CET Engineering Services
Technical Bulletin
November 2007

Lower Delaware River Basin Special Protection Waters

Introduction

The Delaware River Basin Commission (DRBC) proposed amendments to its Water Quality Regulations, Water Code and Comprehensive Plan to classify the Lower Delaware River as Special Protection Waters (SPW) in the *Pennsylvania Bulletin* on October 13, 2007. This technical bulletin is provided as a summary review of the proposed amendments and a reminder that a public hearing will be held on December 4, 2007 at the DRBC office building, located at 25 State Police Drive, West Trenton, NJ and final comments on the proposed amendments are due by the close of business on December 6, 2007.

Written comments may be submitted by email to paula.schmitt@drbc.state.nj.us; by fax to the DRBC Secretary at (609) 883-9522; by USPS to the DRBC Secretary, P.O. Box 7360, West Trenton, NJ 08628-0360; or by overnight mail to the DRBC Secretary, 25 State Police Drive, West Trenton, NJ 08628-0360. More detailed information may be found at the DRBC website at: http://www.state.nj.us/drbc/drbc.htm.

Background

The DRBC adopted SPW regulations in 1992, which are designed to protect the existing high water quality in applicable areas of the Delaware River Basin considered to have "exceptionally high scenic, recreational, ecological and/or water supply values." The initial SPW regulations apply to a 121-mile length of the Delaware River from Hancock, NY downstream to the Delaware Water Gap.

In 2005, the DRBC temporarily designated a 76-mile length of the Delaware River from the Delaware Water Gap National Recreation Area to the head of the tide at Trenton, NJ based on water quality data collected from 2000 through 2004. This temporary classification was first extended to September 26, 2005, subsequently to September 26, 2006 and September 26, 2007, and finally to May 15, 2008 to allow adequate time for the rulemaking and public comment process to occur.

Summary of Amendments

Numeric values for 20 parameters are proposed to define water quality at 24 control points in the Lower Delaware River. The parameters include:

Alkalinity	Nitrate Nitrogen
Ammonia Nitrogen	Orthophosphate
Chloride	pH
Chlorophyll-a	Specific Conductance
Dissolved Oxygen	Total Dissolved Solids
Dissolved Oxygen Saturation	Total Kjeldahl Nitrogen
E. coli	Total Nitrogen
Enterococcus	Total Phosphorus
Fecal Coliform	Total Suspended Solids
Hardness	Turbidity

Direct-discharge facilities to SPW, whether they are new facilities or upgraded facilities in the Lower Delaware drainage area, will be required for the first time to demonstrate that the new or increased discharges will cause no measurable degradation of existing water quality at the proposed 24 water quality control points. The "no measurable change" requirement applies whether a project discharges directly to the main stem or to a tributary.

For existing facilities discharging to SPW, only substantial additions or alterations will trigger the requirements for project approval, which include:

(1) Evaluation of all non-discharge load reduction alternatives and subsequent rejection of the alternatives because of technical or financial feasibility.

(2) Demonstration of the technical and/or financial infeasibility of using natural wastewater treatment technologies for all or a portion of the incremental load.

(3) Demonstration that the project is in the public interest.

(4) Use of Best Demonstrable Technology (BDT) for minimum treatment.

Substantial additions or alterations are defined in the proposed amendments as those additions and alterations resulting in:

(1) A complete upgrade of an existing wastewater treatment plant, including substantial replacement or rehabilitation of the existing processes or major physical structures such as headworks, settling tanks, biological/chemical treatment or filtration tanks, whether conducted as a single or multiple phased project.

(2) An increase in flow or loading from an existing wastewater treatment plant that is not contained in an NPDES permit effective on the date of SPW designation.

Alterations limited to changes in the method of disinfection and/or nutrient removal treatment additions are not deemed to be substantial additions or alterations.

BDT is defined in the current regulations as the following 30-day average effluent criteria:

Ammonia Nitrogen (NH3-N)	1.5 mg/L or less
$CBOD_5$	10 mg/L or less
Dissolved Oxygen (DO)	6.0 mg/L or greater
Fecal Coliform	50/100 mL or less
Total Nitrogen (TN)	10 mg/L or less
Total Phosphorus (TP)	2.0 mg/L or less
Total Suspended Solids (TSS)	10 mg/L or less

DRBC also proposes to approve effluent trading between point sources within the same watershed or between the same interstate control points to achieve no measurable change to water quality.

Table 2 of the proposed amendments defines the existing water quality for each of the 24 control points established in the Lower Delaware River. A list of the 24 boundary (BCP) or interstate control points (ICP) follows:

Belvidere ICP
Bulls Island ICP
Bushkill Creek (PA)
Cooks Creek (PA)
Easton ICP
Lambertville ICP
Lehigh River (PA)
Lockatong Creek (NJ)
Martins Creek (NJ)
Milford ICP,
Musconetcong River (NJ)
Nishisakawick Creek (NJ)
Paulins Kill (NJ)
Paunacussing Creek (PA)
Pequest River (NJ)
Pidcock Creek (PA)
Pohatcong Creek (NJ)
Portland ICP
Riegelsville ICP
Tinicum Creek (PA)
Tohickon Creek (PA)
Trenton ICP
Washington Crossing ICP
Wickecheoke Creek (NJ)

Written by Judy F. Musselman, QEP, Senior Environmental Scientist with CET Engineering Services

At Your Service

To better serve you, CET endeavors to keep its mailing list as up to date as possible. Please contact Cindy Heisler at 1-800-238-3644 or cheisler@cet-inc.com about a change of address or other corrections that should be made to our mailing list. Or, visit our web site, www.cet-inc.com, and click on "Press Room" to update your contact information. Thank you.

CET Engineering Services is part of Commonwealth Engineering & Technology Inc., an environmental engineering firm providing its services to guide your project from planning through operation. CET is composed of professional engineers, environmental scientists, planners and infrastructure management consultants.
For more information about CET, call us at 1-800-CET-ENGG (1-800-238-3644) or visit us at www.cet-inc.com.
Published by CET Engineering Services, Raymond H. Myers, P.E., Editor, rmyers@cet-inc.com.

Copyright © 2007 by Commonwealth Engineering & Technology, Inc. T/A CET Engineering Services. All Rights Reserved.