



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO ATTENTION OF  
ECW-15J

**Region 5 Enforcement and Compliance Assurance Division  
SDWA DRINKING WATER INSPECTION REPORT**

City of Benton Harbor  
Berrien County, Michigan

Inspection Date(s):	November 10, 2021		
Owner/Company Name:	City of Benton Harbor		
System Name	Benton Harbor PWS		
System Location	601 North Ridgeway Drive		
City, State, Zip Code	St. Joseph, Michigan 49085		
County	Berrien		
Mailing Address:	601 North Ridgeway Drive		
City, State, Zip Code	St. Joseph, Michigan 49085		
System Contact	Ellis Mitchell, City Manager		
	(269) 927-8457		
PWS ID No:	MI0000600		
Personnel Participating in Inspection:			
Jonathan Moody	Environmental Engineer, Lead	<a href="mailto:Moody.Jonathan@epa.gov">Moody.Jonathan@epa.gov</a>	312-886-7570
Abul Ahmed	Operator in Charge Treatment System	<a href="mailto:aahmed@fv-operations.com">aahmed@fv-operations.com</a>	616-588-2900
EPA Lead Inspector Signature/Date			
<b>Reviewed by:</b> Team Leader Signature/Date			
<b>Approved by:</b> Section Chief Signature/Date			

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# **1 INTRODUCTION**

## **1.1 Purpose of the Inspection**

On November 10, 2021, EPA Region 5 conducted an inspection at the City of Benton Harbor drinking water system (System) in Berrien County, Michigan. The scope of the inspection was an onsite review of the water source, facilities, equipment, operation, maintenance, and monitoring compliance of a public water supply (PWS) to evaluate the adequacy of the PWS, its sources and operations, and the distribution of safe drinking water. This inspection specifically looked at the configuration of an overflow from a finished water storage reservoir at the water treatment plant.

## **1.2 System Description**

The System is a community water system (CWS) serving approximately 9,800 full time residents.

# **2 INSPECTION SUMMARY**

## **2.1 Opening Conference**

An opening conference was held at the start of the inspection at 8:30 AM on November 10, 2021. Jonathan Moody from the Environmental Protection Agency (EPA) was present along with Abul Ahmed, Darold Harlan and Robert Jones from F&V Operations and representing the City of Benton Harbor.

## **2.2 Physical Areas Inspected**

A pole camera manufactured by Zistos, model number IAD-PSW-A14Z, was used to take video and photos of the configuration of an overflow weir on the high service suction well reservoir at the water treatment plant. The overflow is not screened and no backflow prevention could be located at the time of the inspection. An excerpt of the plant flow schematic is included in Figure 1. A thick dotted square on the schematic shows the location where the videos and photos were collected. Per the schematic, the overflow connects to the Plant Drain Line, which discharges to the lagoon north of the plant. The Plant Drain Line is also utilized by the raw water sump overflow, filter backwash and the overflows from the underground finished water storage reservoirs.

## **2.3 Closing Conference**

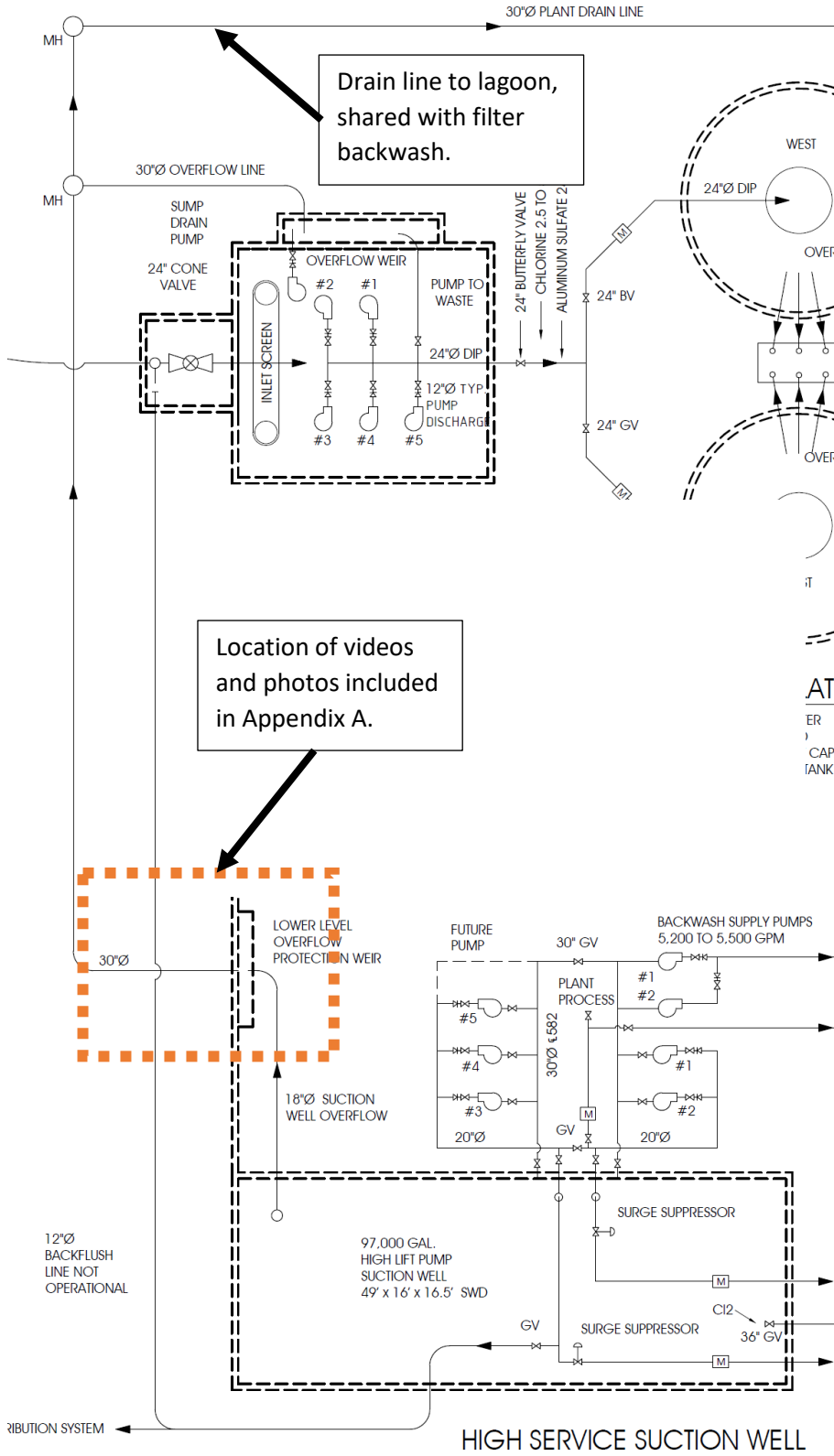
Mr. Moody closed out the inspection at approximately 0915 on Wednesday morning and provided copies of the videos and photos to Mr. Ahmed.

# **3 Areas of Concern and Observations**

## **3.1 Areas of Concern**

The following area of concern was noted based on the inspection received:

- Potential cross connection between the high service suction well and the water treatment plant drain line. Additionally, the overflow pipe is not screened to prevent contamination from entering the finished water storage.



I - Excerpt of Plant Flow Schematic

### **3.2 Additional Observations**

There were no additional observations.

## **DOCUMENTS RECEIVED AND REFERENCED**

No documents were received or reviewed during this inspection.

A copy of the “As-Recorded Water Filtration Plant Renovations”, dated 9-30-09 was referenced for determining the downstream connection of the well overflow.

## Appendix A: Photolog



2: 4349.PNG

Location: Benton Harbor PWS

Photographer: Jonathan Moody

Date/Time: 11/10/21 8:43 AM

Duration: 48 seconds

Camera Direction: Inside Horizontal

Description: Video of overflow pipe from the high service suction well. The grey pipe is labeled 'overflow' and is connected to a concrete weir. Image is a screen shot and has been rotated 180 degrees.





3: 4600.PNG

Location: Benton Harbor PWS

Photographer: Jonathan Moody

Date/Time: 11/10/21 8:46 AM

Duration: 59 seconds

Camera Direction: Down

Description: Image is a screenshot from the video and is looking inside the concrete weir box where the overflow pipe is connected.



4: 4746.PNG

Location: Benton Harbor PWS

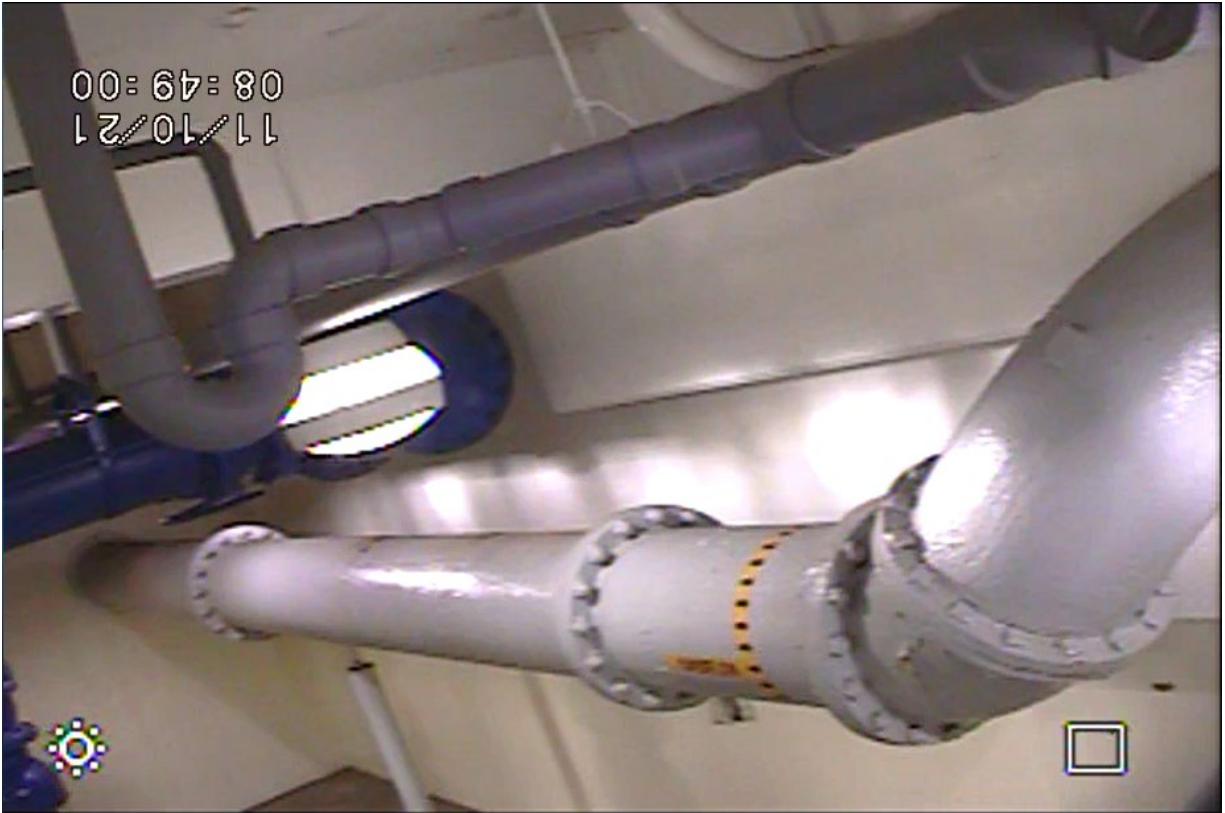
Photographer: Jonathan Moody

Date/Time: 11/10/21 8:48 AM

Camera Direction: Down

Duration: 37 seconds

Description: Image is a screen shot looking down at the outlet from the grey pipe into the concrete weir.



5: 4855.PNG

Location: Benton Harbor PWS

Photographer: Jonathan Moody

Date/Time: 11/10/21 8:49 AM

Camera Direction: Horizontal

Duration: 35 Seconds

Description: Image is a screenshot showing the grey overflow pipe coming out of the high service suction well.



6: 5246.PNG

Location: Benton Harbor PWS

Photographer: Jonathan Moody

Date/Time: 11/10/21 8:53 AM

Camera Direction: Horizontal

Duration: 33 seconds

Description: Video of the trench receiving waste from the bar screen at the headworks of the treatment plant. Image is a screenshot of the inside of the trench.





7: 084444.JPG

Location: Benton Harbor PWS

Photographer: Jonathan Moody

Date/Time: 11/10/21 8:44 AM

Camera Direction: Down

Description: At the concrete weir with the overflow from the high service suction well. Water was present in the bottom of the weir box.



8: 084451.JPG

Location: Benton Harbor PWS

Photographer: Jonathan Moody

Date/Time: 11/10/21 8:44 AM

Camera Direction: Down

Description: At the concrete weir with the overflow from the high service suction well. Water was present in the bottom of the weir box. Both the upstream and downstream pipe flanges are visible in this image. The flow of water would be from the top of the photo to the bottom.



9: 084744.JPG

Location: Benton Harbor PWS  
Photographer: Jonathan Moody  
Date/Time: 11/10/21 8:47 AM  
Camera Direction:  
Description: Accidental photo.





10: 084827.JPG

Location: Benton Harbor PWS

Photographer: Jonathan Moody

Date/Time: 11/10/21 8:48 AM

Camera Direction:

Description: At the concrete weir with the overflow from the high service suction well. Water was present in the bottom of the weir box. This pipe is connected to the grey overflow pipe and is the upstream side of the concrete weir box.





11: 084832.JPG

Location: Benton Harbor PWS

Photographer: Jonathan Moody

Date/Time: 11/10/21 8:48 AM

Camera Direction:

Description: At the concrete weir with the overflow from the high service suction well. Water was present in the bottom of the weir box. This pipe is connected to the grey overflow pipe and is the upstream side of the concrete weir box.