

National Pollutant Discharge Elimination System (NPDES) Permit Program

F A C T S H E E T

Regarding a Modification to an NPDES Permit To Discharge to Waters of the State of Ohio
for the North Royalton B Wastewater Treatment Plant

Public Notice No.: 11-12-006
Public Notice Date: December 2, 2011
Comment Period Ends: January 2, 2012

OEPA Permit No.: 3PC00018*HD
Application No.: OH0026808

Name and Address of Applicant:

City of North Royalton
11675 Royalton Road
North Royalton, Ohio 44133

Name and Address of Facility Where
Discharge Occurs:

North Royalton B Wastewater Treatment Plant
11355 West Sprague Road
North Royalton, Ohio

Receiving Water: Baldwin Creek *via*
Unnamed tributary

Subsequent
Stream Network: East Branch Rocky River,
Rocky River, Lake Erie

Introduction

Development of a Fact Sheet for NPDES permits is mandated by Title 40 of the Code of Federal Regulations, Section 124.8 and 124.56. This document fulfills the requirements established in those regulations by providing the information necessary to inform the public of actions proposed by the Ohio Environmental Protection Agency, as well as the methods by which the public can participate in the process of finalizing those actions.

This Fact Sheet is prepared in order to document the technical basis and risk management decisions that are considered in the determination of water quality based NPDES Permit effluent limitations. The technical basis for the Fact Sheet may consist of evaluations of promulgated effluent guidelines, existing effluent quality, instream biological, chemical and physical conditions, and the relative risk of alternative effluent limitations. This Fact Sheet details the discretionary decision-making process empowered to the Director by the Clean Water Act and Ohio Water Pollution Control Law (ORC 6111). Decisions to award variances to Water Quality Standards or promulgated effluent guidelines for economic or technological reasons will also be justified in the Fact Sheet where necessary.

In accordance with the antidegradation rule, OAC 3745-1-05, the Director has determined that a lowering of water quality in Baldwin Creek is necessary. Provision (F)(2)(d) was applied to this application. This provision excludes the need for the submittal and subsequent review of technical alternatives and social and economic issues related to the degradation. Other rule provisions, however, including public participation and appropriate intergovernmental coordination were required and considered prior to reaching this decision.

Procedures for Participation in the Formulation of Final Determinations

The proposed modification is tentative but shall become final on the effective date unless (1) an adjudication hearing is requested, (2) the Director withdraws and revises the proposed modification after consideration of the record of a public meeting or written comments, or (3) upon disapproval by the Administrator of the U.S. Environmental Protection Agency.

Within thirty (30) days of publication of this notice, any person may submit written comments, a statement as to why the proposed modification should be changed, a request for a public meeting on the proposed modification and/or a request for notice of further actions concerning the modification. All communications timely received will be considered in the final formulation of the modification. If significant public interest is shown a public meeting will be held prior to finalization of the modification.

Within thirty (30) days of the issuance of the proposed modification any officer of an agency of the state or of a political subdivision, acting in his representative capacity or any person aggrieved or adversely affected by issuance of it may request an adjudication hearing by submitting a written objection in accordance with Ohio Revised Code Section 3745.07. Since all other conditions of the permit remain in effect, a hearing may not be requested on any issues other than the proposed modification. If an adjudication hearing is requested, the existing NPDES permit will remain in effect until the hearing is resolved. Following the finalization of the modification by the Director, any person who was a party to an adjudication hearing may appeal to the Environmental Review Appeals Commission.

Requests for public meetings shall be in writing and shall state the action of the Director objected to, the questions to be considered, and the reasons the action is contested. Such requests should be addressed to:

**Legal Records Section
Ohio Environmental Protection Agency
Lazarus Government Center
P.O. Box 1049
Columbus, Ohio 43216-1049**

Interested persons are invited to submit written comments upon the proposed modification. Comments should be submitted in person or by mail no later than 30 days after the date of this Public Notice. Deliver or mail all comments to:

**Ohio Environmental Protection Agency
Attention: Division of Surface Water
Permits and Compliance Section
Lazarus Government Center
P.O. Box 1049
Columbus, Ohio 43216-1049**

The OEPA permit number and Public Notice numbers should appear on each page of any submitted comments. All comments received no later than 30 days after the date of the Public Notice will be considered.

Citizens may conduct file reviews regarding specific companies or sites. Appointments are necessary to conduct file reviews, because requests to review files have increased dramatically in recent years. The first 250 pages copied are free. For requests to copy more than 250 pages, there is a five-cent charge for each page copied. Payment is required by check or money order, made payable to Treasurer State of Ohio.

For additional information about this fact sheet or the draft permit, contact Erm Gomes, (330) 963-1196, Erm.Gomes@epa.ohio.gov.

Location of Discharge/Receiving Water Use Classification

The North Royalton B wastewater treatment plant discharges at River Mile (RM) 0.20 to an unnamed tributary of Baldwin Creek (RM 7.10). Figure 1 shows the approximate location of the facility.

This segment of the Baldwin Creek is described by Ohio EPA River Code: 13-101, County: Cuyahoga, Ecoregion: Erie Drift Plain. Baldwin Creek is designated for the following uses under Ohio's Water Quality Standards (OAC 3745-1-20): Warmwater Habitat (WWH), Agricultural Water Supply (AWS), Industrial Water Supply (IWS), Class B Primary Contact Recreation (PCR), and State Resource Water (SRW).

Facility Description

The North Royalton B wastewater treatment plant has an average daily design flow of 1.0 MGD (million gallons per day). Wet stream processes are influent pumping, flow equalization, screening and grit removal, activated sludge aeration – extended aeration, phosphorus removal by chemical addition, final clarification, chlorination and dechlorination. Sludge is transferred to the North Royalton Regional Composting Facility for processing and disposal by distribution and marketing.

The North Royalton B plant has separate sanitary and storm sewers and treats primarily domestic wastewater.

Description of Existing Discharge

Table 1 presents a summary of unaltered Discharge Monitoring Report (DMR) data for outfall 3PC00018001. Data are presented for the period October 2006 through September 2011.

Basis of the Modification

The City of North Royalton has applied for coverage under the general mercury variance, Rule 3745-33-07(D)(10) of the Ohio Administrative Code. Based on the results of low-level mercury monitoring, the permittee has determined that its wastewater treatment plant cannot meet the 30-day average water quality based effluent limit (WQBEL) of 1.3 nanograms per liter (ng/l). However, the permittee believes that the plant will be able to achieve an annual average mercury effluent concentration of 12 ng/l. The variance application also demonstrated to the satisfaction of Ohio EPA that there is no readily apparent means of complying with the WQBEL without constructing prohibitively expensive end-of-pipe controls for mercury. Based on these factors, the permittee is eligible for coverage under the general mercury variance.

Ohio EPA has reviewed the mercury variance application and has determined that it meets the requirements of the Ohio Administrative Code. As a result, Ohio EPA is proposing a modification to the NPDES permit. Mercury variance provisions are being added as Items S, T and U Part II of the NPDES permit. The following requirements have been included in the draft modification:

- A variance-based monthly average effluent limit of 2.79 ng/l, which was developed from sampling data submitted by the permittee;
- A requirement that the permittee make reasonable progress to meet the water-quality-based effluent limit for mercury by implementing the plan of study, which has been developed as part of the Pollutant Minimization Program (PMP);
- Low-level mercury monitoring of the plant's influent and effluent;
- A requirement that the annual average mercury effluent concentration is less than or equal to 12 ng/l as specified in the plan of study;
- A summary of the elements of the plan of study;

- A requirement to submit an annual report on implementation of the PMP; and
- A requirement for submittal of a certification stating that all permit conditions related to implementing the plan of study and the PMP have been satisfied, but that compliance with the monthly average water quality based effluent limit for mercury has not been achieved.

Other Changes

Final Outfall 001

Mass loading limits were added for mercury. Sampling types for several parameters were changed from “Composite” to 24-hour Composite”.

SSO Station 300

Reporting requirements for Flow Rate, Bypass Occurrence and Bypass Duration were replaced by Overflow Occurrence. Appropriate foot notes were added to the table.

Sludge Station 588

The foot notes were updated.

Influent Station 601

Added quarterly low-level mercury monitoring. Sampling types for several parameters were changed from “Composite” to 24-hour Composite”.

Part II, Other Requirements

- Item A was updated to include current operator certification and minimum staffing requirements.
- In Item E, several revisions were made to the SSO reporting conditions to reflect current requirements.

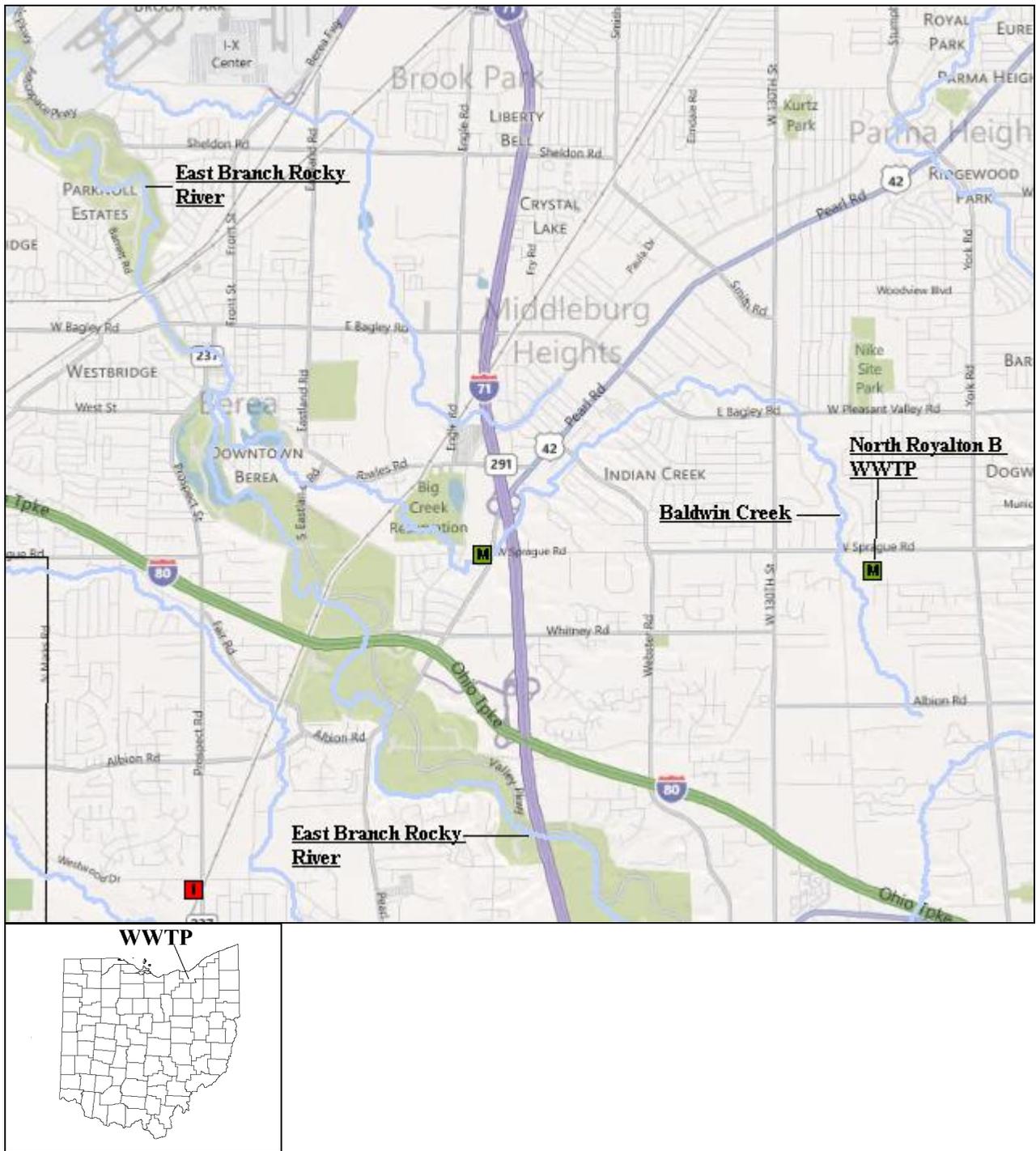


Figure 1. Location of the North Royalton B wastewater treatment plant.

Table 1. Effluent Characterization Using Self-Monitoring Data

Summary of unaltered discharge monitoring report data for North Royalton B outfall 3PC00018001 (October 2006 – September 2011). All values are based on annual records unless otherwise indicated.

| Parameter | Season | Units | # Obs. | Percentiles | | Data Range |
|--------------------------------------|--------|----------|--------|------------------|------------------|------------|
| | | | | 50 th | 95 th | |
| Water Temperature | Annual | C | 1826 | 16.6 | 22.7 | 8.3-24.5 |
| Dissolved Oxygen | Summer | mg/l | 920 | 7.9 | 8.7 | 6.2-9.4 |
| Dissolved Oxygen | Winter | mg/l | 906 | 8.8 | 9.9 | 6.1-11 |
| Total Suspended Solids | Annual | mg/l | 789 | 4 | 9 | 0-24 |
| Oil and Grease, Total | Annual | mg/l | 11 | 0 | 6.68 | 0-6.93 |
| Oil and Grease, Hexane | Annual | mg/l | 50 | 0 | 6.16 | 0-10 |
| Nitrogen, Ammonia (NH ₃) | Summer | mg/l | 398 | 0 | 0.442 | 0-1.62 |
| Nitrogen, Ammonia (NH ₃) | Winter | mg/l | 394 | 0 | 0.234 | 0-2.28 |
| Nitrogen Kjeldahl, Total | Annual | mg/l | 60 | 1.3 | 3.37 | 0.4-17.7 |
| Nitrite Plus Nitrate, Total | Annual | mg/l | 60 | 15.1 | 22.7 | 0-25.7 |
| Phosphorus, Total (P) | Annual | mg/l | 196 | 0.266 | 0.512 | 0.08-0.934 |
| Nickel, Total Recoverable | Annual | ug/l | 13 | 0 | 11.3 | 0-11.4 |
| Zinc, Total Recoverable | Annual | ug/l | 15 | 35.4 | 73.2 | 16.9-83 |
| Cadmium, Total Recoverable | Annual | ug/l | 13 | 0 | 0 | 0-0 |
| Lead, Total Recoverable | Annual | ug/l | 27 | 0 | 0 | 0-60.4 |
| Chromium, Total Recoverable | Annual | ug/l | 13 | 0 | 3.49 | 0-8.72 |
| Copper, Total Recoverable | Annual | ug/l | 27 | 12.1 | 18 | 0-23.9 |
| Chromium, Dissolved Hexavalent | Annual | ug/l | 13 | 0 | 0 | 0-0 |
| Fecal Coliform | Annual | #/100 ml | 401 | 21 | 89 | 1-5500 |
| Flow Rate | Summer | MGD | 920 | 0.466 | 1.08 | 0.115-2.41 |
| Flow Rate | Winter | MGD | 906 | 0.6 | 1.76 | 0.253-3.12 |
| Flow Rate | Annual | MGD | 1826 | 0.519 | 1.49 | 0.115-3.12 |
| Chlorine, Total Residual | Annual | mg/l | 919 | 0 | 0.02 | 0-0.33 |
| Mercury, Total (Low Level) | Annual | ng/l | 20 | 1.5 | 3 | 0.53-3.68 |
| pH, Maximum | Annual | S.U. | 1826 | 7.3 | 7.6 | 6.6-7.9 |
| pH, Minimum | Annual | S.U. | 1826 | 7.2 | 7.5 | 6.5-7.9 |
| CBOD 5 day | Summer | mg/l | 377 | 0 | 3.6 | 0-9.5 |
| CBOD 5 day | Winter | mg/l | 378 | 0 | 3.33 | 0-5.3 |

Table 2. Modified final effluent limits and monitoring requirements for North Royalton B outfall 3PC00018001 and the basis for their recommendation.

| Parameter | Units | Effluent Limits | | | | Basis ^b |
|-------------|-------|-----------------|-------------------|-------------------------------|---------------|--------------------|
| | | Concentration | | Loading (kg/day) ^a | | |
| | | 30 Day Average | Daily Maximum | 30 Day Average | Daily Maximum | |
| Mercury, T. | ng/l | 2.79 | 1700 ^c | 0.000011 | 0.00644 | VAR |

^a Effluent loadings based on average design discharge flow of 1.0 MGD.

^b Definitions: VAR = General mercury variance, Rule 3745-33-07(D)(10) of the Ohio Administrative Code

^c No change from current permit.