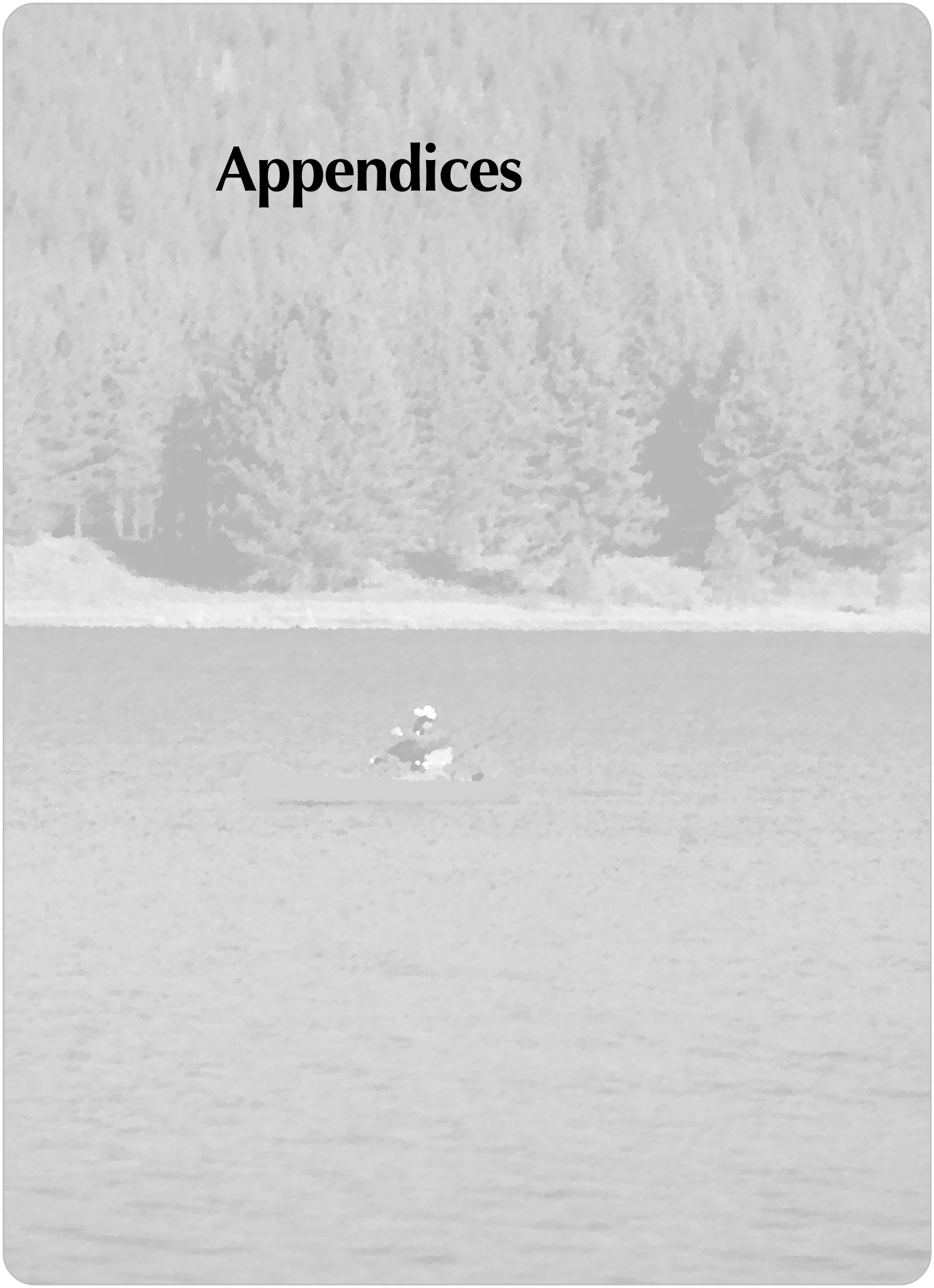
Appendices



Appendix A - Glossary of Terms

This glossary draws heavily from the glossary in U.S. EPA's NPDES Permit Writers Manual (December 1996). For a more complete glossary, see this manual at: www.epa.gov/owm/permits/pwcourse/manual.htm.

ACUTE TOXICITY: The toxic effect of a pollutant as measured by effects on aquatic life or humans that are observed over a short period of time — usually within 96 hours or less in a typical aquatic toxicity test.

ANTIDEGRADATION: A federally required policy that states must create to protect the existing uses of waters and to maintain waters whose quality is better than established standards and/or exceeds levels necessary to protect aquatic life and recreational uses. In a nutshell, a state's antidegradation policy is intended to keep clean waters clean. Antidegradation also includes special protections for waters designated as "Outstanding National Resource Waters."

BEST MANAGEMENT PRACTICES (BMPs): Management activities that are typically associated with efforts to control pollution caused by runoff, or non-point sources of pollution. When BMPs are required in an NPDES permit, there may be a schedule of activities, prohibition of practices, maintenance procedures or other management activities described. BMPs are sometimes used in NPDES permits in place of or in conjunction with effluent limitations. BMPs are also referred to when discussing voluntary nonpoint source programs for the control of polluted runoff, for instance from agricultural fields.

BEST PROFESSIONAL JUDGMENT (BPJ): A method used by permit writers to develop technology-based NPDES permits limits and conditions on a case-by-case basis, relying on the past experience and expertise of the permit writer.

BIOMONITORING: The monitoring of an effluent's chronic or acute toxicity by exposing representative aquatic organisms to the effluent for a certain time period and observing them for any harmful effects such as inability to reproduce, slowness of growth or outright mortality.

CHRONIC TOXICITY: The toxic effects of a pollutant over a longer period time as measured by reduced growth, reduced reproduction, etc. in addition to lethality. Chronic effects take longer to become noticeable than acute effects.

COMBINED SEWER OVERFLOW (CSO): An overflow or discharge of wastewater from a combined sewer system before the water has been treated by a sewage treatment plant. A combined sewer is a collection system that carries stormwater as well as domestic wastewater to a centralized sewage treatment plant. CSO discharges generally occur during wet weather when the sewer system becomes overloaded with rainwater or snow melt or when the capacity of the treatment facility is exceeded.

COMPOSITE SAMPLE: A water quality monitoring sample made up of two or more individual samples. The composite sample reflects the average water quality over the sampling time period.

CONVENTIONAL POLLUTANTS: Defined by federal regulation as BOD, TSS, fecal coliform, oil and grease and pH. (40 CFR 401.16). These are some of the main pollutants associated with municipal sewage treatment plans.

DESIGNATED USE: These are the uses, designated in the state water quality standards, which we desire to protect. These uses must be protected under state water quality standards. However, they may or may not be attained at any given point in time (e.g., the waterbody may not be safe for the designated use and so may be identified as impaired under the Total Maximum Daily Load Program). Examples of designated uses include fishing, drinking water supply, secondary contact (not suitable for swimming) or aquatic life.

DESIGN AVERAGE FLOW: The average amount of wastewater in millions of gallons per day being discharged from a specific outfall pipe over a given period of time.

DESIGN MAXIMUM FLOW: The maximum amount of wastewater in millions of gallons per day that can be discharged from the facility according to the facility's design.

DISCHARGE MONITORING REPORTS (DMRs): The forms used by NPDES permit holders to report self-monitored data from their effluent discharges. DMRs are submitted monthly to the agency in charge of permitting.

EFFLUENT LIMITATIONS: Restrictions imposed on the quantities, discharge rates and concentrations of pollutants that can be discharged from point sources of pollution into waterways. These restrictions are incorporated into each polluter's NPDES permit under the Clean Water Act.

EFFLUENT LIMITATION GUIDELINES: These guidelines are established by regulation under Section 304(b) of the Clean Water Act. They set the national technology-based effluent requirements for an entire, specific industrial category.

EXISTING USE: The uses (e.g., swimming, fishing or support of aquatic life) that the waterway supported or was clean enough to support on or after November 28, 1975. These uses must be protected by the state's water quality standards. Examples of existing uses include the presense of a specific endangered species, a recreational fishery or the existence of a swimming area. While designated uses cover broader, more general classes of uses, existing uses can cover specific, often site specific, uses of our waters.

INDIRECT DISCHARGE: The discharge of pollutants into a municipal sewage treatment system from any industrial or commercial facility.

MIXING ZONES: A mixing zone is a defined area within a waterbody where water quality criteria can be exceeded as long as chronically toxic conditions are prevented. A different type of mixing zone, known as a Zone of Initial Dilution or ZID, is a defined area within a waterbody where water quality criteria can be exceeded as long as acutely toxic conditions are prevented.The mixing zone should be defined, or delineated, within the permit.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES): The national system for issuing, modifying, revoking, monitoring and enforcing permits. NPDES permits regulate point sources of pollution. The system also imposes and enforces pretreatment requirements. See Sections 307, 318, 402 and 405 of the Clean Water Act.

NONPOINT SOURCE: Nonpoint source pollution, also known as polluted runoff, is the single largest source of water pollution nationwide. Polluted runoff is the result of rain or melting snow carrying pollutants or sediments from the land to the water. Polluted runoff results in water pollution from land-disturbing activities like agriculture, forestry, mining and urban development. Congress added Section 319 to the Clean Water Act in 1987, which directs states to assess their waters for runoff damages and create watershed-based programs to repair damages and prevent further pollution.

POINT SOURCE: Any discernible, confine, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fixture, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. See Section 502 of the Clean Water Act.

PRETREATMENT PROGRAM: Allows municipal sewage treatment plants to set up a system where the plant receives wastewater from local industries and treats that waste. This allows for centralized treatment of wastes. The treatment plants require the local dischargers to meet certain standards of "pre-treatment" before discharging their waste it into their system.

REASONABLE POTENTIAL ANALYSIS: The statistical projection of whether a discharge is likely to violate water quality standards. This projection is based on a number of factors including quantity of data and available dilution.

STORMWATER: Runoff from rainfall, snow melt runoff and surface runoff and drainage. See 40 CFR 122.26(b)(13).

SPECIAL CONDITIONS: Requirements within a NPDES permit which are designed to provide an additional level of control (beyond effluent limits) for the reduction of pollution. Special conditions include pollution prevention requirements, Best Management Practices, additional monitoring requirements and pretreatment requirements.

TECHNOLOGY-BASED EFFLUENT LIMIT: A limit on permit discharges for a particular pollutant which is based on the capability of a treatment technology to reduce the pollutant to a certain concentration. (See effluent limitation guidelines)

TOTAL MAXIMUM DAILY LOAD: In short, a TMDL is a calculation and a plan: a calculation of the maximum amount of a pollutant that a river, lake or coastal water can receive before becoming unsafe and a plan to lower pollution to that identified safe level. In the legal sense, a TMDL is "[t]he sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background…" See 40 C.F.R. 130.2(i)

TRIENNIAL REVIEW: Clean Water Act regulations require that states review and provide public comment on their water quality standards every three years and submit all changes to EPA for approval.

VARIANCE: Allows a modification or waiver of the applicable effluent limitations requirements or timelines of the Clean Water Act. The provisions for variances are found under Sections 301 or 316 of the Act, in 40 CFR 125 or in the applicable effluent limitation guidelines.

WATER QUALITY-BASED EFFLUENT LIMIT (WQBEL): Used when a technology-based effluent limit has a reasonable potential to cause or contribute to a violation of water quality standards. The WQBEL is a value set by selecting the most stringent of effluent limits calculated using all applicable criteria for a specific point source to a specific receiving water for a specific pollutant.

WATER QUALITY CRITERIA: May be either numeric or narrative. Numeric criteria are scientifically derived limits set for a specific pollutant in order to protect human health or aquatic life (e.g., "Dissolved oxygen levels must be 5.0 ppm or higher). Narrative criteria are statements that describe the desired water quality goal (e.g., "Waters shall be free from floating debris").

WATER QUALITY STANDARD: Made up of the designated use of the waterbody, the numeric or narrative water quality criteria necessary to protect that use and the antidegradation policy used to keep clean waters clean. WQS take the form of laws or regulations, usually promulgated by the states.

WATERS OF THE UNITED STATES: All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. Waters of the United States include but are not limited to all interstate waters and intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds. See 40 CFR 122.2 for the regulatory definition.

WHOLE EFFLUENT TOXICITY (WET): The total combined toxic effect of an effluent measured directly with a toxicity test. Testing the effluent as a total package measures any toxic effects created by the combination of pollutants.

Appendix B - State NPDES Contacts

These contacts were current as of May 2002. For updates and changes, please visit River Network's searchable database of state Clean Water Act information at www.rivernetwork.org/cleanwater/cwa_search.asp.

ALABAMA
Truman Green (Municipal/Domestic), phone: (334) 271-7800, email: tgg@adem.state.al.us

Ed Hughes (Industrial), phone: (334) 271-7838, email: ekh@adem.state.al.us

Richard Hulcher (Mining/Construction), phone: (334) 394-4309, email: rfh@adem.state.al.us

ALASKA
Alaska is not delegated permit authority. The Alaska contact is Pete McGee, phone: (907) 451-2101, email: pmcgee@envircon.state.ak.us.

ARIZONA
Arizona is not delegated permit authority. The Arizona contact is Chris Varga, phone: (602) 207-4665, email: varga.chris@ev.state.az.us

ARKANSAS
Marysia Jastrzebski, phone: (501) 682-0629, email: marysia@adeq.state.ar.us

CALIFORNIA
John Youngerman, phone: (916) 341-5501, email: younj@dwq.swrcb.ca.gov

COLORADO
Susan Nachtrieb, phone: (303) 692-3510, email: susan.nachtrieb@state.co.us

CONNECTICUT
Richard Mason, phone: (860) 424-3804, email: richard.mason@po.state.ct.us

DELAWARE
Peder Hansen, phone: (302) 739-5731, email: phansen@state.de.us

DISTRICT OF COLUMBIA
The District of Columbia is not delegated permit authority. The District contact is William Ruby, phone: (202) 535-2193, email: William.Ruby@dc.gov. The U.S. EPA contact is Joseph Piotrowski, phone: (215) 814-5730.

FLORIDA
John Coates (Wastewater), phone: (850) 921-9468, email: john.coates@dep.state.fl.us

GEORGIA
David Bullard (Municipal), phone: (404) 362-2680, email: david_bullard@mail.dnr.state.ga.us

Mike Creason (Industrial), phone: (404) 362-2680, email: mike_creason@mail.dnr.state.ga.us

HAWAII
Denis Lau, phone: (808) 586-4309, email: dlau@eha.health.state.hi.us

IDAHO
Rick Huddleston, phone: (208) 373-0561, email: rhuddleston@deq.state.id.us

ILLINOIS
Tom McSwiggin, Bureau of Water, phone: (217) 782-0610, email: epa1239@epa.state.il.us

INDIANA
Catherine Hess (Municipal), phone: (317) 232-8704, email: chess@dem.state.in.us

Steve Roush (Industrial), phone: (317) 232-8706, email: sroush@dem.state.in.us

IOWA
Wayne Farrand, phone: (515) 281-8877, email: wayne.farrand@dnr.state.ia.us

KANSAS
Rod Geisler (Municipal), phone: (785) 296-5527, email: rgeisler@kdhe.state.ks.us

Don Carlson (Industrial), phone: (785) 296-5547, email: dcarlson@kdhe.state.ks.us

KENTUCKY
Bruce Scott, phone: (502) 564-3410 ext. 437, email: bruce.scott@mail.state.ky.us

LOUISIANA
Tom Killeen, phone: (225) 765-0508, email: tom_k@deq.state.la.us

MAINE
Brian Kavanah, phone: (207) 287-7700,
email: Brian.W.Kavanah@state.me.us

MARYLAND
Jim Dieter, phone: (410) 631-3619,
email: jdieter@mde.state.md.us

MASSACHUSETTS
Paul Hogan, phone: (508) 767-2796,
email: paul.hogan@state.ma.us

MICHIGAN
William McCracken, phone: (517) 335-4114,
email: mccrackw@state.mi.us

MINNESOTA
Charlotte Morrison, phone: (651) 296-7229,
email: charlotte.morrison@pca.state.mn.us

MISSISSIPPI
Jerry Cain, phone: (601) 961-5073,
email: jerry_cain@deq.state.ms.us

MISSOURI
Phil Shroeder, phone: (573) 751-6825,
email: nrschrp@mail.dnr.state.mo.us

MONTANA
Bonnie Lovelace, phone: (406) 444-4969,
email: blovelace@state.mt.us

NEBRASKA
Rick Bay, phone: (402) 471-4200,
email: deq017@mail.deq.state.ne.us

NEVADA
Jon Palm, phone: (775) 687-4670 x3050,
email: jpalm@govmail.state.nv.us

NEW HAMPSHIRE
New Hampshire is not delegated permit authority. The New Hampshire contact is George Berlandi, phone: (603) 271-2458, email: gberlandi@des.state.nh.us. The U.S. EPA contact is Fred Gay, phone: (617) 918-1297.

NEW JERSEY
Narinder Ahuja, phone: (609) 292-4543,
email: nahuja@dep.state.nj.us

NEW MEXICO
New Mexico is not delegated permit authority. The New Mexico contact is Glen Saums, phone: (505) 827-2827, email: glen_saums@nmenv.state.nm.us. The U.S. EPA contact is Jane Watson, phone: (214) 665-7180, email: watson.jane@epa.gov.

NEW YORK
Warren Lavery, phone: (518) 402-8110,
email: wtlavery@gw.dec.state.ny.us

NORTH CAROLINA
Dave Goodrich, phone: (919) 733-5083 ext. 517,
email: dave.goodrich@ncmail.net

NORTH DAKOTA
Gary Bracht, phone: (701) 328-5227,
email: gbracht@state.nd.us

OHIO
Jennifer Leshnock (Municipal), phone: (614) 644-2022, email: jennifer.leshnock@epa.state.oh.us

Mark Mann (Industrial), phone: (614) 644-2023,
email: mark.mann@epa.state.oh.us

OKLAHOMA
Jon Craig, phone: (405) 702-8100,
email: Jon.Craig@deqmail.state.ok.us

OREGON
Mike Kortenhof, phone: (503) 229-6066,
email: kortenhof.mike@deq.state.or.us

PENNSYLVANIA
R.B. Patel, phone: (717) 787-8184,
email: rbpatel@state.pa.us

RHODE ISLAND
Eric Beck, phone: (401) 222-4700 x7202,
email: ebeck@dem.state.ri.us

SOUTH CAROLINA
Marion Sadler, phone: (803) 898-4167,
email: sadlermf@columb32.dhec.state.sc.us

SOUTH DAKOTA
Lonnie Steinke, phone: (605) 773-3351,
email: lonnies@denr.state.sd.us

TENNESSEE
Saya Qualls, phone: (615) 532-0652,
email: squalls@mail.state.tn.us

TEXAS
L'oreal Stepney, phone: (512) 239-1321,
email: lstepney@tnrcc.state.tx.us

UTAH
Gayle Smith, phone: (801) 538-6779,
email: gsmith@deq.state.ut.us

VERMONT
Marilyn Davis, phone: (802) 241-3822,
email: marilynd@dec.anr.state.vt.us

VIRGINIA
Dale Phillips, phone: (804) 698-4077,
email: mdphillips@deq.state.va.us

WASHINGTON
Gary Bailey, phone: (360) 407-6433,
email: gbai461@ecy.wa.gov

WEST VIRGINIA
Anne Howell, phone: (304) 759-0530,
email: ahowell@mail.dep.state.wv.us

WISCONSIN
Duane Schuettpelz, phone: (608) 266-0156,
email: schued@dnr.state.wi.us

WYOMING
Todd Parfitt, phone: (307) 777-7092,
email: tparfi@state.wy.us

Appendix C - NPDES Permit Resources

Handbooks, regulations and other materials

- *The Code of Federal Regulations*. The easiest place to look for the citations in this guide or to read up on other regulations is the searchable CFR site at: www.access.gpo.gov/nara/cfr/index.html
- *USEPA Permit Writers' Manual*. On-line access to USEPA Permit Writers' Manual (EPA 833-B-96-003, which can be ordered for free at 1-800-490-9198); a great resource for those interested in water pollution permits from a more advanced technical and policy level. Find it at www.epa.gov/own/permits/pwcourse/manual.htm.
- *Water Pollution Permitting 101*. This paper presents a brief history and introduction to the national water pollution control permitting program as administered by the U.S. Environmental Protection Agency (EPA) and provides an overview of the permitting activities implemented through the NPDES program today. Find it at www.epa.gov/owm/permits/pwcourse/101pape/htm.
- *The Clean Water Act: An Owner's Manual*. River Network, 1999. A great general guide for citizens who want to learn more about how permitting fits into the whole slew of protections under the Clean Water Act. Available through River Network at www.rivernetwork.org.
- *The Clean Water Act 20 Years Later*. Robert W. Adler et al., 1993. A look at the successes of 20 years of the Act and the challenges of the future. Contact the Natural Resources Defense Council at: (202) 289-6868.
- *Clean Water Report Card*. Environmental Working Group's report on expired NPDES permits. The report found that all 6,700 Clean Water Act National Pollution Discharge Elimination System (NPDES) permits for major facilities shows that in 12 states more than half of all water pollution permits for major polluters are expired. More than one third of all permits are expired in 17 states, and in 44 states and the District of Columbia more than 10% are expired. The report includes state specific information…check out what's going on in your own state! Find it at: www.ewg.org/pub/home/reports/reportcard/home.html.

U.S. Enviromental Protection Agency Websites

- **EPA's NPDES site** at www.epa.gov/owm/npdes.htm. Includes proposed and final rules, fact sheets, links to lots of publications, information on certain types of permits (e.g., factory farm, combined sewer overflows, coalmining), state and regional permit contact lists and more.
- **Permit Compliance System** at www.epa.gov/enviro/html/pcs/pcs_query_java.html. The Permit Compliance System (PCS) provides information on companies which have been issued permits to discharge wastewater into rivers. You can review information on when a permit was issued and expires, how much the company is permitted to discharge and the actual monitoring data showing what the company has discharged. The Water Discharge Permits Query Form allows you to retrieve selected data from the Permit Compliance System database in Envirofacts regarding facilities holding National Pollutant Discharge Elimination System permits. Specify the facilities by using a combination of facility name, geographic location, standard industrial classification and chemicals.
- **Envirofacts.** Single point of access to select U.S. environmental data; provides the public with direct access to the wealth of information contained in the U.S. EPA's databases. Find it at: www.epa.gov/enviro/.
- **Envirofacts Water Program**. Find it at: www.epa.gov/enviro/html/water.html.

  (1a) **Water Discharge Permits query form**. Search the Permit Compliance System at: www.epa.gov/enviro/html/pcs/pcs_query_java.html.

  (1b) **PCS customized query engine**. This query allows you to select any data element in PCS to build a tabular report or a Comma Separated Value (CSV) file for downloading at: www.epa.gov/enviro/html/pcs/adhoc.html.

  (2) **Safe Drinking Water Information System**. Safe Drinking Water query form; search the SDWIS database at: www.epa.gov/enviro/html/sdwis/sdwis_query.html.

  (3) **National Drinking Water Contaminant Occurance database**. The purpose of this database is to support U.S. EPA's decisions related to identifying contaminants for regulation and subsequent regulation development; contains occurance data from both Public Water Systems (PWS) and other sources (like the USGS National Water Information System) on physical, chemical, microbial and radiological contaminants for both detections and non-detects. Find it at: www.epa.gov/ncod.

- **Surf Your Watershed** at www.epa.gov/surf. An interactive U.S. EPA service to help citizens locate, use and share environmental information about their local watershed.
- **EnviroMapper** at: www.epa.gov/enviro/html/em/index.html. EnviroMapper is an interactive mapping tool which includes information on drinking water, toxic and air releases, hazardous waste, water discharge permits and Superfund sites; allows users to zoom in to an area, or enter a state, county EPA's Envirofacts Warehouse; also links to text reports, with even more information.
- **EnviroMapper** for Watersheds 2.0 at: http://map2.epa.gov/enviromapper/. Specific EnviroMapper application for surface water information, particularly water quality conditions; very useful to inform public of water quality conditions in their area.
- **Locate Your Watershed** at: www.epa.gov/surf3/locate. Use your ZIP code, county name, city name, stream name or other information to determine the name and geographic extent of your watershed and access its *Watershed Profile*.
- **Index of Watershed Indicators** at: www.epa.gov/iwi. A compilation of information on the health of aquatic resources in the United States.
- **Watershed Information Network** at: www.epa.gov/win. A guide to information and services for protecting and restoring water resources.
- **Non-Point Source (NPS) Pollution**. Find EPA's general non-point information at: www.epa.gov/ow/nps. Or find all sorts of NPS documents at: www.epa.gov/owow/nps/pubs.html.

On-Line Maps

It is worthwhile to look up the specific location of a discharger to determine if there are important recreational or biological areas downstream, such as drinking water intakes, parks or other recreational areas, boat launches, swimming areas, etc.

- **EnviroMapper for Watersheds 2.0** at: http://map2.epa.gov/enviromapper/. See information in "U.S. Enviromental Protection Agency Websites"; general information about EnviroMapper is available at: www.epa.gov/enviro/html/em/index.html.
- **National Atlas** at: www.nationalatlas.gov.
- **MapQuest** at: www.mapquest.com.
- **Microsoft TerraServer** at: http://terraserver.microsoft.com. Provides access to detailed satellite topographic images.

Trainings

Trainings offer a great way to dive deeper into permits or to explore related areas such as water quality standards or Total Maximum Daily Load watershed cleanup plans.

- **River Network** and the **Clean Water Network** both offer a range of trainings and tools for water activists. Contact them at:

  RIVER NETWORK
  520 SW Sixth Avenue, Suite 1130
  Portland, Oregon 97204-1511
  tel: (503) 241-3506
  E-mail: info@rivernetwork.org
  www.rivernetwork.org

  CLEAN WATER NETWORK
  1200 New York Ave. N.W., Suite 400
  Washington D.C. 20005
  tel:(203) 289-2395
  Merritt Frey, tel:(208) 345-7776
  E-mail: mkfrey@mindspring.com
  www.cwn.org

- **EPA's Permit Writers' Trainings**. This 5-day course is, unfortunately, hard for the public to get into. Five days is a lot for a citizen to invest as well. However, if you are really gung-ho, it is worth asking about, as the materials and in-depth nature of the class really allows you to get into the meat of the thing. Find the details at: www.epa.gov/owm.npdesup.htm.
- **Water Environment Federation**. U.S. EPA and WEF have joined together to present a two-day workshop for everyone interested in NPDES permits. This workshop is intended to assist applicants prepare more thorough applications and understand how they can participate in the process. The workshop presents an overview of the NPDES program, along with exercises to help complete an NPDES application. The two-day course consists of both lecture and exercises analyzing a sample application with supplemental information as a model. Fee: $277. Find the details at: www.wef.org/ConferencesWorkshop_Semin/NPDES_course.jhtml.