Miami Valley Regional Planning Commission
208 Areawide Water Quality Management Plan Survey

Date: October 27, 2010

NPDES Permit Number: 1PD00020*ID

Facility Name: Tri-Cities North Regional Wastewater Authority

Owner: Tri-Cities North Regional Wastewater Authority, David J. Heckler General Manager

Operator / Manager: Veolia Water North America, Joseph L. Hart, Plant Manager

When was the treatment facility built? 1985

Have there been any upgrades or expansions? If yes, please explain. When completed?

Upgrades have been made at the WWTP and in the interceptor sewer system. These include tower media replacement in 2000 at the plant, new 16 MGD pump station in 2004, parallel force main in 2007 and currently all pumps, controls and onsite generators are be replaced with new high efficiency units at the plant.

If there are any proposed expansions, when will they be built and at what estimated cost?

What jurisdictions does the facility serve? Huber Heights, Vandalia, Tipp City and portion of southern Miami County

Please provide a list of service agreements associated with this facility.

Tipp City has an agreement with Miami County and Vandalia has an agreement with the city of Dayton for service to the Dayton airport.

Is there a current map of the Facility Planning Area boundary or a 201 Plan? If so, please provide.

Yes, MVRPC has this on file

Is there a map of the currently served areas within the Facility Planning Area boundary? If so, please provide. No, but one can be provided. It will take some time to prepare but the cities can map this I believe.
Are there unsewered areas within the Service Area that have onsite treatment systems? If so, please provide location information.

Yes, there are. Exact locations need to be determined to provide locations.

Are there currently any revisions to the 201 Plan underway? If so, please explain. Yes, all 3 cities are working together to update TCA’s FPA boundary map and submit it as part of the 208 update which is underway.

What treatment process is used at the facility? Primary, Intermediate and Final settling, with Random media filters, nitrification towers, disinfection, Anaerobic digestion

What is the current average daily flow the facility treats? 8,370,000 gallons per day

What is the design average daily flow for the facility? 11,200,000

What is the maximum Ohio EPA allowable (peak) flow the facility can treat? 30,000,000

Do wet weather flow bypass or storage facilities exist? If yes, please explain and give their locations.

No

Are you aware of any sanitary sewer overflows (SSOs) or chronic water-in-basement locations in the collection system? If yes, where are they located?

Yes, SSO’s occasionally occur during extreme wet weather events at 4 locations on TCA’s interceptor sewer, 1 location in Tipp City at their main street pump station, 1 location in Vandalia (influenced by excessive flows coming for the Dayton Airport) at Marview Ave, and 1 location in Huber Heights at the Chambersburg/Old Troy Pike pump station. Current efforts and projects are underway to significantly reduce and hopefully eliminate 5 of these. These include the one in Tipp City, one in Huber Heights, one in Vandalia (via I&I reduction on Dayton Airport property) and 2 on TCA’s interceptor sewer.

Is the facility under any NOVs, findings or orders from the Ohio EPA? Ammonia Violations

List the five (5) largest customers to the plant, in terms of flow or load.

1. City of Huber Heights
2. City of Tipp City
3. City of Vandalia
4. 
5. 

Does a certified treatment plant operator operate your facility? Yes

Does your treatment facility accept septage? No
August 27, 2010

DRAFT FINDING OF NO SIGNIFICANT IMPACT
to all interested citizens, organizations,
and government agencies

VILLAGE OF YORKSHIRE
SANITARY SEWER SYSTEM
WPCLF # CS391021-0002

The purpose of this notice is to seek public input and comments on the Ohio EPA's preliminary decision that a Supplemental Environmental Study is not required to implement the recommendations discussed in the attached Environmental Assessment of a wastewater facilities plan submitted by the Village of Yorkshire mentioned above.

How were environmental issues considered?

The Water Pollution Control Loan Fund program requires the inclusion of environmental factors in the decision-making process. Ohio EPA has done this by incorporating a detailed analysis of the environmental effects of the proposed alternatives in its review and approval process. Environmental information was developed as part of the facilities plan, as well as through the facilities plan review process and during site inspections. The Agency's preliminary Environmental Assessment found that the project does not require the preparation of a Supplemental Environmental Study.

Why is a Supplemental Environmental Study not required?

Our environmental review concluded that significant environmental impacts will not result from the action. Any adverse impacts have either been eliminated by changes in the facilities plan or have been reduced by the implementation of the mitigative measures discussed in the attached assessment.
How do I get more information? A map depicting the location of the project is included as part of the Environmental Assessment. The Environmental Assessment presents additional information on the project, alternatives that were considered, impacts of the action, and basis for our decision. Further information can be obtained by calling or writing the contact person named at the end of the Environmental Assessment.

How do I submit comments? Any comments supporting or disagreeing with this preliminary decision should be submitted to me at the letterhead address. We will not take any action on this facilities plan for 30 calendar days from the date of this notice in order to receive and consider any comments.

What happens next? In the absence of substantive comments during this period, our preliminary decision will become final. The Village of Yorkshire will then be eligible to receive loan assistance from this agency.

Please bring any information that you feel should be considered to our attention. We appreciate your interest in the environmental review process.

Sincerely,

Gregory H. Smith, Chief
Division of Environmental & Financial Assistance

GHS/fg

Attachment
ENVIRONMENTAL ASSESSMENT

A. **Project Identification**

**Name:** Village of Yorkshire Sanitary Sewer System

**Address:** 38 East Main Street  
P.O. Box 572  
Yorkshire, OH 45388

**Loan No.:** CS391021-0002

B. **Proposed Project**

1. **Summary**

The Village of Yorkshire, located in Darke County, has applied for funding assistance in the amount of $730,000 from the Ohio EPA’s Water Pollution Control Loan Fund (WPCLF) to finance needed wastewater treatment improvements. This funding will enable the Village of Yorkshire to install a sanitary sewer system and participate in the joint construction of a regional wastewater treatment lagoon, which will alleviate problems associated with failing on-lot treatment systems. The lagoon construction is also being funded by grants and loans obtained by the Villages of Osgood and North Star. Yorkshire qualifies for a 20-year, 0% hardship interest for the WPCLF loan portion of the proposed project. The entire project is expected to cost around $1,400,000. Multiple funding sources are being secured to implement this project.

Yorkshire, like North Star and Osgood, is currently unsewered, but the villages intend to install central sewer systems, and are working together for the construction of a lagoon type wastewater treatment plant. This treatment plant would receive the wastewater from all three villages, along with serving some of the surrounding areas located outside of the villages’ limits. These projects are being conducted at the request of the villages, and are supported by Ohio EPA and the Darke County Health Department. In Yorkshire’s case, the proposed project is needed to abate a long standing environmental hazard, where inadequately-treated wastewater is believed to be entering village’s storm water systems and eventually discharging into an unnamed tributary in the upper Loramie Creek watershed.

2. **Existing Conditions**

Currently, the village of Yorkshire, located in northern Darke County, has no central sewer service. Approximately 115 residents and businesses (40 properties) in Yorkshire utilize on-site (septic systems) wastewater treatment that is regulated by the Darke County Health Department. Due to the age of most of the properties, most of the sewage systems were constructed prior to many of the modern rules for wastewater disposal that exist today, and most of the systems do not meet current health department requirements. Replacing the antiquated systems with new ones in most cases is not an option, as most of the village lot
sizes are not large enough to allow for a modern on-site wastewater disposal system to be installed.

3. Discussion of Feasible Alternatives

The purpose of this project is to replace existing individual, on-site sanitary disposal systems (i.e., septic tanks and leach fields) with a centralized collection and treatment system. A number of alternatives were considered to solve the area’s wastewater problems, as briefly discussed below.

Taking no action is not a feasible alternative, due to the potential human health threat that is created when inadequately-treated human waste is released into the environment. Replacing the antiquated systems in most cases is not an option, as most of the village lot sizes are not large enough to allow for a modern on-site wastewater disposal system to be installed.

Several alternatives were examined for both treatment and collection systems. These are described below.

Alternatives considered for the collection system include:

Option 1:  *Gravity Sewers:* This alternative involves installation of typical gravity-flow sewers at varying depths. It was selected because of the ease of constructability, low maintenance, and the overall cost-effectiveness.

Option 2:  *Low Pressure Sewers:* This alternative involves small diameter sewers installed at shallow depths, with wastewater being pushed through the collection system by individual grinder pumps. It would be difficult to implement due to the issue of grinder pump installation on individual properties and, hence, pump ownership, and long-term responsibility for operation and maintenance of the grinder pump units needed in this system.

Option 3:  *Minimum Grade Effluent Sewers:* This alternative involves using small diameter gravity flow sewers to transport the leachate (liquid portion) of the sewage in the septic tanks for treatment, while maintaining the septic tanks for solids collection. Problems with this alternative include the need to replace old septic tanks with new ones, along with maintaining an appropriate schedule for pumping out the tanks. Thus, this alternative would be more cost-effective in an area where the water table is high, the soil is rocky, or where the terrain is rolling.

Option 4:  *Septic Tank Effluent Pump Sewers:* This alternative is similar to Option #3, except that small pumps and pressure sewers would be used to help transport the septic tank leachate for treatment rather than relying on gravity flow sewers. Like Option #3, it would be difficult to implement this alternative due to the need for replacing the old septic tanks and maintaining a long-term sludge pumping schedule.
Alternatives considered for the wastewater treatment system include:

Option 1: Controlled Discharge Facultative Lagoon: This alternative would involve installation of a large, non-aerated lagoon for providing only basic levels of sewage treatment, so effluent discharge would be restricted to infrequent periods of high stream flow. Thus, this alternative would not provide the required degree of treatment for meeting water quality goals.

Option 2: Aerated Lagoon: This alternative would involve installation of a smaller, mechanically-aerated lagoon that has wide application in this type of setting. It was selected due to the relatively low cost and flexibility for use within a regional system.

Option 3: Oxidation Ditch: This alternative would involve construction of a fairly common type of mechanical aeration wastewater treatment system. However, it would only serve the Village of Yorkshire and would require additional land purchase and extensive operation and maintenance, so it would not be a cost-effective option over the life of the system.

Option 4: Sequencing Batch Reactor Plant: This alternative would involve construction of a specialized type of wastewater treatment plant for processing variable "slugs" of sewage flows. It would need to be preceded by primary treatment, due to the age of most residences and the unknown condition and size of most of the existing septic tanks. Since the useful life of this type of wastewater treatment system is unknown, and replacement of the system poses significant problems, this is not a viable option.

Option 5: Transport to the Village of Chickasaw: This alternative would involve regionalization with another community in the area, through installation of a sewer line connection from Yorkshire to Chickasaw. It was not selected due to the relatively high cost of construction for the regional sewer line connection.

4. Selected Alternative

The Village of Yorkshire is currently unserved, but, with the villages of Osgood and North Star, is working together for the construction of a lagoon type wastewater treatment plant, which will serve all three communities. This treatment plant would receive the wastewater from the three villages, along with some of the surrounding area located outside of the villages' limits. This project is being conducted at the request of the villages and is supported by Ohio EPA and the county health department, to abate a long-standing environmental hazard, where inadequately treated wastewater is believed to be entering village storm water systems and eventually discharging to area surface waters that flow to Mile Creek.

Yorkshire has determined that it is economically feasible to build a wastewater treatment plant in conjunction with the villages of North Star and Osgood. In addition, each village will
construct its own collection system. This will result in the collection, treatment and discharge of wastewater in an environmentally-sound manner.

The proposed sewer system for the Village of Yorkshire will include approximately 4,200 linear feet of 12-inch diameter sanitary sewer and 5,400 linear feet of 8-inch diameter sanitary sewer, with 4" or 6" diameter laterals.

The WWTP, which is currently under construction, will consist of three lagoon type ponds, an inlet structure, two transfer structures, a discharge structure and other miscellaneous items.

The design phase of this project has been completed and the village is currently working on securing the funding for the project. Construction will proceed shortly after funding at an estimated cost of $1.05 million.

5. Implementation of the Selected Alternative

The village expects to obtain a September loan award, with construction beginning in mid October. The construction will take approximately 210 days to complete.

The funding for this entire project is coming from several sources, including approximately $730,000 from the Ohio Water Pollution Control Fund (Ohio EPA) at a 0% hardship interest loan rate for a 20-year term, $200,000 from Ohio Public Works Commission (OPWC) and $470,000 from the Community Development Block Grant Water and Sewer Fund (CDBG). The total project cost for all of the improvements is currently estimated to be at $1,400,000, which includes planning and engineering costs.

C. Environmental Impacts of the Selected Alternative

While the proposed construction activities will result in some direct, short-term negative impacts to the environment, no significant short or long-term adverse impacts are expected.

Certain environmental features will not be significantly affected by the project for the following reasons:

- No significant or permanent loss of aesthetic quality or recreational use within the planning area is anticipated, as the project is for centralized sewers that will be located underground and for a WWTP that will be located in a former farm field;

- No wetlands are identified in the project areas; therefore, no impacts to wetlands will occur. All construction will be in existing rights-of-way and easements.

- The project site is not in a floodplain; therefore, no impacts to floodplains will occur.

- There are no national or state parks, wild or scenic rivers, or national monuments within the project area.
- The project will require consumption of energy for equipment used in the construction. Overall, the project is not expected to have a significant impact on energy consumption.

- There will be no long-term stationary sources of air pollution created by the project, while construction and operation of the project will not generate sufficient amounts of pollutants to place the county out of attainment of the National Ambient Air Quality Standards. Dust control methods (water or calcium chloride) will be utilized as necessary during project construction.

- Construction of the lagoon will involve excavation that will not change the overall topography of the area, and the collection system will be under ground. Once construction is complete, disturbed areas will be restored to their pre-construction condition so there will be no significant impact to major landforms.

Features that could be affected by this project are described below. All adverse impacts are expected to be minor and will be minimized by using the mitigative measures outlined below. Due to the planning and design of the project, these impacts are not expected to be significant for the reasons given.

1. **Archaeological and Historical Resources**

The Ohio Historic Preservation Office reviewed the project and determined that the project location has no historic sites and is unlikely to have any significant archaeological remains. However, if during the course of construction evidence of deposits of historical or archaeological interest are found, operations affecting the find will cease and both Ohio EPA and the State Historic Preservation Officer will be notified. Work will not resume until a survey of the find and a determination of value has been made, and Ohio EPA authorizes work to continue.

2. **Noise, Traffic, and Energy**

Although construction will temporarily increase noise levels, this will cease once construction is complete, so there will be no significant long-term adverse impacts. To reduce the short-term impacts, construction activity will be limited to daytime hours, and equipment will be provided with mufflers, as appropriate.

There will be an increase of construction-related traffic as the project is implemented. Emergency vehicle access will be maintained at all times. Barricades, warning signs, danger signals, or flag persons will be used to direct traffic flow, if needed.

There may be a short-term increase in energy demand (fuel, electric power, etc.) associated with the construction of the WWTP. The sewer system within Yorkshire will be entirely gravity sewer which will not require energy expenditure until the wastewater is pumped from Osgood to the new WWTP. There will be an increase in the on-going energy expenditures to operate the Osgood pumping station and the new WWTP. This on-going expenditure is typical for
such wastewater facilities, and the increase in demand will not significantly impact local energy resources.

3. **Surface Water, and Terrestrial and Aquatic Habitats**

Currently, there is a threat to human health due to untreated sanitary sewage being discharged into the area's surface waters, with the wastewater believed to be entering village storm water systems and eventually discharging into Mile Creek. Mile Creek contains a warmwater habitat biological assemblage, and is located in the Loramie Creek Watershed. The water quality of this warmwater habitat river and the drainage ways in and around the village will be improved when the new sanitary collection system and treatment lagoon is completed. Likewise, the human health threat from exposure to untreated wastewater will be eliminated.

Construction runoff (i.e. sedimentation/siltation) associated with project implementation can adversely impact aquatic habitats and organisms. Thus, proper implementation and adherence to the Storm Water Pollution Prevention Plan (SWP3) will be critical to ensuring that the proposed project does not contribute sediment to the river. Provisions of the SWP3 should be incorporated into the plans and specifications for the proposed construction.

For example, any site preparation that will involve earth moving, (such as clearing and grubbing) will not begin more than two weeks in advance of the start of general project excavation. The purpose of this restriction is to prevent the existence of large areas of exposed soils for an extended period of time when construction is not proceeding. Stockpiled topsoil and fill material will be protected with erosion control barriers or temporary seeding. No fill, topsoil, or heavy equipment shall be stored within 200 feet of a stream bank or within the drip-line of a treed area. If, due to weather, final grading cannot be accomplished immediately, mulching and temporary seeding, if feasible, or some type of temporary erosion control measures, must be used within 30 days until long-term restoration can occur. Excess soil that is stockpiled must be either removed or re-graded within 15 days of the completion of construction.

The Ohio Department of Natural Resources, Division of Natural Areas and Preserves (ODNR-DNAP) was contacted for information regarding rare, threatened, or endangered species of plants and animals in the area. The proposed project is within the range of the federally-endangered Indiana bat (Myotis sodalis), which is highly-dependent upon trees, including dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors, and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. If suitable trees occur within the project area, these trees should be preserved. If suitable habitat occurs on the project area and trees must be cut, this must occur between September 30 and April 1. No further records of rare or endangered species occur within one half mile of the proposed project.

4. **Ground Water**

Household wastewater treatment systems are a potential source of ground water contamination if not maintained properly. Thus, removal of the failing systems will help protect
the ground water resources in the area for those individuals that receive their drinking water from private wells. Consequently, the project construction is not expected to have a long-term, direct, significant adverse impact on ground water resources. If dewatering is necessary, water coming from the construction site will either be filtered or directed to a settling basin prior to discharge surface waters to avoid impacting the aquatic environment.

5. **Local Economy**

The Village of Yorkshire has determined that it is economically feasible to build a wastewater treatment plant in conjunction with the villages of North Star and Osgood. Each village is constructing its own collection system. This will result in the collection, treatment and discharge of wastewater in an environmentally-sound manner.

According to the 2000 Census, Yorkshire has a population of 110 and a medium household income (MHI) of $38,750. As described previously, the area is currently unsewered and there is no public water system. The project will not involve any individual assessments, but after the project construction is completed, a monthly sewer bill will be initiated. The typical monthly sewer bill is estimated to be $42 per month (or $504 per year), based upon 400 gallons per day of water usage, which represents less than 1.3% of the median household income. This rate for sanitary sewer charges is similar to that of the nearby villages of Burkettsville ($540/year) and New Weston ($612).

Once the loan is awarded, residents will need to abandon their septic tanks and construct lateral connections to tap into the new sanitary sewer collection system. The typical cost for these tasks is $1,300, depending upon the length of lateral needed. Options are being explored to identify programs that may be available to provide assistance with these costs to low-income residents.

Based on the above information, the project should have no disproportionately high adverse human health or environmental effects to any segment of the community. In fact, the project will have a beneficial human health impact on the entire community by correcting current water quality problems and addressing their NPDES compliance schedule.

6. **Secondary Growth**

This action is intended to resolve an existing wastewater treatment problem in the villages of Osgood, North Star and Yorkshire. It has also been designed to accommodate modest growth and development in the general area, but not to encourage growth. Thus, adverse impacts to environmental resources are not expected due to secondary (indirect) development impacts associated with future growth.

**D. Public Participation**

The Village of Yorkshire had submitted an application to the Ohio Department of Development’s CDBG Water and Sewer Fund in June, 2009, and then re-submitted on September 4, 2009. As part of the CDBG grant requirements, two public hearings were held on May 5, 2009 and June 2, 2009.
The environmental review was completed for the CDBG program on January 25, 2010, and the record was held open for public review at the Darke County Commissioners office in Greenville, OH. Darke County also made facility planning information available for public review and comment by advertising in the Greenville Daily Advocate Greenville Daily Advocate, an area newspaper of general circulation.

This environmental review provides yet another opportunity for public notification and comment. Although some citizens may be concerned about the potential costs associated with having a centralized sewer system, the project is being kept as affordable as possible for residents by maximizing grant funds and low-interest loans.

The following agencies have reviewed the proposed wastewater improvement project:

- Ohio Environmental Protection Agency
- Ohio Department of Natural Resources
- Ohio Historic Preservation Office

No objections to the project have been received from the above agencies.

E. **Reasons for Concluding That There Will Be No Significant Adverse Impacts from the Proposed Project**

Based on Ohio EPA's review of the information contained in the facilities plan and all associated documents, we have concluded that there will be no significant adverse impacts from the proposed project relative to the environmental features discussed previously. Through the use of the mitigative measures outlined in this document and in the specifications and detailed plans, the impacts from construction activities should generally be short-term and insignificant.

Thus, it is the finding of this Environmental Assessment that the proposed activities do not constitute an action having an individually or cumulatively significant effect on the human environment and therefore does not require the preparation of an environmental impact statement.

Environmental benefits that will be gained by the construction of the wastewater improvements include elimination of a human health threat and a source of water quality impairment by removal of untreated wastewater from failing on-lot systems. Improved water quality should result from project implementation due to the elimination of untreated or poorly-treated sewage discharges to area surface waters.
F. **Questions or Comments**

For further information, please contact:

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Ohio Environmental Protection Agency  
Division of Environmental and Financial Assistance  
P.O. Box 1049  
Columbus, Ohio 43216-1049  
Phone: (614) 644-3664  
Fax: (614) 644-3687  
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Figure 1: Project Location Map

- Wastewater conveyance route
- Villages of Yorkshire, Osgood and North Star

Ohio EPA
Division of Environmental & Financial Assistance