



Environmental  
Protection Agency

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

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January 31, 2011

Union County Commissioners  
County Office Building  
233 W. Sixth Street  
Marysville, OH 43040

**Re: NPDES / Public  
Union County WWTPs  
Compliance Inspections  
Union County**

Dear Commissioners:

On November 9, 2010, Reconnaissance Inspections were conducted at the Tawa Estates and Parrott Village wastewater treatment plants (WWTP). Mill Creek Estates and Crottinger Estates WWTP were also inspected as all four plants are in the process of having their permits renewed. Present for the inspections were Mary Sampsel, Jeff Stauch, Bill Narducci, and Mike Galloway representing the Union County Commissioners, and Mike Sapp, Kelly Thiel, and myself of the Ohio EPA, Central District Office, Division of Surface Water. The purpose of the inspection was to evaluate compliance with the terms and conditions of the National Pollutant Discharge Elimination System (NPDES) permit.

At the time of the inspections, the overall operation and maintenance of the four facilities has improved since the last inspection; most notably, the tertiary sand filters, alarm systems and a decrease in the number of permit violations. There is room for improvement as the standard wet weather operating procedure for the Mill Creek Estates and Parrott Village WWTP is still unsatisfactory as the plant operator continues to temporarily shut off the air to the aerations tanks in order to help maintain solids inventories within the plant. This practice has been successful in minimizing the period of non-compliance following a rain event; however, it should not be considered a permanent solution to the inflow and infiltration problem in the collection system. As discussed during the inspections with Ms. Sampsel, I am recommending a compliance schedule for inflow and infiltration work at the Mill Creek Estates facility.

One general concern is that the County intends to install remote controls for the aeration blowers that will be used during rain events to turn off the blowers. As mentioned in previous inspection reports, this action should not be considered a permanent operational practice. The County must continue to focus on indentifying and eliminating sources of inflow from the collection systems serving these plants.



Central District Office

### NPDES Compliance Inspection Report

SECTION A: NATIONAL DATA SYSTEM CODING					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
4PG00036*FD	OH0070815	11/9/10	R	M	1

SECTION B: FACILITY DATA		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Mill Creek Estates WWTP 15870 Valley View Drive Marysville, OH 43040	9:40 am	September 1, 2005
	Exit Time	Permit Expiration Date
	10:20 am	August 31, 2010
Name(s) and Title(s) of On-Site Representatives		
Mary Sampsel Assistant County Engineer (937) 645-3132	Mike Galloway Plant Operator (937) 645-3018	
Name and Title of Responsible Official		
Union County Commissioners 233 W. Sixth St. Marysville, OH 43040 (937) 645-3018		

SECTION C: AREAS EVALUATED DURING INSPECTION		
Key: S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated		
S	Permit	
S	Records/Reports	
M	Operations & Maintenance	Clarifier walls not scraped, filamentous bacteria problem, wet weather procedures are temporary; a permanent fix is needed
M	Facility Site Review	Spalling walls, no handrails, temporary piping along pathways.
M	Collection System	I&I problems.
S	Flow Measurement	
N	Laboratory	
M	Effluent/Receiving Waters	Occasional violation. Some bank erosion but recent riprap placement should help.
N	Sludge Storage/Disposal	
N	Pretreatment	
N	Compliance Schedule	
S	Self-Monitoring Program	

Signatures	
 1-31-11	 1-31-11
Cole Miller, Inspector Compliance & Enforcement Division of Surface Water Central District Office	Erin Sherer, Reviewer Compliance & Enforcement Supervisor Division of Surface Water Central District Office

## Summary of Findings and Comments Mill Creek Estates WWTP

### General

The Mill Creek Estates Wastewater Treatment Plant has a permitted design treatment capacity of 105,000 gpd with a direct discharge to Mill Creek. The actual treatment capacity is only 72,000 gpd (aeration capacity) since the older aeration tanks were converted to sludge holding tanks. The plant currently serves approximately 263 homes in the Mill Creek Estates, Pleasant Ridge and Buxton Meadows subdivisions. Wet stream process provided at the plant include an influent pump station, flow equalization, extended aeration, clarification, fixed media clarification, tertiary sand filtration, ultraviolet disinfection and post aeration. Solids handling facilities consist of aerated sludge holding with decant capabilities and sludge drying beds.

1. At the time of the inspection, the following general observations were made with the operational and maintenance practices at the plant:
  - a. A filament problem was identified in the plant. Please explain what caused this proliferation of filamentous bacteria and what modifications will be made to preclude a recurrence.
  - b. There have been some repairs to the spalling and cracked concrete, but there are still areas in need of repair. Piping that is also being held in place by strings and ropes. Both of these issues need addressed.
  - c. Air is shut-off during high flow events in order to try and maintain solids inventories in the plant.
  - d. The plant was operating with step feeds. Additionally, some of the blowers appeared to operate less efficiently than other blowers.
2. The attached table contains a list of NPDES permit violations for the time period between August 2008 and September 2010 followed by a table summarizing flow since August 2008. It appears that progress has been made in eliminating I&I problems, but peak flows are still approximately three times above the design flow and the average flow is also above the design flow.
3. On December 2, 2010, Mike Sapp and I returned to the plant after a large rain event on November 30, 2010. The sand filters appeared to be draining properly and there was no evidence of solids near the discharge point.
4. The bypass pipe from the distribution box of the sand filters to the under drain system on the sand filters must be eliminated immediately. **Notify me within 30 days of receipt of this letter as to how the pipe will be removed.** Note that this office requested this work to be done in the September 18, 2008, inspection report but no action has been taken to remove the pipe.

5. The following has changed since the last inspection:

- a. Installation of a mechanical bar screen. No PTI was submitted for this treatment process. This is a violation of the Ohio Revised Code 6111.44. In the future you must submit a PTI prior to modifying your treatment plant. An after-the-fact PTI will not be required for the mechanical bar screen. Please call me if you have questions.
- b. The flow equalization basin was modified into two compartments. One compartment is for standard equalization while the second, larger compartment is used for equalization during high flow events.
- c. The sand filters were changed from 9 small cells to 3 larger cells.
- d. The bypass line at the influent pump station was removed.
- e. A new effluent flow meter was installed.
- f. The headwall at the outfall to Mill Creek was removed and the effluent pipe was secured with rip rap.

### NPDES Permit Violations for Mill Creek Estates WWTP August 2008 – September 2010

Reporting Period	Parameter	Limit Type	Units	Limit	Reported Value	Violation Date
August 2008	Nitrogen, Ammonia (NH3)	30D Conc	mg/L	3.0	3.35	8/1/2008
August 2008	Nitrogen, Ammonia (NH3)	7D Conc	mg/L	5.0	6.4	8/8/2008
June 2009	Fecal Coliform	7D Conc	#100/mL	2000	3800.	6/1/2009
June 2010	Fecal Coliform	7D Conc	#100/mL	2000	2600.	6/1/2010

### Flow Information for Mill Creek Estates WWTP August 2008 – September 2010

	Flow (mgd)	Date Occurred
Highest since last inspection	0.461	2/12/2009
Highest in 2010	0.237	3/16/2010
2nd Highest in 2010	0.222	8/5/2010
Average August '08 - Sept '10	0.078	
Design Capacity	0.105*	

\*Due to an aeration tank being converted to a sludge holding tank, the true flow design is 72,000 gallons per day.

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