

**PHEASANT RUN SANITARY SEWER/WWTP ABANDONMENT  
APRIL 4, 2017**



# Overview of Topics

- Existing Pheasant Run Wastewater Treatment Plant Compliance Issues
- Compliance Options
- Project Scope
- Funding Sources for Project Costs
- Project Cost Summary

# Existing Pheasant Run WWTP Compliance Issues

- Existing plant rated for 120,000 gal/day
- Current average flows are 124,000 gal/day
- No additional homes can connect
- Wet weather flows exceed 1,500,000 gal/day
- WWTP frequently overflows during wet weather
- Permit limits are regularly not being met
- Existing WWTP would need significant upgrades to obtain compliance – not feasible due to space constraints
- Capacity expansion of existing WWTP - not feasible due to receiving stream limitations



# Existing Pheasant Run WWTP Compliance Issues

- Ohio EPA Findings & Orders (2001, 2003, & 2006) - Required upgrades at the WWTP to meet permit limits, removal of storm water from the sanitary sewer, and prohibits additional connections to WWTP.
- Ohio Attorney General's Office – Findings & Orders have not been satisfied, so the Ohio EPA forwarded to the AG's office for enforcement action.
  - AG is currently withholding enforcement actions based upon the construction schedule provided for this project.



# Compliance Options

## -LORCO-

- Pheasant Run Association had LORCO initiate a study in November 2012 to pump flows to the existing LORCO gravity sewer at Parsons Rd/Indian Hollow Rd.
  - Pumping rate of 359 gallons per minute (gpm)
  - Existing WWTP converted to daily flow equalization
  - Based on flow monitoring, option would require 340,000 gallons of equalization volume at a 50 yr/12 hr storm (only 110,000 gallons of existing tankage exists)
  - Did not include rehabilitation of the existing collection system – could be added for additional costs
  - Pheasant Run still owned and operated the existing collection system

# Compliance Options

## -Lorain County-

- Pheasant Run Association contacted Lorain County in June 2013 following the discussions with LORCO to determine if a better solution could be provided.
  - Pump flows to the Village of LaGrange for treatment
  - Maximum pumping rate of 677 gallons per minute (gpm)
  - Existing WWTP being converted to wet weather flow equalization
  - Requires 78,000 gallons of wet weather equalization for 50 yr/12 hr storm (110,000 gallons of existing tankage exists, no additional storage construction required)
  - Includes rehabilitation of the failing sanitary mainlines within the existing collection system
  - County assumes ownership and operation of the existing collection system

# Compliance Options

Type	LORCO Option*	Lorain County Option
Collection System Rehab		✓
Wet Weather EQ		✓
No Flow in Tanks During Normal Operation		✓
Collection System Owner	Pheasant Run	Lorain County
Pump Rate	359 gpm	675 gpm
Force Main Length	8 miles	4.5 miles

\*Based on information provided by PRA from LORCO

- On May 19, 2014 the Pheasant Run Association Board held a meeting with the residents where they examined the two options and decided to move forward with the County option.

## PROJECT SCOPE OF WORK

### Existing Collection System Rehabilitation (Imp. #123)

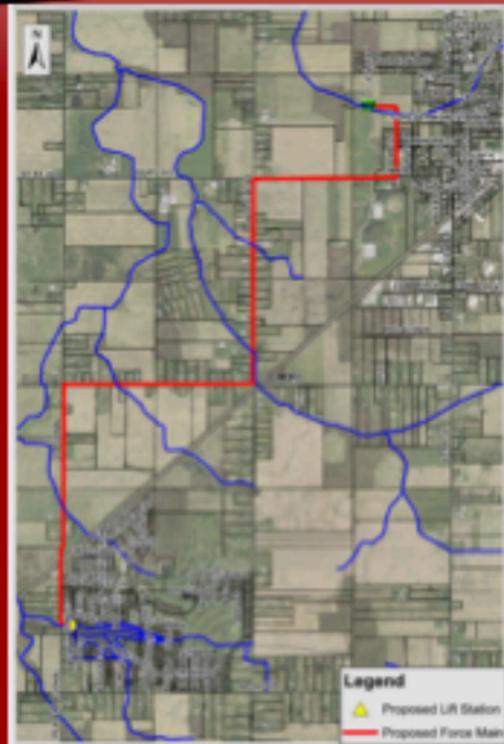
- Cured-In-Place Pipe Lining - 18,000 feet of cured-in-place pipe lining of the approximately 32,000 linear feet of existing mainlines
- 55 Manhole Inflow Inserts – Prevents storm water inflow into the sanitary manholes through the lids
- 37 Manholes Rehabilitated – Prevents ground water infiltration through manhole walls



## PROJECT SCOPE

### Lift Station/Force Main (Imp. #124) & Water Meter Replacement (Imp. #125)

- Lift Station
  - Rated at 677 gpm with an overflow to Equalization Tanks
  - 23,500 feet of 8" force main to the LaGrange WWTP
- Wet Weather Flow Equalization
  - The existing WWTP Concrete Tanks that are in good condition will be converted to wet weather flow equalization
  - Flows pumped back to the lift station during low flows
- Water Meter Replacement
  - Replace existing water meters with Radio Frequency (RF) type meters that can easily be read



## SCOPE OF WORK

### Village of LaGrange WWTP Upgrades

- Increasing WWTP treatment capacity from 363,000 gpd to 720,000 gpd average daily flow
- Adding an additional treatment ring to their oxidation ditch process
- Plant upgrades to be completed at the same time that the lift station is completed
- Costs for the LaGrange WWTP upgrades will be covered through the LaGrange sewer user charge.



# Funding for Project Costs

- **Primary Funding - Ohio EPA WPCLF Small Community Loan**
  - **Currently 1.83% for 20 year loan/1.88% for 30 year loan**
  
- **Secondary Funding Option - USDA Rural Development Loan**
  - **Currently 2.75% for 40 year loan**

# Project Cost Summary

Project	Original 2014 Cost Estimate	Current 2017 Cost Estimate
Lift Station, Force Main, & Equalization	\$2,645,000	\$2,926,000 (+281k)
Sanitary Sewer Rehabilitation	\$ 1,894,000	\$1,569,000 (-325k)
Water Meter Replacement	N/A	\$263,000
<b>TOTAL</b>	<b>\$4,539,000</b>	<b>\$4,758,000</b>

## Tentative Assessment Cost Per Resident (ERU)

	Lump Sum Payoff Amount	30 Year/3.67%
<b>Total Tentative Assessment</b>	<b>\$8,811.11</b>	<b>\$14,679.48</b>

# Estimated Monthly Fees Based on Current Ohio EPA Loan Rates

	30 Year/2.0%	20 Year/1.9%
Monthly Fee	\$32.78	\$44.47
Annual Fee	\$394	\$534
Total Payback	\$11,802.02	\$10,673.05

# Future Tap-Ins

- **Future property tap-ins**
  - Pay for proportionate cost of the new lift station & force main - \$3,900/tap
  - Does not include costs to repair existing sewers or water meters
  - Future sewer extension costs paid for by the developer
  - Cash payment only – no assessment with interest costs
  - Tap-in fee paid to PRA
  - 300 taps would provide \$1,117,000 (40% of Lift Station/Force Main Costs)