

Steven L. Beshear
Governor



Leonard K. Peters
Secretary

Energy and Environment Cabinet
Department for Environmental Protection
Division of Water
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FINDING OF NO SIGNIFICANT IMPACT (FONSI)
Lexington Fayette Urban County Government
Wolf Run Wet Weather Storage Facility
Fayette County, Kentucky
AI ID: 1073; PLN20140002

In accordance with the procedures contained in the State Revolving Fund Operating Agreement between the U.S. Environmental Protection Agency and the Commonwealth of Kentucky, the Kentucky Energy and Environment Cabinet (EEC) is required to determine whether a proposed project funded through the Clean Water State Revolving Fund will significantly impact the environment. Based on a review of the *Lexington-Fayette County Urban Government (LFUCG) Wolf Run Wet Weather Storage Tank Facility* submitted by the applicant and other supporting documents, the EEC has determined the above referenced proposed project will not have a significant impact on the environment and is issuing a Finding of No Significant Impact (FONSI).

The *LFUCG Wolf Run Wet Weather Storage Facility* project consists of the construction of a 1.8 million gallon Wet Weather Storage Facility (Equalization Basin), pump station, and 250 linear feet of sewer line. This proposed project was submitted in the Remedial Measures Plan in accordance with the terms of the Consent Decree with the USEPA and the Kentucky Energy and Environment Cabinet. The proposed project is expected to improve the capacity of the sewer system and help LFUCG to comply with the terms of its Consent Decree to reduce sanitary sewer overflows (SSO).

These actions are a necessary step in improving water quality of local streams, as well as the inability to meet permit limits due to aging and failing infrastructure. The proposed projects are located within the South Elkhorn Creek watershed, Hydrologic Unit Code 05090201.

The Environmental Information Document, attached, contains detailed information supporting this proposed action within the following sections: A) Proposed Project and Funding Status, B) Existing Environment, C) Existing Wastewater Facilities, D) Need for Project, E) Alternatives Analysis, F) Environmental Consequences, Mitigative Measures, G) Public Participation and User Rates, and H) Sources Consulted.

This FONSI will be available for review and comment for thirty (30) calendar days. Interested persons are encouraged to submit comments within the comment period. The DEP will take no action on this project until after the State Clearinghouse review and public comment period has ended. Written comments supporting or disagreeing with the proposed action should be sent to Cindy McDonald, Supervisor, Wastewater Planning Section, Water Infrastructure Branch, Division of Water, 200 Fair Oaks Lane, 4th Floor, Frankfort, Kentucky, 40601, or by e-mail to cindy.mcdonald@ky.gov.

Sincerely,



Peter T. Goodmann, Director
Division of Water

CM:ld



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Environmental Information Document (EID)

Wolf Run Wet Weather Storage Facility
Lexington-Fayette Urban County Government
Fayette County, Kentucky
AI # 1073; PLN20140002

The Department for Environmental Protection (DEP) has conducted a review of the above proposed project in accordance with the clean water state environmental review process, which is incorporated in the State Revolving Fund Operating Agreement between the Environmental Protection Agency Region IV and the Commonwealth of Kentucky.

A. Proposed Project and Funding Status

Proposed Project

The Lexington Fayette Urban County Government (LFUCG) has applied for financing through the Clean Water State Revolving Fund (CWSRF) of 2013 to fund the rehabilitation of portions of its wastewater collection system. The proposed project will consist of the construction of a 1.8 million gallon Wet Weather Storage Facility (Equalization Basin), pump station, and 250 linear feet of sewer line. This proposed project was submitted in the Remedial Measures Plan (RMP) in accordance with the terms of the Consent Decree with the U.S. Environmental Protection Agency (USEPA) and the Kentucky Energy and Environment Cabinet. The proposed project is expected to improve the capacity of the sewer system and help LFUCG to comply with the terms of its Consent Decree to reduce sanitary sewer overflows (SSO).

Funding Status

The proposed project (SX21067042) cost is estimated at \$9,428,669 and will be funded by a low interest loan from the CWSRF Fund A.

B. Existing Environment

Topography and Soils

The proposed project area is located on the western side of Lexington in Fayette County. Fayette County is located in the Inner Bluegrass Physiographic Region; dominated by the Lexington, Cynthiana, and High Bridge Group limestone formations from the Ordovician Period. The terrain is typically gently rolling and undulating. Sinkholes are common in this area, having a

high potential for Karst formations that occur with the abundance of limestone. Elevations in the area range from 549 feet to the highest peak at 1,070 feet. Limestone bluffs are characteristic of stream valleys which are narrow and steep.

The project location is dominated by the Armour Soils Group characterized by 2 - 6% slopes with deep, well drained, fertile, and medium textured soil. Most of the soil is comprised of silty material washed away as runoff from the limestone. The soil is comprised of silt loam and silty clay loam having moderate permeability and high water capacity.

Surface Water

The proposed project is located near Wolf Run (RM 1.25) of Town Branch which is part of the South Elkhorn Creek Watershed (HUC 11 – 0510020570) in the Kentucky River Basin Management Unit. The *2012 Kentucky Division of Water Integrated Report to Congress on the Condition of Water Resources in Kentucky* lists Wolf Run as non-supporting for primary and secondary contact recreation and partial support for warm water aquatic habitat due to channelization, loss of riparian habitat, stormwater, and urban runoff/storm sewers. Reducing SSO discharges into Wolf Run will have a positive impact on stream quality by reducing these types of pollutant sources.

There are no Special Use Designated Waters, i.e. Exceptional Waters, Reference Reach Waters, or Outstanding National Resource Waters located in the project area. The South Elkhorn Creek Watershed is listed as a Priority Watershed according to Kentucky Division of Water (DOW).

Public water is supplied by Kentucky American Water – Hardins Landing Water Treatment Plant. The intake is located on the Kentucky River at RM 48.8 in Franklin County.

Groundwater

Groundwater is often a source of drinking water supply for humans and animals through wells and springs. The quality of the groundwater can be negatively impacted by both natural and man-made sources. The sensitivity to these potential pollutant sources has been assessed and the project area is rated as having a high sensitivity to groundwater pollution. The project area is located in a high potential zone for Karst formations because of extensive limestone and bedrock throughout the region. This project has the potential to prevent pollution from entering groundwater in the area.

C. Existing Wastewater Facilities

The proposed Wolf Run Wet Weather Storage Facility location is off of Kilrush Drive near Wolf Run Creek. This area is located in the Town Branch WWTP Planning Area. The Town Branch WWTP was originally constructed in 1919 which included imhoff tanks, trickling filters, and drying beds. Several upgrades and expansions have occurred over the years, most notably the expansion in 1987. This expansion increased to the current design capacity of 30 million gallons per day (mgd) with 64 mgd peak hour capacities. This facility treats approximately 60% of Fayette County. The Wolf Run Wet Weather Storage Facility is designed to handle 1.8 million

gallons of overflow that will protect the WWTP from capacity overflows and prevent flooding of Wolf Run.

The WWTP uses a secondary treatment process which consists of grit removal, primary clarification, aeration, parshall flume, chlorination, dechlorination, and cascade aeration before the discharge into Town Branch at RM 10.2 (38°03'49.16", 84°32'01.66"). Sludge and solids treatment consists of gravity thickening, primary digester, secondary digester, belt filter press, and then landfill disposal. The WWTP operates under the KPDES Permit #KY0021491; the permit limits are included in Table 1.

A total of 49 lift stations with force mains transport wastewater to the Town Branch WWTP from the planning area. Collection lines include concrete and clay pipes installed prior to 1950. Ductile Iron and PVC pipes were used for force mains and gravity sewers after 1950. The majority of the existing lines is over 25 years old and will need to be replaced in the coming years. Equipment replacement and modifications are recommended to be completed in the next few years to maintain the treatment process within the design capacity and peak flow capacity.

The LFUCG Town Branch WWTP Planning Area is located in the Bluegrass Area Development District.

Table 1 Existing KPDES Permit Limits Wastewater Treatment Plant Town Branch WWTP Lexington, Fayette County, Kentucky	
Parameter	Limitations
Carbonaceous Biological Oxygen Demand (CBOD ₅)	10 mg/l*
Total Suspended Solids (TSS)	30 mg/l*
Ammonia-nitrogen (NH ₃ -N)	2 mg/l – summer* 7 mg/l – winter*
Dissolved Oxygen (DO)	7.0 mg/l (min.)**
<i>Escherichia coli</i>	130 Col./100 mls***
Total Residual Chlorine (TRC)	0.011 mg/l*
*Monthly Average	**Daily Minimum
***Monthly Geometric Mean	

D. Need for Project

LFUCG was placed under a Consent Decree by the USEPA in 2008 due to numerous Notices of Violation caused by Sanitary Sewer Overflows. The Remedial Measures Plan is a list of projects proposed by the LFUCG to comply with the Consent Decree. It was approved by the USEPA in 2011. The Wolf Run Wet Weather Storage Facility is one of the projects proposed in the RMP. The SSOs consists of unpermitted discharges of untreated sewage into Wolf Run and Town Branch. The main causes include capacity restrictions, sewer line blockages, and deteriorating sewer lines. The overflows occur during heavy rainfall events where the capacity of the

collection lines were exceeded and overflows occurred directly into Wolf Run and Town Branch. The flow during these rain events exceeds the peak flow design capacity of the WWTP.

E. Alternative Analysis

Alternatives were considered to determine the most cost-effective method for providing wastewater treatment to the planning area.

No Action: Because this plan is a requirement of the Consent Decree this alternative is not an option.

Wolf Run Wet Weather Storage Facility: This project proposes to construct a 1.8 million gallon storage tank that will hold the overflow from heavy rainfall events to prevent untreated wastewater from entering Wolf Run or Town Branch, preventing pollution and KPDES permit violations. This project is only a part of the total remedial measures that LFUCG has proposed. The total cost for this project is \$9,428,669.

Selected Alternative

The selected alternative is constructing a 1.8 million gallon storage tank, pump station, and 250 LF of sewer line to hold the overflow from heavy rainfall events into Wolf Run and Town Branch. This storage tank will prevent untreated wastewater from flowing into the streams and prevent permit violations. This alternative is the requirement from the Consent Decree and the approved Remedial Measures Plan as the best method of decreasing the sanitary sewer overflows to the streams.

F. Environmental Consequences, Mitigative Measures

The applicant solicited government agency review comments through the Kentucky State Clearinghouse. Correspondence dated March 31, 2014, from the Kentucky State Clearinghouse indicated no serious local or environmental issues are anticipated.

Impacts on Historical Properties and Archaeological Sites

The State Historic Preservation Office (SHPO) commented, through correspondence dated May 23, 2014, the project will occur in a previously disturbed area and therefore no adverse effects are expected. They made no further comments.

Impacts on Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS) commented, by letter dated February 19, 2014, several federally listed species are known to occur in the project area and a biological survey

should be completed to determine if the habitat exists. The species in question are the Indiana bat (*Myotis sodalis*), Northern Long-Eared bat (*Myotis septentrionalis*), Gray bat (*Myotis grisescens*), Short's bladderpod (*Physaria globosa*), and Running buffalo clover (*Trifolium stoloniferum*). A biological survey was conducted and a report submitted to the USFWS for review and comment. The report shows the habitats for the vegetative species, Running Buffalo Clover and Short's Bladderpod do not exist in the project area. The habitat for the three bat species does occur in the project area and steps need to be taken to minimize impacts to their habitat. LFUCG has entered into a Memorandum of Agreement (MOA) with USFWS (FWS2014-B-0269) to minimize the impacts to the Indiana bat, Northern Long-Eared bat, and the Gray bat habitats. The MOA concurs with the findings of the biological survey.

Impacts on Wetlands and Streams

The U.S. Army Corps of Engineers (USACE) has determined "waters of the U.S." will not be impacted by the proposed project, by correspondence dated March 5, 2014.

The Kentucky Department of Fish and Wildlife Resources (KDFWR) commented via the Clearinghouse process on March 31, 2014 and recommended erosion control measures are in place to prevent impacts to the aquatic environment.

Impacts on Floodplains

The Kentucky Division of Water has commented through the Clearinghouse process requiring a Floodplain Construction permit since the project is located in the floodplain of Wolf Run. A permit was granted on June 5, 2014 (Permit #20918).

Impacts on Prime Farmland

The National Resource Conservation Service (NRCS) was solicited for comments. The soils map and soil descriptions of the project area were provided by email on February 19, 2014. There were no other determinations concerning prime farmlands.

Impacts on Air Quality

Kentucky Division for Air Quality Regulation 401 KAR 63:010 – Fugitive Emissions states that no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Additional requirements include the covering of open-bodied trucks, operating outside the work area transporting materials likely to become airborne, and that no one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. Please note the Fugitive Emissions Fact Sheet located at <http://air.ky.gov/Pages/ComplianceandInspections.aspx>.

Kentucky Division of Air Quality Regulation 401 KAR 63:005 states that open burning is prohibited. Open burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney. However, open burning may be utilized

for the expressed purposes listed in the Open Burning Brochure located at <http://air.ky.gov/Pages/OpenBurning.aspx>.

The Kentucky Division of Air Quality also recommends the following strategies for protecting the state's air quality:

- Utilize alternatively fueled equipment.
- Utilize other emission controls as applicable to the equipment used.
- Reduce idling time on equipment.
- Contact the local government officials to comply with local air quality regulations.

Miscellaneous Impacts

The environmental impact of constructing the proposed facilities includes only those temporary impacts of noise, dust, and service and traffic disruption in the construction area. Construction debris will be properly disposed and the area will be reseeded as soon as possible after construction is finished. The proposed project is expected to result in improvements to the surface water and groundwater quality in the project area.

G. Public Participation & User Rates

LFUCG conducted a public meeting on Wednesday, February 4, 2015 at 6:00 pm to discuss the proposed project. The meeting was located at Cardinal Valley Elementary School in Lexington KY. The meeting notice was published in the Lexington Herald Leader on January 27, 2015.

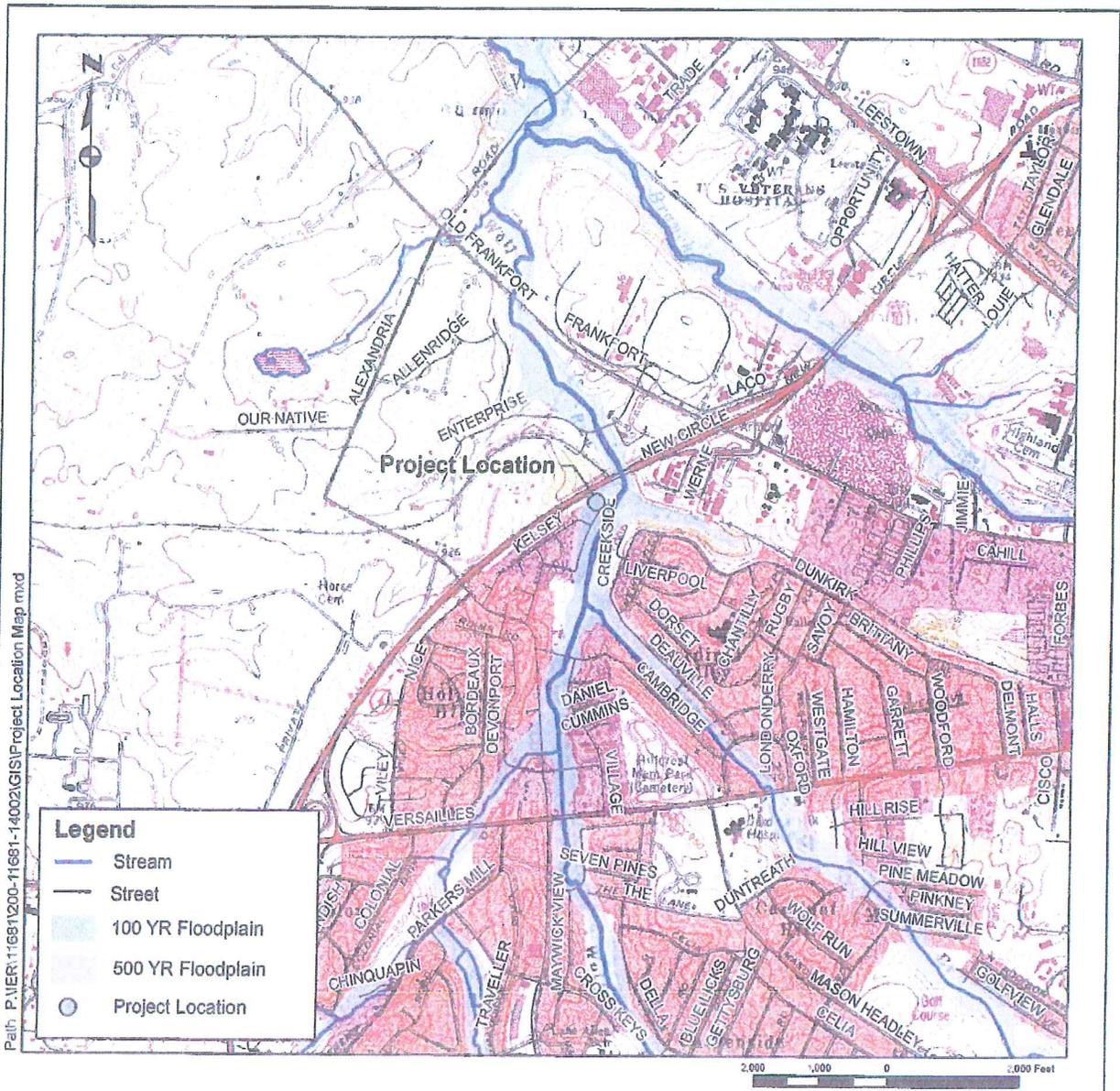
The purpose of the meeting was to provide the public with an opportunity to attend and comment on such issues as economic and environmental impacts, project area, alternatives to the project, cultural and historical issues, or any other pertinent issues. Eight (8) members of the general public attended the meeting with a few general questions but nothing that would delay the project.

The current user rate is \$21.25 per 4000 gallons for residential customers (Schedule A) and for commercial/industrial customers the rate is \$28.54 per 4000 gallons (Schedule B). No increases are planned due to this project.

H. Sources Consulted

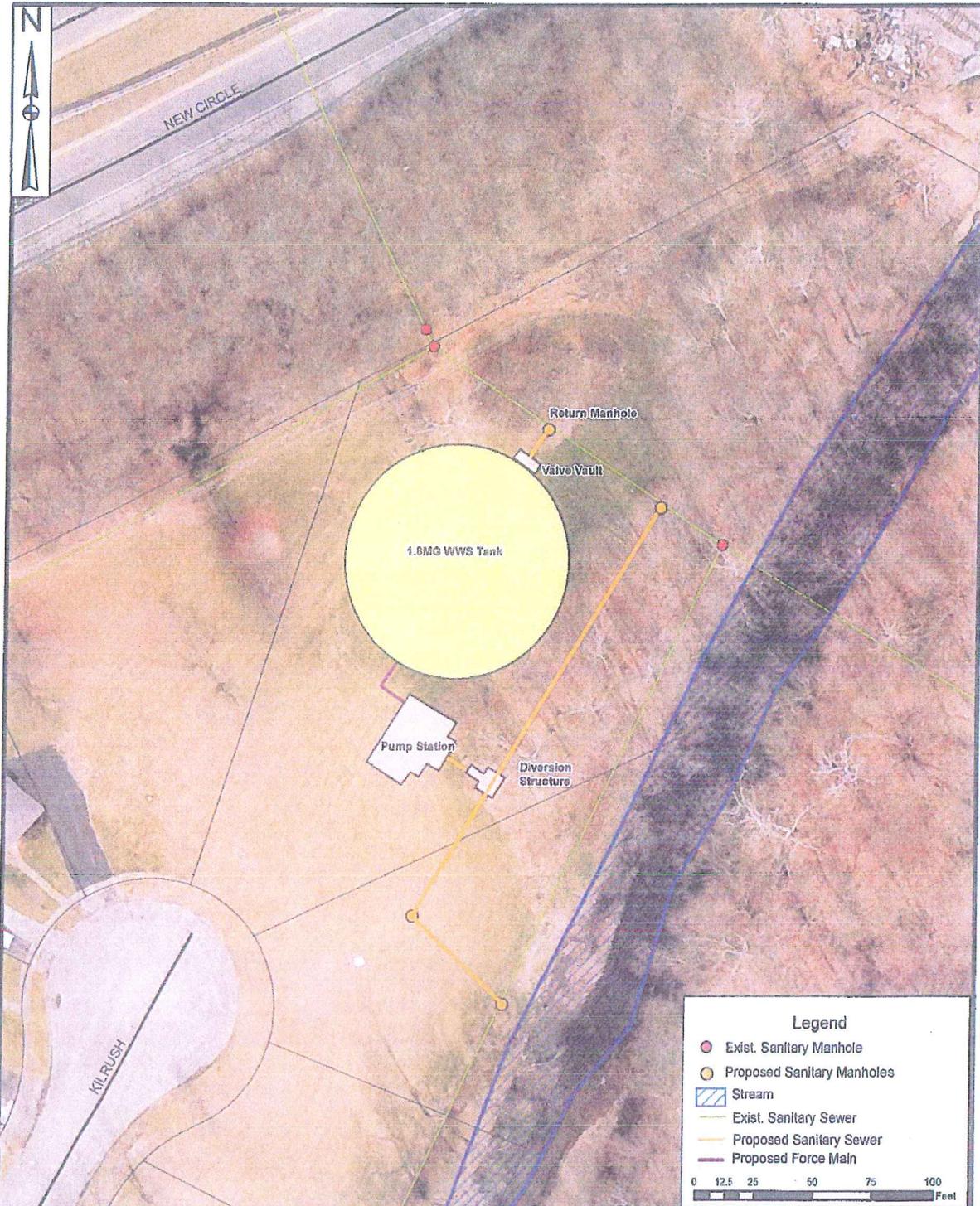
Kentucky Department of Air Quality (DAQ)
Kentucky Department of Fish & Wildlife Resources (KDFWR)
Kentucky Department of Water (DOW)
Kentucky Department of Transportation (KYTC)
Kentucky Department of Waste Management (DWM)
Kentucky Infrastructure Authority (KIA)
Kentucky Heritage Council
Kentucky State Clearing House
Lexington Fayette Urban County Government (LFUCG)

Tetra Tech, Inc.
United States Fish & Wildlife Service (USFWS)
United States Corps of Engineers (USCOE)



Project Location Map

LFUCG Division of Water Quality
 Wolf Run Wet Weather Storage Facility
 Lexington, KY




TETRA TECH
www.tetratech.com
 200 CORPORATE DRIVE SUITE 200
 LEXINGTON, KY 40503
 Phone (252) 233-4000 Fax (352) 224-1024

Lexington - Fayette Urban County Government
 Wolf Run Wet Weather Storage Facility
 Lexington, Kentucky
Proposed Layout

Project : 200-11651-14002
 Date January 2014
 Designed by : LES
 Figure
EX-1