No. 17-6155

UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

TENNESSEE VALLEY AUTHORITY,
Defendant-Appellant,
v.
TENNESSEE CLEAN WATER NETWORK and TENNESSEE SCENIC RIVERS ASSOCIATION,
Plaintiffs-Appellees.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF TENNESSEE, NASHVILLE DIVISION
CASE NO. 3:15-CV-00424

BRIEF OF *AMICI CURIAE* CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA, TENNESSEE CHAMBER OF COMMERCE & INDUSTRY, KENTUCKY CHAMBER OF COMMERCE, NATIONAL ASSOCIATION OF MANUFACTURERS, AMERICAN CHEMISTRY COUNCIL, AMERICAN IRON & STEEL INSTITUTE, AMERICAN PUBLIC POWER ASSOCIATION, NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION, THE ENERGY INSTITUTE OF ALABAMA, THE MISSISSIPPI ENERGY INSTITUTE, ASSOCIATION OF TENNESSEE VALLEY GOVERNMENTS, THE TENNESSEE FARM BUREAU FEDERATION, THE KENTUCKY FARM BUREAU, UTILITY WATER ACT GROUP, AND KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC. IN SUPPORT OF DEFENDANT-APPELLANT

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UNITED STATES COURT OF APPEALS
FOR THE SIXTH CIRCUIT

Disclosure of Corporate Affiliations and Financial Interest

Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, Chamber of Commerce of the United States of America
Name of Party
makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

No

2. Is there a publicly owned corporation, not a party to the appeal, that has a financial interest in the outcome? If yes, list the identity of such corporation and the nature of the financial interest:

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UNITED STATES COURT OF APPEALS
FOR THE SIXTH CIRCUIT

Disclosure of Corporate Affiliations and Financial Interest

Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, Tennessee Chamber of Commerce & Industry
Name of Party
makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

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Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, Kentucky Chamber of Commerce
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1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

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Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, National Association of Manufacturers
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makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

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Disclosure of Corporate Affiliations and Financial Interest

Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, American Chemistry Council
Name of Party
makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

No

2. Is there a publicly owned corporation, not a party to the appeal, that has a financial interest in the outcome? If yes, list the identity of such corporation and the nature of the financial interest:

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UNITED STATES COURT OF APPEALS
FOR THE SIXTH CIRCUIT

Disclosure of Corporate Affiliations and Financial Interest

Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, American Iron & Steel Institute
Name of Party
makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

No

2. Is there a publicly owned corporation, not a party to the appeal, that has a financial interest in the outcome? If yes, list the identity of such corporation and the nature of the financial interest:

At this time, American Iron & Steel Institute ("AISI") is not aware that any of its member companies have a financial interest in the outcome of this matter "by reason of insurance, a franchise agreement, or indemnity agreement." L.R. 26.1(b)(2). AISI reserves the right to supplement this disclosure should new or different information become available.

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UNITED STATES COURT OF APPEALS
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Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, American Public Power Association
Name of Party
makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

No

2. Is there a publicly owned corporation, not a party to the appeal, that has a financial interest in the outcome? If yes, list the identity of such corporation and the nature of the financial interest:

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Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, National Rural Electric Cooperative Association
Name of Party
makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

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2. Is there a publicly owned corporation, not a party to the appeal, that has a financial interest in the outcome? If yes, list the identity of such corporation and the nature of the financial interest:

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UNITED STATES COURT OF APPEALS
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Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, The Energy Institute of Alabama
Name of Party
makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

No. The Energy Institute of Alabama ("EIA") is a non-profit, trade association. EIA's members include corporations with publicly held affiliates, but EIA itself is not publicly held, is not a subsidiary of any corporation, and has no corporate affiliation with any corporation that is publicly held.

2. Is there a publicly owned corporation, not a party to the appeal, that has a financial interest in the outcome? If yes, list the identity of such corporation and the nature of the financial interest:

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UNITED STATES COURT OF APPEALS
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Disclosure of Corporate Affiliations and Financial Interest

Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, The Mississippi Energy Institute
Name of Party
makes the following disclosure:

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2. Is there a publicly owned corporation, not a party to the appeal, that has a financial interest in the outcome? If yes, list the identity of such corporation and the nature of the financial interest:

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UNITED STATES COURT OF APPEALS
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Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, Association of Tennessee Valley Governments
Name of Party
makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

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UNITED STATES COURT OF APPEALS
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Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, The Tennessee Farm Bureau Federation
Name of Party
makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

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Sixth Circuit
Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, Kentucky Farm Bureau
Name of Party
makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

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Case Number: 17-6155 Case Name: TVA v. Tenn. Clean Water Network et al

Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, Utility Water Act Group
Name of Party

makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

No

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Sixth Circuit
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Name of counsel: Elbert Lin

Pursuant to 6th Cir. R. 26.1, Kentucky Industrial Utility Customers, Inc.
Name of Party

makes the following disclosure:

1. Is said party a subsidiary or affiliate of a publicly owned corporation? If Yes, list below the identity of the parent corporation or affiliate and the relationship between it and the named party:

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INTEREST OF *AMICI CURIAE*[1]

Amici curiae ("*amici*") urge this Court to reject the district court's incorrect expansion of the Clean Water Act ("CWA" or "Act") point source program. That expansion is premised on the mistaken belief that releases of pollutants to groundwater would otherwise escape regulation, and it now threatens to undermine other CWA programs and environmental laws actually intended to regulate such pollution.

Amici are the Chamber of Commerce of the United States of America, Tennessee Chamber of Commerce & Industry, Kentucky Chamber of Commerce, National Association of Manufacturers, American Chemistry Council, American Iron & Steel Institute, American Public Power Association, National Rural Electric Cooperative Association, The Energy Institute of Alabama, The Mississippi Energy Institute, Association of Tennessee Valley Governments, The Tennessee Farm Bureau Federation, The Kentucky Farm Bureau, Utility Water Act Group, and Kentucky Industrial Utility Customers, Inc. They represent a cross-section of the entire economy. Many (if not all) of their members are subject to the CWA and are thus keenly interested in the interpretation and application of the CWA's

[1] This brief was submitted with an accompanying motion for leave to file pursuant to Federal Rule of Appellate Procedure 29(a)(3). No counsel for a party authored this brief in whole or in part, and no party or their counsel or any person other than *amici*, their members, or their counsel contributed money that was intended to fund the preparation or submission of this brief.

point source and nonpoint source programs, as well as the CWA's interaction with other environmental laws, including the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§ 6901 *et seq*. Given *amici's* broad perspective, this brief not only addresses the district court's failure to follow the Act's text, structure, and legislative history, but also highlights the regulatory uncertainty and costs that would be imposed upon the economy by the district court's interpretation of the CWA.

ARGUMENT

The core statutory question in this case is not *whether* pollutants released to groundwater are controlled, but *under which* type of CWA program—point source or nonpoint source—or other environmental law such releases fall. Congress enacted two principal CWA programs to protect human health and the environment from releases of pollutants to water. *First*, the point source program prohibits "'any addition of any pollutant to navigable waters from any point source,' such as a pipe, ditch, or other 'discernible, confined and discrete conveyance,'" unless authorized by a National Pollutant Discharge Elimination System ("NPDES") permit. *See Nat'l Ass'n of Mfrs. v. Dep't of Def.*, No. 16-299, 2018 WL 491526, at *4 (U.S. Jan. 22, 2018) (quoting 33 U.S.C. §§ 1362(12), (14)); *see also* 33 U.S.C. § 1311(a). *Second*, recognizing that not all water pollution results from point source discharges to navigable waters, Congress created nonpoint source programs

that apply to other releases and gave states primary responsibility for developing such programs with federal support.[2] *See infra* pp. 9-10. In addition, Congress provided in another environmental law—RCRA—direct federal and state oversight of the ash management features at issue here.

The district court incorrectly expanded the CWA's point source program based on an unfounded concern that pollution released into groundwater might otherwise escape regulation. *Tenn. Clean Water Network v. Tenn. Valley Auth.*, No. 3:15-cv-00424, 2017 WL 3476069, at *43 (M.D. Tenn. Aug. 4, 2017) ("*TCWN*"). Without analyzing the statute's text, structure, or compelling legislative history, the district court permitted a cause of action under the CWA's point source program for "discharges through groundwater, if the hydrologic connection between the source of the pollutants and navigable waters is direct, immediate, and can generally be traced." *Id.* at *44.

As discussed below, releases of pollutants into groundwater do not fall under the point source program; instead, they are subject to the CWA's nonpoint source programs and other environmental laws. That is unambiguously clear from the CWA's text, structure and legislative history, EPA's contemporaneous interpretations, and well-reasoned case law. But even if the statute were unclear,

[2] *See, e.g.*, *Ky. Waterways All. v. Ky. Utils. Co.*, No. 5:17-292-DCR, 2017 WL 6628917, at *11, (E.D. Ky. Dec. 28, 2017) (CWA "does not purport to … require a [NPDES] permit for … every act that involves" the release of pollution to waters) (internal quotation marks and citation omitted).

the effect of the district court's interpretation on other regulatory programs, as well as the regulatory uncertainty and enormous expansion of the point source program that it creates, makes it entirely implausible that Congress would approve such a reading of the statute.

I. The Clean Water Act Point Source Program Unambiguously Does Not Extend to the Release of Pollutants to Groundwater.

A. The Statutory Text Limits the Point Source Program to Circumstances Where Pollutants Are Carried Into Navigable Waters by a "Discernible, Confined and Discrete Conveyance."

The point source program prohibits "the discharge of any pollutant" except as authorized by a NPDES permit. 33 U.S.C. § 1311(a). The term "discharge of a pollutant" means "any addition of any pollutant to navigable waters from any point source." *Id*. § 1362(12). In turn, a "point source" is defined as "any discernible, confined and discrete conveyance … from which pollutants are or may be discharged." *Id*. § 1362(14). A prohibited "discharge" under the point source program, therefore, includes only the "addition of any pollutant *to* navigable waters *from*" "any discernible, confined and discrete *conveyance … from which pollutants are or may be discharged*." *Id*. § 1362(12), (14) (emphases added).

The only plausible reading of this text is that the point source program applies only where pollutants are added into a navigable water by something "discernible, confined and discrete." Congress did not extend the program to the addition of pollutants to navigable waters traceable to any "discernible, confined

and discrete" source. Were that true, the statute might plausibly encompass the release of pollutants from a "discernible, confined and discrete" source where the pollutants eventually, through some other means, reach a navigable water. Rather, Congress required the pollutants to come "from" a "conveyance" "from which pollutants are or may be discharged" "to navigable waters," *id.* § 1362(14), i.e., something that both carries and discharges pollutants into navigable waters. To give those words meaning, the point source program must be limited to circumstances where the pollutants are carried to, and discharged into, the navigable water by something "discernible, confined and discrete." In short, a point source must be the means by which the pollutants reach and are added to navigable waters.

The Supreme Court agrees: the CWA "makes plain" that a point source must "*convey* the pollutant to 'navigable waters'" to be subject to NPDES permitting. *S. Fla. Water Mgmt. Dist. v. Miccosukee Tribe of Indians*, 541 U.S. 95, 105 (2004) (emphasis added). Emphasizing the word "conveyance," the Supreme Court explained that a point source "need not be the original source of the pollutant," but it does "need [to] convey the pollutant to 'navigable waters.'" *Id.* at 105; *see also Simsbury-Avon Pres. Soc'y, LLC v. Metacon Gun Club, Inc.*, 575 F.3d 199, 224 (2d Cir. 2009) (Act "requires that pollutants reach navigable waters by a 'discernible, confined and discrete conveyance'").

This is also the only reading that maintains any meaningful distinction between point source and nonpoint source pollution. The requirement that a pollutant be conveyed to *and* added to the navigable water by a point source, and not just have been emitted by a point source at some time before reaching the navigable water, prevents the point source program from encompassing virtually all water pollution. As one court recently explained, "any non-point-source pollution … could invariably be reformulated as point-source pollution by going up the causal chain to identify the initial point sources of the pollutants that eventually ended up through non-point sources to come to rest in navigable waters." *26 Crown Assocs., LLC v. Greater New Haven Reg'l Water Pollution Control Auth.*, No. 3:15-cv-1439 (JAM), 2017 WL 2960506, at *8 (D. Conn. July 11, 2017), *appeal docketed*, No. 17-2426 (2d Cir. Aug. 4, 2017).[3]

The holding below that the point source program covers pollutants that migrate to navigable waters "*through* groundwater" does not comport with the

[3] This interpretation does not require reading the word "directly" into the statute. Though the Supreme Court was "not decid[ing]" the scope of the point source program in *Rapanos v. United States*, the plurality opinion by Justice Scalia correctly observed that the statutory text does not prohibit only "direct" discharges. 547 U.S. 715, 743 (2006) (plurality op.). The requirement is not that a pollutant originate from a point source and be discharged immediately into navigable waters, but only that the pollutant must be added by a point source to navigable waters. Thus, a pollutant discharged by a point source may "indirectly" reach navigable waters, if it has "pass[ed] through conveyances in between" and is added to those navigable waters by a point source, as was true in every case cited by the *Rapanos* plurality. *Id.* (internal quotations omitted).

statute's plain text. The district court did not find, nor could it have found, that the groundwater itself is a point source.

> Groundwater is, by its nature, a diffuse medium and not the kind of discernible, confined and discrete conveyance contemplated by the CWA's definition of point source.

Ky. Utils., 2017 WL 6628917, at *10 (internal quotation marks and citation omitted); *see also 26 Crown Assocs.*, 2017 WL 2960506, at *8 ("a diffuse medium like ground water for the passive migration of pollutants to navigable waters cannot constitute a 'point source' …."). Thus, pollutants added by groundwater to navigable waters have not been carried to and discharged into the navigable waters by a "discernible, confined and discrete conveyance," as the statute requires.

The district court's arbitrary limitations—that there must be a "hydrologic connection" that is "direct, immediate, and can generally be traced," *TCWN*, 2017 WL 3476069, at *44—merely highlight its error. As one court has observed, the district court below felt compelled to "attempt[] to mitigate" the consequences of its holding, *Ky. Utils.*, 2017 WL 6628917, at *11 n.3, like every other court that has erroneously extended the point source program.[4] The need for that "crucial

[4] Other courts have invented a hodgepodge of inconsistent standards for subjecting releases to groundwater to NPDES regulation. *See, e.g.*, *Haw. Wildlife Fund v. Cty. of Maui*, No. 15-17447, 2018 WL 650973, at *7 (9th Cir. Feb. 1, 2018) (pollutants that "are fairly traceable from a point source" and "more than *de minimis*"); *Kelley ex rel. People of the State of Michigan v. United States*, 618 F. Supp. 1103, 1106 (W.D. Mich. 1985) ("'wastes which migrate from groundwaters *back into* surface waters are within EPA's regulatory jurisdiction'") (emphasis

caveat," which is found nowhere in the Act's text, should have alerted the district court to its mistake. *TCWN*, 2017 WL 3476069, at *43. As explained, Congress has written into the CWA a logical and easily administrable limitation on the point source program, which the district court failed to apply.[5]

B. The Statute's Structure Supports This Reading of the Text.

Other CWA provisions linked to the point source program make sense only if that program is limited to circumstances where pollutants are carried into navigable waters by a "discernible, confined and discrete conveyance." For example, discharges under the point source program are subject to "effluent limitations," i.e., restrictions on quantities, rates, or concentrations of chemicals or other substances "which are discharged from point sources *into* navigable waters." 33 U.S.C. § 1362(11) (emphasis added); *see also* 71 Fed. Reg. 32,887, 32,891

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added) (quoting *Kelley v. United States*, No. 79-10199, slip op. at 2-3 (E.D. Mich. Oct. 28, 1980)); *Ass'n Concerned Over Res. & Nature, Inc. v. Tenn. Aluminum Processors, Inc.*, No. 1:10-00084, 2011 WL 1357690, at *17 (M.D. Tenn. Apr. 11, 2011) ("groundwater is subject to the CWA provided an *impact* on federal waters") (emphasis added).

[5] Some have hypothesized that a source could avoid CWA regulation by simply moving a pipe back a few feet from the water and discharge onto ground. As noted, however, the question is not *whether* such a discharge would be controlled, but *how*. If momentum from the pipe release conveys pollutants to navigable waters, that release may be subject to point-source permitting requirements. If it does not (and there is no subsequent point source that conveys the pollutants into navigable waters), that release still would be regulated under CWA nonpoint source programs. These, of course, are not the facts presented here.

(June 7, 2006). The word "into" clearly contemplates pollutants being added by point sources to navigable waters. Moreover, establishing these effluent limitations requires identifiable discharge points where the pollutant being added "into" a navigable water can be measured. That can occur if pollutants are added into navigable waters by a "discernible, confined and discrete conveyance," such as a pipe, but it cannot be done if pollutants migrate from groundwater into navigable waters.

In addition, many CWA provisions recognize that not all pollution is point source pollution measurable through effluent limitations, including the release of pollutants into groundwater. In 1972, Congress enacted a provision directing EPA to issue "guidelines for identifying and evaluating the nature and extent of *nonpoint* sources of pollutants," as well as "processes, procedures, and methods to control pollution" from "subsurface excavations" (like the impoundments here) that potentially discharge pollutants to groundwater. 33 U.S.C. § 1314(f) (emphasis added). Congress has also required states to develop waste management plans to include "a process to control the disposal of pollutants on land or in *subsurface excavations* within such area to protect *ground and surface water quality*." 33 U.S.C. § 1288(b)(2)(K) (emphases added). As this Court has explained: "Congress apparently intended that pollution problems caused by" facilities described in § 1314(f) "are generally to be regulated by means *other than*

the NPDES permit program." *Nat'l Wildlife Fed'n v. Consumers Power Co.*, 862 F.2d 580, 587 (6th Cir. 1988) (emphasis added). And Congress bolstered the nonpoint source program in 1987 with the Nonpoint Source Management Program (Section 319 of the CWA), requiring state development and EPA review of nonpoint source control plans, and providing federal grants to support those plans. 33 U.S.C. § 1329(b)(1), (d)-(n).

Indeed, EPA's "Non-Point Source Control Division" published guidelines in 1973 specifically entitled "Ground Water Pollution from Subsurface Excavations." EPA, Ground Water Pollution from Subsurface Excavations, EPA-430/9-73-012 (1973), http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=2000Z6YZ.TXT. Ex. A. EPA listed "landfills," "lagoons, basins, and pits" like those at issue here as "subsurface excavations" that can cause groundwater contamination, and noted that "polluted ground water" from these facilities also "cause[] surface water pollution." *Id*. at 1, 123-135, 151-177. To control such pollution, EPA did *not* point to the NPDES program, but rather recommended that states employ other control measures. *Id*. at 131-32. As EPA explained in a contemporaneous rulemaking: "[i]n contrast to … nonpoint sources, point sources of water pollution are generally characterized by discrete and confined conveyances from which discharges of pollutants into navigable waters *can be controlled by effluent limitations*." 41 Fed. Reg. 24,709, 24,710 (June 18, 1976) (emphasis added).

The district court's interpretation conflicts with this statutory structure, under which "the NPDES permit program stands alongside of the system controlling 'nonpoint sources' of pollution." *Consumers Power*, 862 F.2d at 587.

C. The CWA's Legislative History Further Confirms That the Point Source Program Does Not Cover the Release of Pollutants Into Groundwater.

The legislative history confirms what the text and structure make unambiguously clear. Congress deliberately did not extend the point source program to pollutants entering groundwater, despite knowing that some such pollutants can migrate through groundwater and enter navigable waters. In 1971, EPA asked Congress for authority over groundwater, arguing that polluted groundwater impacts surface waters. The then-EPA Administrator explained:

> The only reason for the request for Federal authority over ground waters was to assure that we have control over the water table in such a way as to insure that our authority over interstate and navigable streams cannot be circumvented, so we can obtain water quality by maintaining a control over *all* the sources of pollution, *be they discharged directly into any stream or through the ground water table*.

Water Pollution Control Legislation–1971 (Proposed Amendments to Existing Legislation): Hearings before the H. Comm. on Pub. Works, 92nd Cong. 230 (1971) (statement of Hon. William Ruckelshaus, Administrator, EPA) (emphases added). Ex. B. Likewise, in introducing a House amendment to extend the point source program to releases into groundwater, Representative Leslie Aspin argued

that "[i]f we do not stop pollution of ground waters through seepage and other means, *ground water gets into navigable waters*, and to control only the navigable water and not the ground water makes no sense at all." 118 Cong. Rec. 10,666 (1972) (statement of Rep. Aspin) (emphasis added).

Nevertheless, Congress rejected Representative Aspin's amendment and other proposals to extend the reach of the point source program. As one committee report explained: "Several bills pending before the [Senate] Committee provided authority to establish Federally approved standards for groundwaters. … [But] [b]ecause the jurisdiction regarding groundwaters is so complex and varied from State to State, the Committee did not adopt this recommendation." S. Rep. No. 92-414, at 73 (1971), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3739. Rather than extend the NPDES program, Congress chose to regulate pollutants entering groundwater through nonpoint source programs and other federal and state environmental laws that focus on protecting water quality. *Ky. Utils.,* 2017 WL 6628917, at *12.

D. EPA's Original Interpretations of the CWA Reflect a Similar Understanding of the Point Source Program.

Although the district court below claimed to have acted "consistent" with recent EPA guidance, *TCWN*, 2017 WL 3476069, at *43, it failed to consider EPA's original interpretations of the Act. In 1973, for example, EPA's Office of General Counsel confirmed that "the term 'discharge of a pollutant' is defined so

as to include *only* discharges into navigable waters," and explained that "[d]ischarges into ground waters are not included." *In re E.I. DuPont de Nemours & Co.*, Op. No. 6, 1975 WL 23850, at *3 (E.P.A.G.C. Apr. 8, 1975) (emphasis added).

About a decade later, the United States successfully argued in *Kelley ex rel. People of the State of Michigan* that discharges to groundwater allegedly hydrologically connected to nearby navigable waters were *not* regulated by the point source program. 618 F. Supp. at 1107. In moving to dismiss, the United States did not dispute a hydrologic connection, such that "chemicals [could] enter the groundwaters under the … area *and be discharged into Grand Traverse Bay*." United States Mem. in Supp. of Rule 12(b) Mot. & In The Alternative for Summ. J. at 3-4, *Kelley ex rel. People of the State of Michigan v. United States*, 618 F. Supp. 1103 (W.D. Mich. 1985) (No. G83-630) (emphasis added). Ex. C. Rather, the United States argued that "Michigan cannot make these claims under the Clean Water Act since the Act does not regulate pollutant discharges onto soil or into underlying groundwater." *Id*. at 5. According to the United States, "[t]he statutory language, the legislative history, the case law, and EPA's interpretation of the Act all support this conclusion." *Id*. at 22.

EPA has also made numerous statements, spanning both Bush Administrations and the Obama Administration, that are consistent with its original position and that contradict the district court's interpretation.

- In 1992, EPA issued guidance explaining that "EPA and the States regulate facilities [under the CWA] that either discharge wastewaters *directly* to surface waters or discharge to municipal treatment systems."[6] "While a number of States have incorporated ground water discharges into their NPDES permits and pretreatment requirements," EPA confirmed that "*there is no national requirement to do so*."[7]

- In 2004, EPA indicated that "[n]ational [NPDES] regulations apply to … [e]xisting facilities that discharge *directly* to surface waters" and to "[n]ewly constructed facilities that discharge *directly* to surface water."[8]

- In 2005, in discussing a source's options to avoid NPDES permitting requirements, EPA explained that direct surface water discharges "could be re-directed to a non-surface water discharge location, such as ground injection."[9] Under those circumstances, "NPDES … permit

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[6] EPA, Final Comprehensive State Ground Water Protection Program Guidance, EPA 100-R-93-001, at 1-27 (Dec. 1992), http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=100048T6.TXT (emphasis added). Ex. D.

[7] *Id*. (emphasis added).

[8] EPA, Office of Inspector General, Effectiveness of Effluent Guidelines Program for Reducing Pollutant Discharges Uncertain, Report No. 2004-P-00025, at 2 (Aug. 24, 2014), https://www.epa.gov/office-inspector-general/report-effectiveness-effluent-guidelines-program-reducing-pollutant (emphases added). Ex. E.

[9] EPA, Holyoke Gas & Electric Department Cabot Street Station Response to Comments on Draft National Pollutant Discharge Elimination System (NPDES) Permit No. MA0001520, at 20 (undated), https://www3.epa.gov/region1/npdes/permits/2005/finalma0001520rtc.pdf. Ex. F.

requirements would not apply, because there would be no *direct* discharge to a surface water of the United States."[10]

- In 2011, in response to a comment urging that a final NPDES pesticide general permit should "ensure that discharges do not affect groundwater," EPA confirmed that "the Clean Water Act's NPDES program … is for the control of discharges to waters of the United States" and that "discharges to groundwater are not regulated under the NPDES program."[11]

- In 2014, EPA issued a fact sheet regarding the reissuance of three NPDES permits for the discharge of stormwater from municipal storm sewer systems to waters in Massachusetts. In addressing stormwater "discharges to the subsurface," EPA stated that "NPDES permits are applicable for point source discharges to waters of the U.S." and that "discharges to groundwater are not addressed in the NPDES program and as such are not addressed by this permit."[12]

- In 2017, EPA made clear that "discharges to groundwater are not regulated by the NPDES permit program."[13]

In confirming that the NPDES program does not regulate additions to groundwater,

EPA provided no indication in these statements that a source must consider

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[10] *Id*. (emphasis added).

[11] EPA, Response to Public Comments, EPA NPDES Pesticide General Permit, at xxii (Oct. 31, 2011), https://www.regulations.gov/document?D=EPA-HQ-OW-2010-0257-1277. Ex. G.

[12] EPA, Fact Sheet, Draft General Permits for Stormwater Discharges from Small Municipal Separate Sewer Systems in Massachusetts, at 18 (2014), https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit. Ex. H.

[13] EPA, Response to Public Comments, Permit Nos. MAG910000 and NHG910000, at 7 (undated), https://www3.epa.gov/region1/npdes/remediation/ResponsetoComments.pdf. Ex. I.

whether impacted groundwater has a "direct" hydrological-connection to surface water.

While EPA has made a few statements inconsistent with its original and continuing understanding of the Act, those statements are not entitled to any weight.[14] First, because the statute is unambiguous, EPA's interpretation warrants no deference. *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 842-43 (1984). Second and independently, because these statements have never been made pursuant to rulemaking, they "lack[] the force of law and [are] therefore not entitled to *Chevron* deference." *Rosales-Garcia v. Holland*, 322 F.3d 386, 403 n.22 (6th Cir. 2003); *see also Ky. Utils.*, 2017 WL 6628917, at *11 n.2.[15] And because these statements are inconsistent with the CWA's text, structure, and

[14] For example, EPA recently filed an *amicus* brief in the Ninth Circuit, claiming that a "discharge from a point source to jurisdictional surface waters that moves through groundwater with a direct hydrological connection comes under the purview of the CWA's permitting requirements." Br. for the United States as Amicus Curiae in Supp. of Pls.-Appellees at 5, *Haw. Wildlife Fund v. Cty. of Maui*, No. 15-17447, 2018 WL 650973 (9th Cir. Feb. 1, 2018), ECF No. 40. Ex. J. Though EPA claimed a "longstanding and consistent" position, *id*. at 25, that is refuted by the regulatory record described above. The Ninth Circuit correctly rejected EPA's test as inconsistent with the statute, but erred in creating its own test based on terms not in the statute. *See infra* p. 18.

[15] *See also Vill. of Oconomowoc Lake v. Dayton Hudson Corp.*, 24 F.3d 962, 966 (7th Cir. 1994) ("Collateral reference to a problem [in an EPA preamble] is not a satisfactory substitute for focused attention in rule-making or adjudication."); *Umatilla Waterquality Protective Ass'n, Inc. v. Smith Frozen Foods, Inc.*, 962 F. Supp. 1312, 1319 (D. Or. 1997) (*Chevron* deference not warranted where "EPA has offered no formal or consistent interpretation of the CWA that would subject discharges to groundwater to the NPDES permitting requirement").

legislative history, and internally inconsistent with EPA's own positions, they are unpersuasive and thus also not entitled to *Skidmore* deference. *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944).

E. The Majority of Federal Courts of Appeals That Have Addressed This Issue Have Found the Point Source Program Does Not Extend to the Release of Pollutants Into Groundwater.

Two of the three federal courts of appeals to address the issue agree that groundwater contamination falls outside the point source program, even if there is an alleged "hydrological connection" to surface waters. In *Village of Oconomowoc Lake*, the Seventh Circuit ruled that the NPDES program does not extend to pollutants "seep[ing]" into "local ground waters." 24 F.3d at 963, 965. The court understood those pollutants could reach "underground aquifers that feed lakes and streams that are part of the 'waters of the United States.'" *Id*. at 965. But it refused to extend the point source program to such discharges "just because the[y] may be hydrologically connected with surface waters." *Id*. In *Rice v. Harken Exploration Co.*, the Fifth Circuit similarly rejected as "an unwarranted expansion of the [statute]" the application of the point source program to pollutants that reach navigable waters by "gradual, natural seepage" through groundwater. 250 F.3d 264, 271 (5th Cir. 2001). "Congress was aware that there was a connection between ground and surface waters" but decided "to leave the

regulation of groundwater to the States," and the court chose "to respect Congress's decision." *Id.* at 271-72.

The Ninth Circuit's recent contrary decision in *Hawai'i Wildlife Fund* is flawed in numerous respects. The court extended the point source program to pollutants added to groundwater that are "fairly traceable from the point source to a navigable water" and reach the navigable water at "more than *de minimis*" levels. 2018 WL 650973, at *7. But the Ninth Circuit gave no consideration to the significance of the word "conveyance," *see supra* pp. 4-5, other aspects of the point source program, such as the end-of-pipe effluent limitations, *see supra* pp. 8-9, or the CWA's legislative history, *see supra* pp. 11-12. And contrary to the Ninth Circuit's own reasoning, its decision "reads … words into the CWA"—namely, "fairly traceable" and "*de minimis*"—"that are not there." *Haw. Wildlife Fund*, 2018 WL 650973, at *7 n.3; *see also supra* note 4.

As for the cases relied on below, they did not examine the CWA's text, structure, or legislative history, focusing instead on the CWA's purported goals. *See, e.g.*, *Wash. Wilderness Coal. v. Hecla Mining Co.*, 870 F. Supp. 983, 990 (E.D. Wash. 1994) ("since the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters … through groundwater, is subject to regulation by NPDES permit"). That is not how statutory interpretation is done.

See Ross v. Blake, 136 S. Ct. 1850, 1856 (2016) ("Statutory interpretation, as we always say, begins with the text …."). As one court has explained:

> The courts that have found that hydrologically connected groundwater is subject to the NPDES permit requirement have relied heavily on the purpose of the CWA. However, the Supreme Court has "often criticized" relying on the statute's purpose to the detriment of its text "noting that no law pursues its purpose at all costs, and that the textual limitations upon a law's scope are no less a part of its 'purpose' than its substantive authorizations." *Rapanos*, 547 U.S. at 752 (plurality opinion).

Ky. Utils., 2017 WL 6628917, at *12 (internal citations omitted).

II. Even if the Act Were Ambiguous, the District Court's Interpretation Must Be Rejected Because It Lacks Clear Statutory Authorization And Is Unreasonable.

Even were the CWA unclear on the point source program's limits (which it is not), the sweeping and disruptive consequences of the district court's interpretation require it to be rejected for at least two reasons. *First*, ambiguous text cannot be interpreted to effectuate an extraordinary expansion of an agency's authority or an intrusion on an area of traditional state regulation. *Second*, ambiguous text cannot be interpreted unreasonably. Both principles independently bar the district court's interpretation.

A. The District Court's Interpretation Lacks Clear Statutory Authorization.

Absent clear direction from Congress, courts view with skepticism statutory interpretations that extraordinarily expand regulatory jurisdiction. *Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2444 (2014) ("*UARG*"). For example,

the Supreme Court has "been reluctant to read into ambiguous statutory text" the "power to require permits for … thousands, and the operation of millions, of small sources nationwide." *Id*. at 2444. Likewise, "excessive demands on limited governmental resources is … a good reason for rejecting [an interpretation of an ambiguous statute]." *Id*. The Supreme Court "expect[s] Congress to speak clearly if it wishes to assign to an agency decisions of vast 'economic and political significance.'" *Id*. (quoting *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 160 (2000)).

The district court's interpretation triggers this skepticism. That interpretation would extend the NPDES permitting program to millions of small sources never previously regulated under this program. For example, more than 22.2 million homes have septic systems,[16] which have not been understood to require NPDES permits. *United States v. Smithfield Foods, Inc.*, 972 F. Supp. 338, 345 (E.D. Va. 1997). But they disperse wastewater into soil and groundwater, and thus arguably come within the district court's interpretation. Such an increase in sources subject to NPDES permitting would, in turn, require states to devote significant resources to create new (or modify existing) regulatory and permitting

[16] *See* U.S. Department of Housing and Urban Development and U.S. Census Bureau, American Housing Survey for the United States: 2011, Current Housing Reports, H150/11, at 14, Tbl. C-04-AO (Sept. 2013), https://www.census.gov/content/dam/Census/programs-surveys/ahs/data/2011/h150-11.pdf. Ex. K.

programs, placing "excessive demands on limited governmental resources." *UARG,* 134 S. Ct. at 2444. That is precisely the sort of massive regulatory expansion the Supreme Court identified in *UARG*. Yet nothing in the CWA "*clearly*" supports such an extraordinary change in point source permitting jurisdiction. *Id*. (emphasis added).

Nor has Congress clearly authorized the intrusion the district court's interpretation would work on the "federal-state framework." *Solid Waste Agency of N. Cook Cty. v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 173 (2001) ("*SWANCC*"). The regulation of nonpoint source pollution, and groundwater contamination in particular, has traditionally been left to the states. *See supra* pp. 9-10*; see also Am. Farm Bureau Fed'n v. EPA*, 792 F.3d 281, 299 (3d Cir. 2015), *cert. denied*, 136 S. Ct. 1246 (2016) ("[CWA] assigns the primary responsibility for regulating ... nonpoint sources to the states"); *Kelley*, 618 F. Supp. at 1105, 1107 ("the CWA … indicates a clear intent to leave the regulation of groundwater pollution to the states").[17] By expanding the point source program to reach such pollution, the district court's interpretation is "a significant impingement of the States' traditional and primary power over land and water use." *SWANCC*, 531 U.S. at 174. But again, no clear statutory statement justifies that dramatic change in the federal-state balance.

[17] Under section 510 of the CWA, states retain control over waters of the state, which have long been understood to include groundwater. 33 U.S.C. § 1370.

B. The District Court's Interpretation Must Be Rejected Because It Has Significant Adverse Consequences for Other Regulatory Programs and for *Amici* and the Public.

Even if a clear congressional mandate were not required, the significantly disruptive consequences of the district court's interpretation make it implausible that Congress would have intended such a reading. The district court's interpretation undermines other regulatory programs that already protect water quality, sows regulatory uncertainty, and creates disincentives for environmentally protective infrastructure, all while imposing significant costs on *amici* and the public. These are paradigmatic indications of an unreasonable reading of a statute. *See, e.g.*, *Bryant v. Dollar Gen. Corp.*, 538 F.3d 394, 402 (6th Cir. 2008).

1. The District Court's Interpretation Undermines Other Regulatory Programs That Already Protect Navigable Waters.

As explained, the CWA contains a number of tools to address nonpoint source pollution, including the release of pollutants into groundwater. In Tennessee, for example, Section 319 of the CWA has been used successfully to address pollution from impoundments associated with legacy mining operations, resulting in the attainment of water quality standards in formerly impaired surface

waters.[18] This program has also been used in Tennessee to replace failing septic systems to reduce bacteria levels in surface waters.[19]

Rather than promoting environmental protection, the district court's interpretation could divert state resources from successful nonpoint source programs. Because Section 319 funding is only available for nonpoint source pollution, reclassifying releases to groundwater as point source pollution would lead states to lose that funding. 33 U.S.C. § 1329(b).

The district court's interpretation also would interfere with other federal statutes that regulate groundwater. Those statutes include RCRA, which directly addresses ash management features of the sort at issue here. 42 U.S.C. § 6973(a). As explained by TVA and by other *amici*, including the Utility Solid Waste Activities Group, the district court's interpretation would render inapplicable important public health and welfare programs established under RCRA, including the groundwater protection and remediation provisions of a recent EPA rule specifically addressing the management and closure of coal ash impoundments. EPA, Hazardous and Solid Waste Management System; Disposal of Coal

[18] EPA, Section 319 Nonpoint Source Program Success Story, Tennessee, Installing Best Management Practices Abates Acid Mine Drainage in Crab Orchard Creek, EPA 841-F-14-001DD (May 2014), https://www.epa.gov/nps/nonpoint-source-success-stories. Ex. L.

[19] EPA, Nonpoint Source Success Story, Tennessee, Septic Tank Effluent Pumping Project Improves King Branch, EPA 841-F-16-001R (Aug. 2016), https://www.epa.gov/nps/nonpoint-source-success-stories. Ex. M.

Combustion Residuals from Electric Utilities; Final Rule, 80 Fed. Reg. 21,302 (Apr. 17, 2015).

2. The District Court's Interpretation Would Subject *Amici* to Regulatory Uncertainty.

A second indication of the unreasonableness of the district court's interpretation is the regulatory uncertainty it creates. The district court devised a fact-specific test, *TCWN*, 2017 WL 3476069, at *43-44, but provided no guidance on how to implement it. Its interpretation subjects releases to groundwater to the point source program where there is a hydrologic connection to navigable waters that is "direct, immediate, and can generally be traced." *Id*. at *44. But it is "often not obvious" whether or how groundwater connects to navigable water, and none of those new terms is defined in the Act. *Umatilla*, 962 F. Supp. at 1320. Indeed, that "the control of nonpoint source pollution [i]s so dependent on … site-specific factors" is why Congress decided that "uniform federal regulation was virtually impossible." *Shanty Town Assocs. Ltd. P'ship v. EPA*, 843 F.2d 782, 791 (4th Cir. 1988).

Under the district court's new regulatory program, technical assessments of site-specific factors, such as topography, climate, the distance to a surface water, and geologic factors, will be required to determine whether and how the CWA point source program applies. But what is the maximum distance to navigable water, or the necessary time for pollutants to travel through groundwater, for a

connection to be "direct"? How does one determine if a hydrologic-connection "can *generally* be traced" to the source?

Perhaps most critically, how do point source effluent limitations and monitoring, which require identifiable discharge points to measure the pollutants entering a navigable water, apply to diffuse groundwater migration? As noted, the NPDES permitting regulations are "end-of-pipe." *Froebel v. Meyer*, 217 F.3d 928, 937 (7th Cir. 2000). The types of determinations required for point source permitting may be infeasible (if not outright impossible) for migration of pollution in groundwater. *See generally*, EPA, NPDES Permit Writer's Manual, EPA-833-K-10-001 (Sept. 2010), https://www.epa.gov/npdes/npdes-permit-writers-manual, (overview of permitting requirements).

It is unreasonable to introduce into the CWA this "level of uncertainty … [that] would expose potentially [millions] of … [sources] to … litigation and legal liability if they … happen[] to make the 'wrong' choice." *Umatilla,* 962 F. Supp. at 1320. Several Supreme Court justices have already expressed concern about the regulatory uncertainty caused by recent efforts to expand CWA jurisdiction. *U.S. Army Corps of Eng'rs v. Hawkes Co., Inc.*, 136 S. Ct. 1807, 1816-17 (2016) ("the reach and systemic consequences of the [CWA] remain a cause for concern") (Kennedy, J., concurring); *Sackett v. EPA*, 566 U.S. 120, 132-33 (2012) (Alito, J.,

concurring) (criticizing EPA's failure to interpret CWA in way that provides "clarity and predictability").

Moreover, this regulatory uncertainty will have significant real-world effects that contravene Congress's general intent in the CWA to protect the environment. The district court's new test could impact private and public infrastructure that is critical to environmental protection. For example, green infrastructure is designed to retain, percolate, and infiltrate stormwater into the ground, in part, to minimize discharges of industrial and municipal stormwater.[20] Other groundwater recharge systems use spreading basins, percolation ponds, infiltration basins, and injection wells to convey stormwater or recycled wastewater into shallow subsurface aquifers. Those systems augment public water supplies, create seawater intrusion barriers, and eliminate surface outfalls, among other benefits.[21] In this Circuit, the City of Nashville has developed a framework to maximize these kinds of beneficial green infrastructure.[22] But the district court's interpretation suggests that NPDES

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[20] *See generally*, EPA, Green Infrastructure, https://www.epa.gov/green-infrastructure (last visited Jan. 31, 2018).

[21] EPA, 2012 Guidelines for Water Reuse at 4-25, EPA/600/R-12/618 (Sept. 2012), https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=253411. Ex. N.

[22] *See* Metro Water Services of Nashville and Davidson County, Tennessee, Clean Water Nashville Overflow Abatement Program, Green Infrastructure, Nashville's Existing Green Infrastructure, http://www.cleanwaternashville.org/green-infrastructure (last visited Jan. 31, 2018).

permit requirements may apply to such environmentally-protective infrastructure, creating obstacles to and disincentivizing their use.

3. The District Court's Interpretation Would Vastly Increase Permitting Costs on *Amici* and the Public.

As the Supreme Court has observed, complying with CWA permitting requirements "is not trivial." *Rapanos*, 547 U.S. at 719 (plurality op.). EPA estimates that the public spends over 26 million labor hours and over $1 billion *annually* in applying for and complying with NPDES permits. EPA, ICR Supporting Statement, Information Collection Request for National Pollutant Discharge Elimination System (NPDES) Program (Renewal), OMB Control No. 2040-0004, EPA ICR No. 0229.22, at 23, Tbl. 12.1, App. A (Sept. 2017), https://www.regulations.gov/document?D=EPA-HQ-OW-2008-0719-0110. Ex. O.

Requiring NPDES permits for releases of pollutants to groundwater would increase those costs exponentially. If the district court's interpretation is permitted to stand, virtually any source that adds pollutants to groundwater *in any amount* would have to undertake a detailed technical assessment of hydrologic and geologic conditions to determine whether to apply for a NPDES permit. As the district court acknowledged, "most, if not all, natural bodies of water [are] … hydrologically connected to … groundwater" and "[t]he bedrock of the CWA is 'a default regime of strict liability.'" *TCWN*, 2017 WL 3476069, at *41, 42 (citing *Sierra Club v. ICG Hazard, LLC*, 781 F.3d 281, 284 (6th Cir. 2015)). Each of

those many millions of sources newly concerned about NPDES permitting will incur new costs to conduct such an assessment. Even conservatively estimated, the total cost to the public would be in the billions of dollars.

It is unreasonable to adopt an interpretation of the CWA that would so dramatically alter the cost of CWA permitting on the public. *See Michigan v. EPA*, 135 S. Ct. 2699 (2015).

CONCLUSION

The district court's judgment should be reversed.

Dated: February 6, 2018

Respectfully submitted,

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/s/ **Elbert Lin**

Attorney for **Amici Curiae Chamber of Commerce et al.**

Dated: **February 6, 2018**

CERTIFICATE OF SERVICE

Pursuant to Rule 25 of the Federal Rules of Appellate Procedure and Circuit Rule 25, I hereby certify that on this 6th day of February 2018, I served a copy of the foregoing document electronically through the Court's CM/ECF system on the following registered CM/ECF counsel of record:

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STATUTORY ADDENDUM

Page(s)

94–25 in accordance with the percentages provided for such State (if any) in column 5 of such table, and such sum to be in addition to, and not in lieu of, any funds otherwise authorized and to be available until expended.

§ 1288. Areawide waste treatment management

(a) Identification and designation of areas having substantial water quality control problems

For the purpose of encouraging and facilitating the development and implementation of areawide waste treatment management plans—

(1) The Administrator, within ninety days after October 18, 1972, and after consultation with appropriate Federal, State, and local authorities, shall by regulation publish guidelines for the identification of those areas which, as a result of urban-industrial concentrations or other factors, have substantial water quality control problems.

(2) The Governor of each State, within sixty days after publication of the guidelines issued pursuant to paragraph (1) of this subsection, shall identify each area within the State which, as a result of urban-industrial concentrations or other factors, has substantial water quality control problems. Not later than one hundred and twenty days following such identification and after consultation with appropriate elected and other officials of local governments having jurisdiction in such areas, the Governor shall designate (A) the boundaries of each such area, and (B) a single representative organization, including elected officials from local governments or their designees, capable of developing effective areawide waste treatment management plans for such area. The Governor may in the same manner at any later time identify any additional area (or modify an existing area) for which he determines areawide waste treatment management to be appropriate, designate the boundaries of such area, and designate an organization capable of developing effective areawide waste treatment management plans for such area.

(3) With respect to any area which, pursuant to the guidelines published under paragraph (1) of this subsection, is located in two or more States, the Governors of the respective States shall consult and cooperate in carrying out the provisions of paragraph (2), with a view toward designating the boundaries of the interstate area having common water quality control problems and for which areawide waste treatment management plans would be most effective, and toward designating, within one hundred and eighty days after publication of guidelines issued pursuant to paragraph (1) of this subsection, of a single representative organization capable of developing effective areawide waste treatment management plans for such area.

(4) If a Governor does not act, either by designating or determining not to make a designation under paragraph (2) of this subsection, within the time required by such paragraph, or if, in the case of an interstate area, the Governors of the States involved do not designate a planning organization within the time required by paragraph (3) of this subsection, the chief elected officials of local governments within an area may by agreement designate (A) the boundaries for such an area, and (B) a single representative organization including elected officials from such local governments, or their designees, capable of developing an areawide waste treatment management plan for such area.

(5) Existing regional agencies may be designated under paragraphs (2), (3), and (4) of this subsection.

(6) The State shall act as a planning agency for all portions of such State which are not designated under paragraphs (2), (3), or (4) of this subsection.

(7) Designations under this subsection shall be subject to the approval of the Administrator.

(b) Planning process

(1)(A) Not later than one year after the date of designation of any organization under subsection (a) of this section such organization shall have in operation a continuing areawide waste treatment management planning process consistent with section 1281 of this title. Plans prepared in accordance with this process shall contain alternatives for waste treatment management, and be applicable to all wastes generated within the area involved. The initial plan prepared in accordance with such process shall be certified by the Governor and submitted to the Administrator not later than two years after the planning process is in operation.

(B) For any agency designated after 1975 under subsection (a) of this section and for all portions of a State for which the State is required to act as the planning agency in accordance with subsection (a)(6), the initial plan prepared in accordance with such process shall be certified by the Governor and submitted to the Administrator not later than three years after the receipt of the initial grant award authorized under subsection (f) of this section.

(2) Any plan prepared under such process shall include, but not be limited to—

(A) the identification of treatment works necessary to meet the anticipated municipal and industrial waste treatment needs of the area over a twenty-year period, annually updated (including an analysis of alternative waste treatment systems), including any requirements for the acquisition of land for treatment purposes; the necessary waste water collection and urban storm water runoff systems; and a program to provide the necessary financial arrangements for the development of such treatment works, and an identification of open space and recreation opportunities that can be expected to result from improved water quality, including consideration of potential use of lands associated with treatment works and increased access to water-based recreation;

(B) the establishment of construction priorities for such treatment works and time schedules for the initiation and completion of all treatment works;

(C) the establishment of a regulatory program to—

(i) implement the waste treatment management requirements of section 1281(c) of this title,

(ii) regulate the location, modification, and construction of any facilities within such area which may result in any discharge in such area, and

(iii) assure that any industrial or commercial wastes discharged into any treatment works in such area meet applicable pretreatment requirements;

(D) the identification of those agencies necessary to construct, operate, and maintain all facilities required by the plan and otherwise to carry out the plan;

(E) the identification of the measures necessary to carry out the plan (including financing), the period of time necessary to carry out the plan, the costs of carrying out the plan within such time, and the economic, social, and environmental impact of carrying out the plan within such time;

(F) a process to (i) identify, if appropriate, agriculturally and silviculturally related nonpoint sources of pollution, including return flows from irrigated agriculture, and their cumulative effects, runoff from manure disposal areas, and from land used for livestock and crop production, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

(G) a process to (i) identify, if appropriate, mine-related sources of pollution including new, current, and abandoned surface and underground mine runoff, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

(H) a process to (i) identify construction activity related sources of pollution, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

(I) a process to (i) identify, if appropriate, salt water intrusion into rivers, lakes, and estuaries resulting from reduction of fresh water flow from any cause, including irrigation, obstruction, ground water extraction, and diversion, and (ii) set forth procedures and methods to control such intrusion to the extent feasible where such procedures and methods are otherwise a part of the waste treatment management plan;

(J) a process to control the disposition of all residual waste generated in such area which could affect water quality; and

(K) a process to control the disposal of pollutants on land or in subsurface excavations within such area to protect ground and surface water quality.

(3) Areawide waste treatment management plans shall be certified annually by the Governor or his designee (or Governors or their designees, where more than one State is involved) as being consistent with applicable basin plans and such areawide waste treatment management plans shall be submitted to the Administrator for his approval.

(4)(A) Whenever the Governor of any State determines (and notifies the Administrator) that consistency with a statewide regulatory program under section 1313 of this title so requires, the requirements of clauses (F) through (K) of paragraph (2) of this subsection shall be developed and submitted by the Governor to the Administrator for approval for application to a class or category of activity throughout such State.

(B) Any program submitted under subparagraph (A) of this paragraph which, in whole or in part, is to control the discharge or other placement of dredged or fill material into the navigable waters shall include the following:

(i) A consultation process which includes the State agency with primary jurisdiction over fish and wildlife resources.

(ii) A process to identify and manage the discharge or other placement of dredged or fill material which adversely affects navigable waters, which shall complement and be coordinated with a State program under section 1344 of this title conducted pursuant to this chapter.

(iii) A process to assure that any activity conducted pursuant to a best management practice will comply with the guidelines established under section 1344(b)(1) of this title, and sections 1317 and 1343 of this title.

(iv) A process to assure that any activity conducted pursuant to a best management practice can be terminated or modified for cause including, but not limited to, the following:

(I) violation of any condition of the best management practice;

(II) change in any activity that requires either a temporary or permanent reduction or elimination of the discharge pursuant to the best management practice.

(v) A process to assure continued coordination with Federal and Federal-State water-related planning and reviewing processes, including the National Wetlands Inventory.

(C) If the Governor of a State obtains approval from the Administrator of a statewide regulatory program which meets the requirements of subparagraph (B) of this paragraph and if such State is administering a permit program under section 1344 of this title, no person shall be required to obtain an individual permit pursuant to such section, or to comply with a general permit issued pursuant to such section, with respect to any appropriate activity within such State for which a best management practice has been approved by the Administrator under the program approved by the Administrator pursuant to this paragraph.

(D)(i) Whenever the Administrator determines after public hearing that a State is not administering a program approved under this section in accordance with the requirements of this section, the Administrator shall so notify the State, and if appropriate corrective action is not taken within a reasonable time, not to exceed ninety days, the Administrator shall withdraw approval of such program. The Administrator shall not withdraw approval of any such program unless he shall first have notified the State, and made public, in writing, the reasons for such withdrawal.

(g) Allocation of funds

(1) Fiscal year 2002

Subject to subsection (h), the Administrator shall use the amounts appropriated to carry out this section for fiscal year 2002 for making grants to municipalities and municipal entities under subsection (a)(2), in accordance with the criteria set forth in subsection (b).

(2) Fiscal year 2003

Subject to subsection (h), the Administrator shall use the amounts appropriated to carry out this section for fiscal year 2003 as follows:

(A) Not to exceed $250,000,000 for making grants to municipalities and municipal entities under subsection (a)(2), in accordance with the criteria set forth in subsection (b).

(B) All remaining amounts for making grants to States under subsection (a)(1), in accordance with a formula to be established by the Administrator, after providing notice and an opportunity for public comment, that allocates to each State a proportional share of such amounts based on the total needs of the State for municipal combined sewer overflow controls and sanitary sewer overflow controls identified in the most recent survey conducted pursuant to section 1375(b)(1) of this title.

(h) Administrative expenses

Of the amounts appropriated to carry out this section for each fiscal year—

(1) the Administrator may retain an amount not to exceed 1 percent for the reasonable and necessary costs of administering this section; and

(2) the Administrator, or a State, may retain an amount not to exceed 4 percent of any grant made to a municipality or municipal entity under subsection (a), for the reasonable and necessary costs of administering the grant.

(i) Reports

Not later than December 31, 2003, and periodically thereafter, the Administrator shall transmit to Congress a report containing recommended funding levels for grants under this section. The recommended funding levels shall be sufficient to ensure the continued expeditious implementation of municipal combined sewer overflow and sanitary sewer overflow controls nationwide.

(June 30, 1948, ch. 758, title II, § 221, as added Pub. L. 106–554, § 1(a)(4) [div. B, title I, § 112(c)], Dec. 21, 2000, 114 Stat. 2763, 2763A–225.)

INFORMATION ON CSOS AND SSOS

Pub. L. 106–554, § 1(a)(4) [div. B, title I, § 112(d)], Dec. 21, 2000, 114 Stat. 2763, 2763A–227, provided that:

''(1) REPORT TO CONGRESS.—Not later than 3 years after the date of enactment of this Act [Dec. 21, 2000], the Administrator of the Environmental Protection Agency shall transmit to Congress a report summarizing—

''(A) the extent of the human health and environmental impacts caused by municipal combined sewer overflows and sanitary sewer overflows, including the location of discharges causing such impacts, the volume of pollutants discharged, and the constituents discharged;

''(B) the resources spent by municipalities to address these impacts; and

''(C) an evaluation of the technologies used by municipalities to address these impacts.

''(2) TECHNOLOGY CLEARINGHOUSE.—After transmitting a report under paragraph (1), the Administrator shall maintain a clearinghouse of cost-effective and efficient technologies for addressing human health and environmental impacts due to municipal combined sewer overflows and sanitary sewer overflows.''

SUBCHAPTER III—STANDARDS AND ENFORCEMENT

§ 1311. Effluent limitations

(a) Illegality of pollutant discharges except in compliance with law

Except as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.

(b) Timetable for achievement of objectives

In order to carry out the objective of this chapter there shall be achieved—

(1)(A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 1314(b) of this title, or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 1317 of this title; and

(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 1283 of this title prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 1314(d)(1) of this title; or,

(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

(2)(A) for pollutants identified in subparagraphs (C), (D), and (F) of this paragraph, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to

clude any State from requiring compliance with any effluent limitation or schedule of compliance at dates earlier than such dates.

(g) Heat standards

Water quality standards relating to heat shall be consistent with the requirements of section 1326 of this title.

(h) Thermal water quality standards

For the purposes of this chapter the term ''water quality standards'' includes thermal water quality standards.

(i) Coastal recreation water quality criteria

(1) Adoption by States

(A) Initial criteria and standards

Not later than 42 months after October 10, 2000, each State having coastal recreation waters shall adopt and submit to the Administrator water quality criteria and standards for the coastal recreation waters of the State for those pathogens and pathogen indicators for which the Administrator has published criteria under section 1314(a) of this title.

(B) New or revised criteria and standards

Not later than 36 months after the date of publication by the Administrator of new or revised water quality criteria under section 1314(a)(9) of this title, each State having coastal recreation waters shall adopt and submit to the Administrator new or revised water quality standards for the coastal recreation waters of the State for all pathogens and pathogen indicators to which the new or revised water quality criteria are applicable.

(2) Failure of States to adopt

(A) In general

If a State fails to adopt water quality criteria and standards in accordance with paragraph (1)(A) that are as protective of human health as the criteria for pathogens and pathogen indicators for coastal recreation waters published by the Administrator, the Administrator shall promptly propose regulations for the State setting forth revised or new water quality standards for pathogens and pathogen indicators described in paragraph (1)(A) for coastal recreation waters of the State.

(B) Exception

If the Administrator proposes regulations for a State described in subparagraph (A) under subsection (c)(4)(B), the Administrator shall publish any revised or new standard under this subsection not later than 42 months after October 10, 2000.

(3) Applicability

Except as expressly provided by this subsection, the requirements and procedures of subsection (c) apply to this subsection, including the requirement in subsection (c)(2)(A) that the criteria protect public health and welfare.

(June 30, 1948, ch. 758, title III, §303, as added Pub. L. 92–500, §2, Oct. 18, 1972, 86 Stat. 846; amended Pub. L. 100–4, title III, §308(d), title IV, §404(b), Feb. 4, 1987, 101 Stat. 39, 68; Pub. L. 106–284, §2, Oct. 10, 2000, 114 Stat. 870.)

REFERENCES IN TEXT

This Act, referred to in subsecs. (a)(1), (2), (3)(B), (C) and (b)(1), means act June 30, 1948, ch. 758, 62 Stat. 1155, prior to the supersedure and reenactment of act June 30, 1948 by act Oct. 18, 1972, Pub. L. 92–500, 86 Stat. 816. Act June 30, 1948, ch. 758, as added by act Oct. 18, 1972, Pub. L. 92–500, 86 Stat. 816, enacted this chapter.

AMENDMENTS

2000—Subsec. (i). Pub. L. 106–284 added subsec. (i).

1987—Subsec. (c)(2). Pub. L. 100–4, §308(d), designated existing provision as subpar. (A) and added subpar. (B).

Subsec. (d)(4). Pub. L. 100–4, §404(b), added par. (4).

§ 1313a. Revised water quality standards

The review, revision, and adoption or promulgation of revised or new water quality standards pursuant to section 303(c) of the Federal Water Pollution Control Act [33 U.S.C. 1313(c)] shall be completed by the date three years after December 29, 1981. No grant shall be made under title II of the Federal Water Pollution Control Act [33 U.S.C. 1281 et seq.] after such date until water quality standards are reviewed and revised pursuant to section 303(c), except where the State has in good faith submitted such revised water quality standards and the Administrator has not acted to approve or disapprove such submission within one hundred and twenty days of receipt.

(Pub. L. 97–117, §24, Dec. 29, 1981, 95 Stat. 1632.)

REFERENCES IN TEXT

The Federal Water Pollution Control Act, referred to in text, is act June 30, 1948, ch. 758, as amended generally by Pub. L. 92–500, §2, Oct. 18, 1972, 86 Stat. 816. Title II of the Act is classified generally to subchapter II (§1281 et seq.) of this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 1251 of this title and Tables.

CODIFICATION

Section was enacted as part of the Municipal Wastewater Treatment Construction Grant Amendments of 1981, and not as part of the Federal Water Pollution Control Act which comprises this chapter.

§ 1314. Information and guidelines

(a) Criteria development and publication

(1) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and publish, within one year after October 18, 1972 (and from time to time thereafter revise) criteria for water quality accurately reflecting the latest scientific knowledge (A) on the kind and extent of all identifiable effects on health and welfare including, but not limited to, plankton, fish, shellfish, wildlife, plant life, shorelines, beaches, esthetics, and recreation which may be expected from the presence of pollutants in any body of water, including ground water; (B) on the concentration and dispersal of pollutants, or their byproducts, through biological, physical, and chemical processes; and (C) on the effects of pollutants on biological community diversity, productivity, and stability, including information on the factors affecting rates of eutrophication and rates of organic and inorganic sedimentation for varying types of receiving waters.

to navigable waters. Any applicable controls established under this subsection shall be included as a requirement for the purposes of section 1311, 1312, 1316, 1317, or 1343 of this title, as the case may be, in any permit issued to a point source pursuant to section 1342 of this title.

(f) Identification and evaluation of nonpoint sources of pollution; processes, procedures, and methods to control pollution

The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall issue to appropriate Federal agencies, the States, water pollution control agencies, and agencies designated under section 1288 of this title, within one year after October 18, 1972 (and from time to time thereafter) information including (1) guidelines for identifying and evaluating the nature and extent of nonpoint sources of pollutants, and (2) processes, procedures, and methods to control pollution resulting from—

(A) agricultural and silvicultural activities, including runoff from fields and crop and forest lands;

(B) mining activities, including runoff and siltation from new, currently operating, and abandoned surface and underground mines;

(C) all construction activity, including runoff from the facilities resulting from such construction;

(D) the disposal of pollutants in wells or in subsurface excavations;

(E) salt water intrusion resulting from reductions of fresh water flow from any cause, including extraction of ground water, irrigation, obstruction, and diversion; and

(F) changes in the movement, flow, or circulation of any navigable waters or ground waters, including changes caused by the construction of dams, levees, channels, causeways, or flow diversion facilities.

Such information and revisions thereof shall be published in the Federal Register and otherwise made available to the public.

(g) Guidelines for pretreatment of pollutants

(1) For the purpose of assisting States in carrying out programs under section 1342 of this title, the Administrator shall publish, within one hundred and twenty days after October 18, 1972, and review at least annually thereafter and, if appropriate, revise guidelines for pretreatment of pollutants which he determines are not susceptible to treatment by publicly owned treatment works. Guidelines under this subsection shall be established to control and prevent the discharge into the navigable waters, the contiguous zone, or the ocean (either directly or through publicly owned treatment works) of any pollutant which interferes with, passes through, or otherwise is incompatible with such works.

(2) When publishing guidelines under this subsection, the Administrator shall designate the category or categories of treatment works to which the guidelines shall apply.

(h) Test procedures guidelines

The Administrator shall, within one hundred and eighty days from October 18, 1972, promulgate guidelines establishing test procedures for the analysis of pollutants that shall include the factors which must be provided in any certification pursuant to section 1341 of this title or permit application pursuant to section 1342 of this title.

(i) Guidelines for monitoring, reporting, enforcement, funding, personnel, and manpower

The Administrator shall (1) within sixty days after October 18, 1972, promulgate guidelines for the purpose of establishing uniform application forms and other minimum requirements for the acquisition of information from owners and operators of point-sources of discharge subject to any State program under section 1342 of this title, and (2) within sixty days from October 18, 1972, promulgate guidelines establishing the minimum procedural and other elements of any State program under section 1342 of this title, which shall include:

(A) monitoring requirements;

(B) reporting requirements (including procedures to make information available to the public);

(C) enforcement provisions; and

(D) funding, personnel qualifications, and manpower requirements (including a requirement that no board or body which approves permit applications or portions thereof shall include, as a member, any person who receives, or has during the previous two years received, a significant portion of his income directly or indirectly from permit holders or applicants for a permit).

(j) Lake restoration guidance manual

The Administrator shall, within 1 year after February 4, 1987, and biennially thereafter, publish and disseminate a lake restoration guidance manual describing methods, procedures, and processes to guide State and local efforts to improve, restore, and enhance water quality in the Nation's publicly owned lakes.

(k) Agreements with Secretaries of Agriculture, Army, and the Interior to provide maximum utilization of programs to achieve and maintain water quality; transfer of funds; authorization of appropriations

(1) The Administrator shall enter into agreements with the Secretary of Agriculture, the Secretary of the Army, and the Secretary of the Interior, and the heads of such other departments, agencies, and instrumentalities of the United States as the Administrator determines, to provide for the maximum utilization of other Federal laws and programs for the purpose of achieving and maintaining water quality through appropriate implementation of plans approved under section 1288 of this title and nonpoint source pollution management programs approved under section 1329 of this title.

(2) The Administrator is authorized to transfer to the Secretary of Agriculture, the Secretary of the Army, and the Secretary of the Interior and the heads of such other departments, agencies, and instrumentalities of the United States as the Administrator determines, any funds appropriated under paragraph (3) of this subsection to supplement funds otherwise appropriated to programs authorized pursuant to any agreement under paragraph (1).

charge of a specific pollutant or pollutants under controlled conditions associated with an approved aquaculture project may do so if upon submission of such program the Administrator determines such program is adequate to carry out the objective of this chapter.

(June 30, 1948, ch. 758, title III, § 318, as added Pub. L. 92–500, § 2, Oct. 18, 1972, 86 Stat. 877; amended Pub. L. 95–217, § 63, Dec. 27, 1977, 91 Stat. 1599.)

AMENDMENTS

1977—Subsec. (a). Pub. L. 95–217 inserted ''pursuant to section 1342 of this title'' after ''Federal or State supervision''.

Subsec. (b). Pub. L. 95–217 struck out '', not later than January 1, 1974,'' after ''The Administrator shall by regulation'' in existing provisions and inserted provisions that the regulations require the application to the discharge of each criterion, factor, procedure, and requirement applicable to a permit issued under section 1342 of this title, as the Administrator determines necessary to carry out the objectives of this chapter.

Subsec. (c). Pub. L. 95–217 added subsec. (c).

§ 1329. Nonpoint source management programs

(a) State assessment reports

(1) Contents

The Governor of each State shall, after notice and opportunity for public comment, prepare and submit to the Administrator for approval, a report which—

(A) identifies those navigable waters within the State which, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain applicable water quality standards or the goals and requirements of this chapter;

(B) identifies those categories and subcategories of nonpoint sources or, where appropriate, particular nonpoint sources which add significant pollution to each portion of the navigable waters identified under subparagraph (A) in amounts which contribute to such portion not meeting such water quality standards or such goals and requirements;

(C) describes the process, including intergovernmental coordination and public participation, for identifying best management practices and measures to control each category and subcategory of nonpoint sources and, where appropriate, particular nonpoint sources identified under subparagraph (B) and to reduce, to the maximum extent practicable, the level of pollution resulting from such category, subcategory, or source; and

(D) identifies and describes State and local programs for controlling pollution added from nonpoint sources to, and improving the quality of, each such portion of the navigable waters, including but not limited to those programs which are receiving Federal assistance under subsections (h) and (i).

(2) Information used in preparation

In developing the report required by this section, the State (A) may rely upon information developed pursuant to sections 1288, 1313(e), 1314(f), 1315(b), and 1324 of this title, and other information as appropriate, and (B) may utilize appropriate elements of the waste treatment management plans developed pursuant to sections 1288(b) and 1313 of this title, to the extent such elements are consistent with and fulfill the requirements of this section.

(b) State management programs

(1) In general

The Governor of each State, for that State or in combination with adjacent States, shall, after notice and opportunity for public comment, prepare and submit to the Administrator for approval a management program which such State proposes to implement in the first four fiscal years beginning after the date of submission of such management program for controlling pollution added from nonpoint sources to the navigable waters within the State and improving the quality of such waters.

(2) Specific contents

Each management program proposed for implementation under this subsection shall include each of the following:

(A) An identification of the best management practices and measures which will be undertaken to reduce pollutant loadings resulting from each category, subcategory, or particular nonpoint source designated under paragraph (1)(B), taking into account the impact of the practice on ground water quality.

(B) An identification of programs (including, as appropriate, nonregulatory or regulatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, and demonstration projects) to achieve implementation of the best management practices by the categories, subcategories, and particular nonpoint sources designated under subparagraph (A).

(C) A schedule containing annual milestones for (i) utilization of the program implementation methods identified in subparagraph (B), and (ii) implementation of the best management practices identified in subparagraph (A) by the categories, subcategories, or particular nonpoint sources designated under paragraph (1)(B). Such schedule shall provide for utilization of the best management practices at the earliest practicable date.

(D) A certification of the attorney general of the State or States (or the chief attorney of any State water pollution control agency which has independent legal counsel) that the laws of the State or States, as the case may be, provide adequate authority to implement such management program or, if there is not such adequate authority, a list of such additional authorities as will be necessary to implement such management program. A schedule and commitment by the State or States to seek such additional authorities as expeditiously as practicable.

(E) Sources of Federal and other assistance and funding (other than assistance provided under subsections (h) and (i)) which

will be available in each of such fiscal years for supporting implementation of such practices and measures and the purposes for which such assistance will be used in each of such fiscal years.

(F) An identification of Federal financial assistance programs and Federal development projects for which the State will review individual assistance applications or development projects for their effect on water quality pursuant to the procedures set forth in Executive Order 12372 as in effect on September 17, 1983, to determine whether such assistance applications or development projects would be consistent with the program prepared under this subsection; for the purposes of this subparagraph, identification shall not be limited to the assistance programs or development projects subject to Executive Order 12372 but may include any programs listed in the most recent Catalog of Federal Domestic Assistance which may have an effect on the purposes and objectives of the State's nonpoint source pollution management program.

(3) Utilization of local and private experts

In developing and implementing a management program under this subsection, a State shall, to the maximum extent practicable, involve local public and private agencies and organizations which have expertise in control of nonpoint sources of pollution.

(4) Development on watershed basis

A State shall, to the maximum extent practicable, develop and implement a management program under this subsection on a watershed-by-watershed basis within such State.

(c) Administrative provisions

(1) Cooperation requirement

Any report required by subsection (a) and any management program and report required by subsection (b) shall be developed in cooperation with local, substate regional, and interstate entities which are actively planning for the implementation of nonpoint source pollution controls and have either been certified by the Administrator in accordance with section 1288 of this title, have worked jointly with the State on water quality management planning under section 1285(j) of this title, or have been designated by the State legislative body or Governor as water quality management planning agencies for their geographic areas.

(2) Time period for submission of reports and management programs

Each report and management program shall be submitted to the Administrator during the 18-month period beginning on February 4, 1987.

(d) Approval or disapproval of reports and management programs

(1) Deadline

Subject to paragraph (2), not later than 180 days after the date of submission to the Administrator of any report or management program under this section (other than subsections (h), (i), and (k)), the Administrator shall either approve or disapprove such report or management program, as the case may be. The Administrator may approve a portion of a management program under this subsection. If the Administrator does not disapprove a report, management program, or portion of a management program in such 180-day period, such report, management program, or portion shall be deemed approved for purposes of this section.

(2) Procedure for disapproval

If, after notice and opportunity for public comment and consultation with appropriate Federal and State agencies and other interested persons, the Administrator determines that—

(A) the proposed management program or any portion thereof does not meet the requirements of subsection (b)(2) of this section or is not likely to satisfy, in whole or in part, the goals and requirements of this chapter;

(B) adequate authority does not exist, or adequate resources are not available, to implement such program or portion;

(C) the schedule for implementing such program or portion is not sufficiently expeditious; or

(D) the practices and measures proposed in such program or portion are not adequate to reduce the level of pollution in navigable waters in the State resulting from nonpoint sources and to improve the quality of navigable waters in the State;

the Administrator shall within 6 months of the receipt of the proposed program notify the State of any revisions or modifications necessary to obtain approval. The State shall thereupon have an additional 3 months to submit its revised management program and the Administrator shall approve or disapprove such revised program within three months of receipt.

(3) Failure of State to submit report

If a Governor of a State does not submit the report required by subsection (a) within the period specified by subsection (c)(2), the Administrator shall, within 30 months after February 4, 1987, prepare a report for such State which makes the identifications required by paragraphs (1)(A) and (1)(B) of subsection (a). Upon completion of the requirement of the preceding sentence and after notice and opportunity for comment, the Administrator shall report to Congress on his actions pursuant to this section.

(e) Local management programs; technical assistance

If a State fails to submit a management program under subsection (b) or the Administrator does not approve such a management program, a local public agency or organization which has expertise in, and authority to, control water pollution resulting from nonpoint sources in any area of such State which the Administrator determines is of sufficient geographic size may, with approval of such State, request the Administrator to provide, and the Administrator shall provide, technical assistance to such agency or

organization in developing for such area a management program which is described in subsection (b) and can be approved pursuant to subsection (d). After development of such management program, such agency or organization shall submit such management program to the Administrator for approval. If the Administrator approves such management program, such agency or organization shall be eligible to receive financial assistance under subsection (h) for implementation of such management program as if such agency or organization were a State for which a report submitted under subsection (a) and a management program submitted under subsection (b) were approved under this section. Such financial assistance shall be subject to the same terms and conditions as assistance provided to a State under subsection (h).

(f) Technical assistance for States

Upon request of a State, the Administrator may provide technical assistance to such State in developing a management program approved under subsection (b) for those portions of the navigable waters requested by such State.

(g) Interstate management conference

(1) Convening of conference; notification; purpose

If any portion of the navigable waters in any State which is implementing a management program approved under this section is not meeting applicable water quality standards or the goals and requirements of this chapter as a result, in whole or in part, of pollution from nonpoint sources in another State, such State may petition the Administrator to convene, and the Administrator shall convene, a management conference of all States which contribute significant pollution resulting from nonpoint sources to such portion. If, on the basis of information available, the Administrator determines that a State is not meeting applicable water quality standards or the goals and requirements of this chapter as a result, in whole or in part, of significant pollution from nonpoint sources in another State, the Administrator shall notify such States. The Administrator may convene a management conference under this paragraph not later than 180 days after giving such notification, whether or not the State which is not meeting such standards requests such conference. The purpose of such conference shall be to develop an agreement among such States to reduce the level of pollution in such portion resulting from nonpoint sources and to improve the water quality of such portion. Nothing in such agreement shall supersede or abrogate rights to quantities of water which have been established by interstate water compacts, Supreme Court decrees, or State water laws. This subsection shall not apply to any pollution which is subject to the Colorado River Basin Salinity Control Act [43 U.S.C. 1571 et seq.]. The requirement that the Administrator convene a management conference shall not be subject to the provisions of section 1365 of this title.

(2) State management program requirement

To the extent that the States reach agreement through such conference, the management programs of the States which are parties to such agreements and which contribute significant pollution to the navigable waters or portions thereof not meeting applicable water quality standards or goals and requirements of this chapter will be revised to reflect such agreement. Such management programs shall be consistent with Federal and State law.

(h) Grant program

(1) Grants for implementation of management programs

Upon application of a State for which a report submitted under subsection (a) and a management program submitted under subsection (b) is approved under this section, the Administrator shall make grants, subject to such terms and conditions as the Administrator considers appropriate, under this subsection to such State for the purpose of assisting the State in implementing such management program. Funds reserved pursuant to section 1285(j)(5) of this title may be used to develop and implement such management program.

(2) Applications

An application for a grant under this subsection in any fiscal year shall be in such form and shall contain such other information as the Administrator may require, including an identification and description of the best management practices and measures which the State proposes to assist, encourage, or require in such year with the Federal assistance to be provided under the grant.

(3) Federal share

The Federal share of the cost of each management program implemented with Federal assistance under this subsection in any fiscal year shall not exceed 60 percent of the cost incurred by the State in implementing such management program and shall be made on condition that the non-Federal share is provided from non-Federal sources.

(4) Limitation on grant amounts

Notwithstanding any other provision of this subsection, not more than 15 percent of the amount appropriated to carry out this subsection may be used to make grants to any one State, including any grants to any local public agency or organization with authority to control pollution from nonpoint sources in any area of such State.

(5) Priority for effective mechanisms

For each fiscal year beginning after September 30, 1987, the Administrator may give priority in making grants under this subsection, and shall give consideration in determining the Federal share of any such grant, to States which have implemented or are proposing to implement management programs which will—

(A) control particularly difficult or serious nonpoint source pollution problems, including, but not limited to, problems resulting from mining activities;

(B) implement innovative methods or practices for controlling nonpoint sources of pollution, including regulatory programs where the Administrator deems appropriate;

(C) control interstate nonpoint source pollution problems; or

(D) carry out ground water quality protection activities which the Administrator determines are part of a comprehensive nonpoint source pollution control program, including research, planning, ground water assessments, demonstration programs, enforcement, technical assistance, education, and training to protect ground water quality from nonpoint sources of pollution.

(6) Availability for obligation

The funds granted to each State pursuant to this subsection in a fiscal year shall remain available for obligation by such State for the fiscal year for which appropriated. The amount of any such funds not obligated by the end of such fiscal year shall be available to the Administrator for granting to other States under this subsection in the next fiscal year.

(7) Limitation on use of funds

States may use funds from grants made pursuant to this section for financial assistance to persons only to the extent that such assistance is related to the costs of demonstration projects.

(8) Satisfactory progress

No grant may be made under this subsection in any fiscal year to a State which in the preceding fiscal year received a grant under this subsection unless the Administrator determines that such State made satisfactory progress in such preceding fiscal year in meeting the schedule specified by such State under subsection (b)(2).

(9) Maintenance of effort

No grant may be made to a State under this subsection in any fiscal year unless such State enters into such agreements with the Administrator as the Administrator may require to ensure that such State will maintain its aggregate expenditures from all other sources for programs for controlling pollution added to the navigable waters in such State from nonpoint sources and improving the quality of such waters at or above the average level of such expenditures in its two fiscal years preceding February 4, 1987.

(10) Request for information

The Administrator may request such information, data, and reports as he considers necessary to make the determination of continuing eligibility for grants under this section.

(11) Reporting and other requirements

Each State shall report to the Administrator on an annual basis concerning (A) its progress in meeting the schedule of milestones submitted pursuant to subsection (b)(2)(C) of this section, and (B) to the extent that appropriate information is available, reductions in nonpoint source pollutant loading and improvements in water quality for those navigable waters or watersheds within the State which were identified pursuant to subsection (a)(1)(A) of this section resulting from implementation of the management program.

(12) Limitation on administrative costs

For purposes of this subsection, administrative costs in the form of salaries, overhead, or indirect costs for services provided and charged against activities and programs carried out with a grant under this subsection shall not exceed in any fiscal year 10 percent of the amount of the grant in such year, except that costs of implementing enforcement and regulatory activities, education, training, technical assistance, demonstration projects, and technology transfer programs shall not be subject to this limitation.

(i) Grants for protecting groundwater quality

(1) Eligible applicants and activities

Upon application of a State for which a report submitted under subsection (a) and a plan submitted under subsection (b) is approved under this section, the Administrator shall make grants under this subsection to such State for the purpose of assisting such State in carrying out groundwater quality protection activities which the Administrator determines will advance the State toward implementation of a comprehensive nonpoint source pollution control program. Such activities shall include, but not be limited to, research, planning, groundwater assessments, demonstration programs, enforcement, technical assistance, education and training to protect the quality of groundwater and to prevent contamination of groundwater from nonpoint sources of pollution.

(2) Applications

An application for a grant under this subsection shall be in such form and shall contain such information as the Administrator may require.

(3) Federal share; maximum amount

The Federal share of the cost of assisting a State in carrying out groundwater protection activities in any fiscal year under this subsection shall be 50 percent of the costs incurred by the State in carrying out such activities, except that the maximum amount of Federal assistance which any State may receive under this subsection in any fiscal year shall not exceed $150,000.

(4) Report

The Administrator shall include in each report transmitted under subsection (m) a report on the activities and programs implemented under this subsection during the preceding fiscal year.

(j) Authorization of appropriations

There is authorized to be appropriated to carry out subsections (h) and (i) not to exceed $70,000,000 for fiscal year 1988, $100,000,000 per fiscal year for each of fiscal years 1989 and 1990, and $130,000,000 for fiscal year 1991; except that for each of such fiscal years not to exceed $7,500,000 may be made available to carry out subsection (i). Sums appropriated pursuant to this subsection shall remain available until expended.

(k) Consistency of other programs and projects with management programs

The Administrator shall transmit to the Office of Management and Budget and the appropriate Federal departments and agencies a list of those assistance programs and development projects identified by each State under subsection (b)(2)(F) for which individual assistance applications and projects will be reviewed pursuant to the procedures set forth in Executive Order 12372 as in effect on September 17, 1983. Beginning not later than sixty days after receiving notification by the Administrator, each Federal department and agency shall modify existing regulations to allow States to review individual development projects and assistance applications under the identified Federal assistance programs and shall accommodate, according to the requirements and definitions of Executive Order 12372, as in effect on September 17, 1983, the concerns of the State regarding the consistency of such applications or projects with the State nonpoint source pollution management program.

(*l*) Collection of information

The Administrator shall collect and make available, through publications and other appropriate means, information pertaining to management practices and implementation methods, including, but not limited to, (1) information concerning the costs and relative efficiencies of best management practices for reducing nonpoint source pollution; and (2) available data concerning the relationship between water quality and implementation of various management practices to control nonpoint sources of pollution.

(m) Reports of Administrator

(1) Annual reports

Not later than January 1, 1988, and each January 1 thereafter, the Administrator shall transmit to the Committee on Public Works and Transportation of the House of Representatives and the Committee on Environment and Public Works of the Senate, a report for the preceding fiscal year on the activities and programs implemented under this section and the progress made in reducing pollution in the navigable waters resulting from nonpoint sources and improving the quality of such waters.

(2) Final report

Not later than January 1, 1990, the Administrator shall transmit to Congress a final report on the activities carried out under this section. Such report, at a minimum, shall—

(A) describe the management programs being implemented by the States by types and amount of affected navigable waters, categories and subcategories of nonpoint sources, and types of best management practices being implemented;

(B) describe the experiences of the States in adhering to schedules and implementing best management practices;

(C) describe the amount and purpose of grants awarded pursuant to subsections (h) and (i) of this section;

(D) identify, to the extent that information is available, the progress made in reducing pollutant loads and improving water quality in the navigable waters;

(E) indicate what further actions need to be taken to attain and maintain in those navigable waters (i) applicable water quality standards, and (ii) the goals and requirements of this chapter;

(F) include recommendations of the Administrator concerning future programs (including enforcement programs) for controlling pollution from nonpoint sources; and

(G) identify the activities and programs of departments, agencies, and instrumentalities of the United States which are inconsistent with the management programs submitted by the States and recommend modifications so that such activities and programs are consistent with and assist the States in implementation of such management programs.

(n) Set aside for administrative personnel

Not less than 5 percent of the funds appropriated pursuant to subsection (j) for any fiscal year shall be available to the Administrator to maintain personnel levels at the Environmental Protection Agency at levels which are adequate to carry out this section in such year.

(June 30, 1948, ch. 758, title III, § 319, as added Pub. L. 100–4, title III, § 316(a), Feb. 4, 1987, 101 Stat. 52; amended Pub. L. 105–362, title V, § 501(c), Nov. 10, 1998, 112 Stat. 3283; Pub. L. 107–303, title III, § 302(b)(1), Nov. 27, 2002, 116 Stat. 2361.)

REFERENCES IN TEXT

Executive Order 12372, referred to in subsecs. (b)(2)(F) and (k), is Ex. Ord. No. 12372, July 14, 1982, 47 F.R. 30959, as amended, which is set out under section 6506 of Title 31, Money and Finance.

The Colorado River Basin Salinity Control Act, referred to in subsec. (g)(1), is Pub. L. 93–320, June 24, 1974, 88 Stat. 266, as amended, which is classified principally to chapter 32A (§ 1571 et seq.) of Title 43, Public Lands. For complete classification of this Act to the Code, see Short Title note set out under section 1571 of Title 43 and Tables.

AMENDMENTS

2002—Subsecs. (i)(4), (m), (n). Pub. L. 107–303 repealed Pub. L. 105–362, § 501(c). See 1998 Amendment note below.

1998—Subsec. (i)(4). Pub. L. 105–362, § 501(c)(1), which directed the striking out of heading and text of par. (4), was repealed by Pub. L. 107–303. See Effective Date of 2002 Amendment note below.

Subsecs. (m), (n). Pub. L. 105–362, § 501(c)(2), (3), which directed the redesignation of subsec. (n) as (m) and striking out of heading and text of former subsec. (m), was repealed by Pub. L. 107–303. See Effective Date of 2002 Amendment note below.

CHANGE OF NAME

Committee on Public Works and Transportation of House of Representatives treated as referring to Committee on Transportation and Infrastructure of House of Representatives by section 1(a) of Pub. L. 104–14, set out as a note preceding section 21 of Title 2, The Congress.

EFFECTIVE DATE OF 2002 AMENDMENT

Amendment by Pub. L. 107–303 effective Nov. 10, 1998, and Federal Water Pollution Act (33 U.S.C. 1251 et seq.) to be applied and administered on and after Nov. 27,

''(1) ADMINISTRATOR.—The term 'Administrator' means the Administrator of the Environmental Protection Agency.

''(2) FARM.—The term 'farm' has the meaning given the term in section 112.2 of title 40, Code of Federal Regulations (or successor regulations).

''(3) GALLON.—The term 'gallon' means a United States gallon.

''(4) OIL.—The term 'oil' has the meaning given the term in section 112.2 of title 40, Code of Federal Regulations (or successor regulations).

''(5) OIL DISCHARGE.—The term 'oil discharge' has the meaning given the term 'discharge' in section 112.2 of title 40, Code of Federal Regulations (or successor regulations).

''(6) REPORTABLE OIL DISCHARGE HISTORY.—

''(A) IN GENERAL.—Subject to subparagraph (B), the term 'reportable oil discharge history' means a single oil discharge, as described in section 112.1(b) of title 40, Code of Federal Regulations (including successor regulations), that exceeds 1,000 gallons or 2 oil discharges, as described in section 112.1(b) of title 40, Code of Federal Regulations (including successor regulations), that each exceed 42 gallons within any 12-month period—

''(i) in the 3 years prior to the certification date of the Spill Prevention, Control, and Countermeasure plan (as described in section 112.3 of title 40, Code of Federal Regulations (including successor regulations); or

''(ii) since becoming subject to part 112 of title 40, Code of Federal Regulations, if the facility has been in operation for less than 3 years.

''(B) EXCLUSIONS.—The term 'reportable oil discharge history' does not include an oil discharge, as described in section 112.1(b) of title 40, Code of Federal Regulations (including successor regulations), that is the result of a natural disaster, an act of war, or terrorism.

''(7) SPILL PREVENTION, CONTROL, AND COUNTERMEASURE RULE.—The term 'Spill Prevention, Control, and Countermeasure rule' means the regulation, including amendments, promulgated by the Administrator under part 112 of title 40, Code of Federal Regulations (or successor regulations).

''(b) CERTIFICATION.—In implementing the Spill Prevention, Control, and Countermeasure rule with respect to any farm, the Administrator shall—

''(1) require certification by a professional engineer for a farm with—

''(A) an individual tank with an aboveground storage capacity greater than 10,000 gallons;

''(B) an aggregate aboveground storage capacity greater than or equal to 20,000 gallons; or

''(C) a reportable oil discharge history; or

''(2) allow certification by the owner or operator of the farm (via self-certification) for a farm with—

''(A) an aggregate aboveground storage capacity less than 20,000 gallons and greater than the lesser of—

''(i) 6,000 gallons; and

''(ii) the adjustment quantity established under subsection (d)(2); and

''(B) no reportable oil discharge history; and

''(3) not require compliance with the rule by any farm—

''(A) with an aggregate aboveground storage capacity greater than 2,500 gallons and less than the lesser of—

''(i) 6,000 gallons; and

''(ii) the adjustment quantity established under subsection (d)(2); and

''(B) no reportable oil discharge history; and

''(4) not require compliance with the rule by any farm with an aggregate aboveground storage capacity of less than 2,500 gallons.

''(c) REGULATION OF ABOVEGROUND STORAGE AT FARMS.—

''(1) CALCULATION OF AGGREGATE ABOVEGROUND STORAGE CAPACITY.—For purposes of subsection (b), the aggregate aboveground storage capacity of a farm excludes—

''(A) all containers on separate parcels that have a capacity that is 1,000 gallons or less; and

''(B) all containers holding animal feed ingredients approved for use in livestock feed by the Commissioner of Food and Drugs.

''(2) CERTAIN FARM CONTAINERS.—Part 112 of title 40, Code of Federal Regulations (or successor regulations), shall not apply to the following containers located at a farm:

''(A) Containers on a separate parcel that have—

''(i) an individual capacity of not greater than 1,000 gallons; and

''(ii) an aggregate capacity of not greater than 2,500 gallons.

''(B) A container holding animal feed ingredients approved for use in livestock feed by the Food and Drug Administration.

''(d) STUDY.—

''(1) IN GENERAL.—Not later than 1 year after the date of enactment of this Act [June 10, 2014], the Administrator, in consultation with the Secretary of Agriculture, shall conduct a study to determine the appropriate exemption under paragraphs (2) and (3) of subsection (b), which shall be not more than 6,000 gallons and not less than 2,500 gallons, based on a significant risk of discharge to water.

''(2) ADJUSTMENT.—Not later than 18 months after the date on which the study described in paragraph (1) is complete, the Administrator, in consultation with the Secretary of Agriculture, shall promulgate a rule to adjust the exemption levels described in paragraphs (2) and (3) of subsection (b) in accordance with the study.''

ENVIRONMENTAL COURT FEASIBILITY STUDY

Pub. L. 92–500, §9, Oct. 18, 1972, 86 Stat. 899, authorized the President, acting through the Attorney General, to study the feasibility of establishing a separate court or court system with jurisdiction over environmental matters and required him to report the results of his study, together with his recommendations, to Congress not later than one year after Oct. 18, 1972.

TRANSFER OF PUBLIC HEALTH SERVICE OFFICERS

Pub. L. 89–234, §2(b)–(k), Oct. 2, 1965, 79 Stat. 904, 905, authorized the transfer of certain commissioned officers of the Public Health Service to classified positions in the Federal Water Pollution Control Administration, now the Environmental Protection Agency, where such transfer was requested within six months after the establishment of the Administration and made certain administrative provisions relating to pension and retirement rights of the transferees, sick leave benefits, group life insurance, and certain other miscellaneous provisions.

§ 1362. Definitions

Except as otherwise specifically provided, when used in this chapter:

(1) The term ''State water pollution control agency'' means the State agency designated by the Governor having responsibility for enforcing State laws relating to the abatement of pollution.

(2) The term ''interstate agency'' means an agency of two or more States established by or pursuant to an agreement or compact approved by the Congress, or any other agency of two or more States, having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator.

(3) The term ''State'' means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern

Mariana Islands, and the Trust Territory of the Pacific Islands.

(4) The term ''municipality'' means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 1288 of this title.

(5) The term ''person'' means an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body.

(6) The term ''pollutant'' means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. This term does not mean (A) ''sewage from vessels or a discharge incidental to the normal operation of a vessel of the Armed Forces'' within the meaning of section 1322 of this title; or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if such State determines that such injection or disposal will not result in the degradation of ground or surface water resources.

(7) The term ''navigable waters'' means the waters of the United States, including the territorial seas.

(8) The term ''territorial seas'' means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of three miles.

(9) The term ''contiguous zone'' means the entire zone established or to be established by the United States under article 24 of the Convention of the Territorial Sea and the Contiguous Zone.

(10) The term ''ocean'' means any portion of the high seas beyond the contiguous zone.

(11) The term ''effluent limitation'' means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.

(12) The term ''discharge of a pollutant'' and the term ''discharge of pollutants'' each means (A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.

(13) The term ''toxic pollutant'' means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

(14) The term ''point source'' means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

(15) The term ''biological monitoring'' shall mean the determination of the effects on aquatic life, including accumulation of pollutants in tissue, in receiving waters due to the discharge of pollutants (A) by techniques and procedures, including sampling of organisms representative of appropriate levels of the food chain appropriate to the volume and the physical, chemical, and biological characteristics of the effluent, and (B) at appropriate frequencies and locations.

(16) The term ''discharge'' when used without qualification includes a discharge of a pollutant, and a discharge of pollutants.

(17) The term ''schedule of compliance'' means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard.

(18) The term ''industrial user'' means those industries identified in the Standard Industrial Classification Manual, Bureau of the Budget, 1967, as amended and supplemented, under the category of ''Division D—Manufacturing'' and such other classes of significant waste producers as, by regulation, the Administrator deems appropriate.

(19) The term ''pollution'' means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

(20) The term ''medical waste'' means isolation wastes; infectious agents; human blood and blood products; pathological wastes; sharps; body parts; contaminated bedding; surgical wastes and potentially contaminated laboratory wastes; dialysis wastes; and such additional medical items as the Administrator shall prescribe by regulation.

(21) COASTAL RECREATION WATERS.—

(A) IN GENERAL.—The term ''coastal recreation waters'' means—

(i) the Great Lakes; and

(ii) marine coastal waters (including coastal estuaries) that are designated under section 1313(c) of this title by a State for use for swimming, bathing, surfing, or similar water contact activities.

(B) EXCLUSIONS.—The term ''coastal recreation waters'' does not include—

(i) inland waters; or

(ii) waters upstream of the mouth of a river or stream having an unimpaired natural connection with the open sea.

(22) FLOATABLE MATERIAL.—

(A) IN GENERAL.—The term ''floatable material'' means any foreign matter that may float or remain suspended in the water column.

(B) INCLUSIONS.—The term ''floatable material'' includes—

(i) plastic;

(ii) aluminum cans;

(iii) wood products;

(iv) bottles; and

(v) paper products.

(23) PATHOGEN INDICATOR.—The term ''pathogen indicator'' means a substance that indicates the potential for human infectious disease.

(24) OIL AND GAS EXPLORATION AND PRODUCTION.—The term ''oil and gas exploration, production, processing, or treatment operations or transmission facilities'' means all field activities or operations associated with exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities.

(25) RECREATIONAL VESSEL.—

(A) IN GENERAL.—The term ''recreational vessel'' means any vessel that is—

(i) manufactured or used primarily for pleasure; or

(ii) leased, rented, or chartered to a person for the pleasure of that person.

(B) EXCLUSION.—The term ''recreational vessel'' does not include a vessel that is subject to Coast Guard inspection and that—

(i) is engaged in commercial use; or

(ii) carries paying passengers.

(26) TREATMENT WORKS.—The term ''treatment works'' has the meaning given the term in section 1292 of this title.

(June 30, 1948, ch. 758, title V, § 502, as added Pub. L. 92–500, § 2, Oct. 18, 1972, 86 Stat. 886; amended Pub. L. 95–217, § 33(b), Dec. 27, 1977, 91 Stat. 1577; Pub. L. 100–4, title V, §§ 502(a), 503, Feb. 4, 1987, 101 Stat. 75; Pub. L. 100–688, title III, § 3202(a), Nov. 18, 1988, 102 Stat. 4154; Pub. L. 104–106, div. A, title III, § 325(c)(3), Feb. 10, 1996, 110 Stat. 259; Pub. L. 106–284, § 5, Oct. 10, 2000, 114 Stat. 875; Pub. L. 109–58, title III, § 323, Aug. 8, 2005, 119 Stat. 694; Pub. L. 110–288, § 3, July 29, 2008, 122 Stat. 2650; Pub. L. 113–121, title V, § 5012(b), June 10, 2014, 128 Stat. 1328.)

AMENDMENTS

2014—Par. (26). Pub. L. 113–121 added par. (26).

2008—Par. (25). Pub. L. 110–288 added par. (25).

2005—Par. (24). Pub. L. 109–58 added par. (24).

2000—Pars. (21) to (23). Pub. L. 106–284 added pars. (21) to (23).

1996—Par. (6)(A). Pub. L. 104–106 substituted '' 'sewage from vessels or a discharge incidental to the normal operation of a vessel of the Armed Forces' '' for '' 'sewage from vessels' ''.

1988—Par. (20). Pub. L. 100–688 added par. (20).

1987—Par. (3). Pub. L. 100–4, § 502(a), inserted ''the Commonwealth of the Northern Mariana Islands,'' after ''Samoa,''.

Par. (14). Pub. L. 100–4, § 503, inserted ''agricultural stormwater discharges and'' after ''does not include''.

1977—Par. (14). Pub. L. 95–217 inserted provision that ''point source'' does not include return flows from irrigated agriculture.

EFFECTIVE DATE OF 2014 AMENDMENT

Amendment by Pub. L. 113–121 effective Oct. 1, 2014, see section 5012(c) of Pub. L. 113–121, set out as a note under section 1292 of this title.

TERMINATION OF TRUST TERRITORY OF THE PACIFIC ISLANDS

For termination of Trust Territory of the Pacific Islands, see note set out preceding section 1681 of Title 48, Territories and Insular Possessions.

TERRITORIAL SEA AND CONTIGUOUS ZONE OF UNITED STATES

For extension of territorial sea and contiguous zone of United States, see Proc. No. 5928 and Proc. No. 7219, respectively, set out as notes under section 1331 of Title 43, Public Lands.

DEFINITION OF ''POINT SOURCE''

Pub. L. 100–4, title V, § 507, Feb. 4, 1987, 101 Stat. 78, provided that: ''For purposes of the Federal Water Pollution Control Act [33 U.S.C. 1251 et seq.], the term 'point source' includes a landfill leachate collection system.''

§ 1363. Water Pollution Control Advisory Board

(a) Establishment; composition; terms of office

(1) There is hereby established in the Environmental Protection Agency a Water Pollution Control Advisory Board, composed of the Administrator or his designee, who shall be Chairman, and nine members appointed by the President, none of whom shall be Federal officers or employees. The appointed members, having due regard for the purposes of this chapter, shall be selected from among representatives of various State, interstate, and local governmental agencies, of public or private interests contributing to, affected by, or concerned with pollution, and of other public and private agencies, organizations, or groups demonstrating an active interest in the field of pollution prevention and control, as well as other individuals who are expert in this field.

(2)(A) Each member appointed by the President shall hold office for a term of three years, except that (i) any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term, and (ii) the terms of office of the members first taking office after June 30, 1956, shall expire as follows: three at the end of one year after such date, three at the end of two years after such date, and three at the end of three years after such date, as designated by the President at the time of appointment, and (iii) the term of any member under the preceding provisions shall be extended until the date on which his successor's appointment is effective. None of the members appointed by the President shall be eligible for reappointment within one year after the end of his preceding term.

(B) The members of the Board who are not officers or employees of the United States, while attending conferences or meetings of the Board or while serving at the request of the Administrator, shall be entitled to receive compensation at a rate to be fixed by the Administrator, but not exceeding $100 per diem, including traveltime, and while away from their homes or regular places of business they may be allowed trav-

Administrator may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken and he shall file such modified or new findings, and his recommendation, if any, for the modification or setting aside of his original determination, with the return of such additional evidence.

(June 30, 1948, ch. 758, title V, § 509, as added Pub. L. 92–500, § 2, Oct. 18, 1972, 86 Stat. 891; amended Pub. L. 93–207, § 1(6), Dec. 28, 1973, 87 Stat. 906; Pub. L. 100–4, title III, § 308(b), title IV, § 406(d)(3), title V, § 505(a), (b), Feb. 4, 1987, 101 Stat. 39, 73, 75; Pub. L. 100–236, § 2, Jan. 8, 1988, 101 Stat. 1732.)

AMENDMENTS

1988—Subsec. (b)(3), (4). Pub. L. 100–236 redesignated par. (4) as (3) and struck out former par. (3) relating to venue, which provided for selection procedure in subpar. (A), administrative provisions in subpar. (B), and transfers in subpar. (C).

1987—Subsec. (b)(1). Pub. L. 100–4, §§ 308(b), 406(d)(3), 505(a), substituted ''transacts business which is directly affected by such action'' for ''transacts such business'', ''120'' for ''ninety'', and ''120th'' for ''ninetieth'', substituted ''1316, or 1345 of this title'' for ''or 1316 of this title'' in cl. (E), and added cl. (G).

Subsec. (b)(3), (4). Pub. L. 100–4, § 505(b), added pars. (3) and (4).

1973—Subsec. (b)(1)(C). Pub. L. 93–207 substituted ''pretreatment'' for ''treatment''.

EFFECTIVE DATE OF 1988 AMENDMENT

Amendment by Pub. L. 100–236 effective 180 days after Jan. 8, 1988, see section 3 of Pub. L. 100–236, set out as a note under section 2112 of Title 28, Judiciary and Judicial Procedure.

§ 1370. State authority

Except as expressly provided in this chapter, nothing in this chapter shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance is in effect under this chapter, such State or political subdivision or interstate agency may not adopt or enforce any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance which is less stringent than the effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance under this chapter; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.

(June 30, 1948, ch. 758, title V, § 510, as added Pub. L. 92–500, § 2, Oct. 18, 1972, 86 Stat. 893.)

§ 1371. Authority under other laws and regulations

(a) Impairment of authority or functions of officials and agencies; treaty provisions

This chapter shall not be construed as (1) limiting the authority or functions of any officer or agency of the United States under any other law or regulation not inconsistent with this chapter; (2) affecting or impairing the authority of the Secretary of the Army (A) to maintain navigation or (B) under the Act of March 3, 1899, (30 Stat. 1112); except that any permit issued under section 1344 of this title shall be conclusive as to the effect on water quality of any discharge resulting from any activity subject to section 403 of this title, or (3) affecting or impairing the provisions of any treaty of the United States.

(b) Discharges of pollutants into navigable waters

Discharges of pollutants into the navigable waters subject to the Rivers and Harbors Act of 1910 (36 Stat. 593; 33 U.S.C. 421) and the Supervisory Harbors Act of 1888 (25 Stat. 209; 33 U.S.C. 441–451b) shall be regulated pursuant to this chapter, and not subject to such Act of 1910 and the Act of 1888 except as to effect on navigation and anchorage.

(c) Action of the Administrator deemed major Federal action; construction of the National Environmental Policy Act of 1969

(1) Except for the provision of Federal financial assistance for the purpose of assisting the construction of publicly owned treatment works as authorized by section 1281 of this title, and the issuance of a permit under section 1342 of this title for the discharge of any pollutant by a new source as defined in section 1316 of this title, no action of the Administrator taken pursuant to this chapter shall be deemed a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969 (83 Stat. 852) [42 U.S.C. 4321 et seq.]; and

(2) Nothing in the National Environmental Policy Act of 1969 (83 Stat. 852) shall be deemed to—

(A) authorize any Federal agency authorized to license or permit the conduct of any activity which may result in the discharge of a pollutant into the navigable waters to review any effluent limitation or other requirement established pursuant to this chapter or the adequacy of any certification under section 1341 of this title; or

(B) authorize any such agency to impose, as a condition precedent to the issuance of any license or permit, any effluent limitation other than any such limitation established pursuant to this chapter.

(d) Consideration of international water pollution control agreements

Notwithstanding this chapter or any other provision of law, the Administrator (1) shall not require any State to consider in the development of the ranking in order of priority of needs for the construction of treatment works (as defined in subchapter II of this chapter), any water pollution control agreement which may have been entered into between the United States and any other nation, and (2) shall not consider any such agreement in the approval of any such priority ranking.

(June 30, 1948, ch. 758, title V, § 511, as added Pub. L. 92–500, § 2, Oct. 18, 1972, 86 Stat. 893; amended Pub. L. 93–243, § 3, Jan. 2, 1974, 87 Stat. 1069.)

tributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste referred to in paragraph (1)(B), to order such person to take such other action as may be necessary, or both, or to order the Administrator to perform the act or duty referred to in paragraph (2), as the case may be, and to apply any appropriate civil penalties under section 6928(a) and (g) of this title'' for ''to enforce such regulation or order, or to order the Administrator to perform such act or duty as the case may be''.

Subsec. (b). Pub. L. 98–616, § 401(d), amended subsec. (b) generally. Prior to amendment, subsec. (b) read as follows: ''No action may be commenced under paragraph (a)(1) of this section—

''(1) prior to sixty days after the plaintiff has given notice of the violation (A) to the Administrator; (B) to the State in which the alleged violation occurs; and (C) to any alleged violator of such permit, standard, regulation, condition, requirement, or order; or

''(2) if the Administrator or State has commenced and is diligently prosecuting a civil or criminal action in a court of the United States or a State to require compliance with such permit, standard, regulation, condition, requirement, or order: *Provided, however*, That in any such action in a court of the United States, any person may intervene as a matter of right.''

Subsec. (e). Pub. L. 98–616, § 401(e), substituted ''to the prevailing or substantially prevailing party'' for ''to any party'' and inserted ''or section 6976 of this title''.

Subsec. (g). Pub. L. 98–616, § 401(c), added subsec. (g).

1978—Subsec. (c). Pub. L. 95–609, § 7(p)(1), substituted ''subchapter III'' for ''section 212 of this Act.''

Subsec. (e). Pub. L. 95–609, § 7(p)(2), substituted ''require'' for ''requiring''.

TRANSFER OF FUNCTIONS

For transfer of certain enforcement functions of Administrator or other official of Environmental Protection Agency under this chapter to Federal Inspector, Office of Federal Inspector for the Alaska Natural Gas Transportation System, and subsequent transfer to Secretary of Energy, then to Federal Coordinator for Alaska Natural Gas Transportation Projects, see note set out under section 6903 of this title.

§ 6973. Imminent hazard

(a) Authority of Administrator

Notwithstanding any other provision of this chapter, upon receipt of evidence that the past or present handling, storage, treatment, transportation or disposal of any solid waste or hazardous waste may present an imminent and substantial endangerment to health or the environment, the Administrator may bring suit on behalf of the United States in the appropriate district court against any person (including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility) who has contributed or who is contributing to such handling, storage, treatment, transportation or disposal to restrain such person from such handling, storage, treatment, transportation, or disposal, to order such person to take such other action as may be necessary, or both. A transporter shall not be deemed to have contributed or to be contributing to such handling, storage, treatment, or disposal taking place after such solid waste or hazardous waste has left the possession or control of such transporter if the transportation of such waste was under a sole contractural[1] arrangement arising from a published tariff and acceptance for carriage by common carrier by rail and such transporter has exercised due care in the past or present handling, storage, treatment, transportation and disposal of such waste. The Administrator shall provide notice to the affected State of any such suit. The Administrator may also, after notice to the affected State, take other action under this section including, but not limited to, issuing such orders as may be necessary to protect public health and the environment.

(b) Violations

Any person who willfully violates, or fails or refuses to comply with, any order of the Administrator under subsection (a) of this section may, in an action brought in the appropriate United States district court to enforce such order, be fined not more than $5,000 for each day in which such violation occurs or such failure to comply continues.

(c) Immediate notice

Upon receipt of information that there is hazardous waste at any site which has presented an imminent and substantial endangerment to human health or the environment, the Administrator shall provide immediate notice to the appropriate local government agencies. In addition, the Administrator shall require notice of such endangerment to be promptly posted at the site where the waste is located.

(d) Public participation in settlements

Whenever the United States or the Administrator proposes to covenant not to sue or to forbear from suit or to settle any claim arising under this section, notice, and opportunity for a public meeting in the affected area, and a reasonable opportunity to comment on the proposed settlement prior to its final entry shall be afforded to the public. The decision of the United States or the Administrator to enter into or not to enter into such Consent Decree, covenant or agreement shall not constitute a final agency action subject to judicial review under this chapter or chapter 7 of title 5.

(Pub. L. 89–272, title II, § 7003, as added Pub. L. 94–580, § 2, Oct. 21, 1976, 90 Stat. 2826; amended Pub. L. 95–609, § 7(q), Nov. 8, 1978, 92 Stat. 3083; Pub. L. 96–482, § 25, Oct. 21, 1980, 94 Stat. 2348; Pub. L. 98–616, title IV, §§ 402, 403(a), 404, Nov. 8, 1984, 98 Stat. 3271, 3273.)

CODIFICATION

In subsec. (d), ''chapter 7 of title 5'' substituted for ''the Administrative Procedure Act'' on authority of Pub. L. 89–554, § 7(b), Sept. 6, 1966, 80 Stat. 631, the first section of which enacted Title 5, Government Organization and Employees.

AMENDMENTS

1984—Subsec. (a). Pub. L. 98–616, § 402, inserted ''past or present'' after ''evidence that the'', substituted ''against any person (including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility) who has contributed or, who is'' for ''to immediately restrain any person'', substituted ''to restrain such person from'' for ''to stop'', substituted '', to order such person to take such other action as may be necessary, or both'' for ''or to take such other action as may be necessary'', and inserted ''A transporter shall

[1] So in original. Probably should be ''contractual''.

EXHIBITS

Exhibit	Document
Exhibit A	EPA, Ground Water Pollution from Subsurface Excavations, EPA-430/9-73-012 (1973), http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=2000Z6YZ.TXT (excerpt)
Exhibit B	*Water Pollution Control Legislation–1971 (Proposed Amendments to Existing Legislation): Hearings before the H. Comm. on Pub. Works*, 92nd Cong. 230 (1971) (statement of Hon. William Ruckelshaus, Administrator, EPA) (excerpt)
Exhibit C	United States' Memorandum in Support of Rule 12(b) Motion and In The Alternative for Summary Judgment, *Kelley ex rel. People of the State of Michigan v. United States*, 618 F. Supp. 1103 (W.D. Mich. 1985) (No. G83-630) (excerpt)
Exhibit D	EPA, Final Comprehensive State Ground Water Protection Program Guidance, EPA 100-R-93-001 (Dec. 1992), http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=100048T6.TXT (excerpt)
Exhibit E	EPA, Office of Inspector General, Effectiveness of Effluent Guidelines Program for Reducing Pollutant Discharges Uncertain, Report No. 2004-P-00025 (Aug. 24, 2014), https://www.epa.gov/office-inspector-general/report-effectiveness-effluent-guidelines-program-reducing-pollutant (excerpt)
Exhibit F	EPA, Holyoke Gas & Electric Department Cabot Street Station Response to Comments on Draft National Pollutant Discharge Elimination System (NPDES) Permit No. MA0001520 (undated), https://www3.epa.gov/region1/npdes/permits/2005/finalma0001520rtc.pdf (excerpt)

Exhibit	Document
Exhibit G	EPA, Response to Public Comments, EPA NPDES Pesticide General Permit (Oct. 31, 2011), https://www.regulations.gov/document?D=EPA-HQ-OW-2010-0257-1277 (excerpt)
Exhibit H	EPA, Fact Sheet, Draft General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts (2014), https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit (excerpt)
Exhibit I	EPA, Response to Public Comments, Permit Nos. MAG910000 and NHG910000 (undated), https://www3.epa.gov/region1/npdes/remediation/ResponsetoComments.pdf (excerpt)
Exhibit J	Brief for the United States as Amicus Curiae in Support of Plaintiffs-Appellees, *Haw. Wildlife Fund v. Cty. of Maui*, No. 15-17447, 2018 WL 650973 (9th Cir. Feb. 1, 2018), ECF No. 40 (excerpt)
Exhibit K	U.S. Department of Housing and Urban Development and U.S. Census Bureau, American Housing Survey for the United States: 2011, Current Housing Reports, H150/11 (Sept. 2013), https://www.census.gov/content/dam/Census/programs-surveys/ahs/data/2011/h150-11.pdf (excerpt)
Exhibit L	EPA, Section 319 Nonpoint Source Program Success Story, Tennessee, Installing Best Management Practices Abates Acid Mine Drainage in Crab Orchard Creek, EPA 841-F-14-001DD (May 2014), https://www.epa.gov/nps/nonpoint-source-success-stories
Exhibit M	EPA, Nonpoint Source Success Story, Tennessee Septic Tank Effluent Pumping Project Improves King Branch, EPA 841-F-16-001R (Aug. 2016), https://www.epa.gov/nps/nonpoint-source-success-stories

Exhibit	Document
Exhibit N	EPA, 2012 Guidelines for Water Reuse, EPA/600/R-12/618 (Sept. 2012), https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=253411 (excerpt)
Exhibit O	EPA, ICR Supporting Statement, Information Collection Request for National Pollutant Discharge Elimination System (NPDES) Program (Renewal), OMB Control No. 2040-0004, EPA ICR No. 0229.22 (Sept. 2017), https://www.regulations.gov/document?D=EPA-HQ-OW-2008-0719-0110 (excerpt)

EXHIBIT A

GROUND WATER POLLUTION FROM SUBSURFACE EXCAVATIONS

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
Washington, D. C. 20460

1973

EPA-430/9-73-012

GROUND WATER POLLUTION FROM SUBSURFACE EXCAVATIONS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Water Programs
Water Quality and Non-Point Source Control Division
Washington, D.C. 20460

1973

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 - Price $2.25

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INTRODUCTION

"Ground water quality" is the name of the game in a discussion of subsurface excavations as sources of pollution. In rare instances pollution from subsurface excavations moves directly to surface water bodies without entering the ground water domain. To the extent that ground water moves to the surface, which is considerable, polluted ground water causes surface water pollution, but it is the alteration of the chemical, physical, biological and radiological integrity of ground water that is the overriding concern.

Identification of the nature of polluting excavations starts from the premise that every hole in the ground, whether natural or man-made, is a potential source of ground water contamination. A "well" is a particular type of subsurface excavation rather than merely, "a place from which water issues forth" as it was described in ancient England where the word originated.

SECTION III - POLLUTION FROM OTHER SUBSURFACE EXCAVATIONS

LAGOONS, BASINS, AND PITS

In general, a lagoon comprises a natural depression in the land or a sector of some bay, estuary, or wetland area diked off from the remainder. No sharp line of definition distinguishes it from a basin, which is most commonly constructed by formal diking or by a combination of excavating and diking. Pits are distinguished from lagoons and basins by a smaller ratio of surface area to depth.

Unlike excavations used in septic systems or in landfill operations, lagoons, basins, and pits are usually open to the atmosphere, although pits and small basins may sometimes be placed under a roof. Some are intended to discharge liquid to the soil system and hence to the ground water, others are designed to be watertight. The former are, therefore, unlined structures sited on good infiltrative surfaces; the later are lined with puddled clay, concrete, asphalt, metal, or plastic sheeting. Thus, both by design and by accident or failure, this type of structure is of concern in the context of ground water quality.

Lagoons and basins are adapted to a wide spectrum of municipal and industrial uses including storage, processing, or waste treatment on a large scale. For example, the unlined lagoon or basin may serve as a large septic tank for raw sewage, a secondary or tertiary sewage oxidation pond, or as a spreading basin for disposing of effluent from treatment ponds or conventional waste water treatment plants by ground water recharge. In industry the unlined system may serve as a cooling pond or to hold hot waste water until its temperature is suitable for discharge to surface waters, or to store waste water for later discharge into streams during flood flows or for application to the land during the growing season. Some unlined lagoons are used for a special purpose, such as evaporating ponds, to concentrate and recover salt from saline water. Lined basins are used for a number of purposes, including evaporation ponds for concentrating salts or process brines. Recovery of minerals, or more economic disposal of the concentrate, may be the motivating factor. In oil fields, refineries, and chemical processing plants, lined pits are used as holding sumps for brines or wastes as a stage in disposal by well injection, or other acceptable procedure. In the East Bay area of California, a lined basin has served as a receiving sump for fruit and

vegetable cannery wastes to be barged to sea or hauled to land disposal sites.

Unlined pits serve to a limited extent in sewerage; examples include pit privies and cesspools or percolation devices in septic systems. They are also widely used to dispose of storm water from roof drains. In California both pits and basins are used to dispose of storm water which would otherwise collect in highway underpasses and interfere with traffic.

Lined pits have historically been used in industry for processes ranging from tanning of animal hides to metal plating. They are commonly used to house sewage pumps below the ground level. In both industry and municipal sewerage, they are used as intake sumps in pumping installations. Although lined pits are commonly concrete or metal structures, undetected leakage of highly concentrated pollutants can have a significant effect on ground water.

Scope of Problem

Data by which to evaluate the existing scope of the problem of municipal and industrial waste lagoons and similar open

excavations in relation to ground water quality have not been assembled and analyzed. State health departments and water quality control boards can cite instances in which ponded contaminants have created a local pollution problem. To assess the degree to which the use of lagoons, basins, and pits in fact degrade ground water quality will require an extensive survey of the literature and of the practice of ponding wastes and process materials. The present outlook is that the need for such an assessment will become increasingly great with time. Two factors support this conclusion:

- As institutionalized in Public Law 92-500, there is a growing reluctance of regulatory agencies to permit waste discharges to surface waters, thus requiring either land disposal of sewage effluents or the creation of an increasing volume of process brines in achieving an acceptable effluent quality; and
- A growing tendency to require industry to process its own wastes prior to discharge to the municipal sewer, thus creating more need to use lagoons and basins either for waste processing or for managing waste processing brines.

Both of these developments suggest a need to control the pathways by which contaminants may move from ponds to ground water and to monitor the effectiveness of control measures.

Potential Hazard to Ground Water

The potential of sewage lagoons to degrade ground water quality is essentially the same as that of septic systems. An extensive survey of the literature (McGauhey and Krone, 1967) shows that a continuously inundated soil soon clogs to the extent that the infiltration rate is reduced below the minimum for an acceptable infiltration system. If the ground water surface is too close to the lagoon bottom, a hanging column of water will be supported by surface tension and the soil will not drain. Clogging will then continue indefinitely even though no new liquid is added to the system. A spreading pond designed to discharge effluent to the ground water must, therefore, be loaded and rested intermittently to maintain an acceptable recharge rate. If, however, isolating the contents of the lagoon from the ground water is the objective of the system, a low infiltration rate may still mean an undesirable quantity of polluted water passing the water-soil interface. The pollutants carried downward with percolating water from a

sewage lagoon are those described in the section on septic tanks. Not all of the salts introduced to the ground water originate in domestic use. In some instances, such as that of Colorado River water delivered to Southern California, the mineral content of the imported water may be higher than that of the local ground water.

Liquids percolating from lagoons or basins used by industry have a greater potential to degrade ground water than does domestic sewage. Chromates, gasoline, phenols, picric acid, and miscellaneous chemicals have been observed to travel long distances with percolating ground water. Unlined lagoons, basins, and pits are commonly used by industry for the storage of liquid raw materials and waste effluent. Most of these facilities are simply open excavations or diked depressions in which the liquid is temporarily or permanently stored. Few have been designed with proper consideration to water tightness, so that leakage of potential contaminants into the underlying ground water reservoir is very common even though the leakage may seldom be known to exist. Liquids stored in industrial lagoons, basins, and pits may contain brines, arsenic compounds,

heavy metals, acids, gasoline products, phenols, radioactive substances, and many other miscellaneous chemicals.

Where storage areas have been actively used for many years and leakage through the sides and bottom of a particular lagoon or basin has taken place, the quantity of contaminated ground water can be significant and the plume of polluted liquid may have traveled long distances with the percolating ground water. In some instances, the first realization that extensive ground water pollution has occurred may come when the plume reaches a natural discharge area at a stream and contamination of surface waters is noted.

An example of the fate and environmental consequences of a leaky basin containing metal-plating waste effluent from an industrial plant is given in Perlmutter and Lieber (1970). Plating wastes containing cadmium and hexavalent chromium seeped down from disposal basins into the upper glacial aquifer of southeastern Nassau County, New York. The seepage formed a plume of contaminated water over 1200 meters (4,000 feet) long, about 300 meters (1,000 feet) wide, and as much as 20 meters (70 feet) thick. Some of the

contaminated ground water is being discharged naturally into a small creek that drains the aquifer. The maximum observed concentration of hexavalent chromium in the ground water was about 40 mg/l, and concentrations of cadmium have been observed as high as 10 mg/l.

In another case in New Jersey, unlined waste lagoons constructed in sand and gravel beds leaked over 75 million liters (20 million gallons) of effluent into the upper 6 meters (20 feet) of aquifer over a period of only a few years. The contaminated ground water contains high concentrations of phenols, chromium, zinc, and nickel.

Control Methods

In the case of lagoons or basins for deliberate disposal of sewage effluents, or surface runoff by ground water recharge, controls specifically pertinent to ground water protection are essentially self-generating -- the system simply will not work if not properly designed. The first control measure in ground water protection from spreading basins is to apply existing knowledge to their siting and design. Existing engineering and hydrogeologic knowledge would prohibit the construction of such systems directly in

the aquifer; require adequate distance between the infiltrative surface and the ground water surface to permit drainage; and prohibit construction in faulted or fractured strata or in unsuitable soils.

Control of industrial waste discharges to the ground water is a complex problem. In a state with a highly organized water pollution control agency (e.g., California), individual permits are issued on the basis of adequate design and surveillance programs. Because of the variety of industrial wastes and the varied situations in which they occur, control of ground water pollution from such wastes depends both upon proper design of new systems and upon discovery and correction of existing poor systems. Methods for controlling ground water pollution from industrial lagoons, basins, and pits include:

- Pretreatment of wastes for removal of at least the toxic chemicals.
- Lining with impervious barriers of all lagoons, basins, and pits that contain noxious fluids. This is the principal control technique recommended by

some agencies, such as the Delaware River Basin Commission.

- Use barrier wells, pumped to intercept plumes of contaminated ground water from existing industrial basins where leakage has occurred. Such wells have been used successfully, but can be costly to install and operate. The water removed must be treated before redisposal.
- Banning the use of pits. An example is found in Kansas, where thousands of brine pits were used by the oil industry. Kansas was the first State to ban their use because of the contamination of ground water.
- Locating and identifying unauthorized pits on industrial sites, on a case-by-case basis, and apply appropriate regulatory action.

Monitoring Procedures

Lagoons, basins, and pits represent pollution sources which may be of significance to ground water quality degradation. Therefore, a program involving special monitoring wells on a priority basis is a possible approach.

A program of periodic sampling and evaluation of data from existing wells, selected for their potential to reveal both normal ground water quality and point contamination, is another monitoring approach. Accompanying this should be an evaluation of the control measures themselves to assure that ground water protection is indeed being accomplished.

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LANDFILLS

The Matter of Definition

To evaluate the effects of land disposal of solid wastes in the context of "landfills" it is necessary to recognize an unfortunate lack of distinction between the properly designed and constructed sanitary landfill and the variety of operations that are properly classed as refuse dumps. A landfill is herein defined as any land area dedicated or abandoned to the deposit of urban solid waste regardless of how it is operated or whether or not a subsurface excavation is actually involved. A "sanitary landfill" is:

> "A method of disposal of refuse on land without creating nuisances or hazards to public health or safety, by utilizing the principles of engineering to confine the refuse to the smallest practical area, to reduce it to the smallest practical volume, and to cover it with a layer of earth at the conclusion of each day's operation or at such more frequent intervals as it may be necessary."

Less than 10 percent of the refuse disposal sites in the United States are operated within this accepted definition of a sanitary landfill. Very few of those considered true sanitary landfills were established in sites studied and

selected for the special purposes of hazardous waste disposal.

Urban, or municipal, solid waste is considered to include household, commercial, and industrial wastes which the public assumes responsibility for collecting. However, commercial solid waste and industrial solid wastes, presently collected and hauled privately, may be discharged into a public landfill, along with municipal wastes and refuse which the citizen himself delivers.

Environmental Consequences

The potential hazard of landfills to ground water quality via leachate is a function of the total amount of waste generated, its areal distribution, the composition of the waste itself, and the siting, design, and operation of the fill. The U.S. Environmental Protection Agency estimated that in 1969 urban solid waste totaled 225 million tons per year, while industrial solid waste was about 100 million tons. Various estimates of this total for 1972 are about one ton per capita per year--almost 2.72 kilograms per person per day. In 1970 there were some 16,000 authorized land disposal sites, and perhaps 10 times that many

unauthorized dumping grounds. Because wastes are generated and disposed of where people are, the pattern of population distribution gives a clue to the location and intensity of landfill practice.

Typical values of components of solid wastes collected in urban communities are shown in Table 13. From this Table it may be concluded that slightly over 70 percent of domestic refuse is biodegradable organic matter of which about three-quarters (50 percent of total waste) is paper and wood. An additional fraction ranging from 1 to 15 percent in the Table involves materials which might include some leachate solids such as ashes and certain soils. Studies made in Berkeley, California, in 1952 and repeated for the same area in 1967 verify this conclusion and show that the percentages of individual components changed very little over the 15-year period.

Data on the amount and composition of industrial solid wastes and its disposal are less extensive. A survey (Manufacturing Chemists Association, 1967) of 991 chemical plants, of which 889 were production facilities is reported in Table 14. It shows that 75 percent of waste solids were

noncombustible process solids and that 71 percent of the total was disposed of by landfill on company-owned property. No data are at hand on the composition of these wastes but it must be presumed that some fraction of the total was leachable if conditions leading to leaching occurred.

	Santa Clara[a]	Los Angeles[b]	Louis-ville[c]	Quad-Cities N.J.[d]	Purdue Univ.[e]	23 Cities[f]	Madison Wis.[g]	National Avg.
Paper Products	50	41	60	45	42	46	52	50
Food Wastes	12	6	18	[i]	12	17	10	15
Garden Waste	9	21	--	[i]	12	10	8	5
Plastics	1	2	--	2	1	1	2	3[j]
Cloth, Leather Rags. Rubber	4	2	--	5	2	4	4	2[k]
Wood	2	2	--	[i]	2	3	2	
Rocks, Dirt Miscellaneous Unclassified	7	12	3	10	15	1	--	7
Metals	8	6	9	9	8	9	7	8
Glass and Ceramics	7	8	10	6	6	9	15	8

a. EPA, 1970; University of California
b. Bergman, 1972
c. EPA, 1970; University of Louisville
d. US Public Health Service, 1968
e. Bell, 1963
f. Niessen and Chanskey, 1970
g. Ham, 1971
h. Salvato, et al, 1971
i. Total 3 categories ≈ 23 percent
j. Includes rubber
k. Rubber included with plastics

Table 13 Components of domestic solid waste (expressed as percentages of total).

	Total Per Year (Thousands of Metric Tons)	Percent Total
Type of Waste		
Process solids, non-combustible	7,624	75
Process solids, combustible	520	5
Containers, non-combustible	58	1
Containers, combustible	152	1
Fly ash from fuel combustion	1,440	14
Other, or unspecified	423	4
	10,217	
Disposal Method		
Landfill on company property	7,318	71
Landfill away from company property	472	5
Incineration, with heat recovery	83	1
Incineration, without heat recovery	210	2
Open dump burning	99	1
Contracted disposal	1,476	15
Other, or unspecified	559	6
	10,217	

Table 14 Landfill disposal of chemical process wastes.

Leaching of Landfills

Leaching of landfills with consequent degradation of underlying ground water depends upon several factors. These, together with measures for control were summarized in 1971 (Salvato, et al, 1971).

If a landfill is to produce leachate there must be some source of water moving through the fill material. Possible sources include: (1) precipation, (2) moisture content of refuse, (3) surface water infiltrating into the fill, (4) percolating water entering the fill from adjacent land area, or (5) ground water in contact with the fill. In any event, leachate is not produced in a landfill until at least some significant portion of the fill material reaches field capacity. To accomplish this 4.11 cm of water per meter of depth of fill is reported to be necessary. This value is far in excess of that which might be produced from a typical mixed refuse. Moisture in refuse is about 20 percent by weight. Because of the high paper content and the relatively inert material shown in the typical analyses, Table 13, only a small amount of moisture is released by the decomposition of the organic solids in refuse. A composite sample of an average municipal refuse is shown in Table 15.

	Percent
Moisture	20.73
Cellulose, sugar, starch	46.63
Lipids	4.50
Protein – 6.25N	2.06
Other organics	1.15
Inerts	24.93
	100.00

Table 15 Composition of municipal refuse

To induce composting, a moisture content of 50 to 60 percent is required, hence a fill in a very arid region having no source of moisture except that of urban refuse will decompose very slowly and produce little if any leachate. On the other hand, if a fill were made of fruits and vegetables having 80 to 90 percent moisture, anaerobic decomposition would proceed rapidly and leachate would be produced. Thus, landfill is not recommended for cannery wastes alone.

Percolating water entering a landfill from surrounding land is not likely in a proper landfill. If other sources of

water are excluded from a landfill by employing procedures described in a later section, the production of leachate in a well designed and managed landfill can be effectively eliminated. A proper landfill not intersecting the water table will not cause water quality impairment for either domestic or irrigation use. Subsequent reports of test borings around landfills dating back as far as 50 years in England showed no evidence of ground water pollution as a result of leaching. Similarly, no evidence was found in Holland that past landfilling has been a source of pollution of ground water. Evidence reported from Illinois and Minnesota is that leaching did not contaminate ground water in two major fills built within the aquifer itself. Compaction of fill material, clogging of fill area walls and balance of hydrostatic pressure cause ground water to flow around the fill rather than through it.

Absence of leaching as an important problem is characteristic of landfill sites engineered and constructed in accord with best current technology. In this category are most of the sanitary landfills comprising 8 percent of the present land disposal situations, and presumably those to be built in the future. The 75 percent of urban refuse

placed in dumps, which in varying degrees are open to external sources of water, are likely to produce leachate in significant amounts. It is estimated that of 124 cm annual rainfall in New York, 45 percent will infiltrate into an unsealed and unprotected dump. At some seasons of the year up to 75 percent of the infiltrated water may be returned to the atmosphere by evapotranspiration. The remainder, and at times all, of the infiltrate will percolate through the landfill. If the fill is in a subsurface excavation, this percolate will move downward to the ground water at a rate governed by the degree of clogging of the underlying and surrounding soil. Clogging, however, may reduce permeability at the infiltrative surface; it cannot be assumed that the landfill will long discharge leachate at an appreciable rate. It may tend to become essentially a basin filled with saturated refuse and soil. Further rainfall will then run off the fill surface without coming in contact with refuse. However, if leachate is produced within a fill and soil clogging controls its escape to the ground water, a large fill area, even at a low rate of movement into the underlying strata, could with time, discharge a significant volume of leachate.

A secondary leaching phenomenon associated with all types of landfills not subjected to specific controls is the result of CO_2 generated in the fill being forced outward into the surrounding soil. When picked up by percolating rain water, this increases the aggressiveness of water to limestones and dolomites and so increases the hardness of ground water. A refuse of the composition shown in Table 15 is theoretically capable of producing 0.169 cubic meters of CO_2 per kilogram of refuse (Anderson and Callinan, 1969). However, the balance of nutrients, the moisture, and other environmental factors are unlikely to exist over the time span necessary for any such complete destruction of the carbonaceous fraction of refuse.

Nature and Amount of Leachate

Data on the analysis of leachate vary widely. Much of it comes from short-term lysimeter studies in which researchers had to make special effects to saturate the refuse so as to produce maximum leaching. Thereafter, experiments were often terminated before the leaching rate reached an equilibrium. Data on leachate from several sources are summarized in Table 16.

Table 16 indicates what many observers have reported: the initial values of BOD and COD are always high. Studies of operating landfills show constituents of leachate to include:

COD	8,000 - 10,000 mg/l
BOD	2,500 mg/l
Iron	600 mg/l
Chloride	250 mg/l

Table 16 also shows hardness, alkalinity, and some ions to be significantly increased. The California data also show that continuous flow through one acre-foot of newly deposited refuse might leach out during the first year approximately:

Sodium plus potassium	1.36 tons
Calcium plus magnesium	0.9 tons
Chloride	0.83 tons
Sulfate	0.21 tons
Bicarbonates	3.54 tons

Determination (mg/ℓ)	Source[a]					
	1[b]	2[b]	3[b]	4[c]	5[c]	6[c]
pH	5.6	5.9	8.3			
Total hardness ($CaCO_2$)	8,120	3,260	537		8,700	500
Iron total	305	336	219	1,000		
Sodium	1,805	350	600			
Potassium	1,860	655	no result			
Sulfate	630	1,220	99		940	24
Chloride	2,240	no result	300	2,000	1,000	220
Nitrate	no result	5	18			
Alkalinity as $CaCO_2$	8,100	1,710	1,290			
Ammonia nitrogen	815	141	no result			
Organic nitrogen	550	152	no result			
COD	no result	7,130	no result	750,000		
BOD	32,400	7,050	no result	720,000		
Total dissolved solids	no result	9,190	2,000		11,254	2,075

a. No age of fill specified for Sources 1-3, Source 4 is initial leachate composition, 5 is from 3-year old fill, 6 is from 15-year old fill.
b. Data from Los Angeles County (1968).
c. Data from Emrich and Landon (1969).

Table 16 Leachate composition

Rates for subsequent years were expected to be greatly reduced.

Field studies of the amount and quality of leachate through well-designed fills have been made by the Los Angeles County Sanitation Districts. At their Mission Canyon Landfill, underdrains were installed beneath two large fills to entrap leachate. One was installed in 1963; the other in 1968. At the time of Meichtry's report (1971) the first of these two had produced nothing but odorous gases although the fill was heavily irrigated from 1968 onward. The second, deeper fill produced odorous gases but no leachate until March 1968 when 11 cm of rain fell in 24 hours. On that occasion 806.1 liters of leachate were collected. Flow then continued at a rate of about 5678 liters per month. Periodic analysis of the leachate indicated that a spring in the canyon wall beneath the fill, rather than infiltration of the fill, was the source.

Table 17 shows both the initial composition of the leachate and its reduction with time over a 3-year period. The Table shows a decrease in concentration of most constituents of the leachate with time. This same phenomenon has been

observed in comparing a 27-year old abandoned fill with an active fill.

Pilot studies were made in 1964 to 1966 to study the effects of rainfall and irrigation on landfill leaching. Two cells, 15 meters square at the bottom and sloped to the top, were filled with a single 5.3 meter lift of refuse, plus a 61 cm earth cover. Devices to collect leachate at various depths were installed. One was subjected to simulated rainfall, the other to irrigation of turf. After 27 months and 330 cm of rainfall, no leachate appeared in the rainfall cell. A small amount of water appeared in the topmost cell of the irrigated system at 27 months and 429 cm of applied water.

Constituent	Leachate Analysis	
	Mission Canyon Landfill	
	3-18-68	3-24-71
pH	5.75	7.40
Total Solids, mg/ℓ	45,070	13,629
Suspended Solids, mg/ℓ	172	220
Dissolved Solids, mg/ℓ	44,900	13,409
Total Hardness, mg/ℓ $CaCO_3$	22,800	8,930
Calcium, mg/ℓ $CaCO_3$	7,200	216
Magnesium, mg/ℓ $CaCO_3$	15,600	8,714
Total Alkalinity, mg/ℓ $CaCO_3$	9,680	8,677
Ammonia, mg/ℓ N	0.0	270
Organic Nitrogen, mg/ℓ N	104	92.4
BOD, mg/ℓ O	10,900	908
COD, mg/ℓ O	76,800	3,042
Sulfate, mg/ℓ SO_4	1,190	19
Total Phosphate, mg/ℓ PO_4	0.24	0.65
Chloride, mg/ℓ Cl	660	2,355
Sodium, mg/ℓ Na	767	1,160
Potassium, mg/ℓ K	68	440
Boron, mg/ℓ B	1.49	3.76
Iron, mg/ℓ Fe	2,820	4.75

Table 17 Change in leachate analysis with time (Meichtry, 1971).

Limited experiments, such as the foregoing, support the conclusion previcusly cited that leachate from well-designed fills is not a significant problem.

The time required to produce leachate from a fill penetrated by rainfall can be predicted by moisture-routing techniques (Remson, 1968). For example, a 2.44 meter lift of refuse with 61 cm of earth cover will take from 1 to 2 1/2 years to reach field capacity and produce leachate if 117.8 cm of rainfall is allowed to infiltrate and percolate into the fill.

In one field observation (Hassan, 1971) a landfill partly inundated by ground water was investigated. Well water 325 meters down gradient from the fill showed leachate effects in terms of hardness, alkalinity, Ca, Mg, Na, K, and Cl. At a distance of 1,000 meters the effects were undetectable. Inasmuch as the fill was an old one, it might be concluded that the ground water was not seriously affected. However, similar studies in Germany revealed the presence of leachate effects in ground water 3,000 meters away.

In the case of industrial wastes disposed of by landfill on company property, little is known of the nature and extent of leachate. Table 14 shows that noncombustible solids represent 75 percent and ashes another 14 percent of the total. These data suggest that soluble minerals provide the most common materials which might be leached from industrial waste fills. In terms of ground water pollution, oil, process sludges, and salt solutions from lagoons and pits are likely to be the most significant industrial wastes.

Control Methods

In general, procedures for the control of leachate are those which exclude water from the landfill, prevent leachate from percolating to ground water, or collect leachate and subject it to biological treatment. Obviously, the possible utilization of these three approaches is maximum in the design phase of a landfill operation and minimal in some types of existing landfills.

In existing situations the potential of a landfill to pollute ground water can be limited by such procedures as:

- Separating at the source wastes which are unacceptable in a given landfill situation,

- Controlling haulers by requiring permits and by enforcing restrictions on materials for disposal,
- Licensing private haulers of industrial wastes.

In the case of a new projected landfill the control measures include:

- Select site to achieve both general regulations and specific objectives. Typical of the general measures for siting control are those of Los Angeles County which recognize three classes of fills:
  - Class I, which may accept all types of solid wastes by reason of its geologic isolation from any contact with the ground water. This type of site is essentially an impervious bowl, and hence is not common.
  - Class II, which may accept the normal run of mixed municipal solid refuse (no waste oils, or chemical sludges).
  - Class III, which may accept only inert earth-type materials.

- Specific siting involves evaluation of alternate locations by hydrogeologists and engineers to determine such things as:
  - Location and depth of ground water in the vicinity.
  - Importance of underlying ground water as a resource, both present and future.
  - Nature of geology of the site.
  - Feasibility of excluding both surface water and ground water from the finished fill.

- Design landfill to correct deficiencies of best available site:
  - Use compacted earth fill to seal walls and bottom of fill site. If the fill is above water table, as is most commonly required, this will minimize the rate of escape of leachate from the fill. If the fill is in an aquifer, the movement of the ground water into and out of the fill will be minimized.
  - Provide underdrainage system to collect leachate and deliver it to a sump.

- Drain sump to surface by a valved pipe or by a vertical well into which a submersible pump may be inserted, if necessary, to collect and deliver leachate for biological treatment.

- Construct fill with purpose of keeping the minimum of refuse surface exposed to rainfall, and the working surface and site well drained. Use dike and fill technique to isolate fill from unfilled area.

- Utilize water for dust control during construction in such amounts that evaporation rather than infiltration is its fate.

- Divert surface water from the fill site during and after fill construction by means of peripheral bypass drains.

- Compact and slope fill cover for good surface drainage, vent gases through the fill cover with J-vents.

In new or existing landfills:

- Provide ccntinuing maintenance of the graded finished fill cover, fill in and regrade surface as shrinkage of the fill causes cracks or depressions which might serve to increase infiltration.
- Seed completed fill surface with a high transpiration cover crop.
- Avoid over irrigation of surface plantings.
- Divert both surface and ground water around fill site where feasible.
- Reduce the amount of putrescible solid waste by initiating regional reclamation activities under a statewide authority which features energy conversion of the organic fraction of refuse.

In the case cf existing landfills and dumps:

- Intercept polluted ground water at the fill site by well points in or near the fill area if the situation is serious.
- Initiate and implement statewide programs of waste management which feature regional landfills, thus replacing numerous small refuse dumps with

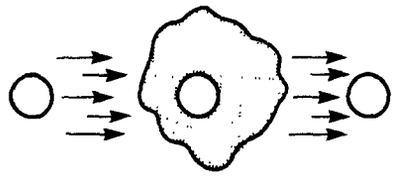
landfills on an economic scale, phasing out with time the leachate contribution to ground water.

Of the foregoing control measures only those which are applicable to new sanitary landfills have the potential to prevent or essentially to eliminate the possibility of ground water pollution by leachate. Siting, constructing, operating, and maintaining fills are in this category of control measures. Existing well-engineered landfills, although not generally equipped with underdrains, are minimal in their effects upon ground water quality and hence of secondary importance in comparison with dumps. Similarly, old landfills may have contributed the major portion of their leachate already and are now of secondary importance. Reshaping the soil surface and maintaining surface drainage are measures which reduce the effect of leachate from existing fills. The overall effect of dumps may be lessened by a geographical distribution of the volume of wastes they contain. Control measures such as well-point interception reduce rather than prevent or eliminate leachate discharges. Regionalization of waste treatment is a control measure which can reduce and eventually phase out the leachate from existing dumps.

Monitoring Procedures

In new fills, properly engineered and sealed off from underlying and sidewall strata, the drainage system and a pumped well located in or near the fill can be used both for inspection (monitoring) and for control.

A system of three observation wells is illustrated in Table 18 along with the results of ground water quality observations.



Groundwater Characteristics	Background (mg/liter)	Fill (mg/liter)	Monitor Well (mg/liter)
Total Dissolved Solids	636	6712	1506
pH	7.2	6.7	7.3
COD	20	1863	71
Total Hardness	570	4960	820
Sodium	30	806	316
Chloride	18	1710	248

Table 18 Ground water quality

It would be feasible to drill and gravel pack a sampling well in a landfill, then seal its bottom and drill through to the ground water below. Portable submersible pumps could be used to pump these two essentially concentric wells for sampling purposes. An alternative might be to drill a pumped monitoring well downstream from the landfill or directly through the fill. Concentrations of TDS, hardness, and chlorides could be measured and used to surmise the presence of leachate, provided the discharge rate needed to produce a significant drawdown cone under the fill did not obscure the effect of leachate on the ground water quality. In any event the best procedure is the use of control measures which minimize the possibility of leaching of landfills.

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EXHIBIT B

WATER POLLUTION CONTROL LEGISLATION—1971
(Proposed Amendments to Existing Legislation)

(92-16)

HEARINGS
BEFORE THE
COMMITTEE ON PUBLIC WORKS
HOUSE OF REPRESENTATIVES
NINETY-SECOND CONGRESS
FIRST SESSION

JULY 13, 14, 15, 20, 22, 27, 28, 29; AUGUST 2, 3, 4, 5; SEPTEMBER 13, 14, 15, 16, 20, 21, 22, 23, 24; AND NOVEMBER 9, 1971

Printed for the use of the Committee on Public Works

Of course the primary responsibility for enforcement remains with the States. Our proposals are in no way intended to diminish that role. But we must be able to act swiftly if the States fail to do so.

The inability to secure adequate information and data not available from Government sources concerning pollution has inhibited truly effective enforcement. We propose to give EPA broad authority to obtain information and data, to subpoena witnesses and records for administrative proceedings and to require monitoring and reporting, all consistent with the due process requirements of law.

We would also authorize EPA to move immediately when an emergency presents an imminent and substantial danger to human health or welfare or to water quality by requesting the Attorney General to seek temporary or permanent injunctions in Federal court.

Citizen suits with appropriate safeguards would be authorized to enable private groups and individuals to compel compliance with specific requirements established under the law and to assure that the public interest will be protected where the law provides a clear duty and remedy.

I have appreciated the opportunity to appear before you during these three days of hearings. We look forward to the early enactment of legislation which will achieve the purposes which have been stated. We intend to cooperate with you fully in this process. I will be pleased to answer any questions you may have.

Mr. ROBERTS. With reference to ground water, you state:

We would also extend water quality standards to ground waters.

Wherein do we have that authority, and where does it exist in the present law?

Mr. RUCKELSHAUS. Well, we don't have the authority under existing law, Mr. Chairman, and we are asking for extension of existing law because of a number of problems which have cropped up. One which I mentioned in my testimony. One, the disposal of toxic wastes in deep wells, which is sometimes a method adopted by industry, and we are worried that these toxic substances, through the ground water table, might contaminate existing water supplies.

Mr. ROBERTS. Where the State has complete control under the State permit system on ground water, would you interfere in that situation? I am speaking specifically of salt water injection wells. In water flooding of low-producing oil properties producers use water flood or water injection to bring the pressure back up. You have a State permit system on every well that is drilled, whether it is 100 or 5,000 or 10,000 feet.

Mr. RUCKELSHAUS. We would have no desire, Mr. Chairman, under the program to interfere with the existing State program that was adequately protecting water quality. The only reason for the request for Federal authority over ground waters was to assure that we have control over the water table in such a way as to insure that our authority over interstate and navigable streams cannot be circumvented, so we can obtain water quality by maintaining a control over all the sources of pollution, be they discharged directly into any stream or through the ground water table.

Mr. ROBERTS. You further state:

We would also authorize EPA to move immediately when an emergency presents an imminent and substantial danger to human health or welfare or to water quality by requesting the Attorney General to seek temporary or permanent injunctions in Federal Court.

I am sure you are aware of the fact that the Congress and the EPA are getting some very unfavorable publicity down in Texas because the Government had two or three airplanes down there to be used for spraying, and saying that EPA would not turn them loose. We have

EXHIBIT C

UNITED STATES DISTRICT COURT FOR THE
WESTERN DISTRICT OF MICHIGAN

FRANK J. KELLEY, Attorney General of Michigan for and on behalf of the PEOPLE OF THE STATE OF MICHIGAN, and the NATURAL RESOURCES COMMISSION, Plaintiffs, v. THE UNITED STATES OF AMERICA; UNITED STATES DEPARTMENT OF TRANSPORTATION: THE HONORABLE ELIZABETH DOLE, Secretary of the Department of Transportation; The UNITED STATES COAST GUARD, AND ADMIRAL JAMES GRACEY, Commandant of the Coast Guard, Defendants.	Civil Action No. G-83-630 Hon. Richard A. Enslen

DEFENDANTS' RULE 12(b) MOTION AND IN THE ALTERNATIVE FOR SUMMARY JUDGMENT

MEMORANDUM IN SUPPORT OF DEFENDANTS' RULE 12(b) MOTION AND IN THE ALTERNATIVE FOR SUMMARY JUDGMENT

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Dated: July 12, 1984

IN THE UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

FRANK J. KELLEY, Attorney General of Michigan for and on behalf of the People of the State of Michigan and the NATURAL RESOURCES COMMISSION Plaintiffs, v. THE UNITED STATES OF AMERICA, UNITED STATES DEPARTMENT OF TRANSPORTATION, THE HONORABLE ELIZABETH DOLE, Secretary of the Department of Transportation, THE UNITED STATES COAST GUARD, AND ADMIRAL JAMES GRACEY, Commandant of the Coast Guard, Defendants.	Civil Action No. G-83-630(5) Richard A. Enslen

DEFENDANTS' MEMORANDUM IN SUPPORT OF RULE 12(b) MOTION AND IN THE ALTERNATIVE FOR SUMMARY JUDGMENT

I. INTRODUCTION

This action is brought under the Clean Water Act, 33 U.S.C. §§ 1251 et seq. ("CWA"), by the Attorney General of the State of Michigan and the State of Michigan Natural Resources Commission ("Michigan" or "plaintiffs"). The plaintiffs claim that the Coast Guard has polluted the groundwater in and around the Coast Guard Air Station Traverse City, Michigan and the East Arm of Grand Traverse Bay. Although the plaintiffs' complaint is imprecise, we assume that the plaintiffs assert four causes of action in their three count complaint. The Plaintiffs first assert a cause of action under Section 505 of the CWA, 33 U.S.C. § 1365. The plaintiffs' three other asserted causes of

action are based on Michigan state law. The plaintiffs request relief in the form of monetary damages, an injunction ordering the federal defendants to undertake a program to remove the alleged pollution from Michigan groundwater, and civil penalties.

The federal defendants demonstrate below, however, that the plaintiffs cannot prevail under any of their asserted theories and that the defendants are entitled to summary judgment as a matter of law.

II. BACKGROUND

The Coast Guard Air Station involved here is located in Traverse City, Michigan. The plaintiffs allege that the Air Station was originally operated by the Navy until 1945 when the Coast Guard took over the operation of the Air Station. Complaint ¶s 8-11.

The plaintiffs allege that the defendants have maintained and serviced aircraft at the air station at Traverse City since 1943. Plaintiffs also allege that during routine servicing and maintenance of Coast Guard aircraft, the defendants used oils, lubricants, paints, paint stripping solvents, aviation gasoline, dry cleaning solvent PS-661, toluene, tri-chlorethylene, benzene, carbon tetrachloride, and aromatic naptha. Plaintiffs further allege that the defendants allowed unknown amounts of these chemicals to be released to the ground since 1943 by direct dumpings, spills, and storage leaks. Complaint ¶s 12-15.

In 1980, the plaintiffs allege, a resident of Avenue E in East Bay Township reported to Michigan a strong chemical odor coming from water in a new well. Complaint ¶ 16. As a result of that report Michigan began an investigation of alleged contamination. Id. It is claimed that subsequent tests of other wells in the Avenue E area revealed the presence of chemicals in drinking water wells. Complaint ¶ 18. The Michigan Department of Public Health recommended in October 1980 that Avenue E residents obtain alternate sources of drinking and cooking water. Complaint ¶ 19. In January 1981, the plaintiffs allege, Traverse City municipal water supply lines were extended to Avenue E at a cost of $176,000.00 and 28 Avenue E homeowners paid the necessary charges to connect their homes to the water supply lines. Complaint ¶ 21. Plaintiffs also claim that Avenue E residents now are charged substantially higher rates for water than Traverse City residents.

The plaintiffs allege that the source of the contamination of Avenue E was determined by the Michigan Department of Natural Resources to be the United States Coast Guard Air Station at Traverse City and the land alleged to be owned by the Coast Guard and Navy immediately adjoining the Air Station. Complaint ¶ 23. The plaintiffs further contend that the defendants' improper disposal and handling of the chlorinated hydrocarbons and other petrochemicals at the Coast Guard station have caused

the chemicals to enter the groundwaters under the Avenue E area and be discharged into Grand Traverse Bay. Complaint ¶ 43.

The plaintiffs allege that the attorney general gave notice to the Coast Guard in May 1982 of his intent to sue the Coast Guard under Section 505 of the CWA, 33 U.S.C. § 1365. Complaint ¶s 41 and 42. The plaintiffs filed their complaint a year later on June 10, 1983.

III. MICHIGAN'S FOUR CLAIMS

The Plaintiffs first assert a cause of action (Count I) under Section 505 of the Act. The plaintiffs' three other asserted causes of action are based on Michigan state law (examined in detail later in this brief) under Sections 6(a) and 6(c) of the state Water Resources Commission Act (Count II), Michigan Statutes Annotated (MSA 3.526(c)) (hereafter "WRCA"), and Section 2(1) of the Michigan Environ mental Protection Act (Count III), MSA 14.528(202)(1) (here-after "MEPA"). The plaintiffs allege that under Section 313 of the Act, 33 U.S.C. § 323, the United States waived its sovereign immunity, and therefore, according to the plaintiffs, they can sue the federal defendants under those two state laws. As relief the plaintiffs seek to have defendants ordered to eliminate all identifiable contamination sources, to install a purging system to collect and remove contamination from groundwaters, to reimburse the East Bay Township for its expenses in connection with extending water supply lines to

Avenue E, reimbursement of expenses to Avenue E residents and civil penalties.

IV. SUMMARY OF ARGUMENT

As demonstrated below, Michigan cannot make these claims under the Clean Water Act since the Act does not regulate pollutant discharges onto soil or into underlying groundwater.

As to the two state law-based claims, this Court does not have subject matter jurisdiction of those claims since they are barred by sovereign immunity. It is fundamental that sovereign immunity bars any suit against the federal government unless Congress has expressly waived that immunity to allow for a particular claim. Michigan does not show any express waiver to allow a claim under either the WRCA or MEPA. To the extent that Section 313 of the CWA is a waiver of sovereign immunity, the claims under the WRCA and the MEPA are not within the scope of the waiver. The scope of the waiver is restricted to "requirements" of state law that are objective, administratively predetermined standards of liability. The plaintiffs fail to allege the violation of any such administratively pre-determined pollution standard. Instead the plaintiff do no more than bring their action "pursuant to" the WRCA and the MEP. Complaint ¶s 49 and 56. Thus, Michigan's claims under both WRCA and MEPA are in the nature of nuisance claims. Michigan seeks to determine

the validity of those nuisance claims, not as Congress intended, by deciding whether a set effluent standard has been violated, but by using ad hoc determinations that Congress wanted to avoid.

Additionally, the plaintiffs do not have a cause of action under either the CWA or under Michigan state law. First, the plaintiffs cannot establish three essential elements for a cause of action under Section 505 of the CWA. The plaintiffs do not allege and cannot establish (1) a point source discharge, (2) a date of discharge or (3) an effluent standard under the Act that is violated by defendants. Second, since the plaintiffs cannot show either the source or date of discharge, they do not state a claim under state law. Additionally, the defendants do not come within the statute's definitions of "person" in WRCA.

Finally, assuming arguendo that Congress had waived the United State's immunity from either of the two Michigan state law claims, Michigan still cannot obtain the type of relief it seeks under the Clean Water Act. The Act only authorizes non-federal plaintiffs to obtain injunctive relief from the United States which requires prospective compliance with regulatory requirements. Congress did not allow for sweeping equitable decrees concerning past discharges of pollutants. For example, the order to pay for clean-up of past discharges which Michigan wants is not available.

As for a civil fine, Congress only authorizes a prnalty assessment against the United States when a state court order has been violated. No such violation is alleged in this case.

ARGUMENT

V. TEST FOR DETERMINING THE UNITED STATES' MOTION AND GENERAL PRINCIPLES OF SOVEREIGN IMMUNITY

This Court must first determine whether it has jurisdiction over each of Michigan's claims, for there is no presumption of federal subject matter jurisdiction to adjudicate a particular case. 5 Wright, Miller, & Cooper, Fed. Prac. & Proc: Civil §1206, p. 75 (1969). Plaintiffs have the burden of establishing federal subject matter jurisdiction for each claim. Id., §§1214, p. 107 and §1350, p. 555, n. 91 (collecting cases). 1/

Indeed, since the United States is the defendant, Michigan has the burden of establishing that sovereign immunity has been waived so as to create subject matter jurisdiction. 5 Wright, Miller and Cooper, supra, §1212. "The basic rule of federal sovereign immunity is that the

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1/ The complaint must, on its face, state the grounds for federal subject matter jurisdiction. Burgess v. Charlottesville Savings & Loan Ass'n., 477 F.2d 40, 43 (4th Cir. 1973). "To sustain it, the complaint must . . . contain allegations 'affirmatively and distinctly' establishing federal grounds, 'not in mere form, but in substance' and 'not in mere asssertion, but in essence and effect.'" Burgess, supra. The basis for federal jurisdiction cannot be supplied "argumentatively or by inference." 5 Wright, Miller & Cooper, supra, §1206 at 79.

d. EPA has consistently taken the position that the CWA does not in general regulate discharges into groundwaters.

It is well established that, in construing the CWA, substantial deference should be afforded the interpretation given to it by EPA, the agency charged with its implementation. EPA v. National Crushed Stone Ass'n., 449 U.S. 64, 83 (1980); E.I. duPont de Nemours and Co. v. Train, 430 U.S. 112, 134-135 (1977); Train v. Natural Resources Defense Council, 421 U.S. 60, 87 (1975). Thus, even if the statutory language, the legislative history, and the case law were not determinative, EPA's views on the issue should be sustained so long as they are reasonable. E.I. DuPont de Nemours and Co., supra.

In an opinion dated December 13, 1973, EPA's Office of General Counsel ruled that EPA did not have the authority to generally regulate groundwaters. Instead, it was opined that only when a person discharges pollutants into deep wells in conjunction with associated discharges to surface waters, did EPA have the statutory authority to regulate the subsurface discharges. 9/ Shortly after that opinion was issued, EPA promulgated regulations that incorporated the General Counsel's interpretation. 38 Fed. Reg. 13528 (May 22, 1973). See 40 C.F.R. §125.26(a)(1)(1977). However, in response to the Fifth Circuit's opinion in the Exxon case, supra, EPA eliminated entirely its authority to regulate discharges into groundwaters.

9/ The General Counsel's opinion is reproduced in full in the Exxon opinion, 554 F.2d at 1320-21 n.21.

44 Fed. Reg. 32853, 32870 (1979). This basic position has not changed. 10/

Section 301(a) of the CWA thus does not apply to discharges of pollutants into the soil or groundwater. The statutory language, the legislative history, the case law, and EPA's interpretation of the Act all support this conclusion. Accordingly, Michigan's Count I should be dismissed for lack of subject matter jurisdiction, or failure to state a claim upon which relief can be granted.

2. Sections 313, 505 of the Act do not authorize claims premised on the substantive state laws which Michigan relies upon here.

Michigan asserts claims in Counts II and III based upon its state statutory law. Michigan makes claims under Sections 6(a) and 6(c) of WRCA and Section 2(1) of the MEPA. In none of those claims, however, does Michigan allege the violation of any effluent standard. Each of these causes

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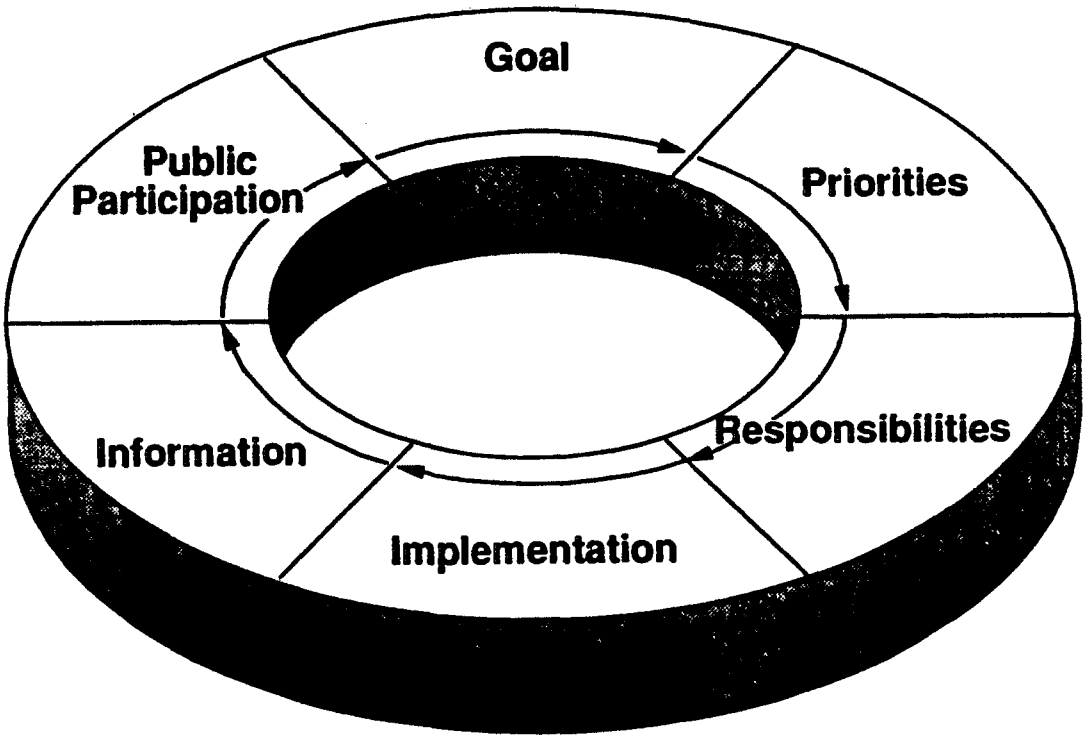
10/ EPA's current regulations under the CWA apply to groundwater only to the extent that groundwater exists near the surface of land "at a frequency and duration sufficient to support . . . a prevelance of vegetation typically adapted for life in saturated soil conditions." 40 C.F.R. §322.2 (1983) (definition of "waters of the United States," subpart (g), defining "wetlands"), appearing at 48 Fed. Reg. 14146, 141 57 (April 1, 1983). See also 33 C.F.R. §323.2(c) (1982) (parallel regulation of U.S. Army Corps of Engineers.)

EPA presently regulates discharges of pollutants into injection wells. However, this is done under the authority of the Safe Drinking Water Act, 42 U.S.C. §§300g et seq. See 48 Fed. Reg. 14189 (April 1, 1983) (to be codified at 40 CFR Part 144). Michigan has not asserted any claim under the Safe Drinking Water Act.

EXHIBIT D

United States Environmental Protection Agency | Office of The Administrator (WH-550G) | EPA 100-R-93-001 December 1992

Final Comprehensive State Ground Water Protection Program Guidance



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PART I: GUIDANCE TO STATES

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Part II:
LINKAGE TO EPA AND OTHER FEDERAL AGENCY PROGRAMS

NPDES AND INDUSTRIAL PRETREATMENT PROGRAM

Resource-Based Priority Setting in Decision Making

Under the Clean Water Act, EPA and the States regulate facilities that either discharge wastewaters directly to surface waters or discharge to municipal wastewater treatment systems. Direct discharges are covered under the National Pollutant Discharge Elimination System (NPDES), whereas industrial discharges to municipal treatment systems are covered by pretreatment requirements. The primary objective of these regulatory programs is to ensure the attainment of the "designated uses" (e.g., fishable, swimable) of receiving surface waters.

While a number of States have incorporated ground water discharges into their NPDES permits and pretreatment requirements, there is no national requirement to do so. States might consider surface water recharge to valuable ground waters as a designated use for surface water and issue specific NPDES permit requirements designed to assure attainment of that designated use and, thereby, indirectly protect inter-connected high priority ground waters. States could use the resource assessment, source evaluation and priority setting mechanism of CSGWPPs to identify high-priority ground waters that are subject to contamination from closely hydrologically connected surface waters.

Coordination with Other Programs

CSGWPPs can provide a central coordination point for surface water regulators to coordinate with ground water officials from a wide variety of ground water-related programs. For example, a number of facilities with required NPDES or pretreatment permits for surface water protection are also likely to be subject to future RCRA D and SDWA Underground Injection Control Class V Well requirements. The CSGWPP can help a State make integrated environmental management decisions across both ground and surface waters. In other words, States can use their ground water protection authorities in conjunction with the NPDES permitting process to ensure that specific requirements in NPDES permits do not result in unintended contamination of sensitive ground water from practices such as the use of surface impoundments.

EXHIBIT E

OFFICE OF INSPECTOR GENERAL

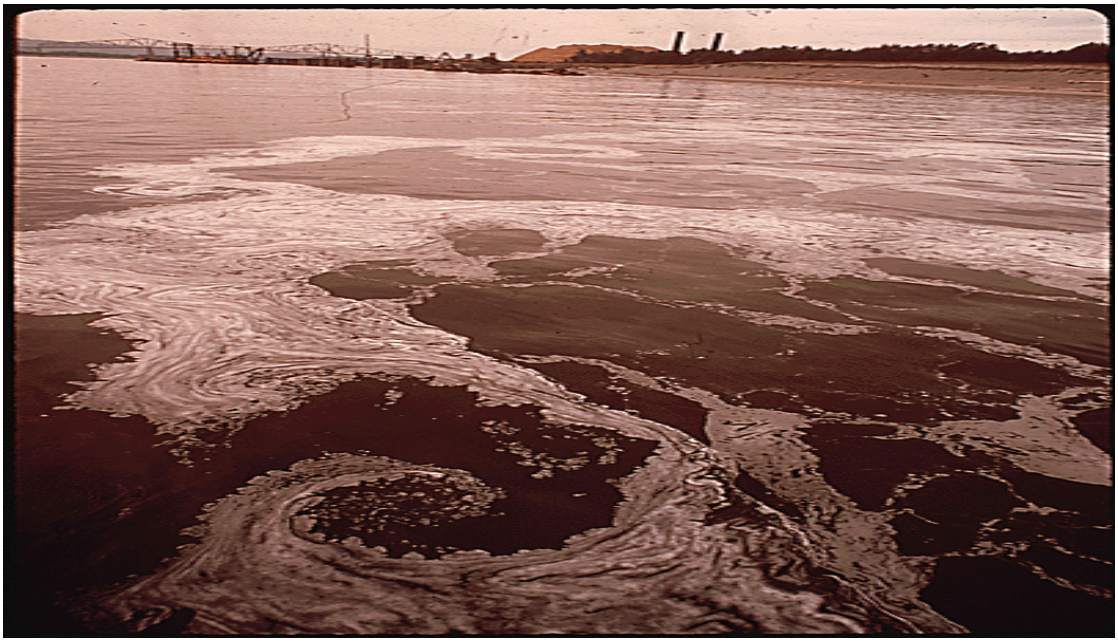
Catalyst for Improving the Environment

Evaluation Report

Effectiveness of Effluent Guidelines Program for Reducing Pollutant Discharges Uncertain

Report No. 2004-P-00025

August 24, 2004



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Chapter 1
Introduction

Purpose

Effluent guidelines are national technology regulations that limit the discharge of pollutants to surface waters and publicly owned treatment works. By creating minimum levels of treatment for different industrial sectors based on the environmental performance of specific technologies, effluent guidelines are intended to establish a minimum floor of control across the country. Guidelines produce an environmental outcome by having their requirements factored into individual facilities' discharge permits as they are renewed. The Environmental Protection Agency (EPA) has developed effluent guidelines for 55 industrial point source categories affecting between 35,000 to 45,000 facilities that directly discharge to the nation's waters. Guidelines cover industries as diverse as iron and steel to centralized waste. According to EPA, effluent guidelines are responsible for preventing the discharge of almost 700 billion pounds of pollutants each year through their utilization in National Pollutant Discharge Elimination System (NPDES) permits. EPA has budgeted about $22 million a year for the last 3 fiscal years (2001 to 2003) to develop effluent guidelines. For this evaluation, we sought to answer the following questions:

- How has EPA's effluent guidelines development process changed over time?
- How effectively are effluent guidelines used to reduce pollutant loadings?
- To what extent does EPA measure the effectiveness of the effluent guidelines program?

Background

In 1972, Congress established the effluent guidelines program by adopting the Federal Water Pollution Control Act of 1972, which was amended by the 1977 Clean Water Act Amendments and the Water Quality Act of 1987. Congress adopted these Acts to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." EPA's Office of Water is responsible for implementing these Acts, which provide EPA and the States with a variety of programs to protect and restore the nation's waters.

The effluent guidelines program, along with the water quality standards and criteria program, form the basis of all water quality programs used by EPA to reduce point source loadings. National effluent guidelines regulations typically specify the maximum allowable levels of pollutants that may be discharged by

facilities within an industrial category. While pollutant limits are based on the performance of specific technologies, they do not generally require each facility to use these technologies; rather, they allow it to use any effective alternatives to meet the numerical pollutant limits.

Each facility within an industrial category must generally comply with the applicable discharge limits, regardless of its location within the country or on a particular water body. In this way, the limits are consistent for all facilities within an industrial category or subcategory. National regulations apply to three types of facilities within an industrial category:

- Existing facilities that discharge directly to surface waters.
- Existing facilities that discharge to publicly owned treatment works.
- Newly constructed facilities that discharge directly to surface water.
- Newly constructed facilities that discharge to publicly owned treatment works.

According to EPA, effluent guidelines, through their use in NPDES permits, are responsible for preventing the discharge each year into public waters of over 1 billion pounds of toxic pollutants, such as heavy metals; over 470 billion pounds of non-conventional pollutants, such as nutrients and salts; and almost 220 billion pounds of conventional pollutants, such as suspended solids. All facilities that discharge pollutants from any point source into waters of the United States are required to obtain a NPDES permit. Table 1.1 provides definitions for each pollutant type and additional examples.

Table 1.1: Definitions and Examples of Pollutant Types

Pollutant Type	Definition	Examples
Conventional	Pollutants typical of municipal sewage and for which municipal secondary treatment plans are typically designed. These pollutants are defined by regulation.	Biological oxygen demand, total suspended solids
Toxic	Pollutants or combination of pollutants that cause death, disease, or other injuries to humans or animals upon exposure, inhalation, or ingestion. The pollutants are defined by regulation.	Dioxin, chloroform
Non-conventional	All pollutants not listed by regulation.	Acetone, ammonia

Initially, the 1972 Clean Water Act directed EPA to develop effluent guidelines for existing industrial dischargers by certain statutory deadlines. EPA was unable to do this by the statutory deadlines and was sued by the Natural Resources

Defense Council (NRDC). In 1976, EPA entered into a consent decree with NRDC and agreed to speed the completion of effluent guidelines and address more toxic pollutants when developing and revising effluent guidelines.

The Clean Water Act was amended by the Water Quality Act of 1987, which required EPA to establish schedules for reviewing and revising existing effluent guidelines and promulgating new ones. In 1990, EPA published its first Effluent Guidelines Plan, with schedules developing new and revised effluent guidelines for several industrial categories. Following another suit from the NRDC and Public Citizen, Inc., EPA, in 1992, agreed to abide by a consent decree that established a schedule for EPA to promulgate effluent guidelines for 19 industrial categories. The consent decree required EPA to develop effluent guidelines for certain industries, and allowed EPA the discretion of selecting other industries for effluent guidelines development.

The consent decree also required that EPA establish an Effluent Guidelines Task Force (Task Force) to develop recommendations on how to improve the effluent guidelines program. The Task Force sought to determine ways in which the effluent guidelines process could be streamlined.

State and EPA permits writers are responsible for writing NPDES permits. When developing a permit, the permit writers must calculate technology-based effluent limits from effluent guidelines and compare them to water quality-based effluent limits for each pollutant in a permit. The Clean Water Act and EPA regulations require the permit writer to apply the most stringent limit. A permit writer can use an effluent guideline in developing a facility's permit after the effluent guideline is effective (typically about 60 days after the effluent guideline is promulgated).

Scope and Methodology

We conducted our evaluation in accordance with *Government Auditing Standards*, issued by the Comptroller General of the United States. We conducted our field work from August 2002 to November 2003. We evaluated the effluent guidelines program by developing and applying a four-phase model that describes the four key processes involved in the program (Table 1.2).

EXHIBIT F

Holyoke Gas & Electric Department Cabot Street Station Response to Comments on Draft National Pollutant Discharge Elimination System (NPDES) Permit No. MA0001520

INTRODUCTION

In accordance with the provisions of 40 C.F.R. §124.17, this document presents EPA's response to comments (RTC) received on the Draft NPDES Permit (MA0001520). The RTC explains and supports EPA's determinations that form the basis of the final Permit. The Holyoke Gas & Electric Department (HG&E) Cabot Street Station draft permit public comment period began August 19, 2005, and ended on September 17, 2005. HG&E is also referred to as the facility and the permittee in this document. Comments were received from:

1. Charles L. Martel, Environmental Health & Safety Coordinator, City of Holyoke Gas & Electric Department;
2. Andrea F. Donlon, River Steward, Connecticut River Watershed Council; (CRWC)
3. Cindy Delpapa, Stream Ecologist, Massachusetts Riverways Programs.

Additionally, EPA received a correspondence from the permittee dated September 19, 2005. This correspondence did not present any new comments, it only requested clarification on two points in the permit. For administrative convenience, EPA is addressing these two points in Section C of this document.

This document refers to the above Commenters by designated numbers.

The final permit has changed from the draft permit based on comments received. EPA's decision-making process has benefitted from the various comments and the additional information submitted. The information and arguments did not result in any substantial new changes to the permit. However, a few improvements and changes are detailed in this document and are reflected in the final permit. A summary of the changes made in the final permit is listed below. The analyses underlying these changes are explained in the responses to individual comments. Each change is followed by a number that correlates to a specific response.

1. A footnote has been added to the table in Part I A 1. of the final permit to allow for the continuous flow measures for Outfall 001 to be monitored in each of the two contributing pipes separately and summed. (1)

2. The monitoring frequency for pH at Outfall 002 has been changed from once per month to once per day when a discharge from Outfall 002 occurs. (7)

3. A one-time Whole Effluent Toxicity (WET) test requirement for Outfall 001 has been added to the final permit. (8)

4. A prohibition on the use of biocides has been added to the final permit. (9)

5. Requirements to collect temperature measurement in the Second Level Canal and the Connecticut River during thermal study events have been added in Part I.A.10 of the final permit. (11)

6. Requirements to collect temperature measurements at the water/sediment interface in each sample location during each thermal study event have been added in Part I. A.10 of the final permit. (11)

C. Clarification issues

HG&E raised two somewhat similar issues and requests an EPA response. EPA points out here that the permit has been developed based on previous information submitted by the company and actual operations, not on future hypothetical scenarios. EPA provides the following responses. However, since the company has not made specific changes at the facility that may warrant modifications to the permit, EPA is providing general answers to the inquires.

Issue 1:

In its email dated September 19, 2005, HG&E asked, "... how will HG&E's plans to reconfigure the piping associated with internal outfalls 004 and 005 affect the Draft Permit? Will we still be required to meet the sampling and testing protocol established in the Draft Permit if the discharges are redirected?" The company referred to an August 2nd e-mail to EPA in which HG&E indicated that it was considering making piping changes to the traveling screen.

Response to Issue 1:

This permit addresses the current configuration of internal Outfalls 004 and 005. Future permitting actions, if appropriate, will depend on how and if the discharges are redirected or otherwise reconfigured. Two examples of potential piping changes and the subsequent potential permitting requirements are provided below.

First, the permittee may wish to cease the discharge altogether. The discharges could be re-directed to the publicly owned treatment works (POTW) where they would be regulated by the POTW's pretreatment regulations. Alternatively, the discharges could be re-directed to a non-surface water discharge location, such as ground injection. In such a situation, the National Pollutant Discharge Elimination System (NPDES) permit requirements would not apply, because there would be no direct discharge to a surface water of the United States. Therefore, the permittee would not be subject to sampling and testing requirements. However, the permittee would still be required to report a "no discharge" for internal Outfalls 004 and 005 in the monthly Discharge Monitoring Report (DMR) until the permit is modified or re-issued.

Second, HG&E could redirect either of these discharges to a new discharge location that ultimately discharges to the receiving water. In this instance, HG&E would need to submit a permit modification request (including new flow diagrams) so that the applicable standard could be evaluated as explained in Section 5.1 of the Fact Sheet. Since these are low volume wastes as defined in 40 CFR § 423.11(b), they would be subject to these technology-based standards or to water quality based standards, whichever is more stringent.

Issue 2:

In its August 19, 2005 email, HG&E asked if it still would be held to the sampling and analytical protocol established for the Outfall 002 in the Draft Permit if it abolished all discharges from Outfall 002 due to the July 2005 demolition of its demineralizer system? Additionally, HG&E asked "What steps would be necessary for the HG&E to change the 002 discharge from demineralizer waste to a filter backwash waste stream? This last issue was also raised by the company in an August 2, 2005 email to EPA.

EXHIBIT G

Response to Public Comments

EPA NPDES Pesticide General Permit

October 31, 2011

Docket ID #: EPA-HQ-OW-2010-0257

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Comment Essays

Individual Comments and Responses

PGP Comment Response NOI Threshold Essay

EPA received numerous comments on the Agency's approach for determining which Operators are required to submit NOIs when seeking coverage under the PGP and which Operators would be covered automatically without having to submit an NOI. While some commenters disagreed with the Agency's position that not all Operators should have to submit an NOI to obtain coverage, the majority of commenters supported EPA's basic idea that NOI submittal would be based on the basic principles that only pesticide applications of larger size, from more significant Operators, and to sensitive waterbodies should be required to submit NOIs.

Operators that are not required to submit NOIs are still required to comply with the terms of the permit such as: minimizing discharges to waters of the United States resulting from the application of pesticides, meeting applicable water quality standards, and monitoring for and reporting adverse incidents. Under the permit, these Operators have fewer requirements than Operators that are required to submit NOIs. EPA bases this decision on EPA's evaluation of applicable technology-based requirements for the universe of dischargers and the use of EPA's best professional judgment (33 U.S.C. 1342(a)(1); 40 CFR § 125.3(c)) when establishing many of the other permit terms and conditions. For example, one commenter noted that the use of restrictive NOI requirements would promote the use of home misting systems which would not be regulated under the permit. However, all Operators (regardless of whether they are required to submit an NOI or not) must comply with NPDES permit requirements for point source discharges of biological pesticides, and of chemical pesticides that leave a residue to waters of the United States. Likewise, Operators applying biological pesticides, and chemical pesticides that leave a residue that result in discharges to waters of the United States consistent with any of the four pesticide use patterns identified in the permit are required to either seek coverage through an NOI, and once authorized, comply with the permit, or comply automatically with the NPDES permit. Please note that pesticide applications that do not result in point source discharges of pollutants to waters of the United States do not require NPDES permit coverage regardless of the size of that application.

EPA received a number of suggestions regarding which Operators should be required to submit an NOI. For instance, some commenters believed that no Operator should be required to submit an NOI (provided those Operators were in compliance with other state and federal laws, including FIFRA requirements). Other commenters suggested that all Operators should be required to submit NOIs since EPA would not be able to track pesticide applications activities without obtaining information from every entity covered under the permit. Some commenters noted that they did not believe uniform annual treatment area thresholds were reasonable for establishing who should be required to submit an NOI because of varying soil and climatic conditions as well as the differences in solubility, mobility, and bioavailability of pesticides. Other commenters suggested other bases for establishing annual treatment area thresholds to be used for establishing who should submit NOIs such as to consider:

- Budget of the agency performing applications;
- Distance the application is from the waterbody;
- Exempting small waterbodies (e.g., less than 20 acres);

- Percent of waterbody treated;
- Quality of the waterway (e.g., impaired and Tier 3)
- Type/toxicity of pesticide used or on risks (human health and environmental) and benefits of the application;
- For agricultural activities, the total acres cultivated in the production unit;
- For weeds, whether treatment is for emergent or submergent plants;
- For transmission and other utility right of ways, 750 miles or more; and
- An ecological or watershed approach, with a cap and maximum amount of pesticide applications depending on the status of each bioregion.

EPA worked with states and other stakeholders throughout the multi-year process of developing the PGP to evaluate different approaches and select an appropriate one for identifying the types of dischargers that should be required to submit NOIs. The approach in the final permit represents EPA's best professional judgment regarding which Operators should submit NOIs and when those NOIs should be submitted and is based on communication with states and stakeholders and public comments. EPA acknowledges that the other suggestions for establishing thresholds identified above to identify who should submit NOIs generally have some merit; however, EPA opted for the approach used in the final permit based on the discussion which follows. EPA expects to consider many of these other alternatives during this permit cycle and may revise its approach for the next PGP based on any additional information gathered and analyzed over the next five years. EPA developed an NOI form (along with other forms such as an annual report form, adverse incident reporting form, and pesticide discharge evaluation worksheet) and an electronic NOI (eNOI) system to assist Operators with completing and submitting necessary documentation under the permit and making that information readily available to the public through the Agency's website at www.epa.gov/npdes/pesticides. Use of the eNOI system provides the most efficient approach for Operators to submit NOIs and obtain authorization to discharge in a timely manner (as is important for many pesticide applications). EPA expects to provide additional guidance, such as a Pesticide Discharge Management Plan template, on that same website.

EPA acknowledges that Operators who are not required to submit NOIs will be more difficult to identify/evaluate than those that do submit NOIs; however, the Agency believes its approach provides a reasonable balance between permit requirements, the burden placed on Operators, and environmental protection. EPA expects to coordinate with other stakeholders knowledgeable in pesticide applications, such as state lead agencies for pesticide programs, to develop and implement outreach and oversight of Operators who are not required to submit an NOI. EPA will evaluate data and other information gathered during this five year permit term and may opt for a revised approach in subsequent permit issuances, if necessary. However, consistent with 122.28(b)(2)(v), EPA has the discretion to authorize discharges under a general permit without submitting a NOI where EPA finds an NOI would be inappropriate. To be clear, EPA does not consider the PGP to be a rule or a permit-by-rule; rather, general permits are administrative actions performed under the authority of the NPDES regulations.

It is important to note that NPDES-authorized states are not obligated to use EPA's NOI approach for their state-issued NPDES permits for point source pesticide discharges. EPA expects states to issue permits consistent with the NPDES regulations that allow a state permit

writer to base permit limitations on the permit writer's best professional judgment. 33 U.S.C. § 1342(a)(1); 40 CFR § 125.3(c). Those states have the authority to establish permit requirements based on their state-specific considerations (e.g. whether to include requirements based on "waters of the state" rather than on the federal requirement to protect "waters of the United States"). NPDES-authorized states are required to provide a rationale for their permitting approach for any general permit in the companion fact sheet. One commenter requested that EPA's permit ensure that discharges do not affect groundwater. To be clear, the Clean Water Act's NPDES program, under which EPA issued the PGP, is for the control of discharges to waters of the United States. Generally, discharges to groundwater are not regulated under the NPDES program; rather, discharges to groundwater are regulated under Safe Drinking Water Act along with any additional protections that may be incorporated in FIFRA regulations.

EPA revised its approach for NOI requirements in the final permit based on comments received on the draft. These changes include:

1. NOIs are now required based on three criteria: operator type, nature of receiving streamn, and size of area treated (i.e, annual treatment area threshold). The draft permit based NOI obligations only on the size of area treated.
2. For-hire applicators no longer are required to submit NOIs. Rather NOIs are to be submitted only by certain Decision-makers.
3. Research and development activities no longer require submission of an NOI.
4. All Decision-makers (regardless of annual treatment area threshold) with discharges to Tier 3 waters or to waters of the United States with any NMFS Listed Resources of Concern now must submit an NOI for those discharges.
5. EPA revised its use of annual treatment area thresholds to include:
   - Standardized the use of the term "annual treatment area threshold" throughout the permit and added a definition of this term in Appendix A of the permit.
   - Annual treatment area threshold for two pesticide use categories (i.e., mosquitoes and other flying insects and forest canopy pests) increased by an order of magnitude (from 640 acres in the proposed permit to 6,400 acres in the final permit). The annual treatment area threshold for two categories (i.e., aquatic weeds and algae and aquatic animal pests) increased from 20 acres of water to 80 acres of water (or a linear distance of 20 miles, a threshold that remains the same in the final permit).
   - Annual treatment area threshold calculations are now based on discharges directly to waters of the United States and does not include discharges to conveyances.
   - Areas treated for the both aquatic weeds and algae and aquatic animal pests categories are now to be calculated based on the size of area treated in a calendar year regardless of the number of applications to that area. Area treated for both the Mosquito Control and Other Flying Insect Pest Control and Forest Canopy Pest Control use patterns are still based on accumulation of multiple treatments to calculate a total annual treatment area.
   - Calculation of annual treatment area for mosquito control now only counts areas treated with adulticide. Larviciding is not to be used in the calculations.
6. No NOIs are required for any discharges between the effective date of this permit and January 12, 2012 to allow time for Decision-makers to provide an opportunity for

Decision-makers to take necessary actions as required by the permit prior to NOI submission.

A discussion of these changes and the final PGP NOI approach are provided below.

As noted above, regulations at §122.28(b)(2)(v) provide that at the discretion of the Director (which, for the PGP, is EPA), certain discharges can be authorized under a general permit without submitting an NOI where EPA finds that an NOI would be inappropriate for such discharges. In making such a finding, the regulations require the Director to consider the following criteria: the type of discharge; the expected nature of the discharge; the potential for toxic and conventional pollutants in the discharges; the expected volume of the discharges; other means of identifying discharges covered by the permit; and the estimated number of discharges to be covered by the permit. As described below, EPA is requiring submission of an NOI for certain discharges and is providing automatic coverage for certain other discharges for which EPA determined it would be inappropriate to require an NOI.

EPA expects a large number of discharges from the application of pesticides spanning a wide range of Operators and activities will require compliance with NPDES requirements. EPA's consideration of the regulatory criteria in §122.28(b)(2)(v) for providing general permit coverage to certain Operators without submission of an NOI is as follows:

Type and expected nature of discharge

All discharges authorized by this general permit involve discharges resulting from the application of biological pesticides, or chemical pesticides that leave a residue into Waters of the United States. The general permit is structured by pesticide use patterns. These use patterns were developed to include discharges that are similar in type and nature, and therefore represent the type of discharges and expected nature of the discharges covered under this permit. EPA evaluated each use pattern independently with the goal of identifying the significant activities resulting in discharges that should be covered under this PGP. As described below (see section entitled, "NOIs for Decision-Makers Exceeding an Annual Treatment Area Threshold"), EPA evaluated pesticide application practices of each of these four use patterns to identify the most significant applications, for which NOIs would be most appropriate. In general, annual treatment area thresholds are larger for mosquito and other flying insect pests and forest canopy pests than for aquatic weeds and algae and aquatic animals applications.

Potential for toxic and conventional pollutants in the discharge

EPA does not expect the potential for toxic and conventional pollutants in the discharges from pesticides to vary among use patterns. EPA would expect, however, that the potential for impacts from high concentrations of toxic or conventional pollutants in the discharge would be smaller when fewer acres or linear feet are treated or when pesticide applications are targeting pests not directly in the water.

EXHIBIT H

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

FACT SHEET

DRAFT GENERAL PERMITS FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS IN MASSACHUSETTS

NPDES PERMIT NUMBERS:

MAR041000 –Traditional cities and towns

MAR042000 – Non-traditional state, federal, county and other publicly owned systems

MAR043000 – Non-traditional transportation systems

PUBLIC COMMENT PERIOD: September 30, 2014 – December 29, 2014

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Fact Sheet – Massachusetts Small MS4

I. INTRODUCTION AND PROGRAM BACKGROUND

The Director of the Office of Ecosystem Protection EPA-Region 1 is proposing to reissue three (3) National Pollutant Discharge Elimination System (NPDES) general permits for the discharge of stormwater from Small Municipal Separate Storm Sewer Systems (MS4s) to waters within the Commonwealth of Massachusetts. The General Permit will apply to traditional cities and towns; state and federal MS4s; and state transportation agencies (except for MassDOT-Highway Division). The Draft General Permit consists of the following parts:

Part 1: Introduction
Part 2: Non-Numeric Effluent Limitations
Part 3: Additional Requirements for Discharges to Surface Drinking Water Supplies and Their Tributaries
Part 4: Program Evaluation, Record Keeping and Reporting
Part 5: Requirements for Non-Traditional MS4s
Part 6: Requirements for Transportation Agencies
Appendices:
Appendix A – Definitions, Abbreviations, and Acronyms
Appendix B – Standard Permit Conditions Applicable to All Authorized Discharges
Appendix C – Endangered Species Act Eligibility Guidance
Appendix D – National Historic Preservation Act Eligibility Guidance
Appendix E – Information Required for the Notice of Intent (NOI)
Appendix F – Requirements for MA Small MS4s Subject to Approved TMDLs
Appendix G – Impaired Waters Monitoring Parameter Requirements
Appendix H – Requirements Related to Discharges to Certain Water Quality Limited Waterbodies
Appendix I – EPA New England Bacterial Source Tracking Protocol

A. Program Background

The goal of the Clean Water Act is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Clean Water Act (CWA) § 101(a), 33 U.S.C. § 1251(a); *see also id.* §§ 1251(a)(1) ("national goal that the discharge of pollutants into the navigable waters be eliminated by 1985"), (a)(2) ("national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983").

In 1987, Congress amended the Clean Water Act to better regulate stormwater discharges. Congress enacted Section 402(p) of the Clean Water Act, which requires that "[p]ermits for discharges from municipal storm sewers . . . shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and shall require controls to reduce the discharge of pollutants to the maximum extent practicable...and such other provisions as the Administrator …determines appropriate for the control of such pollutants." CWA §§ 402(p)(3)(B)(ii)-(iii).
EPA"s "Phase II" stormwater regulations, among other things, set forth requirements for stormwater discharges from small municipal separate storm sewer systems, ("small MS4s") which are defined at 40 CFR § 122.26(b)(16) as follows:

> Small municipal separate storm sewer system means all separate storm sewers that are:
> (i) Owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over

unless granted a waiver by the permitting authority. The latest Decennial Census was conducted in 2010. MS4s located in an urbanized area as determined by the 2010 Census will be subject to the stormwater requirements for small MS4s unless they receive a waiver in accordance with 40 CFR §122.32(c) or 40 CFR § 123.35(d). The 2010 Census delineated urbanized areas in municipalities that did not contain urbanized areas according to the 2000 Census, namely: Adams, Amherst, Ashburnham, Ashby, North Adams, Pelham, Ware, Wellfleet, and Westhampton. EPA has provided notification to any MS4 affected by the 2010 Census. MS4s located in an urbanized area as defined by the 2000 census remain subject to the stormwater regulation even if there is a change in the reach of "urbanized area" because of a change in census data. This is consistent with the preamble to the Phase II rule that states "...a small MS4 that is automatically designated into the NPDES program for stormwater under an urbanized area calculation for any given Census year will remain regulated regardless of the results of subsequent urbanized area calculations." 64 FR 68752, December 8, 1999.

As stated previously, the Draft Permit applies to small MS4s located in urbanized areas and those MS4s designated by EPA to need a permit. EPA has authority under the CWA to designate stormwater sources other than those that are specifically identified by the stormwater regulations as needing to obtain a permit when necessary to protect water quality or remedy localized water quality impacts, including small MS4s not in an urbanized area. If EPA decides to designate additional MS4s, EPA will provide public notice and an opportunity to comment on the designation. Once designated, such sources would be eligible for coverage under this general permit.

1. ***Limitations on Permit Coverage***

The Draft Permit sets limitations on the discharges that are authorized by the permit. The Draft Permit does not authorize the following:

1. Stormwater discharges that are mixed with sources of non-stormwater unless the non-stormwater discharges are in compliance with a separate individual or other general NPDES permit. The Draft Permit requires illicit (non-stormwater) discharges to be prevented and eliminated except for the categories of non-stormwater discharges listed in 40 CFR §122.34(b)(3) and identified in Part 1.4 of the Draft Permit. These categories need not be addressed unless they are determined by the permittee or EPA to be significant contributors of pollutants to the MS4. Since this Draft Permit addresses stormwater discharges, requiring that sources of non-stormwater are addressed under separate NPDES permits ensures that the various sources of pollutants are addressed appropriately.
2. Stormwater discharges that are subject to other permits. This includes industrial stormwater discharges described at 40 CFR § 122.26(b)(14)(i)-(ix) and (xi); stormwater discharges related to construction described in either 40 CFR § 122.26(b)(14)(x) or 40 CFR § 122.26(b)(15); or discharges subject to an individual permit or alternative general permit for stormwater.
3. Stormwater discharges, or discharge-related activities, that are likely to adversely affect any species that are listed as threatened or endangered under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is designated as critical under the ESA. The MS4 must follow the procedures detailed in Appendix C of the Draft Permit to make a determination regarding permit eligibility. A more detailed discussion of the Endangered Species Act and EPA's obligation under that Act are contained in Section I.B of this fact sheet.
4. Stormwater discharges whose direct or indirect impacts do not prevent or minimize any adverse effects on any Essential Fish Habitat (EFH). This topic is addressed in in Section I.B of this fact sheet.

5. Stormwater discharges or implementation of a stormwater management program that would adversely affect properties listed or eligible to be listed on the National Register of Historic Places. The MS4 must follow the procedures in Appendix D of the Draft Permit to make a determination regarding eligibility. This topic is addressed in Section I.B of this fact sheet.
6. Stormwater discharges to territorial seas, the contiguous zone and the oceans. (Territorial seas are waters located between the mean low water line and a line approximately twelve nautical miles from the mean low water line. The contiguous zone is from the edge of the territorial sea up to 24 nautical miles from the mean low water line.)
7. Discharges that are prohibited under 40 CFR § 122.4.
8. Stormwater discharges to the subsurface subject to Underground Injection Control (UIC) regulations. Although the permit includes provisions related to stormwater infiltration and groundwater recharge, structural controls that dispose of stormwater into the ground may be subject to UIC regulation requirements or other state regulations. Authorization for such discharges must be obtained from the relevant authority depending on the location of the discharge and/or conform to state regulations. NPDES permits are applicable for point source discharges to waters of the U.S.; discharges to groundwater are not addressed in the NPDES program and as such are not addressed by this permit.
9. Any Non-traditional MS4 facility that is a "new discharger" and discharges to a waterbody listed in category 5 or 4b on the Massachusetts Integrated Report of waters listed pursuant to Clean Water Act section 303(d) and 305(b) due to nutrients (nitrogen or phosphorus), metals, solids, bacteria/pathogens, chloride or oil and grease (hydrocarbons), or discharges to a waterbody with an approved TMDL for any of those pollutants, is not eligible for coverage under this permit and shall apply for an individual permit.

2. ***Allowable Non-Stormwater Discharges***

The Draft Permit lists sources of non-stormwater discharges contained in 40 CFR § 122.34(b)(3)(iii). These are sources of allowable non-stormwater into the MS4. However, if the permittee determines that these sources (either categorically or individually) are significant contributors of pollutants to the MS4, the permittee must control or prohibit these sources of non-stormwater as part of its illicit discharge detection and elimination (IDDE) program. The Draft Permit does not require any action by the permittee regarding these discharges if the permittee determines that these sources are not significant contributors of pollutants to the MS4. Other than language contained in the CWA regarding non-stormwater sources, the legislative history of the stormwater regulations is essentially silent on the issue of non-stormwater discharges, which makes determination of Congress' expectations regarding non-stormwater discharges subject to agency interpretation. EPA expects MS4s to examine the sources of non-stormwater discharges as categories and examine their potential to contribute pollutants to the MS4. For example, potable water may not contribute pollutants that affect the MS4 discharges because the source is associated with the water supply. However, foundation drains and crawl spaces may be within residential basements and the type of pollutants associated with the non-stormwater discharge may be unknown. In this situation, the MS4 may want to establish a registration program for such discharges and include education about proper storage of household chemicals, or the MS4 may choose to prohibit the discharge due to the unknown nature of the pollutants. The permittee must document its determinations on the categories of non-stormwater in its SWMP and must prohibit any sources identified as a significant contributor of pollutants. In accordance with 40 CFR § 122.34(b)(3)(iii), discharges or flows from

EXHIBIT I

Response to Public Comments

In accordance with the provisions of 40 Code of Federal Regulations (CFR) §124.17, this document presents the United States Environmental Protection Agency's response to comments received on the following draft National Pollutant Discharge Elimination System (NPDES) general permits for remediation activity discharges – the Remediation General Permit (RGP):

Massachusetts General Permit, Permit No. MAG910000
New Hampshire General Permit, Permit No. NHG910000

From August 18, 2016 to September 19, 2016, the United States Environmental Protection Agency (EPA) solicited public comments for the draft RGP for sites located in the Commonwealth of Massachusetts and the State of New Hampshire which discharge as a result of remediation activities from eight categories: 1) Petroleum-related site remediation; 2) Non-petroleum-related site remediation; 3) Contaminated/formerly contaminated site dewatering; 4) Pipeline and tank dewatering; 5) Aquifer pump testing; 6) Well development/rehabilitation; 7) Dewatering/remediation of collection structures; and 8) Dredge-related dewatering. This document represents EPA's response to comments received on the draft RGP.

After a review of the comments received, EPA has made a final decision to issue the RGP authorizing the remediation activity discharges. Although EPA's decision-making process has benefitted from the comments and additional information submitted, the information and arguments presented did not raise any substantial new questions concerning the RGP. Therefore, the final RGP is substantially similar to the draft RGP that was available for public comment.

EPA did, however, make minor changes to the final RGP based on comments received. The rationale underlying these changes are explained in the responses to individual comments that follow and are reflected in the final RGP. Comments received in writing are organized by commenter and some have been paraphrased for length or clarity. EPA has also corrected typographical errors and/or inconsistencies in the draft RGP. Except when directly stated in response to a specific comment, these corrections do not result in a change to any effluent limitation or condition of the final RGP.

In the fact sheet that accompanied the draft RGP, EPA stated that we would seek concurrence from the United States Fish and Wildlife Service (FWS) regarding EPA's determination of effects on endangered species. Following the release of the draft RGP, EPA had discussions with FWS on this matter. Based on discussions with FWS, EPA has determined that this general permit has "no effect". The reason for this determination is because each Notice of Intent (NOI) that is submitted must assess site-specific endangered species impacts using FWS's Information, Planning, and Conservation (IPaC) system mapping tool website. Based on the findings using the IPaC website, the operator can either make a determination of impacts or if there are questions, seek input from FWS directly. Since each NOI is individually screened prior to authorization, the general permit has no effect. EPA requested concurrence from the National Marine Fisheries Service (NMFS) regarding EPA's determination of effects on endangered species under their jurisdiction. Concurrence was received from NMFS, dated January 13, 2017.

Copies of the final permits may be obtained from EPA Region 1's RGP website at: https://www.epa.gov/region1/npdes/rgp.html; or by writing or calling EPA's NPDES Stormwater and Construction Permits Section (OEP 06-1), Office of Ecosystem Protection, 5 Post Office Square, Suite 100, Boston, MA 02109-3912; Telephone: (617) 918-1989.

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Response to Comment A.2

EPA Method 1664 revisions A and B, are currently the only approved test methods in 40 CFR 136 for analysis of Total Petroleum Hydrocarbons (TPH). Method 8100 is a surface water method that, prior to the approval of Method 1664, was occasionally specified on a case-by-case basis in NPDES permits for analysis of TPH. However, because an approved test method is available and meets the test method requirements specified in the RGP, including sufficiently sensitive test methods requirements, it is the test method operators are required to use for the purposes of compliance with the RGP.

However, an individual operator may elect to request formal approval of an alternative method under the Clean Water Act Alternate Test Procedure (ATP), described at 40 CFR 136.4 and 136.5. This program provides a mechanism for submission and review for limited use of an ATP for measurement of a pollutant as an alternative to the methods approved at 40 CFR Part 136. An ATP may fall into one of two categories: 1) A method using a determinative technique (e.g., a pollutant detector) different from that in an existing Part 136 method (for method validation and evaluation purposes this type of method is referred to as a new method); or 2) A modification to a Part 136 method that falls outside the scope of the modification flexibility described in the Part 136 method, or at 40 CFR 136.6 (for validation and evaluation purposes this type of method is referred to as an ATP).

If you wish to request approval of EPA Method 8100 for use under a RGP authorization, the Regional ATP Coordinator for Region 1 is Ann R. Jefferies in EPA's New England Regional Laboratory Quality Assurance Branch (Phone: 617-918-8373). In the event an ATP is approved for use by all operators, EPA may incorporate such methods into Appendix VII. You may also use EPA Method 8100 for process control *in addition to* Method 1664 for compliance monitoring.

B. Comments submitted by Jeremy Fennell, Senior Scientist, Epsilon Associates, Inc.

Comment B.1

In section 3g. of the 2010 general permit, there is a very clear exemption for "discharges directly or indirectly to the ground". The 2016 draft permit does not have such as exemption. This is creating some disagreement among certain entities concerning discharge of hydrostatic test waters from newly built pipelines within uncontaminated sites to vegetated uplands where direct overland flow will not occur to a Water of the U.S. Please provide some clarification and continue this exemption clearly within the 2016 permit.

Response to Comment B.1

EPA believes the commenter is referring to Part I.A.3.g of the 2010 RGP under "Specific Discharges Excluded from Coverage". This part refers to types of discharges that were excluded, that is, *ineligible*, for coverage under the 2010 RGP. The draft RGP contained the discharges ineligible for coverage in Part 1.3, "Limitations on Coverage". This part is not intended as a list of discharges *exempt* from NPDES permit coverage. The NPDES permit program is applicable to the discharge of pollutants to Waters of the United States. See §301(a), 33 USC §1311(a). The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122,

124, 125, and 136. Accordingly, discharges to groundwater are not regulated by the NPDES permit program. However, discharges to groundwater *may* be regulated under other discharge permit authorities.

EPA retained each of the ineligible discharges included in the 2010 RGP except when such discharges are either 1) no longer ineligible to obtain coverage under the RGP; or 2) the exclusion was revised to provide greater specificity. With respect to "discharges directly or indirectly to the ground" ineligible for coverage under the RGP, EPA retained the following limitation on coverage:

13. Discharges of treated groundwater into the subsurface under an Underground Injection Control (UIC) Program permit under authority of the Safe Drinking Water Act.

This limitation was retained to provide specificity that *if* a discharge to groundwater requires a permit, the RGP is not the permit program authority under which such discharges can be covered. Such discharges are generally regulated under the UIC Program, as indicated. However, other similar programs, such as State groundwater discharge permit programs, could also apply. EPA also acknowledges that this limitation could retain the phrase used in the 2010 RGP, as requested. Therefore, EPA has revised this limitation on coverage in the final RGP as follows:

13. Discharges directly or indirectly to the ground subject to other program authority, including the Underground Injection Control (UIC) Program under authority of the Safe Drinking Water Act, a State groundwater discharge permit program, or a similar program authority.

Regarding discharges of hydrostatic test waters from newly-built pipelines at uncontaminated sites, if such discharges do not result in the discharge of pollutants to Waters of the United States, the RGP does not apply. However, such discharges *may* be regulated under other discharge permit authorities. If such discharges are expected to occur in Massachusetts, the commenter should contact the Massachusetts Department of Environmental Protection regarding the applicability of a Groundwater Discharge Permit. If such discharges are expected to occur in New Hampshire, the commenter should contact the New Hampshire Department of Environmental Services regarding the applicability of a Groundwater Management Permit (GMP) or Groundwater Release Detection Permit (GRDP).

C. Comments submitted by Lauren Konetzny, Project Manager, CDW Consultants, Inc.

Comment C.1

Appendix 4 Part 1 Section I: "EPA's NOI processing time is thirty (30) days. The effective date of coverage will be the date indicated in the authorization to discharge provided to the operator by EPA in writing and will generally be the first day of the month following EPA's NOI processing time."

It is proposed that the RGP review process has been extended from fourteen days to at least 30 days. Based on the above statement, the review period could be as long as two months. (If the NOI is submitted 29 days prior to the end of the month, the end of the EPA's 30-day processing

EXHIBIT J

No. 15-17447

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

HAWAII WILDLIFE FUND; SIERRA CLUB-MAUI GROUP; SURFRIDER FOUNDATION; WEST MAUI PRESERVATION ASSOCIATION,

Plaintiffs-Appellees,

v.

COUNTY OF MAUI,

Defendant-Appellant.

On Appeal from the U.S. District Court, Dist. of Hawaii
No. 12-cv-198, Hon. Susan Oki Mollway, District Judge

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE IN SUPPORT OF PLAINTIFFS-APPELLEES

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3. Whether the County had fair notice that it was subject to civil penalties for its discharges to jurisdictional surface waters without a NPDES permit.

STATEMENT OF THE CASE

I. STATUTORY BACKGROUND

Congress enacted the Clean Water Act to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Congress therefore prohibited any non-excepted "discharge of any pollutant" to "navigable waters" unless it is authorized by a permit. *Id.* §§ 1311, 1342, 1344, 1362. The CWA defines "discharge of a pollutant" as "any addition of any pollutant *to* navigable waters from any point source." *Id.* § 1362(12)(A) (emphasis added). Pollutant means "dredged spoil, solid waste, incinerator, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." *Id.* § 1362(6). The CWA defines "navigable waters" as "the waters of the United States, including the territorial seas"; and a point source is "any discernible, confined and discrete

conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." *Id.* § 1362(7), (14).

The CWA authorizes EPA to issue NPDES permits under Section 402(a), but EPA may authorize a state to administer its own NPDES program if EPA determines that it meets the statutory criteria. *Id.* § 1342(a), (b). When a state receives such authorization, EPA retains oversight and enforcement authorities. *Id.* §§ 1319, 1342(d). Hawaii obtained such permitting authority in 1974. *See* 39 Fed. Reg. 43,759 (Dec. 18, 1974).

The CWA is a strict-liability regime that prohibits non-excepted discharges unless they are authorized by a CWA permit. *Id.* §§ 1311, 1342, 1344. An unpermitted discharge constitutes a violation of the CWA regardless of fault and is subject to enforcement by the state or federal government or a private citizen. *Id.* §§ 1319, 1365. To establish liability for a violation of the permit requirement, a plaintiff must show there was (1) a discharge (2) of a pollutant (3) to navigable waters (4)

from a point source. *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F.3d 526, 532 (9th Cir. 2001).

The CWA includes a civil-penalty provision for those who violate the Act. 33 U.S.C. § 1319(d). When determining a civil-penalty amount, courts must consider "the seriousness of the violation or violations, the economic benefit (if any) resulting from the violation, any history of such violations, any good-faith efforts to comply with the applicable requirements, the economic impact of the penalty on the violator, and such other matters as justice may require." *Id.*

EPA's longstanding position is that a discharge from a point source to jurisdictional surface waters that moves through groundwater with a direct hydrological connection comes under the purview of the CWA's permitting requirements. *E.g.*, Amendments to the Water Quality Standards Regulations that Pertain to Standards on Indian Reservations, 56 Fed. Reg. 64,876, 64,982 (Dec. 12, 1991) ("[T]he affected ground waters are not considered 'waters of the United States' but discharges to them are regulated because such discharges are effectively discharges to the directly connected surface waters.").

CWA's NPDES program.[4] *See Hudson R. Fishermen's Ass'n v. City of New York*, 751 F. Supp. 1088, 1100 (S.D.N.Y. 1990), *aff'd*, 940 F.2d 649 (2d Cir. 1991) (objectives of the CWA and the SDWA are not "mutually exclusive"); *see also Bath Petrol. Storage, Inc. v. Sovas*, 309 F. Supp. 2d 357, 369 (N.D.N.Y. 2004).

C. The District Court's Finding of Liability Is Consistent with EPA's Longstanding Position.

EPA's longstanding position has been that point-source discharges of pollutants moving through groundwater to a jurisdictional surface water are subject to CWA permitting requirements if there is a "direct hydrological connection" between the groundwater and the surface water. EPA has repeatedly articulated this view in multiple rulemaking preambles. In 1990, EPA stated that "this rulemaking only addresses discharges to water of the United States, consequently discharges to ground waters are not covered by this rulemaking (unless there is a

[4] The County misconstrues EPA's position in *Inland Steel v. EPA*, 901 F.2d 1419 (7th Cir. 1990). EPA argued that not all disposals into injection wells are discharges of pollutants under the CWA, and that the connection between the wells and navigable waters in that case was too attenuated to bring the discharges under the purview of the CWA. *Id.* at 1422-23. That position (embraced by the Seventh Circuit) does not mean that "injection into wells is not a discharge of pollutants requiring a NPDES permit." Op. Br. at 27.

hydrological connection between the ground water and a nearby surface water body)." NPDES Permit Application Regulations for Storm Water Discharges, 55 Fed. Reg. 47,990, 47,997 (Dec. 2, 1990).

And in the preamble to its final rule addressing water quality standards on Indian lands, EPA stated:

> [T]he Act requires NPDES permits for discharges to groundwater where there is a direct hydrological connection between groundwaters and surface waters. In these situations, the affected groundwaters are not considered "waters of the United States" but discharges to them are regulated because such discharges are effectively discharges to the directly connected surface waters.

56 Fed. Reg. at 64,982.

In 2001, EPA reiterated its position: "As a legal and factual matter, EPA has made a determination that, in general, collected or channeled pollutants conveyed to surface waters via ground water can constitute a discharge subject to the Clean Water Act." 66 Fed. Reg. at 3017. EPA recognized that the determination was "a factual inquiry, like all point source determinations," adding:

> The time and distance by which a point source discharge is connected to surface waters via hydrologically connected surface waters will be affected by many site specific factors, such as geology, flow, and slope. Therefore, EPA is not proposing to establish any specific criteria beyond confining

> the scope of the regulation to discharges to surface water via a "direct" hydrological connection.

Id. A general hydrological connection between all groundwater and surface waters is insufficient; there must be evidence showing a direct hydrological connection between specific groundwater and specific surface waters. *Id.*

To the extent there is statutory ambiguity about whether the CWA applies to discharges to jurisdictional surface waters through groundwater, EPA's interpretation is entitled to *Chevron* deference. *Chevron,* 467 U.S. at 842-43.

The County's contention that the direct-hydrological-connection standard is at odds with EPA's recently-stated position on whether groundwater is a jurisdictional water misinterprets EPA's statements. Op. Br. at 38-39. The Clean Water Rule, which was promulgated in June 2015 (and stayed by the Sixth Circuit pending further order of the court, *see In re EPA & Dep't of Def. Final Rule*, 803 F.3d 804, 809 (6th Cir. 2015)), expressly excludes groundwater from the definition of "waters of the United States." 80 Fed. Reg. 37,054. But, as EPA clarified, the fact that groundwater itself is not jurisdictional under the CWA does not mean that pollutants that reach waters of the United

States through groundwater do not require CWA permits. "EPA agrees that the agency has a longstanding and consistent interpretation that the Clean Water Act may cover discharges of pollutants from point sources to surface water that occur via ground water that has a direct hydrologic connection to the surface water. Nothing in this rule changes or affects that longstanding interpretation, including the exclusion of groundwater from the definition of 'waters of the United States.'" *See* EPA, *Response to Comments – Topic 10 Legal Analysis* (June 30, 2015); available at http://www.epa.gov/cleanwaterrule/response-comments-clean-water-rule-definition-waters-united-states. The County erroneously attempts to conflate the jurisdictional exclusion of groundwater with the role that groundwater can play as the pathway through which pollutants from a point source reach jurisdictional surface waters.[5]

[5] The district court stated that if the proposed Clean Water Rule was finalized, it "would likely mean that the groundwater under the [facility] could not itself be considered 'waters of the United States'" and that this would affect whether Plaintiffs could also prevail under *Healdsburg*. *Hawaii I*, 24 F. Supp. 3d at 1001. But the court erred in attempting to apply *Healdsburg* because the jurisdictional status of groundwater itself is irrelevant to whether discharges that move through groundwater to jurisdictional waters require NPDES permits.

EXHIBIT K

American Housing Survey for the United States: 2011

Current Housing Reports

Issued September 2013

H150/11

U.S. Department of Housing and Urban Development
OFFICE OF POLICY DEVELOPMENT AND RESEARCH

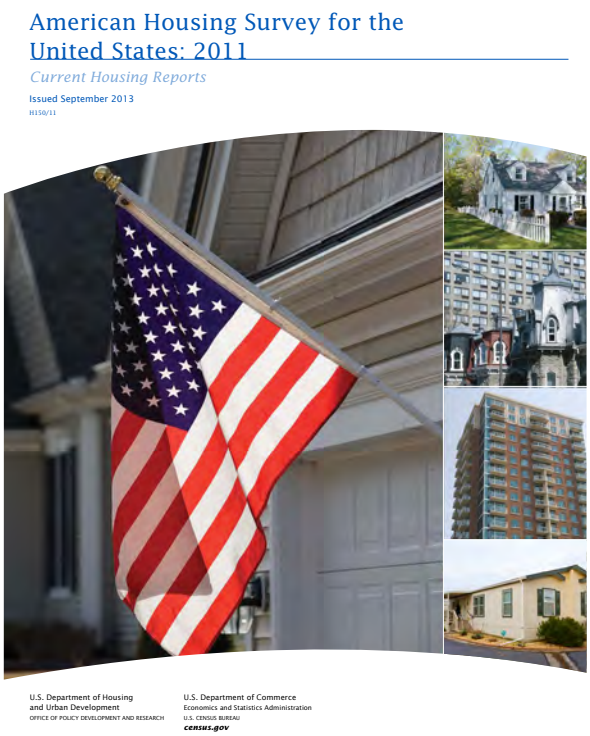
U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

American Housing Survey for the United States: 2011

Issued September 2013

Current Housing Reports

H150/11



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Economics and Statistics Administration
Mark Doms,
Under Secretary
for Economic Affairs

U.S. CENSUS BUREAU
John H. Thompson,
Director

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CONTENTS

* Table not shown, it only applies to owner-occupied units.

** Table not shown, it only applies to renter-occupied units.

Introduction

This report presents data from the American Housing Survey (AHS). The survey is sponsored by the Department of Housing and Urban Development (HUD) and conducted by the U.S. Census Bureau.

The AHS is the most comprehensive national housing survey in the United States. It provides data on a wide range of housing subjects, including single-family homes, apartments, manufactured housing, vacant units, family composition, income, housing and neighborhood quality, housing costs, equipment, fuel type, and recent moves. National data are collected every 2 years from a sample of housing units. The national survey, which began in 1973, has sampled the same units since 1985; it also samples new construction to ensure continuity and timeliness of the data.

The survey, whose data are presented in this report, includes about 155,000 housing units. Respondents in the sample were interviewed between July and December 2011. Data are collected by census enumerators by telephone or personal visit via a laptop survey questionnaire. For unoccupied units, data are collected from landlords, rental agents, or neighbors.

In the past, the AHS was two surveys conducted independently of one another. The national survey was enumerated every other odd-numbered year, while the metropolitan survey occurred in selected areas on a rotating basis. Starting in 2007, the national and metropolitan surveys were conducted in the same time-period to reduce costs. Although they were collected simultaneously, the resulting data were not pooled to produce a single set of estimates. The national cases were used for regional- and national-level estimates, while the metropolitan cases were used for specific-area estimates. These areas usually, but not always, coincide with the Office of Management and Budget (OMB) definitions of the metropolitan statistical area. There was no AHS-Metropolitan sample in the 2011 survey. Instead, a supplemental sample of housing units was selected for 29 metropolitan areas. This supplemental sample was combined with the national sample in these areas in order to produce metropolitan estimates using the national survey. The 2011 sample also includes an oversample of assisted housing units, drawn from HUD administrative records.

SAMPLE DESIGN

Information regarding the sample size and response rate can be found in Appendix B. Sample units are weighted and represent about 2,000 other units in the national survey. The weighting is designed to minimize sampling error and utilize independent estimates of occupied and vacant housing units.

SAMPLING ERRORS

The data in this report are subject to error from sampling and other causes, such as incomplete data and wrong answers. Appendix D contains a complete description of the types of errors and provides formulas for constructing confidence intervals. Standard errors for all 2011 AHS tables are available at <www.census.gov/housing/ahs/>.

2011 CHANGES

The 2011 AHS includes topical supplements on potential health and safety hazards in the home and modifications made to assist occupants living with disabilities. Mortgage questions have been redesigned, while selected neighborhood and journey-to-work questions were dropped from the 2011 survey altogether. These topical supplements will likely rotate back into the questionnaire in subsequent surveys. In addition, the 2011 tables were significantly redesigned from 2009. See Appendix C for more details. A table crosswalk for all 2011 AHS tables is available at <www.census.gov/housing/ahs/>.

SURVEY AUTHORITY

Title 12, Sections 1701Z-1 and 1701-2g of the U.S. Code authorizes the Secretary of HUD to collect data from the public and private agencies and protect the confidentiality of the data. Title 12, Section 1701Z-10 mandates the collection of the data for the AHS. The guarantee of confidentiality made to respondents is provided by the Census Bureau through Title 13, Section 9(a) of the U.S. Code.

FOR MORE INFORMATION

Visit the AHS Web site at <www.census.gov/housing/ahs> for national and metropolitan publications dating back to 1973.

Also available from the Web site are public-use micro data files in SAS and ASCII formats, as well as additional survey information including questionnaire text, micro data codebooks, and AHS-based analyses.

Please contact us at 888-518-7365 (toll-free) or e-mail us at <ahsn@census.gov> with any inquiries about these data.

Table C-04-AO.

Plumbing, Water, and Sewage Disposal—All Occupied Units

[Numbers in thousands, except as indicated. **Weighting consistent with Census 2010**. X not applicable; Z represents or rounds to zero. See Appendix A for definitions]

Characteristics	Total occupied units	Tenure		Housing unit characteristics		Household characteristics				Regions				Inside MSA		Outside MSA
		Owner	Renter	New construction past 4 years	Manufactured/mobile homes	Black alone	Hispanic	Elderly (65 years and over)	Below poverty level	Northeast	Midwest	South	West	Central city	Not central city	
Total	**114,907**	**76,091**	**38,816**	**2,571**	**7,190**	**14,694**	**13,841**	**25,058**	**18,129**	**21,066**	**25,682**	**42,584**	**25,575**	**33,892**	**58,218**	**22,797**
Primary Source of Water																
Public or private system	101,397	64,327	37,070	2,289	5,211	14,140	13,294	21,415	16,548	17,855	21,804	37,733	24,004	33,422	51,091	16,884
Well serving 1 to 5 units	13,131	11,515	1,615	272	1,915	541	523	3,529	1,504	3,120	3,832	4,670	1,509	451	6,958	5,721
Drilled	11,849	10,518	1,331	246	1,723	451	444	3,217	1,308	2,749	3,522	4,214	1,365	400	6,343	5,105
Dug	808	689	120	17	155	67	44	255	124	233	187	315	73	19	384	406
Not reported	473	309	165	9	36	23	35	57	71	138	122	141	71	32	231	210
Other	380	249	131	9	65	13	25	114	77	91	47	180	62	20	169	192
Safety of Primary Source of Water																
Selected primary water sources[1]	114,841	76,068	38,773	2,567	7,189	14,684	13,827	25,054	18,116	21,059	25,682	42,540	25,559	33,877	58,174	22,790
Safe to drink	104,397	70,716	33,681	2,367	6,471	12,902	10,976	23,403	15,580	19,365	24,174	38,798	22,060	30,232	53,031	21,134
Not safe to drink	9,345	4,684	4,661	173	648	1,592	2,748	1,362	2,295	1,507	1,309	3,257	3,272	3,340	4,597	1,409
Safety not reported	1,099	668	431	27	71	190	102	290	240	188	199	485	227	305	547	248
Safety of Well Water																
Well primary source of water	13,801	11,990	1,812	282	2,163	560	571	3,645	1,631	3,256	4,036	4,891	1,619	481	7,285	6,035
Well has been disinfected	4,009	3,618	391	68	553	121	144	1,100	474	858	1,271	1,444	435	112	2,188	1,708
Well has not been disinfected	8,989	7,825	1,164	198	1,434	409	352	2,368	1,027	2,206	2,563	3,207	1,014	325	4,668	3,996
Not reported	804	547	257	15	177	30	75	178	130	191	202	240	170	43	429	331
Source of Drinking Water																
Primary source not safe to drink	9,345	4,684	4,661	173	648	1,592	2,748	1,362	2,295	1,507	1,309	3,257	3,272	3,340	4,597	1,409
Drinking and primary water source the same	1,362	743	620	27	124	231	289	221	329	258	237	573	295	484	645	234
Public or private system	1,281	680	602	24	107	229	288	198	319	237	223	542	280	482	602	198
Individual well	73	57	16	2	13	1	2	19	10	18	14	30	11	3	37	33
Other	8	6	2	Z	4	Z	Z	4	Z	2	Z	2	4	Z	6	2
Drinking and primary water source different	7,974	3,935	4,039	146	524	1,361	2,459	1,140	1,964	1,249	1,068	2,684	2,973	2,855	3,944	1,175
Public or private system	14	9	5	Z	Z	Z	Z	Z	3	8	6	Z	Z	Z	11	3
Individual well	33	27	6	Z	9	3	8	7	1	1	4	22	6	13	6	14
Commercial bottled water	6,230	2,951	3,280	101	440	1,174	2,057	859	1,621	936	812	2,205	2,277	2,217	3,115	899
Other	1,696	948	748	46	75	185	394	274	339	303	246	457	690	626	811	259
Source of drinking water not reported	9	7	2	Z	Z	Z	Z	Z	2	Z	5	Z	4	1	8	Z
Plumbing Facilities																
With all plumbing facilities	113,472	75,453	38,019	2,550	7,086	14,424	13,618	24,755	17,742	20,660	25,434	42,054	25,324	33,281	57,668	22,524
Lacking some or all plumbing facilities[2]	1,435	638	797	21	104	270	224	303	387	406	249	529	251	611	550	273
No hot piped water	189	95	94	7	23	47	20	27	99	50	27	89	24	68	54	68
No bathtub and no shower	147	54	93	10	9	14	18	29	53	38	17	63	29	50	55	42
No flush toilet	122	55	67	7	Z	20	8	27	43	32	17	47	26	47	28	47
No exclusive use	1,183	523	659	11	73	217	189	268	266	347	217	403	216	528	466	189
Means of Sewage Disposal																
Public sewer	92,636	56,649	35,986	2,034	3,438	13,693	12,807	19,095	15,514	16,891	20,762	32,397	22,585	33,072	46,486	13,078
Septic tank, cesspool, or chemical toilet	22,229	19,418	2,811	530	3,752	994	1,035	5,952	2,596	4,164	4,917	10,160	2,988	807	11,719	9,703
Other	42	24	18	7	Z	8	Z	11	18	10	3	27	3	13	13	15

[1] Excludes units where primary source of drinking water is commercial bottled water.
[2] Figures may not add to total because more than one category may apply to a unit.

EXHIBIT L

Section 319
NONPOINT SOURCE PROGRAM SUCCESS STORY
Tennessee

Installing Best Management Practices Abates Acid Mine Drainage in Crab Orchard Creek

Waterbody Improved

Acid mine drainage (AMD) significantly diminished aquatic life in Morgan County, Tennessee's Crab Orchard Creek. As a result, the Tennessee Department of Environment and Conservation (TDEC) added Crab Orchard Creek to the state's Clean Water Act (CWA) section 303(d) list of impaired waters in 1998 for pH and siltation due to pollution from abandoned mines. Best management practices (BMPs) were installed in the watershed, including intensive restoration activities to abandoned mines. These abatement activities led to the attainment of water quality standards in a 2.3-mile segment of Crab Orchard Creek. The segment was removed from the state's CWA section 303(d) list of impaired waters in 2010.

Problem

Crab Orchard Creek, a 28.9-mile-long tributary to the Emory River in upper east Tennessee drains a 47.3-square mile area that includes portions of Morgan and Cumberland counties (Figure 1). The watershed is mostly forested with areas of agriculture, pine plantations, and abandoned mines. Crab Orchard Creek's designated uses include support of fish and aquatic life, recreation, livestock watering/wildlife, and irrigation. It is listed on the Nationwide Rivers Inventory for exceptional scenic, recreational, geologic, and fish/wildlife values.

Coal mining operations in the Crab Orchard Creek watershed left open pits and acid-forming materials that created pockets of standing and flowing surface water with depressed pH, elevated mineral content, and minimal aquatic habitat. The main sources of these impairments were resource extraction and AMD.

Biological reconnaissance (biorecon) is one tool used to recognize stream impairment using species richness measures. The biorecon index is scored on a scale from 1 to 15, where 5 is considered *very poor*, and 10 is considered *good*. The principal metrics used are the total number of macroinvertebrate families found in a stream. In 1998, Crab Orchard Creek failed a biorecon study. At that time, the entire 28.9 miles of Crab Orchard Creek (Waterbody ID: TN06010208020-2000) was put on the 1998 CWA section 303(d) list for pH and siltation due to pollution from abandoned mines. In 1999 and 2000, a TMDL study confirmed that pH levels in the creek were low and failed to meet water quality standards.

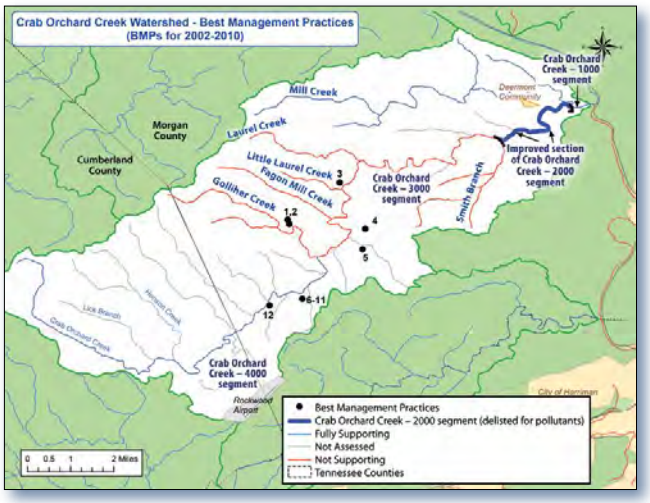

Figure 1. The Crab Orchard Creek watershed is in northeast Tennessee. Partners installed BMPs to address mining and agricultural runoff in several watershed locations.

Project Highlights

To improve water quality within the Crab Orchard Creek watershed, 44 acres of land have been reclaimed. AMD treatments were installed and other remedial management measures were used to achieve nonpoint source pollution load reductions. Measures included limestone treatment ponds and systems, a constructed wetland, a settling pond, a backfill sediment pond and land revegetation (Figures 2 and 3). The Crab Orchard Creek Project

Figure 2. Golliher Creek site, excavated cell, October 2008.

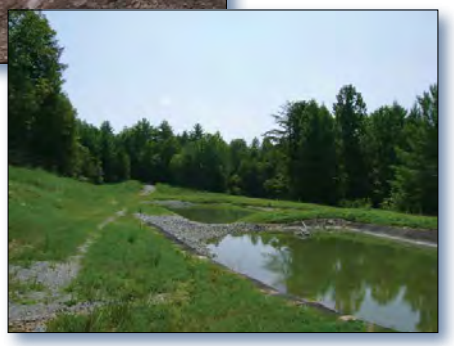

Figure 3. Golliher Creek site, post-reclamation, August 2009.

also involved constructing AMD treatment systems and reclaiming abandoned coal mines to improve the water quality in Mill, Golliher, and Little Laurel Creeks (the three tributaries to Crab Orchard Creek). Four abandoned mine sites where AMD was significantly impacting receiving streams were prioritized and included approximately 185 acres of abandoned surface mines with two sediment ponds, 1,500 feet of highwalls, six identified seeps, and approximately 2,000 feet of exposed and eroding creek bank.

TDEC's Division of Water Pollution Control performed remedial management measures to help treat the creek with BMPs including land reclamation, toxic discharge control, limestone treatment ponds, constructed wetland, settling pond, backfill sediment pond, and stabilization with revegetation. From 2002 through 2010, the Agricultural Resources Conservation Fund (ARCF) funded the installation of agricultural BMPs including laying 969 feet of fencing, planting 16.5 acres of pasture and hay, 42 acres of cropland conservation, laying 1,905 feet of pipeline, construction of a pumping plant, creating two heavy-use areas, construction of four watering facilities, and the construction of a well.

In order to raise awareness among local citizens and recreational users about nonpoint source pollution, impacts from abandoned mines, and this restoration project, a series of four articles were written and submitted to the *Morgan County News*. This project was also highlighted in the newsletters for the Emory River Watershed Association and Chota Canoe Club. Additionally, a series of public meetings were held to share information and updates about the project over the course of the implementation period. An informational brochure was developed as well as a display developed in 2006 showing the watershed. The display was used for special events such as the annual Morgan County Discovery Festival.

Results

In 2006 TDEC collected a Semi-Quantitative Single Habitat Assessment (SQSH) test at mile 3.1 of Crab Orchard Creek. The habitat score indicated that this segment was in compliance with water quality standards and that the stream was of beneficial use for fish and aquatic life. In 2007, a biorecon survey at this same station yielded a perfect score of 15, documenting 17 EPT families, 11 intolerant, and 31 total families. During a sampling in 2006, the stream met pH criteria and the biology had significantly improved. The CWA section 303(d) assessment for the 2010 list, now states that Crab Orchard Creek (TN06010208020-2000) fully supports its designated uses. The upstream section of Crab Orchard Creek remains on the 303(d) list for manganese and pH problems due to mining.

Partners and Funding

Many federal and state agencies, local organizations, and individual landowners worked together to improve water quality in the Crab Orchard Creek watershed. The principle project partners were the Emory River Watershed Association, the Morgan County Soil Conservation District (SCD), TDEC, Marcum Excavating, the community of Oneida, and the Tennessee Valley Authority. In 2006, the U.S. Environmental Protection Agency, through the Tennessee Department of Agriculture, awarded a CWA section 319 grant of $409,200 to TDEC's Abandoned Mine Land Reclamation program for the Crab Orchard Creek Watershed Plan. The grant's state project number was ID-06-08123-00 for the Crab Orchard Creek Watershed Plan. It began on March 1, 2006 and was completed on February 28, 2011. TDEC also provided $290,800 in matching funds. The Agricultural Resources Conservation Fund (ARCF) spent $15,293.35 through the Morgan County Soil Conservation District. U.S. Department of Agriculture Farm Bill funds also supported installation of practices from 2007 to 2011.

U.S. Environmental Protection Agency
Office of Water
Washington, DC

EPA 841-F-14-001DD
May 2014

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EXHIBIT M

NONPOINT SOURCE SUCCESS STORY

Tennessee

Septic Tank Effluent Pumping Project Improves King Branch

Waterbody Improved

Since 1993 King Branch has been posted with signs for water contact avoidance due to high *Escherichia coli (E. coli)* levels from failing septic systems. In 1998 the Tennessee Department of Environment and Conservation (TDEC) added the entire West Prong Little Pigeon River watershed to the Clean Water Act (CWA) section 303(d) list; King Branch was added to the 303(d) list as an individual segment in 2002. The Tennessee Nonpoint Source Program, in conjunction with the Sevier County Environmental Health Department and using partial funding support through CWA section 319 grant funding, installed a septic tank effluent pump (STEP) sewer system to treat sewage that had been impacting both surface and groundwater. In April 2014 the water contact advisory was lifted due to improved water quality and decreased *E. coli*. TDEC removed the 2.5-mile segment of King Branch from Tennessee's CWA section 303(d) list in 2014.

Problem

King Branch is within the West Prong Little Pigeon River–Upper watershed (060101070206) near Pigeon Forge in central Sevier County, Tennessee (Figure 1). King Branch flows generally east/northeast into the West Prong Little Pigeon River, which is part of the Lower French Broad River watershed.

In the early 1990s TDEC conducted an intensive bacteriological study of the West Prong Little Pigeon River to determine if the river met bacteriological standards for body contact recreation during recreational seasons. The sampling results showed that King Branch exceeded regulatory bacterial limits, and the stream was deemed unsafe for contact recreation. The primary cause of impairment was identified as failing septic systems (chiefly for homes and businesses along King Branch Road). In 1993 a public advisory was issued and warning signs were posted. In 1998 and 1999 TDEC tested samples from King Branch for *E. coli*; the sample concentrations ranged from 1,553 counts (cts) per 100 milliliter (mL) to over 2,419 cts/100 mL (i.e., above the test method's detection limit). In 1998 TDEC added the entire West Prong Little Pigeon River watershed to the Clean CWA section 303(d) list; King Branch was added to the 303(d) list as an individual segment (TN06010107010_0200) in 2002.

A total maximum daily load (TMDL) for pathogens in the Lower French Broad River was developed by TDEC and approved by the U.S. Environmental Protection Agency in December 2005. The goal of the TMDL was

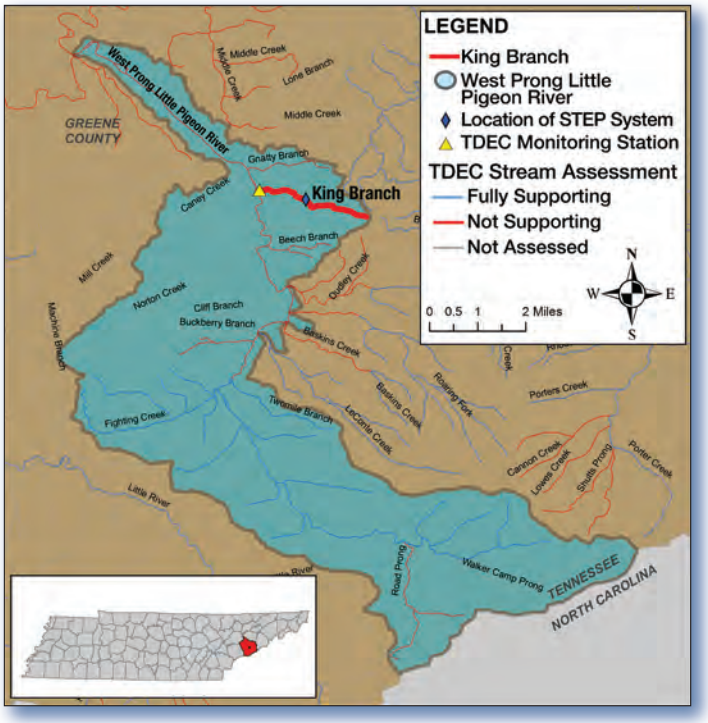

Figure 1. The King Branch Road STEP project was implemented in the West Prong Little Pigeon River watershed in Sevier County, Tennessee. The locations of King Branch, the STEP system, and the nearest TDEC monitoring station are shown in the lower watershed.

to have King Branch meet the Tennessee criteria/standard for *E. coli*, which states that the concentration of a fecal coliform group shall not exceed 200 colony forming units (cfu) per 100 mL nor shall the concentration of the *E. coli* group exceed 126 cfu/100 mL as a

Figure 2. Maneuvering the new STEP system equipment into place was challenging because of tight working conditions along King Branch Road.

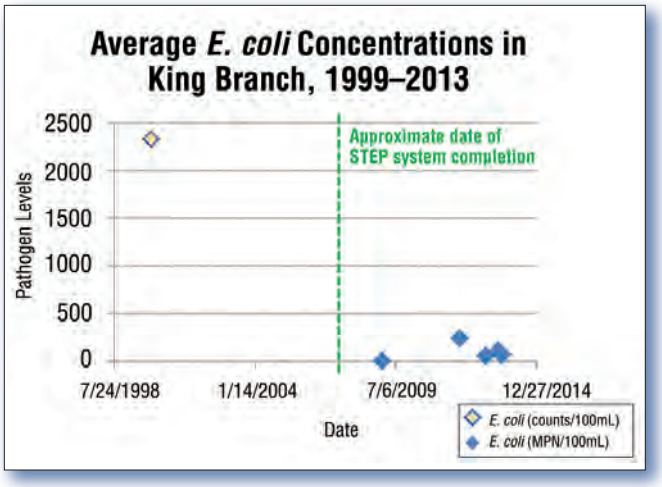

Figure 3. *E. coli* levels consistently met standards after the STEP system was installed.

geometric mean based on a minimum of 10 samples collected from a given sampling site over a period of not more than 30 consecutive days, with individual samples being collected at intervals of not less than 12 hours; and, the concentration of the fecal coliform group in any individual sample shall not exceed 1,000 cfu/100 mL.

Project Highlights

Planning and design for restoring King Branch began in 2001. In 2006 the Sevier County Environmental Health Department approved the construction of a STEP sewer system in this area because of an immediate threat to public health from failing septic systems. STEP systems collect sewage from the customers on the system and route it to a recirculating sand filter with drip irrigation lines for disposal. Previously existing septic leach lines are removed from service, which prevents sewage from reaching the soil surface and contaminating runoff. In 2007 a STEP system capable of treating up to 11,000 gallons of effluent per day was constructed to service over 30 homes and businesses along King Branch Road (Figure 2).

Results

Removing septic-related pollution sources reduced bacteria levels in King Branch. Sampling conducted by TDEC in 2013 showed that the *E. coli* levels within the stream had improved and met water quality standards for all designated uses. Observations from June to August 2013 indicated *E. coli* had decreased to a range of 62.2 most probable number (MPN) per 100 mL to 112.4 MPN/100 mL (this is approximately equal to a range of 62.2–112.4 cfu/100 mL), which is well below the 126 cfu/100 mL required by state standards (Figure 3). In 2014 TDEC lifted the contact advisory and removed King Branch from the impaired waters list for bacteria.

Partners and Funding

The Sevier County Environmental Health Department served as the lead organization for the STEP project. Other cooperating organizations included the Sevier County Soil Conservation District, Smokey Mountain Resource Conservation and Development Council, Tennessee Department of Agriculture, TDEC, Tennessee Department of Health – Division of Lab Services, and the U.S. Department of Agriculture – Natural Resources Conservation Service.

Sevier County was the recipient of two CWA section 319 grants (2001 and 2005) for a total of $334,425. Partial funding through the CWA section 319 program assisted in the purchase of the STEP system itself, along with the accompanying packed bed trickling filter/drip effluent dispersal system. Matching funds for the project were supplied by Sevier County. The system is owned and operated by Tennessee Wastewater Systems and is inspected twice a month. The system serves approximately 35 homes under Permit No. SOP-05043; the permit must be renewed every 5 years (the current permit expires August 31, 2017).

U.S. Environmental Protection Agency
Office of Water
Washington, DC

EPA 841-F-16-001R
August 2016

For additional information contact:

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EXHIBIT N

EPA/600/R-12/618 | September 2012

EPA
United States
Environmental Protection
Agency

2012
Guidelines for Water Reuse

USAID
FROM THE AMERICAN PEOPLE

CDM Smith

EPA/600/R-12/618

September 2012

Guidelines for Water Reuse

U.S. Environmental Protection Agency

Office of Wastewater Management

Office of Water

Washington, D.C.

National Risk Management Research Laboratory

Office of Research and Development

Cincinnati, Ohio

U.S. Agency for International Development

Washington, D.C.

Table of Contents

CHAPTER 4
State Regulatory Programs for Water Reuse

This chapter presents an overview of the overarching approach to developing a reuse program at the state level, a regulatory framework outlining fundamental components for states considering developing or revising regulations, and a summary of which states have regulations and guidelines governing reuse. This chapter also provides a listing of the existing state water reuse regulations or guidelines in 10 sample states (Arizona, California, Florida, Hawaii, Nevada, New Jersey, North Carolina, Texas, Virginia, and Washington) for a comparison of approaches governing different types of reuse applications. Finally, the chapter provides suggested regulatory guidelines for water reuse.

4.1 Reuse Program Framework

Since publication of the 2004 guidelines, several states have developed state water reuse programs, building on the examples of other states with well-established water reuse programs, such as Florida, California, Texas, and Arizona. Establishing an effective state water reuse program involves a number of complex factors beyond establishing guidelines or regulations. There are 15 key elements to an effective state water reuse program, as presented in **Table 4-1**.

4.2 Regulatory Framework

Reuse programs operate within a framework of regulations that must be addressed in the earliest stages of planning. A thorough understanding of all applicable regulations is required to plan the most effective design and operation of a water reuse program and to streamline implementation. Currently, there are no federal regulations directly governing water reuse practices in the United States. In the absence of federal standards and regulations, each state may choose to adopt rules and develop programs for water reuse to meet its specific resource needs, and to ensure that water reuse projects are designed, constructed, and operated in a manner protective of the environment, other beneficial uses, and human health. Water reuse regulations and guidelines have been developed by many states, as described in Section 4.5. Regulations refer to actual rules that have been enacted and are enforceable by governmental agencies. Guidelines, on the other hand, are generally not enforceable, but can be used in the development of a reuse program. In some states, however, guidelines are, by reference, included in the regulations, and thus are enforceable. In addition to providing treatment and water quality requirements, comprehensive rules or guidelines also promote reuse by providing the playing field for which projects must comply. They provide the certainty that if a project meets the requirements, it will be permitted.

Table 4-2 provides fundamental components of a regulatory framework that states may want to consider when developing or amending rules or regulations for water reuse.

4.3 Relationship of State Regulatory Programs for Water Reuse to Other Regulatory Programs

States' regulatory programs for water reuse must be consistent with and, in some cases, function within the limitations imposed by other federal and state laws, regulations, rules, and policies. The following subsections describe some of the more common laws and regulations that can affect states' regulatory programs for water reuse. Laws, policies, rules, and regulations that affect state water reuse regulatory programs include water rights laws, water use, and wastewater discharge regulations, as well as laws that restrict land use and protect the environment.

4.5.2.9 Groundwater Recharge – Nonpotable Reuse

Spreading basins, percolation ponds, and infiltration basins have a long history of providing both effluent disposal and groundwater recharge. Most state regulations allow for the use of relatively low quality water (i.e., secondary treatment with basic disinfection) based on the fact that these systems have a proven ability to provide additional treatment. Traditionally, potable water supplies have been protected by requiring a minimum separation between the point of application and any potable supply wells. These groundwater systems are also typically located so that their impacts to potable water withdrawal points are minimized. While such groundwater recharge systems may ultimately augment potable aquifers, that is not their primary intent and experience suggests current practices are protective of raw water supplies.

California, Florida, Hawaii, and Washington have regulations or guidelines for reuse with the specific intent of groundwater recharge of nonpotable aquifers. Hawaii does not specify required treatment processes, determining requirements on a case-by-case basis. The Hawaii Department of Health Services bases the evaluation on all relevant aspects of each project, including treatment provided, effluent quality and quantity, effluent or application spreading area operation, soil characteristics, hydrogeology, residence time, and distance to withdrawal. Hawaii requires a groundwater monitoring program. Arizona regulates groundwater recharge through their Aquifer Protection Permit process. Washington has extensive guidelines for the use of reclaimed water for direct groundwater recharge of nonpotable aquifers although all aquifers in the state are considered to be potable. Recharge of nonpotable aquifers in Washington first requires the redesignation of the aquifer to nonpotable. **Table 4-15** shows reclaimed water quality and treatment requirements for groundwater recharge via rapid-rate (surface spreading) application systems.

4.5.2.10 Indirect Potable Reuse (IPR)

IPR involves use of reclaimed water to augment surface or groundwater sources that are used or will be used for public water supplies or to recharge groundwater used as a source of public water supply. Unplanned (*de facto*) IPR is occurring in many river systems today. Additionally, many types of reuse projects inadvertently contribute to groundwater as an unintended result of the primary activity. For example, irrigation can replenish groundwater sources that will eventually be withdrawn for use as a potable water supply. IPR systems, as defined here, are distinguished from typical groundwater recharge systems and surface water discharges by both intent and proximity to subsequent withdrawal points for potable water use. IPR involves intentional introduction of reclaimed water into the raw water supply for the purposes of increasing the volume of water available for potable use. In order to accomplish this objective, the point at which reclaimed water is introduced into the environment must be selected to ensure it will flow to the point of withdrawal. Typically the design of these systems assumes there will be little additional treatment in the environment after discharge, and all applicable water quality requirements are met at the point of release of the reclaimed water.

Four of the 10 states (California, Florida, Hawaii, and Washington) have regulations or guidelines specifically pertaining to IPR. For groundwater recharge of potable aquifers, most of the states require a pretreatment program, public hearing requirements prior to project approval, and a groundwater monitoring program. Florida and Washington require pilot plant studies to be performed. In general, all the states that specify treatment processes require secondary treatment with filtration and disinfection. Washington has different requirements for surface percolation, direct groundwater recharge, and streamflow augmentation. Hawaii does not specify the type of treatment processes required, determining requirements on a case-by-case basis. Texas and Virginia do not have specific IPR regulations but review specific projects on a case-by-case basis.

Most states specify a minimum time the reclaimed water must be retained underground prior to being withdrawn as a source of drinking water. Several states also specify minimum separation distances between a point of recharge and the point of withdrawal as a source of drinking water. **Table 4-16** shows the reclaimed water quality and treatment requirements for IPR.

EXHIBIT O

ICR Supporting Statement
Information Collection Request for
National Pollutant Discharge Elimination System (NPDES) Program (Renewal)

OMB Control No. 2040-0004, EPA ICR No. 0229.22

September 2017

Contents

A. Justification

1. Explain the circumstances that make the collection necessary and explain the legal or administrative requirements relevant to the collection and attach a copy of the statute or regulation authorizing the collection

1.1 Short Characterization/Abstract

This consolidated Information Collection Request (ICR) renews the National Pollutant Discharge Elimination System (NPDES) Program ICR. It calculates the burden and costs associated with the NPDES program, identifies the types of activities regulated under the NPDES program, describes the roles and responsibilities of state governments and the Agency, and presents the program areas that address the various types of regulated activities.

This ICR being renewed (Office of Management and Budget [OMB] control no. 2040-0004, EPA ICR no. 0229.21, expiration date 12/31/2017) consolidated the burden and costs associated with activities previously reported in 11 of the NPDES program or NPDES-related ICRs administered by EPA's Water Permits Division. This renewal documents the addition of the burden and costs for seven more NPDES programs, raising the total to 18. Those programs were previously addressed by the following separate ICRs. Once this renewal ICR is approved and these programs are formally incorporated into this ICR, the follow ICRs will be discontinued.

- Consolidated Animal Sectors (OMB control no. 2040-0250, EPA ICR no. 1989.09, expiration date 5/31/2019)
- Pesticide Applicators (OMB control no. 2040-0284, EPA ICR no. 2397.02, expiration date 3/31/2019)
- National Pretreatment Program (OMB control no. 2040-0009, EPA ICR no. 0002.15, expiration date 4/30/2019)
- Cooling Water Intake Structures Phase I—New Facilities (OMB control no. 2040-0241, EPA ICR no. 1973.06, expiration date 11/30/2019)
- Cooling Water Intake Structures at Phase III Facilities (OMB control no. 2040-0268, EPA ICR no. 2169.05, expiration date 07/31/2017)
- Cooling Water Intake Structures Existing Facilities (OMB control no. 2040-0257, EPA ICR no. 2060.07, expiration date 10/31/2017)
- NPDES Electronic Reporting Rule (OMB control no. 2020-0035, EPA ICR no. 2468.02, expiration date 1/31/2019)

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters (CWA section 101). The NPDES program, established under CWA section 402, is an important tool for controlling pollutant discharges. The CWA authorizes the Agency to issue permits for the discharge of pollutants to waters of the United States; the Agency uses the NPDES program to regulate point source discharges. CWA section 402(b) allows states (defined to include Indian tribes and

state agencies in direct contact with individual permittees. EPA Headquarters staff responsible for program oversight were also contacted to provide revised information and data for this ICR.

9. Explain any decision to provide compensation to respondents

No payments or gifts are provided to respondents.

10. Describe any assurance of confidentiality provided to respondents

Permit applications and other respondent reports may contain confidential business information. If this is the case, the respondent may request that such information be treated as confidential. All confidential data will be handled in accordance with 40 CFR 122.7, 40 CFR Part 2, and EPA's *Security Manual* Part III, Chapter 9, dated August 9, 1976. Any claim of confidentiality must be asserted at the time of submission. However, CWA section 308(b) specifically states that effluent data may not be treated as confidential.

11. Provide additional justification for any questions of a sensitive nature

Questions of a sensitive nature are not found in this information collection.

12. Provide estimates of the hour burden of the collection of information

The estimate of respondent burden hours covers facilities subject to NPDES program requirements (permittees) and authorized states. Appendix A describes the information collected and the methodology for estimating respondent burden and costs. Appendix B presents a calculated respondent burden estimate grouped by activity type and respondent type. Table 12.1 summarizes the labor burden and associated labor costs for permittees and states with NPDES program authority.

Table 12.1 Summary of Labor Burden and Costs

	Average Annual Respondents	Average Annual Total Burden (hours)	Average Annual Total Labor Costs (2016$)
Permittees	934,383	26,385,587	$1,348,910,138
States, tribes, territories, and D.C.[a]	637	1,853,675	$83,674,896
Totals	935,020	28,239,262	$1,432,585,035

[a] 590 of these 637 are not authorized to administer the NPDES program and respond to only one information item (certification of EPA-issued permits).

13. Provide an estimate of the total annual cost burden to respondents

This section presents an estimate of annual operating and maintenance (O&M) and capital and start-up costs. The majority of the burden and cost calculations in this ICR are the result of labor costs only. The ICR does, however, account for O&M costs for certain testing/analysis plus certain capital and start-up costs incurred by respondents that perform activities outside the normal operation practices. All costs presented have been adjusted using the Consumer Price Index to August 2016 dollars. This ICR estimates that there are no O&M or capital and start-up costs for state agencies or the federal government.

Permittee O&M costs. The permittee O&M costs are linked to the following activities:

Appendix A—Description of the Information Collected and Methodology for Estimating Respondent Burden and Cost of Collection

This appendix provides detailed information regarding the methodology for estimating respondent burden and costs. Section A.1 provides the methodology for deriving respondent burden and breakdown of capital/start-up cost, while the derivation of costs is provided in section A.2.

A.1. Estimating Respondent Burden

This section describes the methodology for estimating respondent burden for the information requests. Facilities subject to NPDES program requirements (also referred to as permit holders or permittees) and authorized states are included as respondents in this section. Methodologies that apply to NPDES-authorized states also apply to federal burden associated with EPA Regions acting as permitting authority in non-NPDES-authorized states. However, the EPA permitting authority burden and costs are not included in the respondent burden and cost estimates.

This ICR calculates annual burden and costs to respondents. These calculations are complicated because there are two types of permittee respondents discussed in this section: permittees renewing existing permits and applicants for new permits. Applications for NPDES permit renewal must be submitted every 5 years. For these respondents, the ICR assumes that the number of applicants renewing per year equals one-fifth of the total number of existing permitted facilities. For new permits, respondents will apply for each type of new permit only once and the annual number is estimated based on the expected average number of new permit applications that will be submitted over the three-year period covered by this ICR. In subsequent ICRs, new permits will transition to renewal permits.

This section summarizes the input data and assumptions for each category of respondent activity shown in Appendix B. In some cases, the "total number of respondents" and "annual number of respondents" shown in Appendix B may reflect double-counting of individual respondents because the respondent values are summed values within the category which may include multiple activities for the same respondent. For example, a permittee may be required to submit different types of notices to the permitting authority. This is particularly true for recordkeeping, which can involve multiple types of recordkeeping activities.

To simplify the burden estimation process, Appendix A identifies respondent categories that can be used as input values to adjust the burden estimates during each ICR cycle. For each respondent input category, estimates for number of responses, labor hours, O&M costs, and capital/start-up costs are derived from previous ICR estimates. These previous ICR estimates are then adjusted based on revisions to the number of respondents in each respondent input category and wherever underlying assumptions change. The revised number of respondents in each input category are listed in Appendix D and represent

various subsets of the unique respondents listed in Appendix E. The basic assumptions used to derive the ICR estimates are described below.

A.1.1. Recordkeeping

Permittees. Recordkeeping activities include those associated with data collected, DMRs, permit documents, notices, and correspondence. Frequency may range from ongoing to once every five years. The estimated time required per response ranges from 10 minutes (0.17 hours) for sludge permits to 6-7 hours for general stormwater and major industrial NPDES permits.

States. The estimated time required for state respondents for permit oversight recordkeeping ranges from a per-state aggregate of 0.33 hours for the CSO program to 50 hours for sludge programs to 300 hours for the NPDES program.

A.1.2. Individual Permits

A.1.2.1. Application Forms

Below are NPDES application forms that are submitted initially for new permits and resubmitted upon permit renewal every five years. These forms and the facilities that submit them are included in Table 2.1 in Item 2 of Section A (Justification) above. Due to the wide variety in response times, the burdens for different types of application forms are discussed separately below.

Form 1

Permittees. Form 1 requirements apply to all nonmunicipal individual permits and individual stormwater permits. The estimated time required per permittee respondent for Form 1 ranges from 1 to 3 hours.

States/federal. The estimated burden hours for state/federal respondents to review Form 1 is 0.5 hours per form.

Forms 2C-2F

Permittees. The estimated time required per permittee respondent for Forms 2C-2F ranges from 14 hours for Form 2E to 46 hours for Form 2D.

States/federal. Estimated burden hours for state/federal respondents to review Forms 2C-2F ranges from 0.5 hours to 2 hours per form.

Forms for POTWs and PrOTWs

Permittees. The estimated time required per permittee respondent for Forms for POTWs and PrOTWs (Form 2A - Basic, Form 2A - Part D, Form 2A - Part E, Form 2A - Part F, Form 2A - Part G) ranges from 4 to 18 hours. There are non-labor operating costs associated with Forms for POTWs and PrOTWs due to requirements for testing and analysis. See section A.2 for details.

States. Estimated burden hours for a state respondent to review Forms for POTWs and PrOTWs ranges from 0.67 hours to 4 hours per application.

Ocean Discharge Application

Permittees. The estimated total hours per permittee respondent for applications for ocean discharges is 778 hours but no applications are anticipated for the three year-period for this ICR renewal.

States/federal. Estimated burden hours for state/federal respondents to review applications for ocean discharges is 88 hours per application. As stated above, no applications are anticipated for the three years covered by this ICR renewal.

A.1.2.2. DMRs

Permittees. DMR preparation is expected to require about 2 hours per outfall. Some permittees, especially industrial facilities, have multiple outfalls. The required frequency of DMR reporting (monthly, bimonthly, quarterly, semi-annually, or yearly) depends on facility type and permit type. The implementation of the Electronic Reporting Rule is not expected to change the time necessary to prepare the DMR but will reduce mailing costs. These cost adjustments are calculated separately (see section A.1.8.4) and deducted from the total cost burden estimate.

States/federal. The estimated time required for state/federal respondents to review and process DMRs non-electronically is 10 minutes per DMR per outfall; additionally, 20 percent of the submitted DMRs are expected to require 30 minutes for follow-up. The adjustments in burden due to implementation of the Electronic Reporting Rule requirements affect these estimates and are calculated separately and deducted from the total based on pre-rule estimates (see sections A.1.8.4 and A.2.2.9).

A.1.2.3. Reports

Report activities in this category can include submission of notices to the permitting authority concerning the following:

- Facility and Permit Transfer Report;
- Permittee Report of Inaccurate Previous Information;
- Alternate Level Reports;
- Permittee Report of Planned Facility Changes;
- Request for Water Quality-Based Effluent Limitations Modification;
- Non-compliance Reports;
- Compliance Schedule Reports; and
- Unanticipated Bypass/Upset Reports.

Permittees. In general, the estimated time required per response for these activities ranges from 1 to 5 hours. There is no set frequency because these activities are often triggered by unplanned events. The frequencies used to derive the burden estimates are based on experience and assumptions regarding expected occurrence of each. The estimated time required per respondent for preparing and submitting compliance schedule reports is 0.75 hours and occurs on an annual basis.

States/federal. The estimated time required for state/federal respondents to review and process notifications is typically 4 hours per notification but can take up to 20 hours for Permittee Report of Planned Facility Changes. The estimated time required for state/federal respondents to review and process compliance schedule reports is 0.25 hours for municipal and 4 hours for nonmunicipal permits.

A.1.2.4. Permittee Monitoring

Sampling

Permittees. Estimates of the hours per response for DMR sampling are generally based on number of outfalls, reporting frequency, and duration and number of sampling episodes per reporting period. Typical sampling episodes are estimated to require about 2 to 2.75 hours each.

States. Any state activities related to monitoring data are covered under the analyses section below.

Analyses

Permittees. This category refers to chemical analyses that are conducted in-house. Estimates of the hours per response for DMR analyses are generally based on 0.5 hours per parameter analyzed multiplied by the estimated number of outfalls, number of samples per response and number of parameters per sample.

States/federal. The estimated time required for state/federal respondents to review and process monitoring reports is 10 minutes and 0.5 hours for follow-up. The estimate of 10 hours for state respondents applies only to review of post-baseline monitoring data for coal remining permits.

CSO Permittee Monitoring

Permittees. The estimated time required per respondent for CSO monitoring is 27 hours, 18 hours, 20 hours, and 2 hours for sampling, analysis, estimating flow parameters, and reporting, respectively. The frequency is semi-annually.

States. Any state activities related to CSO monitoring data are covered under section A.1.2.2 (DMRs).

A.1.2.5. CSO Notification

Permittees. The estimated time required per respondent for CSO notification is 0.5 hours per sign for inspection and maintenance of notification signs and 5 hours for public advisories with a frequency of 10 times per year for public advisories. There are capital costs for replacement of signs (see section A.2 for details).

States. The estimated time for state oversight of CSO notification is 4 hours per permit every 5 years.

A.1.2.6. Other

Activities in this category include:

- Request for Modification, Revocation and Reissuance, or Termination;
- Section 308(a) Letters;
- New Introduction of Pollutants to POTWs;
- Notification of New or Increased Discharge;
- Permittee Notice of Regulated Discharge Cessation;
- Variance Request;
- Certifications;
- Documenting Nine Minimum Control Measures;
- Writing Long-term Control Plans;
- Part 435 Certification Oil and Gas Extraction; and
- BMP Development.

Request for Modification, Revocation and Reissuance, or Termination
Permittees. The estimated time required per respondent for preparing and submitting a request for modification, revocation and reissuance, or termination is 5 hours and occurs on an as-needed basis.

States/federal. The estimated time required for state/federal respondents to review and process request for modification, revocation and reissuance, or termination is 40 hours for each request.

Section 308 Requests
Permittees. The time required per respondent for preparing responses to Section 308 requests can vary considerably and is estimated to be 5-8 hours, 50 hours, and 1,000 hours for routine requests and letters, medium complexity requests, and complex municipal facility requests, respectively. The frequency is on an as-needed basis.

States/federal. The estimated time required for state/federal respondents to review and process submitted information ranges from 1 to 20 hours depending on permit type.

New Introduction of Pollutants to POTWs
Permittees. The time required per respondent to prepare and submit to the permitting authority a notice of substantial change in the volume or character of pollutants being introduced into that POTW is estimated to be 3 hours and occurs at an approximate frequency of 200 per year.

States/federal. The time required to review and process each notice is 4 hours.

Notification of New or Increased Discharge
Permittees. The time required per respondent to prepare and submit to the permitting authority a notice of new or increased discharge is estimated to be 4 hours and occurs for 5 percent of all major and 3 percent of all minor nonmunicipal permits.

States/federal. The time required to review and process each notice is 4 hours.

Permittee Notice of Regulated Discharge Cessation
Permittees. The time required per respondent to prepare and submit to the permitting authority a notice of new or increased discharge is estimated to be 4 hours and occurs annually for 2 percent of all major and 0.8 percent of all minor nonmunicipal permits.

States/federal. The time required to review and process each notice is 4 hours.

Variance Request
Permittees. Variance requests for individual permits include the following:

- Great Lakes Modification and variance request. The estimated burden is 418 hours.
- Variance Request for Fundamentally Different Factors. The estimated burden is 160 hours.
- Variance Request for Nonconventional Pollutants. The estimated burden is 150 hours.
- Variance Request for Innovative Pollution Control Technology. The estimated burden is 60 hours.
- Variance Request Regarding Thermal Discharges (New). The estimated burden is 400 hours.
- Variance Request Regarding Thermal Discharges (Renewal). The estimated burden is 4 hours.

The number of respondents for each type is based on assumed percentages of different types of permits. The frequency of occurrence is on an as-needed basis.

States/federal. The estimated time required for state/federal respondents to review and process variance requests ranges from 44 to 520 hours for each type of variance request. Time for review and processing of thermal discharge variance renewals is 1 hour.

Long-term Control Plans (LTCPs)
Permittees. The estimated time required per respondent to write an LTCP varies considerably depending on system size and on whether the system has already conducted studies. Respondent time can range from 300 hours for a small system that has existing studies to 6,000 hours for a large system without existing studies.

States/federal. The estimated time required for state/federal respondents to review and process LTCPs is 20, 33, and 53 hours for small, medium, and large combined sewer systems, respectively.

Documenting Nine Minimum Control (NMC) Measures
Permittees. The estimated time required per respondent for collecting necessary information for small, medium and large systems is 29 hours, 43 hours and 200 hours, respectively. EPA estimates that no municipalities will submit NMC documentation in the next 3 years.

States. No state respondent burden is anticipated for this activity.

Certification for Exemption from Monitoring and Notification of Process Changes
The effluent limitations guidelines and standards regulations for 14 industrial categories (12 categories and 2 subcategories) allow dischargers to submit a certification to exempt them from monitoring one or more pollutants.

Permittees. The estimated time required per respondent for preparing certification for exemption documents will typically be one hour and with a frequency of once per year.

States/federal. The estimated time required for state/federal respondents to review and process certification documents is 1 hour for each certification.

Part 435 Certification Oil and Gas Extraction (Synthetic Based Drilling Fluid)
Permittees. The estimated time required per respondent for activities associated with certification of preparation and implementation of BMP plans for control of discharges of synthetic-based drilling fluids cuttings under 40 CFR Part 435 for oil and gas extraction permits is 787 hours and occurs at a frequency of once per year.

Federal. The estimated time required for federal respondents to review and process certification documents is 5.7 hour for each certification.

Pollution Prevention Alternative Certification (Pesticides Packaging and Repackaging)
Permittees. The estimated time required per respondent for preparing pollution prevention alternative certifications for pesticides formulating, packaging, and repackaging category facilities is 20 hours and occurs annually.

States/federal. The estimated time required for state/federal respondents to review and process certification documents is 1 hour for each certification.

BMP Development
Permittees. The estimated time required per respondent is 50 hours for amendment and review of BMP Plans for certain industrial permits and 40 hours for associated refresher training. Recurrence is on an as-needed basis for the BMP plan and semi-annually for the training.

States. The estimated time required for state respondents for BMP plan review is 5 hours.

A.1.2.7. Great Lakes

The activities in this category apply to NPDES permittees that discharge within the Great Lakes watershed and are subject to EPA's Great Lakes Water Quality Guidance.

Permittees. Activities include:

- Great Lakes Antidegradation Demonstration with bioaccumulative chemicals of concern (BCCs).[3] The estimated burden is 22.2 hours and 11.1 hours for municipal and nonmunicipal permits, respectively.
- Great Lakes Antidegradation Demonstration without BCCs. The estimated burden is 14.8 hours and 7.4 hours for municipal and nonmunicipal permits, respectively.
- Great Lakes pollutant minimization plan (PMP) Implementation. The estimated burden is 1.2 hours and 1.4 hours for municipal and nonmunicipal permits, respectively.
- Great Lakes Approvable Strategy. The estimated burden is 104 hours and 142 hours for municipal and nonmunicipal permits, respectively.
- Great Lakes Annual Report. The estimated burden is 20.9 hours and 32.4 hours for municipal and nonmunicipal permits, respectively.
- Great Lakes Bioconcentration Studies. The estimated burden is 73 hours.
- Great Lakes Collecting Data and Monitoring for WET Limits. The estimated burden is 10,877 hours total and 6,841 hours total for all municipal and nonmunicipal permits, respectively.
- Great Lakes WQBEL Compliance Monitoring. The estimated burden is 0.5 hours.

Frequency ranges from ongoing for PMP implementation to annually for monitoring and strategies/studies/reports to once every 5 years for antidegradation demonstrations.

States. The burden applies only to the 7 Great Lake states and the estimated time required per state respondent ranges from 4 to 8 hours for each item.

A.1.3. National Pretreatment Program

The activities in this category are related to the administration of the pretreatment program included in the National Pretreatment Program ICR Supporting Statement (OMB control no. 2040-0009; EPA ICR no. 0002.15). All activities were grouped and allocated on the basis of the type of respondent. Below is a list of the possible types of input variables:

- Total number of SIUs;
- Total number of CIUs;
- Total number of approved pretreatment programs;
- Number of approved states; and
- Estimated number of new pretreatment programs over the next three years.

Burden estimates for each respondent type in the Pretreatment ICR were updated using the current estimate of the number of each respondent type listed above (see Appendix D). Historically, ICIS has been a poor source of information regarding respondent numbers related to the pretreatment program. Consequently, the updated estimates were verified through consultation with the Regional and State pretreatment coordinators. There are no

[3] The criteria for when an antidegradation demonstration must be performed are different for bioaccumulative chemicals of concern (BCCs) and non-BCCs.

capital or start-up costs. Burden estimates for POTWs, IUs, state, and federal government are associated with the following types of activities related to the Pretreatment Program:

- Program development (POTWs and state/federal);
- Program implementation (POTWs, IUs and state/federal);
- Limits modification requests and removal credits (POTWs and IUs);
- POTWs as users of the data (POTWs);
- Recordkeeping (POTWs, IUs and states);
- States as users of the data; and
- Recordkeeping.

Industrial Users. The underlying assumptions regarding burden estimates for industrial users are summarized in Table A.1. Certain industrial user activities are presented as percentages to reflect that they are projections, based on the industrial user universe. In some cases, values are based on estimates that EPA developed for a previous ICR; values were not recalculated as there is no readily available source or indication that these assumptions are incorrect or require revision.

Table A.1 Summary of Burden Assumptions Related to Industrial Users

Industrial User Activity	Frequency	Burden (hours)
Baseline monitoring and report	New sources equivalent to 2 percent of CIUs per year	42.3
IU compliance schedule progress report	25 percent of new sources per year	4
IU compliance attainment analysis and report	New sources equivalent to 2 percent of CIUs per year	34.3
IU resampling compliance report	10 percent of all IUs per year excluding 1,500 Pesticides Formulating Packaging & Repackaging (PFPR) facilities	17
IU self-monitoring compliance sampling and report[a]	Once every 5 years excluding PFPR facilities	14.5–16.6
Pollution prevention plans	10 percent of PFPR facilities per year	20
Minimum monitoring requirements for Paper Mills in specific categories	10 mills per year	826
Pollution prevention compliance alternative; transportation equipment cleaning	84 facilities per year	209 - 235
Best management practices for Paper Mills in specific categories	10 facilities per year	617
Request for coverage under a general control mechanism	Once every 5 years for two percent of all IUs	0.5
Periodic certifications	7,770 IUs per year in 12 categories[b]	1
IU slug load notification	100 SIUs per year	2
Notification of changed discharge	1,000 SIUs per year	4
Bypass notification	1,427 SIUs per year	5 - 7
Notification of changed monitoring location	50 SIUs per year	1
Slug control plan	10 percent of all new CIUs and 5 percent of new non-categorical SIUs per year	2
Alternative limits modification request	10 percent of all new CIUs	2
Net/gross adjustment request	2 per year	50

[a] These assumptions are carried forward from the Pretreatment Streamlining ICR.

[b] Industrial categories include but are not limited to, Electroplating and Metal Finishing; Electrical and Electrical Components; Steam Electric Power Generating; Pulp, Paper, and Paperboard; Centralized Waste Treatment; Pharmaceutical Manufacturing; Pesticide Chemicals; and Aluminum Forming.

POTWs. The underlying assumptions regarding burden estimates for POTWs are summarized in Table A.2.

Table A.2 Summary of Burden Assumptions Related to POTWs

POTW Activity	Frequency	Burden (hours)
POTW pretreatment program approval request	Once per request. See Appendix D.	250
POTW pretreatment compliance schedule progress report	46 per year	5
Annual POTW report	One per year for each POTW	40
Issuance of discharge permits or other control mechanisms for SIUs	Once every 5 years for each POTW-regulated IU	20
Inspection and sampling of CIU and SIUs	One per year for SIUs; one per 2 years for CIUs	8
CIU and SIU effluent analysis	One per year for SIUs; one per 2 years for CIUs	15.2
Establish mass limits	One percent of estimated 12,000 facilities in 14 industrial categories with pretreatment standards	8
Establish equivalent concentration limits	4 percent of estimated 420 CIUs in categories eligible for concentration-based limits	8
Public notification of significant noncompliance	One third of POTWs per year	3
Evaluation of the need to revise local limits	Once every 5 years for each POTW	50
Removal credit applications	1.3 per year	125
Removal credit self-monitoring reports	1.3 per year	40
Recordkeeping	One per year for each POTW	100

States/federal. Some activities performed by authorized states are performed by EPA Regions where EPA is the Control Authority. Table A.3 includes assumptions for both.

Table A.3 Summary of Burden Assumption Related to States

State Activity	State Frequency	EPA Frequency	Burden (hours)
Issuance of SIU discharge permits	Once every 5 years for each IU with a permit	Same	20
Inspection and sampling of CIU and SIUs	One per year for 8.5 percent of SIUs; one per 2 year for CIUs	NA	8
CIU and SIU effluent analysis	One per year for 8.5 percent of SIUs; one per 2 year for CIUs	NA	15.2
Public notification of significant noncompliance	One third of 85 POTWs in 5 states per year	NA	3
Evaluation of the need to revise local limits	Once per 5 years for 85 POTWs in 5 states	NA	50
POTW pretreatment compliance schedule progress report	34 per year	NA	2
POTW pretreatment program approval request	2.3 per year	NA	40
POTW pretreatment program modification	234 per year	NA	20

State Activity	State Frequency	EPA Frequency	Burden (hours)
approval request			
Baseline monitoring report-new sources	17 per year	5 per year	24
CIU compliance attainment report-new sources	4 per year	1 per year	1
CIU compliance attainment report-new sources	17 per year	5 per year	2
IU resampling compliance report	176 per year	56 per year	4
IU/SIU self-monitoring compliance report categorical SIUs	882 twice per year	280 twice per year	2
IU/SIU self-monitoring compliance report non-categorical SIUs	1,074 twice per year	341 twice per year	1
PFPR P2 Plan-modifications	13 per year	4 per year	3
Periodic certifications	1,269 per year	406 per year	1
IU slug load notification	47 per year	15 per year	0.25
Notification of changed discharge	85 per year	27 per year	2
Annual POTW reports	1,171 per year	NA	20
Review of Inspection and sampling of IU and SIU effluent data	16,449 per year	599 per year	0.5
Pretreatment Compliance Inspection (PCI)	937 per year	NA	24
Evaluation of the need to revise local limits	234 per year	NA	1
Net/Gross adjustment request	2 per year	NA	10
Removal credit approval	2 per year	NA	80
Removal credit self-monitoring report review	19 per year	NA	1
Maintenance of records by Approval Authority	36 approved states per year	1 per year	50
Maintenance of monitoring records by Approval Authority	Once per year for each SIU in non-approved states[1]	1 per year	5

"NA" indicates there is no burden to EPA for the activity.

[1] There is additional burden due to States that act as Control Authorities.

Federal. Table A.4 below presents the assumptions related to EPA pretreatment program oversight activities.

Table A.4 Summary of Burden Assumption Related to EPA Program Oversight

Federal Activity	Frequency	Burden (hours)
State pretreatment program approval request	Once per request. See Appendix D.	325
POTW pretreatment compliance schedule progress report[a]	12 per year	2
POTW pretreatment program approval request[a]	2 per year	40
POTW pretreatment program modification approval request[a]	2 per year	20
Annual POTW reports[a]	405 per year	20
Pretreatment compliance inspection (PCI)	324 per year	24
Review of Inspection and sampling of IU and SIU effluent data[a]	5,690 per year	0.5
Evaluation of the need to revise local limits[a]	81 per year	1
Categorical determination request	0 per year	20
Fundamentally different factors variance request	0 per year	400
Removal credit approval request[a]	1 per year	80

Federal Activity	Frequency	Burden (hours)
Removal credit self-monitoring report[a]	6 per year	1

[a] For these activities, burden is apportioned to the Federal Government only where the Federal Government is the Approval Authority.

A.1.4. Stormwater

A.1.4.1. Phase I MS4s

Activities related to Phase I MS4s include:

- Applications;
- Reports;
- Monitoring; and
- Other activities.

Underlying assumptions regarding burden estimates are described below.

Applications

Permittees. The estimated time per permittee required to prepare and submit an MS4 permit application is 60 hours and 80 hours for small and large MS4 systems, respectively. The frequency is once every 5 years.

States/federal. The estimated time required for state/federal respondents to review and process MS4 permit applications is 20 hours for both small and large MS4 systems.

Reports

Permittees. Reports under this category include compliance schedule reports at 0.75 hours per response, facility and permit transfer reports at 3 hours per response, permittee report of inaccurate previous information at 2 hours per response, and permittee report of planned facility changes at 4 hours per response. The estimated time required per respondent for preparing and submitting annual reports is 250 hours.

States/federal. The estimated time required for state/federal respondents to review and process permit reports is 8 hours, 1.6 hours, and 40 hours for petitions, small MS4 reports and Phase I MS4 reports, respectively.

Permittee Monitoring

Permittees. The estimated time per permittee required for each sampling response is 73 hours. The estimated time per required sampling analysis is 41 hours. Both are estimated to occur 20 times per year.

States. State activities related to permittee monitoring data are covered under section A.1.2.3.

Other Activities

Permittees. Activities and time required in this category include updating stormwater management plans (SWMPs) at 200 hours per response and Section 308(a) Letters at 8

hours per response. SWMPs are updated once every 5 years and EPA estimates that the Agency will receive 24 petitions for EPA to require industrial facilities discharging through the MS4 to obtain individual NPDES permits and 31 Section 308(a) Letters per year.

States/federal. The estimated time required for state/federal respondents to review and process SWMPs is 20 hours.

A.1.4.2. Non-municipal Stormwater Permits

Activities in this category include only individual permit applications submitted by industrial stormwater dischargers.

Permittees. The estimated time per permittee to complete a Form 1 application is 3 hours for a new permit and 1 hour for a renewal. The estimated time to complete a Form 2F application is 28.6 hours.

States/federal. The estimated time required for state/federal respondents to review and process a Form 1 application is 0.5 hours.

A.1.5. General Permits

A.1.5.1. Phase II MS4s

Permittee activities related to Phase II MS4s include:

- NOIs; and
- Reports.

NOI

Permittees. The estimated time to per permittee prepare and submit an NOI is 60 hours and occurs once every 5 years.

States/federal. The estimated time required for state/federal respondents to review and process each NOI is 4 hours.

Reports

Permittees. Reports under this category include compliance schedule reports at 0.75 hours per response, facility and permit transfer reports at 3 hours per response, permittee report of inaccurate previous information at 2 hours per response, permittee report of planned facility changes at 4 hours per response, and annual reports at 100 hours per response. EPA estimates that 5% of MS4 permittees will submit compliance schedule reports and all permittees will submit an annual report. Other reports are submitted infrequently.

States/federal. The estimated time required for state/federal respondents to review and process permit reports ranges from 1 to 20 hours per report.

A.1.5.2. Stormwater Industrial Permits

Activities related to Stormwater Industrial General Permits (MSGP) include:

- NOIs;
- DMRs;
- Monitoring/Inspections;
- Reports; and
- Other activities.

Underlying assumptions regarding burden estimates are described below.

NOIs
Permittees. The estimated average time per permittee to prepare and submit an NOI is a weighted average of 1.6 hours based on 1.5 hours for state-administered permits and 3.9 for EPA-administered permits which includes additional time for the one third that report endangered species. Frequency is once every 5 years.

States/Federal. The estimated time required for state/federal respondents to process NOIs is 0.25 hours.

DMRs
Permittees. The estimated average time per permittee to prepare and submit a DMR is 2 hours and occurs 4 times every 5 years for 25% of permits and 8 times every 5 years for the other 75% of permits.

States/federal. The estimated time required for state/federal respondents to process DMRs is 0.16 hours per DMR plus 0.5 hours for follow-up of 20 percent of submissions.

Permittee Monitoring and Inspections
Permittees. The estimated average time per permittee to conduct sampling is 2.25 hours and analysis is 1.5 hours. Frequency is the same as for DMRs. The estimated average time to conduct annual site inspections is 4 hours for inspection plus 0.25 hours to submit the annual report.

States/federal. State/federal activities related to monitoring and inspection data are covered under the DMRs and Reports sections.

Reports
Permittees: Reports under this category include permittee report of inaccurate previous information at 2 hours per response, permittee report of planned facility changes at 4 hours per response, and permittee report of anticipated noncompliance at 5 hours per response.

States/federal. The estimated time required for state/federal respondents to review and process permit reports ranges from 4 to 20 hours.

Other Activities
Activities in this category include NOT submission, updating existing SWPPPs, and Section 308 requests.

Permittees. The estimated average time per permittee to prepare and submit an NOT is 0.5 hours and 8 hours each to update an existing SWPPP or prepare a Section 308 requests.

States/federal. The estimated time required for state/federal respondents to review and process NOTs is 0.25 hours.

A.1.5.3. Stormwater Construction

Activities related to Stormwater Construction General Permits include:

- NOIs/NOTs;
- Inspections;
- Reports; and
- Other activities.

Underlying assumptions regarding burden estimates are described below.

NOI/NOT

Permittees. The estimated average time per permittee to prepare and submit an NOI is 1.5 hours for large sites and 3.7 hours for small sites and occurs once. Those requiring an ESA evaluation will require 6 and 20 hours for informal and formal evaluations, respectively. The estimated average time to prepare and submit an NOT is 0.5 hours.

States/federal. The estimated average time to process and review is 1 hour for NOIs and 0.25 hours for NOTs.

Permittee Inspections

Permittees. The estimated average time per permittee to conduct stormwater site inspections is 0.25 hours for small and 0.5 hours for large construction sites.

States/federal. Site inspection data is normally stored at the construction site. Any related state/federal activities are covered under the Reports section below.

Reports

Reports in this category include: permittee report of planned facility changes, facility and permit transfer report, permittee report of inaccurate previous information, permittee report of anticipated noncompliance, unanticipated bypass/upset reports, maximum daily violation reports, and other noncompliance reports.

Permittees. The estimated average time per permittee to prepare these reports ranges from 2 to 5 hours.

States/federal. The estimated time required for state/federal respondents to review and process permit reports ranges from 4 to 20 hours.

Other Activities

Activities in this category include requesting waiver certification, development of SWPPPs, monitoring, and Section 308(a) letters.

Permittees. The estimated average time per permittee to prepare a waiver certification request is 1 hour. The estimated average time to prepare an SWPPP is 22.7 and 36.4 hours for small and large construction sites, respectively.

States/federal. The estimated average time to process and review waver certification requests and SWPPPs is 1 hour each.

A.1.5.4. Non-Stormwater

The activities in this category apply to general permits issued to cover classes of facilities with similar type discharges with different permits tailored to the class of facility. Activities related to non-stormwater general permits include:

- NOI;
- DMR;
- Monitoring and Inspection;
- Reports; and
- Other activities.

Underlying assumptions regarding burden estimates are described below.

NOI

Permittees. The estimated average time per permittee to prepare and submit an NOI is 1 hour.

States/federal. The estimated average time to process and review an NOI is 0.25 hours.

DMR

Permittees. The estimated average time per permittee to prepare and submit a DMR is 2 hours with frequency ranging from monthly to annually.

States/federal. The estimated average time to process and review DMRs is 0.27 hours (10 minutes plus 30 minutes for follow-up of 20% of DMRs)

Permittee Monitoring and Inspection

Permittees. The estimated average time per permittee to conduct sampling and inspection is 2.25 hours and analysis is 1.5 hours. Frequency is the same as for DMRs.

States/federal. State/federal activities related to permittee monitoring and inspection data are covered under the DMR section above.

Reports

Reports in this category include: permittee report of planned facility changes, facility and permit transfer report, permittee report of inaccurate previous information, permittee report of anticipated noncompliance, unanticipated bypass/upset reports, maximum daily violation reports, and other noncompliance reports.

Permittees. The estimated average time per permittee to prepare these reports ranges from 2 to 5 hours.

States/federal. The estimated average time to process and review these reports ranges from 1 to 20 hours.

Other Activities
The only activity in this category is Permittee Notice of Regulated Discharge Cessation.

Permittees. The time required per permittee to prepare and submit to the permitting authority a notice of cessation is estimated to be 1 hour and occurs annually for 1 percent of all non-stormwater general permits.

States/federal. The estimated average time to process each notice 4 hours.

A.1.5.5. Pesticides Applicators

The activities in this category are related to general permits for discharges from the application of pesticides included in the Pesticide Applicators ICR (OMB control no. 2040-0284; EPA ICR no. 2397.02). All activities are related to either the estimated 365,000 pesticide applicators or the NPDES authorized states. Burden estimates were derived for the total responses and total burden hours for each respondent type. There were no O&M, capital, or start-up costs. These estimates were then updated based on a current estimate of the number of pesticide applicators and number of authorized states shown in Appendix D. Burden estimates are associated with the following four types of activities related to the NPDES program:

- Activities directly related to obtaining coverage under a general permit (e.g., NOI);
- Activities associated with development of a plan (or worksheet);
- Monitoring; and
- Reporting.

Underlying assumptions regarding burden estimates are described below.

Pesticide Applicator General Permit NOI filing
Permittees. Pesticide applicators will take 2 hours to complete each NOI. EPA estimates 0.05 percent will require formal ESA-related evaluation by the Services (20 hours) and 0.1 percent requires an informal evaluation by the Services (6 hours). An estimated 2.5 percent of the regulated universe will need to file an NOI. The PGP designates specific applicators required to submit an NOI.

States/federal. Permitting authorities will spend 0.5 hours processing each NOI.

Pesticide Applicator General Permit NOT filing
Permittees. Pesticide applicators will spend 0.5 hours filling out an NOT. As stated above, only certain applicators are required to file an NOI and thus an NOT; representing an estimated 2.5 percent of the regulated universe.

States/federal. Permitting authorities will spend 0.25 hours processing each NOT.

Plan Development
Permittees. Fifty three percent of NOI filers will be required to develop a Pesticide Discharge Management Plan (40 hours). Twenty five percent of the plans will be updated annually with the average time of 2 hours.

States/federal. State/federal activities related to Pesticide Discharge Management Plans are covered under the NOI section.

Permittee Monitoring
Permittees. Estimated time to perform monitoring ranges from 1 to 16 times per year depending on size of operation. Each monitoring activity is estimated to take 0.25 hours.

States/federal. State/federal activities related to monitoring data are covered under the reports section below.

Reports
Permittees/states/federal. Table A.5 below presents a summary of assumptions regarding report submissions.

Table A.5 Assumptions for Pesticide Applicator Reports

Report	Percent of Permittees	Permittee Hours	Permit Authority Hours[a]
Annual report	1.4%	8	1
Adverse incident	0.01%	4	2
Corrective action	0.1%	5	0
Planned facility changes	0.1%	4	0.5
Anticipated noncompliance	0.1%	5	2
Inaccurate previous information	0.05%	2	1
Noncompliance	0.05%	5	2

[a] States and federal

A.1.5.6. Large Vessels

Activities for large vessels include: NOI/NOT filing, permit authorization and record of inspection (PARI) submission, annual report, routine inspections, annual inspections, drydock inspections, and monitoring.

Permittees. The estimated time required per respondent for performing the above items includes: 1 hour for an NOI, 0.25 hours for a PARI and occurs once every 5 years; 2 to 5 hours for various reports that occur on an as-needed basis; one hour for the annual report; 0.5 to 2 hours for self-inspections that occur on an annual basis; 2 to 4 hours for drydock inspections that occur once every 5 years; and 6 hours for semiannual monitoring.

Federal. Reviews are performed electronically at an estimated rate of 25 per hour.

A.1.5.7. Small Vessels (sVGP)

Activities related to the small vessels general permit include: PARI submission and PARI inspection documentation.

Permittees. The frequency of submission for the PARI is once every five years and is estimated to require 15 minutes to complete. Small vessels are required to conduct and document a self-inspection on a quarterly basis which is estimated to require 15 minutes to complete. Performance of these activities is not expected to occur until December 2017, so average annual burden reported in this ICR represents two years (2018 and 2019) of activity divided over three years.

Federal. Federal recordkeeping activities related to small vessels are estimated to be 0.05 hours per permittee once every 5 years.

A.1.6. Animal Sector

The activities in this category apply to activities related to NPDES permits for CAFO and CAAP facilities included in the Consolidated Animal Sectors ICR (OMB control no. 2040-0250; EPA ICR no. 1989.10). All activities were divided and allocated on the basis of the type of respondent. Below is a list of the possible types of respondents.

- Authorized states for CAFOs;
- CAFO facilities;
- New CAFOs per year;
- Authorized states for CAAP; and
- CAAP facilities.

Burden estimates were derived for each respondent type. These estimates were then updated using the current estimate of the number of each respondent type (see Appendix D). There were no capital or start-up costs. Burden estimates are associated with six types of activities related to the NPDES program:

- Activities directly related to individual permit applications or permit coverage under a general permit (NOIs);
- Activities associated with plan development or special studies;
- Reporting, including certification;
- Recordkeeping; and
- Activities resulting from compliance assessments.

EPA has revised the burden estimates based on developments in the industry. Over time, many of the activities required as a result of the 2003 NPDES Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs) have become part of standard business practice and USDA standards and guidelines. USDA standards are specifically designed to guide farmers as they implement improved waste management practices to keep pace with the changing demands of the industry. USDA has issued extensive guidelines on these practices, including the requirements for Comprehensive Nutrient Management Plans, the practice standards

developed by the USDA Natural Resources Conservation Service (NRCS), the Field Office Technical Guides, and the Agricultural Waste Management Field Handbook. Farmers are motivated to adhere to the USDA guidelines in part because of their own environmental stewardship goals, but also because operations that want to receive USDA financial or technical support are required to follow USDA guidelines to ensure continued eligibility for USDA programs. The combined effect of these external forces is that over time a number of activities required in EPA's original CAFO regulations have become standard industry practice, including regular visual inspections and manure and soil sampling. Thus, EPA concluded that these activities are no longer directly attributable to the NPDES regulations and should not be included in the ICR burden estimates. As a result, the substantial reductions in CAFO burden estimates shown in this ICR reflect the changes that have occurred since the implementation of the CAFO rule. In addition, there continues to be significant consolidation in the industry, so far fewer facilities exist that might be subject to regulation; this is reflected in the CAFO permit numbers in Appendix D. Burden estimates for CAAP facilities did not change significantly from the previous ICR.

Permittees. Table A.6 presents the underlying assumptions used to derive the source ICR burden estimates. Table A.7 presents burden assumptions for CAFO and CAAP facilities.

Table A.6 Underlying Assumptions for Animal Sector Permittees

Assumption	Value
Percent CAFOs in non-CAFO authorized states (ID, MA, NH, and NM)	6.3%
Percent CAFOs covered by general permits	70.0%
Annual CAFO inspection rate	20.0%
Flow through and recirculating commercial facilities	166
Flow through and recirculating non-commercial facilities	178
Net pen facilities	15
Total number of CAAP permittees in non-authorized states	100
Percent of CAAP permittees seeking general permit coverage	52%
Burden to develop/update NMP (hours)	170

Table A.7 Summary of Burden Assumption for CAFO and CAAP Facilities

Activity Description	Frequency	Hours per Response
CAFOs		
Read rule, determine requirements and plan	Once	3
Complete/renew permit/NOI	Once every 5 years	9
Develop/update NMP	Once every 5 years	170
Prepare and submit annual report	Yearly	2
Recordkeeping	Yearly	80
Inspection	Once every 5 years	4
CAAPs		
Form 2B for CAAP facilities	Once every 5 years	6
Complete notice of intent for general permit	Once every 5 years	2
BMP plan development	Once every 5 years	40
BMP training	Yearly	6

Activity Description	Frequency	Hours per Response
BMP plan	Once every 5 years	1.25
Investigational new animal drugs (INAD) program sign-up report	Occasionally/As Needed	1
INAD or extra-label use report	Occasionally/As Needed	1.5
Structural failure report	Occasionally/As Needed	5
Spill report	Occasionally/As Needed	2
Inspection, cleaning, maintenance & repair records	Ongoing	103 to 118

States/federal. Table A.8 presents a summary of the burden assumptions for state/federal respondents.

Table A.8 Summary of State/Federal Burden Assumption for Animal Sector

Activity Description	Frequency	Hours per Response
Program modification	Occasionally/As Needed	80
Review/process permits and NMPs	Every 5 years	50
Public hearings/notice	Every 5 years	20
Process Form 2B for CAAP Facilities	Ongoing	0.5
Other noncompliance reports (CAFO permittees)	Occasionally/As Needed	2
Report receipt (INAD program sign-up, spill, structural failure)	Occasionally/As Needed	0.5
CAFO facility inspection	Once every 5 years	16
Annual report review, all permitted CAFOs	Annual	4
Research on environmental effects of INAD	Occasionally/As Needed	3
Determination of site specific limits for INAD	Occasionally/As Needed	3
Notify state fish & wildlife department	Occasionally/As Needed	0.5
Review cause of failure and past reports to evaluate effectiveness of practices	Occasionally/As Needed	1

A.1.7. Cooling Water Intake Structures

A.1.7.1. Cooling Water Intake Structures Phase I - New Facilities

The activities in this category are related to application and recordkeeping requirements established by the section 316(b) New Facility Rule (66 FR 65256; December 18, 2001). Further, these activities were included in the ICR Supporting Statement Cooling Water Intake Structures Phase I - New Facilities (OMB control no. 2040-0241; EPA ICR no. 1973.06). The rule applies to industrial facilities constructed after January 2002 that withdraw significant quantities of cooling water from waters of the U.S. The rule requires new facilities to submit several distinct types of information as part of their NPDES permit application. In addition, the rule requires new facilities to maintain monitoring and reporting data as outlined by the permitting authority in their NPDES permits.

Below is a list of the types of respondents for which updated estimated respondent numbers were used to develop burden estimates:

- Average annual number of new CWIS facilities;

- Average annual number of new CWIS permits; and
- Average annual CWIS permit renewals.

Burden estimates were derived for each respondent type from the previous ICR and were updated using the current estimate of the number of each respondent (see Appendix D).

Permittees. Table A.9 presents the estimated burden hours and frequency per facility for first-time permit renewal applications and initial compliance activities. Table A.10 presents the estimated burden hours and frequency per facility for recurring activities that apply to all new CWIS facilities.

Table A.9 Estimated Facility Burden Hours for Initial Application and Compliance Activities for New CWIS Facilities

Permittee Application and Initial Compliance Activity	Frequency	Burden (hours)
Start-up activities	Once per new permit	43
Permit application activities	Once per new permit	146
Source waterbody flow information	Once per new permit	104
Source water baseline biological characterization data	Once per new permit	265
CWIS flow reduction requirements (Track I)	Once per new permit with closed cycle recirculating system (CCRS)	108
CWIS velocity requirements (Track I)	Once per new permit with CCRS	138
Design and construction technology plan (Track I)	Once per new permit with CCRS	108
Comprehensive demonstration study plan (Track II)	Once per new permit without CCRS	271
Source water baseline biological characterization study (Track II)	Once per new permit without CCRS	5,196
Evaluation of potential CWIS effects (Track II)	Once per new permit without CCRS	1,626
Verification monitoring plan (Track II)	Once per new permit without CCRS	128
Freshwater verification study (Track II)	Once per new permit without CCRS with freshwater	92
Estuary verification study (Track II)	Once per new permit without CCRS with estuarine water	122
Initial biological monitoring for impingement (freshwater)	Two years per new permit with freshwater	379
Initial biological monitoring for impingement (estuary)	Two years per new permit with estuary	482
Initial biological monitoring for entrainment (freshwater)	Two years per new permit with freshwater	614
Initial biological monitoring for entrainment (estuary)	Two years per new permit with estuary	776

Table A.10 Estimated Facility Burden for Recurring Activities for New CWIS Facilities

Permittee Recurring Activity	Frequency	Burden (hours)
Permit application activities	Once every 5 years	72
Source waterbody flow information	Once every 5 years	31
Source water baseline biological characterization data	Once every 5 years	79
CWIS flow reduction requirements (Track I)	Once every 5 years	108
CWIS velocity requirements (Track I)	Once every 5 years	75
Design and construction technology plan (Track I)	Once every 5 years	43
Comprehensive demonstration study plan (Track II)	Once every 5 years	80

Permittee Recurring Activity	Frequency	Burden (hours)
Source water baseline biological characterization study—freshwater (Track 2)	Once every 5 years	2,808
Source water baseline biological characterization study—marine (Track 2)	Once every 5 years	5,268
Reduced biological monitoring for impingement (freshwater)	Annual per permit with freshwater	191
Reduced biological monitoring for impingement (estuary)	Annual per permit with estuary	244
Reduced biological monitoring for entrainment (freshwater)	Annual per permit with freshwater	308
Reduced biological monitoring for entrainment (estuary)	Annual per permit with estuary	392
Velocity monitoring	Annual per permit	163
Inspection of installed technologies	Annual per permit with once-through cooling	253
Yearly status report activities	Annual per permit	348

States/federal. Table A.11 presents the estimated burden hour and frequency for state agencies and EPA acting as the permit authority.

Table A.11 Estimated State Agency and EPA Activity Burden Associated with New CWIS Facilities

State/Federal Activities	Frequency	Burden (hours)
Permitting authority permit issuance activities (Track I)	Once per new permit with CCRS	188
Permitting authority permit issuance activities (Track II)	Once per new permit with once-through cooling	646
Verification study review	Once per new permit	21
Annual permitting authority activities	Annual per permit	50

A.1.7.2. Cooling Water Intake Structures Phase III - New Offshore Oil and Gas Facilities

The activities in this category are related to NPDES application, monitoring, and recordkeeping requirements established by the 316(b) Phase III Rule (71 FR 35006; June 16, 2006). Further, these activities were included in the Supporting Statement for Cooling Water Intake Structures at Phase III Facilities (Renewal) contained in a separate ICR (OMB control no. 2040-0268, EPA ICR no. 2169.05). This regulation applies to offshore oil and gas facilities that commence construction after July 17, 2006. The permitting authority for all offshore oil and gas facilities is the Federal Government and thus there is no burden for state or local governments.

Below is a list of the types of respondents for which updated estimated respondent numbers were used to develop burden estimates:

- Average annual new offshore oil & gas facilities applying for an NPDES permit;
- Average annual new offshore oil & gas re-applying for an NPDES permit; and
- Average annual new offshore oil & gas facilities performing annual activities.

Burden estimates were derived from the previous ICR for each respondent type and were updated using the current estimate of the number of each respondent type (see Appendix D).

Permittees. Table A.12 presents the estimated burden hours and frequency per facility for permit renewal applications. Table A.13 presents the estimated burden hours and frequency per facility for recurring activities that apply to all new Phase III CWIS facilities.

Table A.12 Estimated Facility Burden for Initial Permit Renewal Applications and Compliance Activities

Permittee Initial Application Activity	Frequency	Burden (hours)
Start-up activities	Once per new permit	43
Permit application activities	Once per new permit	51
Source water body flow information	Once per new permit	38
CWIS velocity information	Once per new permit	150
Design and construction technology plan	Once per new permit	36
Source water baseline biological characterization study	Once per new permit	166

Table A.13 Estimated Facility Burden for Recurring Activities

Permittee Recurring Activity	Frequency	Burden (hours)
Start-up activities	Once every 5 years	13
Permit application activities	Once every 5 years	13
Source water body flow information	Once every 5 years	11
CWIS velocity information	Once every 5 years	45
Design and construction technology plan	Once every 5 years	20
Source water baseline biological characterization study	Once every 5 years	49
Biological monitoring for impingement	Annual per permit	530
Biological monitoring for entrainment	Annual per permit with entrainment requirements	370
Biological monitoring for entrainment (Alaska)	Annual per permit in AK with entrainment requirements	516
Velocity monitoring	Annual per permit	163
Visual inspections	Annual per permit	253
Yearly status report activities	Annual per permit	223

States. Offshore oil and gas facilities operate in federal waters, there is no state burden.

Federal. Table A.14 presents the estimated burden hours and frequency for federal oversight activities.

Table A.14 Estimated Facility Burden for Federal Oversight

Federal Permit Oversight	Frequency	Burden (hours)
Permitting authority permit issuance activities (per facility)	Once per new permit	229
Permitting authority permit renewal activities (per facility)	Once every 5 years	104
Annual Permitting authority activities (per facility)	Annual per permit	50

A.1.7.3. Cooling Water Intake Structures Existing Facilities

The activities in this category are related to NPDES application and recordkeeping requirements defined under the 316(b) Existing Facility Rule (79 FR 48300; August 15, 2014); which was included in the Supporting Statement for Existing Facilities Final Rule contained in a separate ICR (OMB control no. 2040-0257; EPA ICR no. 2060.07). This regulation applies to industrial facilities constructed prior to January 2002 that withdraw significant quantities of cooling water from waters of the U.S. The rule became effective October 14, 2014. A major component of the burden is associated with the preparation of permit application materials required under 122.21(r)(2)-(13) which must be submitted during the first permit renewal that occurs during the five year period after October 2014. Once the permit has been renewed, the burden will be associated with annual monitoring and reporting activities and the subsequent permit renewal applications for which the burden is significantly reduced compared to the initial renewal. The initial CWIS Existing Facility Rule ICR covered the burden associated with the three-year period from October 2014 through October 2017. Because the initial permit renewal is spread out over a five-year period and the previous ICR assumed minimal application burden in the first year, the burden included in this ICR will include the final three of the initial permit renewal years which correspond to the period with the highest burdens.

Below is a list of the types of respondents for which updated estimated respondent numbers were used to develop burden estimates:

- Total power plants;
- Total power plants with a design intake flow (DIF) greater than 50 MGD;
- Total power plants with an actual intake flow (AIF) greater than 125 MGD;
- Total manufacturers with cooling water;
- Total manufacturers with an AIF greater than 125 MGD;
- Annual new power plant units; and
- Annual new manufacturer units.

Burden estimates were derived from the previous ICR for each respondent type and were updated using the current estimate of the number of each respondent type (see Appendix D).

Permittees. Table A.15 presents the estimated burden hours and frequency per facility for first time permit renewal applications and initial compliance activities. Table A.16 presents the estimated burden hours and frequency per facility for recurring activities that apply to all new CWIS facilities.

Table A.15 Estimated per facility burden hours and frequency for first time permit renewal applications and initial compliance activities

Initial permittee application activity	Frequency	Burden (hours)
Permit application activities for power plants with DIF≥50 MG w/ AIF<125 MGD	Once per first permit renewal	709
Permit application activities for power plants with	Once per first permit renewal	2,201

DIF≥50 MGD w/ AIF>125 MGD		
Permit application activities for power plants with DIF> 2 MGD and ≤ 50 MGD and manufacturers > 2 MGD w/ AIF<125 MGD	Once per first permit renewal	481
Permit application activities for manufacturers > 2 MGD w/ AIF>125 MGD	Once per first permit renewal	2,531
Permit application activities for new generating or manufacturing units	Once per new unit	260

Table A.16 Estimated per facility burden hours and frequency for recurring activities that apply to all existing CWIS facilities

Annual activities	Frequency	Burden (hours)
Compliance monitoring - all existing facilities (power plants and manufacturing)	Annual	357
Recurring reporting and recordkeeping - existing facilities (power plants and manufacturing)	Annual	11
Compliance monitoring - new units	Annual	90
Recurring reporting and recordkeeping - new units	Annual	20

States/federal. Table A.17 presents the estimated annual number of responses and burden hours per response for state agencies and EPA.

Table A.17 Estimated annual number of responses and burden by facility type for state agencies and EPA

Facility type	Average responses/ year		Burden hours/ response
Permit application activities			
	States	**EPA**	**States and EPA**
Power plants with DIF≥50 MG w/ AIF<125 MGD	925	23.3	13
Power plants with DIF≥50 MGD w/ AIF>125 MGD	528	15.3	23
Power plants with DIF> 2 MGD and ≤ 50 MGD and manufacturers > 2 MGD w/ AIF<125 MGD	1,259	33.7	13
Power plants with DIF> 2 MGD and ≤ 50 MGD and manufacturers > 2 MGD w/ AIF<125 MGD	41	26	24
New units	16	2	11
Annual activities			
All facilities	2,078	1,065	3

A.1.8. Other

A.1.8.1. Industrial Facility "No Stormwater Exposure" Certification

The no exposure provision of the stormwater regulations provides industrial facilities with industrial materials and activities that are sheltered from stormwater a simplified way of complying by certifying that there is no exposure to stormwater.

Permittees. An estimated 36,377 industrial facilities are eligible for "no exposure certification" over a 5-year period. The time to complete and submit the certification is 0.75 hours.

States/federal. Permitting authorities will spend 1 hour reviewing and processing each certification.

A.1.8.2. Airports

The Airport Deicing ELG allows airports to certify that they are not using deicers containing urea for airfield pavement deicing operations to become exempt from permitting requirements.

Permittees. The time to complete and submit the certification is 1 hour.

A.1.8.3. Alaska Lands

Permittees. The estimated total hours per permittee respondent for submission of an application for Transportation and Utility Systems and Facilities on Federal Lands (Alaskan Lands Application) is 30 hours per application.

A.1.8.4. NPDES Electronic Reporting Rule

The Electronic Reporting Rule ICR included both the initial one-time activities associated with the transition to electronic reporting (primarily in the first three years after promulgation) and ongoing activities, which reflect considerable burden reductions associated with data entry and document mailing. The Electronic Reporting Rule became effective December 21, 2015 and thus the Electronic Reporting Rule ICR covers the calendar years 2016, 2017, and 2018. The various requirements and deadlines are divided into two phases. The corresponding timeframe for today's ICR is 2017, 2018, and 2019.

Phase 1 of the Electronic Reporting Rule requires authorized state NPDES programs to electronically transmit basic facility and permit information to EPA within the first year. After one year (by December 21, 2016) authorized programs must begin electronically transmitting their state data, including information generated from compliance assessment (e.g., inspections), violation determinations, and enforcement actions. Also, starting on December 21, 2016 permittees must submit DMRs electronically. In addition, by this deadline, facilities permitted under the NPDES biosolids program where EPA is the control authority must submit annual reports electronically. Thus, by the beginning of the three-year period covered by this ICR, the majority of the one-time implementation activities associated with Phase 1 will have been completed. For the purposes of this ICR, the implementation activities are assumed to be mostly completed and only ongoing activities related to the Phase 1 and Phase 2 requirements will be included.

Under Phase 2, authorized programs have until December 21, 2020 to begin electronically collecting, managing, and sharing the Phase 2 NPDES program data. This information includes:

- General permit reports (NOI, NOT, No Exposure Certification (NOE), and Low Erosivity Waiver and Other Waivers from Stormwater Controls (LEW));
- Sewage Sludge/Biosolids Annual Program Report (where the state is the authorized NPDES biosolids program); and

- Other NPDES program reports (CAFO Annual Report, MS4 Program Reports, Pretreatment Program Reports, SIU Compliance Reports in Municipalities without approved Pretreatment Programs, Sewer Overflow Event Reports, CWA Section 316(b) Annual Reports).

Thus, the change in burden associated with conversion from paper to electronic reporting will occur over a five-year period, half of which will fall within the three-year period covered by this ICR. As Phase 2 requirements for many other reports are phased in, EPA expects more reports will switch to electronic transmission but this ICR only includes one additional year past the existing ICR.

Permittees. Permittee activities include:

- Passcode reset;
- DMR mailing (O&M savings see section A.2.2.9); and
- Report mailing (O&M savings see section A.2.2.9)).

The ongoing burden for permittees includes 0.4 hours per respondent per year to periodically reset the passcode. Burden for completing DMRs and reports is assumed to be relatively unchanged because the forms need to be completed regardless of whether they are prepared in electronic or paper format.

States. State agency activities include:

- Transfer of data from current state system to EPA system;
- Training and technical support;
- Required programmatic data entry;
- Data entry reduction—DMRs;
- Data entry reduction—reports; and
- DMR printing/mailing (O&M savings see section A.2.2.9).

Underlying assumptions regarding burden estimates are described below.

Transfer of Data
The analysis assumes states currently operating their own systems will bear an ongoing annual cost to manage transfer of data between their system and EPA's. The annual burden estimate per state is 2,080 hours and is based on an estimate of 1 full-time equivalent (FTE), or 2,080 hours, of programmer/technical labor per state per year.

Training and Technical Support
The analysis also assumes that each authorized NPDES program, whether it operates its own system or uses EPA's tools, will bear an ongoing annual cost to provide training and technical support to regulated entities. The estimated annual training and technical support burden per authorized state is 2 FTEs of programmer/technical labor per state per year or 4,160 hours of programmer/technical labor. This is a conservative estimate based on the upper end of the range reported in comments submitted by states.

Required Programmatic Data Entry
Ongoing data entry associated with states submitting required programmatic data to EPA is estimated to have a total annual labor cost of $3,857,000 which is equivalent to 85,445 hours.

Data Entry Reduction—DMRs
Estimated reductions for processing DMRs for states are based on 20 minutes (0.33 hours) per DMR form with many facilities submitting multiple forms. The average reduction per facility DMR submission is estimated to be 0.75 hours.

Data Entry Reduction—Reports
Estimated reductions for processing general permit reports and program reports for states are based on 7.5 minutes (0.125 hours) per report.

Federal. Federal activities include:

- Operate and maintain the necessary changes in the ICIS-NPDES system;
- Data entry reduction—DMRs and reports;
- Oversight Letters; and
- DMR printing/mailing (O&M savings see section A.2.2.9).

Underlying assumptions regarding burden estimates are described below.

Operate and Maintain Changes in the ICIS-NPDES System
The estimated annual EPA burden for ongoing activities to operate and maintain the necessary changes in the ICIS-NPDES system required by the rule is estimated at 16,389 hours per year.

Data Entry Reduction—DMRs and Reports
EPA Regions would receive savings from no longer having to enter information submitted by regulated entities on paper DMRs, general permit reports, and program reports. The average burden reduction per region for this activity is -2,481 hours.

Oversight Letters
When an authorized state, tribe, or territory has less than 90% participation rate for one or more data groups, EPA will use its CWA authority and ICR to issue targeted individual notices requiring NPDES-regulated entities to utilize their NPDES program's electronic reporting system. It is estimated there will be 14,624 letters during the 3 year period or an average of 4,875 per year. It is estimated each letter will require 0.5 hours to prepare and send.

A.1.9. General State Activities

This category applies to permitting authority activities that are not directly attributable to the individual categories described above.

A.1.9.1. Certification of EPA-issued Permits

When EPA issues NPDES permits, it must ensure that the permits are in compliance with state laws, including WQS. Under CWA Section 401, EPA may not issue a permit until the state certifies that the permit is in compliance with state laws. The respondents to this item are the estimated 637 entities including states, tribes, and U.S. territories that must certify EPA-issued permits. The average respondent burden is estimated to be 4 hours.

A.1.9.2. Inspection and Investigation

Authorized states are required to maintain a "program for periodic inspections of the facilities and activities subject to regulation." 40 CFR 123.26(b)(2). Under EPA's *Clean Water Act National Pollutant Discharge Elimination System Compliance Monitoring Strategy* (available at http://www2.epa.gov/compliance/clean-water-act-national-pollutant-discharge-elimination-system-compliance-monitoring), authorized states prepare annual Compliance Monitoring Strategy (CMS) plans that articulate commitments for compliance assessment activities (e.g., inspections) and end-of-year reports that summarize CMS plan implementation over the prior year. EPA has developed a template for states to use when preparing CMS plans and end-of-year reports.

The various types of compliance monitoring activities conducted by permitting authorities include:

- Compliance Sampling Inspection (CSI). The estimated burden for this inspection is 120 hours.
- Compliance Evaluation Inspection (CEI). The estimated burden for this inspection is 24 hours.
- Performance Audit Inspection (PAI). The estimated burden for this inspection is 96 hours.
- Diagnostic Inspection (DI). The estimated burden for this inspection is 128 hours.
- Compliance Biomonitoring Inspection (CBI). The estimated burden for this inspection is 240 hours.
- Toxic Sampling Inspection (XSI). The estimated burden for this inspection is 280 hours.
- Reconnaissance Inspection (RI). The RI is the briefest of all NPDES inspections; the estimated burden for this inspection is 8 hours.

The list of compliance monitoring activities described above is not the complete set of activities that EPA and states conduct pursuant to the CMS. EPA estimates that on an annual basis for major facilities 9 percent receive CSIs, 68 percent receive CEIs, 6 percent receive PAIs, 1 percent receive CBIs, 0.4 percent receive XSIs, 18 percent receive RIs, and an additional 0.3 percent of municipal major facilities receive DIs[4]. Of the minor facilities, 3 percent receive CSIs and 17 percent receive CEIs. In addition, 10 percent of industrial stormwater general permittees, 5 percent of large (> 5 acres) construction stormwater

[4] Estimates for majors were revised from the previous ICR based on ICIS data.

general permittees, 2.5 percent of small (1-5 acres) construction stormwater general permittees, 20 percent of Phase I MS4s, and one-seventh of Phase II MS4s receive RIs.

Also, EPA revised the estimates to include CEIs for 20 percent of MS4 permittees, 10 percent of industrial stormwater general permittees, and 10 percent of construction stormwater general permittees which EPA discovered had not been included in the previous ICR.

A.1.9.3. Submittal of Permit Information to EPA

This item applies to requirements for authorized states to make available to EPA for review any information obtained or used in the administration of a state program. The burden estimate assumes that states must submit all major permits, about 5 percent of minor permits, and all general permits. Time required is estimated to be 10 minutes each and applies to 70 percent of the major permits, 5 percent of the minor permits, and 100 percent of the general permits transmitted to EPA. The remaining 30 percent of major permits require 2 hours of transmittal time.

A.1.9.4. NPDES Program Authorization

This category includes: state requests that an authorized program be transferred back to EPA, with a burden estimate of 480 hours; state requests for NPDES program modifications, with a burden estimate of 250 hours; and state requests for sewage sludge program approval under Part 501, with a burden estimate of 750 hours. EPA estimates that one state will request program authorization, one authorized state over the three-year period will request that an authorized program or program component be transferred, 12 over the three-year period will request program modification to update their legal authorities in response to the regulatory changes (e.g., rulemakings, state water quality standards revisions, etc.) anticipated in the NPDES program, and one over the 3-year period will request a sewage sludge program approval.

A.2. Estimating Respondent Costs

Once burden hours are estimated, the next step is to estimate the labor cost for respondents and the capital costs required to complete each activity. The total cost for each respondent activity is composed of the following:

- Labor cost;
- Operating and maintenance (O&M) cost; and
- Capital/start-up cost.

The results of the respondents' costs analysis are presented in the Detailed Respondent Burden Results by Category table in Appendix B.

A.2.1. Estimating Labor Costs

When calculating respondent labor costs, EPA makes the following assumptions:

- EPA used a labor rate of $45.14 per hour for all authorized state and territory respondent activities defined in this ICR. This hourly rate was based on the average hourly wage for state and municipal employees as determined by the U.S. Department of Labor[5].
- The average hourly rate for municipal employees, which account for all POTW and MS4 costs, as determined by the U.S. Department of Labor, Bureau of Labor Statistics, is $37.29 (including overhead costs of 50 percent)[6].
- EPA assumes the average hourly rate in the private sector is $57.42[7].
- EPA determined the hourly employment cost of federal employees using methodology established in previous ICRs. According to the U.S. Office of Personnel Management, 2016 General Schedule (2016-GS), the average annual salary of a government employee at the GS-9, Step 10 level is $55,666. At 2,080 hours per year, the hourly wage is $26.76. Assuming overhead costs of 60 percent, or $16.06 per hour, the fully loaded cost of employment for a federal employee is $42.82.

A.2.2. Operating and Maintenance (O&M) Costs

Most calculations in this ICR account for labor costs only. A facility incurs O&M costs when it uses services, materials, or supplies needed to comply with the rule's reporting and recordkeeping requirements that the facility will not use otherwise. Another type of O&M cost is for the purchase of contracted services such as laboratory analyses. The purchase of supplies such as filing cabinets and services such as photocopying or boat rental, is also considered O&M costs, and may also be referred to as ODCs. All costs presented in this section have been adjusted with the Consumer Price Index to August 2016 dollars. These costs are linked to the distinctive activities described below.

A.2.2.1. Application Requirements for NPDES Permits (Forms for POTWs and PrOTWs)

Assumptions and estimates for these O&M costs (i.e., testing/contractor costs) are detailed in Tables A.18 to A.20. These assumptions come from the prior ICR (OMB Control no. 2040-0086, EPA ICR no. 0226.18).

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[5] Based on U.S. Department of Labor, Bureau of Labor Statistics, Table 3. Employer costs per hour worked for employee compensation and costs as a percent of total compensation: State and local government workers, by major occupational and industry group, June 2016.

[6] Updated rates are derived from the U.S. Department of Labor, Bureau of Labor Statistics, in a table titled May 2015 National Industry-Specific Occupational Employment and Wage Estimates NAICS 999300 - Local Government, excluding schools and hospitals (OES Designation), and adjusted to June 2016 dollars using the not seasonally adjusted Employment Cost Index (ECI) for state and local government employees.

[7] Determined by the U.S. Department of Labor, Bureau of Labor Statistics, Total Compensation for Management, professional, and related; *Table 5. Employer costs per hour worked for employee compensation and costs as a percent of total compensation: Private industry workers, by major occupational group and bargaining unit status, June 2016.*

Table A.18 Estimate of POTWs that Perform Form 2A Pollutant Testing In-House

Facility type	Basic conventional and nonconventional	Additional conventional and nonconventional	Priority pollutants and state WQS	Multiple species biomonitoring
≺ 0.1 mgd, no priority pollutants.	60%			
0.1–1.0 mgd, no priority pollutants.	80%	80%		
Minors, with priority pollutants.	85%	85%	50%	85%
Majors, no priority pollutants.	85%	85%	10%	75%
Majors, with priority pollutants.	90%	90%	70%	85%

Table A.19 Estimate of POTWs that Perform Form 2S pollutant Testing In-House

Facility type	Basic conventional and nonconventional
NPDES POTWs	95%
NPDES PrOTWs	95%
Sludge Only POTWs	50%
Sludge Only PrOTWs	50%

Table A.20 Testing/Contractor costs (O&M costs)

	Tests/year	Cost per test ($)	Total $
Form 2A			
Basic conventional and non-conventional	3	$119	$202,419
Additional conventional and non-conventional	3	$237	$250,983
Priority pollutants/state WQS	3	$1,365	$3,144,960
Multiple species biomonitoring	1	$9,496	$2,032,144
Form 2S			
NPDES and sludge-only facilities	1	$237	$68,493
Section 308 Requests			
Municipal (complex)	1	$1,365	$4,778
Nonmunicipal (medium)	1	$1,187	$5,638

A.2.2.2. Baseline Determination and Estimate of the Incremental Monitoring Burden and Cost for Remining Sites (DMR Sampling Analysis)

EPA assumes that baseline determination monitoring and annual monitoring costs will be required for all the reporting requirements for mining sites in Indiana (5), Kentucky (7), and Tennessee (9). EPA assumes a sample analysis and mileage cost of $34/sample adjusted to August 2016 using the CPI (Source: Baseline Standards and BMPs for the Coal Mining Point Source Category-Coal Remining Subcategory and Western Alkaline Coal Mining Subcategory ICR; OMB control no. 2040-0239; EPA ICR no. 1944.03).

A.2.2.3. Minimum Monitoring Requirements for Direct Discharging Mills in the Bleached Papergrade Kraft and Soda Subcategory and the Papergrade Sulfite Subcategory of the Pulp, Paper, and Paperboard Point Source Category (DMR Sampling Analysis)

To estimate O&M costs associated with these activities, EPA assumes that mills will send their collected samples to outside laboratories for analysis. Some facilities could perform in-house analysis for some pollutants (i.e., adsorbable organic halides (AOX) and/or chloroform). However, for the purposes of this ICR, EPA assumed that all analyses will be contracted to outside laboratories to express the full potential analytical costs of minimum monitoring on Subparts B and E mills. In the future, facilities might elect to conduct analysis in house, particularly AOX analyses, because the monitoring requirement is daily.

Analytical costs performed at outside laboratories were taken from the Minimum Monitoring Requirements for Direct Discharging Mills in the Bleached Papergrade Kraft and Soda Subcategory and the Papergrade Sulfite Subcategory of the Pulp, Paper, and Paperboard Point Source Category ICR (OMB control no. 2040-0243; EPA ICR no. 1878.02). These costs are $183 for AOX, $1,326 for TCDD/TCDF, $757 for chlorinated phenolics, and $408 for chloroform.

Seventy-five Subpart B Bleached Papergrade Kraft & Soda mills perform daily sampling for AOX, weekly sampling for chloroform, and monthly grab sampling for TCDD, TCDF, and chlorinated phenolics. Thirty-eight Subpart B Bleached Papergrade Kraft & Soda mills perform monthly composite sampling for TCDD, TCDF, and chlorinated phenolics. Five of the Subpart E Ca / Sodium / Mg Sulfite mills perform daily AOX sampling. Two each for the Subpart E Ammonium Sulfite and Specialty Grade perform monthly sampling for TCDD, TCDF, and chlorinated phenolics.

A.2.2.4. Animal Sector Testing/Analysis and Public Notice Costs

The Animal Sector includes O&M costs that account for state agencies issuing public notices and certain testing and analysis costs incurred by respondents that perform activities outside the normal operation practices. O&M costs are based on costs from the Consolidated Animal Sectors ICR (OMB control no. 2040-0250; EPA ICR no. 1989.10). The average cost for state agencies to issue a public notice was $1,410 per notice and the average testing and analysis cost was $76 per event. O&M for recordkeeping was assumed to be 10% of recordkeeping labor costs.

A.2.2.5. Pretreatment

There are O&M costs incurred by IUs for discharge monitoring. The total annual respondent O&M costs associated with this ICR are estimated to be $2,565,555.

A.2.2.6. CWIS Phase I O&M and ODC Costs

O&M and ODC costs are associated with multiple activities including flow, velocity and biological monitoring. EPA assumes that samples taken for the Source Water Baseline Biological Characterization Study to be included with the application will be analyzed by a contracted laboratory. For annual O&M costs, EPA assumes that entrainment monitoring

sampling analysis will be performed by an outside laboratory. Table A.21 presents a summary of average O&M and ODC costs per permit for each activity category.

Table A.21 Summary of CWIS Phase I O&M and ODC Average Annual Costs per Permit

Activity category	O&M/ODC Cost (August 2016 Dollars)
Costs for NPDES permit application activities	$34,496
Costs for NPDES permit renewal activities	$29,820
Costs for NPDES permit annual activities	$10,853

A.2.2.7. Cooling Water Intake Structures Phase III - New Offshore Oil and Gas Facilities O&M Costs

Estimated O&M costs for permit application and permit renewal activities include $993 for various ODCs. For annual O&M costs, EPA assumed that the analysis of impingement monitoring samples will be done on-site, while entrainment monitoring samples is performed by an outside laboratory. Laboratory analysis for entrainment samples is estimated to cost $3,963 per year per facility. The ODCs associated with biological monitoring are estimated to be approximately $869 per facility. Table A.22 presents a summary of the estimated annual O&M costs across all CWIS Phase III Facilities

Table A.22 Summary of Estimated Annual Total O&M Costs for All CWIS Phase III Facilities

Activity Category	O&M/ODC Cost (August 2016 Dollars)
Total facility cost estimates for NPDES permit application activities	$5,960
Total facility cost estimates for NPDES permit application activities (renewals)	$5,960
Total facility cost estimates for annual monitoring and inspection activities	$847,934

A.2.2.8. Cooling Water Intake Structures Existing Facility O&M Costs

O&M costs include costs for the operation and upkeep of capital equipment, cost for the purchase of contracted services, such as laboratory analyses, and the purchase of supplies such as filing cabinets and services such as photocopying or boat rental which are referred to as other direct costs (ODCs). Table A.23 presents a summary of the estimated annual O&M costs across all CWIS Existing Facilities.

Table A.23 Estimated Annual O&M Costs for Existing Facility

Activity Category	O&M/ODC cost (August 2016 Dollars)
Total facility cost estimates for NPDES permit application activities	$13,415,373
Total facility cost estimates for annual activities	$1,135,294

A.2.2.9 Electronic Reporting Rule

Once regulated entities establish their electronic accounts, they will experience savings because they no longer have to mail their submissions to the permitting authority. Regulated entities submitting DMRs electronically will save on paper and postage. According to EPA program experts, the average DMR form is five pages long. DMRs are partially filled out by the regulated entity, sent to an independent laboratory for

completion, and then sent to the permitting authority. Therefore, electronic DMR submission will save two standard envelopes, two first class stamps and five to 20 pages of paper. The average total was $1.15 per submission. Estimated paper and mailing saving for program reports is $0.56 per submission. In the source ICR, the report savings applied to each sludge report, pretreatment report, and CSO report only. Using data from "year 2" (third year - 2018) in the existing ICR, the estimated annual number of DMRs is 249,156 for municipal respondents and 809,361 for private respondents. The estimated annual number of program reports is 7,175.

EPA Regions with NPDES authority and authorized state NPDES programs will also experience savings from no longer sending pre-populated DMR forms to regulated entities. Prior to the implementation of electronic reporting, authorized states would mail DMR forms with regulated entity-specific limits to an estimated 50% of all NPDES-regulated entities. EPA estimates electronic DMR submission will save EPA and state agencies an average of $4.12 per DMR in paper and mailing costs.

A.2.3. Capital/Start-up Costs

Most calculations in the ICR account for labor costs only. The ICR does, however, account for certain capital and start-up costs incurred by respondents that perform activities outside the normal operating practices. All costs presented in this section have been adjusted with the Consumer Price Index to August 2016 dollars. These costs are linked to several distinctive activities.

A.2.3.1. CSO Control Policy (CSO Notification)

The capital costs associated with public notification of CSO locations, events, and public health and environmental effects are included in this ICR. The costs are for municipalities to replace notification signs. From estimates presented in the previous CSO Control Policy ICR (OMB control no. 2040-0170; EPA ICR no. 1680.04) each sign will be replaced every 10 years which is equal to an average annual cost of $12.

A.2.3.2. Baseline Determination and Estimate of the Incremental Monitoring Burden and Cost for Remining Sites (DMR Sampling Analysis)

EPA assumes that flow metering from an installed weir is required for mining sites in Indiana and Tennessee. For all other states, EPA assumes that flow metering is already required and installed as part of the state Rahall remining permit program.

For Indiana and Tennessee, EPA assumes installed weir costs of $1,568 on the basis of an escalation of 2004 cost estimates from previous the Baseline Standards and BMPs for the Coal Mining Point Source Category-Coal Remining Subcategory and Western Alkaline Coal Mining Subcategory ICR (OMB control no. 2040-0239; EPA ICR no. 1944.03) (originally from Weir & Flume Sales Company and Tarco Tech Industries). Indiana will have 5 sites/year × 4 preexisting discharge points/site. Tennessee will have 9 sites/year × 4 preexisting discharge points/site. These costs are annualized using a 7 percent discount rate and an estimated 10-year life for the weir.

A.2.3.3. Start-up Costs for the Animal Sector

Start-up capital costs for Animal Sector facilities include the $36 purchase of a soil auger to collect soil samples and the $43 purchase of a manure sampler. CAFOs will also need pay $43 to install depth markers in their lagoons. All operations will need to expend an estimated $1,397 to develop the NMP elements that pertain to the production area, including performing an engineering analysis of the waste storage volume requirements needed to comply with the CAFO rule.

A.2.3.4. CWIS Phase I Purchase and Installation of Pilot Study Technology

EPA anticipates that Track II facilities that operate once-through cooling intakes will perform pilot studies to determine the effectiveness of their chosen technology. For costing purposes, EPA is assuming that a pilot study will be performed using a Gunderboom system. EPA estimated the pilot study would cost $307,000.

A.2.3.5. CWIS Phase III New Offshore Oil and Gas

EPA estimated that the initial permit application capital costs for installing a remote monitoring device for impingement monitoring at each facility was $25,392.

APPENDIX

DESCRIPTION OF *AMICI CURIAE*

The Chamber of Commerce of the United States of America (the "Chamber") is the world's largest business federation. It represents 300,000 direct members and indirectly represents the interests of more than 3 million companies and professional organizations of every size, in every industry sector, and from every region of the country. An important function of the Chamber is to represent the interests of its members in matters before Congress, the Executive Branch, and the courts. To that end, the Chamber regularly files *amicus curiae* briefs in cases that raise issues of concern to the nation's business community.

The Tennessee Chamber of Commerce & Industry ("Tennessee Chamber") is a statewide, non-profit association for Tennessee businesses, with more than 500 members. Founded over 100 years ago in 1912, the Tennessee Chamber traces its roots to a group of Tennessee business leaders who came together to speak against unfair taxes with a common, unified voice. Today, the Tennessee Chamber continues to represent the interests of companies doing business in Tennessee as to matters of public policy. It fosters a community of businesses and industries that speak collectively on matters of interest to its members across the state. Among the Tennessee Chamber's objectives are promoting Tennessee businesses, creating a collaborative vision for Tennessee business and industry, increasing productivity

through an educated and highly-skilled workforce, advocating for a balanced and predictable tax system, and promoting a favorable business climate and successful business community for all Tennesseans.

The Kentucky Chamber of Commerce is the major catalyst, consensus builder, and advocate for a thriving economic climate in the Commonwealth of Kentucky. The Kentucky Chamber of Commerce supports a prosperous business climate in the state and works to advance Kentucky through advocacy, information, program management and customer service in order to promote business retention and recruitment. Representing the interests more than 68,000 employers across the Commonwealth, the Kentucky Chamber of Commerce advocates for growth-oriented tax reform, infrastructure investment, workforce solutions, a sensible regulatory approach, and a sustainable state government to ensure Kentucky is positioned for growth and opportunity.

The National Association of Manufacturers (the "NAM") is the largest manufacturing association in the United States, representing small and large manufacturers in every industrial sector and in all 50 states. Manufacturing employs more than 12 million men and women, contributes $2.25 trillion to the U.S. economy annually, has the largest economic impact of any major sector and accounts for more than three-quarters of all private-sector research and development in the nation. The NAM is the voice of the manufacturing

community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States.

American Chemistry Council ("ACC") represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®; common sense advocacy designed to address major public policy issues; and health and environmental research and product testing. The business of chemistry is a $768 billion enterprise and a key element of the nation's economy.

American Iron and Steel Institute ("AISI") serves as the voice of the North American steel industry. AISI is comprised of 19 member companies, including integrated and electric furnace steelmakers, and approximately 124 associate members who are suppliers to or customers of the steel industry. AISI's member companies represent over 75 percent of both U.S. and North American steel capacity.

The American Public Power Association is the voice of not-for-profit, community-owned utilities that power 2,000 towns and cities nationwide. It represents public power before the federal government to protect the interests of the more than 49 million people that public power utilities serve, and the 93,000

people they employ. The association advocates and advises on electricity policy, technology, trends, training, and operations. Its members strengthen their communities by providing superior service, engaging citizens, and instilling pride in community-owned power.

National Rural Electric Cooperative Association ("NRECA") is the association of not-for-profit energy cooperatives supplying central station service through generation, transmission, and distribution of electricity to member-owners, especially those in rural areas of the United States. On behalf of its members, NRECA participates in administrative and judicial proceedings involving or affecting its members' interests. NRECA members will be directly affected by the decision in this case. TVA is the wholesale power provider for 50 NRECA members serving 1.9 million consumers with combined retail sales of 45.5 million MWh in 2016, more than 10 percent of electric cooperative sales nationally. Sales to electric cooperatives account for more than a quarter of TVA's total sales.

The Energy Institute of Alabama ("EIA") is an association of energy industry stakeholders operating throughout the State of Alabama. EIA promotes the interests and perspective of the energy industry, including formulating, communicating, and advocating for constructive energy policies. EIA's mission is to promote reliable, affordable, and clean energy to help grow Alabama's economy, create high-paying jobs, and build public support for Alabama's energy

industry. EIA is supported by an advisory council of state energy experts that includes academic and industry professionals. EIA also serves as a voice for the energy industry in cases before courts and on issues being considered by policymakers.

The Mississippi Energy Institute is a private, non-profit organization with a mission of developing state level policies that support a reliable and expanding energy portfolio that is environmentally responsible; to understand and engage in the national energy debate; and to take advantage of the market opportunities ensuring Mississippi's economic development competitiveness. Membership is made up of companies and organizations with a common interest in an energy policy to support economic growth.

The Association of Tennessee Valley Governments is an advocate for local governments that reside in the Tennessee Valley region. Founded in 1981, the Association of Tennessee Valley Governments is a not-for-profit, 501(c)(4) public interest organization that advances the interests of our members at the national, regional, and state levels, using our voice to work on a nonpartisan basis for solutions to critical issues that affect us all.

The Tennessee Farm Bureau Federation has more than 650,000 family members, making it the largest agricultural organization in Tennessee and the largest state Farm Bureau in the nation. Its mission is to "develop, foster, promote

and protect programs for the general welfare, including economic, social, educational and political well-being of farm people of the great state of Tennessee." Its positions on laws affecting agriculture, developed by its farmer members, support the *amici* parties' interpretation of the CWA in this case.

For nearly one hundred years, the Kentucky Farm Bureau has served as the "Voice of Kentucky Agriculture," representing the interests of agricultural producers and rural communities across the Commonwealth. Today, this voluntary organization of more than 478,000 farm families and their allies are dedicated in identifying problems, developing solutions and taking actions which will improve net farm income, achieve better economic opportunities and enhance the quality of life for all. Being one of the largest Farm Bureaus in the country, this organization stands ready to be a strong advocate at all levels for the benefit of its members, the agriculture industry and all Kentuckians.

The Utility Water Act Group ("UWAG") is a non-profit, unincorporated group of 162 companies and three national trade associations of energy companies: the Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association. UWAG's and its trade association members' utility members operate power plants and other facilities that generate, transmit, and distribute electricity to residential, commercial, industrial, and institutional customers in Tennessee and nearly every other State. One of

UWAG's purposes is to participate on behalf of its members in CWA litigation involving issues of importance to them.

Kentucky Industrial Utility Customers, Inc. ("KIUC") is comprised of 27 energy intensive industrial manufacturers with plants in Kentucky. KIUC member companies purchase approximately 14 million Mwh of electricity annually for their Kentucky plants. These plants produce steel, aluminum, paper, automobiles, chemicals and other products. Because the cost of electricity is essential in maintaining the competitiveness of Kentucky manufacturers in global and national markets, KIUC actively participates in regulatory and legal actions at the state and federal level that could impact electricity pricing.