

# Appendix A

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## SEC. 319 [33 U.S.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 Act;

(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 208, 303(e), 304(f), 305(b), and 314, and other information as appropriate, and

(B) may utilize appropriate elements of the waste treatment management plans developed pursuant to sections 208(b) and 303, 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 development 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 208, have worked jointly with the State on water quality management planning under section 205(j), 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 the date of the enactment of this section.

(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 Act;

(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 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 the date of the enactment of this section, 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 Act 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 Act 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. The

requirement that the Administrator convene a management conference shall not be subject to the provisions of section 505 of this Act.

(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 Act will be revised to reflect such agreement. Such a 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 205(j)(5) of this Act 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 non- point sources and improving the quality of such waters at or above the average level of such expenditures in its two fiscal years preceding the date of enactment of this subsection.

(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 Ground water 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 ground water 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, ground water assessments, demonstration programs, enforcement, technical assistance, education and training to protect the quality of ground water and to prevent contamination of ground water 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 ground water 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 Act;

(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.

[319 added by PL 100-4]

# Appendix B

U.S. EPA Guidance for State 319 programs

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## **Section 319 Program Guidance: Key Components of an Effective State Nonpoint Source Management Program November 2012**

This guidance is an update of the nine key elements guidance contained in the U.S. Environmental Protection Agency's (EPA's) *1997 Guidance for Section 319(h) Grants* ([www.epa.gov/nps/npsguid1.html#IIIa](http://www.epa.gov/nps/npsguid1.html#IIIa)), and contains a description of the key components that characterize an effective state nonpoint source (NPS) management program. The original guidance was developed by EPA with input from state lead NPS control agencies. Similarly, during the spring of 2012, EPA convened an EPA-state workgroup to inform section 319 program improvements; this update was developed with input from this workgroup and further refined by comments and input from other states.

EPA expects all states to review and, as appropriate, revise and update their NPS management programs every five years. An updated, comprehensive program is critical to the states and EPA. It will allow EPA and the states to ensure that section 319 funding, technical support and other resources are directed in an effective and efficient manner to support state efforts to address water quality issues on a watershed basis. States should refer to these key components during review and update of their programs. States will then submit their updated programs to EPA for approval.

### **1. The state program contains explicit short- and long-term goals, objectives and strategies to restore and protect surface water and ground water, as appropriate.**

The state's long-term goals reflect a strategically focused state NPS management program designed to achieve and maintain water quality standards and to maximize water quality benefits. The shorter-term objectives consist of activities, with annual milestones, designed to demonstrate reasonable progress toward accomplishing long-term goals as expeditiously as possible. Since the NPS management program is a longer-term planning document, the annual milestones may be more general than are expected in an annual section 319 grant work plan, but are specific enough for the state to track progress and for EPA to determine satisfactory progress in accordance with section 319(h)(8). Annual milestones in a state's NPS management program describe outcomes and key actions expected each year, e.g., delivering a certain number of WQ-10 success stories or implementing projects in a certain number of high priority impaired watersheds. The state program includes objectives that address nonpoint sources of surface water and ground water pollution as appropriate (including sources of drinking water) in alignment with the goals of the Clean Water Act. The objectives include both implementation steps and how results will be tracked (e.g., water quality improvements or load reductions).

The state program includes long-term goals and shorter-term (e.g., three- to five-year) objectives that are well integrated with other key environmental and natural resource programs, such as those described under component #3. State program goals and objectives are periodically revised as necessary to reflect progress or problems encountered, strategies to make progress towards achieving the goals, and indicators to measure progress.

**2. The state strengthens its working partnerships and linkages to appropriate state, interstate, tribal, regional, and local entities (including conservation districts), private sector groups, citizens groups, and federal agencies.**

The state uses a variety of formal and informal mechanisms to form and sustain these partnerships. Examples include memoranda of agreement, letters of support, cooperative projects, sharing and combining of funds, and meetings to share information and ideas.

The state NPS lead agency works collaboratively with other key state and local NPS entities in the coordinated implementation of NPS control measures in high priority watersheds. Interagency collaborative teams, NPS task forces, and representative advisory groups can be effective mechanisms for accomplishing these linkages, as can more informal but ongoing program coordination and outreach efforts. The state works to ensure that its local partners and grantees have the capacity to effectively carry out watershed implementation projects funded to support its NPS management program.

Further, the state seeks public involvement from local, regional, state, interstate, tribal and federal agencies, and public interest groups, industries, academic institutions, private landowners and producers, concerned citizens and others as appropriate, to comment on significant proposed program changes. This involvement helps ensure that environmental objectives are well integrated with those for economic stability and other social and cultural goals.

**3. The state uses a combination of statewide programs and on-the-ground projects to achieve water quality benefits; efforts are well-integrated with other relevant state and federal programs.**

The state has the flexibility to design its NPS management program in a manner that is best suited to achieve and maintain water quality standards. The state may achieve water quality results through a combination of watershed approaches and statewide programs, including regulatory authorities, as appropriate. The state NPS management program emphasizes a watershed management approach and includes an explanation of the state's approach to prioritizing waters and watersheds to achieve water quality restoration and protection.

The state NPS management program is well integrated with other relevant programs to restore and protect water quality, aligning priority setting processes and resources to increase efficiency and environmental results. These include the following programs, as applicable:

- Total Maximum Daily Loads (TMDLs);
- Clean Water State Revolving Fund (CWSRF);
- U.S. Department of Agriculture (USDA) farm bill conservation programs;
- state agricultural conservation;
- state nutrient framework or strategy
- source water protection;
- point sources (including storm water, confined animal feeding operations, and enforcement of permitted facilities);
- ground water;
- drinking water;
- clean lakes

- wetlands protection;
- national estuary program;
- coastal nonpoint pollution control program;
- pesticide management;
- climate change planning;
- forestry, both federal (U.S. Forest Service) and state;
- U.S. Army Corps of Engineers programs;
- and other natural resource and environmental management programs.

Because of the significant resources potentially available through USDA conservation programs, the state makes a strong sustained effort to coordinate and leverage with USDA NRCS. Similarly, a state NPS management program is well-integrated and clearly identifies processes to incorporate some of the significant resources of the CWSRF loan program for eligible nonpoint source activities.

Where applicable, the state NPS management program explains how NPS projects fit into the state's prioritization scheme for CWSRF funding, and describes state efforts to increase the use of the state CWSRF for the NPS management program. If there are barriers to prioritization of NPS projects, the state NPS management program describes efforts to coordinate with the CWSRF program and potential future steps to encourage NPS projects are considered.

If, in reviewing federal programs, the state identifies federal lands and activities that are not managed consistently with state nonpoint source program objectives, the state may seek EPA assistance to help resolve issues at the federal agency level. Federal programs subject to review by the state include the land management programs of the Bureau of Land Management and the U.S. Forest Service, USDA's conservation programs, and the U.S. Army Corps of Engineers waterway programs, as well as development projects and financial assistance programs that are, or may be, inconsistent with the state's NPS management program.

As a federal agency, EPA has a role to play in support of the state's NPS management program by working with other federal agencies to enhance their understanding of the significance of nonpoint source pollution and of the need to work cooperatively with the state to solve nonpoint source problems. Where appropriate, EPA will assist in resolving particular issues that arise between the state and federal agencies with respect to federal consistency with the state NPS management program. As EPA becomes aware of these issues, EPA works at a national level to improve consistency among federal programs.

**4. The state program describes how resources will be allocated between (a) abating known water quality impairments from NPS pollution and (b) protecting threatened and high quality waters from significant threats caused by present and future NPS impacts.**

The program describes its approach to addressing the twin demands of remedying waters that the state has identified as impaired by NPS pollution and preventing new water quality problems from present and reasonably foreseeable future NPS impacts, especially for waters which currently meet water quality standards.

With limited resources, the state will likely need to make choices about the relative emphasis on restoring impaired waters and protecting high quality waters. The state's program describes how it will approach setting priorities and aligning resources between these two areas of emphasis based on their water quality challenges and circumstances.

**5. The state program identifies waters and watersheds impaired by NPS pollution as well as priority unimpaired waters for protection. The state establishes a process to assign priority and to progressively address identified watersheds by conducting more detailed watershed assessments, developing watershed-based plans and implementing the plans.**

The state identifies waters impaired by nonpoint source pollution based on currently available information (e.g., in reports under sections 305(b), 319(a), 303(d), 314(a), and 320), and revises its list periodically as more up-to-date assessment information becomes available. As feasible, the state also identifies important unimpaired waters that are threatened or otherwise at risk from nonpoint source pollution.

In addition the state identifies the primary categories and subcategories causing the water quality impairments, threats, and risks across the state. At regular intervals the state updates the identification of waters impaired or threatened by NPS pollution preferably as part of a single comprehensive state water quality assessment which integrates reports required by the Clean Water Act. The state establishes a process to assign priority and to progressively address identified waters and watersheds by conducting more detailed watershed assessments, developing watershed-based plans, and implementing the plans. Factors used by the state to assign priority to waters and watersheds may include a variety of considerations, for example:

- human health considerations including source water protection for drinking water;
- ecosystem integrity, including ecological risk and stressors;
- beneficial uses of the water;
- value of the watershed or ground water area to the public;
- vulnerability of surface or ground water to additional environmental degradation;
- likelihood of achieving demonstrable environmental results;
- degree of understanding of the causes of impairment and solutions capable of restoring the water;
- implementability (site-specific technical feasibility);
- adequacy of existing water quality monitoring data or future monitoring commitments;
- degree to which TMDL allocations made to point sources are dependent on NPS reductions being achieved;
- extent of partnerships with other federal agencies, states, local public and private agencies/organizations and other stakeholders to coordinate resources and actions;
- availability and access of funding sources other than section 319(h); and
- readiness to proceed among stakeholders and project partners.

The state links its prioritization and implementation strategy to other programs and efforts such as those listed under component #3. In establishing priorities for ground water activities, the state considers wellhead protection areas, ground water recharge areas, and zones of significant ground water/surface water interaction, including drinking water sources.

There are different approaches for prioritizing waters for restoration and protection and EPA offers several tools to assist. For example, EPA's Recovery Potential Screening Tool, available at [www.epa.gov/recoverypotential](http://www.epa.gov/recoverypotential), is useful for comparing restorability of impaired waters across various watersheds. Also, the Nitrogen and Phosphorus Pollution Data Access Tool (NPDAT), at [epa.gov/nutrientpollution/npdat](http://epa.gov/nutrientpollution/npdat), is a GIS-based tool designed to assist in identifying priority watersheds to address nutrient pollution.

**6. The state implements all program components required by section 319(b) of the Clean Water Act, and establishes strategic approaches and adaptive management to achieve and maintain water quality standards as expeditiously as practicable. The state reviews and upgrades program components as appropriate. The state program includes a mix of regulatory, nonregulatory, financial and technical assistance, as needed.**

Under section 319(b) state NPS management programs include all of the following components:

(i) An identification of measures (i.e., systems of practices) that will be used to control NPS pollution, focusing on those measures which the state believes will be most effective in achieving and maintaining water quality standards. These measures may be individually identified or presented in manuals or compendiums, provided that they are specific and are related to the category or subcategory of nonpoint sources. They may also be identified as part of a watershed approach towards achieving water quality standards, whether locally, within a watershed, or statewide;

(ii) An identification of the key programs to achieve implementation of the measures, including, as appropriate, nonregulatory or regulatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, and demonstration projects. The state is free to decide the best approaches for solving the problems that it identifies under key component #5 above. These approaches may include one or all of the following:

- watershed or water quality-based approaches aimed at meeting water quality standards directly;
- iterative, technology-based approaches based on best management practices or measures, applied on either a categorical or site-specific basis; or
- an appropriate mix of these approaches.

(iii) A description of the processes used to coordinate and, where appropriate, integrate the various programs used to implement NPS pollution controls in the state;

(iv) A schedule with goals, objectives, and annual milestones for implementation at the earliest practicable date: legal authorities to implement the program; available resources; and institutional relationships;

(v) Sources of funding from federal (other than section 319), state, local, and private sources;

(vi) Federal land management programs, development projects and financial assistance programs; and

(vii) A description of monitoring and other evaluation programs that the state will conduct to help determine short- and long-term NPS management program effectiveness.

**In addition, the state incorporates existing baseline requirements established by other applicable federal or state laws to the extent that they are relevant.** For example, a coastal state or territory with an approved coastal zone management program incorporates its approved state coastal nonpoint pollution control programs required by section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990, into its NPS management program since CZARA requires implementation through the state's NPS management program. In this manner, the state ensures that this program and other relevant baseline programs are integrated into, and consistent with, section 319 programs.

**7. The state manages and implements its NPS management program efficiently and effectively, including necessary financial management.**

The state implements its program to solve its water quality problems as effectively and expeditiously as possible, and makes satisfactory progress each year in meeting program goals. To help assure that priority water quality problems are addressed cost-effectively and in a timely manner, the state includes in its program a process for identifying priority problems and/or watersheds, and deploys resources in a timely fashion to address priorities, including any critical areas requiring treatment and protection within watersheds.

The state employs appropriate programmatic and financial systems that ensure section 319 dollars are used efficiently and consistent with its legal obligations, and generally manages all section 319 funds to maximize water quality benefits. The state ensures that section 319 funds complement and leverage funds available for technical and financial assistance from other federal sources and agencies.

**8. The state reviews and evaluates its NPS management program using environmental and functional measures of success, and revises its NPS management program at least every five years.**

The state establishes appropriate measures of progress in meeting programmatic and water quality goals and objectives identified in key component #1 above. The state also describes a monitoring/evaluation strategy and a schedule to measure success in meeting those goals and objectives. The state integrates monitoring and evaluation strategies with ongoing federal natural resource inventories and monitoring programs.

The state NPS management program is reviewed and revised every five years. The revision is not necessarily a comprehensive update unless significant program changes warrant a complete revision; instead, an update targets the parts of the program that are out-of-date. At a minimum, this includes updating annual milestones and the schedule for program implementation, so that they remain current and oriented toward achieving water quality goals.

# Appendix C

## Geologic Timeline

ERA	PERIOD/ SYSTEM	MILLIONS YEARS AGO	PREDOMINANT ROCK TYPES IN INDIANA	PRINCIPAL FOSSIL TYPES IN INDIANA	
CENOZOIC	QUATERNARY	2.6	Unconsolidated deposits - glacial till, sand, gravel, silt, marl, clay, and peat deposited during and after continental glaciation	Mastodon, mammoth, peccary, dire wolf, saber-toothed cat, gastropods, pelecypods, plants, and pollen	
	TERTIARY		Unconsolidated sediment consisting of clay, mud, gravel, sand, and silt	Short-faced bear, peccary, camels, snakes, rodents, fishes, birds, and turtles	
MESOZOIC	CRETACEOUS	65.5	None present	None present	
	JURASSIC	145.5	None present	None present	
	TRIASSIC	199.6	None present	None present	
PALEOZOIC	PERMIAN	251	None present	None present	
	CARBONIFEROUS	PENNSYLVANIAN	299	Shale, sandstone, mudstone, clay, coal, limestone, and conglomerate	Lycopods, <i>Calamites</i> , seed ferns, true ferns, <i>Cordaites</i> , and amphibians
		MISSISSIPPIAN	318.1	Shale, sandstone, siltstone, limestone, and gypsum	Crinoids, brachiopods, cephalopods, corals, molluscs, trilobites, bryozoans, fishes, arthropods, and foraminifera
	DEVONIAN		359.2	Upper part: carbonaceous shale Lower part: limestone, dolostone, and shale	Corals, brachiopods, cephalopods, trilobites, pelecypods, and bryozoans
			416	Dolostone, limestone, siltstone, and shale	Corals, stromatoporoids, bryozoans, brachiopods, trilobites, gastropods, pelecypods, crinoids, and eurypterids
	ORDOVICIAN		443.7	Upper part: shale and limestone Lower part: limestone, dolostone, and sandstone*	Cephalopods, trilobites, brachiopods, bryozoans, crinoids, pelecypods, and gastropods
			488.3	Sandstone and dolostone*	Trilobites, brachiopods, and sponges
	CAMBRIAN		542	Granite, marble, gneiss, and other igneous and metamorphic rock types*	Microbes
	PRECAMBRIAN		4,600		

\* Present only in the subsurface

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 This may be reproduced for educational purposes, courtesy of the Indiana Geological Survey.  
 Geologic time dates from U.S. Geological Survey, 2010, Divisions of geologic time—major chronostratigraphic and geochronologic units: U.S. Geological Survey Fact Sheet 2010-3059.

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# Appendix D

## Indiana Designated MS4s

### Indiana Designated MS4 Entities Currently Permitted

County	MS4 Entity	Permit Number	Phone
Adams	Decatur	INRo40055	260-724-4218
Allen	City of Fort Wayne; IPFW; Ivy Tech North East; Indiana Institute of Technology; University of St. Francis	Co-Permittees INRo40029	260-427-5066
Allen	City of New Haven	INRo40063	260-748-7031
Allen	Allen County; Hometown; Leo-Cedarville	Co-Permittees INRo40131	260-449-3612
Bartholomew	Bartholomew County	INRo40097	812-379-1660
Bartholomew	City of Columbus	INRo40098	812-376-2540
Boone	Town of Zionsville	INRo40035	317-873-4544
Boone	City of Lebanon	INRo40113	765-482-8823
Boone	Boone County	INRo40133	765-483-4444
Cass	City of Logansport	INRo40043	574-753-6231
Clark	Oak Park Conservancy District	INRo40001	813-283-3960
Clark	Town of Clarksville	INRo40076	812-283-8233
Clark	Town of Sellersburg	INRo40116	812-246-3821
Clark	City of Jeffersonville	INRo40117	812-280-4730
Clark	Clark County	INRo40118	812-288-2161
Clinton	City of Frankfort	INRo40020	765-659-4741
Daviess	City of Washington	INRo40095	812-254-2792
Dearborn	Hidden Valley Lake CDP	INRo40009	812-537-3091
Decatur	City of Greensburg	INRo40091	812-663-2138
DeKalb	City of Auburn	INRo40119	260-925-1714
Delaware	Delaware County; City of Muncie; City of Yorktown; Ivy Tech State College	Co-Permittees INRo40056	765-749-1114
Delaware	Ball State University	INRo40084	765-285-5092
Delaware	Town of Daleville	INRo40110	765-378-6288
Dubois	City of Jasper	INRo40067	812-482-4255
Elkhart	Elkhart County; City of Elkhart; City of Goshen; Town of Bristol	Co-Permittees INRo40137	574-533-3630 ext 3
Fayette	City of Connersville	INRo40021	765-825-2158
Floyd	City of New Albany	INRo40077	812-946-5333
Floyd	Floyd County	INRo40078	812-948-5466
Floyd	Town of Georgetown	INRo40096	812-951-3800
Floyd	IU -Southeast, New Albany	INRo40147	812-855-6311
Grant	City of Marion; Indiana-Wesleyan University	Co-Permittees INRo40033	765-668-4441
Hamilton	Town of Arcadia	INRo40004	317-984-3512
Hamilton	Town of Fishers	INRo40019	317-595-3461
Hamilton	Hamilton County; Town of Cicero	Co-Permittees INRo40066	317-776-8495
Hamilton	City of Westfield	INRo40109	317-896-5452
Hamilton	City of Noblesville	INRo40127	317-770-5132
Hamilton	City of Carmel	INRo40150	317-571-2314

Hancock	Town of McCordsville	INR040006	317-335-3493
Hancock	City of Greenfield	INR040039	317-477-4320
Hancock	Town of New Palestine	INR040070	317-861-4727
Hancock	Town of Fortville	INR040071	317-485-4044
Hancock	Hancock County	INR040128	317-477-1150
Hendricks	Town of Brownsburg	INR040002	317-852-1114
Hendricks	Town of Plainfield	INR040050	317-839-3490
Hendricks	Town of Avon	INR040086	317-272-0948
Hendricks	Plainfield Correctional Facility	INR040122	317-839-2513 Ext 2451
Hendricks	Hendricks County	INR040125	317-718-6038
Hendricks	Town of Danville	INR040126	317-745-3012
Hendricks	Town of Pittsboro	INR040132	317-892-3326
Henry	City of New Castle	INR040038	765-521-6836
Howard	Howard County	INR040048	765-456-2217
Howard	City of Kokomo	INR040104	765-456-7468
Howard	IU -Kokomo	INR040148	812-855-6311
Huntington	City of Huntington	INR040011	260-358-2313
Jackson	City of Seymour	INR040082	812-522-4020
Jefferson	City of Madison	INR040061	812-265-8326
Johnson	Town of Bargersville	INR040024	317-422-5115
Johnson	City of Greenwood	INR040032	317-887-5230
Johnson	Town of New Whiteland	INR040042	317-535-4664
Johnson	Johnson County	INR040045	317-346-4350
Johnson	Town of Whiteland	INR040052	317-535-5531, ext 222
Johnson	City of Franklin	INR040059	317-3461280
Johnson	Town of Edinburgh	INR04026	812-526-3510
Knox	City of Vincennes	INR040034	812-882-7877
Kosciusko	City of Warsaw	INR040080	574-372-9580
Lake	Lakes of the Four Seasons POA	INR040007	219-988-2581
Lake	Town of Munster	INR040017	219- 836-6995
Lake	City of Hammond	INR040018	219-853-6413 Ext 524
Lake	Town of New Chicago	INR040031	219-962-1157
Lake	Town of Lowell	INR040046	219-696-7794
Lake	Town of St. John	INR040047	219-365-4655
Lake	Town of Merrillville	INR040049	219-769-4670
Lake	City of Crown Point	INR040054	219-661-2280
Lake	Town of Dyer	INR040074	219-865-6108
Lake	Town of Cedar Lake	INR040075	219-374-7400
Lake	City of Lake Station	INR040087	219-962-2081
Lake	City of Gary; Ivy Tech State College-Northwest	Co-Permitees INR040101	219-882-3000
Lake	Town of Griffith	INR040108	219-924-3838
Lake	Town of Schererville	INR040112	219-322-2211
Lake	Lake County	INR040124	219-755-3745
Lake	City of Hobart	INR040130	219-942-3619
Lake	Town of Highland	INR040135	219-972-5069
Lake	City of East Chicago	INR040141	219-391-8773
Lake	IU -Northwest, Gary	INR040145	812-855-6311

LaPorte	LaPorte County; City of LaPorte; City of Michigan City; Town of Trail Creek; Town of Long Beach	Co-Permitees INR040107	219-362-6633, ext 3
LaPorte	Indiana State Prison	INR040120	219-874-7256 Ext 2410
Lawrence	City of Bedford	INR040027	812-275-1641
Madison	Town of Pendleton	INR040014	765-778-4100
Madison	City of Anderson; Anderson University	Co-Permitees INR040016	765-648-6118
Madison	Town of Edgewood	INR040025	260-224-9738
Madison	Town of Ingalls	INR040072	317-485-4321
Madison	Madison County	INR040111	765-641-9639
Madison	Pendleton Correctional Facility	INR040121	765-778-8011 Ext 1010
Madison	City of Alexandria	INR040142	765-724-4733
Madison	Town of Chesterfield	INR040143	765-378-3331
Marion	City of Southport	INR040015	317-786-3585
Marion	Town of Cumberland	INR040022	317-894-6210
Marion	City of Beech Grove	INR040023	317-788-4982
Marion	Town of Speedway	INR040040	317-246-2855
Marion	City of Lawrence	INR040069	317-339-0623
Marshall	City of Plymouth	INR040064	574-936-6717
Miami	City of Peru	INR040081	765-473-7651
Monroe	Ivy Tech Community College-Bloomington	INR040003	812-320-6059
Monroe	Town of Ellettsville	INR040013	812-332-8030
Monroe	Monroe County	INR040089	812- 349-2499
Monroe	Indiana University-Bloomington	INR040123	812-855-0857
Monroe	City of Bloomington	INR040136	812-349-3650
Montgomery	City of Crawfordsville	INR040094	765-364-5152
Morgan	Morgan County; City of Martinsville; City of Mooresville; Town of Brooklyn; Tri-County Conservancy District	Co-Permitees INR040099	765-342-1077
Noble	City of Kendallville	INR040012	260-347-1362
Porter	Twin Creeks Conservancy District	INR040079	219-759-3277
Porter	City of Portage	INR040090	219-762-1815
Porter	Valparaiso Lakes Conservancy District	INR040103	219-464-3770
Porter	Town of Porter	INR040115	219-926-2771
Porter	Porter County	INR040140	219-465-3560
Porter	Nature Works Conservancy District (Aberdeen Homeowners Association)	INR040149	219-464-3536
Porter	City of Valparaiso; Valparaiso University	Co-Permitees INR04073	219-462-1161, ext 316
Porter	Town of Chesterton	INR040036	219-728-1336, ext 2
Putman	City of Greencastle	INR040102	765-655-2301
Randolph	Town of Parker City	INR040093	765-486-7949
Saint Joseph	IU -South Bend	INR040146	574-520-4499
Saint Joseph	St. Joseph County; Town of Osceola; Town of Roseland	Co-Permitees INR040041	572 - 235-9626
Saint Joseph	University of Notre Dame	INR040105	574- 631-6594
Saint Joseph	Mishawaka; Bethel College	Co-Permitees INR040106	574-258-1655
Saint Joseph	City of South Bend; Ivy Tech State College – North Central	Co-Permitees INR040114	574-235-9261
Saint Joseph	Saint Mary's College	INR040139	574- 284-5778
Shelby	City of Shelbyville	INR040051	317-392-5102

Steuben	City of Angola; Trine University	Co-Permitees INRo40005	260-665-2514
Tippecanoe	Tippecanoe County; Town of Battle Ground; City of Lafayette; City of West Lafayette; Town of Dayton; Purdue University; Ivy Tech State College - Lafayette	Co-Permitees INRo40129	765-423-9228
Vanderburgh	University of Southern Indiana	INRo40028	812- 464-1849
Vanderburgh	Vanderburgh County	INRo40030	812-435-5773
Vanderburgh	City of Evansville	INRo40057	812-436-4977
Vanderburgh	University of Evansville	INRo40058	812-488-2721
Vanderburgh	Ivy Tech Community College-Southwest	INRo40060	812-429-1389
Vigo	City of Terre Haute; Vigo County; Town of West Terre Haute; Town of Seelyville; Indiana State University; Rose-Hulman Institute of Technology; Honey Creek Vigo Conservancy District; Ivy Tech Community College - Terre Haute	Co-Permitees INRo40092	812-232-6564
Vigo	US Penitentiary-Terre Haute	INRo40138	812-238-3437
Wabash	City of Wabash	INRo40037	260-563-2941
Warrick	Town of Chandler	INRo40053	812-925-6882
Warrick	Town of Newburgh	INRo40062	812-853-2728
Warrick	Warrick County	INRo40065	812-897-6094
Wayne	IU - East, Richmond	INRo40144	812-855-6311
Wayne	City of Richmond; Earlham College	Co-Permitees INRo40044	765- 983-7238

# Appendix E

IDEM's 2009 WMP Checklist

## IDEM Watershed Management Plan (WMP) Checklist (2009)

<b>Name of Project:</b>		
<b>WMP Draft Date:</b>		
<b>IDEM Reviewers:</b>		<b>WMP Review Date:</b>
<b>1.</b>	<b>2.</b>	<b>3.</b>

**Instructions:** The numbered elements (1-33) make up the IDEM WMP Checklist (2009). The items with boxes are the requirements needed to meet the numbered elements. These items come directly from the WMP Checklist instructions. The WMP cannot be approved until all numbered elements are complete.

Page(s) #	Required Content						
<b>WATERSHED COMMUNITY INITIATIVE</b>							
	<p>1. The reasons the community decided to initiate this watershed project.</p> <p><input type="checkbox"/> Explain the concerns that led leaders to initiate the project</p> <p><input type="checkbox"/> Explain who the local leaders are</p> <p><input type="checkbox"/> Explain how/why they decided to work together</p> <p><i>Comments:</i></p>						
	<p>2. A description of the steering committee and who they represent.</p> <p><input type="checkbox"/> Explain how stakeholder involvement was generated</p> <p><input type="checkbox"/> Explain how additional stakeholder concerns were gathered</p> <p><input type="checkbox"/> In a figure include:</p> <table border="1" style="width: 100%;"> <tr> <td><input type="checkbox"/> Title</td> <td><input type="checkbox"/> Number</td> </tr> <tr> <td><input type="checkbox"/> Title and Number in Table of Contents</td> <td><input type="checkbox"/> Figure is legible</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> A list of the steering committee members and their affiliation</td> </tr> </table> <p><input type="checkbox"/> Describe any outreach efforts used to generate stakeholder involvement</p> <p><i>Comments:</i></p>	<input type="checkbox"/> Title	<input type="checkbox"/> Number	<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible	<input type="checkbox"/> A list of the steering committee members and their affiliation	
<input type="checkbox"/> Title	<input type="checkbox"/> Number						
<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible						
<input type="checkbox"/> A list of the steering committee members and their affiliation							
	<p>3. A list of stakeholder concerns.</p> <p><input type="checkbox"/> In a figure include:</p> <table border="1" style="width: 100%;"> <tr> <td><input type="checkbox"/> Title</td> <td><input type="checkbox"/> Number</td> </tr> <tr> <td><input type="checkbox"/> Title and Number in Table of Contents</td> <td><input type="checkbox"/> Figure is legible</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> A list of concerns from the steering committee and the stakeholders</td> </tr> </table> <p><i>Comments:</i></p>	<input type="checkbox"/> Title	<input type="checkbox"/> Number	<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible	<input type="checkbox"/> A list of concerns from the steering committee and the stakeholders	
<input type="checkbox"/> Title	<input type="checkbox"/> Number						
<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible						
<input type="checkbox"/> A list of concerns from the steering committee and the stakeholders							
<b>WATERSHED INVENTORY</b>							
	<p><b>Part One of the Watershed Inventory:</b></p> <p>4. A description of the geology/topography as it pertains to the watershed.</p> <p><input type="checkbox"/> Explain karst magnitude and general distribution</p> <p style="padding-left: 40px;"><input type="checkbox"/> Not applicable</p>						

	<input type="checkbox"/> Explain the topographic features that define the watershed's drainage patterns <i>Comments:</i>																												
	<p>5. A brief overview of the hydrology as it pertains to the watershed.</p> <input type="checkbox"/> Map(s) of project area showing: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td><input type="checkbox"/> Labeled Streams</td> <td><input type="checkbox"/> Lakes</td> </tr> <tr> <td><input type="checkbox"/> Watershed names and boundaries</td> <td><input type="checkbox"/> HUCs</td> </tr> <tr> <td><input type="checkbox"/> Legal drains</td> <td><input type="checkbox"/> Wetlands</td> </tr> <tr> <td><input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable</td> <td><input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable</td> </tr> <tr> <td><input type="checkbox"/> County boundaries</td> <td><input type="checkbox"/> North arrow</td> </tr> <tr> <td><input type="checkbox"/> Title</td> <td><input type="checkbox"/> Number</td> </tr> <tr> <td><input type="checkbox"/> Title and Number in Table of Contents</td> <td><input type="checkbox"/> Not smaller than 40 square inches</td> </tr> <tr> <td><input type="checkbox"/> Legend</td> <td><input type="checkbox"/> Scale</td> </tr> </table> <input type="checkbox"/> Explain how the following resources are used by the public: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td><input type="checkbox"/> Streams</td> <td><input type="checkbox"/> Lakes</td> </tr> <tr> <td><input type="checkbox"/> Ditches</td> <td><input type="checkbox"/> Legal drains</td> </tr> <tr> <td><input type="checkbox"/> Wetlands</td> <td></td> </tr> </table> <input type="checkbox"/> Where possible, connect hydrologic characteristics and relevant stakeholder concerns  <input type="checkbox"/> Quantify: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td><input type="checkbox"/> Streams in miles</td> <td><input type="checkbox"/> Ditches in miles</td> </tr> <tr> <td><input type="checkbox"/> Legal drains in miles</td> <td><input type="checkbox"/> Wetlands in acreage</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Lakes by number in the watershed and estimated total acreage</td> </tr> </table> <input type="checkbox"/> Describe hydrologic modifications within the watershed <i>Comments:</i>	<input type="checkbox"/> Labeled Streams	<input type="checkbox"/> Lakes	<input type="checkbox"/> Watershed names and boundaries	<input type="checkbox"/> HUCs	<input type="checkbox"/> Legal drains	<input type="checkbox"/> Wetlands	<input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable	<input type="checkbox"/> County boundaries	<input type="checkbox"/> North arrow	<input type="checkbox"/> Title	<input type="checkbox"/> Number	<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Not smaller than 40 square inches	<input type="checkbox"/> Legend	<input type="checkbox"/> Scale	<input type="checkbox"/> Streams	<input type="checkbox"/> Lakes	<input type="checkbox"/> Ditches	<input type="checkbox"/> Legal drains	<input type="checkbox"/> Wetlands		<input type="checkbox"/> Streams in miles	<input type="checkbox"/> Ditches in miles	<input type="checkbox"/> Legal drains in miles	<input type="checkbox"/> Wetlands in acreage	<input type="checkbox"/> Lakes by number in the watershed and estimated total acreage	
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<input type="checkbox"/> Lakes by number in the watershed and estimated total acreage																													
	<p>6. Soil characteristics that can affect water quality including, but not limited to, highly erodible soil (HES), hydric soils, and septic system suitability.</p> <input type="checkbox"/> Explain how soil characteristics impact water quality in the watershed <input type="checkbox"/> Not Applicable  <input type="checkbox"/> Where possible, connect soil characteristics and relevant stakeholder concerns <input type="checkbox"/> Not Applicable  <input type="checkbox"/> Map(s) of the project area showing: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td><input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable</td> <td><input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable</td> </tr> <tr> <td><input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable</td> <td><input type="checkbox"/> Title</td> </tr> <tr> <td><input type="checkbox"/> Number</td> <td><input type="checkbox"/> Not smaller than 40 square inches</td> </tr> <tr> <td><input type="checkbox"/> Title and Number in Table of Contents</td> <td><input type="checkbox"/> Legend</td> </tr> <tr> <td><input type="checkbox"/> North arrow</td> <td><input type="checkbox"/> Scale</td> </tr> <tr> <td><input type="checkbox"/> HES</td> <td><input type="checkbox"/> Hydric soils</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Septic system suitability</td> </tr> </table> <input type="checkbox"/> Quantify according to the percentage of total watershed area they cover: <ul style="list-style-type: none"> <li><input type="checkbox"/> HES</li> <li><input type="checkbox"/> Hydric soils</li> <li><input type="checkbox"/> Septic system suitability</li> </ul> <input type="checkbox"/> Include tillage transect information <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable	<input type="checkbox"/> Title	<input type="checkbox"/> Number	<input type="checkbox"/> Not smaller than 40 square inches	<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Legend	<input type="checkbox"/> North arrow	<input type="checkbox"/> Scale	<input type="checkbox"/> HES	<input type="checkbox"/> Hydric soils	<input type="checkbox"/> Septic system suitability															
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<input type="checkbox"/> Septic system suitability																													

	<input type="checkbox"/> Describe unsewered areas <input type="checkbox"/> Map(s) of project area showing: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable</td> <td style="width: 50%;"><input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable</td> </tr> <tr> <td><input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable</td> <td><input type="checkbox"/> Title</td> </tr> <tr> <td><input type="checkbox"/> Number</td> <td><input type="checkbox"/> Title and Number in Table of Contents</td> </tr> <tr> <td><input type="checkbox"/> Not smaller than 40 square inches</td> <td><input type="checkbox"/> Legend</td> </tr> <tr> <td><input type="checkbox"/> Scale</td> <td><input type="checkbox"/> North arrow</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Large unsewered communities</td> </tr> </table> <p><i>Comments:</i></p>	<input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable	<input type="checkbox"/> Title	<input type="checkbox"/> Number	<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Not smaller than 40 square inches	<input type="checkbox"/> Legend	<input type="checkbox"/> Scale	<input type="checkbox"/> North arrow	<input type="checkbox"/> Large unsewered communities					
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<input type="checkbox"/> Scale	<input type="checkbox"/> North arrow																
<input type="checkbox"/> Large unsewered communities																	
	<p>7. A description of land use in the watershed.</p> <input type="checkbox"/> Map(s) of the project area showing: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 50%;"><input type="checkbox"/> North arrow</td> <td style="width: 50%;"><input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable</td> </tr> <tr> <td><input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable</td> <td><input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable</td> </tr> <tr> <td><input type="checkbox"/> Title</td> <td><input type="checkbox"/> Number</td> </tr> <tr> <td><input type="checkbox"/> Title and Number in Table of Contents</td> <td><input type="checkbox"/> Not smaller than 40 square inches</td> </tr> <tr> <td><input type="checkbox"/> Legend</td> <td><input type="checkbox"/> Scale</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Land use layers pertinent to the watershed and stakeholder concerns.</td> </tr> </table> <input type="checkbox"/> Quantify in acreage and percent of the watershed, the mapped land uses <input type="checkbox"/> Explain how current land uses or land use trends can potentially impact water quality <input type="checkbox"/> Where possible, connect land use and relevant stakeholder concerns <input type="checkbox"/> Not Applicable <input type="checkbox"/> Explain the uses of fertilizer on urban and suburban land <input type="checkbox"/> Not Applicable <input type="checkbox"/> Explain where pet and/or wildlife waste may be an issue <input type="checkbox"/> Not Applicable <p><i>Comments:</i></p>	<input type="checkbox"/> North arrow	<input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable	<input type="checkbox"/> Title	<input type="checkbox"/> Number	<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Not smaller than 40 square inches	<input type="checkbox"/> Legend	<input type="checkbox"/> Scale	<input type="checkbox"/> Land use layers pertinent to the watershed and stakeholder concerns.					
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<input type="checkbox"/> Land use layers pertinent to the watershed and stakeholder concerns.																	
	<p>8. Other planning efforts in the watershed project area.</p> <input type="checkbox"/> Explain how other planning efforts impact water quality in the watershed <input type="checkbox"/> Not Applicable <input type="checkbox"/> Where possible, connect planning efforts and relevant stakeholder concerns <input type="checkbox"/> Not Applicable <input type="checkbox"/> Map(s) of the project area showing: <input type="checkbox"/> Not Applicable <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable</td> <td style="width: 50%;"><input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable</td> </tr> <tr> <td><input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable</td> <td><input type="checkbox"/> Title</td> </tr> <tr> <td><input type="checkbox"/> Number</td> <td><input type="checkbox"/> Title and Number in Table of Contents</td> </tr> <tr> <td><input type="checkbox"/> Not smaller than 40 square inches</td> <td><input type="checkbox"/> Legend</td> </tr> <tr> <td><input type="checkbox"/> Scale</td> <td><input type="checkbox"/> North arrow</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Areas in need of Rule 5 enforcement and/or areas of unmanaged construction/sprawl</td> </tr> </table> <p>Include on the map(s) the jurisdiction of:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 50%;"><input type="checkbox"/> MS4 Plans <input type="checkbox"/> Not Applicable</td> <td style="width: 50%;"><input type="checkbox"/> Regional Sewer District Plans <input type="checkbox"/> Not Applicable</td> </tr> <tr> <td><input type="checkbox"/> City/County Master Plans</td> <td><input type="checkbox"/> TMDL Reports</td> </tr> </table>	<input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable	<input type="checkbox"/> Title	<input type="checkbox"/> Number	<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Not smaller than 40 square inches	<input type="checkbox"/> Legend	<input type="checkbox"/> Scale	<input type="checkbox"/> North arrow	<input type="checkbox"/> Areas in need of Rule 5 enforcement and/or areas of unmanaged construction/sprawl		<input type="checkbox"/> MS4 Plans <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Regional Sewer District Plans <input type="checkbox"/> Not Applicable	<input type="checkbox"/> City/County Master Plans	<input type="checkbox"/> TMDL Reports
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	<i>Comments:</i>																							
	9. <input type="checkbox"/> An identification of threatened and endangered plants and animals that may be found in the watershed and a description of the types of habitat they prefer. <i>Comments:</i>																							
	10. <input type="checkbox"/> A description of the relevant relationships between the characteristics discussed in elements 4 through 9. <i>Comments:</i>																							
	<p><b>Part Two of the Watershed Inventory:</b></p> <p><input type="checkbox"/> A section discussing checklist elements 12-14 for each 12 digit HUC. If the project is at the 10 digit scale, 12 digit HUCs may be combined into sections.</p> <p><input type="checkbox"/> Each section has a map of the applicable subwatershed(s) and all required map information from elements 11-14 may go on these maps</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable</td> <td style="width: 50%;"><input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable</td> </tr> <tr> <td><input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable</td> <td><input type="checkbox"/> Title</td> </tr> <tr> <td><input type="checkbox"/> Number</td> <td><input type="checkbox"/> Title and Number in Table of Contents</td> </tr> <tr> <td><input type="checkbox"/> Not smaller than 40 square inches</td> <td><input type="checkbox"/> Legend</td> </tr> <tr> <td><input type="checkbox"/> Scale</td> <td><input type="checkbox"/> North arrow</td> </tr> </table> <p><i>Comments:</i></p> <p>11. Data and Targets.</p> <p><input type="checkbox"/> For each report, plan, or document whose data is used:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Explain the background of the data</li> <li><input type="checkbox"/> State the data's age</li> <li><input type="checkbox"/> State how often those data were collected</li> </ul> <p><input type="checkbox"/> Explain methodologies for collecting:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Windshield survey (Watershed Inventory must include a windshield survey or desktop survey) <input type="checkbox"/> Not Applicable</td> <td style="width: 50%;"><input type="checkbox"/> Desktop survey (Watershed Inventory must include a windshield survey or desktop survey) <input type="checkbox"/> Not Applicable</td> </tr> <tr> <td><input type="checkbox"/> Habitat data</td> <td><input type="checkbox"/> Biological data</td> </tr> </table> <p><input type="checkbox"/> In a figure include:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Targets for water quality parameters of concern</td> <td style="width: 50%;"><input type="checkbox"/> Targets for habitat data</td> </tr> <tr> <td><input type="checkbox"/> Targets for biological data</td> <td><input type="checkbox"/> Title</td> </tr> <tr> <td><input type="checkbox"/> Number</td> <td><input type="checkbox"/> Title and Number in Table of Contents</td> </tr> <tr> <td><input type="checkbox"/> Figure is legible</td> <td><input type="checkbox"/> Legend</td> </tr> </table> <p><input type="checkbox"/> If an Indiana State Standard exists for a parameter of concern, target must be at least as stringent as that standard <input type="checkbox"/> Not Applicable</p> <p><input type="checkbox"/> If a NPS TMDL exists for the watershed, target must be at least as stringent as the NPS TMDL target</p>		<input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable	<input type="checkbox"/> Title	<input type="checkbox"/> Number	<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Not smaller than 40 square inches	<input type="checkbox"/> Legend	<input type="checkbox"/> Scale	<input type="checkbox"/> North arrow	<input type="checkbox"/> Windshield survey (Watershed Inventory must include a windshield survey or desktop survey) <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Desktop survey (Watershed Inventory must include a windshield survey or desktop survey) <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Habitat data	<input type="checkbox"/> Biological data	<input type="checkbox"/> Targets for water quality parameters of concern	<input type="checkbox"/> Targets for habitat data	<input type="checkbox"/> Targets for biological data	<input type="checkbox"/> Title	<input type="checkbox"/> Number	<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible	<input type="checkbox"/> Legend
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<input type="checkbox"/> Figure is legible	<input type="checkbox"/> Legend																							

Not Applicable  
 On the appropriate subwatershed map, include your sampling locations and locations from other data as appropriate  
*Comments:*

**12. Water Quality Information.**  
 Discuss data pertaining to all concerns  
 Summarize and discuss data from:

<input type="checkbox"/> 305b and 303d lists <input type="checkbox"/> Not Applicable	<input type="checkbox"/> TMDL Reports <input type="checkbox"/> Not Applicable
<input type="checkbox"/> OLQ surface water data <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Assessment Branch surface water data <input type="checkbox"/> Not Applicable
<input type="checkbox"/> LARE Studies <input type="checkbox"/> Not Applicable	<input type="checkbox"/> NPDES facilities <input type="checkbox"/> Not Applicable
<input type="checkbox"/> Permit compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Other WMPs <input type="checkbox"/> Not Applicable
<input type="checkbox"/> USGS <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Flow gauges <input type="checkbox"/> Not Applicable
<input type="checkbox"/> Project data <input type="checkbox"/> Not Applicable	

On the appropriate subwatershed map, include impaired waterbodies  
*Comments:*

**13. Habitat/Biological Information.**  
 Discuss data pertaining to all concerns  
 Summarize and discuss data from:

<input type="checkbox"/> 305b and 303d lists <input type="checkbox"/> Not Applicable	<input type="checkbox"/> TMDL Reports <input type="checkbox"/> Not Applicable
<input type="checkbox"/> OLQ surface water data <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Assessment Branch surface water data <input type="checkbox"/> Not Applicable
<input type="checkbox"/> LARE Studies <input type="checkbox"/> Not Applicable	<input type="checkbox"/> NPDES facilities <input type="checkbox"/> Not Applicable
<input type="checkbox"/> Permit compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Other WMPs <input type="checkbox"/> Not Applicable
<input type="checkbox"/> USGS <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Flow gauges <input type="checkbox"/> Not Applicable
<input type="checkbox"/> Project data <input type="checkbox"/> Not Applicable	

Data from a desktop and/or windshield survey  
 Not Applicable to Habitat/Biological Information  
*Comments:*

14. Land use Information.

- Discuss data pertaining to all concerns
- Include data from a desktop and/or windshield survey
- Discuss, at a minimum:

<input type="checkbox"/> Open space	<input type="checkbox"/> Industry
<input type="checkbox"/> Areas slated for development	<input type="checkbox"/> Land use trends

- Describe and map on the appropriate subwatershed map(s):

<input type="checkbox"/> Stream miles needing buffers <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Stream banks needing stabilization <input type="checkbox"/> Not Applicable
<input type="checkbox"/> Brownfields <input type="checkbox"/> Not Applicable	<input type="checkbox"/> LUSTs <input type="checkbox"/> Not Applicable
<input type="checkbox"/> Other remediation sites <input type="checkbox"/> Not Applicable	

- Describe:

- Fertilizer use on non urban/suburban land uses  
 Not Applicable
- Hobby farms and other AFOs  
 Not Applicable
- Application of municipal wastewater sludge  
 Not Applicable

- Quantify and then map on the appropriate subwatershed map(s):

<input type="checkbox"/> CSOs <input type="checkbox"/> Not Applicable	<input type="checkbox"/> SSOs <input type="checkbox"/> Not Applicable
<input type="checkbox"/> CAFOs <input type="checkbox"/> Not Applicable	<input type="checkbox"/> CFOs <input type="checkbox"/> Not Applicable
<input type="checkbox"/> Other non agricultural animal operations <input type="checkbox"/> Not Applicable	

Comments:

**Part Three of the Watershed Inventory:**

15. Watershed Inventory Summary.

- Summarize important findings, relationships, or trends
- Map(s) of the project area or subwatersheds showing:

<input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable
<input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable	<input type="checkbox"/> Title
<input type="checkbox"/> Number	<input type="checkbox"/> Title and Number in Table of Contents
<input type="checkbox"/> Not smaller than 40 square inches	<input type="checkbox"/> Legend
<input type="checkbox"/> Scale	<input type="checkbox"/> North arrow
<input type="checkbox"/> Important water quality and habitat/biology results	

Comments:

16. Analysis of Stakeholder Concerns.

- In a figure include:

<input type="checkbox"/> Title	<input type="checkbox"/> Number
<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible
<input type="checkbox"/> Each concern	<input type="checkbox"/> Whether the concern's supported by

		data
<input type="checkbox"/>	Evidence for each concern	<input type="checkbox"/> If the concern is quantifiable
<input type="checkbox"/>	If the concern is outside the project's scope	<input type="checkbox"/> Which concerns will be focused on
<input type="checkbox"/>	Explain why concerns supported by data will not be focused on	
	<input type="checkbox"/> Not Applicable	
<i>Comments:</i>		

**IDENTIFY PROBLEMS AND CAUSES**

17. Problems that reflect the concerns on which the group has chosen to focus.

In a figure include:

<input type="checkbox"/> Title	<input type="checkbox"/> Number
<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible
<input type="checkbox"/> The concerns	<input type="checkbox"/> Problems related to the concerns

*Comments:*

18. The potential cause(s) for each identified problem.

In a figure include:

<input type="checkbox"/> Title	<input type="checkbox"/> Number
<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible
<input type="checkbox"/> The problems	<input type="checkbox"/> Potential causes. Causes must be a specific pollutant parameter, but secondary causes may also be identified.

*Comments:*

**IDENTIFY SOURCES AND CALCULATE LOADS**

19. Potential sources for each pollution problem.

In a figure include:

<input type="checkbox"/> Title	<input type="checkbox"/> Number
<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible
<input type="checkbox"/> Sources paired with:	
<input type="checkbox"/> Appropriate environmental problems <input type="checkbox"/> Causes <input type="checkbox"/> Subwatersheds	
<input type="checkbox"/> Provide enough information to explain the magnitude of the source	

*Comments:*

20. Current loads for each pollutant identified as a problem's cause.

In a figure include:

<input type="checkbox"/> Title	<input type="checkbox"/> Number
<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible
<input type="checkbox"/> All current loads for pollutants identified as a problem's cause	

*Comments:*

21. The load reduction needed to achieve the target pollutant load.

In a figure include:

<input type="checkbox"/> Title	<input type="checkbox"/> Number
<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible
<input type="checkbox"/> The current loads	<input type="checkbox"/> The target loads
<input type="checkbox"/> The reductions needed to meet the target load	

*Comments:*

**SET GOALS AND IDENTIFY CRITICAL AREAS**

22. Water quality improvement or protection goal statements based on the calculated loads. Social and/or administrative goal statements may also be developed.

Goal statements include:

<input type="checkbox"/> Problem or pollutant	<input type="checkbox"/> Current pollutant load or level for water quality goal statements or current condition of the problem for social/administrative goal statements
<input type="checkbox"/> Target pollutant load, level, or condition of the problem	<input type="checkbox"/> Timeframe for goal completeness

If water quality standards exist for a pollutant, the goal, at a minimum, must be to meet that standard  
 Not applicable

If a NPS TMDL has been developed for the watershed, the goal, at a minimum, must be designed to achieve the reduction in pollutant load called for in the NPS TMDL  
 Not applicable

*Comments:*

23. An indicator that can be measured for each goal in order to determine whether progress is being made toward achieving that goal.

Water quality restoration goal indicators show environmental changes in the aquatic ecosystem or water chemistry

Non-water quality restoration goal indicators show administrative success or social change  
 Not applicable

*Comments:*

24. Critical areas where implementation will be needed within the watershed project area.

Identify critical areas

Describe the specific water quality pollutant(s) and source(s) in each critical area

Critical areas conform to the definition in the Checklist Instructions

Map(s) of project area or subwatersheds showing:

<input type="checkbox"/> Labeled Streams <input type="checkbox"/> Not applicable	<input type="checkbox"/> Labeled Population centers <input type="checkbox"/> Not applicable
<input type="checkbox"/> Labeled Major roads <input type="checkbox"/> Not applicable	<input type="checkbox"/> Title
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<input type="checkbox"/> Not smaller than 40 square inches	<input type="checkbox"/> Legend
<input type="checkbox"/> Scale	<input type="checkbox"/> North arrow
<input type="checkbox"/> All critical areas	

*Comments:*

**CHOOSE MEASURES /BMPs TO APPLY**

25. A description of best management practices (BMPs) or measures that would be appropriate to address the goals.

In a figure include:

<input type="checkbox"/> Title	<input type="checkbox"/> Number
<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible
<input type="checkbox"/> BMPs and measures appropriate for each critical area	<input type="checkbox"/> Identify why that area was designated critical

*Comments:*

26. The load reduction expected for each BMP.

Calculate load reductions for applicable BMPs and include in element 25's figure.  
*Comments:*

**ACTION REGISTER & SCHEDULE**

27. A series of objectives scheduled to achieve each goal.  
 Identify objectives designed to achieve the goals determined in element 22  
 The objectives should incorporate the BMPs or measures listed in element 25  
 Identify audiences for each objective  
*Comments:*

28. Interim measurable milestones for determining whether each objective is being implemented according to the schedule.  
 Milestones for early stages of implementation  
 Milestones for later stages of implementation  
*Comments:*

29. An estimate of financial cost (in dollar amount) for each objective.  
 List financial estimates for BMPs and outreach activities, salary, promotional costs, technical costs, travel, training, etc.  
*Comments:*

30.  Determine possible partners to implement each objective.  
*Comments:*

31. Technical assistance needed to implement the plan.  
 Explain the technical assistance needed and who will provide it.  
*Comments:*

Information from elements 27-31 are in a Action Register:

<input type="checkbox"/> Title	<input type="checkbox"/> Number
<input type="checkbox"/> Title and Number in Table of Contents	<input type="checkbox"/> Figure is legible

*Comments:*

**TRACKING EFFECTIVENESS**

32. A strategy to track each goal's indicators and evaluate the effectiveness of the implementation efforts over time.  
 Method that tracks water quality indicators through monitoring, modeling load reductions, or other method documenting environmental change. Social and administrative indicators are tracked through databases, surveys, marketing tools, or other methods.  
 Explain:

<input type="checkbox"/> How indicators are tracked	<input type="checkbox"/> The cost
<input type="checkbox"/> Tracking schedule	<input type="checkbox"/> Possible partners
<input type="checkbox"/> Technical assistance needed to track indicators	

*Comments:*

33. A description of future WMP activity.  
 Criteria for when WMP will be revised  
 Project contact information  
 Describe:  
 When the WMP will be re-evaluated  
 Who will be responsible for the re-evaluating and revisions  
*Comments:*

# Appendix F

## IDEM-Approved 9-Element Watershed Management Plans

No.	Name	HUC(s)
1.	Bacon Prairie WMP	05120201080060
2.	Baugo Creek WMP	04050001230010- 040
3.	Beanblossom Creek WMP	05120202010
4.	Big Creek WMP	05120113110
5.	Big Walnut WMP	05120203010-050
6.	Brandywine Creek WMP	0512020403
7.	Buck Creek WMP	05120201080040
8.	Busseron Creek WMP	0512011115
9.	Cedar Creek WMP	04100003080-090
10.	Central Muscatatuck WMP	0512020701, 0512020706
11.	Clifty Creek WMP	0512020601
12.	Coffee Creek WMP*	04040001060030*
13.	Conns Creek WMP	05120205040
14.	Cool Creek WMP	05120201090030
15.	Cordry-Sweetwater WMP	05120204100020, 05120208050010
16.	Daviess Co Prairie Creek WMP	05120202080
17.	Duck Creek WMP	05120201060
18.	Dunes Creek WMP*	04040001080020*
19.	Eagle Creek WMP w/Revision	05120201120
20.	Eel River- Tick Creek WMP	05120104070060
21.	Elkhart River WMP	04050001170-210
22.	Elkhart River-Yellow Creek (lower) WMP	04050001190020, -030, -040, -070; 04050001200100; 04050001210030, -040, - 050, -060; 04050001230040
23.	Five Lakes WMP	04050001170010-030
24.	Flat Lake WMP	07120001060070
25.	Flatrock-Haw Creek WMP	0512020506
26.	Galena River WMP	0404000110*
27.	Garrison Creek WMP	05080003040100
28.	Geist Reservoir Upper Fall Creek WMP	0512020108
29.	Highland-Pigeon WMP	05140202010020, -030; 05140202020, -030, -040, -070; 05140202050010; 05140202100040
30.	Hobart Deep River-Turkey Creek WMP*	04040001030*
31.	Hogan Creek WMP	05090203040
32.	Indian Creek (Harrison Co) WMP	05140104080-100
33.	Indian Creek WMP (Historic Hoosier Hills)	05090203200
34.	Indian Creek WMP (Johnson County)	05120201170
35.	Kessinger Ditch WMP	05120202090040-060
36.	Lake Maxinkuckee WMP	05120106060010

No.	Name	HUC(s)
37.	Lick Creek WMP	05080003040020
38.	Lilly Little Duck WMP	05120201050060; 05120201060020
39.	Limberlost-Loblolly WMP	05120101050010-060
40.	Little Blue River WMP	05120204030
41.	Little Calumet WMP*	04040001040020*, -030*; 07120003030050
42.	Little Cicero WMP	05120201080080, -090
43.	Little Deer Creek Headwaters WMP	05120105050040
44.	Little Elkhart River WMP	04050001140010-030
45.	Little Elkhart Addendum	04050001140040-070
46.	Little Sugar Creek WMP	05120110040020-030
47.	Little Vermillion WMP	05120108140040-060
48.	Lower Eel	05120203080-090
49.	Lower Fall Creek WMP	05120201110
50.	Lower Patoka WMP	05120209070-080
51.	Lower St. Joseph – Bear Creek WMP	04100003070; 04100003100
52.	Lower White Lick Creek WMP	05120201150130, -060, -070, -080
53.	Middle Eel River WMP	0512010405-06
54.	Middle Fork Whitewater WMP	05080003070030-040
55.	Middle Patoka River WMP	0512020902-06
56.	Middle St. Joseph River WMP	0410000305
57.	Morse Reservoir Cicero Creek	0512020106
58.	Mud Creek	05120204100020
59.	Owen Co WMP	05120202020010-030
60.	Patoka Lake SWPP	05120209010
61.	Pigeon Creek WMP	04050001110020-080
62.	Pitcher Lake WMP	05120113120010
63.	Pleasant Run WMP	051202011205
64.	Puterbaugh Cr –Heaton Lake WMP	040500012003
65.	Region of the Great Bend of the Wabash River WMP	0512010801; 0512010802; 0512010805
66.	S Fork Wildcat Blinn Ditch WMP	05120107040040; 05120107040090
67.	Salt Creek WMP*	04040001050*
68.	Sand Creek WMP	05120206030
69.	Silver Creek WMP	0514010108
70.	South Fork Wildcat Creek WMP	051201070301-11,
71.	South Laughery WMP	05090203070-080
72.	St. Joseph River (OH) WMP	04100003
73.	St. Joseph River (MI) WMP	04050001
74.	St. Marys River WMP	04100004 (IN only)
75.	Stony Creek WMP	05120201070040-070
76.	Sugar Creek WMP	05120204060
77.	Swanfeld Ditch WMP	05120201050080
78.	Tanners Creek WMP	05090203030
79.	Trail Creek WMP*	040400010103-05*

No.	Name	HUC(s)
80.	Turtle Creek WMP	0512011150020, -030
81.	Upper Patoka River WMP	05120209020
82.	Upper Tippecanoe WMP	05120106010
83.	Upper Wabash WMP	Indiana portions of 05120101010, 05120101040, 05120101050, 0512011060
84.	Upper White River WMP	051202010303, 051202010305, 051202010110, 051202010111
85.	White R – Lambs Creek WMP	05120201160
86.	Mud Creek Headwaters WMP	05120107010030
87.	Pete’s Run WMP	05120107020070
88.	Turkey Askren Round Prairie WMP	05120107010060
89.	West Fork Whitewater River WMP	0508000301-03
90.	Wildcat Kilmore Creek Stump Ditch WMP	05120107040070
91.	Wildcat Creek Lauramie Creek WMP	05120107040120
92.	Wildcat Creek Little Wildcat Creek WMP	05120107020020
93.	Wildcat Creek Spring Creek – Lick Run WMP	05120107040100
94.	Wildcat Creek Stahl Ditch – Kitty Run WMP	05120107020010; 05120107010100
95.	Wildcat Jerome East WMP	05120107010080
96.	Yellowwood Lake WMP	05120108050060
97.	Youngs Creek WMP	05120204090

\*Coastal Zone WMPs

Note that only WMPs that meet U.S. EPA’ 9 Elements and are eligible to receive Section 319 implementation funding are included in the list above.

# Appendix G

Indiana Attorney General Opinion of IDEM's Authority to Control and Prevent NPS



STATE OF INDIANA  
**OFFICE OF THE ATTORNEY GENERAL**

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**GREG ZOELLER**  
INDIANA ATTORNEY GENERAL

January 9, 2013

Mike Molnar  
Program Manager  
Lake Michigan Coastal Program  
Indiana Department of Natural Resources  
402 West Washington Street, Room W267  
Indianapolis, IN 46204

**RE: Authority to prevent and control nonpoint source pollution; *Advisory Letter #12-35***

Dear Mr. Molnar:

The Department of Natural Resources (DNR) requested an opinion from our office regarding whether the Indiana Department of Environmental Management (IDEM) has authority under applicable statutes and rules to prevent and control nonpoint source pollution within Indiana. We understand that such an opinion is necessary for joint approval of the state's nonpoint pollution control program by the National Oceanic and Atmospheric Administration and the U.S. Environmental Protection Agency pursuant to Section 6217 of the Federal Coastal Zone Act Reauthorization Amendments of 1990, 16 U.S.C. 1455, P.L. 101-508.

## BRIEF ANSWER

In response to DNR's request we can provide the following opinion confirming that IDEM has the relevant authority in this regard based on permitting laws and related authority to require adequate control of resource management measures.

## ANALYSIS

IDEM is the agency within the State of Indiana designated to implement both the Clean Water Act and the Safe Drinking Water Act. As such, IDEM has been granted broad general authority to secure the benefits of these federal Acts and secure compliance therewith. Additionally, a number of state statutes provide IDEM with broad regulatory authority over pollution control and abatement.

IC 13-18-3-1 requires the Water Pollution Control Board (WPCB) <sup>1</sup> to adopt rules for the control and prevention of pollution to Indiana's waters. Additionally, IC 13-18-3-11 provides that all water pollution control laws shall be liberally construed to effectuate the purposes of those laws. For instance, IC 13-18-4-5 states that "a person may not throw, run, drain, or otherwise dispose; or cause, permit, or suffer to be thrown, run, drained, allowed to seep, or otherwise disposed; into any of the streams or waters of Indiana any organic or inorganic matter that causes or contributes to a polluted condition of any of the streams or waters of Indiana..." Therefore, this Act protects waters of the state from pollution irrespective of the specific activity from which the pollution is generated.

IC 13-15-1-2 Provides that the WPCB shall establish requirements for the issuance of permits to control water pollution. The rules may include appropriate management measures to prevent or abate water pollution as necessary. Furthermore, IDEM may issue administrative orders to cease a violation and to abate the condition of pollution. IC 13-18-4-6. Such orders would, among other things, require that the "alleged violator take specific action to correct the violation." IC 13-30-3-4(2) (B)(i). Additionally, IDEM may obtain court orders for injunctive relief pursuant to IC 13-30-4-1(b)(2) and/or IC 4-21.5-6-6(1). The remedy request for action could include management measures such as those suggested in the Section 6217(g) guidance. Furthermore, while the majority of the water programs in Indiana are permit-related, IDEM has the authority to control and prevent nonpoint source pollution in the absence of a permit as well and require implementation of the Section 6217(g) measures, as necessary, including those for agriculture, urban development, roads, highways and bridges, hydromodification, and wetlands and riparian areas.

IDEM is not required to wait for a nonpoint source violation to occur before taking action. Pursuant to IC 13-18-4-6, IDEM may issue administrative orders against a person who "is violating or is about to violate" the rules provided under the WPCA. Additionally, IDEM may take "appropriate steps to prevent any pollution that is determined to be unreasonable and against public interests in view of the condition in any stream or other waters of Indiana." IC 13-18-4-4. Therefore, IDEM has specific statutory authority to proactively prevent nonpoint source pollution from occurring. Any person violating the above provisions is subject to civil penalties. IC 13-30-4-1.

IDEM has promulgated water quality standards that also apply to nonpoint sources of pollution. The WPCB has specific authority to establish rules to determine what qualities and properties of water indicate a polluted condition of the water in any of the streams or waters of Indiana. IC 13-18-4-1. The minimum surface water quality standards (MSWQS) specify minimum conditions for waters within the Great Lakes system. Pursuant to 327 IAC 2-1.5-8 "All surface waters at all times and all places...shall meet the minimum conditions of being free from substances, materials, floating debris, oil, or scum attributable to municipal, industrial, agricultural, and other land use practices..." A person violating these standards is subject to an administrative order requiring the person to cease the violation and abate the condition of pollution, as well court orders for injunctive relief. IC 13-18-4-6, 13-40-4-1(b)(2), 4-21.5-6-6(1). The remedy request for action could include the implementation of management measures such as those suggested in the Section 6217(g) guidance.

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<sup>1</sup>Pursuant to House Enrolled Act 1002-2012 (Public Law 133-2012), the WPCB was abolished effective January 1, 2013 and replaced by the Environmental Rules Board. The new board will have essentially the same powers and duties as those outlined in this opinion, and the legislative change will not affect IDEM's ability to prevent and control nonpoint source pollution.

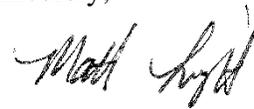
Finally, if the controls available to IDEM at present are not sufficient to address nonpoint source pollution, the WPCB has ample authority to craft additional regulations as necessary. The Board is given broad authority to "adopt rules for the control and prevention of pollution in waters of Indiana with any substance that is deleterious to the public health ...or by which any fish life or any beneficial animal or vegetable life may be destroyed; or the growth or propagation of fish life or beneficial animal or vegetable life is prevented for injuriously affected." IC 13-18-3-1. Additionally, the Board may adopt rules restricting the polluting context of any waste material and polluting substances discharged or sought to be discharged into any of the streams or waters of Indiana. IC 13-18-4-3.

### CONCLUSION

All of these general authorities, which taken together with the regulations promulgated by the Water Pollution Control Board provide IDEM with the authority to prevent and control non-point source pollution within Indiana and require implementation of the 6217(g) management measures, as necessary, including those for agriculture, urban development, roads, highways and bridges, hydromodification, and wetlands and riparian areas.

Please let me know if you need anything further in this regard.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Light".

Matt Light  
Chief Counsel  
Advisory & ADR Services

Division cc: Nancy King, IDEM Office of Legal Counsel

# Appendix H

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## Stakeholder Survey

### Stakeholder Input Questionnaire for Indiana Nonpoint Source Management Program Plan (Program)

Thank you for taking the time to fill out our questionnaire. Please answer to the best of your abilities the questions below:

- 1) A SWOT Analysis is a method used to evaluate the **Strengths, Weaknesses/Limitations, Opportunities, and Threats** involved in a project. Please provide your perspectives on the following:
  - a) **Strengths:** *internal* characteristics of the Program that give it an advantage over others
  - b) **Weaknesses:** *internal* characteristics that place the Program at a disadvantage relative to others
  - c) **Opportunities:** *external* chances to improve performance of the Program
  - d) **Threats:** *external* elements in the environment that could cause trouble for the Program
- 2) What broad goals do you think should be incorporated into the Program?
- 3) What specific objectives do you think should be incorporated into the Program?
- 4) In your opinion, what is the best strategy to reduce NPS pollution?
- 5) What role do you see your organization as having in the future NPS pollution control activities?

# Appendix I

Stakeholders targeted to receive questionnaire

<b>Organization</b>	<b>Contact</b>
Alliance of Indiana Rural Water	Toby Days
DNR - Coastal Program	Mike Molnar
DNR - Contaminants	Doug Keller
DNR - Forestry	Duane McCoy
DNR - LARE	Greg Biberdorf
DNR - Parks & Reservoirs	Dan Bortner
DNR - Reclamation	Steve Herbert
DNR - Water	Dave Nance
Ducks Unlimited	Dave Neal
Ducks Unlimited	Jim Frantz
Ducks Unlimited	Joe Borders
Farm Bureau	Justin Schneider
Friends of the St. Joe	Leah Cooper
Farm Service Agency	Michelle Howell
Grand Cal AOC	Ashley Snyder
Greater Wabash RC&D	Rhonda Hicks
Historic Hoosier Hills RC&D	Terry Stephenson
Hoosier Environmental Council	Jesse Kharbanda
Hoosier Environmental Council	Kim Ferraro
Hoosier Heartland RC&D	Liz Rice
Indiana Association of Cities and Towns	Matt Greller
Indiana Association of Soil and Water Conservation Districts	Jennifer Boyle Warner
IDEM - 401	Jason Randolph
IDEM - Ag	Steve Howell
IDEM - Air Programs	Brian Wolff
IDEM - Brownfields	Kevin Davis
IDEM - Confined Feeding	Travis Goodwin
IDEM - Combined Sewer Overflow	Dave Tennis
IDEM - Ground water	Jim Sullivan
IDEM - Hoosier Riverwatch	Lisa Ritter-McMahan
IDEM - MS4	Reggie Korthals
IDEM - OLQ Municipal Solid Waste	Jeff Harmon
IDEM - Office of Pollution Prevention and Technical Assistance	Jessica Faust-Hamblin

<b>Organization</b>	<b>Contact</b>
IDEM - Solid Waste	Randy Jones
IDEM - WAP Branch	37 members
Indiana Environmental Health Association	Josh Williams
Indiana Geological Survey	Shawn Naylor
Indiana Lakes Management Society	Sara Peel
Indiana Association of Floodplain and Storm water Managers	Daryl Helfert
Indiana Agriculture Resource Council	Amy Cornell
Indiana Chapter of American Planning Assoc	Shane Burkhardt
Indiana Conservation Alliance	Angela Hughes
Indiana Land Use Consortium	Jaime Palmer
Indiana Smallmouth Alliance	Web entry
Indiana Wildlife Federation	Barb Simpson
Indiana Department of Transportation	Nathan Saxe
Indiana Department of Transportation	Ronnie Boehm
Indiana State Department of Agriculture	Deb Fairhurst
Indiana State Department of Agriculture	Logan Garner
Indiana State Department of Health	Mike Mettler
Indiana University-Purdue University Indianapolis	Bob Barr
Indiana University-Bloomington	Melissa Clark
Indiana Water Environment Association	Scott Grimes
Indiana Watershed Leadership Academy	Laura Esman
Indiana Water Resources Association	Phil Bonneau
Jeri Ziliack/Jim Droege	Southwest IN Brine Coalition
Kankakee River Basin Commission	Jody Melton
Lagrange County Lakes Council	Leslie Raymer
Lincoln Hills RC&D	Betsy Wilkinson
Little Calumet River Basin Commission	Dan Repay
Manchester College	Jerry Sweeten
Marshall County Lakes & Water Council	John Ulrich
Maumee River Basin Commission	Rod Renkenberger
Middle Eel River Watershed Initiative	Terri Michaelis
MS4 - Community	Eric Henion
National Park Service	Charlie Morris
Northwest Territory RC&D	Andy Vasquez
Natural Resources Conservation Service	Chris Ritz
Natural Resources Conservation Service	Jill Reinhart
Natural Resources Conservation Service	Roger Kult
Office of the Indiana State Chemist	Dave Scott

<b>Organization</b>	<b>Contact</b>
ORSANCO	Greg Youngstrom
Patoka Lake Regional Water & Sewer Dist	Bruce Heeke
Pheasants Forever	Brian Nentrup
Purdue	Jane Frankenberger
Purdue	Jim Mintert
Purdue Extension	Scott Gabbard
Rural Community Assistance Program	Vicki Perry
Save the Dunes	Jennifer Birchfield
Sierra Club	Bowden Quinn
State Revolving Loan Fund	Emma Kottlowski
State Soil Conservation Board	Larry Clemens
St. Joseph River Basin Commission	Karen Mackowiak
St. Joseph River Watershed Initiative	Greg Lake
Steuben County Lakes Council	Bill Schmidt
Steuben County Lakes Council	Jim Aikman
Surveyors	Chris Knochel
Soil and Water Conservation Society	Becky Ross
Sycamore Trails RC&D	Mike Wilkinson
Taylor University	Mike Guebert
The Nature Conservancy	Kent Wamsley
The Nature Conservancy	Larry Clemens
Trout Unlimited Central Indiana	Web entry
Trout Unlimited Northern	Mike Beachy
Upper Wabash River Basin Commission	Stacia Henderson
U.S. Army Corps of Engineers	Roger Setters
U.S. Fish and Wildlife Service	Scott Pruitt
U.S. Geological Survey	Bill Guertal
Upper White River Watershed Alliance	Jill Hoffmann
West Central Indiana Watershed Alliance	Lisa Holscher
White River RC&D	Whitney Sauerheber
Wildcat Guardians	Sarah Brichford
Western Lake Erie Basin	Carrie Volmer-Sanders
Wood-Land-Lakes RC&D	Lisa Ledgerwood
Wabash River Enhancement Corp.	Stanton Lambert

# Appendix J

319 FOTG BMPs List

## Section 319 Grant Program Eligible NRCS Field Office Technical Guide Practices

Practice Name	Key Requirements
Access Control	1. Livestock exclusion only from stream, wetland or woodland. 2. Area protected must have a minimum of 30 ft distance to water in the case of streams, measured from barrier to water's edge.
Access Road	1. Must be used as approach to stream crossing (578). Distance determined on a case-by-case basis. 2. One way traffic only.
Agrichemical Handling Facility	
Animal Mortality Facility	
Animal Trails and Walkways	
Composting Facility	
Comprehensive Nutrient Management Plan	1. Must follow EQIP Conservation Activity Plan (Practice Code 102). 2. For CNMP development, the NRCS CNMP Review Checklist must be completed and signed by the landowner, a Certified CNMP Developer, and an Approved NRCS CNMP Reviewer, if appropriate.
Conservation Cover	
Constructed Wetland	
Contour Buffer Strip	
Contour Farming	
Cover Crop	1. The cover crop cannot be mechanically harvested for grain, seed or forage. This includes dry hay, straw, baleage, silage, haylage, green chop, etc. 2. Grazing of cover crops is allowed if used to address an existing resource concern caused by existing livestock, and the cover crops will be grazed according to a grazing plan. 3. Funds may be used to establish the cover crop only (does not include removal). 4. This practice is required to be maintained for one season. A farmer is eligible to receive cost-share on a field a maximum of 3 times.
Critical Area Planting	

Denitrifying Bioreactor	
Diversion	
Drainage Water Management	
Fence	1. Only eligible if used to exclude livestock under (472) Access Control or for pasture management that meets (528) Prescribed Grazing standard. 2. Temporary fence is not eligible under this practice.
Field Border	
Filter Strip	
Forage and Biomass Planting	
Grade Stabilization Structure	This practice may not be used in a water of the State unless appropriate permits have been obtained.
Grassed Waterway	
Heavy Use Area Protection	
Integrated Pest Management	1. For pest management plan development, the NRCS Pest Management Plan Checklist must be completed and signed by the producer/operator and a Certified Pest Management Specialist. 2. For PMP implementation, the item that was completed in the PMP that produced an outcome must be listed on the cost-share form.
Irrigation Water Management	1. Eligible only for existing irrigation systems. Participant must have irrigated 2 of the past 5 years. 2. A Uniformity Test and flow monitoring is required. 3. Cost-share is for detailed record keeping and data collection, and irrigating according to an approved irrigation scheduling program (such as Purdue's Michiana Irrigation Scheduler or equivalent). 4. Management must decrease nonpoint source pollution of surface or ground water resources.
Land Reconstruction, Abandoned Mine Land	
Lined Waterway or Outlet	1. Must be applied as part of a resource management system. 2. This practice may not be used in a water of the State unless appropriate permits have been obtained.
Mulching	Only eligible to support another practice for the purpose of establishment of permanent vegetative cover.

Nutrient Management	1. For nutrient management plan development, the Nutrient Management Plan Checklist must be completed and signed by the producer/operator and a Certified Nutrient Management Specialist. 2. For NMP implementation, the item that was completed in the NMP that produced an outcome must be listed on the cost-share form.
Open Channel	1. 2-stage ditch only. 2. Eligible for existing constructed channels with > 1 square mile drainage area. 3. Site evaluation by person with adequate engineering approval is required prior to implementation.
Pipeline	Must be in conjunction with exclusion fencing (382), watering facility (614), or prescribed grazing (528).
Pond	1. Eligible only for livestock watering. Livestock must be excluded from accessing the pond. 2. Must be sized for the grazing need or the minimum to meet standards.
Prescribed Burning	1. The Prescribed Burn Plan must be reviewed and signed by the Burn Boss and a Fire Manager who are familiar with the fuel type being used. 2. Must obtain a Variance from the IDEM Office of Air Quality. 3. Must be implemented to prepare site for an additional approved vegetative BMP.
Prescribed Grazing	Must follow the "Additional Criteria to Improve or Maintain Surface and/or Subsurface Water Quality and Quantity" in the standard.
Pumping Plant for Water Control	Eligible only for livestock watering.
Residue and Tillage Management, Mulch Till	1. This practice must either be used as a transition from conventional tillage to the Residue and Tillage Management, No Till/Strip Till (329); or Mulch-Till must meet the "modified No-Till" criteria; or applicant must prove that the current system's soil loss is above "T" and this practice will take it below "T". 2. Applicant must have mulch-tilled/modified no-tilled and/or no-tilled for no more than 5 consecutive years in order to be eligible. 3. Must develop nutrient management (590) and pest management (595) plans that are specific for a mulch-till system, and have any component critical to the success of the system implemented the fall prior to the implementation of mulch-till.
Residue and Tillage Management, No Till/Strip Till	1. Applicant must have no-tilled for no more than 5 consecutive years in order to be eligible. 2. Must develop nutrient management (590) and pest management (595) plans that are specific for a no-till system, and have any component critical to the success of the system implemented the fall prior to the implementation of no-till.
Riparian Forest Buffer	
Riparian Herbaceous Cover	

Roof Run-off Structure	1. Must limit storm water run-off, thus reducing soil erosion and increasing the infiltration rate. 2.This practice includes cisterns and rain barrels.
Spring Development	Must be in conjunction with exclusion fencing (382) or prescribed grazing (528).
Storm water Run-off Control	May not be used to implement practices for the purpose of meeting any State Rule or National Pollutant Discharge Elimination System (NPDES) Storm Water Program requirements. These requirements most often apply to Rule 5 (327 IAC 15-5) and Rule 13 (327 IAC 15-13), which is also known as the Municipal Separate Storm Sewer System (MS4) rule.
Stream bank and Shoreline Protection	Bioengineering and/or vegetative establishment only.
Stream Crossing	1. May only be used in conjunction with exclusion fencing (382) to limit livestock access to water of the State, or for equipment crossing in conjunction with Access Road (560). 2. For livestock access, the practice must be sited and constructed in a manner to deter loafing time in the stream.
Stream Habitat Improvement and Management	This BMP is considered a secondary practice.*
Strip Cropping	Crop strips will be no wider than 360 feet.
Structure for Water Control	Only as needed for a drainage water management system (554).
Subsurface Drain	Must be used in conjunction with a Grassed Waterway (412), Diversion (362), Drainage Water Management System (554), WASC0B (638), or other approved BMP in which subsurface drainage is necessary.
Terrace	
Tree and Shrub Establishment	Must be used for long-term erosion control and improvement of water quality.
Underground Outlet	Must be used in conjunction with a Terrace (600), Grassed Waterway (412), Diversion (362), Drainage Water Management System (554), WASC0B (638), or other approved BMP in which subsurface drainage is necessary.
Vegetated Treatment Area	This BMP is considered a secondary practice.*
Waste Facility Cover (Roofs and Covers)	

Waste Storage Facility	1. Must be above and beyond permit requirements. 2. If waste facility is on a property that does not contain animals there must be a contract in place to receive manure for at least 10 years. 3. A CNMP must be written, delivered and certified prior to the start of the waste storage facility.
Waste Utilization	1. 319 funds may only be used for technology (including equipment modifications) that reduces or eliminates surface application of manure or that increases application efficiency such as no-till manure injection, variable rate controllers, and Geographic Positioning Systems. 2. Must be above and beyond permit requirements. 3. Soil test must have been completed within the last 4 years to be valid. The minimum number of acres necessary for manure application shall be based on the IDEM "Manure Application Land Requirements." 4. Only fields with a soil test phosphorus level of <50 ppm (100 lbs) per acre will be eligible. 5. Manure must be applied in accordance with a Waste Utilization Plan, Nutrient Management Plan, or CNMP for the field. 6. Does not include any aspect of transport or hauling of waste.
Water and Sediment Control Basin	1. Nutrient Management (590) and Integrated Pest Management (595) must already be implemented or implementation started within the year the structure is being built. 2. Fields within the watershed of the structure must be managed to "T", or practices must be installed in the year the structure is built that brings the soil loss to "T". 3. All of these requirements apply within the entire drainage area of the WASCObS, whether on the applicant's land or adjacent land.
Water Well	Only for livestock watering.
Watering Facility	1. Must be used in conjunction with exclusion fencing (382) and/or prescribed grazing (528). 2. Reimbursed only for livestock watering.
Wetland Creation	
Wetland Enhancement	
Wetland Restoration	

# Appendix K

## Core and Supplemental Environmental Indicators Lists

*Table 1.2: Core and Supplemental Parameters for the IDEM Nonpoint Source Program*

<b>Core parameters for monitoring in the IDEM Nonpoint Source Program</b>	<b>Supplemental parameters, also included in the manual</b>
1. Nitrate 2. Total phosphorus  A sediment measure: 3. Total Suspended Solids, or 4. Turbidity/Transparency  A habitat measure: 5. Qualitative Habitat Evaluation Index 6. Citizens Qualitative Habitat Evaluation Index  7. Dissolved oxygen 8. pH 9. Stream flow 10. Water Temperature 11. E. coli	1. Total Nitrogen 2. Ammonia 3. Total Kjeldahl Nitrogen 4. Orthophosphate 5. Biochemical Oxygen Demand 6. Conductivity 7. Suspended Sediment Concentration 8. Bank Erosion Hazard Index 9. Buffer Zone Width 10. Richards-Baker Flashiness Index 11. Indiana Index of Biotic Integrity for Fish Communities 12. Macroinvertebrate Indices of Biotic Integrity 13. Chlorophyll A 14. Carlson’s Trophic State Index 15. Indiana Trophic State Index 16. Hoosier Riverwatch Water Quality Index

*Table 24. Core and Supplemental Parameters from the Water in Indiana: Choices for Nonpoint Source and Other Watershed Projects. (Water Monitoring Handbook; Frankenberger and Esman 2012).*

# Appendix L

## Status Table of CZARA Section 6217 Conditions

### Agricultural Sources

	Management Measures	Status	Comments	What this means for 319
A	Erosion and Sediment Control (on cropland)	Not Complete	Programmatic elements in place.  Demonstrate how these programs tie into the requirements of specific 6217(g) agriculture management measures.	Describe how State plans to Monitor and track program implementation. Demonstrate link between enforcing and implementing agencies.
B	Confined Animal Facility	Not Complete	Programmatic elements in place.	Describe how State plans to Monitor and track program implementation. Demonstrate link between enforcing and implementing agencies.
C	Nutrient Management	Not Complete	Programmatic elements in place.  Demonstrate how these programs tie into the requirements of specific 6217(g) agriculture management measures.	Describe how State plans to Monitor and track program implementation. Demonstrate link between enforcing and implementing agencies.
D	Pesticide Management	Not Complete	Programmatic elements in place.  Demonstrate how these programs tie into the requirements of specific 6217(g) agriculture management measures.	Describe how State plans to Monitor and track program implementation. Demonstrate link between enforcing and implementing agencies.
E	Livestock Grazing	Not Complete	Programmatic elements in place.  Demonstrate how these programs tie into the requirements of specific 6217(g) agriculture management measures.	Describe how State plans to Monitor and track program implementation. Demonstrate link between enforcing and implementing agencies.
F	Irrigation	Exempt	N/A	N/A

### Forestry – exempt

## Urban Areas

	Management Measures	Status	Comments	What this means for 319
<b>II. Urban Run-off</b>				
A	New development	Complete	MS4	
C	Site development	Complete	MS4	
<b>III. Construction Activities</b>				
A	Construction site erosion and sediment control	Exempt		
B	Construction site chemical control	Exempt		
<b>IV. Existing Development</b>				
A	Existing Development	Not Complete	Programmatic elements in place.	Describe the link between the enforcing and implementing agencies to support the legal opinion. <u>Describe how State plans to Monitor and track program implementation.</u>
<b>V. On-site Disposal Systems</b>				
A	New on-site disposal systems	Complete		
B	Operating on-site disposal systems	Not Complete	Continue working with ISDH to promote model ordinance for OSDS inspection and operation. Continue working with the coastal OSDS work group to develop outreach and education program, research lender point of sale inspection program and SRF loan program for septic upgrade and repair. Map priority coastal septic system areas.	Continued education and coordination to address all 6217 measures with partner agencies and organizations.
<b>VI. Pollution Prevention</b>				
A	Pollution Prevention	Complete		Continued education and coordination to address all 6217 measures with partner agencies and organizations.
<b>VII. Roads, Highways, and Bridges</b>				
A	Planning, siting, and developing roads and highways	Complete		

	Management Measures	Status	Comments	What this means for 319
B	Bridges	Complete		
C	Construction projects	Complete		
D	Construction site chemical control	Complete		
E	Operation and Maintenance			N/A
F	Road, Highway, and Bridge Run-off Systems			N/A

## Marinas and Recreational Boating

	Management Measures	Status
	<b>II. Siting and Design</b>	
A	Marina Flushing	Complete
B	Water Quality Assessment	Complete
C	Habitat Assessment	Complete
D	Shoreline Stabilization	Complete
E	Storm water Run-off	Complete
F	Fueling Station	Complete
G	Sewage Facility	Complete
	<b>III. Marina and Boat Operation</b>	
A	Solid Waste	Complete
B	Fish Waste	Complete
C	Liquid Material	Complete
D	Petroleum Control	Complete
E	Boat Cleaning	Complete
F	Public Education	Complete
G	Maintenance of Sewage Facilities	Complete
H	Boat Operation	Complete

## Hydromodification

	Management Measures	Status	What this means for 319
	<b>II. Channelization and Channel Modification</b>		
A	Physical and chemical characteristics of surface waters	Not Complete	Programmatic measures met. Describe link between enforcing and implementing agencies. Describe how State plans to Monitor and track implementation of 6217 measures
B	Instream and riparian habitat	Not Complete	Programmatic measures met. Describe link between enforcing and implementing agencies. Describe how State plans to Monitor and track implementation of 6217 measures

	<b>III. Dams</b>		
A	Erosion/sediment control	Exempt	
B	Chemical and pollutant control	Exempt	
C	Protection of surface water quality and instream and riparian habitat	Not Complete	Programmatic measures met. Describe link between enforcing and implementing agencies. Describe how State plans to Monitor and track implementation of 6217 measures.
	<b>IV. Stream bank and Shoreline Erosion</b>		
A	Eroding stream banks and shorelines	Not Complete	Programmatic measures met. Describe link between enforcing and implementing agencies. Describe how State plans to Monitor and track implementation of 6217 measures.

### Wetlands, Riparian Areas, and Vegetated Treatment Systems

	Management Measures	Status	What this means for 319
A	Protection of wetlands and riparian areas	Not Complete	Additional programmatic information requested. Describe link between enforcing and implementing agencies to support legal opinion. Describe how the state plans to monitor and track the implementation of 6217 measures.
B	Restoration of wetlands and riparian areas	Not Complete	Programmatic condition not met. Describe programs state may have to promote restoration of pre-existing functions in damaged and destroyed wetlands that provide NPS abatement. Describe link between enforcing and implementing agencies to support legal opinion. Describe how the state plans to monitor and track the implementation of 6217 measures.
C	Vegetated treatment systems	Not Complete	Additional programmatic information requested. Describe link between enforcing and implementing agencies to support legal opinion. Describe how the state plans to monitor and track the implementation of 6217 measures.

### Monitoring and Tracking Techniques

	Management Measures	Status	What this means for 319
	Monitoring of measures	Not Complete	Develop a monitoring plan to assess over time the 6217 management measures in reducing pollutant loads and improving water quality

## Critical Coastal Areas, Additional Management Measures, and Technical Assistance

	<b>Management Measures</b>	<b>Status</b>	<b>What this means for 319</b>
A	Critical coastal areas	Not Complete	Provide additional information on the process for the identification and revision of critical coastal areas
B	Technical Assistance	Not Complete	Describe the types of existing technical assistance programs Indiana employs to address nonpoint source issues within the major CZARA land use categories (ag., urban, marinas, hydromod, wetlands, and riparian areas)
C	Selection of Additional Measures	Not complete	Provide additional information on what process the state will use to identify additional management measures to achieve and maintain applicable water quality standards and protect designated uses.

# Appendix M

## Pollutants and Sources Addressed by Indiana Section 319 Eligible Practices

Implementation Activities	Pollutant Treated				Source of NPS Pollution Addressed									
	Bacteria	Nutrients	Sediment	Metals	Cropland	Pastures and Livestock Operations	CFOs	Stream bank Erosion	On-site Wastewater Treatment Systems	Wildlife/Domestic Pets	Urban NPS Run-off	Forestry	Abandoned Mine Lands	Hydromodification
Access Control <sup>†</sup>	X	X	X			X		X						X
Access Road	O	O	X					X				X		
Active Acid-Mine Drainage Treatment Facilities*				X									X	
Aeration and Settling Ponds for Acid Mine Drainage*				X									X	
Agrichemical Handling facility		X			X									
Alternative Watering Systems <sup>†</sup>	X	X	X			X	X	X		X				
Animal Mortality Facility	X	X	O			X	X			X				
Animal Trails and Walkways	X	O	X			X	O	X		X				
Composting Facility	X	X	O			X	X				X			
Comprehensive Nutrient Management Plan <sup>†</sup>	X	X	O		X		X							
Conservation Cover	X	X	X		X									
Conservation Crop Rotation	X	X	X		X								X	
Conservation Easements <sup>†</sup>	X	X	X		X			X				X	X	
Conservation Tillage/Residue Management <sup>†</sup>	X	X	X		X									
Constructed Wetland	X	X	X		X					X	X			
Contour Buffer Strip	X	X	X		X									
Contour Farming	X	X	X		X									
Cover Crops	X	X	X		X									
Critical Area Planting	X	X	X			X		X			X	X	X	
Dam Modification or Removal <sup>‡</sup>			X					X			X			X
Daylighting <sup>†</sup>											X			X
Diversion	X	X	X		X							X		
Drainage Bioreactor <sup>‡</sup>		X			X									
Drainage Water Management	X	X	O		X	X								
Field Border	X	X	X		X	X							X	

Implementation Activities	Pollutant Treated				Source of NPS Pollution Addressed									
	Bacteria	Nutrients	Sediment	Metals	Cropland	Pastures and Livestock Operations	CFOs	Stream bank Erosion	On-site Wastewater Treatment Systems	Wildlife/Domestic Pets	Urban NPS Run-off	Forestry	Abandoned Mine Lands	Hydromodification
Filter Strips	X	X	X		X	X	X	X		O	O		X	
Forage and Biomass Planting <sup>‡</sup>			X			X								
Fords <sup>‡</sup>			X									X		
Forest Stand Improvement	X	X	X									X		
Grade Stabilization Structure		X	X				X							
Grading		O	X										X	
Grassed Waterways	X	X	X		X									
Green Alley <sup>‡</sup>		X	X								X			
Green Roof <sup>‡</sup>		X	X								X			
Ground water Remediation <sup>‡</sup>				X									X	
Heavy Use Area Protection	X	X	X			X	X					X		
Integrated Pest Management <sup>‡</sup>	X	X	X		X									
Irrigation Water Management <sup>‡</sup>		X	X		X									
Land Reconstruction of Mined Land	X	X	X										X	
Land Use Ordinances <sup>‡</sup>	X	X	X				X	X	X	X	X			
Levee or Dike Modification or Removal <sup>‡</sup>											X			O
Liming*													X	
Lined Waterway or Outlet		X	X		X	O	O							
Log Landings <sup>‡</sup>												X		
Manure Handling, Storage, Treatment, and Disposal <sup>†</sup>	X	X	O				X							
Mineshaft and Adit Closings*													X	
Mulching	X	X	X			X	X	X	X	X	X	X	X	
Nutrient Management Plan	X	X	O		X	O	X				X			
Outreach, Education and Training <sup>‡</sup>	X	X	X		X	X	X	X	X	X	X	X	X	X
Oxidation Wetlands*				X									X	
Passive Acid Mine Drainage Treatment Facilities*				X									X	
Pasture and Hay Planting	X	X	X			X	X							
Phytoremediation*				X									X	
Porous Pavement <sup>‡</sup>		X	X								X			

Implementation Activities	Pollutant Treated				Source of NPS Pollution Addressed									
	Bacteria	Nutrients	Sediment	Metals	Cropland	Pastures and Livestock Operations	CFOs	Stream bank Erosion	On-site Wastewater Treatment Systems	Wildlife/Domestic Pets	Urban NPS Run-off	Forestry	Abandoned Mine Lands	Hydromodification
Prescribed Grazing	X	X	X			X								
Rain Barrel <sup>‡</sup>		X	X								X			
Rain Garden <sup>‡</sup>		X	X								X			
Removal and Consolidation of Small (Mining) Waste Piles*				X									X	
Riparian Forested Buffers	X	X	X		X	X	X	X		X	X			X
Roof Run-off Structure	X	X	X			X	X				X			
Sediment Basin		X	X		X						X			X
Septic Inspection and Maintenance <sup>‡</sup>	X	X	X						X					
Septic System Replacement <sup>‡</sup>	X	X							X					
Silt Fence <sup>‡</sup>			X								X			
Soil Amendment*				X									X	
Soil Removal and Disposal*				X									X	
Spring Development	X	X	X			X								
Storm water Run-off Control <sup>‡</sup>	X	X	X				X				X			
Stream Crossing	O	O	X			X		X		X		X		
Stream Fencing (Animal Exclusion) <sup>†</sup>	X	X	X			X		X						
Stream Habitat Improvement and Management <sup>‡</sup>			X											X
Stream bank and Shoreline Protection	X	X	X		X	X		X		X	X	X		X
Stream bank Stabilization <sup>‡</sup>			X					X			X	X	X	X
Street Rain Garden <sup>‡</sup>		X	X								X			
Strip Cropping	X	X	X		X									
Sulfate-reducing Wetlands*				X									X	
Temporary Bridge/Culvert <sup>‡</sup>			X									X		
Terrace <sup>‡</sup>			X		X									
Two-stage Ditches		X	X		X			X						O
Vegetated Swale <sup>‡</sup>			X								X			
WASCOBs	X	X	X		X									
Waste Storage Facility	X	X	X				X							
Waste Treatment Lagoon	X	X	O				X							

Implementation Activities	Pollutant Treated				Source of NPS Pollution Addressed									
	Bacteria	Nutrients	Sediment	Metals	Cropland	Pastures and Livestock Operations	CFOs	Stream bank Erosion	On-site Wastewater Treatment Systems	Wildlife/Domestic Pets	Urban NPS Run-off	Forestry	Abandoned Mine Lands	Hydromodification
Waste Utilization	X	X			X		X							
Water Bars <sup>‡</sup>			X									X		
Well Decommissioning	X	X												
Wetland Creation/Enhancement/Restoration	X	X	X		X			X		X	X		X	X

\*These mining practices were not addressed by the Ohio document.

<sup>†</sup> These practice categories represent a combination or generalization of several practices in the Ohio document.

<sup>‡</sup> Practices are not in the Ohio document and BPJ has been used by IDEM-NPS program staff to assign pollutants treated and under which conditions.

Table 25. Best management practices – pollutants and sources controlled. *Adapted from Wilson, R. Analysis of Effectiveness of Ohio NRCS Practice Standards in Addressing Five Leading Causes of Water Quality Impairment, Ohio EPA.* X indicates a relatively high pollutant control effectiveness (ratio  $\geq 1.0$ ), O indicates minimal pollutant control effectiveness (ratio 0.9-0.1), blank space indicates that this pollutant or source is not targeted by, or loadings are *increased* by, use of this practice.

# Appendix N

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## Outstanding State/National Resource Waters, High Quality Waters

### Indiana Outstanding State Resource Waters as of 2/14/2012

The following listing is based upon 327 IAC 2-1-2(3), 327 IAC 2-1.5-19(b), and IC 13-18-3-2(u) [which added all exceptional use waters (listed in 327 IAC 2-1-11(b) and which are listed as items (7) thru (17) below]:

- (1) The Blue River in Washington, Crawford, and Harrison Counties, from river mile 57.0 to river mile 11.5. (HUC 0514010407, 0514010408, 0514010409)
- (2) The North Fork of Wildcat Creek in Carroll and Tippecanoe Counties, from river mile 43.11 to river mile 4.82. (HUC 0512010704)
- (3) The South Fork of Wildcat Creek in Tippecanoe County, from river mile 10.21 to river mile 0.00. (HUC 0512010703)
- (4) Cedar Creek in Allen and DeKalb counties, from river mile 13.7 to its confluence with the St. Joseph River. (HUC 0410000308)
- (5) The Indiana portion of the open waters of Lake Michigan.
- (6) All waters incorporated in the Indiana Dunes National Lakeshore.
- (7) Big Pine Creek in Warren County downstream of the State Road 55 bridge near the town of Pine Village to its confluence with the Wabash River. (HUC 0521010804)
- (8) Mud Pine Creek in Warren County from the bridge on the County Road between Brisco and Rainsville to its confluence with Big Pine Creek. (HUC 5012010803)
- (9) Fall Creek in Warren County from the old C.R. 119 bridge in the NW quarter of Section 21, Township 22N, Range 8W downstream to its confluence with Big Pine Creek. (HUC 0512010804)
- (10) Indian Creek in Montgomery County from the County Road 650 West bridge downstream to its confluence with Sugar Creek. (HUC 0512011006)
- (10) Clifty Creek in Montgomery County within the boundaries of Pine Hills Nature Preserve. (HUC 0512011006)
- (11) Bear Creek in Fountain County from the bridge on County Road 450 North to its confluence with the Wabash River. (HUC 0512010806)
- (12) Rattlesnake Creek in Fountain County from the bridge on County Road 450 North to its confluence with Bear Creek. (HUC 0512010806)

- (13) The small tributary to Bear Creek in Fountain County within the Portland Arch Nature Preserve which enters Bear Creek at the sharpest bend and has formed the small natural bridge called Portland Arch. (HUC 0512010806)
- (14) Blue River from the confluence of the West and Middle Forks of the Blue River in Washington County downstream to its confluence with the Ohio River. (HUC 0514010407, 0514010408, 0514010409)
- (15) The South Fork of Blue River in Washington County from the Horner's Chapel Road bridge downstream to its confluence with Blue River. (0514010406)
- (16) Lost River and all surface and underground tributaries upstream from the Orangeville Rise (T<sub>2</sub>N, R<sub>1</sub>W, Section 6) and the Rise of Lost River (T<sub>2</sub>N, R<sub>1</sub>W, Section 7) and the mainstem of the Lost River from the Orangeville Rise downstream to its confluence with the East Fork of White River. (HUC 0512020812, 0512020813)

# Appendix O

## Annual Milestones Tables

### Reportable Activities for 2014

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
1.1		Assist Indiana Department of Natural Resources, Lake Michigan Coastal Program to obtain full approval of all outstanding measures on the LMCP CNPC plan	2014	2018	ongoing	
1.1	a	NPS NW WSS will assist the LMCP with on-site disposal systems measures as needed/requested	2014	2018	ongoing	
1.1	b	IDEM NPS will host a coordination meeting with U.S. EPA Region V, LMCP, and IDEM NPS to discuss the "linkage" requirement of 6217	2014	2015	one-time	
1.2	a	Complete ongoing TMDLs and WMPs in the Coastal Zone: <i>East Branch Little Calumet River</i>	2012	2014	ongoing	
1.2	b	Complete ongoing TMDLs and WMPs in the Coastal Zone: <i>Deep River</i>	2013	2015	ongoing	
1.2	c	Complete ongoing TMDLs and WMPs in the Coastal Zone: <i>Salt Creek</i>	2010	2018	ongoing	
1.3	a	Restore and protect water quality in critical areas of coastal WMPs: <i>Trail Creek</i>	2013	2014	ongoing	
1.4		Support the Conservation Reserve Enhancement Program (CREP), Mississippi River Basin Initiative (MRBI), Great Lakes Restoration Initiative (GLRI), Lake and River Enhancement (LARE), Clean Water Indiana (CWI), and other Indiana Conservation Partnership (ICP) and statewide initiatives as they become available by:	2014	2018	ongoing	
1.4	a	Forwarding solicitation or information as it becomes available	2014	2018	ongoing	
1.4	b	Participating in ICP planning meetings to determine priorities for funding/initiatives that align with WMP critical areas, water quality, and/or TMDL priority areas (every other month)	2014	2018	ongoing	
1.4	c	By promoting the programs through the watershed specialists (WSS) and work with watershed groups to identify/recommend projects that would fit well under the priorities for each funding source	2014	2018	ongoing	
1.4	d	By including them in relevant TMDLs as methods for implementation	2014	2018	ongoing	
1.4	e	By funding ISDA technicians to design and implement BMPs in select watersheds (ARN 1-66)	2013	2015	ongoing	
1.5		Utilize the ICP as an advisory group for priority state NPS policies and updates by participating in bimonthly leadership meetings.	2014	2018	ongoing	
1.6		Continue to provide technical assistance to local watershed groups through the WSS or	2014	2018	ongoing	

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		project manager as documented through quarterly site visit reports and the Section 319 Annual Report.				
1.7		Utilize the TMDL-WMP template for 2014 TMDLs and beyond	2014	2018	ongoing	
1.8		Continue to partner with the IN-USDA-NRCS on the National Water Quality Initiative (NWQI) for as long as the Initiative remains a national priority.	2014	2018	ongoing	
1.8	b	Coordinate with NRCS on at least an annual basis to share in the decision-making on next steps for the Initiative (annually)	2014	2018	annually	
1.8	c	Fund Silver Creek (051201040501) implementation as a critical area of the larger Middle Eel watershed through their section 319 grant (ARN 3-4)	2012	2016	ongoing	
1.8	d	Provide implementation funding for the Middle Patoka River watershed, thereby indirectly providing outreach and education to Ell Creek (051202090405), which, though not a critical area as defined in the Middle Patoka WMP, will receive benefits from the 319 grant (ARN 3-31)	2013	2016	ongoing	
1.9		Support implementation of the State Nutrient Reduction Strategy once approved	2014	2018	ongoing	
1.9	a	Review priorities of both documents and import objectives of NPS-related importance to the state NPS management plan	2014	2014	one-time	
1.10		Dedicate an average of \$100,000 in 319 funds to the Coastal Zone (Little Calumet-Galien watershed, HUC 04040001) annually until all of the remaining conditions of the LMCP CNPCP are met.	2014	until full approval	ongoing	
1.11		Coordinate with CWSRF to link loan applicants and local watershed groups	2014	2018	ongoing	
1.11	a	IDEM NPS will cross-reference the monthly SRF project status report with active 319 projects and/or other known watershed efforts to identify watershed opportunities and meet quarterly (March, June, September, December) with CWSRF Loan Program to communicate those that may benefit from SRF funding.	2014	2018	ongoing	
1.11	b	Annually, the NPS program will notify the CWSRF and DWSRF program of the 319 projects that are approved for funding, upon notice from EPA.	2014	2018	annually	
1.11	c	Where there are potential projects, the appropriate NPS staff participates with the CWSRF staff in the community orientation or planning meeting. A fact sheet describing the potential NPS project(s) opportunity is included in the SRF packet to the community, and the NPS staff promotes the potential project(s), provides contacts for technical assistance, and provides information on other funding sources active in the watershed (such as NRCS, Clean Water Indiana, 319, 205(j) etc.)	2014	2018	ongoing	
1.13		Utilize IDEM WSS to assist partners with NPS planning and implementation activities	2014	2018	ongoing	

Goal 2: Monitor and assess Indiana waters for NPS impairments and improvements.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
2.1		Require the use of the Environmental Monitoring for Watershed Groups handbook for 319 grantees	2014	2018	annually	
2.2		Coordinate with NRCS to develop a sampling regime for NWQI projects	2014	2015	one-time	
2.3		Import 319 grantee data meeting appropriate data quality criteria into NPS-AIMS or the Hoosier Riverwatch Database to be uploaded into STORET on a routine basis.	2014	2018	ongoing	
2.4		Invite the participation of local project leaders when conducting 305(b) CWA assessments on baseline monitoring data.	2014	2018	ongoing	
2.5		Evaluate results of the monitoring program and make adaptive management decisions on an annual basis	2014	2018	annual	
2.7		Continue to fund the Clean Lakes Program (volunteer and professional) data collection for use in Clean Water Act 305(b) and 314 assessments and 303(d) listings	2014	2018	ongoing	
2.8		Direct IDEM resources to perform baseline characterization monitoring of at least one watershed annually to support TMDL and watershed planning efforts	2013	2018	annually	
2.10	a	Complete Hoosier Riverwatch QAPP template	2014	2014	one-time	
2.10	b	Provide support for 20 Hoosier Riverwatch workshops (volunteer trainings) and maintain current loaner/teaching trunks	2014	2018	annually	
2.10	c	Provide support for maintenance and upgrades of the Hoosier Riverwatch water quality monitoring database and associated websites.	2014	2018	ongoing	
2.11	a	Complete acceptance criteria for External Data Framework	2014	2014	one-time	
2.11	b	Complete the development of technical assistance materials for the EDF and web site development to support its implementation.	2014	2014	one-time	
2.11	c	Begin accepting, reviewing and ranking water quality data provided by external organizations and, if appropriate, using the data to make 305(b)/303(d) water quality assessment and listing decisions.	2014	2014	one-time	
2.12	a	Evaluate water quality data submitted through the EDF process, as well as grantee monitoring, to identify watersheds that should be surveyed for possible NPS water quality improvements.	2014	2018	annually	
2.12	b	Use additional resources (e.g., staff, funds, and technical support) to monitor water quality in watersheds where NPS restoration activities have occurred. The monitoring data will be compared to baseline information, if available, to gauge the efficacy of the work.	2014	2018	annually	
2.13		Continue the Ground water Monitoring Network (GWMN)	2013	2018	ongoing	
2.14	a	Meet with IDEM-GW staff to discuss level of analysis of ground water data occurring and needed to characterize causes, sources, and magnitude of NPS in ground water	2014	2014	one-time	
2.14	b	Gather data and develop a timeline for completing the ground water data analysis and reporting mechanism	2014	2015	ongoing	

Goal 3: Develop and conduct a strategic outreach and education program						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
3.1	a-b	Initiate meetings with partners to discuss IDEM's goal of strategic messaging for the state on septic system care: Work with partners to define the purpose of the outreach program. Work with partners to identify the target audience.	2014	2015	several meetings over the course of year	
3.1	d	Publicize septic system care/repair/replacement water-quality success stories through multiple media applications.	2014	2018	ongoing	
3.1	e	Support technical events (such as IEHA annual conference), to exchange information between government partners, watershed groups, and citizens.	2014	2018	ongoing	
3.1	f	Assist in providing outreach on septic systems in the Lake Michigan Coastal Zone	2014	2018	ongoing	
3.1	f.i	Market on-site disposal system inspections at property transfer to lending institutions in the Coastal Zone.	2014	2015	ongoing	
3.1	f.ii	Work with partners to develop and/or promote existing Septic Awareness Campaign regarding septic impacts. Items may include developing Public Service Announcements regarding the importance of proper on-site disposal system maintenance.	2014	2014	one-time	
3.1	f.iii	Promote the use of the Revolving Loan Fund for Septic upgrades and repairs.	2014	2018	annually	
3.2	a-b	Initiate meetings with partners to discuss IDEM's goal of strategic messaging for the state on hydromodification. Work with partners to define the purpose of the outreach program. Work with partners to identify the target audience.	2014	2014	several meetings over the course of year	
3.2	d	Publicize hydromodification/stream restoration success stories through multiple media applications.	2014	2018	ongoing	
3.2	e	Continue outreach to the community of County Surveyors to become involved in water quality improvement through the IWLA, the Indiana Association of County Surveyors, local watershed groups, and county contacts.	2014	2018	ongoing	
3.3	a-b	Initiate meetings with partners to discuss IDEM's goal of strategic messaging for the state on sediment and nutrient pollution. Work with partners to define the purpose of the outreach program. Work with partners to identify the target audience.	2014	2014	several meetings over the course of year	
3.3	d	Publicize success stories through multiple media applications.	2014	2018	ongoing	
3.4		At least annually review print and electronic materials for updates and republish as needed	2014	2018	annually	
3.5		Continue to provide citizen monitoring training through Hoosier Riverwatch and the	2014	2018	ongoing	

Goal 3: Develop and conduct a strategic outreach and education program						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		Clean Lakes Program				
3.6	a	Produce 5 “Success Stories” (EPA WQ-10 Strategic Measure) by 2017 and publicize widely within Indiana	2014	2017	ongoing	
3.6	b	Publicize any awards given to watershed groups related to their water quality efforts in Indiana	2014	2018	ongoing	
3.7	a	Utilize social media to provide up-to-the minute information to followers of IDEM’s social media outlets	2014	2018	ongoing	
3.7	b	Continue to participate in the Pathway to Water Quality at the Indiana State Fairgrounds	2014	2018	ongoing	
3.9	a	Continue to provide technical assistance to Purdue University’s Indiana Watershed Leadership Academy	2014	2018	ongoing	
3.9	b	Continue to support the ICP’s Training and Certification Program on watershed related issues by sitting on the Technical Research Board and the advisory team	2014	2018	ongoing	

Goal 4: Improve Indiana’s water quality, including surface and ground water, by reducing NPS pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
4.1	a	Utilize the TMDL-WMP template for TMDLs sampled for and written in 2014 and beyond so that they are implementable using 319 funds	2014	2018	ongoing	
4.1	b	Prioritize TMDLs for the next five years to give watershed groups an idea of where TMDLs will be pursued	2014	2014	one-time	
4.1	c	Link TMDLs with baseline water monitoring projects for Section 319 watershed management planning applications	2014	2018	ongoing	
4.2		Develop guidance for updating watershed management plans	2014	2016	one-time	
4.3		Promote integration of WMPs with local comprehensive plans	2014	2018	ongoing	
4.4	a	Integrate disparate NPS program databases into one centralized integrated Watershed database to assist with tracking and reporting. Develop scope of work for the integrated databases project	2014	2015	ongoing	
4.5		Use Section 319 funding to support implementation of WMPs that meet the U.S. EPA’S 9 Key Elements of a Watershed Plan (including staff support and outreach as well as the placement of BMPs in critical areas as identified in the WMPs)	2014	2018	ongoing	
4.6		Repair previously-installed BMPs with the caveats outlined in the program policy	2014	2018	ongoing	
4.7		Continue to leverage LARE and CWI funds to address erosion, sedimentation and nutrient input concerns as long as the General Assembly continues to approve appropriations.	2014	2018	ongoing	

Goal 4: Improve Indiana's water quality, including surface and ground water, by reducing NPS pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
4.8		Develop guidance for the identification of critical areas	2014	2014	one-time	
4.9		Show partial or total restoration in at least 5 12-digit watersheds (at least 5 SP12 and 5 WQ-10; watersheds identified may count for both measures) in the five-year cycle 2013-2017.	2013	2017	ongoing	
4.10	a	Investigate and adopt a standard method to estimate <i>E. coli</i> reductions	2014	2014	one-time	
4.11		Geolocate all BMPs installed through the Section 319 grant program in order to enhance the BMP GIS layer located in the NPS program	2014	2018	ongoing	
4.12		Solicit for proposals to use Section 319 funding to support implementation of WMPs that meet the U.S. EPA'S 9 Key Elements of a Watershed Plan (includes staff support as well as BMPs)	2014	2018	annually	
4.12	a	Provide financial and technical support to install agricultural BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	b	Provide financial and technical support to install urban and/or residential BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	c	Provide financial and technical support to install forestry BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	d	Provide financial and technical support to install abandoned mine BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	e	Provide financial and technical support to install hydrological and aquatic habitat BMPs in critical areas identified in the plan	2014	2018	annually	

Goal 5. Protect sensitive, vulnerable, and high quality waters of the state so that they may continue to meet their designated uses.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
5.3		Participate as requested in Phase II wellhead protection planning	2014	2018	ongoing	

**Table O1. Indiana State NPS Management Plan 2014 Action Register**

Reportable Activities for 2015

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
1.1		Assist Indiana Department of Natural Resources, Lake Michigan Coastal Program to obtain	2014	2018	ongoing	

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		full approval of all outstanding measures on the LMCP CNPC plan				
1.1	a.	NPS NW WSS will assist the LMCP with on-site disposal systems measures as needed/requested	2014	2018	ongoing	
1.1	b.	IDEM NPS will host a coordination meeting with U.S. EPA Region V, LMCP, and IDEM NPS to discuss the “linkage” requirement of 6217	2014	2015	one-time	
1.2	b.	Complete ongoing TMDLs and WMPs in the Coastal Zone: <i>Deep River</i>	2013	2015	ongoing	
1.2	c.	Complete ongoing TMDLs and WMPs in the Coastal Zone: <i>Salt Creek</i>	2010	2018	ongoing	
1.3	b.	Restore and protect water quality in critical areas of coastal WMPs: <i>Deep River</i>	2015	2017	ongoing	
1.4		Support the Conservation Reserve Enhancement Program (CREP), Mississippi River Basin Initiative (MRBI), Great Lakes Restoration Initiative (GLRI), Lake and River Enhancement (LARE), Clean Water Indiana (CWI), and other Indiana Conservation Partnership (ICP) and statewide initiatives as they become available by:	2014	2018	ongoing	
1.4	a.	Forwarding solicitation or information as it becomes available	2014	2018	ongoing	
1.4	b.	Participating in ICP planning meetings to determine priorities for funding/initiatives that align with WMP critical areas, water quality, and/or TMDL priority areas (every other month)	2014	2018	ongoing	
1.4	c.	By promoting the programs through the watershed specialists (WSS) and work with watershed groups to identify/recommend projects that would fit well under the priorities for each funding source	2014	2018	ongoing	
1.4	d.	By including them in relevant TMDLs as methods for implementation	2014	2018	ongoing	
1.4	e.	By funding ISDA technicians to design and implement BMPs in select watersheds (ARN 1-66)	2013	2015	ongoing	
1.5		Utilize the ICP as an advisory group for priority state NPS policies and updates by participating in bimonthly leadership meetings.	2014	2018	ongoing	
1.6		Continue to provide technical assistance to local watershed groups through the WSS or project manager as documented through quarterly site visit reports and the Section 319 Annual Report.	2014	2018	ongoing	
1.7		Utilize the TMDL-WMP template for 2014 TMDLs and beyond	2014	2018	ongoing	
1.8		Continue to partner with the IN-USDA-NRCS on the National Water Quality Initiative (NWQI) for as long as the Initiative remains a national priority.	2014	2018	ongoing	
1.8	a.	Begin monitoring for the NWQI	2015	2015	once (to begin)	
1.8	b.	Coordinate with NRCS on at least an annual basis to share in the decision-making on next steps for the Initiative (annually)	2014	2018	annually	

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
1.8	c.	Fund Silver Creek (051201040501) implementation as a critical area of the larger Middle Eel watershed through their section 319 grant (ARN 3-4)	2012	2016	ongoing	
1.8	d.	Provide implementation funding for the Middle Patoka River watershed, thereby indirectly providing outreach and education to Ell Creek (051202090405), which, though not a critical area as defined in the Middle Patoka WMP, will receive benefits from the 319 grant (ARN 3-31)	2013	2016	ongoing	
1.9		Support implementation of the State Nutrient Reduction Strategy once approved	2014	2018	ongoing	
1.10		Dedicate an average of \$100,000 in 319 funds to the Coastal Zone (Little Calumet-Galien watershed, HUC 04040001) annually until all of the remaining conditions of the LMCP CNPCP are met.	2014	until full approval	ongoing	
1.11		Coordinate with CWSRF to link loan applicants and local watershed groups	2014	2018	ongoing	
1.11	a.	IDEM NPS will cross-reference the monthly SRF project status report with active 319 projects and/or other known watershed efforts to identify watershed opportunities and meet quarterly (March, June, September, December) with CWSRF Loan Program to communicate those that may benefit from SRF funding.	2014	2018	ongoing	
1.11	b.	Annually, the NPS program will notify the CWSRF and DWSRF program of the 319 projects that are approved for funding, upon notice from EPA.	2014	2018	annually	
1.11	c.	Where there are potential projects, the appropriate NPS staff participates with the CWSRF staff in the community orientation or planning meeting. A fact sheet describing the potential NPS project(s) opportunity is included in the SRF packet to the community, and the NPS staff promotes the potential project(s), provides contacts for technical assistance, and provides information on other funding sources active in the watershed (such as NRCS, Clean Water Indiana, 319, 205(j) etc.)	2014	2018	ongoing	
1.12		Work with partners to model, assess, and prioritize critical watersheds in the state	2015	2018	ongoing	
1.13		Utilize IDEM WSS to assist partners with NPS planning and implementation activities	2014	2018	ongoing	

Goal 2: Monitor and assess Indiana waters for NPS impairments and improvements.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
2.1		Require the use of the Environmental Monitoring for Watershed Groups handbook for 319 grantees	2014	2018	annually	
2.2		Coordinate with NRCS to develop a sampling regime for NWQI projects	2014	2015	one-time	
2.3		Import 319 grantee data meeting appropriate data quality criteria into NPS-AIMS or the	2014	2018	ongoing	

Goal 2: Monitor and assess Indiana waters for NPS impairments and improvements.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		Hoosier Riverwatch Database to be uploaded into STORET on a routine basis.				
2.4		Invite the participation of local project leaders when conducting 305(b) CWA assessments on baseline monitoring data.	2014	2018	ongoing	
2.5		Evaluate results of the monitoring program and make adaptive management decisions on an annual basis	2014	2018	annually	
2.6	a.	Conduct exploratory meeting to determine desired outcomes/goals of an NPS assessment methodology	2015	2015	one-time	
2.6	b.	Investigate the inputs required to develop a NPS assessment methodology and if development of a NPS assessment methodology is feasible, develop a timeline for methodology development	2015	2015	one-time	
2.7		Continue to fund the Clean Lakes Program (volunteer and professional) data collection for use in Clean Water Act 305(b) and 314 assessments and 303(d) listings	2014	2018	ongoing	
2.8		Direct IDEM resources to perform baseline characterization monitoring of at least one watershed annually to support TMDL and watershed planning efforts	2013	2018	annually	
2.9		Utilize IDEM resources to monitor waterbodies identified as targets of the National Water Quality Monitoring Initiative (NWQI) as described in the sampling design developed by IDEM and NRCS	2015	2018	ongoing	
2.10	b.	Provide support for 20 Hoosier Riverwatch workshops (volunteer trainings) and maintain current loaner/teaching trunks	2014	2018	annually	
2.10	c.	Provide support for maintenance and upgrades of the Hoosier Riverwatch water quality monitoring database and associated websites.	2014	2018	ongoing	
2.11	c.	Accept, review and rank water quality data provided by external organizations and, if appropriate, using the data to make 305(b)/303(d) water quality assessment and listing decisions.	2014	2018	annually	
2.12	a.	Evaluate water quality data submitted through the EDF process, as well as grantee monitoring, to identify watersheds that should be surveyed for possible NPS water quality improvements.	2014	2018	annually	
2.12	b.	Use additional resources (e.g., staff, funds, and technical support) to monitor water quality in watersheds where NPS restoration activities have occurred. The monitoring data will be compared to baseline information, if available, to gauge the efficacy of the work.	2014	2018	annually	
2.13		Continue the Ground water Monitoring Network (GWMN)	2013	2018	ongoing	
2.14	b.	Gather data and develop a timeline for completing the ground water data analysis and reporting mechanism	2014	2015	one-time	
2.14	c.	Determine the frequency of future ground water analyses and reporting	2015	2015	one-time	

Goal 3: Develop and conduct a strategic outreach and education program						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
3.1	c.	Work with partners to develop a consistent statewide message for septic system care	2014	2015	ongoing	
3.1	d.	Publicize septic system care/repair/replacement water-quality success stories through multiple media applications.	2014	2018	ongoing	
3.1	e.	Support technical events (such as IEHA annual conference), to exchange information between government partners, watershed groups, and citizens.	2014	2018	ongoing	
3.1	f.	Assist in providing outreach on septic systems in the Lake Michigan Coastal Zone	2014	2018	ongoing	
3.1	f.i	Market on-site disposal system inspections at property transfer to lending institutions in the Coastal Zone.	2014	2015	ongoing	
3.1	f.iii	Promote the use of the Revolving Loan Fund for Septic upgrades and repairs.	2014	2018	annually	
3.2	c.	Work with partners to develop a consistent message surrounding hydromodification.	2016	2016	ongoing	
3.2	d.	Publicize hydromodification/stream restoration success stories through multiple media applications.	2014	2018	ongoing	
3.2	e.	Continue outreach to the community of County Surveyors to become involved in water quality improvement through the IWLA, the Indiana Association of County Surveyors, local watershed groups, and county contacts.	2014	2018	ongoing	
3.3	c.	Work with partners on consistent messaging surrounding sediment and nutrients	2015	2015	ongoing	
3.3	d.	Publicize success stories through multiple media applications.	2014	2018	ongoing	
3.3	e.	Work with other ICP organizations to strategize about outreach to absentee landowners.	2015	2015	ongoing	
3.4		At least annually review print and electronic materials for updates and republish as needed	2014	2018	annually	
3.5		Continue to provide citizen monitoring training through Hoosier Riverwatch and the Clean Lakes Program	2014	2018	ongoing	
3.6	a.	Produce 5 "Success Stories" (EPA WQ-10 Strategic Measure) by 2017 and publicize widely within Indiana	2014	2017	ongoing	
3.6	b.	Publicize any awards given to watershed groups related to their water quality efforts in Indiana	2014	2018	ongoing	
3.7	a.	Utilize social media to provide up-to-the minute information to followers of IDEM's social media outlets	2014	2018	ongoing	
3.7	b.	Continue to participate in the Pathway to Water Quality at the Indiana State Fairgrounds	2014	2018	ongoing	
3.8	b.					
3.9	a.	Continue to provide technical assistance to Purdue University's Indiana Watershed Leadership Academy	2014	2018	ongoing	
3.9	b.	Continue to support the ICP's Training and Certification Program on watershed related issues by sitting on the Technical Research Board and the advisory team	2014	2018	ongoing	

Goal 4: Improve Indiana's water quality, including surface and ground water, by reducing NPS pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
4.1	a.	Utilize the TMDL-WMP template for TMDLs sampled for and written in 2014 and beyond so that they are implementable using 319 funds	2014	2018	ongoing	
4.1	c.	Link TMDLs with baseline water monitoring projects for Section 319 watershed management planning applications	2014	2018	ongoing	
4.2		Develop guidance for updating watershed management plans	2014	2016	ongoing	
4.3		Promote integration of WMPs with local comprehensive plans	2014	2018	ongoing	
4.4	a.	Integrate disparate NPS program databases into one centralized integrated Watershed database to assist with tracking and reporting. Develop scope of work for the integrated databases project	2014	2015	ongoing	
4.5		Use Section 319 funding to support implementation of WMPs that meet the U.S. EPA'S 9 Key Elements of a Watershed Plan (including staff support and outreach as well as the placement of BMPs in critical areas as identified in the WMPs)	2014	2018	ongoing	
4.6		Repair previously-installed BMPs with the caveats outlined in the program policy	2014	2018	ongoing	
4.7		Continue to leverage LARE and CWI funds to address erosion, sedimentation and nutrient input concerns as long as the General Assembly continues to approve appropriations.	2014	2018	ongoing	
4.9		Show partial or total restoration in at least 5 12-digit watersheds (at least 5 SP12 and 5 WQ-10; watersheds identified may count for both measures) in the five-year cycle 2013-2017.	2013	2017	ongoing	
4.10		Determine a way to track E. coli load reductions being achieved by BMPs	2014	2015	ongoing	
4.10	b.	Train staff and grantees on the method	2015	2015	ongoing	
4.10	c.	Track implementation of E. coli reducing-practices and reductions achieved	2015	2015		
4.11		Geolocate all BMPs installed through the Section 319 grant program in order to enhance the BMP GIS layer located in the NPS program	2014	2018	ongoing	
4.12		Solicit for proposals to use Section 319 funding to support implementation of WMPs that meet the U.S. EPA'S 9 Key Elements of a Watershed Plan (includes staff support as well as BMPs)	2014	2018	annually	
4.12	a.	Provide financial and technical support to install agricultural BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	b.	Provide financial and technical support to install urban and/or residential BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	c.	Provide financial and technical support to install forestry BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	d.	Provide financial and technical support to install abandoned mine BMPs in critical areas identified in the plan	2014	2018	annually	

Goal 4: Improve Indiana’s water quality, including surface and ground water, by reducing NPS pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
4.12	e.	Provide financial and technical support to install hydrological and aquatic habitat BMPs in critical areas identified in the plan	2014	2018	annually	

Goal 5. Protect sensitive, vulnerable, and high quality waters of the state so that they may continue to meet their designated uses.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
5.1		Encourage watershed planning activities in watersheds with Category 1 waters (including those waters identified in Table 15 and in subsequent Integrated Reports)	2015	2018	ongoing	
5.2		Identify watersheds with source water intakes	2015	2015	one-time	
5.3		Participate as requested in Phase II wellhead protection planning	2014	2018	ongoing	
5.4		Develop priorities for plans and implementation in watersheds that impact Outstanding State Resource Waters (OSRWs) and waters important for aquatic habitat	2015	2018	annually	
5.5		Fund 319-eligible protection strategies identified in critical areas of IDEM-approved 9-Elements watershed management plans proposed by Section 319 grant applicants whose implementation applications rank high enough for funding	2015	2018	annually	
5.6		Work with IDEM’s Ground Water section and watershed groups, as well as CWSRF and Drinking Water SRF, to identify wells in need of proper decommission.	2015	2018	ongoing	

**Table O2. Indiana State NPS Management Plan 2015 Action Register**

Reportable Activities for 2016

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
1.1		Assist Indiana Department of Natural Resources, Lake Michigan Coastal Program to obtain full approval of all outstanding measures on the LMCP CNPC plan	2014	2018	ongoing	
1.1	a.	NPS NW WSS will assist the LMCP with on-site disposal systems measures as needed/requested	2014	2018	ongoing	
1.2	c.	Complete ongoing TMDLs and WMPs in the Coastal Zone: <i>Salt Creek</i>	2010	2018	ongoing	
1.3	b.	Restore and protect water quality in critical areas of coastal WMPs: <i>Deep River</i>	2015	2017	ongoing	

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
1.4		Support the Conservation Reserve Enhancement Program (CREP), Mississippi River Basin Initiative (MRBI), Great Lakes Restoration Initiative (GLRI), Lake and River Enhancement (LARE), Clean Water Indiana (CWI), and other Indiana Conservation Partnership (ICP) and statewide initiatives as they become available by:	2014	2018	ongoing	
1.4	a.	Forwarding solicitation or information as it becomes available	2014	2018	ongoing	
1.4	b.	Participating in ICP planning meetings to determine priorities for funding/initiatives that align with WMP critical areas, water quality, and/or TMDL priority areas (every other month)	2014	2018	ongoing	
1.4	c.	By promoting the programs through the watershed specialists (WSS) and work with watershed groups to identify/recommend projects that would fit well under the priorities for each funding source	2014	2018	ongoing	
1.4	d.	By including them in relevant TMDLs as methods for implementation	2014	2018	ongoing	
1.5		Utilize the ICP as an advisory group for priority state NPS policies and updates by participating in bimonthly leadership meetings.	2014	2018	ongoing	
1.6		Continue to provide technical assistance to local watershed groups through the WSS or project manager as documented through quarterly site visit reports and the Section 319 Annual Report.	2014	2018	ongoing	
1.7		Utilize the TMDL-WMP template for 2014 TMDLs and beyond	2014	2018	ongoing	
1.8		Continue to partner with the IN-USDA-NRCS on the National Water Quality Initiative (NWQI) for as long as the Initiative remains a national priority.	2014	2018	ongoing	
1.8	b.	Coordinate with NRCS on at least an annual basis to share in the decision-making on next steps for the Initiative (annually)	2014	2018	annually	
1.8	c.	Fund Silver Creek (051201040501) implementation as a critical area of the larger Middle Eel watershed through their section 319 grant (ARN 3-4)	2012	2016	ongoing	
1.8	d.	Provide implementation funding for the Middle Patoka River watershed, thereby indirectly providing outreach and education to Ell Creek (051202090405), which, though not a critical area as defined in the Middle Patoka WMP, will receive benefits from the 319 grant (ARN 3-31)	2013	2016	ongoing	
1.9		Support implementation of the State Nutrient Reduction Strategy once approved	2014	2018	ongoing	
1.10		Dedicate an average of \$100,000 in 319 funds to the Coastal Zone (Little Calumet-Galien watershed, HUC 04040001) annually until all of the remaining conditions of the LMCP CNPCP are met.	2014	until full approval	ongoing	
1.11		Coordinate with CWSRF to link loan applicants and local watershed groups	2014	2018	ongoing	
1.11	a.	IDEM NPS will cross-reference the monthly SRF project status report with active 319	2014	2018	ongoing	

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		projects and/or other known watershed efforts to identify watershed opportunities and meet quarterly (March, June, September, December) with CWSRF Loan Program to communicate those that may benefit from SRF funding.				
1.11	b.	Annually, the NPS program will notify the CWSRF and DWSRF program of the 319 projects that are approved for funding, upon notice from EPA.	2014	2018	annually	
1.11	c.	Where there are potential projects, the appropriate NPS staff participates with the CWSRF staff in the community orientation or planning meeting. A fact sheet describing the potential NPS project(s) opportunity is included in the SRF packet to the community, and the NPS staff promotes the potential project(s), provides contacts for technical assistance, and provides information on other funding sources active in the watershed (such as NRCS, Clean Water Indiana, 319, 205(j) etc.)	2014	2018	ongoing	
1.11	d.	The CWSRF program communicates to the NPS program those NPS project BMPs funded through CWSRF that were identified in the approved 319 WMPs. NPS staff ensures that this information is input into GRTS. This information is included in the Annual 319 Report to U.S. EPA.	2016	2018	annually	
1.12		Work with partners to model, assess, and prioritize critical watersheds in the state	2015	2018	ongoing	
1.13		Utilize IDEM WSS to assist partners with NPS planning and implementation activities	2014	2018	ongoing	

Goal 2: Monitor and assess Indiana waters for NPS impairments and improvements.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
2.1		Require the use of the Environmental Monitoring for Watershed Groups handbook for 319 grantees	2014	2018	annually	
2.3		Import 319 grantee data meeting appropriate data quality criteria into NPS-AIMS or the Hoosier Riverwatch Database to be uploaded into STORET on a routine basis.	2014	2018	ongoing	
2.4		Invite the participation of local project leaders when conducting 305(b) CWA assessments on baseline monitoring data.	2014	2018	ongoing	
2.5		Evaluate results of the monitoring program and make adaptive management decisions on an annual basis	2014	2018	annual	
2.7		Continue to fund the Clean Lakes Program (volunteer and professional) data collection for use in Clean Water Act 305(b) and 314 assessments and 303(d) listings	2014	2018	ongoing	
2.8		Direct IDEM resources to perform baseline characterization monitoring of at least one watershed annually to support TMDL and watershed planning efforts	2013	2018	annually	
2.9		Utilize IDEM resources to monitor waterbodies identified as targets of the National Water	2015	2018	ongoing	

Goal 2: Monitor and assess Indiana waters for NPS impairments and improvements.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		Quality Monitoring Initiative (NWQI) as described in the sampling design developed by IDEM and NRCS				
2.10	b.	Provide support for 20 Hoosier Riverwatch workshops (volunteer trainings) and maintain current loaner/teaching trunks	2014	2018	annually	
2.10	c.	Provide support for maintenance and upgrades of the Hoosier Riverwatch water quality monitoring database and associated websites.	2014	2018	ongoing	
2.11	c.	Accept, review and rank water quality data provided by external organizations and, if appropriate, using the data to make 305(b)/303(d) water quality assessment and listing decisions.	2014	2018	annually	
2.12	a.	Evaluate water quality data submitted through the EDF process, as well as grantee monitoring, to identify watersheds that should be surveyed for possible NPS water quality improvements.	2014	2018	annually	
2.12	b.	Use additional resources (e.g., staff, funds, and technical support) to monitor water quality in watersheds where NPS restoration activities have occurred. The monitoring data will be compared to baseline information, if available, to gauge the efficacy of the work.	2014	2018	annually	
2.13		Continue the Ground water Monitoring Network (GWMN)	2013	2018	ongoing	

Goal 3: Develop and conduct a strategic outreach and education program						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
3.1	d.	Publicize septic system care/repair/replacement water-quality success stories through multiple media applications.	2014	2018	ongoing	
3.1	e.	Support technical events (such as IEHA annual conference), to exchange information between government partners, watershed groups, and citizens.	2014	2018	ongoing	
3.1	f.	Assist in providing outreach on septic systems in the Lake Michigan Coastal Zone	2014	2018	ongoing	
3.1	f.iii.	Promote the use of the Revolving Loan Fund for Septic upgrades and repairs.	2014	2018	annually	
3.2	c.	Work with partners to develop a consistent message surrounding hydromodification.	2016	2016	ongoing	
3.2	d.	Publicize hydromodification/stream restoration success stories through multiple media applications.	2014	2018	ongoing	
3.2	e.	Continue outreach to the community of County Surveyors to become involved in water	2014	2018	ongoing	

Goal 3: Develop and conduct a strategic outreach and education program						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		quality improvement through the IWLA, the Indiana Association of County Surveyors, local watershed groups, and county contacts.				
3.3	d.	Publicize success stories through multiple media applications.	2014	2018	ongoing	
3.3	e.	Work with other ICP organizations to strategize about outreach to absentee landowners.	2015	2015	ongoing	
3.4		At least annually review print and electronic materials for updates and republish as needed	2014	2018	annually	
3.5		Continue to provide citizen monitoring training through Hoosier Riverwatch and the Clean Lakes Program	2014	2018	ongoing	
3.6	a.	Produce 5 "Success Stories" (EPA WQ-10 Strategic Measure) by 2017 and publicize widely within Indiana	2014	2017	ongoing	
3.6	b.	Publicize any awards given to watershed groups related to their water quality efforts in Indiana	2014	2018	ongoing	
3.7	a.	Utilize social media to provide up-to-the minute information to followers of IDEM's social media outlets	2014	2018	ongoing	
3.7	b.	Continue to participate in the Pathway to Water Quality at the Indiana State Fairgrounds	2014	2018	ongoing	
3.8	b.	Initiate meetings with partners to discuss IDEM's goal of strategic messaging for the state on hydromodification.	2014	2016	ongoing	
3.9	a.	Continue to provide technical assistance to Purdue University's Indiana Watershed Leadership Academy	2014	2018	ongoing	
3.9	b.	Continue to support the ICP's Training and Certification Program on watershed related issues by sitting on the Technical Research Board and the advisory team	2014	2018	ongoing	

Goal 4: Improve Indiana's water quality, including surface and ground water, by reducing NPS pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
4.1	a.	Utilize the TMDL-WMP template for TMDLs sampled for and written in 2014 and beyond so that they are implementable using 319 funds	2014	2018	ongoing	
4.1	c.	Link TMDLs with baseline water monitoring projects for Section 319 watershed management planning applications	2014	2018	ongoing	
4.2		Develop guidance for updating watershed management plans	2014	2016	ongoing	
4.3		Promote integration of WMPs with local comprehensive plans	2014	2018	ongoing	
4.4	a.	Integrate disparate NPS program databases into one centralized integrated Watershed database to assist with tracking and reporting. Develop scope of work for the integrated	2014	2015	one-time	

Goal 4: Improve Indiana's water quality, including surface and ground water, by reducing NPS pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		databases project				
4.4	b.	Hire contractor to work on the project	2016	2016	one-time	
4.4	c.	Develop database	2016	2018	ongoing	
4.5		Use Section 319 funding to support implementation of WMPs that meet the U.S. EPA'S 9 Key Elements of a Watershed Plan (including staff support and outreach as well as the placement of BMPs in critical areas as identified in the WMPs)	2014	2018	ongoing	
4.6		Repair previously-installed BMPs with the caveats outlined in the program policy	2014	2018	ongoing	
4.7		Continue to leverage LARE and CWI funds to address erosion, sedimentation and nutrient input concerns as long as the General Assembly continues to approve appropriations.	2014	2018	ongoing	
4.9		Show partial or total restoration in at least 5 12-digit watersheds (at least 5 SP12 and 5 WQ-10; watersheds identified may count for both measures) in the five-year cycle 2013-2017.	2013	2017	ongoing	
4.11		Geolocate all BMPs installed through the Section 319 grant program in order to enhance the BMP GIS layer located in the NPS program	2014	2018	ongoing	
4.12		Solicit for proposals to use Section 319 funding to support implementation of WMPs that meet the U.S. EPA'S 9 Key Elements of a Watershed Plan (includes staff support as well as BMPs)	2014	2018	annually	
4.12	a.	Provide financial and technical support to install agricultural BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	b.	Provide financial and technical support to install urban and/or residential BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	c.	Provide financial and technical support to install forestry BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	d.	Provide financial and technical support to install abandoned mine BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	e.	Provide financial and technical support to install hydrological and aquatic habitat BMPs in critical areas identified in the plan	2014	2018	annually	

Goal 5. Protect sensitive, vulnerable, and high quality waters of the state so that they may continue to meet their designated uses.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
5.1		Encourage watershed planning activities in watersheds with Category 1 waters (including those waters identified in Table 15 and in subsequent Integrated Reports)	2015	2018	ongoing	
5.2		Identify watersheds with source water intakes	2015	2015	one-time	

5.3		Participate as requested in Phase II wellhead protection planning	2014	2018	ongoing	
5.4		Develop priorities for plans and implementation in watersheds that impact Outstanding State Resource Waters (OSRWs) and waters important for aquatic habitat	2015	2018	annually	
5.5		Fund 319-eligible protection strategies identified in critical areas of IDEM-approved 9-Elements watershed management plans proposed by Section 319 grant applicants whose implementation applications rank high enough for funding	2015	2018	annually	
5.6		Work with IDEM's Ground Water section and watershed groups, as well as CWSRF and Drinking Water SRF, to identify wells in need of proper decommission.	2015	2018	ongoing	

**Table O3. Indiana State NPS Management Plan 2016 Action Register**

Reportable Activities for 2017

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
1.1		Assist Indiana Department of Natural Resources, Lake Michigan Coastal Program to obtain full approval of all outstanding measures on the LMCP CNPC plan	2014	2018	ongoing	
1.1	a.	NPS NW WSS will assist the LMCP with on-site disposal systems measures as needed/requested	2014	2018	ongoing	
1.2	c.	Complete ongoing TMDLs and WMPs in the Coastal Zone: <i>Salt Creek</i>	2010	2018	ongoing	
1.3	b.	Restore and protect water quality in critical areas of coastal WMPs: Deep River	2015	2017	ongoing	
1.4		Support the Conservation Reserve Enhancement Program (CREP), Mississippi River Basin Initiative (MRBI), Great Lakes Restoration Initiative (GLRI), Lake and River Enhancement (LARE), Clean Water Indiana (CWI), and other Indiana Conservation Partnership (ICP) and statewide initiatives as they become available by:	2014	2018	ongoing	
1.4	a.	Forwarding solicitation or information as it becomes available	2014	2018	ongoing	
1.4	b.	Participating in ICP planning meetings to determine priorities for funding/initiatives that align with WMP critical areas, water quality, and/or TMDL priority areas (every other month)	2014	2018	ongoing	
1.4	c.	By promoting the programs through the watershed specialists (WSS) and work with watershed groups to identify/recommend projects that would fit well under the priorities for each funding source	2014	2018	ongoing	
1.4	d.	By including them in relevant TMDLs as methods for implementation	2014	2018	ongoing	
1.5		Utilize the ICP as an advisory group for priority state NPS policies and updates by participating in bimonthly leadership meetings.	2014	2018	ongoing	
1.6		Continue to provide technical assistance to local watershed groups through the WSS or project manager as documented through quarterly site visit reports and the Section 319 Annual Report.	2014	2018	ongoing	

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
1.7		Utilize the TMDL-WMP template for 2014 TMDLs and beyond	2014	2018	ongoing	
1.8		Continue to partner with the IN-USDA-NRCS on the National Water Quality Initiative (NWQI) for as long as the Initiative remains a national priority.	2014	2018	ongoing	
1.8	b.	Coordinate with NRCS on at least an annual basis to share in the decision-making on next steps for the Initiative (annually)	2014	2018	annually	
1.9		Support implementation of the State Nutrient Reduction Strategy once approved	2014	2018	ongoing	
1.10		Dedicate an average of \$100,000 in 319 funds to the Coastal Zone (Little Calumet-Galien watershed, HUC 04040001) annually until all of the remaining conditions of the LMCP CNPCP are met.	2014	until full approval	ongoing	
1.11		Coordinate with CWSRF to link loan applicants and local watershed groups	2014	2018	ongoing	
1.11	a.	IDEM NPS will cross-reference the monthly SRF project status report with active 319 projects and/or other known watershed efforts to identify watershed opportunities and meet quarterly (March, June, September, December) with CWSRF Loan Program to communicate those that may benefit from SRF funding.	2014	2018	ongoing	
1.11	b.	Annually, the NPS program will notify the CWSRF and DWSRF program of the 319 projects that are approved for funding, upon notice from EPA.	2014	2018	annually	
1.11	c.	Where there are potential projects, the appropriate NPS staff participates with the CWSRF staff in the community orientation or planning meeting. A fact sheet describing the potential NPS project(s) opportunity is included in the SRF packet to the community, and the NPS staff promotes the potential project(s), provides contacts for technical assistance, and provides information on other funding sources active in the watershed (such as NRCS, Clean Water Indiana, 319, 205(j) etc.)	2014	2018	ongoing	
1.11	d.	The CWSRF program communicates to the NPS program those NPS project BMPs funded through CWSRF that were identified in the approved 319 WMPs. NPS staff ensures that this information is input into GRTS. This information is included in the Annual 319 Report to U.S. EPA.	2016	2018	annually	
1.12		Work with partners to model, assess, and prioritize critical watersheds in the state	2015	2018	ongoing	
1.13		Utilize IDEM WSS to assist partners with NPS planning and implementation activities	2014	2018	ongoing	

Goal 2: Monitor and assess Indiana waters for NPS impairments and improvements.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
2.1		Require the use of the Environmental Monitoring for Watershed Groups handbook for 319 grantees	2014	2018	annually	

Goal 2: Monitor and assess Indiana waters for NPS impairments and improvements.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
2.3		Import 319 grantee data meeting appropriate data quality criteria into NPS-AIMS or the Hoosier Riverwatch Database to be uploaded into STORET on a routine basis.	2014	2018	ongoing	
2.4		Invite the participation of local project leaders when conducting 305(b) CWA assessments on baseline monitoring data.	2014	2018	ongoing	
2.5		Evaluate results of the monitoring program and make adaptive management decisions on an annual basis	2014	2018	annual	
2.7		Continue to fund the Clean Lakes Program (volunteer and professional) data collection for use in Clean Water Act 305(b) and 314 assessments and 303(d) listings	2014	2018	ongoing	
2.8		Direct IDEM resources to perform baseline characterization monitoring of at least one watershed annually to support TMDL and watershed planning efforts	2013	2018	annually	
2.9		Utilize IDEM resources to monitor waterbodies identified as targets of the National Water Quality Monitoring Initiative (NWQI) as described in the sampling design developed by IDEM and NRCS	2015	2018	annually	
2.10	b.	Provide support for 20 Hoosier Riverwatch workshops (volunteer trainings) and maintain current loaner/teaching trunks	2014	2018	annually	
2.10	c.	Provide support for maintenance and upgrades of the Hoosier Riverwatch water quality monitoring database and associated websites.	2014	2018	ongoing	
2.11	c.	Accept, review and rank water quality data provided by external organizations and, if appropriate, using the data to make 305(b)/303(d) water quality assessment and listing decisions.	2014	2018	annually	
2.12	a.	Evaluate water quality data submitted through the EDF process, as well as grantee monitoring, to identify watersheds that should be surveyed for possible NPS water quality improvements.	2014	2018	annually	
2.12	b.	Use additional resources (e.g., staff, funds, and technical support) to monitor water quality in watersheds where NPS restoration activities have occurred. The monitoring data will be compared to baseline information, if available, to gauge the efficacy of the work.	2014	2018	annually	
2.13		Continue the Ground water Monitoring Network (GWMN)	2013	2018	ongoing	

Goal 3: Develop and conduct a strategic outreach and education program						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
3.1	d.	Publicize septic system care/repair/replacement water-quality success stories through multiple media applications.	2014	2018	ongoing	
3.1	e.	Support technical events (such as IEHA annual conference), to exchange information	2014	2018	ongoing	

Goal 3: Develop and conduct a strategic outreach and education program						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		between government partners, watershed groups, and citizens.				
3.1	f.	Assist in providing outreach on septic systems in the Lake Michigan Coastal Zone	2014	2018	ongoing	
3.1	f.iii	Promote the use of the Revolving Loan Fund for Septic upgrades and repairs.	2014	2018	annually	
3.2	d.	Publicize hydromodification/stream restoration success stories through multiple media applications.	2014	2018	ongoing	
3.2	e.	Continue outreach to the community of County Surveyors to become involved in water quality improvement through the IWLA, the Indiana Association of County Surveyors, local watershed groups, and county contacts.	2014	2018	ongoing	
3.3	d.	Publicize success stories through multiple media applications.	2014	2018	ongoing	
3.3	e.	Work with other ICP organizations to strategize about outreach to absentee landowners.	2015	2018	ongoing	
3.4		At least annually review print and electronic materials for updates and republish as needed.	2014	2018	annually	
3.5		Continue to provide citizen monitoring training through Hoosier Riverwatch and the Clean Lakes Program	2014	2018	ongoing	
3.6	a.	Produce 5 “Success Stories” (EPA WQ-10 Strategic Measure) by 2017 and publicize widely within Indiana	2014	2017	ongoing	
3.6	b.	Publicize any awards given to watershed groups related to their water quality efforts in Indiana	2014	2018	ongoing	
3.7	a.	Utilize social media to provide up-to-the minute information to followers of IDEM’s social media outlets	2014	2018	ongoing	
3.7	b.	Continue to participate in the Pathway to Water Quality at the Indiana State Fairgrounds	2014	2018	ongoing	
3.8	b.	Initiate meetings with partners to discuss IDEM’s goal of strategic messaging for the state on hydromodification.	2014	2016	ongoing	
3.9	a.	Continue to provide technical assistance to Purdue University’s Indiana Watershed Leadership Academy	2014	2018	ongoing	
3.9	b.	Continue to support the ICP’s Training and Certification Program on watershed related issues by sitting on the Technical Research Board and the advisory team	2014	2018	ongoing	

Goal 4: Improve Indiana’s water quality, including surface and ground water, by reducing NPS pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
4.1	a.	Utilize the TMDL-WMP template for TMDLs sampled for and written in 2014 and beyond so that they are implementable using 319 funds	2014	2018	ongoing	

Goal 4: Improve Indiana's water quality, including surface and ground water, by reducing NPS pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
4.1	c.	Link TMDLs with baseline water monitoring projects for Section 319 watershed management planning applications	2014	2018	ongoing	
4.3		Promote integration of WMPs with local comprehensive plans	2014	2018		
4.4	c.	Develop database	2016	2018	ongoing	
4.5		Use Section 319 funding to support implementation of WMPs that meet the U.S. EPA'S 9 Key Elements of a Watershed Plan (including staff support and outreach as well as the placement of BMPs in critical areas as identified in the WMPs)	2014	2018	ongoing	
4.6		Repair previously-installed BMPs with the caveats outlined in the program policy	2014	2018	ongoing	
4.7		Continue to leverage LARE and CWI funds to address erosion, sedimentation and nutrient input concerns as long as the General Assembly continues to approve appropriations.	2014	2018	ongoing	
4.9		Show partial or total restoration in at least 5 12-digit watersheds (at least 5 SP12 and 5 WQ-10; watersheds identified may count for both measures) in the five-year cycle 2013-2017.	2013	2017	ongoing	
4.11		Geolocate all BMPs installed through the Section 319 grant program in order to enhance the BMP GIS layer located in the NPS program	2014	2018	ongoing	
4.12		Solicit for proposals to use Section 319 funding to support implementation of WMPs that meet the U.S. EPA'S 9 Key Elements of a Watershed Plan (includes staff support as well as BMPs)	2014	2018	annually	
4.12	a.	Provide financial and technical support to install agricultural BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	b.	Provide financial and technical support to install urban and/or residential BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	c.	Provide financial and technical support to install forestry BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	d.	Provide financial and technical support to install abandoned mine BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	e.	Provide financial and technical support to install hydrological and aquatic habitat BMPs in critical areas identified in the plan	2014	2018	annually	

Goal 5. Protect sensitive, vulnerable, and high quality waters of the state so that they may continue to meet their designated uses.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
5.1		Encourage watershed planning activities in watersheds with Category 1 waters (including those waters identified in Table 15 and in subsequent Integrated Reports)	2015	2018	ongoing	

5.3		Participate as requested in Phase II wellhead protection planning	2014	2018	ongoing	
5.4		Develop priorities for plans and implementation in watersheds that impact Outstanding State Resource Waters (OSRWs) and waters important for aquatic habitat	2015	2018	annually	
5.5		Fund 319-eligible protection strategies identified in critical areas of IDEM-approved 9-Elements watershed management plans proposed by Section 319 grant applicants whose implementation applications rank high enough for funding	2015	2018	annually	
5.6		Work with IDEM's Ground Water section and watershed groups, as well as CWSRF and Drinking Water SRF, to identify wells in need of proper decommission.	2015	2018	ongoing	

**Table O4. Indiana State NPS Management Plan 2017 Action Register**

Reportable Activities for 2018

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
1.1		Assist Indiana Department of Natural Resources, Lake Michigan Coastal Program to obtain full approval of all outstanding measures on the LMCP CNPC plan	2014	2018	ongoing	
1.1	a.	NPS NW WSS will assist the LMCP with on-site disposal systems measures as needed/requested	2014	2018	ongoing	
1.1	c.	IDEM will conduct probabilistic and targeted sampling in the Little Calumet-Galien watershed	2018	2018	one-time	
1.2	c.	Complete ongoing TMDLs and WMPs in the Coastal Zone: <i>Salt Creek</i>	2010	2018	ongoing	
1.3	b.	Restore and protect water quality in critical areas of coastal WMPs: Deep River	2015	2017	ongoing	
1.4		Support the Conservation Reserve Enhancement Program (CREP), Mississippi River Basin Initiative (MRBI), Great Lakes Restoration Initiative (GLRI), Lake and River Enhancement (LARE), Clean Water Indiana (CWI), and other Indiana Conservation Partnership (ICP) and statewide initiatives as they become available by:	2014	2018	ongoing	
1.4	a.	Forwarding solicitation or information as it becomes available	2014	2018	ongoing	
1.4	b.	Participating in ICP planning meetings to determine priorities for funding/initiatives that align with WMP critical areas, water quality, and/or TMDL priority areas (every other month)	2014	2018	ongoing	
1.4	c.	By promoting the programs through the watershed specialists (WSS) and work with watershed groups to identify/recommend projects that would fit well under the priorities for each funding source	2014	2018	ongoing	
1.4	d.	By including them in relevant TMDLs as methods for implementation	2014	2018	ongoing	
1.5		Utilize the ICP as an advisory group for priority state NPS policies and updates by	2014	2018	ongoing	

Goal 1: Utilize partnerships to leverage resources available for NPS management.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		participating in bimonthly leadership meetings.				
1.6		Continue to provide technical assistance to local watershed groups through the WSS or project manager as documented through quarterly site visit reports and the Section 319 Annual Report.	2014	2018	ongoing	
1.7		Utilize the TMDL-WMP template for 2014 TMDLs and beyond	2014	2018	ongoing	
1.8		Continue to partner with the IN-USDA-NRCS on the National Water Quality Initiative (NWQI) for as long as the Initiative remains a national priority.	2014	2018	ongoing	
1.8	b.	Coordinate with NRCS on at least an annual basis to share in the decision-making on next steps for the Initiative (annually)	2014	2018	annually	
1.9		Support implementation of the State Nutrient Reduction Strategy once approved	2014	2018	ongoing	
1.10		Dedicate an average of \$100,000 in 319 funds to the Coastal Zone (Little Calumet-Galien watershed, HUC 04040001) annually until all of the remaining conditions of the LMCP CNPCP are met.	2014	until full approval	ongoing	
1.11		Coordinate with CWSRF to link loan applicants and local watershed groups	2014	2018	ongoing	
1.11	a.	IDEM NPS will cross-reference the monthly SRF project status report with active 319 projects and/or other known watershed efforts to identify watershed opportunities and meet quarterly (March, June, September, December) with CWSRF Loan Program to communicate those that may benefit from SRF funding.	2014	2018	ongoing	
1.11	b.	Annually, the NPS program will notify the CWSRF and DWSRF program of the 319 projects that are approved for funding, upon notice from EPA.	2014	2018	annually	
1.11	c.	Where there are potential projects, the appropriate NPS staff participates with the CWSRF staff in the community orientation or planning meeting. A fact sheet describing the potential NPS project(s) opportunity is included in the SRF packet to the community, and the NPS staff promotes the potential project(s), provides contacts for technical assistance, and provides information on other funding sources active in the watershed (such as NRCS, Clean Water Indiana, 319, 205(j) etc.)	2014	2018	ongoing	
1.11	d.	The CWSRF program communicates to the NPS program those NPS project BMPs funded through CWSRF that were identified in the approved 319 WMPs. NPS staff ensures that this information is input into GRTS. This information is included in the Annual 319 Report to U.S. EPA.	2016	2018	annually	
1.12		Work with partners to model, assess, and prioritize critical watersheds in the state	2015	2018	ongoing	
1.13		Utilize IDEM WSS to assist partners with NPS planning and implementation activities	2014	2018	ongoing	

Goal 2: Monitor and assess Indiana waters for NPS impairments and improvements.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
2.1		Require the use of the Environmental Monitoring for Watershed Groups handbook for 319 grantees	2014	2018	annually	
2.3		Import 319 grantee data meeting appropriate data quality criteria into NPS-AIMS or the Hoosier Riverwatch Database to be uploaded into STORET on a routine basis.	2014	2018	ongoing	
2.4		Invite the participation of local project leaders when conducting 305(b) CWA assessments on baseline monitoring data.	2014	2018	ongoing	
2.5		Evaluate results of the monitoring program and make adaptive management decisions on an annual basis	2014	2018	annual	
2.7		Continue to fund the Clean Lakes Program (volunteer and professional) data collection for use in Clean Water Act 305(b) and 314 assessments and 303(d) listings	2014	2018	ongoing	
2.8		Direct IDEM resources to perform baseline characterization monitoring of at least one watershed annually to support TMDL and watershed planning efforts	2013	2018	annually	
2.9		Utilize IDEM resources to monitor waterbodies identified as targets of the National Water Quality Monitoring Initiative (NWQI) as described in the sampling design developed by IDEM and NRCS	2015	2018	annually	
2.10	b.	Provide support for 20 Hoosier Riverwatch workshops (volunteer trainings) and maintain current loaner/teaching trunks	2014	2018	annually	
2.10	c.	Provide support for maintenance and upgrades of the Hoosier Riverwatch water quality monitoring database and associated websites.	2014	2018	ongoing	
2.11	c.	Accept, review and rank water quality data provided by external organizations and, if appropriate, using the data to make 305(b)/303(d) water quality assessment and listing decisions.	2014	2018	annually	
2.12	a.	Evaluate water quality data submitted through the EDF process, as well as grantee monitoring, to identify watersheds that should be surveyed for possible NPS water quality improvements.	2014	2018	annually	
2.12	b.	Use additional resources (e.g., staff, funds, and technical support) to monitor water quality in watersheds where NPS restoration activities have occurred. The monitoring data will be compared to baseline information, if available, to gauge the efficacy of the work.	2014	2018	annually	
2.13		Continue the Ground water Monitoring Network (GWMN)	2013	2018	ongoing	

Goal 3: Develop and conduct a strategic outreach and education program						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
3.1	d.	Publicize septic system care/repair/replacement water-quality success stories through	2014	2018	ongoing	

Goal 3: Develop and conduct a strategic outreach and education program						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
		multiple media applications.				
3.1	e.	Support technical events (such as IEHA annual conference), to exchange information between government partners, watershed groups, and citizens.	2014	2018	ongoing	
3.1	f.	Assist in providing outreach on septic systems in the Lake Michigan Coastal Zone	2014	2018	ongoing	
3.1	f.iii.	Promote the use of the Revolving Loan Fund for Septic upgrades and repairs.	2014	2018	annually	
3.2	d.	Publicize hydromodification/stream restoration success stories through multiple media applications.	2014	2018	ongoing	
3.2	e.	Continue outreach to the community of County Surveyors to become involved in water quality improvement through the IWLA, the Indiana Association of County Surveyors, local watershed groups, and county contacts.	2014	2018	ongoing	
3.3	d.	Publicize success stories through multiple media applications.	2014	2018	ongoing	
3.3	e.	Work with other ICP organizations to strategize about outreach to absentee landowners.	2015	2018	ongoing	
3.4		At least annually review print and electronic materials for updates and republish as needed.	2014	2018	annually	
3.5		Continue to provide citizen monitoring training through Hoosier Riverwatch and the Clean Lakes Program	2014	2018	ongoing	
3.6	a.	Produce 5 "Success Stories" (EPA WQ-10 Strategic Measure) by 2017 and publicize widely within Indiana	2014	2017	ongoing	
3.6	b.	Publicize any awards given to watershed groups related to their water quality efforts in Indiana	2014	2018	ongoing	
3.7	a.	Utilize social media to provide up-to-the minute information to followers of IDEM's social media outlets	2014	2018	ongoing	
3.7	b.	Continue to participate in the Pathway to Water Quality at the Indiana State Fairgrounds	2014	2018	ongoing	
3.9	a.	Continue to provide technical assistance to Purdue University's Indiana Watershed Leadership Academy	2014	2018	ongoing	
3.9	b.	Continue to support the ICP's Training and Certification Program on watershed related issues by sitting on the Technical Research Board and the advisory team	2014	2018	ongoing	

Goal 4: Improve Indiana's water quality, including surface and ground water, by reducing NPS pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
4.1	a.	Utilize the TMDL-WMP template for TMDLs sampled for and written in 2014 and beyond so that they are implementable using 319 funds	2014	2018	ongoing	

Goal 4: Improve Indiana's water quality, including surface and ground water, by reducing NPS pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
4.1	c.	Link TMDLs with baseline water monitoring projects for Section 319 watershed management planning applications	2014	2018	ongoing	
4.3		Promote integration of WMPs with local comprehensive plans	2014	2018		
4.4	c.	Develop database	2016	2018	ongoing	
4.5		Use Section 319 funding to support implementation of WMPs that meet the U.S. EPA'S 9 Key Elements of a Watershed Plan (including staff support and outreach as well as the placement of BMPs in critical areas as identified in the WMPs)	2014	2018	ongoing	
4.6		Repair previously-installed BMPs with the caveats outlined in the program policy	2014	2018	ongoing	
4.7		Continue to leverage LARE and CWI funds to address erosion, sedimentation and nutrient input concerns as long as the General Assembly continues to approve appropriations.	2014	2018	ongoing	
4.11		Geolocate all BMPs installed through the Section 319 grant program in order to enhance the BMP GIS layer located in the NPS program	2014	2018	ongoing	
4.12		Solicit for proposals to use Section 319 funding to support implementation of WMPs that meet the U.S. EPA'S 9 Key Elements of a Watershed Plan (includes staff support as well as BMPs)	2014	2018	annually	
4.12	a.	Provide financial and technical support to install agricultural BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	b.	Provide financial and technical support to install urban and/or residential BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	c.	Provide financial and technical support to install forestry BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	d.	Provide financial and technical support to install abandoned mine BMPs in critical areas identified in the plan	2014	2018	annually	
4.12	e.	Provide financial and technical support to install hydrological and aquatic habitat BMPs in critical areas identified in the plan	2014	2018	annually	

Goal 5. Protect sensitive, vulnerable, and high quality waters of the state so that they may continue to meet their designated uses.						
Obj. #	MM	Objective	FFY Start	FFY End	Frequency	Complete
5.1		Encourage watershed planning activities in watersheds with Category 1 waters (including those waters identified in Table 15 and in subsequent Integrated Reports)	2015	2018	ongoing	
5.3		Participate as requested in Phase II wellhead protection planning	2014	2018	ongoing	
5.4		Develop priorities for plans and implementation in watersheds that impact Outstanding	2015	2018	annually	

		State Resource Waters (OSRWs) and waters important for aquatic habitat				
5.5		Fund 319-eligible protection strategies identified in critical areas of IDEM-approved 9-Elements watershed management plans proposed by Section 319 grant applicants whose implementation applications rank high enough for funding	2015	2018	annually	
5.6		Work with IDEM's Ground Water section and watershed groups, as well as CWSRF and Drinking Water SRF, to identify wells in need of proper decommission.	2015	2018	ongoing	

**Table O5. Indiana State NPS Management Plan 2018 Action Register**