



Environmental
Protection Agency

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

APRIL 23, 2012

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

CITY OF SEVEN HILLS, WEST CREEK WATERSHED SEWER
PHASES II AND III
WPCLF LOAN # CS390839-0004

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 entity 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 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 general 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 entity 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, appearing to read "Gregory H. Smith".

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

Attachment

ENVIRONMENTAL ASSESSMENT

A. Project Identification

Name: City of Seven Hills
West Creek Watershed Sewer - Phases II and III

Address: The Honorable Richard P. Dell'Aquila
City of Seven Hills, City Hall
7325 Summitview Drive
Seven Hills, OH 44131

Loan No.: CS390839-0004

B. Project Summary

The City of Seven Hills is under Ohio EPA Director's Final Findings and Orders (DFFOs) issued in December 2002 to eliminate the existing septic tank outfalls within the West Creek Watershed (see Figure 1 on Page 3). As the last action needed to bring the city into compliance with the DFFOs, this project includes providing a new gravity sanitary sewer main for 60 existing homes and 2 vacant, but buildable, lots (or 62 properties total) along Broadview Road and Skyview Drive. In addition, the project involves obtaining permanent and temporary easements to permit construction and maintenance of the proposed sanitary sewer project.

To address the DFFOs during this proposed project, the City of Seven Hills proposes to construct two phases of sanitary sewer improvements at an estimated total construction cost of \$2,043,016 over an eight month period with a combination of small community low-interest financial assistance from Ohio EPA's Water Pollution Control Loan Fund (WPCLF) and other state funding programs. These improvements include work to extend sanitary sewers into two areas (Phases II and III) currently served by home sewage treatment systems (HSTS). Together these two areas and the area previously served during Phase 1 are collectively referred to by the city as the West Creek Watershed Sewer Project Area (see Figure 1). By eliminating these failing HSTS, Ohio EPA expects that human health and water quality conditions in the project area will generally improve.

On the basis of the planning information provided by the city, the proposed project is expected to provide a long-term (minimum twenty-year) solution to the project area's needs that recognizes its environmental conditions, minimum growth potential, the city's comprehensive planning efforts, and the steps needed to mitigate any potentially significant adverse environmental impacts that could follow installation of the proposed collection system. Please see Figure 2 on Page 4 for the specific location of the proposed improvements.

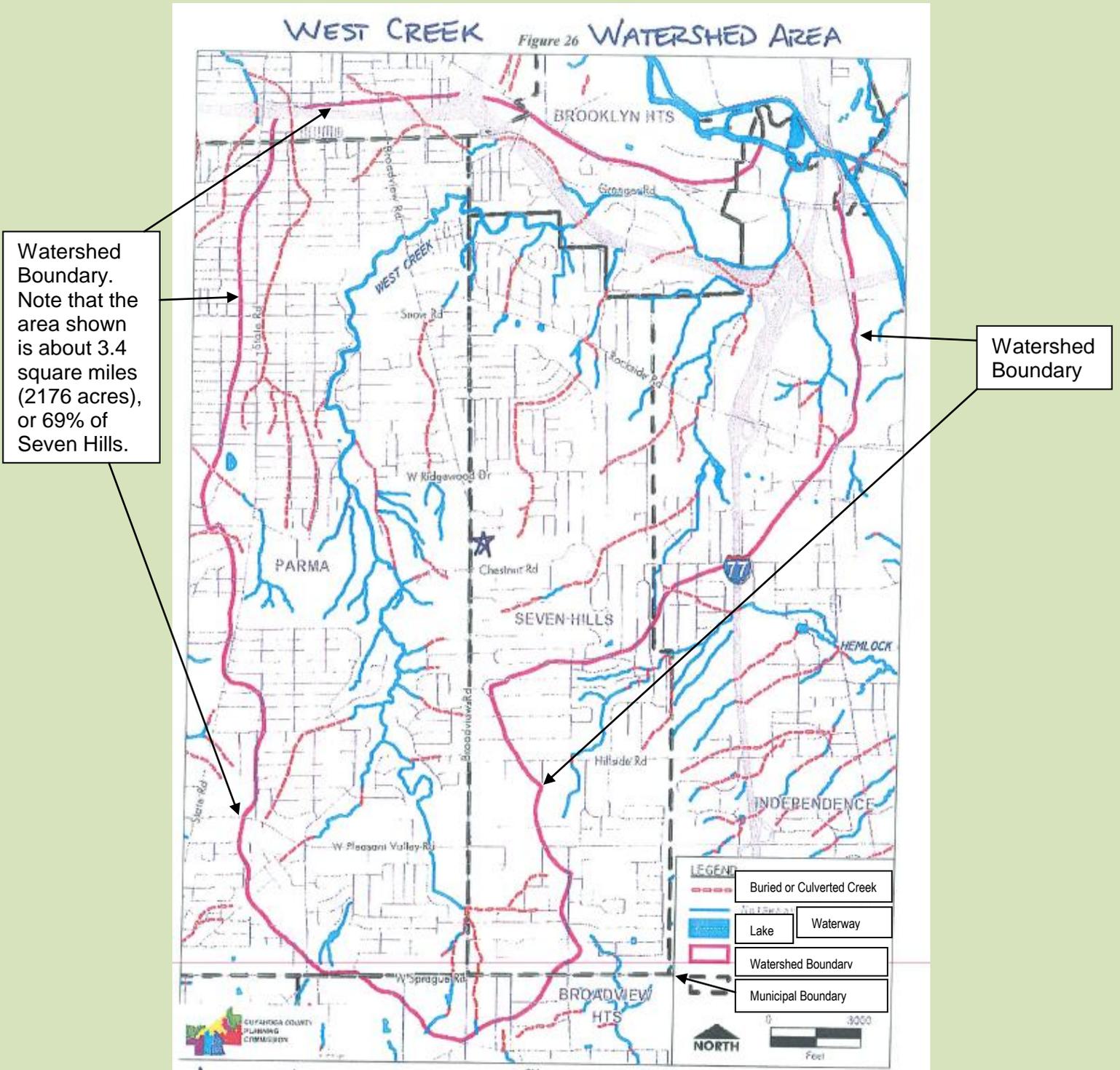
Further information about this project's scope can be found in the "Project Description" section of this document.

The environmental review conducted by Ohio EPA, described in this document, indicates that the proposed project will not result in significant adverse direct or indirect environmental impacts. Mitigation has been proposed by the city to reduce the impacts that were identified. On balance, this project will result in water quality benefits to the tributary streams that flow into West Creek, a tributary of the Cuyahoga River, and provide human health benefits.

Any direct environmental impacts during the construction of the privately- and publicly-owned sanitary sewer improvements are generally expected to be temporary and relatively minor. This conclusion was reached primarily since the most visible effects will mainly be limited to: (1) previously disturbed areas within residents' yards during removal of their existing HSTS and installation of new sanitary sewer laterals, and (2) road rights-of-way needed for laying the proposed sanitary sewers. In addition, specific environmental impact mitigation has been proposed to limit the effects of construction activities on ravines and streams within the area shown in Figure 3. Together, using boring and jacking or directional drilling technology, avoiding prohibited construction activities, and implementing routine impact mitigation should also assure that the actions of the contractors hired to complete the proposed project are consistent with the basis for this draft finding of no significant impact and environmental assessment. Ohio EPA has therefore concluded that all of these proposed improvements are expected generally to result in improved human health and environmental conditions within the project area. Finally, given the generally pre-disturbed conditions of the few remaining developable properties in the project area, and coordination with the relevant review agencies during the planning for the city's previous projects, Ohio EPA has concluded that no significant, adverse indirect impacts on aquatic or terrestrial habitats should occur in response to this proposed project.

According to information provided by the city engineer and the city's consultant, a thorough property assessment process was completed during the planning for this proposed project. The results of this property assessment process, including hearings and information provided to the public through other means, indicate that the public now generally supports the project and that it considers the costs to be affordable. Based on the material provided by the city, each resident in the project area will be responsible, on average, for an estimated assessment of \$12,207 (about \$741 per year over twenty years), a tap-in-fee of \$100 (normally paid by the homeowner's contractor), a one-time county-levied household sewage abandonment fee of \$100, a city charged sanitary lateral inspection fee of \$100, between \$3,000 and \$5,000 on average to properly replace an HSTS with a sanitary sewer lateral (including HSTS abandonment costs), and a sewer service charge of approximately \$546.23 per year in 2014 to pay for the OM&R of the city's sanitary

sewer system and treatment of wastewater at NEORSD's Southerly Wastewater Treatment Plant (WWTP).



Watershed Boundary. Note that the area shown is about 3.4 square miles (2176 acres), or 69% of Seven Hills.

Watershed Boundary

Figure 1, West Creek Watershed Map (* = Project Area)

Taken together and amortized to result in annual equivalent amounts, these costs are expected to total between \$1488 and \$1609 per year per residential customer. Expressed as a percentage of Seven Hills' 2006-2010 median household income (MHI) of \$58,950, this post-project annual amortized cost is equivalent to between 2.52% and 2.73%. The annual sewer service charge figure used above is based on a wastewater rate of \$64.55 per 1000 cubic feet of water use and an annual base charge of \$26.40, as will be charged by NEORS in 2014; and Seven Hills' annual sewer maintenance fee of \$35.75 per average household. Please refer to the "Project Implementation" section of this document for more information about how these annual equivalent costs were established and the WPCLF small community interest rate that Seven Hills is expected to receive. For the current month of May 2012, this fixed interest rate is 2.19%.

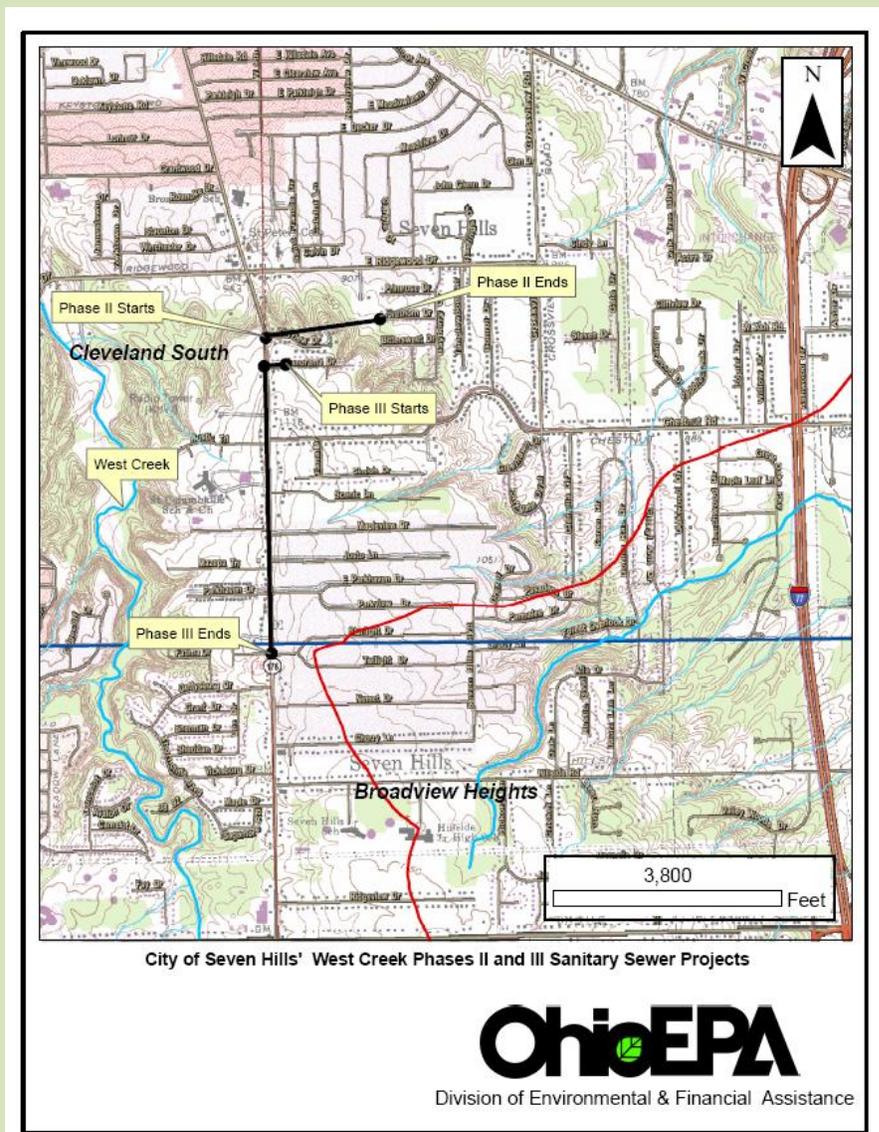


Figure 2, Specific Project Locations

C. Project Description

1. Project History

To address a portion of the DFFOs issued in December 2002 as noted above and comments received from Ohio EPA, the city prepared a general plan and submitted it to Ohio EPA's Division of Surface Water in September 2003, followed by a revised document in August 2004. Another updated planning document was sent by Seven Hills to Ohio EPA in February 2005. Following additional comments received from Ohio EPA's Northeast District Office in Twinsburg in June 2005, the city and its consultants addressed them in October 2005. At this point, there appears to have been little additional progress on moving Phases II and III of this overall project forward, as the city was concentrating on the construction of Phase I and the elimination of 160 failing HSTS.

Then, in July 2007, the city's engineering consultant prepared a basis of design report summarizing the proposed wastewater improvements project and identifying options for the city to consider in terms of funding and implementing the project. Shortly thereafter, in October 2007, Seven Hills' consultant prepared detailed plans and a storm water pollution prevention plan covering the project area shown in Figure 2 and submitted them to Ohio EPA's Division of Surface Water, Twinsburg Office for review. Subsequently, the city received a permit-to-install (PTI) for the proposed project from Ohio EPA, and prepared a flow monitoring report and infiltration/inflow (I/I) analysis report on the city's sanitary sewers in August 2009. This additional report was provided to Ohio EPA soon thereafter. However, as the Phase II/III improvements were not installed under the PTI before it expired, the city re-applied for a PTI in July 2010, and Ohio EPA issued it in September 2010. Prior to this date, in March 2010, the city nominated its proposed project for WPCLF financial assistance from Ohio EPA. According to Seven Hills, it contacted the Northeast Ohio Regional Sewer District (NEORS) prior to 2007 about the city sending wastewater flows from the project area to NEORS's Southerly WWTP, but the district did not agree in writing to accept flows from there and to treat them at its facility until August 2010.

In August 2010, Ohio EPA's WPCLF project reviewers asked Seven Hills for facilities planning information and in October 2010 received the requested information. At that time, the relatively high cost of the project was a concern to both the city and Ohio EPA. On this basis and given Ohio EPA concerns about the cost-effectiveness of the proposed collection system alternative, the project was delayed until these questions were answered, and the other components of the city's funding package (primarily Ohio Public Works Commission funds) became more certain and brought the estimated costs down to a more acceptable level in 2011.

According to the city, this project is the final phase of its sanitary sewer improvement program begun in response to Ohio EPA DFFOs issued in December 2002. Thus, other than the proposed Hemlock Creek Watershed Sanitary Sewer project with its 304 properties on septic tanks, any remaining wastewater treatment needs in Seven Hills will be addressed by individual property owners upgrading their HSTS, or connecting to existing sanitary sewers, where available, at their own cost.

2. Project Planning

• Unsewered Areas

According to information provided by the City of Seven Hills' consultants, the entire city has sanitary sewers except for the area covered by this proposed project (see Figure 2) and the Hemlock Creek project area (see above reference). On this basis and the need to eliminate the HSTS units from the West Creek Watershed to address the DFFOs issued in 2002, the remainder of this document will focus on the proposed wastewater improvements and the condition of the existing sanitary sewers where they could connect.

• Population Projections and Flow Projections for This Project

After peaking in 1980 with a population of 13,650 following five decades in which its population generally more than doubled every ten years, Seven Hills' population has declined. According to the U.S. Census, Seven Hills saw its total population decrease 2.1% from 12,309 in 1990 to 12,080 in 2000. This trend continued in 2010, with the latest census showing a total population of 11,804, or a loss of about 2.3% during the last decade. In comparison, the project area shown in Figure 2 has a current population of about 153 people living in 60 existing homes. In July 2010, assuming four people per household and usage of 100 gallons per capita per day, the city's consultant determined that 24,400 gallons per day (gpd) of wastewater at start-up to 24,800 gpd (in the design year) would be generated by the project area on an average daily basis. With peak flows ranging between 136,000 and 138,000 gpd, the consultant chose a minimum-size gravity sanitary sewer with a capacity of 490,000 gpd for this proposed project. As such, the proposed sanitary sewers are expected to be running less than half full on a regular basis and to be serving a built-out, single-family residential project area almost immediately.

3. Wastewater Collection and Treatment Systems

• Collection System

As none of the proposed improvements will replace parts of the city's existing sanitary sewer collection system, readers should only note that the city's proposed sanitary sewers will convey the collected wastewater to Seven Hills' existing sanitary sewer network and then onto the NEORSD's centralized sewer system and

Southerly WWTP. As shown in the city's August 2009 West Creek Watershed Sanitary Sewers Flow Monitoring and Infiltration/Inflow (I/I) Analysis report, and based on the city's prior work to remove I/I from its sanitary sewers, the city's sanitary sewers, particularly those in the Crossview Road subarea downhill of the project area, appear to no longer be subject to excessive I/I.¹

- City of Seven Hills' Pump Stations Locations

According to the city, there are no wastewater pump stations in the West Creek Watershed Sanitary Sewer project area, or Seven Hills as a whole. For this reason, readers should note that completion of Phases II and III of the city's West Creek Watershed sanitary sewer plan will have no effect on operation and maintenance costs of these types of wastewater collection system components. Rather, as the focus of this proposed project is on correcting the problems within the city's remaining unsewered areas and will not directly affect any pump station design capacity or configuration, the rest of this document will focus on the city's proposal to replace failing HSTS with new collector sewers.

4. Discussion of Feasible Alternatives

The following discussion analyzes the options considered in the city's planning documents to address the present problems and future needed capacity of its unsewered areas and its wastewater collection system:

- Option 1 - No Action

The no-action option was screened from further analysis since the city would not be able to address the terms of the Findings and Orders issued to it by Ohio EPA in December 2002, nor would a no-action alternative address the human health concerns of the Cuyahoga County Board of Health.

- Option 2 - Home Sewage System Improvements

Because of small lot sizes, poor soils, local hydrology, geologic characteristics, connection to existing storm sewers, and other local conditions contributing to HSTS failures, replacing existing HSTS with modern septic tanks and leach fields meeting Cuyahoga County Board of Health requirements, or installation of any other types of on-lot treatment systems, was not deemed feasible. For that reason, this alternative was also not considered any further by the city to address the DFFOs, or the high

¹ Infiltration/inflow is defined as extraneous, clear water that enters a sanitary sewer system through surface or subsurface locations. Inflow may include clear water entering the system through manhole covers, roof or foundation drains, direct storm sewer connections, etc. Infiltration usually occurs when clear water enters the system below ground through cracked or broken pipes and manholes, poorly sealed or misaligned pipe joints, damaged or poorly connected sewer laterals, etc.

levels of fecal coliform bacteria colonies found in water quality samples (over 40,000 colonies per 100 milliliters [ml] of water compared to the public health nuisance level of 5,000 colonies per 100 ml) by the county's board of health.

- Option 3 - Collector Sewer Improvements

In its planning materials submitted to various divisions of Ohio EPA between 2003 and 2011, the city and its engineering consultants provided information on different collection system approaches, as well as different alignments and technologies to install the proposed sanitary sewers. Basically, these options involved the use of either Alternative 1, open cut trench gravity sanitary sewers, or Alternative 2, gravity sewers with force main. Readers should note that the city did not provide Ohio EPA with the requested present worth analysis of grinder pumps and small diameter pressure sewers (force mains) to address the agency's concerns about the potentially very high cost of making these wastewater improvements in a very small service area. Rather, the city sent Ohio EPA a narrative explanation of why it would not consider a non-gravity sanitary sewer alternative. More specific details on these alternatives follow.

As noted earlier, planning for the wastewater improvements discussed in this document began in 2003. At that time and culminating with the 2007 basis of design report prepared by the city's consultants, the city considered two versions of Alternative 1 that differed in terms of where to install the collector sewers and the service laterals. In general, Alternative 1A proposed to use easements along the front of properties for these purposes, while Alternative 1B proposed to use the rear of properties to serve area homes and the couple of businesses in the project area. Efforts to minimize disturbance to residential yards and the presence of existing utilities led the city to choose the sanitary sewer alignment in the front of properties along Broadview Road (see Figure 2). The costs of this proposed option (Alternative 1A) can be found below in Table 1.

Because of the relatively high cost of the proposed improvements, Ohio EPA was very concerned during 2010 and 2011 with the cost-effectiveness of the proposed gravity sewer option (Alternative 1A). This led to lengthy discussions with the city and the city's eventual submittal of a narrative explanation of why it did not consider a grinder pump, low-pressure small-diameter force main alternative feasible or potentially cost-effective. Mainly, the city argued that it does not want the responsibility of operating, maintaining, and replacing a small diameter force main/grinder pump sanitary sewer system on behalf of its residents, even with potentially lower capital costs due to shallower trench excavations, and it asserted that gravity sewers have a much lower annual operation, maintenance, and replacement (OM&R) cost than other collection system options. It also added that the future liability of any sanitary sewer overflows from any pump stations was something it wants to avoid.

(Readers interested in this topic may want to note that Ohio EPA is aware that options other than gravity sanitary sewers [such as small-diameter pressure sewers with grinder pumps, and small-diameter sewers with septic tanks as pre-treatment units] typically have higher operation, maintenance, and replacement (O,M&R) costs, but typically lower up-front capital costs, than those associated with conventional gravity sewers. These higher O,M&R costs are typically due to annual pump maintenance requirements, electricity use, and pump replacements every five years on average. In addition, electrical outages and the need for backup generators also can be additional costs of using small diameter pressure sewers that are not associated with conventional gravity sanitary sewers. In contrast, gravity sewers typically can have higher initial installation costs, but very low annual O,M&R costs.)

Finally, the city did provide Ohio EPA with a side-by-side table comparing the construction costs of a combined force main and gravity sewer alternative to a gravity sewer option. These costs are summarized in Table 1 below. Together with the previously noted monetary and non-monetary considerations cited by the city, this additional cost information comprised Seven Hills' wastewater collection system alternatives analysis.

Table1, Capital Cost Comparison of Collection System Options		
Item	Gravity Sanitary Sewer Option (1A) Cost	Force Main Option (2) Cost
Construction Costs Estimate (including storm sewer replacement, road repair, and site restoration)	\$1,683,470	\$1,878,720
Engineering and Surveying	\$187,500	\$187,500
Redesign Force Main/Alternative	\$0	\$60,000
Construction Admin/Inspection	\$145,093	\$145,093
Existing Project Sewer Easements	\$162,000	\$162,000
Additional Easements for Force Main Alternative	\$0	\$8,816
Legal, Appraisals, Permits, and Advertising	\$99,115	\$126,215
Capitalized Interest	\$24,113	\$41,351
WPCLF Application	\$3,462	\$4,598
Contingency (10% of construction costs)	\$168,347	\$187,872
Total Cost	\$2,473,100	\$2,802,165
Note that the gravity sewer alternative would require the removal of 16 trees over 12 inches in diameter and 39 trees greater than 9 inches in diameter, while the force main option would reduce the number of trees larger than 12 inches in diameter being removed to 10. No comparable figures are available for smaller trees.		

5. Selected Alternative

Using the analysis conducted as part of planning and detail design work, the city established the selected alternative for the areas comprising Phases II and III. The specific proposal for sewerage for these two areas is explained in more detail below. To correct the problems identified with the HSTS units in the Phase II and III areas, Seven Hills has proposed to install approximately 6,857 lineal feet (lf) of eight-inch diameter gravity sanitary sewer and about 27 accompanying manholes. In addition, the city has proposed to install 52 six-inch diameter short lateral connections between the gravity sewer riser and the edge of rights-of-way, 10 six-inch diameter long lateral connections to the edge of rights-of-way, an asphalt overlay on Skyview Drive, and other appurtenances (driveway removal/replacement, topsoil, and seeding). In addition, private property owners benefitting from this project will need to install privately-owned house laterals from the house foundations to the publicly-owned laterals at the intersection with the public rights-of-way. Further information on this proposed project can also be found in the permit-to-install issued by Ohio EPA's Northeast District Office in 2007 and re-issued in September 2010. Of the proposed sanitary sewer, 4,240 lf is proposed to be installed along the east side of Broadview Road. Readers should note that the other side of the Broadview Road is located in Parma and the homes there are already served by sanitary sewers.

According to the city, an average property owner can expect to pay a property assessment of \$12,207 on the basis of the most recent total construction cost estimate of \$2,043,016. Overall, 62 property owners will benefit from the proposed wastewater improvements. As the city has already paid for the planning and design work on this project with its own funds, the WPCLF program will not be reimbursing the city for these prior incurred costs. Readers should also note that by not selling bonds to cover the 40% of the total project costs not being financed with grants, but rather by using low-interest WPCLF funds, the property owners of the project area will be saving approximately \$2,000 per home.

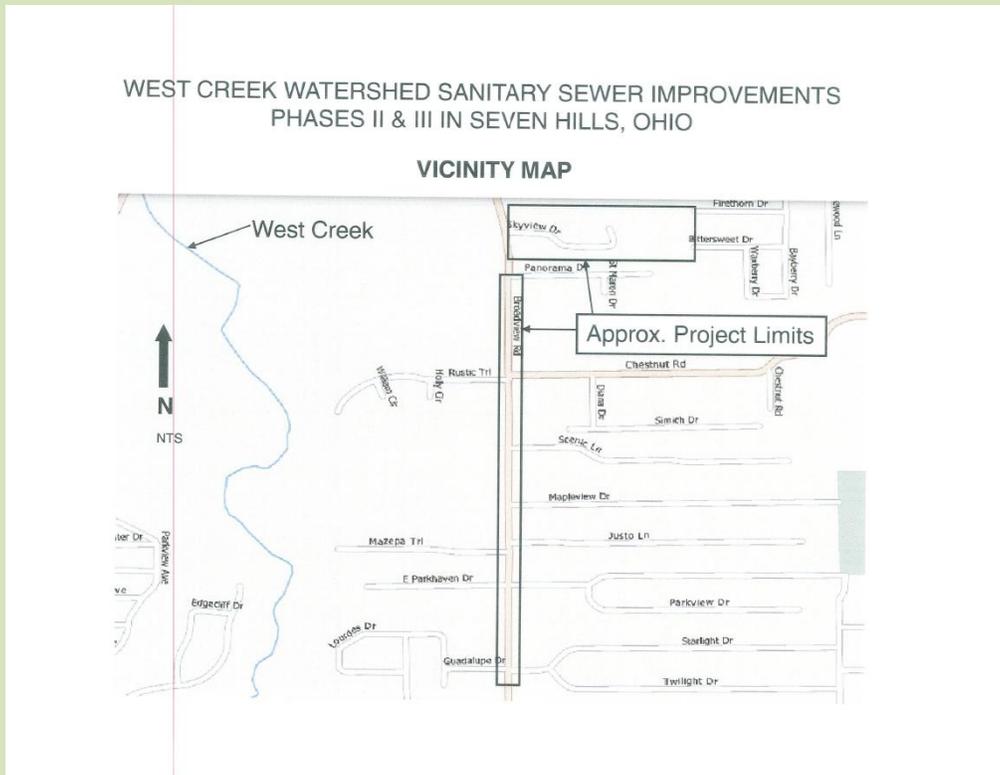


Figure 3, Seven Hills’ Selected Plan for the Phase II/III Areas (No Scale)

In terms of potential environmental impacts, the proposed wastewater improvements along Broadview Road and Skyview Drive will entail similar effects. Generally, temporary traffic disruption, site clearing, and permanent tree removal resulting from having to dig trenches to install the proposed sanitary sewers will be the most visible impacts to local residents in the project area. Residents should also expect to see and hear the movement of heavy equipment through their neighborhoods, along with the likelihood that city streets will occasionally become muddy as trucks move through a large portion of Seven Hills. Overall, Ohio EPA expects that the impacts associated with the construction of this project can be satisfactorily mitigated by provisions in the contract documents. With the specific steps the city has proposed to mitigate these possible impacts, it has shown that these concerns can be adequately addressed. For more information on the possible environmental impacts of this project and the means to mitigate them, please refer to the “Environmental Impacts of the Selected Alternative” section of this document.

D. Project Implementation

The total estimated construction cost of this project, excluding prior incurred planning and design costs, currently is \$2,043,016. Of this amount, the city expects to finance a maximum of 60% of the construction costs (roughly \$1,225,809) with grant funds from the Ohio Public Works Commission (OPWC). The remainder is

expected to be provided by an \$817,207 low-interest loan from Ohio EPA’s WPCLF program at a small community interest rate payable over 20 years. Readers should note that the WPCLF program’s pre-award interest rates are adjusted on a monthly schedule to reflect market conditions. For the current month of May 2012, the interest rate is 2.19%.

Currently, the city expects to follow the schedule below for completing this project:

<u>Activity</u>	<u>Date</u>
Advertisement of Phases II-III for Bids	Done
Open Phases II-III Bids	Done
Initiation of Phases II-III Construction	June 2012
Completion of Construction of both Phases	By July 1, 2013

As noted above, the city has already advertised Phases II and III of the overall West Creek Watershed Sewers project for bids and expects to receive a WPCLF loan in May 2012. Construction of this proposed project is expected to take eight months to complete.

According to the city, a thorough assessment hearing process was completed for this overall project in May 2011. At the final assessment hearing, almost half of the property owners in the project area filed letters of objection with the assessment equalization board. These concerns were addressed by the city finding additional OPWC grant funds to lower the property assessments and by levying each property owner the same assessment.

As a result of the city’s proposed funding and repayment mechanisms, no additional increases in sanitary sewer service charges beyond those already scheduled are expected to be needed to finance this proposed project and its associated debt through the funding programs identified previously. Based on the estimated total project costs, the city expects the current estimated total annualized private homeowner costs of \$941.40 per household when added to Seven Hills’ average annual sanitary sewer fee of \$546.23 per year will be sufficient to cover the annualized debt of assessments and homeowner improvements, and the annual operation, maintenance, and replacement costs the city expects to face upon completion of these improvements.

In terms of the city’s 2006-2010 annual MHI figure of \$58,950, the total post-project annual amortized wastewater cost is equivalent to between 2.52% and 2.73% of this amount. The city expects that its already acquired OPWC grant funding, plus low-

interest financing from the WPCLF, will help make these improvements as affordable as possible. More information on this proposed project's potential environmental and economic impacts can be found in the "Environmental Impacts" section of this document. Table 2 provides a financing summary of all of the proposed improvements.

Table 2, City of Seven Hills Collector Sewers Project Financing Summary	
Item	Cost
Total Estimated Construction Costs, including engineering fees and contingencies	\$2,043,016
Estimated OPWC Grant Funds (60% max.)	\$1,225,809
Estimated WPCLF Loan (40% Min.) at 2.19%	\$817,207
Seven Hills' Pre-project (2012) Share of Annual O,M&R Costs of WWTPs and Sewers	\$268,058
Seven Hills' Post-project (2014) Share of Annual O,M&R Costs of WWTPs and Sewers	\$246,441
Existing Pre-Project Wastewater Annual Debt Retirement (2012)	\$34,052
Estimated New Annual Debt Retirement – WPCLF Payment	\$62,278
Estimated Total Post-Project Wastewater Annual Debt Retirement	\$96,330
City's Total Estimated Annual Debt Service and O,M&R Costs	
2012	\$300,110
2014	\$342,771
Pre-project, Annual Residential Sewer Service Rate (2012) covering all city wastewater costs, based on 7500 cubic feet usage.	\$453 per year
Post-project, Annual Residential Sewer Service Rate (2014) covering all city wastewater costs, based on 7500 cubic feet usage.	\$546 per year
Notes: The City provided the following other relevant information:	
1. Assessable Project Costs (62 Benefiting Users): \$748,082 (property owners portion) or \$756,822 (total assessment/assessable project costs)	
2. Non-assessable Project Costs: \$69,124	
3. Total Local Share: \$817,206/7	
4. Average Residential Homeowner Assessment: \$12,207	
5. WPCLF loan will be repaid through special (property) assessments and general tax receipts.	

E. Environmental Impacts of The Selected Alternative

The proposed solutions to the water quality problems in the project area discussed in this document involve elimination of failing and inefficient home sewage treatment systems and new collector sanitary sewers improvements as described above. Because of the sites chosen for this particular project, its scope, and the detailed mitigation developed by the city's consultant, Ohio EPA expects the proposed wastewater improvements will not directly result in significant adverse effects on the natural or human environment. Where there is any potential for direct or primary impacts on any resources in these two categories, an analysis can be found below in the following summary of Ohio EPA's environmental review.

In addition, the project was reviewed by Ohio EPA's Division of Environmental and Financial Assistance for indirect or secondary impacts on the environment. Where pertinent, an explanation has been provided below that describes the current condition of proposed development areas and why no significant adverse environmental impacts from this development within Seven Hills' project planning area are expected. Overall, this proposed project is not expected to result in any significant, adverse environmental impacts for the reasons cited below.

1. Major Land Forms

Given that the purpose of these proposed wastewater improvements is mainly to replace failing HSTS with more reliable centralized sanitary sewers of adequate capacity within generally previously disturbed road rights-of-way and easements, no significant changes in major land forms (unique topographic features or soils) are expected. Thus, the direct impacts of this project on this environmental attribute will not be significant following its completion and restoration of pre-construction topography. Similarly, as there are very few undeveloped lots left in the project area and the terrain of the vacant land is unsuitable for development, no indirect, short-term or long-term, adverse impacts on major land forms are expected to occur through provision of sanitary sewer capacity in excess of what is needed to eliminate HSTS.

2. Surface and Ground Water

The proposed placement of the project's components within mostly previously-disturbed areas of Seven Hills and the limited amount of construction activities that will be conducted in ravines and near small streams in the project area indicate that there should not be any significant, adverse, direct environmental impacts on surface water resources within the planning area. While more specific information on the project's potential impacts has been provided in the aquatic and terrestrial portion of this document, certain key mitigative measures are worth noting here. These include requiring the city's contractor(s) to follow a storm water pollution prevention plan and install specific best management practices (e.g., inlet protection, silt barriers, and temporary/permanent seeding) to assure that construction related activities do not result in adverse water quality impacts to tributaries of West Creek during the project's construction. By taking the above steps and avoiding specific prohibited construction activities over the life of the project to prevent any off-site filling of wetlands and floodplains, Ohio EPA expects that the proposed project will not result in significant, adverse, direct impacts on surface water features in the area shown in Figure 2. Failure to follow these provisions can result in payment being withheld from the city until the mitigative measures are properly deployed and maintained, or appropriate restoration activities are completed by the contractor(s). For information on any secondary impacts on surface water features, please see the following section on terrestrial and aquatic habitat.

No significant, adverse, direct effects on ground water resources are anticipated because residents of the project area are served by the City of Cleveland's public water supply and distribution system lines that generally run perpendicular to the proposed sanitary sewer lines. Thus, installation of the sanitary sewer and any trench dewatering that has to occur should not affect any private wells in the vicinity of the project. In addition to no direct effects, the proposed project should also not indirectly affect any ground water resources through either related infrastructure improvements or property development.

3. Terrestrial and Aquatic Habitat, including Endangered Species, Floodplains and Wetlands

Terrestrial Habitat. During the review of this project, Ohio EPA focused primarily on the proposed project's potential to impact terrestrial habitats: namely, the ravine between Skyview Drive and Firethorn Drive as shown in Figures 4 and 5, and the associated forest (Figure 6). Given these conditions, Ohio EPA requested that the city identify the trees within the proposed permanent and temporary sewer easements by species to establish if any of these trees could provide habitat suitable for Indiana bats.

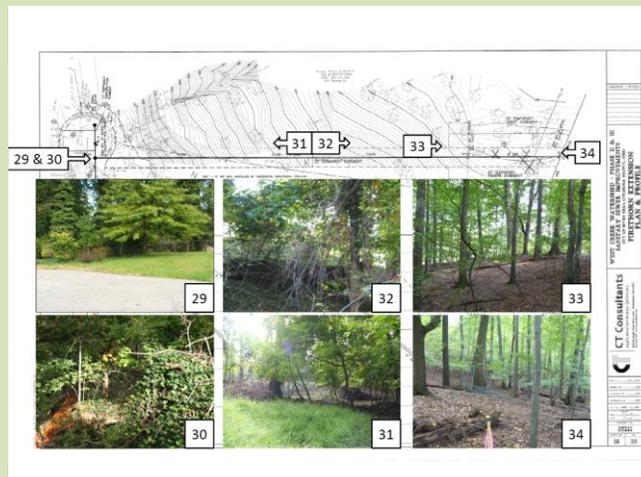


Figure 4, Wooded Ravine Between Skyview and Firethorn Drives

Based on the arborist's report to the city for the area shown on Photos 33 - 36, the majority of the trees present are red maple and red oak, followed by a few individual wild black cherry, beech, hackberry, ash, aspen, and sycamore trees. Of these trees, only two individuals (a wild black cherry and a red maple) were identified as having potential Indiana bat habitat. However, the arborist concluded that the exfoliating bark on the wild black cherry and the open, cracked limb on the red maple were either not likely sufficient for habitat (cherry) or likely to fall before construction starts (red maple). On this basis, Ohio EPA has concluded that the proposed project will have no adverse impact on Indiana bats or their habitat covered under the federal Endangered Species Act.

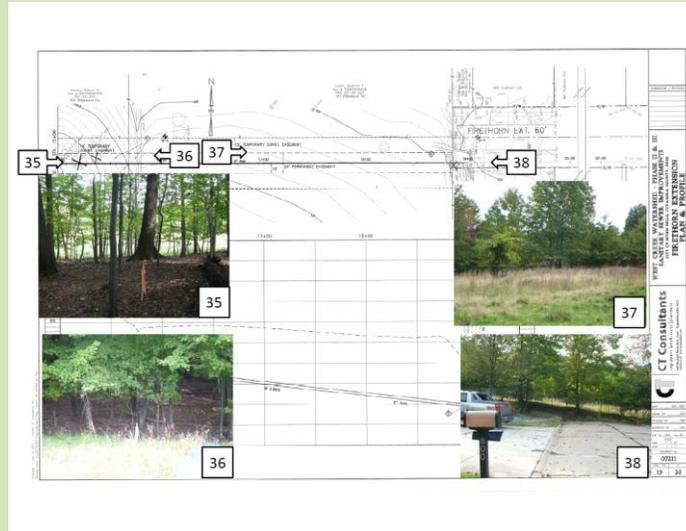


Figure 5, Wooded Ravine Between Skyview and Firethorn Drives

In terms of additional potential impacts on terrestrial habitat, the city indicated what its plans are for the roughly nine hundred feet between the terminus of Skyview Drive and the end of Firethorn Drive, where the proposed sanitary sewer will connect to an existing sanitary sewer stub. Of these nine hundred feet through the wooded ravine, the city has committed to horizontally directionally drill approximately 400 feet of sanitary sewer and so avoid impacting the majority of the ravine and associated mature trees within the 20-foot wide permanent easement (See Photos 30 – 33 in Figure 4). In addition, the city has noted that its intent is for the contractor not to remove any large trees (nine inch diameter or larger) within the two 15-foot wide temporary easements paralleling the 20-foot wide permanent easement (see Photos 33 – 38 in Figures 4 and 5), as well as its requirement for the contractor to hire a certified arborist and submit a tree removal plan for the approximately 500 feet of sanitary sewer excavation that will be open cut through the lower part of the hillside. Moreover, the city has indicated that the contractor is to use the temporary easement through the hillside primarily for storing spoils excavated from the sanitary sewer trench and stockpiling of materials, while protecting the trees to remain. Accordingly, Ohio EPA has concluded that the use of horizontal directional drilling and open cut techniques to install the proposed sanitary sewer between Skyview Drive and Firethorn Drive, along with the associated removal of approximately ten larger trees, will not result in significant, adverse environmental impacts on terrestrial habitat. Readers should note that removal of trees under nine inches in diameter was not considered during this review.



Figure 6, Aerial Photograph of Ravine between Skyview and Firethorn Drive (in Foreground)

While Ohio EPA's review focused primarily on the ravine between Skyview and Firethorn Drives, we also noted that a large number (45 to 55) of street trees will need to be removed to install the sanitary sewer between 6981 Broadview Road and the intersection of Broadview Road with Panorama Drive and to maintain a proper isolation distance from existing, parallel running water lines. These impacts are expected to be addressed by the city's plan to improve the streetscape by planting over 80 trees along Broadview Road and Civic Drive during 2012.

Aquatic Habitat. As noted above, the contractor performing the work involved in this project will be required to follow a storm water pollution prevention plan and avoid specific actions that could result in adverse impacts to aquatic habitat. By adhering to specific prohibited construction activities (such as not placing fill in any wetlands or floodplains even with the permission of property owners) and using horizontal directionally drilling techniques to avoid large trees in the ravine between the end of Skyview Drive and Firethorn Drive as shown above, only acceptable levels of storm water runoff are expected to occur. In fact, in the long-term, this proposed project should not only have a positive benefit for human health conditions, but also enable water quality of streams further down in the West Creek watershed to improve. As there are no unculverted streams in the project area, Ohio EPA expects that construction-related impacts of this proposed project on aquatic habitats, including floodplains and wetlands, will be short-term and generally insignificant. A similar conclusion was reached in terms of long-term, indirect and cumulative impacts, as the project area has reached a built-out condition and no additional home building activity is likely.

Other Endangered Species. According to the Ohio Department of Natural Resources' Division of Natural Areas, given its suburban character, the proposed

project area lacks any habitat specifically known or capable of supporting federal- or state-listed potentially endangered or threatened species. On this basis, Ohio EPA has concluded that no direct, indirect, or cumulative impacts on any additional rare, threatened, or endangered species are likely to occur in response to the proposed improvements.

4. Land Use and Agriculture

Based on a review of the project area during the past year, Ohio EPA concluded that the proposed wastewater improvements will have no significant direct, indirect, or cumulative effects on either land use or agriculture production because of their location within a largely urbanized area, as well as the built-out condition of developable properties within the project area.

5. Air Quality

Air pollution levels in Seven Hills mirror the conditions in Cuyahoga County. Since the entire county is expected to be in non-attainment with air quality standards for eight-hour ozone upon issuance of non-attainment designations by U.S. EPA and is currently in non-attainment for particulate matter (PM 2.5), Ohio EPA has reviewed the proposed project for direct and indirect impacts on air quality. Given that the proposed project is expected to be completed over the next eight months, any increase in heavy equipment traffic is expected to be temporary and with the mitigation proposed for proper control of vehicle emissions, it should not result in any significant, adverse, short-term or long-term impacts on air quality. A similar conclusion was reached for short-term increases in dust during sanitary sewer construction. Use of dust control measures and prompt repaving and reseeding of disturbed areas should limit dust generation to relatively low levels.

Considering the generally built-out condition of the project area and the minimum pipe size used on this project and thus its relatively low growth potential, very little, if any, additional air pollutants are expected to originate within the proposed project area (see Figure 3) over the planning period. For that reason, no significant, adverse indirect and cumulative impacts on air quality are expected.

Ohio EPA and the Northeast Ohio Areawide Coordinating Agency (NOACA) support the conclusion that this project is consistent with the objectives of water quality planning under the Clean Water Act, and with the State of Ohio's State Implementation Plan under the Clean Air Act. These assurances also indicate that any projected future growth in Seven Hills's project planning area should not induce adverse indirect environmental impacts on air quality. With NOACA having completed a Clean Water Act Section 208 Areawide Water Quality Planning review on this project, the city's activities continue to be consistent with regional plans for water and air quality. Finally, a positive benefit of this project will be the elimination of odors associated with failing HSTS inside the project area.

6. Noise, Traffic, and Aesthetics

The contract specifications for this project provide adequate mitigation to address potential short-term noise, traffic, and aesthetic concerns. As a result of such control measures as keeping construction equipment properly operating, following a required traffic maintenance plan, and preventing construction activity during evening and nighttime hours, no significant, direct project effects on noise, traffic, and aesthetic levels should occur. Overall, noise levels and traffic patterns are expected to return to pre-construction levels once this project is completed. However, one of the unavoidable long-term aspects of this project is selected tree removal along city roads and within permanent and temporary construction easements. More information on tree removal within the project area can be found above in the terrestrial and aquatic habitat portion of this document. In addition to this potential concern, the city has taken steps to design this project to avoid private landscaping as much as possible, and so minimize any short- or long-term effects on these local conditions as well.

7. Energy Use

Given the city's selected alternative for this proposed project and the absence of any energy usage needed to operate the city's proposed gravity collector sewers, no significant short- or long-term adverse effects on the production of non-renewable energy or the air pollution it produces are expected. This conclusion was reached primarily because a gravity sewer does not require any energy to operate. In addition, the energy (in the form of fossil fuels) needed to operate the equipment to install the proposed gravity sewer is expected to be comparable to that used on similar projects, and thus not to constitute a short-term adverse environmental impact. Upon completion of the proposed project, energy usage will return to pre-construction levels and no long-term energy needs will exist.

8. Archaeological and Historic Resources

A review by the Ohio Historic Preservation Office found that the city's proposed project does not have any potential for affecting archaeological or historical resources in the facilities planning area listed in, nominated to, or eligible for the National Register of Historic Places. Ohio EPA concurs with this finding. On this basis, any direct or indirect impacts on these types of resources should not be adverse.

9. Local Economy

The local economy of Seven Hills (and with it the city's declining population over the past ten years or more) has been influenced by the conditions of its commercial and residential sectors. Given these conditions, the rest of this section deals with the

city's population trends and how the city's funding proposal can assist with making these proposed capital improvements more affordable for city residents.

Over the past thirty years, the city's population has declined from a peak of 13,650 people. Community demographics show that its median household income increased by about 39.56% from \$42,240 to \$58,950 between 1990 and 2010, while the percentage of its population over age 65 increased to 25.84% from 21.36% between 1990 and 2000, and the percentage of its population living beneath the poverty level also increased, albeit minimally, from 1.93% to 2.6% during the same decade. To help these latter segments of the city's population afford the improvements to the city's wastewater collection system, the city has pursued and received \$1.2 million in OPWC grant funds (not to exceed 60% of the total project costs) to help lower the capital costs of this project, and the property assessments associated with it. It should also be noted that the WPCLF small community interest rate loan and OPWC grant funds will further reduce the costs of this project when compared to market rate loans. Currently, the city qualifies for a 2.19% interest rate on its WPCLF loan. This fixed interest rate will be in effect through May 2012, when a new monthly interest rate will be set.

Because the city plans to repay its WPCLF loan through special (property) assessments and general tax receipts, Seven Hills' project area residents may want to note that NEORSRD's wastewater bill is scheduled to increase over the next several years. As the city's proposed project costs are just part of its overall wastewater bill (the remainder comes from paying a portion of operating NEORSRD's Southerly WWTP costs), readers should be aware that future debt service and operations costs from NEORSRD can be passed along to them as well. At this time, however, given the substantial grant funds received for this project (about two-thirds of the costs), Ohio EPA does not expect that the city will need to further raise its wastewater rates to avoid annual wastewater account deficits during the next twenty years. On this basis, current support of city residents to finance this project suggests that the proposed assessments, tap-in fees, two inspection fees, HSTS abandonment and sewer lateral construction costs, and wastewater charges when combined and amortized to reflect an annual equivalent cost should be affordable for an average resident of the city. When expressed this way, the total costs are equivalent to between \$1488 and \$1609 per year per residential customer. Expressed as a percentage of Seven Hills' 2006-2010 MHI of \$58,950, this post-project annual amortized cost is equivalent to between 2.52% and 2.73% of this amount.

F. Public Participation

The proposed project has been reviewed by the following agencies, or for conformance with laws under their jurisdiction. Where the agencies were directly contacted, they were provided an opportunity to comment on the proposal to

finance construction activities in the City of Seven Hills using WPCLF and other funds.

- * NOACA
- * Ohio Department of Natural Resources
- * Ohio Environmental Protection Agency
- * Ohio Historic Preservation Office
- * U.S. Fish and Wildlife Service

During the environmental review of this project, Ohio EPA coordinated fully with federal and state review agencies. As a result of this coordinated effort to address possible adverse impacts as early as possible, no negative comments about the proposed improvements were received from these review agencies.

In addition, Seven Hills completed a thorough public notification and involvement process. This process included holding public meetings during the facilities planning phase of project development in 2007, plus following the required property assessment process during which project area residents could provide comments. Records from the assessment equalization board hearing in May 2011 and city council's action to approve the board's recommendations in July 2011 indicate that residents' main concerns dealt with how the project could be made more affordable given the small population base available to finance the proposed wastewater improvements. Given that these concerns were addressed, it appears that the city provided ample opportunities for local area residents to have their questions answered during the multiple available public review and comment periods on this project. Accordingly, Ohio EPA has concluded that the public participation requirements of the WPCLF program were met and that the city has appropriately involved the public in the decision making process for this project.

G. Reasons for a Preliminary Finding of No Significant Impact

Based upon our review of the city's facilities planning information and the materials presented in this Environmental Assessment, Ohio EPA has concluded that there will be no significant adverse direct impacts from the proposed project as it relates to the environmental features discussed previously. Through avoidance of the most environmentally-sensitive areas and the use of mitigative measures described in this document, the impacts from construction should generally be short-term and insignificant. Any indirect or cumulative impacts from this project should be addressed by on-going local initiatives to implement comprehensive planning ideas and storm water controls, as well as enforcement of existing federal and state regulatory frameworks under the federal Clean Water Act and existing state law.

H. Contact Information

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