



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

August 26, 2015

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

City of Clyde
Sandusky County
Wastewater Treatment Plant Flow Equalization Basin
Loan No. CS390268-0005

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 the equalization basin project submitted by the municipality 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 facility plan and associated documents, as well as through the facility 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 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,

A handwritten signature in blue ink that reads "Jerry Rouch" followed by a flourish.

Jerry Rouch, Assistant Chief
Division of Environmental &
Financial Assistance

AAA/JB/jb

Attachment

**ENVIRONMENTAL ASSESSMENT
For
City of Clyde
Wastewater Treatment Plant Flow Equalization Basin
WPCLF Loan Number CS390268-0005**

**Applicant: The Honorable Scott Black, Mayor
City of Clyde
222 North Main Street
Clyde, OH 43410**

Project Summary

Clyde, a city of approximately 6,300 located in Sandusky County (Figure 1), proposes to construct a 1.0 million gallon flow equalization basin at its wastewater treatment plant (WWTP). The purpose of the project is to reduce the discharges to surface water from Clyde's single remaining combined sewer overflow (CSO) in compliance with its state-issued NPDES¹ permit and a 2004 Consent Decree between Clyde and the US EPA. In a Long-Term CSO Control Plan developed in 2007 and updated in 2014, Clyde evaluated several alternatives and found that an equalization basin installed near the WWTP is the most cost-effective means of reducing CSO discharges. The latest project cost estimate is \$2,600,000, most of which Clyde proposes to fund through the Ohio Water Pollution Control Loan Fund (WPCLF). Debt will be recovered from sewer rates. At an affordable cost, the project will deliver significant benefits by reducing human exposure to sewage from the CSO discharges and curtailing the contribution of CSO discharges to water quality impairments in local waterways.



Figure 1: Clyde Location (see back of document for attribution)

Existing Conditions

Clyde is situated in the Raccoon Creek watershed (Figure 2). The watershed is largely rural with land use primarily dedicated to agricultural activities. Clyde is its only major urban area. Its mainstem, Raccoon Creek, is a tributary of Sandusky Bay that passes through Clyde.

Clyde owns and operates the sewer system and WWTP that process wastewater from Clyde's service area. The WWTP is located at 749 West McPherson Highway. It

¹ National Pollutant Discharge Elimination System permits set forth the concentration and loading limits of the regulated water pollutants and sets forth operating parameters.

consists of primary and secondary aerobic digesters, oxidation ditches for secondary treatment, internal clarifiers for nitrification, tertiary treatment lagoons and UV disinfection. It is designed to treat average daily flows of 1.4 million gallons per day (MGD) and peak flows of 4.8 MGD. It discharges to Raccoon Creek at river mile 11.02 under NPDES permit #2PD0004. It was built in 1986 and was modified in 2006.

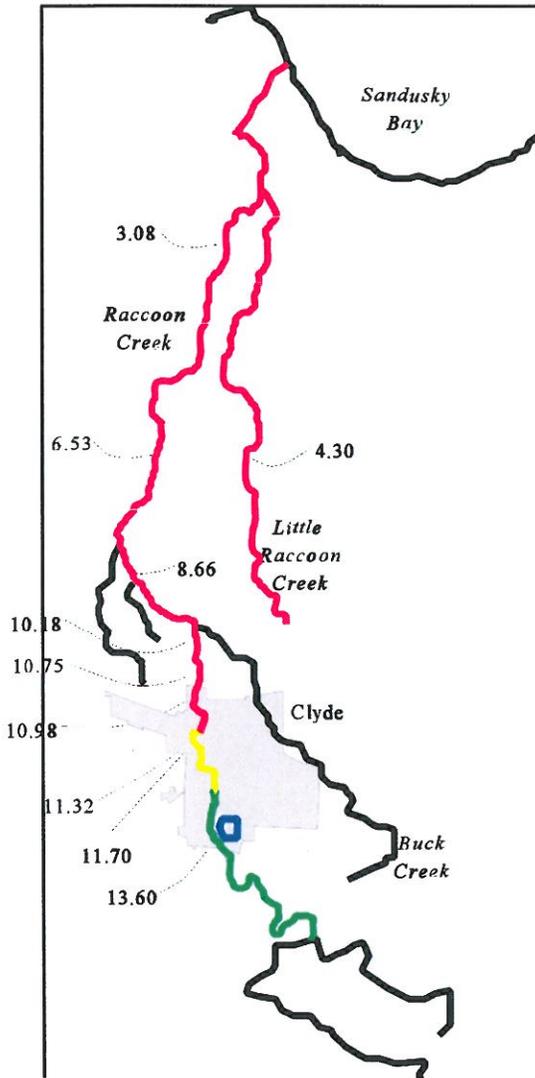


Figure 2 Raccoon Creek Watershed showing reaches of non-attainment (red), partial attainment (yellow) and full attainment (green)

As in many US municipalities, Clyde's sewers were originally built as a combined system. Combined sewer systems are an outdated design in which storm water runoff and sewage of domestic, industrial and commercial origin are conveyed to treatment in the same pipes or, when the sewer system's capacity is exceeded during wet weather, to surface water through CSO. CSO discharges generally contribute to water quality and aquatic habitat degradation and pose a public health risk. With the passage of the Clean Water Act (CWA) in 1972 and the adoption of the US EPA National Combined Sewer Overflow Policy (1994) and the Ohio Combined Sewer Overflow Strategy (1995), CSOs have come under strict regulation. CSO communities are required to implement

nine minimum controls to optimize sewer and treatment capacity during wet weather and, if needed, implement a Long Term Control Plan (LTCP) to capture enough CSO flows to eliminate CSO contributions to water quality degradation.

Seven CSO originally discharged to Raccoon Creek from Clyde's combined sewer system in violation of the CWA. By introducing phosphates, nitrates and bacterial loads, the CSOs contributed to the failure of the creek to meet the water quality standards (WQS) associated with its legally-designated aquatic life use warm water habitat. Other impairment sources included habitat alterations, agriculture, unsewered areas and Clyde's landfill. These sources cause siltation, embedded substrates, and nutrient loadings.

Upon being notified of the CWA violation, Clyde began a voluntary CSO control program in 1993 with the separation of the combined sewers into sanitary sewers, which convey domestic, industrial and commercial sewage to the WWTP, and storm sewers, which convey only storm flow to surface waters. Sewer separation is highly effective at reducing CSO discharges because it removes a significant portion of storm water from sewers. From 1993 through 2002, Clyde completed 13 sewer separation projects throughout the city. This resulted in the inactivation of 5 of the CSOs and the removal of 5.9 MG of storm water from the system during a 2-year 1-hour storm and 8.8 MG of storm water during a 10-year, 1 hour storm². From 2007 through 2012, 7 more combined areas were separated, removing additional storm water.

Under present conditions, 30 to 35 percent of Clyde's collection system is combined. While CSO inactivation has reduced total flows in the system, more wet weather flows are now captured and transported to the WWTP than before CSO inactivation. This has raised average daily wastewater flows from approximately 1.42 MGD in 1999 to 1.84 in 2004. Additional flows at the WWTP come from the regionalization of sewage treatment between Clyde and the Village of Green Springs (2006). Green Springs sends a maximum of 0.25 MGD to Clyde for treatment. Equalization at Green Springs plus the effects of Green Springs' sewer separation and I/I³ management prevents Green Springs' flows from surging Clyde's WWTP.

A single CSO remains in service to discharge the wet weather flows that exceed the WWTP capacity. Designated CSO 1A/1B, it is upstream from the WWTP and receives overflows from the city's two main gravity interceptors. Because the other CSOs have been inactivated, the Consent Decree requires the control of only this CSO. Among the compliance requirements in the Consent Decree are: 1) the addition of a screening facility to remove large objects (rags, paper, etc.) from the CSO 1A/1B discharge (completed in 2006); 2) the conduct of wet weather stress testing at the WWTP to

² The 2-year storm and the 10-year storm have a 50 percent chance and a 10 percent chance of occurring in any year, respectively. "1-hour" refers to the amount of rainfall that occurs in one hour during storms of these intensities. It is common practice to design storm detention and treatment facilities to capture runoff flows generated by storms of specified intensities.

³ Infiltration and inflow, which includes groundwater that enters sanitary sewers through pipe defects and direct connections of catch basins, downspouts, etc.

determine actual high-flow treatment capacity (completed 2004); and 3) development of a LTCP for the control of CSO 1A/1B (completed 2007 and 2014).

The activation of CSO 1A/1B depends on rainfall and the capacity of the WWTP to fully treat wet weather flows. The 2004 wet weather stress test showed that the WWTP is capable of sustained treatment of significantly more flow than the design peak of 4.8 MGD, which is limited mainly by the capacity of the influent screens in the Preliminary Treatment Building. With operational adjustments and the expansion of screening capacity, the WWTP stressed capacity can reduce CSO discharges.

Future Conditions and Design Criteria

Future WWTP capacity is determined by the control needs for CSO 1A/1B rather than by future average daily flows. Clyde anticipates little population influx over the 20-year planning period and does not plan to serve additional areas. Industrial activity is currently stable with Whirlpool Corporation as the city's largest single employer. Average daily flows based on flow monitoring from 2010 through 2013 ranged from 1.7 MGD to 2.4 MGD and are expected to remain near those values over 20 years.

Wet weather control needs were determined from flow monitoring conducted from 2010 through 2013 (four years). During this time, CSO 1A/1B discharged an annual average of 18 times over 24 days. To capture enough flow to allow only 4 overflows per year would require a basin of approximately 0.5 million gallons capacity. That capacity is the basic design criterion for the basin.

Alternatives Analysis

The primary goals of the Ohio CSO Control Strategy are to control CSOs so that they do not significantly contribute to violations of WQS or impairment of designated uses, to minimize the total loading of pollutants discharged during wet weather, and to eliminate CSOs when economically feasible. These goals can be achieved by meeting either a set of "demonstration" criteria or of "presumption" criteria. The demonstration criteria require NPDES permittees to demonstrate that their control plans can meet WQS and designated beneficial uses. This approach often applies when the in-stream effects of CSO reduction to be clearly identified. This is not the case with Raccoon Creek, which has multiple pollution sources. Clyde therefore developed a long-term control plan (LTCP) based on the presumption approach. The presumption approach is based on the expectation that WQS will be met by a LTCP that reduces overflow events to no more than 4 per year, eliminates or captures no less than 85 percent of the volume of sewage collected in the combined system during rain events on a system-wide annual average basis, or removes no less than the mass of pollutants identified as causing water quality impairments. Combined sewer flows remaining after implementation of the nine minimum controls and within the 85 percent capture or 4 overflows per year criteria are required to receive at least primary clarification or an equivalent process, solids and floatables disposal, and effluent disinfection if needed.

Clyde found through flow monitoring in 2005 that more than 85 percent of the wet weather flows remaining in the system after the 1993-2002 sewer separation and the application of the nine minimum controls were being captured and fully treated, thus meeting one of the presumption approach criteria. Although Clyde does not need to go further in CSO control, the city believes that further CSO reduction can yield enough benefit in terms of water quality and community health to make additional controls of moderate cost worth pursuing. Thus, Clyde proposes to reduce CSO 1A/1B discharges from 18 per year to 4 per year or less, meeting two of the presumption criteria.

The LTCP considered the following CSO control options (all costs are 2007 present worth estimates and are presented here for comparison purposes only):

- 1) Separating the 30-35 percent of the sewers that are still combined at a cost of \$21,000,000. Although this is the best option for eliminating CSOs, it was ruled out because of its large capital expenditure and the fact that some equalization could still be needed to capture inflow from sources other than combined sewers, such as cross-connected catch basins, which might not be found and corrected for years.
- 2) Separating only the sewers in Main, East and Forest Streets for \$2,400,000. This is cost-effective because these sewers carry some of the heaviest storm flows. Removing these flows will help reach the goal of 4 untreated overflows per year. This was carried out as described under Existing Conditions.
- 3) Expanding the WWTP using a high rate treatment process to fully treat peak weather flow. At \$7,000,000, this option was screened from consideration because it involves greater capital, operation and maintenance costs than the more passive alternatives such as sewer separation and equalization.
- 4) Installing a separate CSO treatment facility downstream from the CSO screen. This would clarify and disinfect enough wet weather flows to reduce untreated discharges to 4 per year for \$1,650,000.
- 5) Installing a 1.0 MG equalization basin for \$1,500,000. Although the original design capacity was 0.5 MGD, 1.0 MG was finally settled upon to allow additional clarification of high flows. This was the selected option based on low cost and high degree of effectiveness.

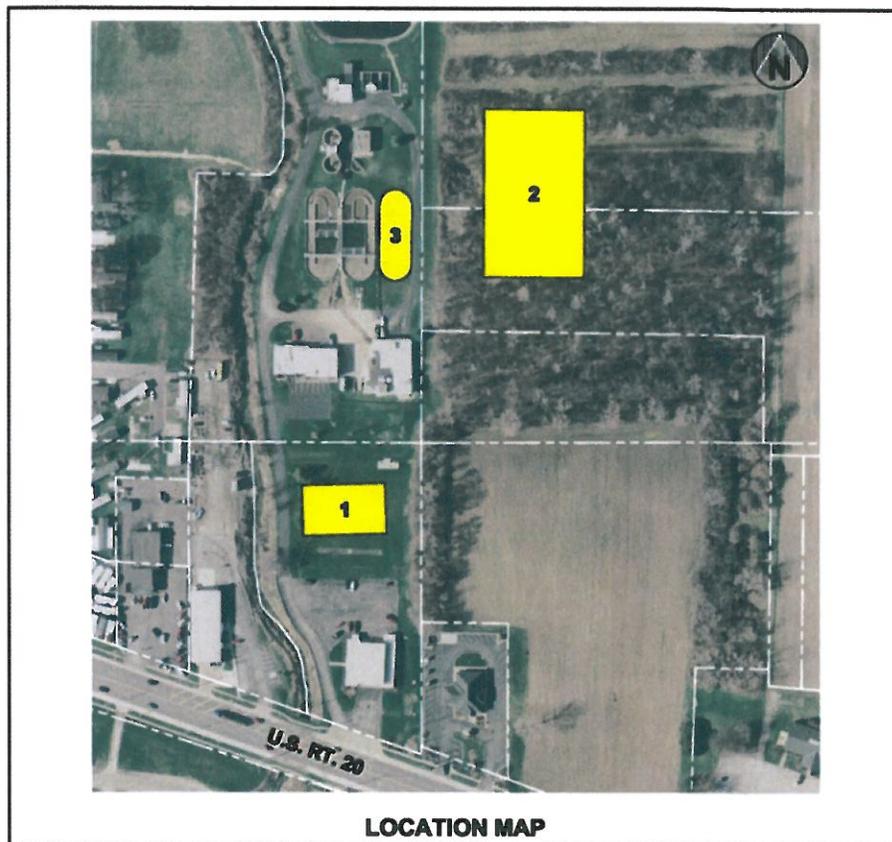
Three possible basin sites were considered in or near the WWTP (Figure 3). Site 1 was selected because it is close to the CSO outfall and the CSO screening facility, making it easy to connect to the screening facility. Building on it would have fewer environmental impacts than construction on Site 2 and, unlike Site 3, would not consume space at the WWTP that could be used for biological treatment expansion if needed.

Selected Alternative

The 1.0 MG basin will be rectangular open-topped concrete structure approximately 100 feet wide, 120 feet long and 16 feet deep. The walls will extend 3 feet above grade. Security fencing will be installed around it for safety. Construction will be carried out by conventional excavation and backfill. The construction site is a flat, vacant, mown 0.75-acre area south of the Preliminary Treatment Building. It is the site of Clyde's original

wastewater treatment lagoon, now demolished and filled in. The CSO screening facility will be re-configured to allow it to discharge to the basin and new larger screens will be installed in the Preliminary Treatment Building to allow more flow through the WWTP. The WWTP is isolated from occupied structures to the east. To the west, across Raccoon Creek are commercial buildings, a trailer sales lot and a small residential subdivision.

In operation, the basin will receive effluent from the CSO screening facility. Upon storm subsidence or when treatment capacity becomes available in the WWTP, the basin contents will be released by gravity into the 18-inch line influent line to the WWTP for full treatment. When the basin is full, which is estimated to be at most 4 times per year on average, untreated flows will be discharged to Raccoon Creek through the existing CSO outfall structure.



Implementation

The total project cost estimate is now \$2,656,340, including the basin and the influent screen improvements. This cost includes project planning, design and construction. The city anticipates receiving \$325,000 from the Ohio Public Works Commission and the balance from the Water Pollution Control Loan Fund.

Clyde has nominated the project for the WPCLF nutrient reduction discount (NRD). This is an interest rate discount that applies to the portions of projects that are directly attributable to the reduction of nutrients (nitrates and phosphorus) in discharges from publicly-owned treatment works (POTW). Ohio EPA initiated this discount as a means to control harmful algal blooms, which are generated in large part by nutrients in surface waters from various sources including POTW. HAB toxins have recently contaminated surface water intakes in the Western Lake Erie Basin. The dollar amount to which the NRD will be applied for Clyde's equalization basin project will be determined after bidding. Any amount to which the NRD cannot be applied will be eligible for funding at the WPCLF hardship rate of 1.0 percent.

Debt associated with this project will be repaid by 9 percent annual increases in sewer rates that went into effect in 2014 and will continue through 2016. The last of these increases will yield average annual sewer service bills of \$42.28 monthly or \$507 annually based on a water consumption of 4,500 gallons. This will be approximately 1.4 percent of Clyde's 2015 median household income estimate of \$37,165.

Environmental Impacts and Mitigation

Unaffected Environmental Features: The project will have no secondary development impacts, since it is not intended to serve growth in undeveloped and/or actively farmed areas. It will have no direct (construction-related) effect on state-designated scenic rivers or on state-or federally-designated wildlife areas, since none are present in or near the work area.

Surface Water: No in-water work is proposed with this project, so the potential for sediment transport to Raccoon Creek is low with this project. Nevertheless, the city will take precautions against inadvertent pollution of the creek during construction as indicated in the detail plans. Based on this the project will have no significant adverse long-term impact to surface waters.

Terrestrial Habitat and Endangered Species: The work area is within the ranges of the following federal endangered and threatened species: the Indiana bat, the northern long-eared bat, kirtland's warbler, the piping plover, the red knot (birds), the eastern massasauga (rattlesnake) and the eastern prairie fringed orchid. Trees and riparian vegetation are absent from the basin work area, so forested habitat and species that are dependent on it, such as the bats, will not be adversely affected by construction. The birds are generally associated with shorelines and the orchid and the eastern massasauga require wetland habitat, none of which are present in the work area. Because no in-water work is proposed the project will have no potential adverse impact to endangered mussel species. Based on this, the project will have no adverse impact on terrestrial habitat or endangered species.

Wetlands: Although the soils in and around the work area are hydric (wet), and the National Wetland Inventory map shows small, scattered potential wetlands in the general area, the basin work area is mown and appears not to support wetland

vegetation. It is within an active wastewater treatment plant. Based on this the project will not adversely affect wetlands.

Floodplains/Floodway: The western edge of the basin will be approximately 80 feet from Raccoon Creek. The top of the basin wall will be approximately 660 feet above msl and the 100-year flood elevation is at 654 feet msl. This provides structural protection against damage from a 100-year storm. The basin is located outside the floodway, so it will not affect flood elevations downstream. Based on this, the project will not be adversely affected nor will it have adverse impacts on flood elevations.

Drinking and Ground Water: Clyde is located over limestone bedrock in which portions of the limestone have become fractured or have dissolved as a result of contact with water, leaving fissures that contain groundwater. This aquifer type is highly susceptible to pollution. A large number of individual wells around Clyde depend on this aquifer, making it important to prevent surface spills of pollutants that could migrate down to the aquifer. The city will require contractors to prevent the spills of fuel and other contaminants and avoid disposing of concrete wash anywhere on the ground surface. Ohio EPA's Potential Contaminant Sources Inventory shows no hazardous waste contamination sources in the construction area. Still, any unrecorded drums or UST encountered during excavation will be removed and disposed of in a manner consistent with the Bureau of Underground Storage Tanks Regulations and other applicable laws. Provided these measures are followed, the project will have no significant long-term adverse impact on drinking or ground water.

Cultural Properties: The basin construction site has undergone such extensive past ground disturbance that intact historically significant archaeological remains are unlikely to be present. The WWTP is less than 50 years old, and so is not of potential historic significance. Thus the work that will be done in the Preliminary Treatment Building will not affect a historic structure. The adjacent subdivision and commercial buildings are generally prefabricated structures that are not eligible for the National Register of Historic Places. There are no recorded historic districts near the construction site. Therefore, the slight change in the appearance of the WWTP brought about by the basin will not affect structures that are listed on or eligible for listing on the National Register of Historic Places. Based on this, the project will have no significant long-term effects on cultural resources.

Noise, Dust and Odors: The contract documents require the contractors to limit construction to weekday daytimes and to use dust suppressants when needed. The basin will be filled occasionally and will be flushed after each use to prevent odors. Based on this, noise, dust and odors will have no significant long-term adverse effect on the subdivision residents.

Local Economy: At 1.4 percent of Clyde's median household income, the rates from which debt for the project will be repaid are affordable.

Public and Governmental Oversight

On April 29, 2014, Clyde City Council held a work session to review the sewer rate study on which the rate increase to pay for this project was based. The council work session was open to the public. Representatives of several newspapers, radio stations and television stations within the region were invited. The session was followed by a discussion of the rate increase in a news article in *The Clyde Enterprise* on May 14, 2014 and a legal notice in the same newspaper May 30, 2014. These efforts did not generate any organized opposition to the project. Given the low economic impact to individual ratepayers, the low environmental impact of the construction and the high water quality and public health benefit, this is considered adequate public participation.

Conclusion

Based on the 2007 Long-Term Control Plan, its 2014 update and other information provided by the applicant, the Wastewater Treatment Plant Equalization Basin as described herein will have no adverse effect on surface water, floodplains, ground water, wetlands, endangered species, critical aquatic and forested habitat, state and federally designated wildlife areas, scenic or recreational rivers, farmland, cultural properties, air quality, traffic or the local economy. Noise, dust and odors will be controlled using standard construction best management practices.

The basin will yield significant public health benefits from the reduced discharge of untreated sewage from Clyde's CSO.

For further information, please contact:

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Figure 1 is attributed as follows:.

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