



REGION 3

PHILADELPHIA, PA 19103

Report Title: Clean Water Act Compliance Inspection Report
Inspection Date(s): 09/22/2023
Regulatory Program(s): National Pollutant Discharge Elimination System (NPDES)
Type of Activity: NPDES Compliance Inspection
Site/Facility Name: Canaan Valley National Wildlife Refuge
Permittee: U.S. Fish and Wildlife Service
Site/Facility Operator: U.S. Fish and Wildlife Service
Site/Facility Address: 6263 Appalachian Hwy.
Davis, WV 26260
Latitude: 39.047309 **Longitude:** -79.444772
County/Parish: Tucker
Permit Numbers: WV0103110/WVG550918 and WV0078743/WVG990163
NAICS Code: 712190 **SIC:** 9512
Unique Project #: 3E23WN127A

Site/Facility Representatives:	Point of Contact
Matthew Boarman, Wildlife Refuge Specialist Phone: 304-815-3001 Email: matthew_boarman@fws.gov	X
Daryl Johnson, Engineering Equipment Operator Phone: 304-940-6889	
Caleb Stutler, Bio Tech Phone: 304-629-7622 Email: Enter email address	□

EPA Contractor Inspector:
Michael Prescott, PE, ABT Associates Consultant
Phone: 703-727-7517 Email: Mkprescott7@gmail.com

State/Local Inspector:
Levi Thurman, WVDEP Environmental Inspector
Phone: 304-822-7266 Email: levi.c.thurman@wv.gov

		11/21/23
Report Preparer	Michael Prescott, EPA Contractor Inspector	Date
Signature/Date	ABT Associates Consultant	
	MARK ZOLANDZ Digitally signed by MARK ZOLANDZ Date: 2023.11.21 11:49:29 -05'00'	11/21/2023
Supervisor	Mark Zolandz, Section Chief	Date
Signature/Date	NPDES Enforcement Section (3ED32)	

Unique Project #: 3E23WN127A

Table of Contents

<u>Section</u>		<u>Page</u>
I	Introduction.....	3
A	Inspection Opening Conference.....	3
	Weather and Precipitation	4
B	Conditions.....	4
C	Summary of the Facility.....	4
II	Site Activity.....	4
III	Records Review.....	5
IV	Observations.....	6
A	Domestic Sewage Permit.....	6
B	Vehicle Washing Permit.....	10
V	Closing Conference.....	12
VI	List of Attachments.....	12

Attachment 1: General Water Pollution Control Permits for Sewage Treatment and Disposal
and for Vehicle Washing

Attachment 2: Photograph Log

Attachment 3: Domestic Sewage System Diagram

Attachment 4: Electronic Discharge Monitoring Reports

I. Introduction

On September 22, 2023, an inspection team composed of a contractor for the U.S. Environmental Protection Agency (“EPA”) Region 3 and an inspector from the West Virginia Department of Environmental Protection (WVDEP) (hereinafter, “Inspection Team”) conducted a National Pollutant Discharge Elimination System (NPDES) Compliance Inspection of the Canaan Valley National Wildlife Refuge (NWR) facility (hereinafter, “the facility”). The purpose of the inspection was to observe compliance with the Clean Water Act (CWA) and to verify compliance with the facility’s National Pollutant Discharge Elimination System (NPDES) Permits: [General Permit No. WV0103110/ General Permit Registration No. WVG550918 (hereinafter, the “Domestic Sewage Permit”) and General Permit No. WV0078743/ General Permit Registration No. WVG990163 (hereinafter, the “Vehicle Washing Permit”)] and applicable State and Federal regulations.

A. Inspection Opening Conference

The Inspection Team arrived at the facility at about 9:30 AM for the inspection. The inspectors met with the following facility representatives:

Table 1: Inspection Attendee List

Name	Affiliation	Telephone	Email
EPA Region 3 Inspectors and Contractors			
Michael Prescott	Abt Associates Consultant	703-727-7517	Mkprescott7@gmail.com
Site/Facility Representatives			
Daryl Johnson	U.S. Fish and Wildlife Service	304-940-6889	
Caleb Stutler	U.S. Fish and Wildlife Service	304-629-7622	
State or County Representatives			
Levi Thurman	WVDEP	304-822-7266	levi.c.thurman@wv.gov

Michael Prescott displayed his credentials to Daryl Johnson and Caleb Stutler at the onset of the inspection, and explained the purpose of the inspection was to observe compliance with the facility’s two CWA NPDES Permits. Copies of the Permits are provided in Attachment 1. The Inspection Team informed Daryl Johnson and Caleb Stutler that any information that the Facility deemed to be confidential business information (“CBI”) should be identified to EPA representatives during the inspection and it would be handled as CBI according to EPA’s CBI procedures.

Mr. Boarman, the primary facility contact, was not available for the on-site inspection, but Mr. Prescott had phone calls (on 9/7/23 and 9/14/23) and exchanged emails with him prior to the inspection to obtain key information on the facility, important documents and records, and descriptions of the wastewater sources, treatment systems, and monitoring methods. Mr. Boarman had also instructed Mr. Johnson and Mr. Stutler on key aspects of the facility that would be inspected.

B. Weather and Precipitation Conditions

During the inspection, the weather was sunny and cool with no precipitation. National Oceanic and Atmospheric Administration (NOAA) National Weather Service precipitation data for the date of the inspection and 5 days prior are provided in the Table 2 below:

Table 2. Precipitation Data

Station Name	Date	Precipitation Amount (inches) ¹
Davis, WV	9/17/23	.37
Davis, WV	9/18/23	1.11
Davis, WV	9/19/23	.09
Davis, WV	9/20/23	0
Davis, WV	9/21/23	0
Davis, WV	9/22/23	0

C. Summary of the Facility

The facility is a National Wildlife Refuge operated by the U.S. Fish and Wildlife Service facility and includes a combination visitors center and office building recently completed in 2020, a separate maintenance building, and large open areas with some trails and wetlands.

II. Site Activity

The facility operates a visitors center for anyone interested in visiting the NWR and an office building which houses a small staff. A separate maintenance building is used for maintaining off road vehicles, tractors, and other equipment, as well as for maintaining facilities. Just outside this building is the vehicle washing area. There are also large open areas with some trails and wetlands for visitors, research, and preservation.

¹ Source: NOAA National Climatic Data Center (<http://www.ncdc.noaa.gov/>).

During the inspection, the Inspection Team observed all the above buildings and areas and the two wastewater treatment systems (WWTSs) for the discharges regulated by the two Permits. The observations from the inspection are described in detail below in the Observations section. Photographs were taken during the inspection by Michael Prescott, and are provided in the Photograph Log in Attachment 2.

The Domestic Sewage WWTS receives and treats wastewater generated by the visitors center and office building. The diagrams for the Domestic Sewage WWTS are shown in Attachment 3, and photographs of the Domestic Sewage WWTS are included in Attachment 2 and identified as Photos 1 - 6. Raw wastewater initially flows to two septic tanks, followed by a holding/dosing tank that pumps the wastewater to a constructed wetlands system unit. From the wetlands unit, the treated wastewater flows to the four UV disinfection units and then discharges to the polishing pond. The effluent from the pond then discharges to a natural wetlands.

The Vehicle Washing WWTS receives and treats wastewater generated by the washing of vehicles both inside and outside of the Maintenance Building. The photographs of the Vehicle Washing WWTS and the two sources of wastewater are included in Attachment 2 and identified as Photos 7 - 10. Wastewater from snow melt drainage from tractors and from an outside vehicle wash pad flow to a 3-chamber treatment tank with baffles to remove solids and oil. The effluent from the treatment tank is then pumped to the discharge point into a ditch.

After the inspection, Mr. Prescott followed up with Mr. George Wilfong, the consultant that does the sampling of the effluent from the WWTSs for CVNWR, to get information on his sampling and on-site analysis procedures and his duties as the licensed Wastewater Treatment Plant (WWTP) Operator. Mr. Prescott sent emails to Mr. Boarman on 10/2/23 and then Mr. Wilfong on 10/3/23 with specific questions. Mr. Prescott then had a phone call on 10/17/23 with Mr. Wilfong to get detailed answers to his questions.

III. Records Review

Prior to the inspection, Mr. Prescott obtained and reviewed documentation emailed from Mr. Boarman on September 7-8, 2023, including:

1. A diagram of the Domestic Sewage WWTS (see Attachment 3).
2. Electronic Discharge Monitoring Reports (DMRs) from the WVDEP online system for 8 quarters of the last 3 years. Note 3 of the 8 quarters showed no discharge (4Q21, 4Q22, and 2Q23) and there were 4 quarters missing (3Q20, 2Q21, 3Q21, and 3Q22) (see Attachment 4).
3. Photos of the Domestic Sewage WWTS and the facility in a PowerPoint File.

Copies of the Permits are provided in Attachment 1.

IV. Observations

The inspection observations below are made pursuant to the requirements of the Permit.

A. Domestic Sewage Permits No. WV0103110/WVG550918

Failure to Submit DMRs

Part B.1 of the Permit requires that the “Permittee shall submit electronically, each calendar quarter according to the enclosed format, a Discharge Monitoring Report (DMR) indicating in terms of concentration, and/or quantities, the values of the constituents analytically determined to be in the treatment facility effluent.”

Observation #1: The facility has not submitted DMRs as required by the Permit. Some DMRs have not been submitted and others have been submitted late, but the current facility representatives could not determine the submittal status for each of the DMRs. Mr. Boorman reported he obtained the DMRs that were sent to Mr. Prescott from the WVDEP website that accesses DMRs.

Prior to the inspection, the EPA Enforcement and Compliance History Online (ECHO) database showed failure to report for the previous 12 quarters of DMRs. According to Mr. Boorman and Mr. Wilfong, the lab that analyzes the samples inputs the results in the WVDEP DMR system, but the DMRs must be reviewed and signed off by someone from the facility and this has not been done or has been done late.

Failure to Comply with Permit Effluent Limits

Part A.3 of the Permit states, “Discharge Limitations and Monitoring Requirements - Treatment Category III - During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, permittees who have been assigned to Treatment Category III are authorized to discharge from the point source. The discharge shall comply with the following: (Summer Limitations are applicable May 1 - October 31 and Winter Limitations are applicable November 1 - April 30)”

Observation #2: The facility had 32 exceedances from 2020 to 2023 as shown in the Table 3. This includes exceedances in Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), fecal coliform, and flow.

Table 3. Exceedances

Monitoring Period Date	Outfall	Parameter Description	Statistical Base Type	DMR Value	DMR Value Unit	Limit Value	Limit Value Unit	% Exceedance
6/30/2020	001-B	BOD, 5-day, 20 deg. C	MO AVG	13	mg/L	5	mg/L	160
6/30/2020	001-B	BOD, 5-day, 20 deg. C	INST MAX	13	mg/L	12.5	mg/L	4
6/30/2020	001-B	BOD, 5-day, 20 deg. C	DAILY MX	13	mg/L	10	mg/L	30
6/30/2020	001-B	Solids, total suspended	DAILY MX	64	mg/L	60	mg/L	7
6/30/2020	001-B	Solids, total suspended	MO AVG	64	mg/L	30	mg/L	113
6/30/2020	001-B	Flow, in conduit or thru treatment plant	DAILY MX	0.00072	MGD	0.0004	MGD	80
9/30/2020	001-B	BOD, 5-day, 20 deg. C	DAILY MX	20.5	mg/L	10	mg/L	105
9/30/2020	001-B	BOD, 5-day, 20 deg. C	INST MAX	20.5	mg/L	12.5	mg/L	64
9/30/2020	001-B	BOD, 5-day, 20 deg. C	MO AVG	20.5	mg/L	5	mg/L	310
9/30/2020	001-B	Solids, total suspended	DAILY MX	68	mg/L	60	mg/L	13
9/30/2020	001-B	Solids, total suspended	MO AVG	68	mg/L	30	mg/L	127
9/30/2020	001-B	Flow, in conduit or thru treatment plant	DAILY MX	0.0007	MGD	0.0004	MGD	75
9/30/2020	001-B	Coliform, fecal general	DAILY MX	4000	#/100 mL	400	#/100 mL	900
9/30/2020	001-B	Coliform, fecal general	INST MAX	4000	#/100 mL	500	#/100 mL	700
9/30/2020	001-B	Coliform, fecal general	MO GEOMN	4000	#/100 mL	200	#/100 mL	1900
12/31/2020	001-B	BOD, 5-day, 20 deg. C	MO AVG	18.4	mg/L	10	mg/L	84

12/31/2020	001-B	Solids, total suspended	MO AVG	80	mg/L	30	mg/L	167
12/31/2020	001-B	Solids, total suspended	INST MAX	80	mg/L	75	mg/L	7
12/31/2020	001-B	Solids, total suspended	DAILY MX	80	mg/L	60	mg/L	33
12/31/2020	001-B	Flow, in conduit or thru treatment plant	DAILY MX	0.0036	MGD	0.0004	MGD	800
3/31/2021	001-B	BOD, 5-day, 20 deg. C	MO AVG	16.3	mg/L	10	mg/L	63
3/31/2021	001-B	Solids, total suspended	INST MAX	123	mg/L	75	mg/L	64
3/31/2021	001-B	Solids, total suspended	MO AVG	123	mg/L	30	mg/L	310
3/31/2021	001-B	Solids, total suspended	DAILY MX	123	mg/L	60	mg/L	105
3/31/2021	001-B	Flow, in conduit or thru treatment plant	DAILY MX	0.0028	MGD	0.0004	MGD	600
3/31/2022	001-B	Flow, in conduit or thru treatment plant	DAILY MX	0.00046	MGD	0.0004	MGD	15
6/30/2022	001-B	BOD, 5-day, 20 deg. C	DAILY MX	12.6	mg/L	10	mg/L	26
6/30/2022	001-B	BOD, 5-day, 20 deg. C	MO AVG	12.6	mg/L	5	mg/L	152
6/30/2022	001-B	BOD, 5-day, 20 deg. C	INST MAX	12.6	mg/L	12.5	mg/L	1
6/30/2022	001-B	Solids, total suspended	MO AVG	183	mg/L	30	mg/L	510
6/30/2022	001-B	Solids, total suspended	INST MAX	183	mg/L	75	mg/L	144
6/30/2022	001-B	Solids, total suspended	DAILY MX	183	mg/L	60	mg/L	205

Failure to Maintain Monitoring Records

Part Appendix A III.4 of the Permit states that, “Recording of Results- For each measurement or sample taken pursuant to the permit, the permittee shall record the following information. a) The date, exact place, and time of sampling or measurement; b) The date(s) analyses were performed; c) The individual(s) who performed the sampling or measurement; d) The individual(s) who performed the analyses; if a commercial laboratory

is used, the name and address of the laboratory; e) The analytical techniques or methods used, and f) The results of such analyses. Information not required by the DMR form is not to be submitted to this agency but is to be retained as required in III.6.”

Observation #3: A consultant, Mr. Wilfong, samples the effluent, but he does not provide records of the sampling. This consultant gets the sample bottles from the lab (Pace Analytical Services) that does the analyses and drops the samples off at a location in Davis where the lab picks it up for analysis. The facility also could not provide records from the lab with the details on the analyses and procedures, as required by the Permit.

Failure to Monitor Discharges Quarterly

Part A.3 of the Permit states that, “Discharge Limitations and Monitoring Requirements - Treatment Category III - During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, permittees who have been assigned to Treatment Category III are authorized to discharge from the point source. The discharge shall comply with the following: (Summer Limitations are applicable May 1 - October 31 and Winter Limitations are applicable November 1 - April 30).”

Observation #4: The consultant, Mr. Wilfong, that does the sampling for the DMRs reported he goes to the Facility to sample the effluent only on the days when the lab picks up samples in Davis, which occurs about every 2 weeks. According to Mr. Wilfong, most of the time when he goes to the Facility to sample, there is no flow because there is not much water usage by employees and visitors that discharges to the Domestic Sewage WWTS.

Mr. Wilfong reported he tries to get samples according to the lab pickup schedule, particularly later in the quarter. However, if there was no flow on the days he went to the facility to sample in a quarter, he reports no flow for the quarter, even if there is flow on another day in the quarter when he is not present. Examples of quarters when no flow was indicated included the DMRs for 4Q21, 4Q22, and 2Q23.

Failure to Prepare and Submit Annual Sludge Management Reports

Part C.4 – 6 of the Permit requires:

“4. The permittee shall monitor and report yearly on the enclosed Sludge Management Report form. See B.3 for submission requirements.

5. The permittee shall submit the Sewage Sludge Management Report form for each monitoring period listed below according to the following due dates:

<u>Monitoring Period</u>	<u>Sewage Sludge Management Report Due Date</u>
--------------------------	---

January 1 - December 31	January 20
-------------------------	------------

6. The permittee shall maintain all records and reports of all monitoring required by Section C of this permit for five (5) years after the date of monitoring or reporting. Records should include copies of all required reports; and records of all data used to complete these reports.”

Observation #5: The facility did not prepare and submit Annual Sludge Management Reports. In addition, the facility did not maintain records and reports related to sludge management. According to Mr. Boarman, the sludge in the Domestic Sewage WWTS is pumped out about every two years, but he did not have records for these events.

B. Vehicle Washing Permits No. WV0078743/WVG990163

Failure to Install a Multi-Media Filter

Part B.12.c of the Permit states, “The permittee shall provide treatment for the wastewater from the vehicle wash that meets the design requirements listed below, or an Alternate treatment technology may be approved for use, if adequate data can be submitted to verify waste reduction...”

c. The multi-media filter should contain a minimum of 100 square feet of surface area and have a minimum overall depth of 4 feet. To determine the size of the filter needed, you can use this formula: $\text{Area of filter} = \text{Flow (gallon/day)} \div 20 \text{ (gallon/day/square foot)}$. [Example: Flow Rate = 2000 gallon/day. Area = 2000 gallon/day divided by 20 (gallon/day/square foot) = 100 square foot.] To facilitate cleaning of the filter, consideration should be given to utilizing dual filters. This will be especially helpful for vehicle washes with high daily flow rates and/or for transportation companies that wash their fleet of trucks. Proposed facilities shall enclose the multi-media filter in such a manner to prevent a discharge to groundwater (existing facilities see Section B.16.).”

Observation #6: The Vehicle Washing WWTS does not utilize a multi-media filter, as required by the Permit. Mr. Boarman reported that such a filter had never been installed with the current or previous WWTS. According to Mr. Boarman, the vehicle washing pad and the first WWTS were installed in 2010, and the current WWTS was installed in late 2021 because the old system was found to be leaking into the ground.

Discharging Without a Permit

Part B.1 of the Permit states that, “ If a permit registration needs to be reissued, the permittee shall submit reissuance application within 30 days of receiving the reissuance packet notification.”

Observation #7: The facility had been subject to the prior Vehicle Washing General Permit, that expired on 5/31/22. The current General Permit was issued on 6/13/22, and the facility did not apply for the new Permit prior to expiration of the old Permit. During the 1/31/23 inspection of the facility by the WVDEP, it was determined by the inspectors that the facility was operating without a Permit, and WVDEP issued a Notice of Violation for discharging without a valid NPDES permit. On 3/1/2023, WVDEP sent the Facility an approval letter covering the facility under NPDES General Permit No. WV0078743. Therefore, it appears the facility was discharging without NPDES permit coverage from 6/13/22 to 3/1/23 (the date when the facility was first authorized by WVDEP to be covered under the current Vehicle Washing General Permit).

Failure to Sample the Effluent and Submit DMRs

Part A.1. and B.2 of the Permit state, “A.1. Discharge Limitations and Monitoring Requirements (Facilities which discharge less than 1,500 gpd) - During the period beginning effective date of permit and lasting through midnight expiration date of permit, the permittee is authorized to discharge from outlet number(s) 001 (Treated Wastewater) Minimum technology must be provided for the wastewater as required in Section B.11. of this permit.

B.2. At least one (1) representative sample of the facility effluent shall be collected and analyzed for the regulated pollutant parameters for the appropriate monitoring periods of each discharge. The permittee shall submit electronically, each reporting period, per the enclosed format, a Discharge Monitoring Report (DMR) indicating in terms of concentration, the values of the constituents analytically determined to be in the treatment facility effluent. A copy of the facility Maintenance Log will be attached to the electronic DMRs. The required DMRs shall be submitted electronically, via the Electronic Submission System (ESS) to the Division of Water & Waste Management by each respective due date.”

Observation #8: The facility has not sampled the effluent from the vehicle washing treatment system annually since the new WWTS was installed in late 2021 and has not submitted DMRs to WVDEP. Annual sampling would have been required within one year of issuance of the new General Permit which occurred on 6/13/22.

V. Closing Conference

After the facility walk, the Inspection Team met with the available facility representatives, Mr. Johnson and Mr. Stutler, for a closing conference. The Inspection Team shared preliminary observations with the facility. The Inspection Team reiterated to the facility representatives that all preliminary observations discussed were not compliance determinations. Any and all preliminary observations shared were subject to further investigation by EPA upon the additional review of records and documentation. Additional observations may be contained in this inspection report that were not identified at the time of the closing conference after EPA reviewed additional materials following the inspection.

The inspection concluded at about 12:45 PM.

VI. List of Attachments

Attachment 1: General Water Pollution Control Permits for Sewage Treatment and Disposal and for Vehicle Washing

Attachment 2: Photograph Log

Attachment 3: Domestic Sewage System Diagram

Attachment 4: Electronic Discharge Monitoring Reports