

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 Gibsonburg Wastewater Treatment Plant

Public Notice No.: 10-10-021  
Public Notice Date: October 12, 2010  
Comment Period Ends: November 10, 2010

OEPA Permit No.: 2PA00005\*GD  
Application No.: OH0029122

Name and Address of Applicant:

Village of Gibsonburg  
120 North Main Street  
Gibsonburg, Ohio 43431

Name and Address of Facility Where  
Discharge Occurs:

Gibsonburg Wastewater Treatment Plant  
225 West Cedar Street  
Gibsonburg, Ohio

Receiving Water: Hurlbut Ditch and  
State Route 300 Ditch

Subsequent  
Stream Network: Wolf Creek, Portage 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 Hurlbut Ditch, State Route 300 Ditch and Wolf 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 Mary Beth Cohen, (419) 373-3014, [Mary.Cohen@epa.ohio.gov](mailto:Mary.Cohen@epa.ohio.gov).

## Location of Discharge/Receiving Water Use Classification

The Gibsonburg wastewater treatment plant discharges to Hurlbut Ditch and State Route 300 Ditch, which enter Wolf Creek at approximately River Mile (RM) 14.4. Figure 1 shows the approximate location of the facility.

Hurlbut Ditch and State Route 300 Ditch are not named streams in Ohio's water quality standards. This segment of Wolf Creek is described by Ohio EPA River Code: 16-005, County: Sandusky, Ecoregion: Huron/Erie Lake Plains. Wolf Creek is designated for the following uses under Ohio's Water Quality Standards (OAC 3745-1-23): Warmwater Habitat (WWH), Agricultural Water Supply (AWS), Industrial Water Supply (IWS), and Class B Primary Contact Recreation (PCR).

## Facility Description

The Gibsonburg wastewater treatment plant has an average daily design flow of 0.50 MGD (million gallons per day). Wet stream processes are comminution and bar screening, flow equalization, activated sludge aeration (oxidation ditches), final clarification, chlorination and dechlorination. Solid stream processes are aerobic digestion, dewatering using sludge drying beds or a belt filter press, with disposal of stabilized sludge either at a landfill or by land application at agronomic rates.

Gibsonburg's collection system is a combination of separate sanitary sewers and combined sewers. Currently, three combined sewer overflows (CSO) are regulated under the NPDES permit, but one of these, station 002, has been eliminated. The current permit includes a schedule of compliance to implement its approved long-term CSO control plan.

## Description of Existing Discharge

Table 1 presents a summary of unaltered Discharge Monitoring Report (DMR) data for outfall 2PA00005001. Data are presented for the period August 2005 through July 2010.

## Basis of the Modification

The Village of Gibsonburg 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 X, Y and Z in Part II of the NPDES permit. The following requirements have been included in the draft modification:

- A variance-based monthly average effluent limit of 5.8 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

#### *Escherichia coli Monitoring*

Limits for *E. coli* have replaced fecal coliform limits at the final outfall, station 001. Monitoring for *E. coli* has been added to the two downstream monitoring stations, 901 and 902, replacing fecal coliform, which is in the current permit.

#### *Sanitary Sewer Overflow (SSO) Monitoring and Reporting – Station 300 and Part II, Item G*

The parameters flow rate, bypass occurrence and bypass duration were deleted from the Station 300 table and were replaced the parameter Overflow Occurrence. The total number of SSOs occurring on the Gibsonburg collection system must be reported each month. The foot note for Station 300 was revised to read, “All sanitary sewer overflows are prohibited.” This is consistent with current regulations.

In Part II, Item G, the first paragraph was revised to read, “All sanitary sewer overflows are prohibited.”, and paragraph 1.a was revised to require reporting within 24 hours of leaning of an SSO.

#### *Operator Certification and Minimum Staffing*

Updated operator certification requirements have been included in Part II, Item A of the permit to be consistent with rules adopted in December 2006. These rules require the Ashtabula wastewater treatment plant to have a Class I operator in charge of the sewage treatment plant operations discharging through outfall 001 .

#### *Operator of Record*

In December 2006, Ohio Administrative Code rule revisions became effective that affect the requirements for certified operators for sewage collection systems and treatment works regulated under NPDES permits. Part II, Item A of this NPDES permit has been updated to be consistent with rule 3745-7-02 of the Ohio Administrative Code (OAC). It requires the permittee to designate one or more operator of record to oversee the technical operation of the treatment works.



Figure 1. Location of the Gibsonburg wastewater treatment plant.

**Table 1. Effluent Characterization Using Self-Monitoring Data**

Summary of unaltered discharge monitoring report data for Gibsonburg outfall 2PA00005001 (August 2005 through July 2010). All values are based on annual records unless otherwise indicated.

Parameter	Season	Units	# Obs.	Percentiles		Data Range
				50 <sup>th</sup>	95 <sup>th</sup>	
Water Temperature	Annual	C	1250	15.8	25	4.3-32.8
Total Precipitation	Annual	Inches	1126	0	0.7	0-5
Dissolved Oxygen	Summer	mg/l	639	7.05	8.25	0-9.21
Dissolved Oxygen	Winter	mg/l	612	8.52	10.3	5.02-12.1
pH	Annual	S.U.	1250	7.73	8.08	7.11-8.21
Total Suspended Solids	Annual	mg/l	480	5	15	0.67-40.5
Oil and Grease, Hexane	Annual	mg/l	23	0	0	0-0
Oil and Grease, Freon	Annual	mg/l	37	0	0	0-0
Nitrogen, Ammonia (NH3)	Summer	mg/l	239	0.2	8.1	0.01-25
Nitrogen, Ammonia (NH3)	Winter	mg/l	238	0.1	1.53	0.1-9
Nitrite Plus Nitrate, Total	Annual	mg/l	60	7.04	20.1	0-23.8
Phosphorus, Total (P)	Annual	mg/l	60	7.67	21.5	2.26-24.2
Cyanide, Free	Annual	mg/l	20	0	0.0053	0-0.011
Nickel, Total Recoverable	Annual	ug/l	20	0	0.2	0-4
Zinc, Total Recoverable	Annual	ug/l	20	65.5	207	31-226
Cadmium, Total Recoverable	Annual	ug/l	20	0	0	0-0
Lead, Total Recoverable	Annual	ug/l	20	0	0	0-0
Chromium, Total Recoverable	Annual	ug/l	20	0	0	0-0
Copper, Total Recoverable	Annual	ug/l	20	7.5	13.2	4-16
Chromium, Dissolved Hexavalent	Annual	ug/l	20	0	0	0-0
Fecal Coliform	Annual	#/100 ml	239	1	1710	1-10000
Flow Rate	Summer	MGD	920	0.415	0.615	0.123-0.777
Flow Rate	Winter	MGD	906	0.524	0.63	0.139-1.13
Flow Rate	Annual	MGD	1826	0.489	0.622	0.123-1.13
Chlorine, Total Residual	Annual	mg/l	638	0	0.00001	0-0.00001
Mercury, Total (Low Level)	Annual	ng/l	20	2.08	22.3	0.838-278
CBOD 5 day	Summer	mg/l	240	2.49	5.77	0.19-7.1
CBOD 5 day	Winter	mg/l	240	1.68	3.83	0.35-138

**Table 2. Modified final effluent limits and monitoring requirements for Gibsonburg outfall 2PA00005001 and the basis for their recommendation.**

Parameter	Units	Effluent Limits				Basis <sup>b</sup>
		Concentration		Loading (kg/day) <sup>a</sup>		
		30 Day Average	Daily Maximum	30 Day Average	Daily Maximum	
<i>E. coli</i> Summer Only	#/100ml	161	362 <sup>c</sup>	--	--	WQS
Mercury, T.	ng/l	5.8	1700 <sup>d</sup>	0.000011	0.00322 <sup>d</sup>	VAR

<sup>a</sup> Effluent loadings based on average design discharge flow of 0.50 MGD.

<sup>b</sup> Definitions: VAR = General mercury variance, Rule 3745-33-07(D)(10) of the Ohio Administrative Code; WQS = Ohio Water Quality Standards (OAC 3745-1-07).

<sup>c</sup> Weekly average limit.

<sup>d</sup> No change from current permit.