

John R. Kasich, Governor Mary Taylor, Lt. Governor Craig W. Butler, Interim Director

August 22, 2014

FINDING OF NO SIGNIFICANT IMPACT TO ALL INTERESTED CITIZENS, ORGANIZATIONS AND GOVERNMENT AGENCIES

City of Gallipolis
Water Pollution Control Facility Improvements Project
CS390377-0004

The purpose of this notice is to seek public input and comments on 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 municipality identified 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 will be 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 the basis for our decision. Further information can be obtained by calling or writing the contact person listed in the back 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 municipality 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,

Alauddin A. Alauddin, Chief

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Division of Environmental & Financial Assistance

Attachment

Environmental Assessment

Project Identification

Name: City of Gallipolis

Water Pollution Control Facility Improvements

Address: 1547 Chatham Avenue, Gallipolis, 45631

WPCLF Loan No: CS390377-0004

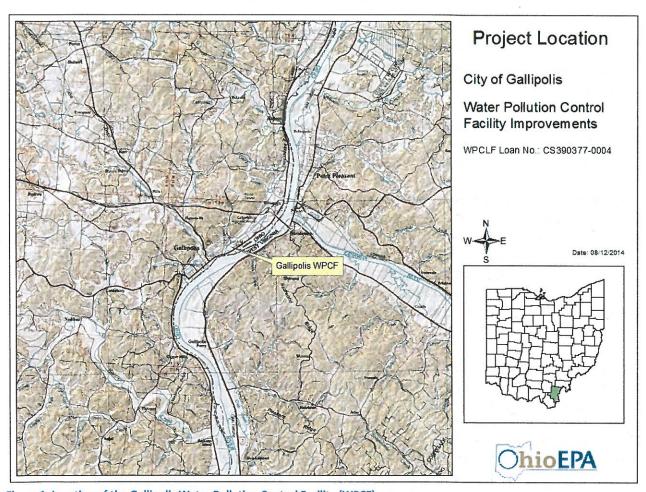


Figure 1: Location of the Gallipolis Water Pollution Control Facility (WPCF)

Proposed Project

Summary

The City of Gallipolis has applied to the Ohio Environmental Protection Agency's (Ohio EPA) Water Pollution Control Loan Fund (WPCLF) for financing of a project that will improve wastewater treatment functions at its Water Pollution Control Facility (WPCF) located at 1547 Chatham Avenue. This Environmental Assessment (EA) is prepared, in accordance with the WPCLF procedures, to evaluate the potential environmental impacts of the proposed project.

The overall project consists of upgrades to aged equipment; the addition of a third clarifier; the conversion of the primary settling tanks to an activated sludge tank; and the replacement of the chlorine disinfection system with ultraviolet (UV) treatment.

This project will serve the residents and businesses of Gallipolis, Kanauga-Addison Township, Green Township, Springfield Township and Dan Evans Industrial Park. The total estimated project cost is \$6,244,300. The requested WPCLF loan financing is approximately \$4,994,300 at a one percent rate. The remaining balance of \$1,250,000 is being provided by the Ohio Public Works Commission (OWPC) and Appalachian Regional Commission (ARC). Based on Ohio EPA's review, which is summarized in this EA, the WPCF improvements project will not result in any significant adverse environmental impacts provided the mitigative measures detailed in this document are followed.

Project History and Existing Conditions

The City of Gallipolis is located at the southern part of Gallia County. United States (US) Route 35 passes north of the City, along with State Routes (SR) 141, 160 and 588. The City had a population of 3,641 people at the 2010 Census and is projected to have had a decrease in growth since then. Assuming the average growth rate of the state continues, by 2035 the estimated population will be 3,752 people. The average number of people per household is 2.26 as of the 2000 Census. The City currently has approximately 676 wastewater service taps.

The City's existing WPCF was constructed in 1959, with a major upgrade in 1987 and an odor control project in 2001. The influent to the plant enters Special Manhole 10, where there is an emergency bypass of flows to the effluent line, and where there is a chlorine feed that is no longer used. From here the flow is routed to the diversion chamber. Normal flows continue through the diversion chamber to the Administration and Pumping Building, flowing through a comminutor to shred rags and other larger items. Then the water enters a wet-well and is pumped by one or more of three centrifugal, non-clogging dry-pit raw sewage pumps through the venturi pit to the grit chamber for grit removal. A fourth raw sewage pump sends excess flow to the equalization basin, where the water will stay until flow decreases. The odor control process takes the air from the confined spaces above the water level at the influent wet-well, grit chamber, raw primary sludge wells and the primary tank effluent and runs it through chemical media for odor reduction.

Once the wastewater is cleaned of grit, the water flows to the primary settling tanks. The solids are allowed to settle and be collected for further treatment by the sludge collection chains and removed by the telescoping valves. The primary settling tank effluent flows by gravity to the primary effluent pump station. Three pumps are available to pump the water up to the top of the two tricking filters for biological treatment. The growth of bacteria on the media allows the wastewater to be treated. The final clarifiers following the trickling filters provide the detention time for any remaining solids to settle before proceeding to the chlorine contact tanks for disinfection before discharging into the Ohio River.

The primary sludge digester receives the settled solids from the primary clarifiers. Here the solids become anaerobic where the environment is free of oxygen, which in turn creates methane gas for collection. The primary digester is heated with the methane gas and the sludge is mixed. Natural gas is used as a back-up for the digester gas. The removal and addition of sludge to maintain sufficient treatment and gas production is crucial. Once withdrawn from the primary digester, the sludge is pumped to the secondary digester, where the function of this digester is to allow the sludge to settle and thicken. Here the supernatant (i.e., separated liquid portion) is pumped back to the primary tanks and the sludge is pumped to the sludge drying beds. The nine sludge drying beds use filtration for the drying process. The liquid portion of the sludge is filtered through the sand media. The remaining sludge dries into a sludge cake and is hauled to the landfill or land applied.

The maximum daily flow (MDF) at the WPCF occurs in the spring, due to seasonal rainfall increasing the infiltration of clear water into the collection system. The plant can treat an average daily flow of 1.6 million gallons per day (MGD), a maximum daily flow of 5.7 MGD and a peak hourly flow of 9.0 MGD (6,250 gallons per minute (gpm)). The equalization basin holds 1.2 million gallons. With the plant reaching its design life, along with the intense maintenance needed to keep the plant operating at regulatory standards, the need for an upgrade must be addressed.

In determining the need for the project upgrade, there were three primary factors that make the current WPCF operation inadequate for projected operations: 1) aged equipment; 2) increased flow; and 3) future changes in nutrient regulations.

The first factor relates to the plant having reached the 20-year design life on the existing equipment. The existing equipment has been well maintained, but it is wearing out and in need of more frequent repair. Add to this that spare parts are harder to locate. To ensure that the plant will operate consistently and without significant maintenance for the next 20 years and beyond, most of the existing equipment needs to be replaced.

The second factor is due to the service area expansion and potential population growth that will result in an increase in flow, both average daily flow and peak flows. There is a need for increased hydraulic capacity to serve previously unsewered areas in the County, and to assure capacity available for economic development efforts to attract industry to the

Dan Evans Industrial Park. This necessitates increased capacity of pumps, tanks and other equipment.

The third factor is that the plant may need to meet additional, future National Pollutant Discharge Elimination Systems (NPDES) permit regulations. The WPCF effluent is currently meeting all existing discharge limits; however, discharge limits for nutrients, specifically total nitrogen and phosphorus, is likely to be applied to all wastewater treatment plants eventually. The existing NPDES permit only requires monitoring of these nutrients in the effluent.

With an increase in capacity, the anti-degradation process will be required as part of the permit-to-install application. This requires two 30-day public comment periods in addition to the plan review process.

Alternatives Analysis

The City of Gallipolis' WPCF is in need of significant overall improvement and expansion. As previously stated, plant upgrades have not occurred since 1987, the plant's service area has increased to the point where additional treatment capacity is necessary and future regulatory changes require modifications to existing treatment for nutrients.

To ensure the most cost-effective option for achieving these goals was designed, four alternatives, including a "no action" alternative, were evaluated to meet current and future discharge limits. The following discussion reviews these four wastewater treatment alternatives, including their capital costs, operation and maintenance costs and probable construction costs.

"No Action" alternative:

A "No Action" alternative should always be evaluated as a means to document the necessity of a given project. The population and flow projections show that increased flow capacity is needed at the facility. Also, the equipment at the facility has reached or exceeded its useful life.

Action is required because the City has contractual commitments to provide wastewater service to previously unsewered areas in the County. Also, much of the equipment in the plant is beyond its expected service life and in need of upgrade or replacement. Action is needed now to prevent declining performance and increased maintenance efforts, so the "no action" alternative was eliminated from further consideration.

There are various improvements to the existing facility that will be required for each of the remaining three alternatives. These improvements are required due to aged equipment and/or increased flow. These include the addition of fine screens in a Headworks Building to increase removal efficiency of rags, paper materials, etc. The existing comminutor is to be removed. All raw influent pumps will be upgraded along with new equipment in the grit

removal system. The primary and secondary digesters will remain anaerobic, but with the installation of new process components. Switching to aerobic digestion was considered for the alternatives that include activated sludge, but this would add operational cost, remove the opportunity to have beneficial re-use of methane from the digesters, and change the current, well-functioning sludge digestion and drying process. An additional final clarifier, giving a total of three, will be installed to provide for increased peak flow capacity. The existing final clarifiers will have new mechanisms and Stamford baffles to prevent short circuiting. These new upgrades will increase the treatment capacity to be able to handle the current and projected increased flows.

In addition to the baseline improvements to the existing facility above, the alternatives include the following improvements:

Alternative 1 – Additional Trickling Filter:

The primary settling tanks will remain the same with all tanks in operation, but each tank will be upgraded with new non-metallic chains and flights. For the secondary treatment, an additional trickling filter, giving a total of three, will be installed along with new media and mechanisms in the existing trickling filters. The primary effluent pumps will be upgraded as well. The chlorine disinfection will continue to be used due to effluent quality (suspended solids) not being conducive for ultraviolet disinfection.

Alternative 2 - Trickling Filter / Activated Sludge:

The primary settling tanks will be converted to a small conventional activated sludge tank, and an intermediate clarifier will be added. This combination of activated sludge and trickling filters will provide the same or better effluent quality as the existing plant at the increased flows without the addition of a third trickling filter. The media and mechanisms will be replaced in the existing trickling filters. The chlorine disinfection will be changed to UV disinfection to reduce man hours and eliminate safety precautions needed for handling the chlorine.

Alternative 3 - Activated Sludge:

The primary settling tanks will be eliminated and an activated sludge tank (e.g. oxidation ditch) will be added to provide full biological treatment. The activated sludge tank will eliminate the need for the trickling filters. A return activated sludge pump station will be installed for the activated sludge process. The existing sand drying beds will be eliminated to make space for the activated sludge tank due to limited space on the property. In lieu of the drying beds, a new belt filter press will be installed in a solids handling building. The chlorine disinfection will be changed to UV disinfection to reduce man hours and eliminate safety precautions needed for handling the chlorine.

Of the above-listed alternatives, the City has opted, based on its engineer's recommendation, to proceed with Alternative No. 2 – Trickling Filter / Activated Sludge. This alternative was chosen for the following reasons:

- The proposed improvements can meet the proposed blended effluent limits;
- The proposed improvements are more easily upgraded to address any potential future nutrient limitations;
- This alternative utilizes the existing two trickling filters, so it does not incorporate a mirroring of one treatment train;
- This alternative results in treatment of a 2.0 MGD average daily dry-weather flow, which is consistent with the predicted flow projection expected from the additional system users;
- The WPCF can transition from chlorine disinfection to ultraviolet disinfection; and
- The present-worth cost is similar to Alternative No. 1 and significantly lower than Alternative No. 3.

Project Description

The proposed WPCF Improvements will replace aged equipment at the Gallipolis Water Pollution Control Facility, prepare the facility to meet potential future discharge permit regulations and provide capacity for expected additional sewage flows from the Kanauga-Addison and Green Township sewer extension projects in Gallia County, which address contamination issues in those areas with a regionalized approach. To accomplish this, the primary settling tanks will be converted to a small conventional activated sludge tank and an intermediate clarifier will be added. This combination of activated sludge and trickling filters will provide the same or better effluent quality as the existing plant at the increased flows without the addition of a third trickling filter. The media and mechanisms will be replaced in the existing trickling filters and the chlorine disinfection will be changed to UV disinfection to reduce man hours and eliminate safety precautions of handling the chlorine.

Implementation

Gallipolis intends to open bids in September 2014. Construction is expected to start in October 2014, with final completion to occur in March 2016.

Environmental Impacts of the Proposed Project

A complete environmental review of the project was performed and each environmental attribute is addressed below. Construction-related impacts will generally be confined to the areas of surface disturbance. Mitigative measures have been included, where needed. The project should not result in any secondary (indirect) impacts to any of these resources, since construction is limited to the area present within the existing wastewater treatment plant property. The mitigative measures discussed in this document should adequately address any temporary impacts typically associated with construction activities.

Major Land Forms

The project area topography slopes south-southeast toward the Ohio River. The project will primarily be located within the property of the existing WPCF and involves temporary earth

disturbance (trenching, backfilling, etc.), but no extensive, long-term modification of the existing topography.

Based on the above, there should be no significant adverse impacts to major land forms associated with the proposed project.

Surface and Ground Waters

The project area is located in the Long Run-Ohio River watershed (HUC 05090101-01-03). Effluent from the WPCF is discharged into the Ohio River at Mile Point 268.6. This segment of the Ohio River is defined as follows: Ohio EPA River Code: 25-350, USEPA River Reach #: 05090101-017, County: Gallia, Ecoregion: Western Allegheny Plateau. The Ohio River is designated for the following uses under Ohio's Water Quality Standards (Ohio Administrative Code [OAC] 3745-1-32): Warmwater Habitat (WWH), Agricultural Water Supply (AWS), Industrial Water Supply (IWS), Bathing Waters (BW) and Public Water Supply (PWS).

Gallipolis is required by its National Pollutant Discharge Elimination System (NPDES) permit to meet the water quality criteria set forth in OAC rule 3745-1-32. The City is currently in compliance with its NPDES permit (No. OH0020478), and this project will ensure that compliance is maintained. Because the project will result in an increase of loadings into the Ohio River, it was subject to an anti-degradation review, which examines a series of technical alternatives; a review of social and economic issues related to the degradation of water quality of the affected water body; and consideration of all public and appropriate intergovernmental comments. Based on this review, Ohio EPA's director has determined that a lowering of water quality in the Ohio River is necessary to accommodate important social or economic development.

Surface water may also be impacted by storm water discharges associated with construction activities. Normal sediment and erosion control best management practices and good project site housekeeping will minimize impacts that may result from construction activities to surface water features.

Residents in the project area are served by centralized water service; therefore, any dewatering that may be required to construct the project will not impact private drinking water wells. Furthermore, any dewatering required as part of construction work should be of relatively short duration. Based upon this, no significant adverse impacts to ground water should result from construction of the proposed project.

Provided mitigative measures are followed as described above, there should be no significant adverse impacts to surface or ground waters associated with the proposed project.

Terrestrial and Aquatic Habitat

Terrestrial habitat at the Gallipolis WPCF Improvements construction project site, located in Gallia County, consists of mowed areas. Aquatic habitat is not present.

As part of the environmental review of the overall project, the Ohio Department of Natural Resources (ODNR) was consulted with regard to threatened and endangered species that may be present in the project area. U.S. Fish and Wildlife Service (USFWS) information on federally-listed species was also collected. Information from ODNR and USFWS indicates that Gallia County is within the range of the following federally-listed species:

Common Name (Scientific Name)	Status	Habitat Preferences		
Indiana bat (<i>Myotis sodalis</i>)	Endangered	Hibernacula = Caves and mines; Maternity and foraging habitat = small stream corridors with well-developed riparian woods; upland forests.		
Northern long-eared bat (Myotis septentrionalis)	Proposed as Endangered	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. During late spring and summer, roosts and forages in upland forests.		
Fanshell (Cyprogenia stegaria) (=C. irrorata)	Endangered	Found in areas of packed sand and gravel at locations in a good current.		
Pink mucket pearlymussel (Lampsilis abrupta)	Endangered	The lower Ohio River and its larger tributaries		
Sheepnose (Plethobasus cyphyus)	Endangered	Shallow areas in larger rivers and streams		
Snuffbox (Epioblasma triquetra)	Endangered	Small to medium-sized creeks and some larger rivers, in areas with a swift current		

Habitat for the above-listed species is not present within the project area; therefore, there should be no significant adverse impacts to threatened or endangered species and their respective terrestrial and/or aquatic habitats associated with the proposed project.

Land Use and Agriculture

The project area consists of an existing wastewater treatment plant; therefore, no significant adverse impact to land use or agriculture will result from the project.

Floodplains and Wetlands

The proposed project was reviewed with respect to facilities being located in a designated floodplain or floodway. The existing Gallipolis WPCF is located in a Special Flood Hazard Area (i.e., 100-year floodplain) of the Ohio River. The 100-year flood elevation at the WPCF is 569.0 feet above mean sea level. Existing buildings on-site, including the recently constructed Headworks Building, have a finish floor elevation one foot above the 100-year flood plain elevation. The new Administration Building and the top of concrete on the walls of the new tanks will also be at least one foot above the 100-year floodplain elevation.

The proposed project was also reviewed with respect to wetlands in the construction area. Based on a review of National Wetland Inventory (NWI) maps and county soil survey information, no wetlands are depicted in the area and hydric soils are not present. During a field inspection in March 2013, forested areas were observed west of the property that exhibited wetland characteristics; however, the project will not extend beyond the existing facility footprint. Provided construction limits do not extend outside of the existing WPCF property, there should be no significant adverse impacts to wetlands associated with the proposed project.

Based on the above, there should be no significant adverse impacts to floodplains or wetlands associated with the proposed project.

Archaeological and Historical Resources

The proposed project was reviewed with respect to its potential for adverse impacts to archaeological or historic resources. Ohio EPA reviewed the information in the Ohio Historic Inventory, the Ohio Archaeological Inventory and the National Register of Historic Places. Because of past land disturbance activities and the lack of documented cultural resources in or around the project area, it was concluded that the project will have no effect on any properties listed on or eligible for listing on the National Register of Historic Places.

¹Flood hazard areas identified on the Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood.

Based on the above, there should be no significant adverse impacts to archaeological and historical resources associated with the proposed project.

Air Quality

Gallia County is currently in attainment with all federal air quality pollutant standards except for particulates. In addition to particulates, pollutants monitored for air quality are: ozone, sulfur dioxide, nitrogen oxide, lead, and carbon monoxide.

The proposed construction at the WPCF may result in a temporary increase of dust and fumes. This will be mitigated using standard construction control practices, such as dust suppressants and use of properly operated equipment in good working order. All construction vehicles will be equipped with proper emissions control equipment, which will be periodically checked for proper tuning to minimize exhaust emissions and noise. Unpaved areas will be wet down, as necessary, during construction to minimize dust generation. With these mitigative measures, effects on air quality will be short-term, ending when construction is complete. Therefore, no significant short-term adverse impact to air quality will result from the project. With regard to long-term air quality, the State Implementation Plan (SIP) for non- attainment areas will address how to return the regional area to compliance with the national particulate standard.

Noise, Traffic, and Aesthetics

An increase in noise levels may be noticeable in the project area during construction. However, construction will take place only during normal, daytime operating hours to help minimize disturbance and these impacts will be short-term in duration, ending when construction is complete. Construction equipment will be provided with intake silencers and mufflers. Therefore, noise resulting from the operation of earthmoving and other construction equipment should not result in any significant adverse environmental impacts. Furthermore, there will be no long-term increase in noise levels attributable to the proposed project beyond what currently exist at the site.

Access to the WPCF is from the Ohio River Scenic Byway, a heavily traveled road in Gallipolis. A short-term increase in traffic may be noticeable in the area due to delivery of equipment and materials during construction. Measures to account for disruptions to traffic are outlined in the detail plan sheets, some of which include a requirement that at least one lane of traffic must be maintained along the travel route to the construction site and that access to emergency vehicles must be maintained at all times. Any construction equipment or excavations near roads must be marked with lights, reflectors, oil lanterns or smudge pots. Furthermore, barricades, warning signs, danger signals, flag person(s), watchers and all other appropriate precautions necessary for the protection of the workers and safety of the vehicles travelling through the area must be provided, as needed.

Construction activities are typically aesthetically displeasing; however, the proposed construction will be confined to the surrounding WPCF setting and will neither add to nor detract from the aesthetics of the area.

Based on the above, there should be no long-term adverse impact to noise, traffic or aesthetics associated with the proposed project.

Local Economy

The proposed Gallipolis WPCF Improvements construction project is estimated to cost \$6,244,300.00. Funding for the project will occur from multiple sources. Two grants will account for \$1,250,000 of project costs: \$1,000,000 from the Ohio Public Works Commission and \$250,000 from the Appalachian Regional Commission. The remaining \$4,994,300 will be provided through a WPCLF loan. Since Gallipolis has a service population between 2,500 and 10,000, with a median household income equal to or less than \$44,425, it qualified for an interest rate of 1.0 percent on a loan that is to be paid back over a 20-year period. Compared with a market rate of 4.34 percent (August 2014), the City of Gallipolis will save almost \$2 million using WPCLF money.

According to the 2007 – 2011 American Community Survey, the City of Gallipolis has a population of 3,290 and a median household income (MHI) of 26,638. Residential users within the City of Gallipolis pay a minimum of \$22.26 per month (\$267 per year) for sewer service. This equates to 1.0 percent of the MHI for the project area, which is below the Ohio average of 1.1 percent (the statewide annual average user charge for wastewater services as a percentage of the 2000 Ohio MHI). In September 2009, Ordinance No. O2009-53 dictated that sewer rates would increase three percent annually every April. Even though rates will increase as required by this ordinance, rates are not being increased specifically to pay for this project, but rather to generally ensure adequate funds to properly operate and maintain the city's wastewater facilities, now and in the future.

Based on the above, there should be no significant adverse impacts to the local economy associated with the proposed project.

Public Participation

The following agencies have reviewed, and were provided an opportunity to comment on, the planning information for the proposed project:

- Ohio Environmental Protection Agency
- Ohio Department of Natural Resources

The project has also been discussed at multiple Commission Meetings by the City of Gallipolis; has been advertised in newspaper articles and press releases; and has been subject to a 30-day public comment period as required by Ohio EPA's anti-degradation review and NPDES permit procedure. Neither Ohio EPA, nor the City of Gallipolis, is

aware of any public opposition to the proposed project. Furthermore, this EA document will be posted on Ohio EPA's website and will be made available by the City for another 30-day public comment period. Any comments received at that time will be evaluated by Ohio EPA, and addressed as appropriate.

Based on the above information, it is determined that adequate opportunity for public participation has been provided for the project.

Reasons for a Preliminary Finding of No Significant Impact

Based upon Ohio EPA's review of the planning information and the materials presented in this Environmental Assessment, it is concluded that there will be no significant adverse impacts from the proposed project as it relates to the environmental features discussed previously, provided the mitigative measures detailed above are followed.

The completion of this project will allow Gallipolis to replace aged equipment at the City's WPCF, prepare the facility to meet potential future discharge permit regulations, and provide capacity for expected additional sewage flows from surrounding townships where sewer extension projects, which address contamination issues in those areas with a regionalized approach, recently occurred. It will help to protect the water quality of the Ohio River and maintain the aquatic life use designation of warmwater habitat for that stream.

Questions or Comments

For further information, please contact:

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Figure 2 – Gallipolis WPCF



Figure 2 – Gallipolis WPCF proposed site grading plan.