Wastewater Committee
Village of Peninsula, Ohio
4/23/2020

Village of Peninsula

The following information has been assembled from research, correspondence, and data attained by the Mayor, Village Council, Planning Commission, as well as past and current Village Wastewater Committees.

All monetary figures are considered estimates and are subject to change as the initiative continues.

Wastewater Committee

The Village of Peninsula has been placed on notice by the Ohio Environmental Protection Agency that the Village is in violation of the Clean Water Act.

EPA concerns include recent testing results which showed E. Coli levels exceeding the Clean Water Act limitations of 1030 CFU/100mL in a majority of the storm sewer discharge points in the Village downtown small lot area.

The EPA has advised the Village that it has 6 months to produce a plan to abate the nuisance(s), and that if a plan is not produced, the EPA will request the Attorney General's office to take action action against the Village. This six month period began on 1/14/2020 and runs until 7/14/2020.

Recent concerns, events, & correspondence

- **2018 and 2019:** Summit County Dept. of Health and the Ohio EPA conducted Village storm sewer testing for e-coli.

SCHD and OEPA storm sewer and catch basin sampling results (E. coli in CFU/100mL).

Sample ID	Location Description	SCDH Sampling 7/2/2018	SCDH Sampling 9/17/2018	OEPA Samples 9/2019	SCPH Samples 1/2020
Peninsula 1	SE Corner of W. Streetsboro Rd. bridge	**1,100**	**30,760**	**11,500**	**1,750**
Peninsula 2	SW Corner of W. Streetsboro Rd. bridge	No Flow	No flow	5 (road ditch)	Not Sampled
Peninsula 3	Off of bike trail on the NW side of W. Streetsboro Rd. bridge	**1,680**	570.4	Not Sampled (dry)	Not Sampled
Peninsula 4	NE corner of W. Streetsboro Rd. bridge. Behind "Century Cycles"	613.1	**1,733**	261	Not Sampled
Peninsula 5	Catch basin to the North of 6122 N Locust St driveway	204.6	**2,920**	**1380**	Not Sampled
Peninsula 6 (SCHD)	South side of Orchard St across from 1643 Orchard St	150	**2,620**	--	248.9
Peninsula 6 (OEPA)	Storm sewer in DMT Motors parking lot	--	--	144	--
Peninsula 6-2 (OEPA)	Storm sewer on Akron-Peninsula Road directly off DMT motors.	Not Sampled	Not Sampled	**39,700**	212
Peninsula 7	Catch basin on East side of Riverview Rd. North of library entrance	**19,350**	**29,870**	**3,080**	Not Sampled
Peninsula 8	Catch basin b/n Peninsula Fndtn parking lot and library entrance	**51,200**	**>241,960**	Not sampled (dry)	Not Sampled
Peninsula 9*	Pipe on the East side of Stine Rd. & Riverview Rd. intersection	290.9	980.4	49	Not Sampled

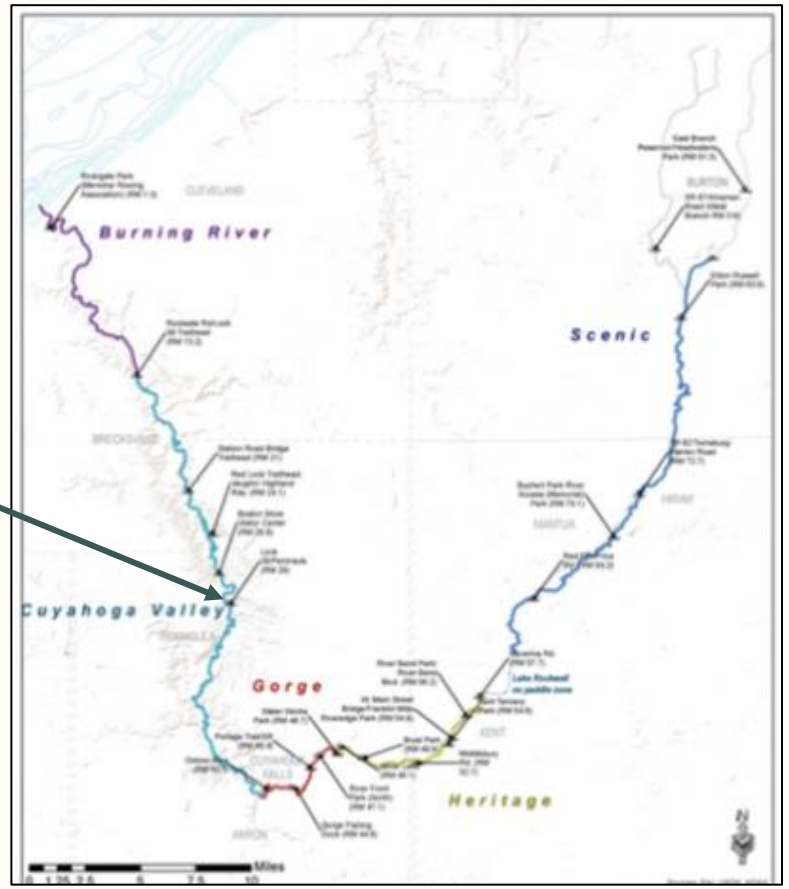
Samples that exceed 1030 CFU/100mL exceed the Clean Water Act thresholds

***Sample #9 is not within the Village proposed wastewater district**

Recent concerns, events, & correspondence

- **October 2019**: The Cuyahoga River is designated a State Water Trail by ODNR.

Peninsula is located at the center mark of the designated "Scenic" run of the River. We have at least two storm sewer outfalls located near Lock 29. The Oct 2018 report from Summit County Health Department showed elevated levels of E.coli (above Clean Water limits) in every operational storm sewer in the proposed wastewater district on either one or both of the two tests conducted. There are numerous residents and businesses along the north side of Rt. 303 that discharge septic effluent directly into Slipper Run which is a tributary to the Cuyahoga River.



Recent concerns, events, & correspondence

- **January 2020**: The Ohio EPA calls a meeting with the Village Mayor to discuss Summit County Department of Health and Ohio EPA storm sewer testing results, and next steps.
- **February 2020**: Village Council establishes a new Wastewater Committee consisting of Councilpersons Michael Kaplan, John Krusinski, and Christopher Weigand.
- **April 2020**: Ohio EPA sends the following correspondence to the Village reminding the Village of its request to provide a plan to address *the unsanitary conditions within the next six months.*

Ohio Environmental Protection Agency

Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

April 2, 2020

Re: Village of Peninsula
General Correspondence
NPDES
Summit County
8DU00438

TRANSMITTED ELECTRONICALLY

Mayor Schneider & Council
Village of Peninsula
1582 Main Street
Peninsula, OH 44264

Subject: Peninsula wastewater treatment options

Dear Mayor Schneider & Council:

This letter is in response to the on-going discussions between Ohio EPA, Division of Surface Water and the Village of Peninsula (Village) regarding wastewater issues that exist within the Village.

On January 14, 2020, Ohio EPA Northeast District Office met with Mayor Dan Schneider Jr., Council Members Chris Weigano, Dan Schneider, and the Village Solicitor Brad Bryan, to discuss the most recent sampling conducted by the Ohio EPA and to explore the Village's options to managing wastewater generated within the Village.

The most recent sampling, conducted by the Ohio EPA in September of 2019, revealed that elevated levels of E. Coli are being discharged from the storm sewers in Peninsula into the Cuyahoga River which flows through the Cuyahoga Valley National Park. Ohio EPA's findings agree with previous sampling results, obtained by the Summit County Public Health Department in September of 2018.

During our meeting in January, we reviewed the options to address the unsanitary conditions which include installing a central sewerage system or individually upgrading failing septic systems in the Village, of which there are many. As stated at the end of our January meeting, Ohio EPA expects the Village to reach a decision on how they plan to address the unsanitary conditions within six months. During the meeting, the Village committed to establishing a wastewater committee. We are in receipt of Mayor Schneider's email, dated February 27, 2020, in which he states the Wastewater Committee held their first meeting on February 25, 2020. We understand the Village plans to have a public meeting soon to discuss these options with their residents and are encouraged by these developments.

Although both above-mentioned options are available, Ohio EPA strongly believes the installation of a central sewerage system is the best approach. The centralized sewerage system would provide a permanent solution to the Village's wastewater treatment concerns while individual

systems would only provide a temporary solution, as individual systems often only have a useful lifetime of approximately 20 years. Having individual systems would also require all commercial properties to obtain a National Pollutant Discharge Elimination System (NPDES) permit with the Ohio EPA. If these commercial systems are not able to meet the effluent limits of their NPDES permit, they would potentially be subject to enforcement action and additional costly upgrades and\or replacement of their individual system.

Further, a centralized sewer system would alleviate the water quality issues that Ohio EPA is currently dealing with from businesses throughout the Village that have failing wastewater treatment systems. A centralized wastewater treatment system would produce a higher quality effluent when compared to many individual systems resulting in improved water quality in the Cuyahoga River. Please keep in mind that the costs of installing individual systems would be paid entirely upfront whereas the cost of a centralized sewerage system could potentially be distributed over many years.

We understand that you are pursuing grant funds in order to lower the cost of a central sewage system. If the Village wishes to proceed with the installation of a central Wastewater Treatment Plant (WWTP) and sanitary sewers, Ohio EPA recommends that the Village initiate discussions with Mike Weant of the Summit County Department of Sanitary Sewer Services, as soon as possible. The County has experience in designing, installing and maintaining sanitary sewer collection systems and WWTPs and could be an excellent resource as the village moves forward We believe it is imperative that the Village continue its efforts to construct a centralized system in as expeditious a manner as possible. The exercise of our enforcement discretion to deal with water quality violations through temporary solutions grows more limited with the passage of time as persistent violations accumulate.

As a precautionary response to COVID-19, Ohio EPA is currently operating with most staff working remotely. During this time, we will not be issuing hard-copy mail. The attached letter is an official response from Ohio EPA that will be maintained as a public record. We would be happy to meet with you to further discuss these issues and answer any questions you may have. To that end, please feel free to contact me at 330-963-1204.

Sincerely,

Kurt M. Princic

Kurt M. Princic (Apr 2, 2020)

Kurt Princic, District Chief
Ohio EPA, Northeast District Office

KP/cs
ec: Ynes Arocho, Ohio EPA, DSW, NEDO
Rich Blasick, Ohio EPA, DSW, NEDO
Dean Stoll, Ohio EPA, DSW, NEDO
Tiffani Kavalec, Ohio EPA, Chief DSW, CO
Larry Reeder, Ohio EPA, Enforcement DSW, CO
Ali Rogalski, Summit County Public Health (arogalski@schd.org)
Tonia Burford, Summit County Public Health (tburford@schd.org)
Julie Reis, Summit County Public Health (jreis@schd.org)
Mike Weant, Summit County Dept. of Sanitary Sewer Services (mweant@summitoh.net)
Mayor Schneider, (mayor@villageofpeninsula-oh.gov)

Review of the Village Proposed Wastewater District and users effected

- The "proposed" Wastewater District is outlined in the Village Long Range Plan (2003 and 2019 update) and was used as the baseline for the 2017 Preliminary Engineering Report and the 2018 Design Engineering.
- Users effected *(estimated)*

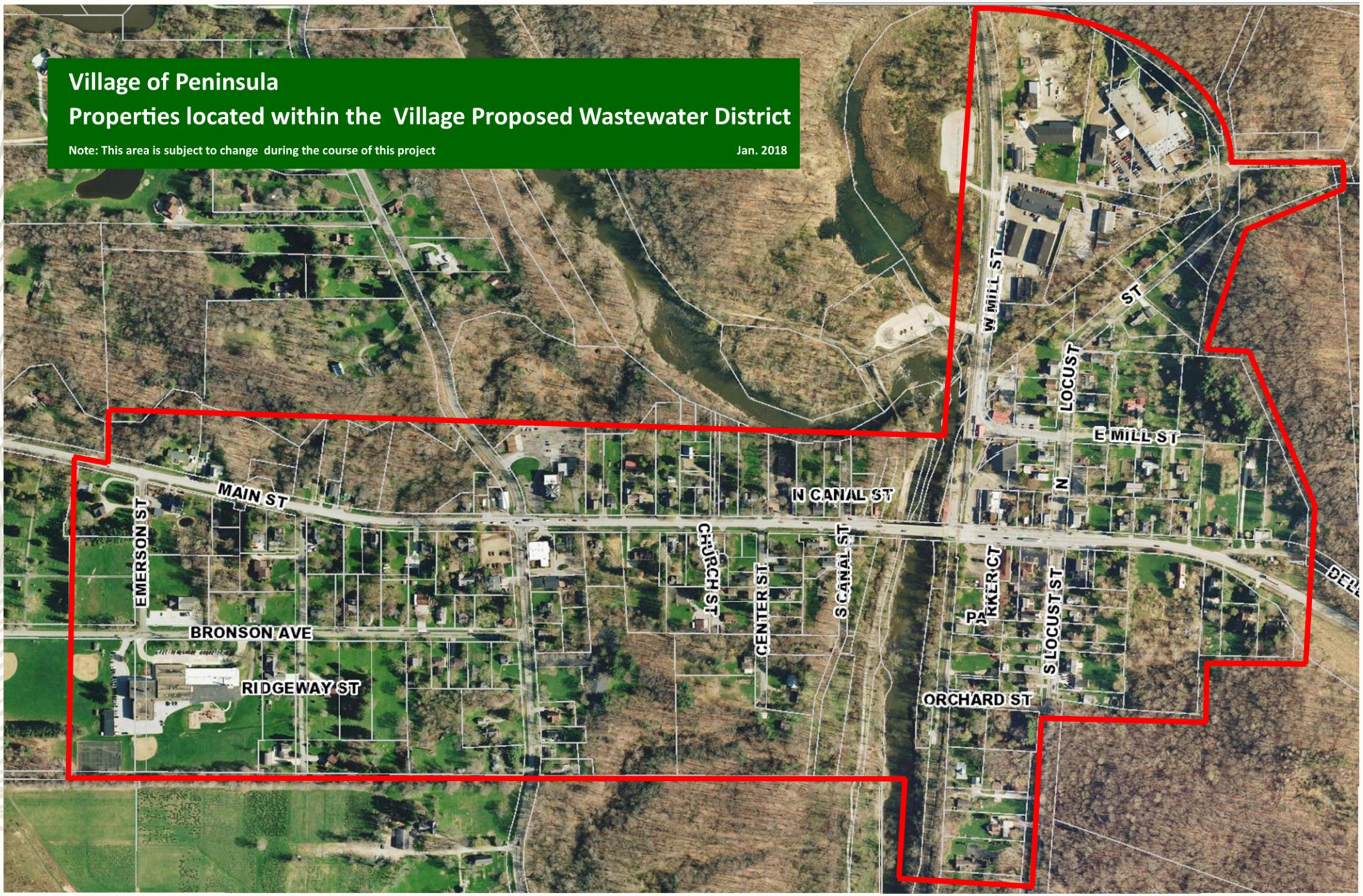
1 Lateral = 1 connection to a sewer system.

	# of Laterals		% of Laterals
PUBLIC INST.	9	PUBLIC INST.	5.1%
COMMERCIAL	32	COMMERCIAL	18.3%
INDUSTRIAL	3	INDUSTRIAL	1.7%
MULTIFAMILY	23	MULTIFAMILY	13.1%
SINGLE FAMILY	108	SINGLE FAMILY	61.7%
TOTAL	175		

Village of Peninsula
Properties located within the Village Proposed Wastewater District

Note: This area is subject to change during the course of this project

Jan. 2018



Review of the Village Proposed Wastewater District and users effected

- Usage is based on “EDU”s – Equivalent Dwelling Unit. EDUs are calculated based on EPA guidelines for non-metered systems.
- A “Dwelling” (one single family unit) is one EDU. All other users are based on the EPA estimating charts (seating capacity, number of units in multi-family, number of employees, etc.)

	# of Laterals		% of Laterals
PUBLIC INST.	9	PUBLIC INST.	5.1%
COMMERCIAL	32	COMMERCIAL	18.3%
INDUSTRIAL	3	INDUSTRIAL	1.7%
MULTIFAMILY	23	MULTIFAMILY	13.1%
SINGLE FAMILY	108	SINGLE FAMILY	61.7%
TOTAL	175		

	# OF EDU'S		% of EDUs
PUBLIC INST.	27	PUBLIC INST.	11.2%
COMMERCIAL	80	COMMERCIAL	33.1%
INDUSTRIAL	4	INDUSTRIAL	1.7%
MULTIFAMILY	23	MULTIFAMILY	9.5%
SINGLE FAMILY	108	SINGLE FAMILY	44.6%
TOTAL	242		

Note: Users and associated EDUs may be modified as the project moves through Design Engineering

What are the options?

NPDES: On-lot Individual upgrades, both for residents and businesses. Paid for, maintained, sampling and permits to be applied for by the individual land owners.

Village Owned and Operated Centralized Sewer System: Designed, built and operated by the Village with an option to turn over operations to SCDSS.

County Owned and Operated Cent**ralized Sewer System:** Summit County Division of Sanitary Sewers, Designed , Built and Operated by SCDSS.

Each of these options has its Pros and Cons. We will go through a brief description of each of these options and discuss the Pros an Cons for each.

1. NPDES: Residential Application

Summit County Department of Health:

The NPDES will likely be the permitted HSTS for the downtown/small lot parcels due to several factors including:

1. Proximity to owner or neighbors' water source (minimum 50ft from water source)
2. Small lot size will not accommodate a soil-based non-discharging system which requires ~1ac.
3. Soil conditions in the Village are not well suited for drainage with soil-based systems
4. If lots are too small for an NPDES then a holding tank is last resort option
5. As a rule of thumb, NPDES is only allowed for HSTS replacement for an existing structure. New construction requires soil-based systems.

NPDES - Residential Application

1. Pre-treatment tank
2. Aerobic treatment unit
3. UV disinfection/re-aeration
4. Pump tank

- Will accommodate up to 4 bedrooms
- Footprint required is ~7ft x 15ft
- 20-year life, but can last longer with proper maintenance

NPDES - Life Cycle Costs over 20 yrs

- **System Cost**

	Cost
Initial EPA application fee	$200
Permit to install	$384
System Cost (HydroAction)	$6,616
Drawings, electrician, labor, install, crush/fill old tanks	$3,000
Total Estimated System Cost	**$10,200**

NPDES - Life Cycle Costs over 20 yrs

- **NPDES Ongoing yearly O&M**

	Yrly	20yr
HD Permit per year	$30	$600
Yearly sampling	$100	$2000
Yearly Service Contract (serviced every 6 months)	$200	$4000
Electric (~$12/mth for Hydra system. ~$30/mth Jet system) (Avg at $21/mth)	$252	$5040
Empty tank (at least every 3 yrs. @$400)	$135	$2400
Total O&M Expenses		**$19,440**

NPDES - Life Cycle Costs over 20 yrs

- **Expected component replacement during system life**

	Cost/item	20 yr
UV Light: needs replaced every 2-4 yrs	$165	$1000
Air compressor: needs replaced or rebuilt every 5-7 years. [estimated cost of rebuild].	$300	$900
Sump pump: needs replaced every 8-10 yrs	$350	$700
Total Component Replacement Costs		**$2600**

Note: NPDES system, O&M, and component replacement cost estimates provided by Downs Septic and Wastewater Solutions

Total Life Cycle Costs

NPDES - Life Cycle Costs over 20 yrs

- **Estimated Cost over 20 years**

	Cost	Avg cost/mth
Unit cost and installation (including fees and permit)	$10,200	
Expected O&M cost over 20yr life	$19,440	
Expected component replacement costs over 20yr life	$2,600	
Total Estimated Costs over 20 years	**$32,240**	**$134**
Interest if unit is financed [$10,200/10 yrs/4% interest]	$2,192	
Cost with financing	**$34,432**	**$144**

Note: NPDES system, O&M, and component replacement cost estimates provided by Downs Septic and Wastewater Solutions

1. NPDES: Commercial Applications

- The Village currently has three on-lot commercial treatment package plants. Winking Lizard, Fishers Café, Heritage Classical Academy
- Existing commercial, public institution, or even multiuse zoned properties would need to install individual treatment “plants” on-site for a long-term solution to accommodate restaurants, cafes, public venues, etc.
- Parcels in the downtown district are small. On-lot commercial treatment systems would take up already limited property area. Some commercial lots may be too small to accommodate the required commercial treatment system size.

NPDES
Pros and Cons…

Pros

1. We don’t have to tear up street right of way to install.
2. Individuals can select their own service providers.
3. Construction cost is out of pocket so not tied to their property tax bill.
4. Village does not own and operate the systems.
5. People that have properly functioning and approved systems could keep them and not have to transition to and be assessed for a central system.

NPDES

Pros and Cons…

Cons

1. The EPA regards on-site septic systems as temporary solutions.

2. Kurt Princic, OHEPA District Chief stated that: The exercise of our enforcement discretion to deal with water quality through temporary solutions grows more limited with the passage of time as persistent violations accumulate.

3. The Summit County Health Department acknowledged it is possible that if there is a concentration of NPDES systems in a dense area that the standards put forth in the Clean Water Act for the Cuyahoga River may not be met.

Individual residence in the sewer district could spend tens of thousands of dollars to replace every system only to find that the Village is still in violation of the Clean Water Act. If that would happen the Village would have to put in a central system and every newly installed and existing individual system would have to be abandoned. All of the money spent to install those individual systems would be wasted.

NPDES

Pros and Cons…

Cons (continued)

4. The complete costs of individual NPDES systems could cost the individual residents more than a centralized system would cost per month and over the years.

5. Having an NPDES system in every yard in the district (some would have to be in the front yard) could be unsightly. Each unit produces some amount of odor and the sound of a running pump.

6. Each resident would have to apply for and maintain an NPDES permit with the OEPA. All maintenance and monitoring would be the responsibility of the residents. Annual testing to be completed by the resident.

9. All reporting to the EPA to be completed by the residents.

10. The OHEPA and The Summit County Health Department do not believe that this option will make the Village comply with the CWA.

2. Village owned and operated centralized sewer system *designed, built, and operated by the Village.*

Fighting for grant assistance would make a difference in affordability for all.

	Scenario #1	Scenario #2	Scenario #3
SYSTEM COST - Stantec Engineering 2020 est.	**$6,250,000**	**$6,250,000**	**$6,250,000**
VILLAGE PROCURED GRANTS	$0	($1,000,000)	($2,000,000)
COST TO BE FINANCED [45yr and 30yr notes]	**$6,250,000**	**$5,250,000**	**$4,250,000**
MONTHLY COST PER EDU			
Monthly Debt Retirement	$74.00	$61.82	$50.04
Monthly Service Fee (includes replacement costs)	$43.03	$43.03	$43.03
Total Monthly cost	**$117**	**$105**	**$93**
OTHER COSTS - OUT OF POCKET			
On-lot costs (crush or remove current on-lot system and run lateral to connect) *Estimted cost range for single family dwelling.*	$1500-$2000	$1500-$2000	$1500-$2000
Tap in Fee per EDU (County)			

2. Village owned and operated centralized sewer system.
Pros and Cons….

Pros

1. As an incorporated Village, Peninsula has the legal right to design, build, own, and operate our own utilities. The Village can maintain control over the type of system we want and where we want the treatment plant and lift stations. The Village hires the design firm we want to better control design, technology, construction, and costs.

2. The Village can pursue grants and other funding only available to municipalities to help reduce the overall system cost.

3. We would have control over the monthly sewer fee and the assessment.

4. If eventually the Village decided that it would be better to hand the system over to SCDSS to operate, we could. Mr. Weant has stated that if the Village wastewater system is designed, maintained, and operated to SCDSS standards, that SCDSS would likely be willing to take over the operations.

5. This approach would fulfill the Village of Peninsula's responsibility to comply with the Clean Water Act.

Village owned and operated centralized sewer system

Pros and Cons….

Cons

1. The Village is solely responsible for all loans, costs, design, construction, management, maintenance, repair costs and any design flaws or mis- estimations.

2. The Village would be responsible to have the infrastructure to maintain the system and respond immediately upon any failure or breakdown. The Village would likely appoint a three-member Operating Board to oversee the wastewater system, and hire a certified operator to perform all required EPA testing and reporting (est, at 10/hrs. per week.

3. The Village would have to have the infrastructure to send billing and collect fees.

3. County Owned and Operated Centralized Sewer System: Summit County Division of Sanitary Sewers design, build and operate.

	County
SYSTEM COST - Stantec Engineering 2020 est.	*$6,250,000*
POSSIBLE COUNTY CONTRIBUTION	*($1,000,000)*
COST TO BE FINANCED [30yr notes]	*$5,250,000*
MONTHLY COST PER EDU	
Monthly Debt Retirement (tax assessment)	*$15k per EDU (est.)*
Monthly O&M (service fee)	**$56.03**
Total Monthly cost	*Unknown*
OTHER COSTS - OUT OF POCKET	
On-lot costs (crush or remove current on-lot system and run lateral to connect)	*$1500-$2000*
SCDSS Tap in Fee PER EDU	**$3,270.00**

Note: Amounts indicated in italics are still unknowns.

Note:
At this time, the Village does not have any project cost estimates or user cost debt retirement (tax assessment) estimates from SCDSS.

SCDSS has provided the monthly service fee amount (O&M) as well as the required user Tap-in fee.

County Owned and Operated Centralized Sewer System: Summit County Division of Sanitary Sewers design, build and operate

- The SCDSS would design the system and build the system. They would be responsible for all maintenance and system failure issues.
- Residents of the district would be responsible for initial up-front costs: Tap in fee of $3270, and abandonment of their existing system $1500 - $2,000.
- The current monthly sewer maintenance is $56.03 per EDU (a single-family home is one EDU).
- The cost of the system will be paid via tax assessment. Mr. Weant suggested that the system financing could be stretched to a 30 year term as opposed to their normal 20 year pay back term.

County Owned and Operated Centralized Sewer System : Summit County Division of Sanitary Sewers design, build and operate

Pros and Cons…

Pros

1. The SCDSS is responsible for the loans to build the system.

2. The SCDSS is responsible for all operations, maintenance and replacement costs.

3. This approach would fulfill the Village of Peninsula's responsibility to comply with the Clean Water Act.

Centralized Sewer System: designed, built and operated by Summit County Division of Sanitary Sewers .

Pros and Cons…

Cons

1. The total projected cost of the system will not be determined for at least 9 months after the Village would create a resolution to have the SCDSS design and build the system. (We have an estimated cost of the system of $6,250,000 from the engineering firm that the Village previously hired to complete the Preliminary Engineering Report and Design Engineering). Mike Weant of the SCDSS stated that it is *likely* that SCDSS designed system costs should be close to those estimates. Despite the above, the total cost of the system and assessment amount might not be determined until after the system has been built and placed into operation.

2. The concern is how much grant assistance SCDSS can offer the Village and how much grant assistance can be obtained from other sources to offset the final system cost which will affect the total tax assessment.

Moving Forward….

Please take the time to read and study each one of the slides in this presentation.

If you have questions or concerns please forward them within the next 30 days to:

Mr. Martin F. Kuboff, Administrative Assistant, Village of Peninsula

admin@villageofpeninsula-oh.gov

Mr. Kuboff will forward your questions or comments to each member of the Wastewater Committee. Your questions and the response from the Wastewater Committee will be added to this presentation and made available for others to consider.

Moving Forward….

- As a precautionary response to Covid- 19, the Village Council and the Village Wastewater Committee are working remotely. This PowerPoint presentation has been created to continue the communication with the community regarding the Village of Peninsula's current alleged violations of the Clean Water Act and the eventual response.
- **This presentation and the question and answer period will be available for the next 30 days. All correspondence, questions and comments will be utilized to help form the final recommendations of the wastewater committee.**