



**Environmental
Protection Agency**

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director



1PB0004420080422

BROWN

MT ORAB WWTP

JACKSON, JOSHUA 2008/04/22



State of Ohio Environmental Protection Agency

Southwest District Office

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Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

April 22, 2008

Mayor & Council
Village of Mt. Orab
P.O. Box 466
Mt. Orab, OH 45154

**RE: Village of Mt. Orab WWTP/Compliance Inspection Report
NPDES Permit No. OH0026646/OEPA PERMIT NO. 1PB00044*CD**

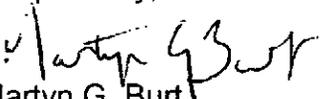
Ladies & Gentlemen:

On April 9, 2008, Joshua Jackson of this office conducted an NPDES Compliance Inspection at the Village of Mt. Orab wastewater treatment works (WWTW). Mr. Stuart Patrick with the H2O Company (contract operator representing the facility), Duane Stinson and Eric Stephan with the Village of Mt. Orab were present during the inspection. The purpose of the inspection was to evaluate compliance with the terms and conditions of the NPDES Permit.

A copy of Mr. Jackson's report on the inspection is enclosed. The "Collection System" and "Effluent/Receiving Waters" sections of the report received below "Satisfactory" ratings. **Please pay special attention to the compliance dates (items requiring correction) located throughout the report.**

Thank you and your staff for the time extended during the inspection process. If you have any questions, please feel free to contact Mr. Jackson by phone at (937) 285-6029 or by e-mail at joshua.jackson@epa.state.oh.us.

Respectfully,


Martyn G. Burt
Environmental Supervisor
Division of Surface Water

Cc: John Van Harlingen, The H2O Company (w/report)

Enclosures





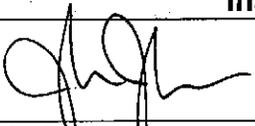
State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
1PB00044*CD	OH0026646	4/9/2008	C	S	11

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Mt. Orab WWTW 12943 US Route 68 Mt. Orab, Brown County	9:30 a.m.	4/1/2008
	Exit Time	Permit Expiration Date
	12:15 p.m.	3/31/2013
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
John Van Harlingen, Operator of Record (H ₂ O Co.) Duane Stinson, Class I Operator Eric Stephan, Operator	513-827-3295(cell phone) 937-444-2657 (WWTW phone)	
Name, Address and Title of Responsible Official	Phone Number	
Mayor Bruce Lunsford Village of Mt. Orab PO Box 466 Mt. Orab, OH 45154	937-444-4141	

Section C: Areas Evaluated During Inspection					
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)					
S	Permit	S	Flow Measurement	N	Pretreatment
S	Records/Reports	S	Laboratory	S	Compliance Schedule
S	Operations & Maintenance	U	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal	N	Other
M	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)	
See attached report.	
Inspector	Reviewer
 Joshua Jackson Division of Surface Water Southwest District Office	 Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
4-22-08 Date	4/24/08 Date

Sections E thru K: Complete on all inspections as appropriate
Y – Yes, N – No, N/A – Not Applicable, N/E – Not Evaluated

Section E: Permit Verification

Inspection observations verify the permit

- (a) Correct name and mailing address of permittee Y
- (b) Correct name and location of receiving waters..... Y
- (c) Product(s) and production rates conform with permit application (Industries)..... Y
- (d) Flows and loadings conform with NPDES permit..... Y
- (e) Treatment processes are as described in permit application... Y
- (f) New treatment process(es) added since last inspection..... Y
- (g) Notification given to State of new, different or increased discharges..... Y
- (h) All discharges are permitted..... Y
- (i) Number and location of discharge points are as described in permit..... Y

Comments/Status:

WWTW is under construction (~90% complete)

Section E: Permit Verification

- (a) Any significant violations since the last inspection..... Y
- (b) Permittee is taking actions to resolve violations..... Y
- (c) Permittee has a compliance schedule..... N
- (d) Compliance schedule contained in
- (e) Permittee is meeting compliance schedule..... N/A

Comments/Status:

The Village believes that the WWTW upgrade will address the effluent limit violations.

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

- (a) Standby power available.....generator or dual feed N
- (b) Adequate alarm system available for power or equipment failures.. Y
- (c) All treatment units in service other than backup units..... Y
- (d) Wastewater Treatment Works classification (OAC 3745-7)..... II
- (e) Operator of Record holds unexpired license of class required by permit..... Y
 Class: II
- (f) Copy of certificate of Operator of Record displayed on-site..... N
- (g) Minimum operator staffing requirements fulfilled (OAC 3745-7)... Y
- (h) Routine and preventative maintenance scheduled/performed... Y
- (i) Any major equipment breakdown since last inspection..... N
- (j) Operation and maintenance manual provided and maintained..... Y
- (k) Any plant bypasses since last inspection..... N
- (l) Regulatory agency notified of bypasses..... N/A
 On MORs and/or Spill Hotline (1-800-282-9378)
- (m) Any hydraulic and/or organic overloads since last inspection..... Y

Record Keeping:

- (a) Log book provided..... Y
- (b) Format of log book (i.e. computer log, hard bound book)

hard bound book
- (c) Log book(s) kept onsite (in an area protected from weather)..... N
- (d) Log book contains the following:
 - I. Identification of treatment works..... Y
 - II. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7..... N
 - III. Daily record of operation and maintenance activities (including preventative maintenance, repairs and request for repairs)..... Y
 - IV. Laboratory results (unless documented on bench sheets)... Y
 - V. Identification of person making log entries..... N
- (e) Has the operator of record submitted written notification to the permittee, Ohio EPA and (if applicable) any local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred..... Y

Section G: Operation & Maintenance (con't)

Collection System:

- (a) Percent combined system: 0%
- (b) Any collection system overflows since last inspection..... Y
(CSO and/or SSO)
- (c) Regulatory agency notified of overflows (SSOs)..... Y
- (d) CSO O&M plan provided and implemented..... N/A
- (e) CSOs monitored and reported in accordance with permit..... N/A
- (f) Portable pumps used to relieve system..... Y
- (g) Lift station alarms provided and maintained..... Y
- (h) Are lift stations equipped with permanent standby power
or equivalent..... N
- (i) Is there an inflow/infiltration problem (separate sewer system),
or were there any major repairs to collection system since
last inspection..... Y
- (j) Any complaints received since last inspection of basement flooding Y
- (k) Are any portions of the sewer system at or near capacity..... Y

Comments/Status:

The nearest facility to rent a generator for the WWTW or lift stations is Cincinnati.

The WWTW upgrade is designed to eliminate the sanitary sewer overflow at the Main Pump Station (old WWTW).

Section H: Sludge Management

- (a) Sludge management plan (SMP)
Submitted date: Approval #: Not submitted N/A
- (b) Sludge management plan current..... N/A
(c) Sludge adequately disposed..... Y
(Method:dewatered and then hauled to sanitary landfill)
(d) If sludge is incinerated, where is ash disposed of
(e) Is sludge disposal contracted..... N
(Name:)
(f) Has amount of sludge generated changed significantly since
last inspection..... N
(g) Adequate sludge storage provided at plant..... Y
(h) Land application sites monitored and inspected per SMP..... N/A
(i) Records kept in accordance with State and Federal law..... N/E
(j) Any complaints received in last year regarding sludge..... N
(k) Is sludge adequately processed (digestion, pathogen control)..... Y

Comments/Status:

Section I: Self-Monitoring Program

Flow Measurement:

- (a) Primary flow measuring device operated and maintained..... Y
Type of device: Ultrasonic & Parshall flume Ultrasonic & Weir Weir
Calculated from influent Other (Specify:)
- (b) Calibration frequency adequate Y
(Date of last calibration: August 17, 2008)
(c) Secondary instruments operated and maintained..... Y
(d) Flow measurement equipment adequate to handle full range
of flows..... Y
(e) Actual flow discharged is measured..... Y
(f) Flow measuring equipment inspection frequency
 Daily Weekly monthly other

Comments/Status:

Section I: Self-Monitoring Program (con't)

Sampling:

- (a) Sampling location(s) are as specified by permit..... Y
- (b) Parameters and sampling frequency agree with permit..... Y
- (c) Permittee uses required sampling method..... N
- (d) Sample collection procedures are adequate..... Y
 - (i) Samples refrigerated during compositing..... Y
 - (ii) Proper preservation techniques used..... Y
 - (iii) Containers and sample holding times prior to analysis conform with 40 CFR 136.3..... Y
- (e) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e, continuous monitoring instrumentation, calibration and maintenance records)..... N/E
- (f) Adequate records maintained of sampling date, time, location, etc.. N/E

Laboratory:

General

- (a) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
- (b) If alternate analytical procedures are used, proper approval has been obtained..... N/A
- (c) Analyses being performed more frequently than required by permit. N
- (d) If (c) is yes, are results in permittee's self-monitoring report..... N/A
- (e) Commercial laboratory used..... Y

Parameters analyzed by commercial lab: Metals, O&G, Phosphorus, Nitrate+Nitrite

Lab name: Test America

Quality Control/Quality Assurance

- (f) Quality assurance manual provided and maintained..... N
- (g) Satisfactory calibration and maintenance of instruments/equipment. N
- (h) Adequate records maintained..... N/E
- (i) Results of latest USEPA quality assurance performance sampling program: Satisfactory Marginal Unsatisfactory

Date:

Comments/Status:

WWTW records are kept at the water treatment plant.

Section J: Effluent/Receiving Water Observations

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	none	none	mild	mild	mild	clear	

Comments/Status:

Snapping Turtle Run had large algae mats at the WWTW outfall location and downstream of the WWTW discharge (>175 feet observed)

Section K: Multimedia Observations

- (a) Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories..... N
- (b) Do you notice staining or discoloration of soils, pavement or floors.. N
- (c) Do you notice distressed (unhealthy, discolored, dead) vegetation.. N
- (d) Do you see unidentified dark smoke or dust clouds coming from sources other than smokestacks..... N
- (e) Do you notice any unusual odors or strong chemical smells..... N
- (f) Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities..... N

If any of the above are observed, ask the following questions:

- (1) What is the cause of the condition?
- (2) Is the observed condition or source a waste product?
- (3) Where is the suspected contaminant normally disposed?
- (4) Is this disposal permitted?
- (5) How long has the condition existed and when did it begin?

Comments/Status:

Inspection Findings (Items for Correction in Bold Type)

The Village of Mt. Orab wastewater treatment works (WWTW) has an average daily design flow of 0.7 MGD and discharges treated effluent to Snapping Turtle Run, which is a tributary of Sterling Run. A review of the Discharge Monitoring Reports (DMRs) for January 2007 – February 2008, shows an average daily discharge flow of 0.45 MGD. During the same period of review, the Village also reported the following numeric NPDES permit violations:

EFFLUENT LIMIT VIOLATIONS (Period of Review: January 2007 –February 2008)

7D = Weekly 30D = Monthly 1D = Daily
 Conc. = Concentration (mg/l) Qty.= Quantity (Kg/Day)

Reporting Period	Parameter	Limit Type	Limit	Reported Value
January 2007	Total Suspended Solids	30D Qty	26	32.3539
January 2007	Total Suspended Solids	7D Qty	39	42.3337
January 2007	Total Suspended Solids	7D Qty	39	55.8075
February 2007	Total Suspended Solids	30D Conc	20	48.1875
February 2007	Total Suspended Solids	7D Conc	30	51.
February 2007	Total Suspended Solids	30D Qty	26	146.414
February 2007	Total Suspended Solids	7D Qty	39	80.6676
February 2007	CBOD 5 day	30D Qty	19	27.9805
February 2007	CBOD 5 day	7D Qty	28	29.9513
February 2007	Total Suspended Solids	7D Qty	39	61.2595
February 2007	CBOD 5 day	7D Qty	28	49.2495
February 2007	Total Suspended Solids	7D Conc	30	114.
February 2007	Total Suspended Solids	7D Qty	39	427.584
March 2007	Nitrogen, Ammonia (NH3)	7D Qty	3.88	5.05447
March 2007	Total Suspended Solids	7D Qty	39	40.3783
April 2007	Nitrogen, Ammonia (NH3)	30D Qty	2.59	3.04143
April 2007	CBOD 5 day	30D Qty	19	21.4662
April 2007	CBOD 5 day	7D Qty	28	34.9698
April 2007	Nitrogen, Ammonia (NH3)	7D Conc	3.0	4.045
April 2007	Nitrogen, Ammonia (NH3)	7D Qty	3.88	6.75562
April 2007	Total Suspended Solids	7D Qty	39	39.1558
April 2007	Total Suspended Solids	7D Qty	39	39.0309
May 2007	Total Suspended Solids	7D Qty	23	24.2429
June 2007	Total Suspended Solids	30D Conc	12	13.5125
June 2007	Total Suspended Solids	30D Qty	16	17.9139
June 2007	Total Suspended Solids	7D Conc	18	34.2
June 2007	Total Suspended Solids	7D Qty	23	49.7046
July 2007	Total Suspended Solids	7D Qty	23	26.9643
July 2007	CBOD 5 day	7D Qty	19	20.1248
August 2007	Nitrogen, Ammonia (NH3)	30D Conc	1.5	1.71222

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October 2007	Total Suspended Solids	30D Qty	16	21.1505
October 2007	Total Suspended Solids	7D Qty	23	66.2942
October 2007	CBOD 5 day	7D Qty	19	24.5892
November 2007	Nitrogen, Ammonia (NH3)	30D Conc	2.0	2.71375
November 2007	Nitrogen, Ammonia (NH3)	30D Qty	2.59	4.06457
November 2007	Nitrogen, Ammonia (NH3)	7D Conc	3.0	6.12
November 2007	Nitrogen, Ammonia (NH3)	7D Qty	3.88	8.841
November 2007	Nitrogen, Ammonia (NH3)	7D Qty	3.88	3.94416
December 2007	Nitrogen, Ammonia (NH3)	30D Conc	2.0	6.31625
December 2007	Nitrogen, Ammonia (NH3)	7D Conc	3.0	7.595
December 2007	Nitrogen, Ammonia (NH3)	30D Qty	2.59	12.9373
December 2007	Nitrogen, Ammonia (NH3)	7D Qty	3.88	13.6237
December 2007	Nitrogen, Ammonia (NH3)	7D Conc	3.0	4.345
December 2007	Nitrogen, Ammonia (NH3)	7D Qty	3.88	14.1227
December 2007	CBOD 5 day	7D Qty	28	28.9268
December 2007	Nitrogen, Ammonia (NH3)	7D Conc	3.0	6.27
December 2007	Nitrogen, Ammonia (NH3)	7D Qty	3.88	12.5236
December 2007	Nitrogen, Ammonia (NH3)	7D Conc	3.0	7.055
December 2007	Nitrogen, Ammonia (NH3)	7D Qty	3.88	11.4791
January 2008	Total Suspended Solids	30D Conc	20	24.95
January 2008	Total Suspended Solids	7D Conc	30	39.
January 2008	Total Suspended Solids	30D Qty	26	60.2193
January 2008	Total Suspended Solids	7D Qty	39	121.895
January 2008	Nitrogen, Ammonia (NH3)	30D Conc	2.0	2.356
January 2008	Nitrogen, Ammonia (NH3)	30D Qty	2.59	6.30978
January 2008	CBOD 5 day	30D Qty	19	25.1638
January 2008	CBOD 5 day	7D Qty	28	42.9805
January 2008	Nitrogen, Ammonia (NH3)	7D Qty	3.88	5.49733
January 2008	Total Suspended Solids	7D Conc	30	51.25
January 2008	Total Suspended Solids	7D Qty	39	98.0315
January 2008	CBOD 5 day	7D Qty	28	28.7451
January 2008	Nitrogen, Ammonia (NH3)	7D Conc	3.0	4.625
January 2008	Nitrogen, Ammonia (NH3)	7D Qty	3.88	6.33098
February 2008	Total Suspended Solids	30D Conc	20	64.25
February 2008	Total Suspended Solids	7D Conc	30	229.
February 2008	Total Suspended Solids	30D Qty	26	136.888
February 2008	Total Suspended Solids	7D Qty	39	468.938
February 2008	Nitrogen, Ammonia (NH3)	30D Qty	2.59	3.6999
February 2008	CBOD 5 day	30D Qty	19	22.2816
February 2008	CBOD 5 day	7D Qty	28	37.9274
February 2008	Nitrogen, Ammonia (NH3)	7D Qty	3.88	6.04016
February 2008	Total Suspended Solids	7D Qty	39	62.1421
February 2008	Nitrogen, Ammonia (NH3)	7D Qty	3.88	4.01509

A rating of "Unsatisfactory" was given for the "Effluent/Receiving Waters" section of the report because of the numeric violations shown above.

The Village has nearly completed Phase I WWTW improvements, which were approved through Ohio EPA's Division of Environmental & Financial Assistance (PTI# 597902). These improvements are designed to bring the WWTW back into compliance with the NPDES permit and to allow capacity for growth (expanding up to 0.7 MGD). These improvements consist of the following items:

- (3)-600 gpm Equalization pumps (2-existing pumps at 400 gpm, each)
- (1) Final Clarifier, 27' in diameter and 14' side water depth (2 existing clarifiers of equal size)
- (2)-250 gpm sludge pumps (3-existing sludge pumps at 250 gpm, each)
- (1) 2M belt filter press for sludge dewatering (geotextile woven bags will be used as a backup means for dewatering sludge)

*The 2 existing oxidation ditches were re-rated to treat 0.7 MGD. This re-rating was justified by CDM (consulting firm) in a report submitted with the Mt. Orab WWTW NPDES renewal application.

The Village has reported several sewage overflows at the Main Pump Station (location of the old WWTW). The bypass discharges to Sterling Run upstream of Lake Grant. The following table summarizes the overflow instances and the gallons discharged:

Main Pump Station Overflows
(September 2006 – Present)

Date(s) of Overflow Event	Estimated Gallons
3/18/2008 – 3/20/2008	224,000
2/5/2008 – 2/6/2008	98,000
12/9/2007 – 12/10/2007	17,500
2/20/2007 – 2/21/2007	79,000
1/14/2007 – 1/15/2007	128,3000
10/17/2006	122,000
9/12/2006 – 9/13/2006	235,750

The Village has just installed 4 new wet well pumps (600 gpm, each – 2 in each wet well) at the Main Pump Station. These improvements were part of PTI# 597902, mentioned above and are designed to eliminate sanitary sewer overflows at the pump station.

Items Noted During the Inspection

1. There are approximately 35 grinder pumps that are connected to the force main in between the main pump station and the WWTW. Village staff noted that with the upgrades to the main pump station, the force main to the WWTW would realize a very high pressure (typically after a rain event when influent flow rates are high. When this occurs, the grinders could not pump into the force main.
The Village has devised a way to regulate this. When a pressure transducer senses the force main is under a pressure of 30 PSI or greater for 60 minutes, the Main Pump Station variable drive pumps will wind down for 10 minutes to allow the grinder pumps to "catch up". This regulating system was not set up at the time of the inspection, but it was expected to be on-line within a week.
The effectiveness of this system will need to be monitored by the Village.
2. There was a fair amount of non-putrescible objects (feminine hygiene products, condoms) on the surface of the clarifiers. The new final clarifier had solids in the effluent channel; operations staff stated that the telescopic valve was plugged with rags when it was inspected in the morning. When the valve was unplugged, the sludge blanket was stirred up.
Currently, the Village has a coarse screen (1/2"-bar spacing) in the influent channel prior to the oxidation ditches. Without a mechanical fine screen (at most 1/8"-bar spacing), rags and other debris will continue to create maintenance and equipment problems. Phase II of the Village of Mt. Orab WWTW upgrade should include mechanical fine screens in the headworks improvements.
If, at any time, Ohio EPA observes any rags or debris attributed to the WWTW in the receiving stream; thereby causing an Ohio Water Quality Standard violation, the recommendation for screening improvements will become a requirement. The same would go for NPDES effluent limit violations that are directly attributed to maintenance issues caused by screenings pass-through.
3. The final effluent sampler did not have a thermometer to verify the storage temperature of $\pm 6^{\circ}$ C. The sampler line was also very dirty.
The Village must obtain a thermometer for the final composite sampler by no later than May 1, 2008. By the same date, the Village must also replace or clean the sampler tubing.
4. The Village does not have an automatic composite sampler for the raw influent. This is a violation of Part II (F) of the Village's NPDES permit that states the following:

Composite samples shall be comprised of a series of grab samples collected over a 24-hour period and proportionate in volume to the sewage flow rate at the time of sampling. Such samples shall be collected at such times and locations, and in such a fashion, as to be representative of the facility's overall performance.

The Village must obtain a composite sampler for raw influent and have it operational as soon as possible, but no later than June 15, 2008.

5. The Village has an excellent preventative maintenance schedule and method for documenting repair work at the WWTW and within the collection system.
6. When asked how to calibrate the Hach dissolved oxygen meter at the WWTW, staff were unable to perform the task. All dissolved oxygen meters require some calibration (even if it is air calibration). **The Village shall contact the manufacturer of the dissolved oxygen meter to acquire the procedures for performing this task. A procedure shall be in place for calibrating the DO meter by no later than May 15, 2008.**
7. The Operator of Record's wastewater certificate was not posted at the WWTW. Ohio Administrative Code 3745-7-05(C) requires the Operator of Record to post the certificate for public display at the plant or the principal office of the owner (Village administrative building). This would not include the water treatment plant. **A copy of the Operator of Record's wastewater certificate shall be posted without delay.**
8. During the course of the inspection, it became clear that none of the WWTW discharge monitoring reports, laboratory bench sheets or the Operator of Record's log are stored at the WWTW; they are stored at the Village's water treatment plant or kept with the Operator or Record (contract operator). **According to OAC 3745-7-09(A)(1), the records shall be accessible onsite for twenty-four hour inspection by agency or emergency response personnel. This information shall be kept at the WWTW.**
9. While at the inspection there were questions by operational staff revolving around the Owner and Operator of Record's log book. According to OAC 3745-7-09, the log book shall contain the following information, at a minimum:
 - Identification of the public water system, sewerage system, or treatment works;
 - Date and times of arrival and departure for the operator of record and any other operator required by this chapter;

- Specific operation and maintenance activities that affect or have the potential to affect the quality or quantity of sewage or water conveyed, effluent or water produced;
- Results of tests performed and samples taken, unless documented on a laboratory sheet;
- Performance of preventative maintenance and repairs or requests for repair of the equipment that affect or have the potential to affect the quality or quantity of sewage or water conveyed, effluent or water produced ; and
- Identification of the persons making entries.

Since the amount of information required to be stored can be quite voluminous for one hard bound book, staff can split items into different books (separate maintenance book and operations book, etc.) as long as they are all kept at the WWTW.

A computer log can also be used as long as there is a way to guarantee its authenticity, such as passwords.

10. At this point, the Village has no means for an alternate electrical source in the event of a power outage at the WWTW or the main pump station. "Recommended Standards for Wastewater Treatment Facilities, 2004" (Ten States Standards) section 56.1 states:

"All Plants shall be provided with an alternate source of electric power or pumping capability to allow continuity of operation during power failures...Methods of providing alternate sources include:

- a. The connection of at least two independent power sources such as substations. A power line from each substation is recommended, and will be required unless documentation is received and approved by the reviewing authority verifying that a duplicate line is not necessary;*
- b. Portable or in-place internal combustion engine equipment which will generate electrical or mechanical energy."*

The Village shall provide a means for back-up power at the WWTW. This shall be installed no later than July 1, 2010, or when the Phase II WWTW upgrade is completed (whichever comes first).

Along this same topic, the Village does not currently have a generator for the Main Pump Station (High Meadows Drive). In the PTI application for the pump station improvements, the Village stated that a portable generator was available in the event of a power outage.

According to WWTW staff, the nearest available generator capable of handling the demands of the main pump station is located in Cincinnati, which is at least 40 minutes away. This generator is not considered "readily accessible".

According to Ten States Standards section 47.2, "Emergency pumping capability shall be accomplished by connection of the station to at least two independent utility substations, or by provision of portable or in-place

internal combustion engine equipment which will generate electrical or mechanical energy, or by the portable pumping equipment." Portable equipment sized to serve the Main Pump Station must be owned by the Village or be available 24 hours/day from a company within the Village.

The Village shall provide a means for back-up power at the Main Pump Station by no later than July 15, 2008.

11. Results of sampling performed in 2006 for the TMDL (Total Maximum Daily Load) process in the Whiteoak Creek watershed, revealed nutrient enrichment throughout the entire watershed. In order for the Village to plan for future WWTW improvements, a numeric limitation for Total Phosphorus will be included for outfall 001 in the Village's next NPDES permit renewal. At this early stage in the process, a specific target limit for the Village is not known but it is likely that a 1.0 mg/l-limit for Total Phosphorus would be the least restrictive given.

Inflow and Infiltration

At the time of the inspection, the Village of Mt. Orab did not have an infiltration & inflow (I&I) removal plan and program established. For this reason, a rating of "Marginal" was given to the "Collection System" section of this report. With aging sewer infrastructures, more and more communities are investing time and money into sewer investigation and repair work in order to remove extraneous water from the collection system. Groundwater and surface water run-off can enter the sewers through deteriorated manholes, sewer joints, cracked sewer mains/laterals and cross-connections (including downspouts, sump pumps and driveway drains). During precipitation events, surges of "clean" water in the collection system can create compliance problems at the WWTW or even illegal sanitary sewer overflows; such as those that have occurred at the Main Pump Station).

The Village of Mt. Orab has recently made a substantial investment with the newly constructed Phase I WWTW upgrade and will be undertaking a Phase II upgrade in the near future. Attention should also be given to the sewage collection system in order to protect that investment and to free up capacity (during wet weather) for future growth.

The Village of Mt. Orab shall prepare and submit a "Rain Derived Infiltration & Inflow (RDII) Reduction Plan" to the Ohio EPA Southwest District Office no later than November 1, 2008. The plan shall provide the following items, at a minimum:

- a. A map of the sanitary sewer system. This map shall show all the sanitary sewers, 8" and larger, within the Village's service area and identify the size of each section of sewer. The map should also identify all manholes,

streets, pump stations, sewer force mains, WWTW, streams, and any other pertinent landmarks.

- b. Baseline collection system flow monitoring shall be initiated at strategic points in the sewage collection system (split up into drainage basins), as well as associated automatic rain gauges.

The Village shall then evaluate the data produced and its reliability, perform analyses to determine normal daily flow and diurnal flow patterns, rainfall intensity and duration, the collection system's response to the rain events, and the impact of antecedent conditions (such as frozen soils, soil saturation, and prior rain events) on the sanitary sewer system's response to rain events.

- c. For drainage basins that have been identified as "areas with significant RDII, the Village must also conduct more extensive investigation; such as dye/smoke testing, manhole inspections, CCTVing of the sewer lines, and performing an inventory of residential and commercial "clean water connections" (downspouts, driveway drains and sump pumps) so that a list of RDII-reduction projects can be compiled for the basin. The results of all the investigative work must be included in the report.
- d. The RDII-reduction project list must include cost for each project as well as a priority ranking.
- e. All RDII-reduction projects given a high priority must have a proposed schedule within the plan for completion of each project.
- f. Establishment of a RDII-reduction Program for the Village that will include the following items:
 - i. Set-up a percentage of the Village's annual Wastewater budget that will go towards RDII-reduction investigation and RDII-reduction projects.
 - ii. Create a schedule for more extensive investigation of any drainage areas that did not have a high enough priority for investigation and project list development through this plan but are in need of follow-up. Ohio EPA understands that there may be some drainage areas where the ratio of wet weather flow to dry weather flow may be too low to warrant any further investment of Village resources at this time.

