

# Agenda Item Report

## Mayor & Commissioners (Workshop)

October 7, 2024



**SECTION:** Old Business

**ITEM:** Discuss joint request by the Lewes Board of Public Works and Sussex County to explore a three-way regional wastewater partnership among the three organizations.

**SUBMITTED BY:** Henry Matlosz, Director of Public Works, Public Works

### PURPOSE

The purpose of this item is to continue discussing a request by the Lewes Board of Public Works and Sussex County to explore a regional partnership for wastewater treatment and disposal. The regional partnership would consist of the Lewes Board of Public Works and Sussex County building a new treatment plant at Wolfe Neck and sending the treated effluent to a connection point in the existing Rehoboth Beach ocean outfall.

### BACKGROUND

#### **1st County Proposal – Nov 2018:**

Upon completion of the Rehoboth Beach ocean outfall, the City contracted with The Abraham's Group to conduct a preliminary water/wastewater rate analysis (which predicted significant rate increases to cover costs for the Outfall and future capital improvements at the wastewater treatment plant). In 2018 - 2019 Sussex County presented a proposal to take over the Rehoboth Beach wastewater treatment plant. This would have allowed the County to disburse operating and upgrade costs over a much larger group of users, which would have reduced the financial burden on the residents of Rehoboth Beach. Rather than base charges on water usage, the County would have charged customers based on an EDU basis (equivalent dwelling unit). After holding several public meetings and conducting a public hearing in January 2019, the Board of Commissioners decided not to accept/move forward with the County's offer.

#### **2nd County Proposal – Nov 2021:**

In November 2021, Sussex County officials approached the City with a proposal/request to purchase a portion of the excess capacity in the City's ocean outfall. After a series of public meetings, there were several issues of concern expressed by the Board with the County's proposal: the proposal to purchase the excess capacity rather than lease it, nutrient removal and the level of treatment of the County's effluent, "ownership" of the required environmental permits, and the actual purchase price. In January 2022, the Board of Commissioners voted on several of the individual items in the proposal and agreed to continue the discussions with the County. However, after seeing/hearing the discussions of the Board, the County withdrew their offer.

#### **3rd County and Lewes BPW Proposal – May 2024:**

Sussex County and Lewes BPW officials reached out to the City to discuss a possible wastewater partnership between the three entities. The Lewes BPW/County team has evaluated their long-term wastewater treatment needs and is evaluating potential courses of action available to meet their increasing wastewater treatment needs in the coming years and have asked the City to consider allowing them to use capacity in the ocean outfall as a possible course of action. The Lewes BPW/County team have indicated that they are willing to discuss a long-term lease of the excess capacity rather than an outright purchase and that they are willing to negotiate an appropriate fee for the lease. Finally, they acknowledge that the treatment of their effluent would be equal to, or better, than the level of treatment required by DNREC from the Rehoboth Beach Wastewater Treatment Plant.

**Now:**

The latest offer attempts to address the four “sticking points” that were iterated by the Commissioners in January 2022 (except for the “ownership” of the permit itself, which DNREC will not allow). The major benefit to the City would be the financial gain in the form of a direct payment of \$20M made upon the successful permit approval(s). Additionally, this could help create a better environmental solution for the region by removing effluent from the Lewes and Rehoboth Canal.

**OPTIONS (COURSE OF ACTION)**

Discuss outstanding questions related to the regional partnership for wastewater treatment and disposal among the three organizations.

**STAFF RECOMMENDATION**

Discuss, and at a future meeting consider, the request by the Lewes Board of Public Works and Sussex County to form a regional wastewater partnership among the three organizations.

**FINANCIAL IMPLICATIONS**

Positive implication. Payment of \$20M to the City of Rehoboth Beach made upon the successful permit approval(s) and the added benefit of a continued partnership.

**BUDGET REVIEW**

N/A

**LEGAL REVIEW**

N/A

**PROPOSED MOTION**

N/A

**CDP AFFILIATION**

**Chapter 6 - Transportation and Infrastructure**

m) Maintain continual communication with County, State, and federal agencies for new compliance mandates, programs, and initiatives., n) Continue to seek funding alternatives for infrastructure improvements and maintenance.

**ATTACHMENTS/SUPPORT DOCUMENTS**

[05-24-24 Lewes BPW-Sussex County request for three-way partnership stamped received](#)

May 28 - 2024

Wastewater Addendum (rev.1)

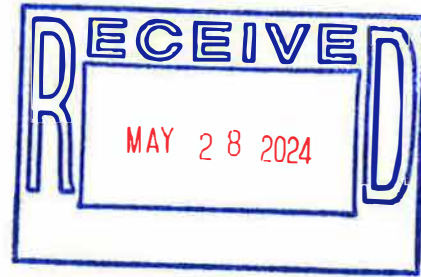
LBPW-SC Regional Wastewater Partnership Expansion Presentation (rev.1) - 05 Sep 2024

LBPW-SC Presentation - RB Workshop - 10.7.2024 - Final.v2



May 24, 2024

Stanley A. Mills, Jr., Mayor  
City of Rehoboth Beach Commissioners  
229 Rehoboth Avenue  
P.O. Box 1163  
Rehoboth Beach, DE 19971



Dear Mayor Mills and Commissioners:

On behalf of the Lewes Board of Public Works (LBPW) and the Sussex County Council (County), we are contacting you regarding the long-range wastewater planning efforts currently unfolding between our respective organizations. We seek your consideration on the formation of a regional partnership for wastewater treatment and disposal among the three organizations. The regional partnership would consist of LBPW and the County building a new treatment plant at Wolfe Neck and sending the treated effluent to a connection point in the existing Rehoboth Beach ocean outfall.

#### Background

The LBPW owns and operates its Wastewater Treatment Facility (WWTF), which is located between Savannah Road and Freeman Highway within the city limits of Lewes, in a FEMA-designated AE6/7 flood zone. The WWTF discharges into the Lewes-Rehoboth Canal near the former railroad bridge off Gills Neck Road.

The County owns and operates the Wolfe Neck Regional Wastewater Facility (WNRWF), which is located on a farm south of Lewes and north of Rehoboth Beach. The WNRWF is a spray irrigation facility operating on more than 300 acres of property leased from the State of Delaware.

Since 2016, LBPW and the County have worked together as sewer partners to better serve their respective customers and service territories. In 2022, LBPW officials embarked on a long-range planning exercise to contemplate the future of its WWTF. Due to its location, the facility has little resiliency to the potential effects of sea level rise and coastal storms. In addition, calls for the LBPW to consider alternatives to disposing its effluent in the Lewes-Rehoboth Canal have increased in recent years. At the same time, the County was designing the plans to expand the WNRWF. It was around this time that LBPW and County officials began discussing the possibility of extending their partnership to meet the future needs of both organizations.

#### GHD Evaluation & Options

The consulting firm GHD was hired to shepherd these discussions and provide both financial and scientific analytics to compare a variety of options. In November 2022, GHD produced its conceptual evaluation report, which listed six (6) options to consider.<sup>1</sup> During the course of a

<sup>1</sup> The GHD report is available on the LBPW website, see: <https://www.lewesbpwde.gov/wp-content/uploads/2023/01/12582813-REP-Lewes-WWTF-Long-Range-Planning-Study-Report.pdf>

series of public meetings held in 2023, the LBPW and the County evaluated each option and narrowed the list to two preferences:

- Send the Lewes flow to a new plant at Wolfe Neck for treatment, and send treated effluent back to the existing LBPW canal outfall for disposal (known as option 3-a); or
- Send the Lewes flow to a new plant at Wolfe Neck for treatment and disposal via existing spray irrigation, a new constructed wetland, and a new canal outfall (known as option 3-b).

These two options presented the most cost-effective method for Lewes BPW and Sussex County to partner together for their treatment and disposal needs. However, during this time, a very substantial archeological discovery was made at the Wolfe Neck property by the State in preparation for the design of its new bike path around the Wolfe Neck property. As a result of the discovery, the State has required the County to alter its current planned use of the Wolfe Neck property while it conducts further archeological studies. In essence, the Wolfe Neck property will be “off limits” for any future land disturbance until the studies are completed. This may take a number of years and the results will most likely lead to future restrictions. This discovery changed the course of the LBPW and County considerations.

### Alternative Options

Due to the archeological findings, the LBPW and County’s pursuit of a joint sewer solution was narrowed to focus on the use of the existing LBPW outfall into the Lewes-Rehoboth Canal. But, the calls by the public to consider other options to “get the discharge out of the canal” persisted. And by mid-2023, the decision was made to instruct GHD to provide conceptual information for a new ocean outfall to be installed from the Wolfe Neck property and extend via the State Park property into the Atlantic Ocean. A conceptual map developed by GHD is inserted below.



The hurdles surrounding the construction of a new ocean outfall are well known. The time required for approval will be lengthy; the necessary State and federal permitting could take as long as ten (10) years before receiving final approval. This second ocean outfall would be located within 1.2 miles of the current Rehoboth outfall and the Department of Natural Resources and Environmental Control (DNREC) has opined that a second outfall is not preferred since one already exists. For these reasons and others, we decided to approach the City of Rehoboth to discuss this potential partnership opportunity once again.

### Regional Partnership

Sussex County and the City of Rehoboth have been wastewater partners since 1983. And that partnership expanded in 2017 when Rehoboth and Sussex joined forces to fund the ocean outfall and the City's wastewater plant upgrades. Subsequently, Sussex helped Rehoboth by financing its electrical, headworks, and oxidation ditches upgrades in 2018-2020.

Sussex County readily admits this is not our first discussion with the City involving the ocean outfall. Indeed, we believe our recent discussions in 2021 will assist us now because we have a better idea of the City's concerns. It is our hope that Rehoboth will consider further expanding this relationship by forming a regional partnership with Lewes BPW and Sussex County.

Currently, LBPW and the County are proposing to build a new wastewater facility at the Wolfe Neck property and dispose the treated effluent through the existing Rehoboth ocean outfall. The new joint facility will meet or exceed the performance of the City's facility under a separate National Pollutant Discharge Elimination System permit issued and enforced by DNREC. LBPW and the County will pay the City for the use of the outfall and want to discuss what those terms could be to satisfy Rehoboth's concerns.

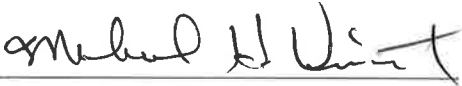
From our perspective, it is unreasonable to build a second ocean outfall next to an existing ocean outfall. Indeed, the existing ocean outfall could serve the purposes we seek and has excess disposal capacity that will never be used by the City. Over the course of time, an ocean outfall in Rehoboth has proven to be a safe and environmentally sound disposal option. In fact, Rehoboth and Sussex County chose the ocean outfall option back in 2017 for the very purpose the City of Lewes seeks today – to remove our effluent disposal from the Lewes-Rehoboth canal, which has been a priority for the State and federal environmental agencies for decades.

In conclusion, we are asking to open a dialogue with the City of Rehoboth Beach Commissioners to explore a potential partnership. We are hopeful you will consider having that discussion and look forward to hearing from you soon.

Sincerely,



Thomas S. Panetta  
President of the Board  
Lewes BPW



Michael H. Vincent  
President  
Sussex County Council



# Table extracted from NPDES Permit Number DE 0020028 (City of Rehoboth Beach)

## 2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS for Outfall 002 (Phase 2)

During the period beginning **Completion Date of Ocean Outfall Project, but no later than June 1, 2018**, and lasting through **expiration date**, the permittee is authorized to discharge from point source 002<sup>(1)</sup> the quantity and quality of effluent specified below:

Parameter	Effluent Limitations						Monitoring Requirements <sup>(2)</sup>		
	Load			Concentration			Measurement Frequency	Sample Type	
	Daily Average	Daily Maximum	Units	Daily Average	Daily Maximum	Units			
Flow <sup>(3)</sup>			MGD	--	--	--	Continuous	Record/ Totalize	
pH	The pH shall be between 6.0 S.U. and 9.0 S.U at all times						S.U.	Once Daily	Grab
Total Residual Chlorine	None Detectable <sup>(4)</sup>						mg/L	Once Daily	
Dissolved Oxygen	The dissolved oxygen concentration shall not be less than 5.0 mg/L at any time						mg/L	Once Daily	
Enterococcus <sup>(5)</sup>	--	--	--	10		Col./ 100mL	Three times Weekly		
BOD <sub>5</sub>	425	652	lbs/day	15	23	mg/L	Three times Weekly	Composite	
BOD <sub>5</sub> (Influent)			lbs/day			mg/L	Once Monthly	Composite	
Total Suspended Solids (TSS)	425	652	lbs/day	15	23	mg/L	Three times Weekly	Composite	
TSS (Influent)			lbs/day			mg/L	Once Monthly	Composite	
Total Nitrogen (as N)			lbs/day			mg/L	Three times Weekly	Composite	
Total Nitrogen (as N)	Report Moving 12-Month Cumulative Load <sup>(6)</sup>							Once Monthly	Calculated
Total Phosphorus (as P)			lbs/day			mg/L	Three times Weekly	Composite	
Total Phosphorus (as P)	Report Moving 12-Month Cumulative Load <sup>(6)</sup>							Once Monthly	Calculated
Biomonitoring	See Part III, A., Special Condition No. 9							Once per year	Composite

The discharge shall be free from floating solids, sludge deposits, debris, oil and scum.

**Note:** In the table above, a blank box indicates that a value must be reported, but there is no effluent limitation.





# Current Rehoboth Beach Wastewater Loans

Loan Description	Annual Rate	Original Amt	Pmt Amounts	Frequency	Annual Pmts	Balance	Maturity
Outfall	2.00%	40,481,095	1,102,209.13	Semi-annual	2,204,418	34,688,927	3/1/2043
Sussex A	0.00%	3,000,000.00	75,000.00	Quarterly	300,000.00	2,550,000.00	12/31/2032
Sussex B	2.00%	1,560,000.00	43,127.01	Quarterly	172,508.04	1,345,371.00	12/31/2032
Sussex C	2.00%	780,000.00	21,563.50	Quarterly	86,254.00	672,685.37	12/31/2032
Plant	2.00%	12,000,000.00	93,682.78	Semi-Annual	187,365.55	9,368,277.57	3/1/2038
		57,821,095.00	1,335,582.42		2,950,545.85	48,625,260.88	

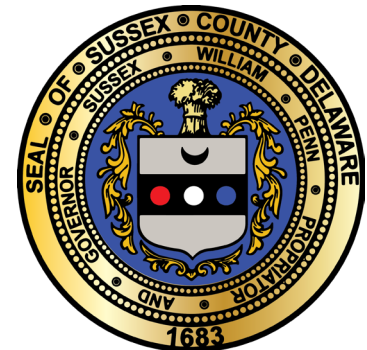
Interest is paid semi-annually on Plant loan at 2%. When draws reach \$12,000,000 it will begin amortizing  
 Annual interest on the plant loan has been calculated at 2% of the outstanding balance.



# Regional Wastewater Partnership Expansion

## *Responses to Questions*

September 9, 2024



# Background

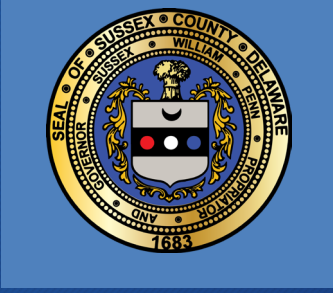


*On July 8, 2024, the Lewes Board of Public Works and Sussex County made a presentation to the Rehoboth Beach Commission seeking to open a dialogue on expanding the regional wastewater partnership.*

*The Commission provided a list of questions to LBPW-SC for a response. The following slides list the questions and respective responses.*



# *LBPW-SC Response to Questions*



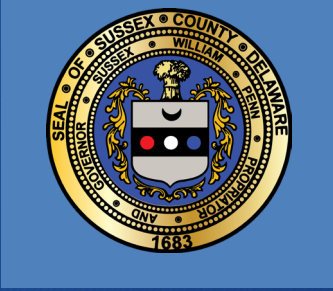
## **Rehoboth Question**

- How is our current agreement with Sussex County impacted?

## **LBPW-SC Response**

- The current Agreement will not be impacted. Its terms are 25-years ending on 8/8/2042 with a 25-year County renewal option ending in 2067.

# LBPW-SC Response to Questions



## Rehoboth Question

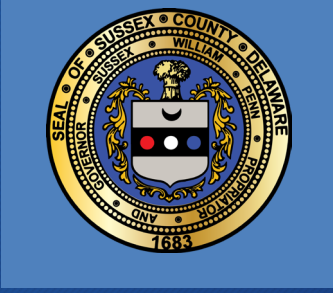
- Term of agreement – length, suggested to be in perpetuity
  - a. Is this an agreement with Sussex County only
  - b. What is role of LBPW once plant is decommissioned

## LBPW-SC Response

- LBPW-SC is proposing a capacity agreement, i.e., they will pay for additional capacity. The same terms (e.g., length of years) of the current RB agreement would apply to the capacity agreement.
  - a. The new agreement would be with LBPW and Sussex County
  - b. LBPW will fund a percentage of the agreement. LBPW will review Wolfe Neck treatment operations.



# *LBPW-SC Response to Questions*



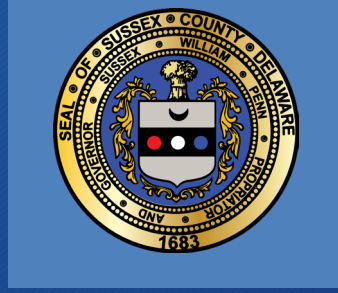
## **Rehoboth Question**

- Treatment standards – TMDL
  - a. What does the current RB NPDES permit require
  - b. What would the new Wolfe Neck permit require

## **LBPW-SC Response**

- a. Rehoboth staff will provide NPDES permit
- b. County will design new Wolfe Neck RWF to meet or exceed Rehoboth's current treatment plant's performance

# *LBPW-SC Response to Questions*



## **Rehoboth Question**

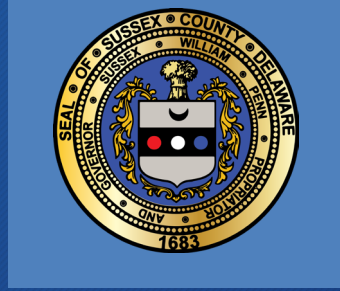
- Proposed treatment technology used at new Wolfe Neck plant
  - a. Consideration of Aerobic Granulated Sludge Process (AGS)

## **LBPW-SC Response**

- The County would use extended aeration with a BNR component similar, if not identical, to the South Coastal RWF and Rehoboth process.
  - a. The consideration of a smaller footprint process such as AGS would not be warranted at a site like Wolfe Neck RWF.



# LBPW-SC Response to Questions



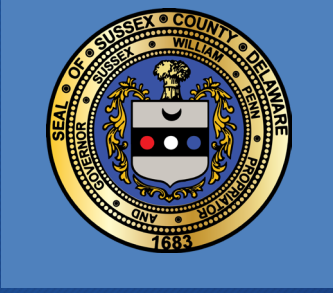
## Rehoboth Question

- Sussex County time frame
  - a. RFP
  - b. Permits process
  - c. Construction schedule
  - d. Projected on-line date
  - e. Decommission of Lewes WWTP

## LBPW-SC Response

- In general, it is difficult to predict the schedule at this point, but LBPW-SC is very eager to begin the process. Nonetheless, here are some broad timelines:
  - a. 2026-RFP for treatment plant construction; 2027-RFP for outfall connection construction
  - b. 2026-DNREC & USACE permit submittal
  - c. Upon successful permit approval and contract awards
  - d. 2029
  - e. 2030

# *LBPW-SC Response to Questions*



## **Rehoboth Question**

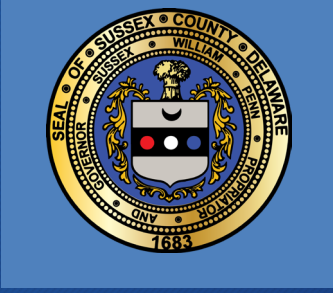
- Financial package
  - a. What is our current debt service on wwtp/outfall
  - b. Rate structure: flow, flat rate, base rate plus volume
- How could this impact (lower) our current sewer rate

## **LBPW-SC Response**

- a. Rehoboth staff will provide this information
  - b. One-time lump sum payment of \$20.0M for up to 5.0 MGD in capacity. Payment made upon successful permit approval(s)
- The City of Rehoboth will determine how to use the lump sum purchase



# *LBPW-SC Response to Questions*



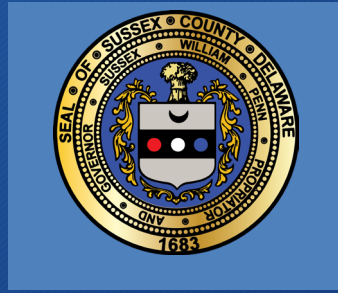
## **Rehoboth Question**

- List of state and federal permits required for complete project

## **LBPW-SC Response**

- New Wolfe Neck RWF NPDES Permit
- DNREC Construction permits for the treatment plant upgrades and effluent force main extension to the tie-in point
- DNREC/USACE Subaqueous Crossing Permit of the Canal

# LBPW-SC Response to Questions



## Rehoboth Question

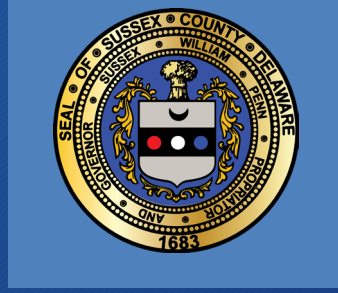
- Current permitted treatment capacity
  - a. Rehoboth Beach
  - b. Lewes BPW
  - c. Wolfe Neck
- i. Projected future capacity estimates 5 / 10 / 20 years

## LBPW-SC Response

- a. Rehoboth Beach: 3.4 MGD
  - b. LBPW BPW: 1.5 MGD
  - c. Wolfe Neck RWF: 3.1 MGD (annual average)
- 
- i. Combined LBPW-SC 2024 annual average inflows are 2.7 MGD and expected future inflows are as follows: 2030 = 3.4 MGD; 2040 = 4.0 MGD; 2050 = 5.0 MGD



# LBPW-SC Response to Questions



## Rehoboth Question

- Any redesign for our current outfall
  - a. Consideration of wear and tear attributable on additional flow at the plant\*\*, force main, outfall infrastructure.

## LBPW-SC Response

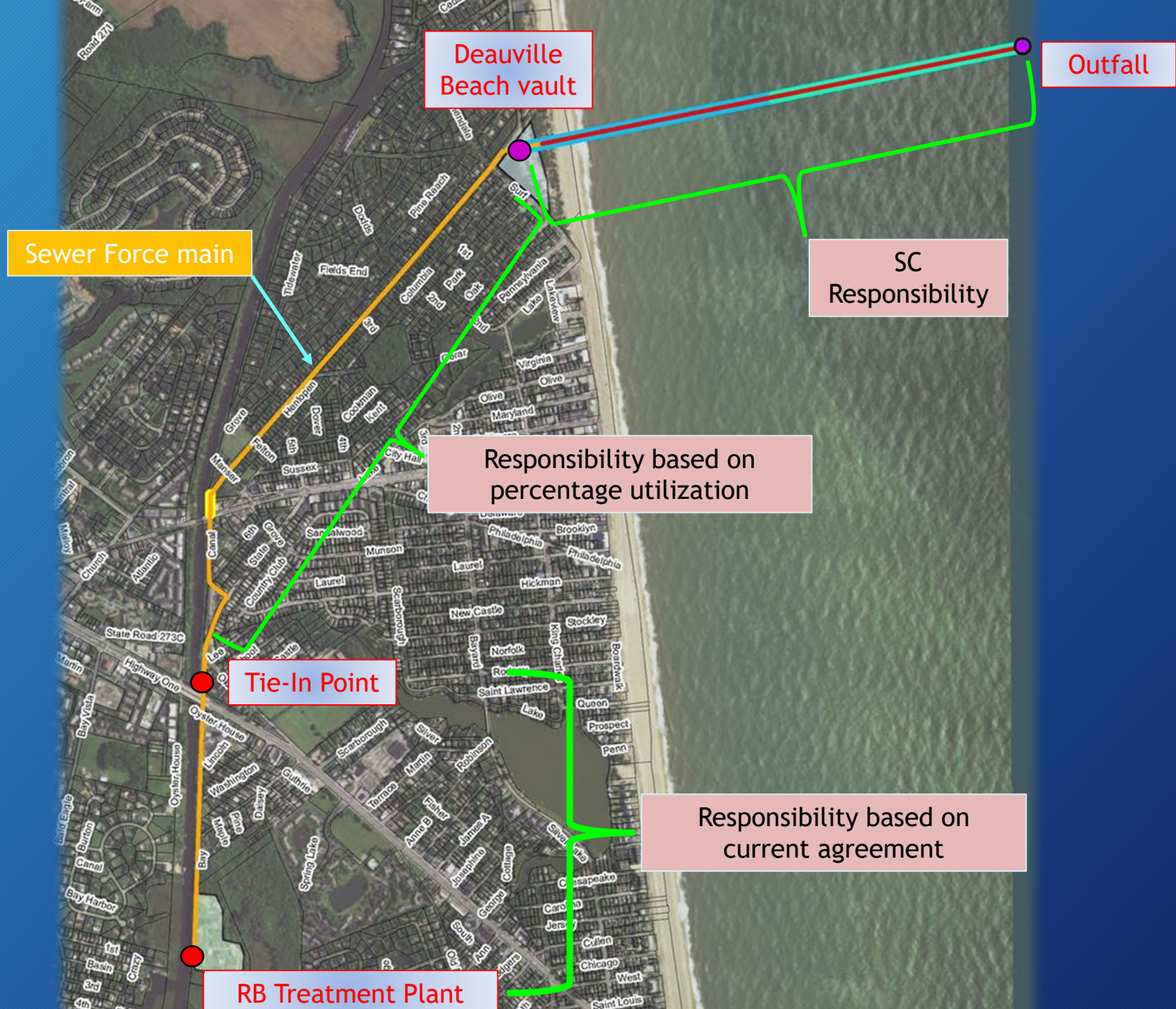
- With the payment agreement, SC will assume 100% of all required ocean testing and modelling, any outfall modification expenses, and 100% of all future operations and maintenance
- Furthermore, SC will participate in the force main maintenance and repair based on the percentage utilization. See next slide for illustration and explanation.

\*\*This project will not result in additional flow “at the [Rehoboth] plant”



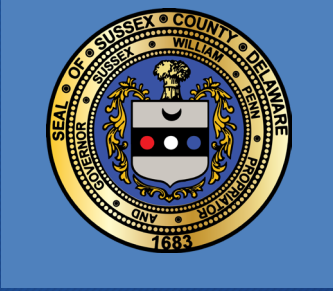


# Effluent Force Main and Outfall O&M





# *LBPW-SC Response to Questions*



## **Rehoboth Question**

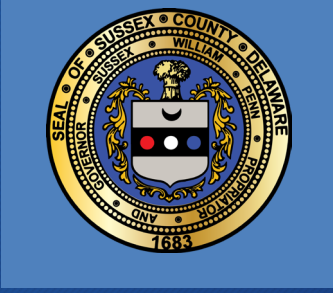
- Hans and Todd mentioned there are agreements between Sussex County and municipalities, where effluent is treated by Sussex County. This proposed partnership is a reverse of those agreements, can we obtain copies of those agreements as models?

## **LBPW-SC Response**

- Sussex County has an agreement with the Town of Selbyville for the disposal of effluent in the County's Ocean outfall. Copies of the agreement will be provided.



# *LBPW-SC Response to Questions*



## **Rehoboth Question**

- Determination of GHD's role in project. Seems to be conflict of interest as they would be representing all players.

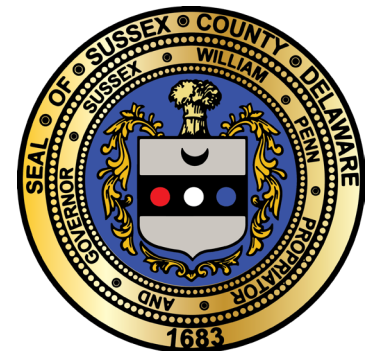
## **LBPW-SC Response**

- LBPW-SC have no concerns to GHD's involvement with the City. If the City decides to hire a new consultant, LBPW-SC would still like to see a decision on the proposal by the end of the year.

# Regional Wastewater Partnership Expansion

## *Questions & Comments*

September 9, 2024

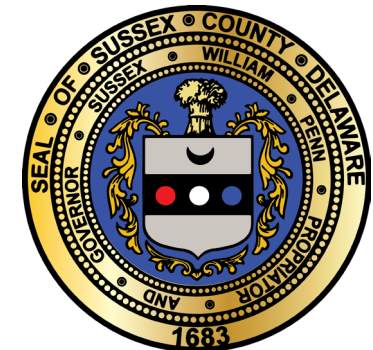




# Regional Wastewater Partnership Expansion

## *Responses to Questions*

October 7, 2024





# Background



*On July 8, 2024, the Lewes Board of Public Works and Sussex County made a presentation to the Rehoboth Beach Commission seeking to open a dialogue on expanding the regional wastewater partnership.*

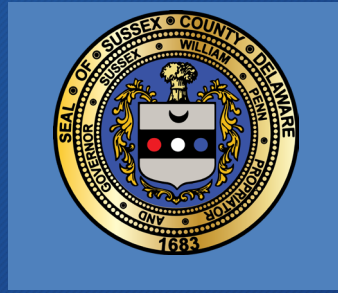
*On September 9, 2024, LBPW and SC returned to continue the dialogue.*

*Subsequently, the Commission provided a list of questions to LBPW and SC for a response.*

*The following slides include the responses to most of the questions.*



# LBPW-SC Response to Questions



## Rehoboth Question

- Explain the financial proposal (\$20.0 million offer)

## LBPW-SC Response

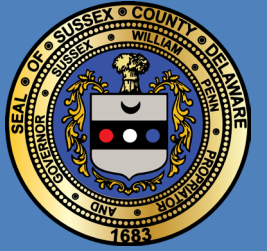
Basis of Offer	
2017 Total cost of ocean outfall including engineering but excluding pump station	\$38,500,000
Minimum hydraulic capacity based on 5.0 fps of 24" pipe	/10.15 MGD
Cost per MGD	\$3,794,423
5 MGD request	X 5
Value	\$18,972,115
Weighing other options and the desire to get out of the canal*	+\$1,027,885
<b>Offer</b>	<b>\$20,000,000</b>

\* New Outfall = \$50M

Canal Discharge = \$30M

Use of Rehoboth Outfall = \$31M (\$11M for to get additional flow to outfall)

# LBPW-SC Response to Questions



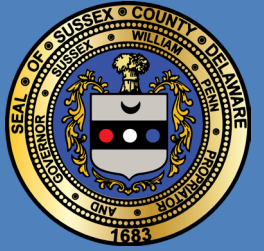
## LBPW-SC Response (continued)

### Additional Rationale for Offer (Calculated Price Using Inflationary and Depreciation Costs)

Cost of Rehoboth Ocean Outfall from Connection Point including Engineering	\$34,965,850
Inflationary Factor using published Engineering News-Record Construction Index	126%
Present worth value	\$44,055,383
Minus depreciation (6 of 50 years)	- \$5,286,646
Value of a 6 year old outfall	\$38,768,737
Hydraulic Capacity per Ten State Standards	/11.45
Cost per MGD	\$3,384,450
5 MGD Request	5
Value	\$16,922,250



# LBPW-SC Response to Questions



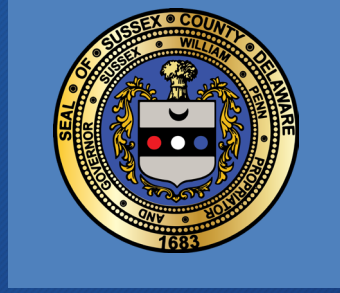
## LBPW-SC Response (continued)

### Additional Rationale for Offer (Calculated Price Using Inflationary and Depreciation Costs & all Costs incurred by Rehoboth)

Cost of Rehoboth Ocean Outfall including PS, Forcemain, Engineering, etc.	\$40,481,095
Inflationary Factor using published Engineering News-Record Construction Index	126%
Present worth value (note: very close to what it will cost to build an outfall today)	\$51,004,341
Minus depreciation (6 of 50 years)	- \$6,120,521
Value of a 6 year old outfall	\$44,883,820
Hydraulic Capacity per Ten State Standards	/11.45
Cost per MGD	\$3,918,287
5 MGD Request	5
Value	\$19,591,436



# LBPW-SC Response to Questions



## Rehoboth Question

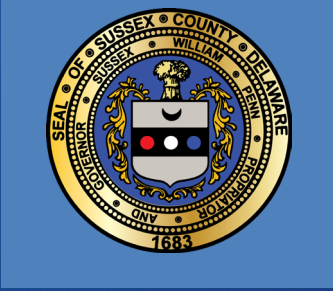
- *Paraphrasing:* Discuss the control of the outfall, is SC open to the outfall remaining under RB control? What will that mean to the payment offer and current debt service payments?

## LBPW-SC Response

- RB will remain the owner of the outfall. LBPW-SC's prior suggestion to allow SC to take responsibility of the outfall was an effort to keep this arrangement straight forward since SC was also offering to take over all future operations and maintenance.
- LBPW-SC's offer remains in place regardless of "ownership" of the outfall. Additionally, we remain committed to assume 100% of all required ocean testing and modelling, any outfall modification expenses, and 100% of all future operations and maintenance.
- SC will continue to pay 42% of the outfall debt as the current agreement requires.



# *LBPW-SC Response to Questions*



## **Rehoboth Question**

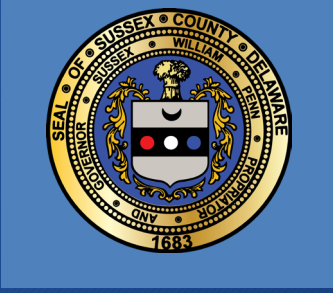
- Is LBPW-SC open to utilizing new treatment methods and technologies, for example AGS?

## **LBPW-SC Response**

- SC will design the new Wolfe Neck RWF to meet or exceed Rehoboth's current treatment plant's performance.
- It is too early to determine the exact treatment methods the new wastewater plant will utilize. Federal and State regulations will dictate the new plant's design and permit issuance.
- It is the County's intent to design the plant for extended aeration with a BNR component similar, if not identical, to the South Coastal RWF and Rehoboth process.
- AGS will not be considered.



# *LBPW-SC Response to Questions*



## **Rehoboth Question**

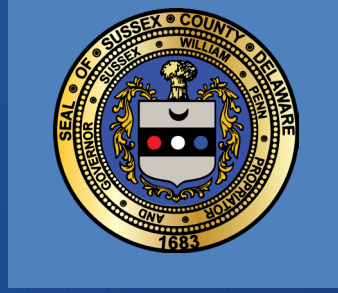
- Is SC willing to reimburse RB the consulting fee (\$26,000) for the independent analysis or any future reimbursement.

## **LBPW-SC Response**

- The consultant was hired by RB to perform the scope of work established by RB. LBPW-SC will not pay for RB's consultant.



# LBPW-SC Response to Questions



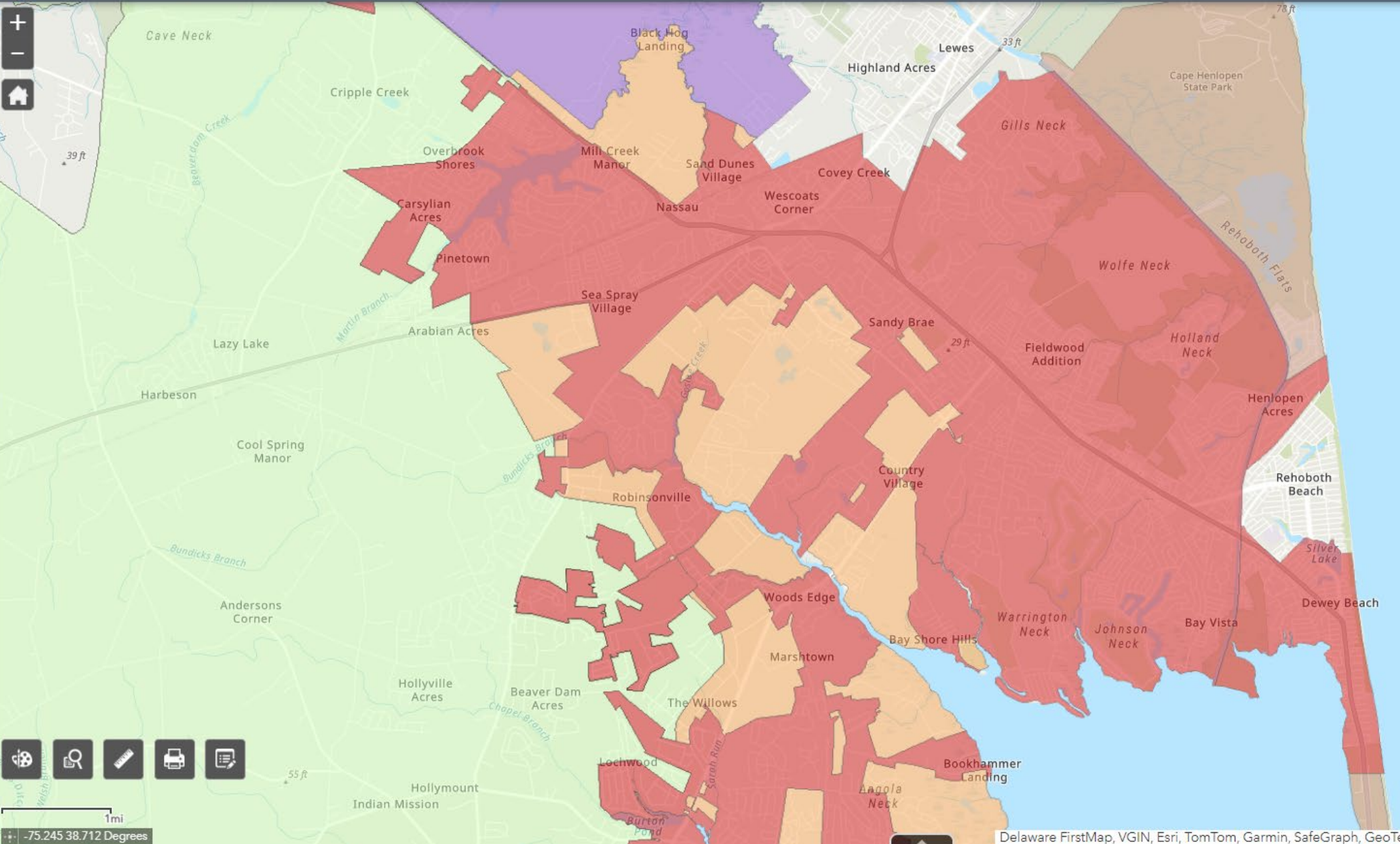
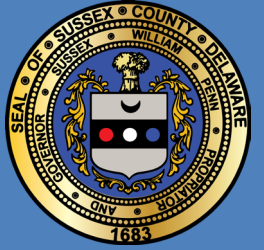
## Rehoboth Question

- *Paraphrasing:* Provide detailed assumptions on future flow estimates. Explain the growth related to conversion of septic's; the loss of field spraying; growth related to new housing/commercial development by 2030, 2040, and 2050.

## LBPW-SC Response

- The following estimates were provided previously: Combined LBPW-SC 2024 annual average inflows are 2.7 MGD and expected future inflows are as follows: 2030 = 3.4 MGD; 2040 = 4.0 MGD; 2050 = 5.0 MGD
- To respond accurately to the question(s) would require a detailed analysis.
- LBPW-SC are planning a regional system to meet its treatment demands and that of its partners. LBPW-SC intend to send treated wastewater from its service areas to the outfall as those demands require. The system will service parts of the area depicted on the next slide. That area will account for the annual inflows which will grow to 5.0 MGD at some point in the future.

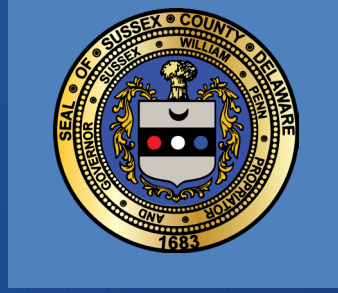




- County Sewer Tier 1
- County Sewer Tier 2
- County Sewer Tier 3



# LBPW-SC Response to Questions



## Rehoboth Question

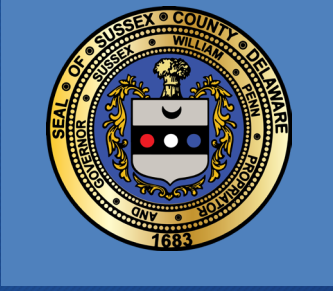
- *Paraphrasing:* Describe the force main and outfall maintenance schedule today and will that be affected by increased flows?

## LBPW-SC Response

- In general, the current Permit requires maintenance and inspection of the ocean outfall in accordance with the recommendations found in the applicable sections of "Marine Wastewater Outfalls and Treatment Systems by Philip J. W. Roberts, et al. 2010 Edition
- In review of the publication, it appears that friction loss monitoring is applicable for trending of marine growth obstructing the diffuser ports.
- In particular, the Permit requires visual inspection of the ocean outfall structure every two years.
- The visual inspection requirement is consistent with the South Coastal outfall permit.
- These requirements are not affected by increases in flow.



# LBPW-SC Response to Questions



## Rehoboth Question

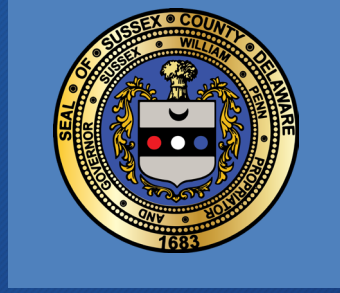
- *Paraphrasing:* How will the new agreement affect the LBPW and County ratepayers? Would there be anything included in those bills that would come to RB annually?

## LBPW-SC Response

- Additional operational costs will be passed on to current LBPW-SC ratepayers.
- The only payment RB will receive is the \$20M one-time payment.



# LBPW-SC Response to Questions



## Rehoboth Question

- *Paraphrasing:* Are there new EPA requirements that the future Wolfe Neck plant will need to meet?

## LBPW-SC Response

- No, the EPA has not set any limits in wastewater treatment for perfluoro octane sulfonic acid (PFOS) and other perfluoroalkyl and polyfluoroalkyl substances (PFAS). However, the new facility will be designed to accommodate future enhanced treatment processes so those enhancements can be added to the facility if necessary. For example, activated carbon filtration, which to date, is the most effective method to remove PFOS & PFAS could be added if the EPA promulgates wastewater maximum contaminant levels (MCL) through the Federal regulation process.