

Public Information Meeting Sagamore Avenue Area Sewer Extension

City of Portsmouth, NH

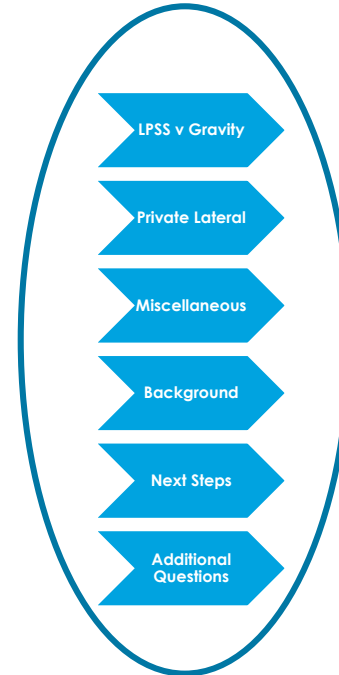
November 25, 2019

Suzanne Woodland, Deputy City Attorney
Terry Desmarais, PE, City Engineer



Introduction

- **Important Project Points and Proposal**
- **Answer Questions**
- **Take Additional Questions**

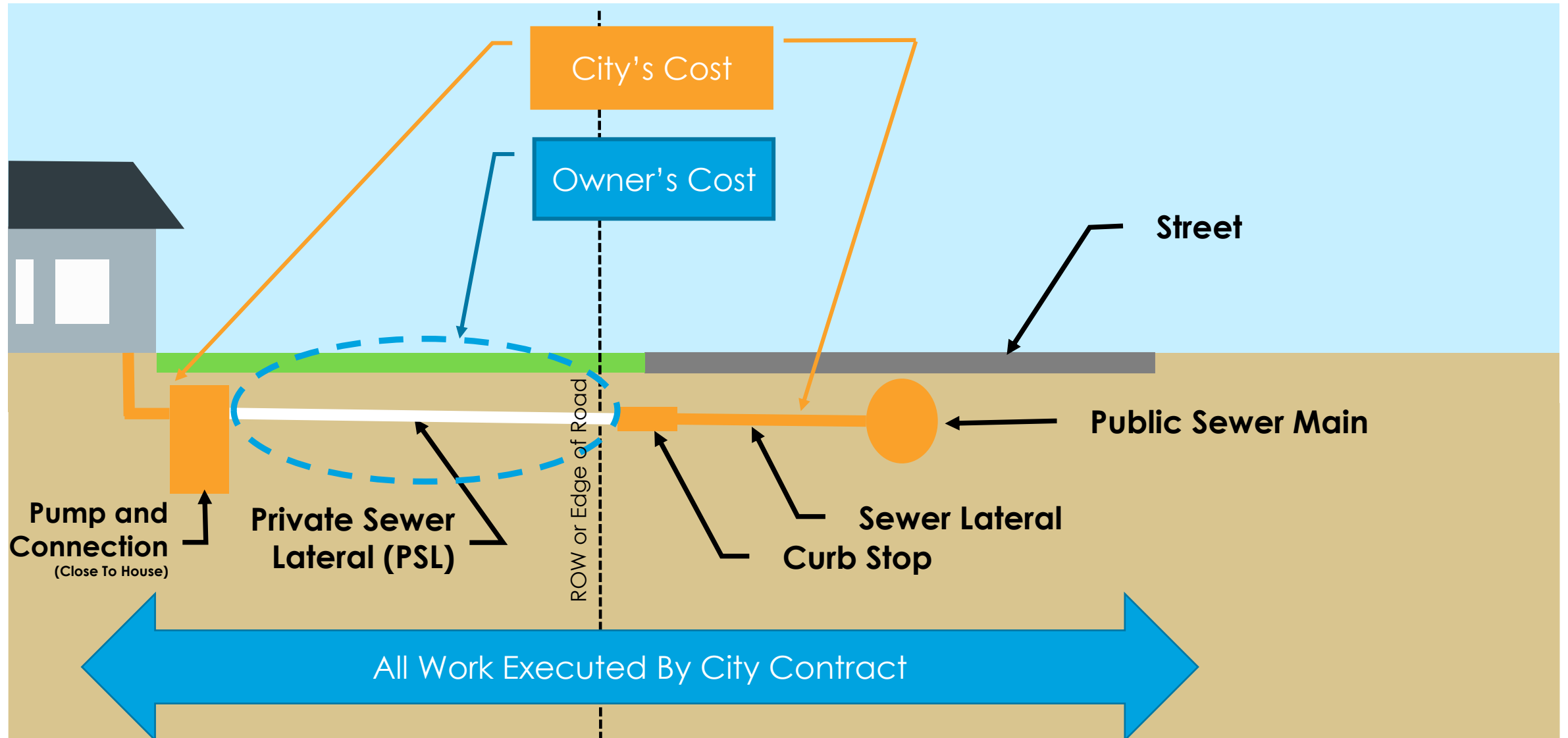


Important Project Points

- **Property Owners Will NOT Be Required To Tie-In If They Have A Functioning Septic System**
 - Sewer Use Ordinance update will include this provision
- **Property Owners Will Have To Tie-In If Their Septic System Fails**
 - New Hampshire Department of Environmental Services (DES) will not issue a permit for a septic system replacement



Cost Apportionment Proposal For Future City Council Consideration



Cost Apportionment Proposal For Future City Council Consideration

- **Final Determination Will Be Made By New City Council and City Manager**
- **Option For Private Property Work To Be Conducted Under City Contract**
 - Fully insured and bonded contractor
 - Economy of scale will reduce owner's costs for sewer service pipe installation from Right of Way to pump
 - Repayment of Owner's responsibility through 10 year, zero interest loan



Future City Council Decisions

- **Cost Apportionment**
- **Related Items Contingent on Cost Apportionment**
 - **Commercial Verses Residential Properties**
 - **What Happens At Sale Of Property**
 - **How to Handle Properties That Do Not Connect Until Later**



Q: Why is this project different than other sewer projects in the City? Mandated? Scale?

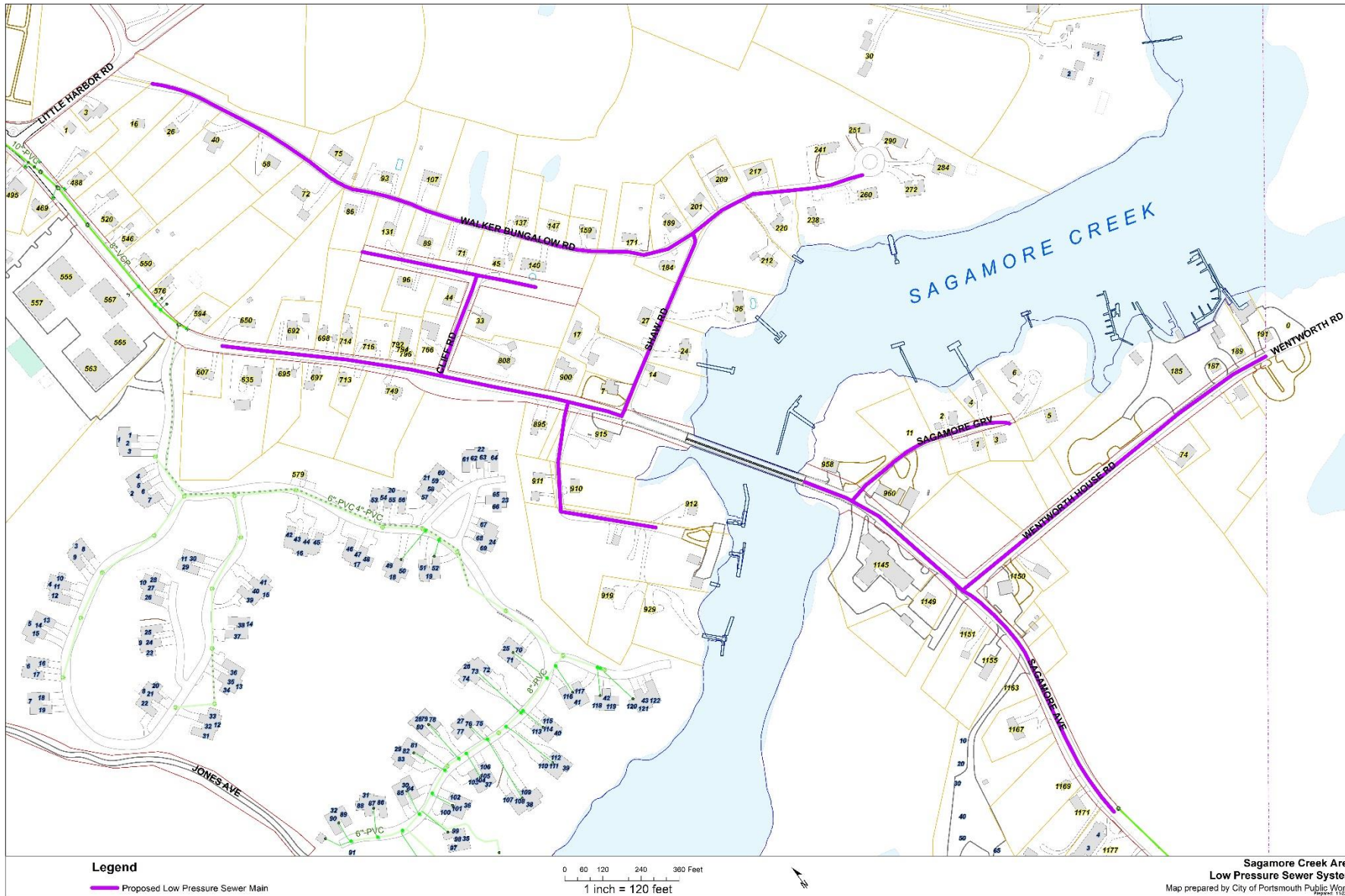
- **Incorporated Into the City's Consent Decree Second Modification**
- **Supplemental Environmental Project**
 - Keeps the dollars local
 - Delivers local environmental benefits
 - Links with other projects in the watershed
- **Scale Of This Project Is Larger Than Previous Projects**



LOW PRESSURE vs. GRAVITY SEWER

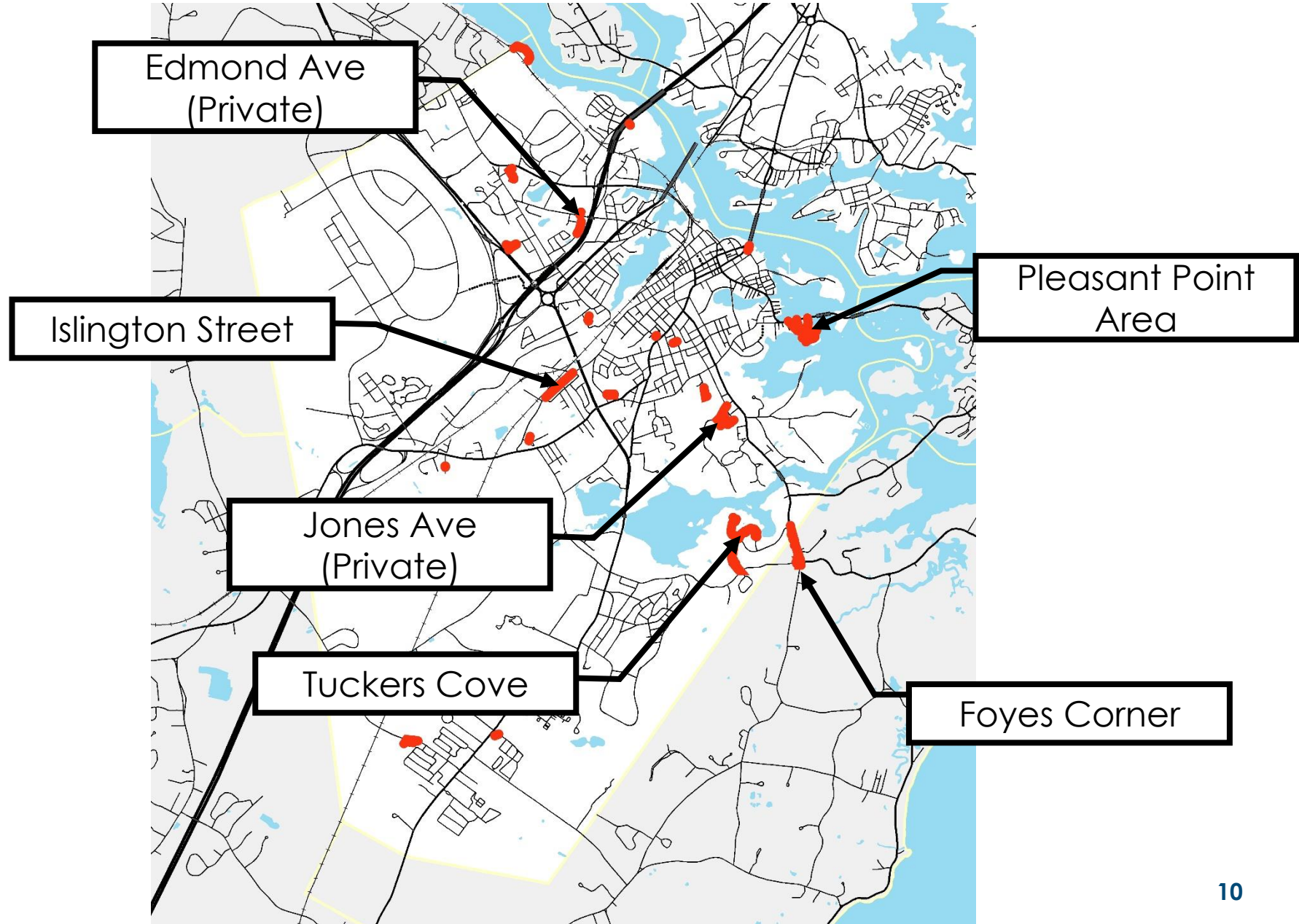


CURRENT SAGAMORE LPSS DESIGN



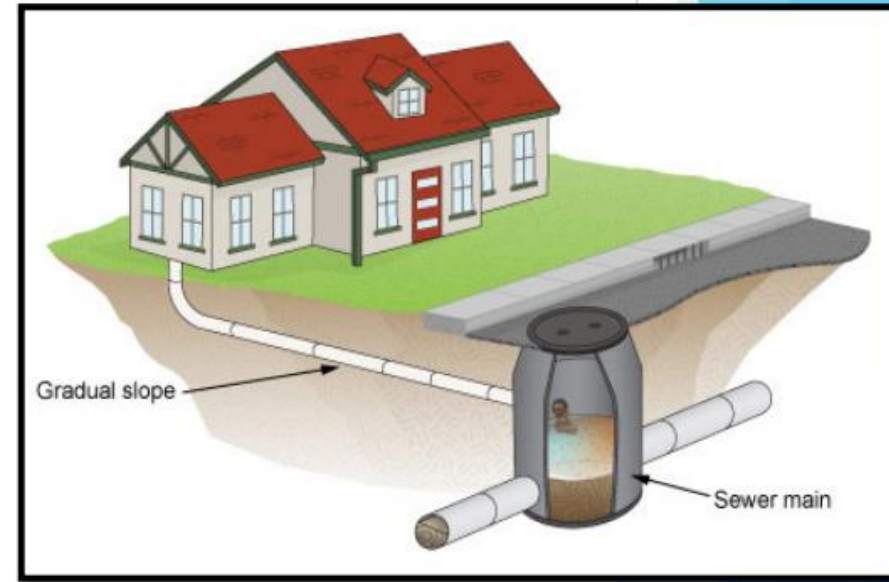
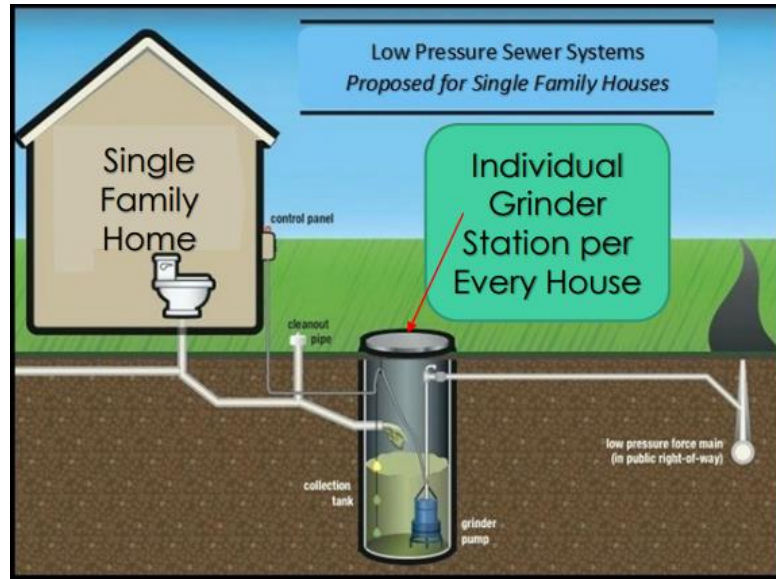
- LPSS v Gravity
- Private Lateral
- Miscellaneous
- Background
- Next Steps
- Additional Questions

CURRENT LPSS IN THE CITY OF PORTSMOUTH



- LPSS v Gravity
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Q: WHY CHOOSE A LOW PRESSURE SYSTEM?



Low Pressure Sewer System

- **Advantages**
 - Lower construction costs due to shallower bury depth of pipe (Shallow ledge in project area)
 - Is not dependent on grade and topography
 - Less invasive construction
- **Disadvantages**
 - Higher annual operation and maintenance costs

Gravity Sewer (No Pressure)

- **Advantages**
 - Lower long term costs to the home owner
- **Disadvantages**
 - Higher construction costs
 - More invasive/destructive construction
 - Requires pump stations based on topography
 - Requires permanent easements for cross country sewer lines



Q: CAN THE CITY PUT A PUMP STATION AT THE BOTTOM OF THE ROAD?

- The City Would Need To Identify And Purchase Land To Construct A Pump Station
- Approximately 35' x 45' Lot Needed
- Increased Costs
- Additional Force Main Construction



Photo: Heritage Ave Pump Station



Photo: Seacoast Community School Pump Station



LPSS v Gravity

Private Lateral

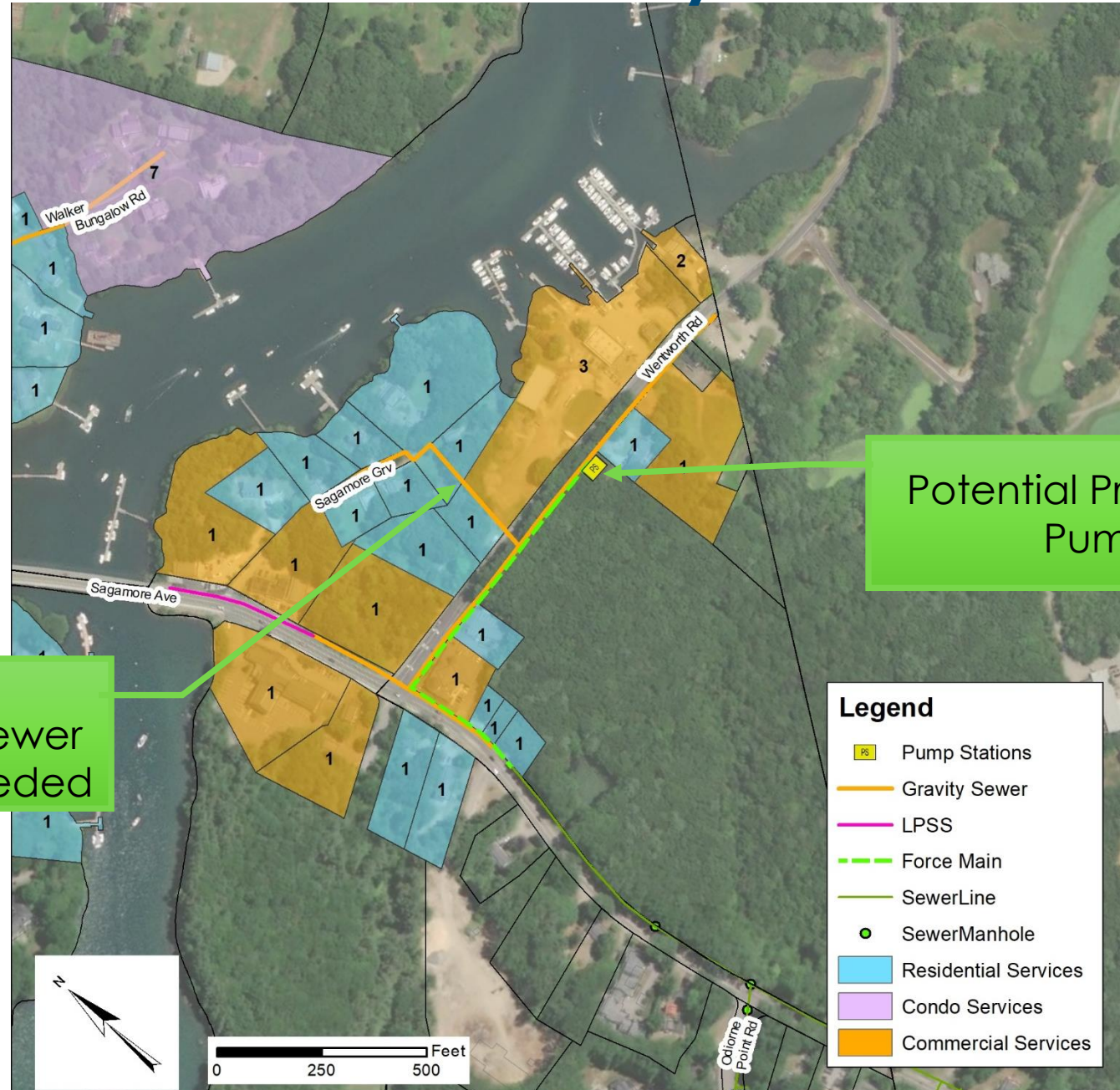
Miscellaneous

Background

Next Steps

Additional Questions

2011 Sagamore Ave Sewer Study – South Gravity



Potential Property Rights for Pump Station

Potential Permanent Sewer Easement Needed

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Miscellaneous

Background

Next Steps

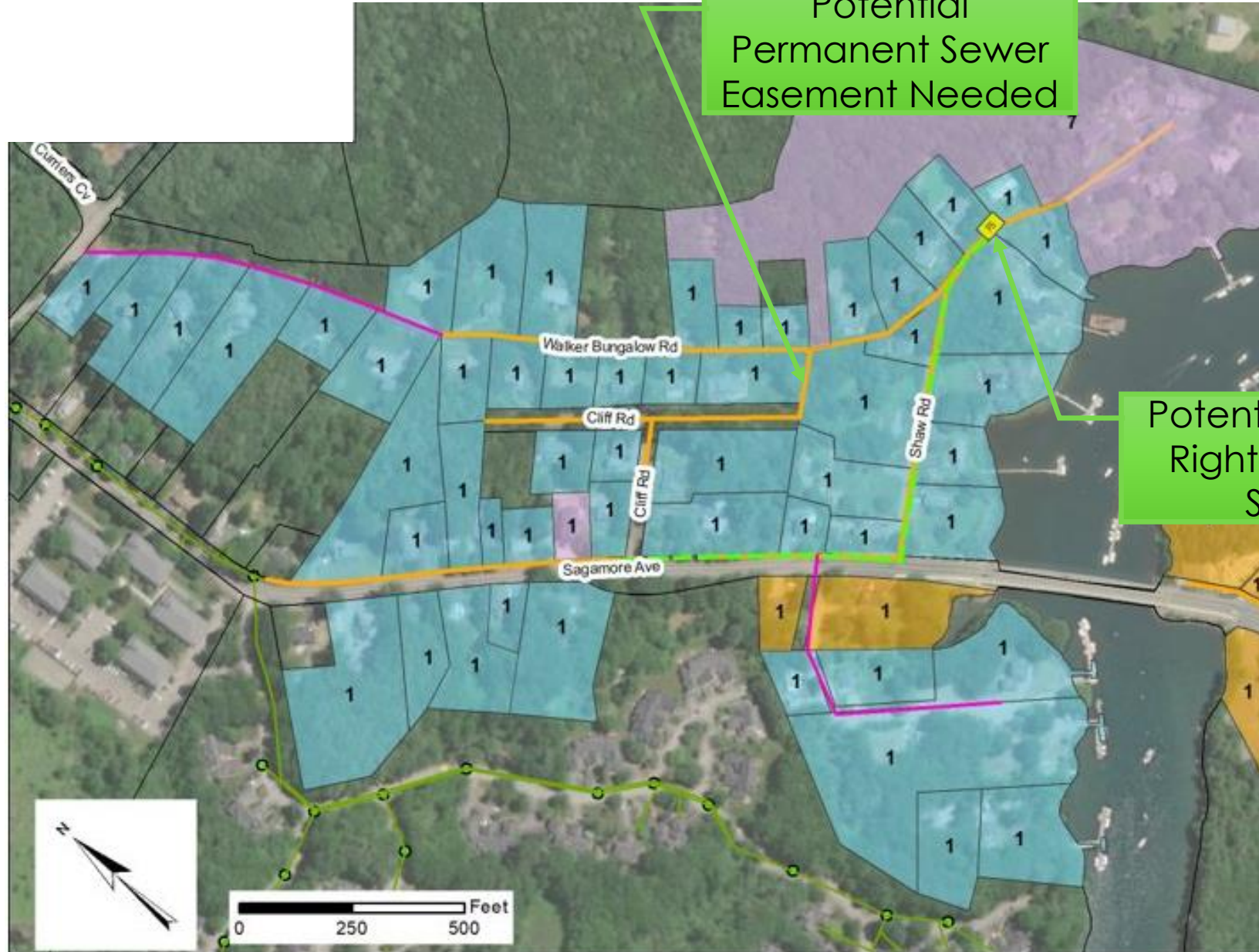
Additional Questions



2011 Sagamore Ave Sewer Study – North Gravity

Legend

- Pump Stations
- Gravity Sewer
- LPSS
- Force Main
- SewerLine
- SewerManhole
- Residential Services
- Condo Services
- Commercial Services



LPSS v Gravity

Private Lateral

Miscellaneous

Background

Next Steps

Additional Questions

Q: CITY HAS DECLINED TO PUT A GRAVITY SEWER DUE TO LEDGE – WHAT WILL THE REAL PROJECT NUMBERS BE?

- **Decisions To Date Have Been Based On Engineering Evaluations And Recommendations**
 - **Low Pressure System Is The Lowest Cost Option**
- **Gravity System Complexities**
 - **Cross Country Main Construction On Private Property**
 - **Land Needs For Pump Stations**
 - **Depth Of Construction Requires Significantly Increased Ledge Excavation**



LPSS v Gravity

Private Lateral

Miscellaneous

Background

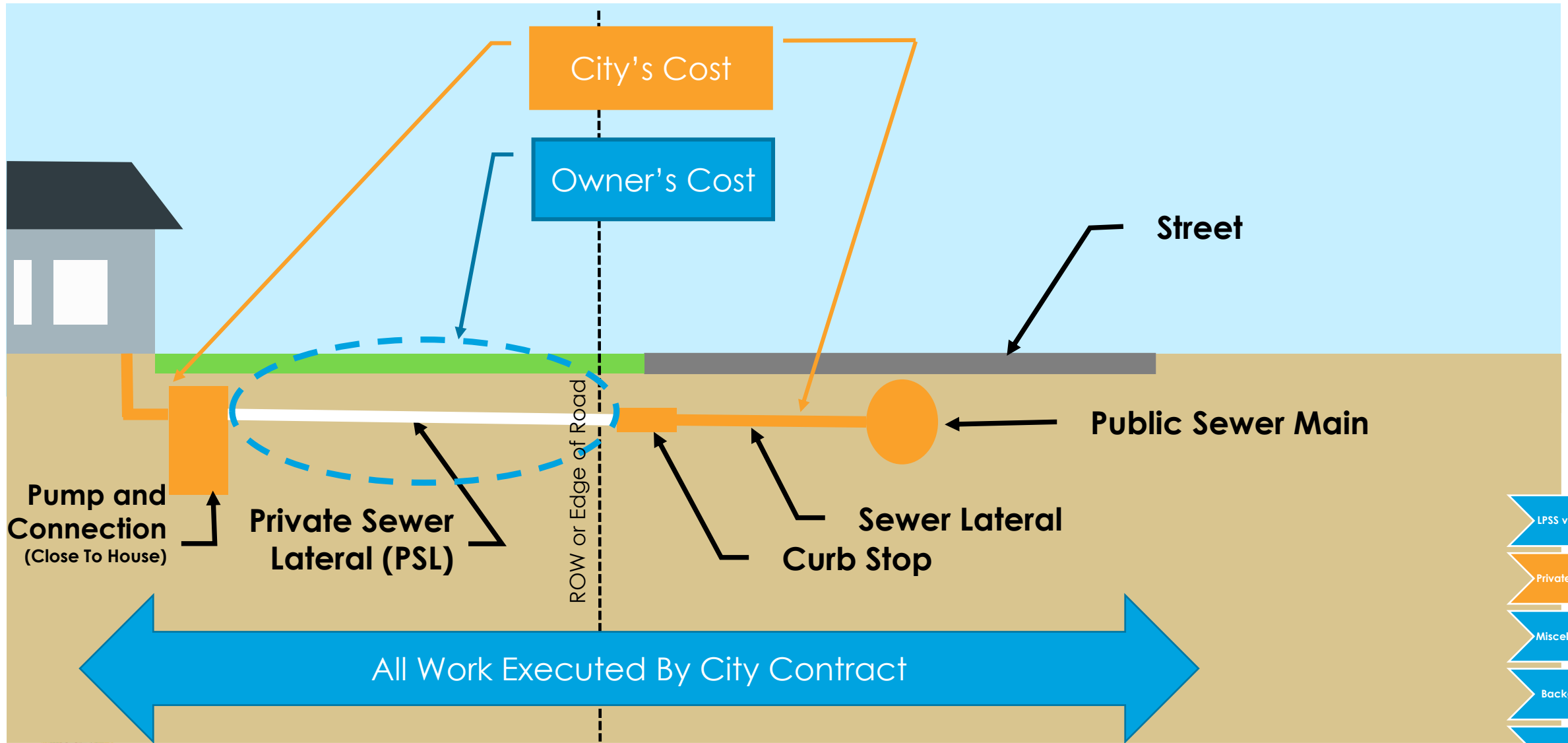
Next Steps

Additional Questions

PRIVATE SEWER LATERALS



Q: IS THE WORK DONE ONLY IN THE ROAD, NOT ON PRIVATE PROPERTY?



- LPSS v Gravity
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Q: WHY THE EONE PUMP?

- Long Track Record
- Considered Industry Standard By Many
- Simple And Reliable, Least Amount Of Worry
- 10-15 Year Pump Life Span
- City Has Confirmed Local Installation And Long Term Ownership Have Been Successful

D-Series | DH071 & DR071 Grinder Pump Station



Typical Annual Electric Cost: \$36



LPSS v Gravity

Private Lateral

Miscellaneous

Background

Next Steps

Additional Questions

Q: WHAT HAPPENS IF THERE IS A POWER OUTAGE? DO I NEED A GENERATOR?

- **Pumps Have Approximately 70 Gallons of Storage That Provides Some Flexibility**
 - **Water Use Typically Declines During Outage**
 - **Typical Toilet Flush Is 1.2 Gallons**
- **Standby Generator Hookup Will Be Supplied With Unit**
- **An Alarm Will Notify Homeowners If Capacity Is Close To Being Reached**



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Private Lateral

Miscellaneous

Background

Next Steps

Additional Questions

MISCELLANEOUS



Q: WHAT IF BLASTING LEDGE DAMAGES MY HOUSE?

- **The City Of Portsmouth Requires All Prospective Contractors To Be Fully Insured And Follow Rules And Regulations In The Blasting Ordinance**
- **Video And Photographic Pre-Blasting Inspections Will Be Conducted**
- **All Potential Claims Would Be Compared To Pre-Blast Inspections**



LPSS v Gravity

Private Lateral

Miscellaneous

Background

Next Steps

Additional Questions

Q: CAN THE GAS COMPANY BRING IN A GAS LINE WHILE THE ROAD IS OPEN?

- **Neighborhood Residents Would Need To Contact Unitil**
- **Unitil Would Conduct A Meeting With Residents**
- **Unitil Would Then Conduct A Study To Evaluate A Cost Benefit Analysis**
- **City Staff Can Coordinate An Initial Meeting If Desired**



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Private Lateral

Miscellaneous

Background

Next Steps

Additional Questions

Q: IS THERE ENOUGH ROOM TO PUT BOTH WATER AND SEWER PIPES FAR ENOUGH APART?

- **Yes There Is Room To Maintain Offset Distances Between Utilities In The Road Right Of Way**
- **Per NH Department Of Environmental Services Rules, A Low Pressure Force Main Can Be Located Closer To A Water Main Than A Gravity Sewer**



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Miscellaneous

Background

Next Steps

Additional Questions

Q: IS THERE A HOLDING TANK OPTION?

- **Permanent Use Of A Holding Tank Is Not Permitted By NHDES**
- **Temporary Use Of A Holding Tank Has Been Permitted Under Certain Circumstances**



LPSS v Gravity

Private Lateral

Miscellaneous

Background

Next Steps

Additional Questions

Q: WHAT OTHER NEIGHBORHOODS HAD TO PAY FOR CITY SEWER INFRASTRUCTURE

Projects	Islington Street (Plains to Vine)	Pleasant Point	Oxford Avenue	Brackett Road
Year	2017	2008	2005	2003
Reason	DPW Addition As Part of Reconstruction	Citizen Request	Failed Septic and Private Services	Citizen Request
Type of System	Low Pressure	Low Pressure	Gravity and Low Pressure	Gravity and Pump Station
Number of Properties	22	20	11	26
Cost Per Property (today's \$\$\$)	~\$8,100	~\$10,800 (\$15,800)	~\$4,300 (\$7,600)	~\$10,000 (\$18,500)
Repayment Option	N/A	5 years at 6% Interest	5 years at 0% Interest	10 years at 4.8% Interest

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Q: DOES THIS REQUIREMENT REDUCE THE VALUE OF MY HOME?

- **No - Having A Connection To Public Sewer Typically Increases Value**
- **With A Sewer Connection The Building Footprint (Another Bedroom, ADU, etc.) Can Be Increased Without Additional Approvals Or Work On The Septic And Leaching Field**



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Miscellaneous

Background

Next Steps

Additional Questions

Q: WHAT IS THE STATE REVOLVING FUND?

- **State Revolving Loan Fund (SRF) Is A State Run Loan Program That Provides Low Interest Loans For Eligible Infrastructure Projects**
 - Included in Clean Water Act
 - Interest Used To Fund Future Projects
 - Administered by NH Department of Environmental Services
- **City Has Applied for State Aid Grant And May Be Eligible If Program Is Funded By State**



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Miscellaneous

Background

Next Steps

Additional Questions

Q: HOW DOES THE CITY CARRY COSTS UNTIL REPAYMENT?

- **The Sewer Enterprise Fund Carries A Net Position (“Fund Balance”) That Allows The Fund To Cover The Costs Until The Determined Cost Allocation Is Received At The Time of Tie-In**
- **This Is Consistent With How The Costs Of Other Projects Have Been Funded**



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Miscellaneous

Background

Next Steps

Additional Questions

Q: HOW HAVE OTHER MUNICIPALITIES HANDLED THIS SITUATION?

- **The Models From Other Communities Are Highly Variable**
- **This Is A Policy Decision To Be Made By The City Council**
- **Generally with Enterprise Funds, The Benefiting Parties Cover The Costs For Utility Extension Projects**
- **Gloucester, MA: North Sewer Extension**
 - 75% Property Owner
 - 25% Sewer Fund
- **Essex, MA: Sewer Extension**
 - 72% Property Owner
 - 28% Sewer Fund



LPSS v Gravity

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Miscellaneous

Background

Next Steps

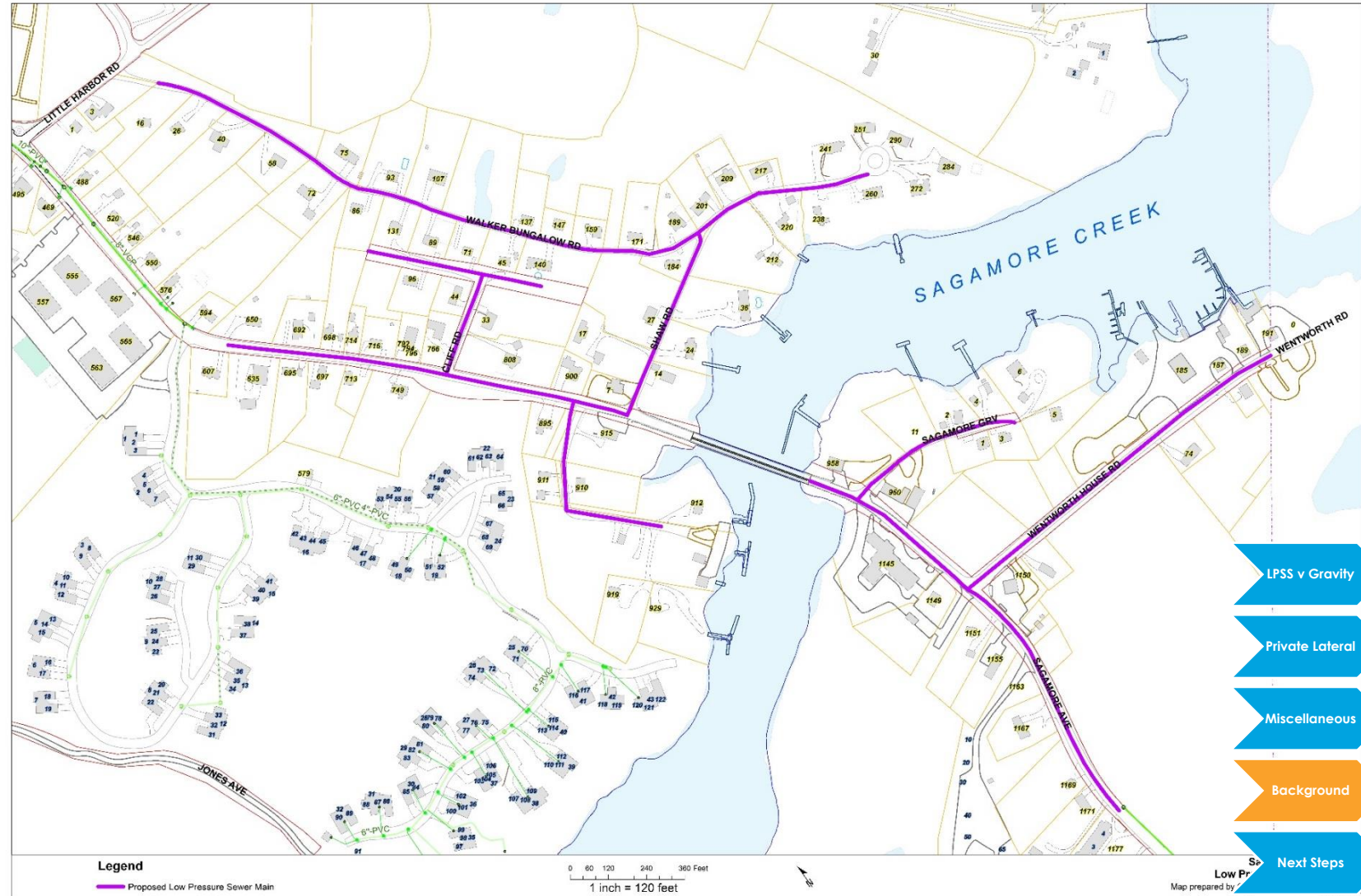
Additional Questions

BACKGROUND



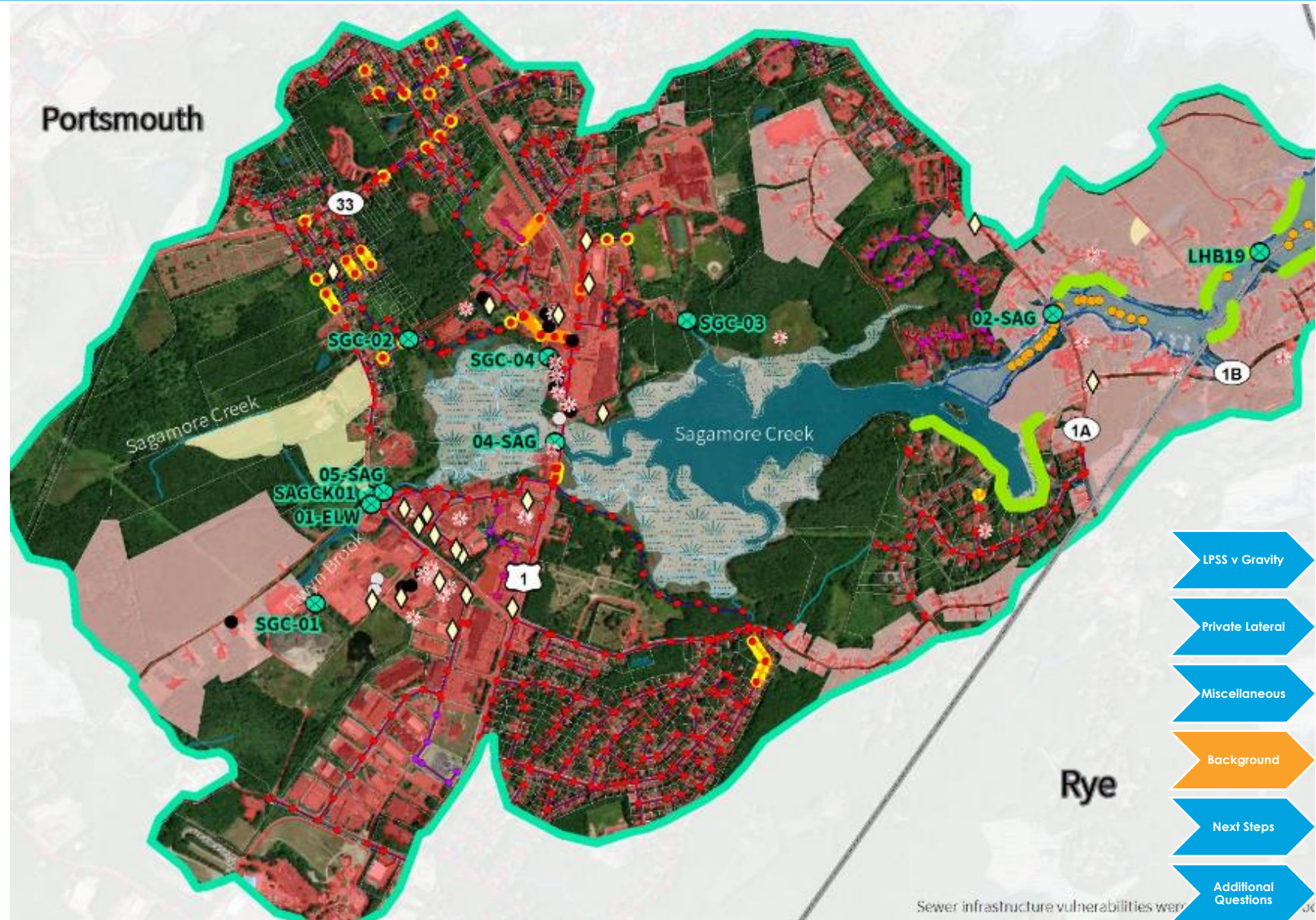
Q: WHAT IS THE SCOPE OF THE AREA AND HOW DID IT GET DEFINED?

- Area Determined Based On DES Study And Staff Knowledge Of Septic Issues In The Area
 - State Wide Bacteria TMDL In 2010
 - Failed Septic And Use Of Holding Tanks
- 91 New Service Connections



Q: WHAT IS THE SCOPE OF THE AREA AND HOW DID IT GET DEFINED? CONTINUED

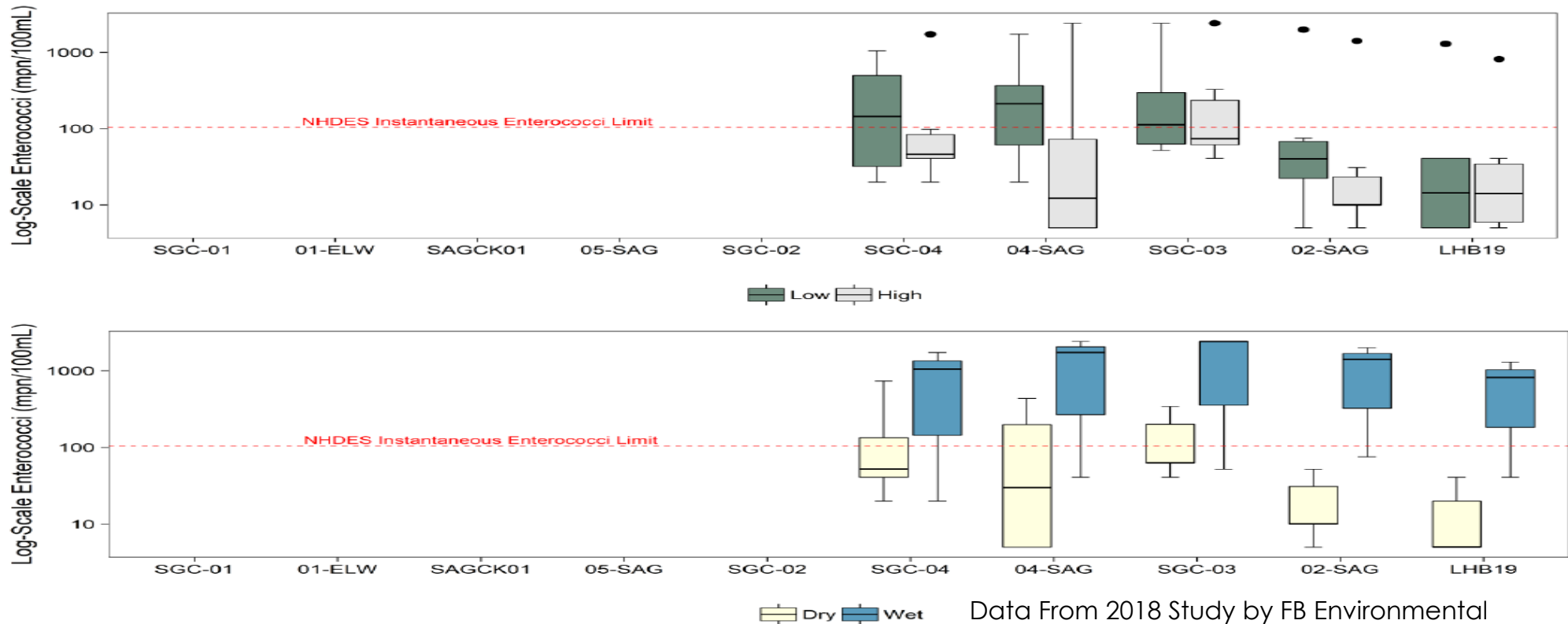
- Project Supplements Other Creek Projects
 - Water Quality Testing In The Creek
 - Potential Watershed Management Plan
 - Stormwater Improvements At Creek Head Of Tide



Q: HOW OLD AND ACCURATE WAS THE STUDY THAT FOUND CONTAMINATION IN SAGAMORE CREEK?

- The State Wide Bacteria TMDL Study Was Completed In 2010 By DES
 - Recommended 80 To 98% Bacteria Reduction
- FB Environmental Completed Water Quality Sampling In 2018 And 2019 That Showed Elevated Levels Of Bacteria

APPENDIX C: Data figures by tide and weather for Sagamore Creek sites



- LPSS v Gravity
- Private Lateral
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Data From 2018 Study by FB Environmental

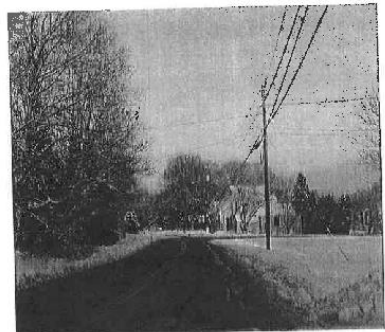
Q: HAS THIS PROJECT BEEN BROUGHT FORWARD BEFORE?

- This Project Has Been In The Capital Improvement Plan (CIP) For A Number Of Years
- City Council Approval For Consent Decree Second Modification March 14, 2016
- Bond Authorized July 15, 2019



PHASE III SEWAGE IMPROVEMENT PROGRAM


Collection System Extensions
The project will include extending the sanitary sewer system to areas that have been identified as having illicit discharges or substandard subsurface disposal systems. The recently completed Brackett Road project is an example of such a project. Two areas under consideration are the Sagamore Ave., south of the Sagamore Creek and Pleasant Point. The benefiting property owners will contribute financially to these projects.



January 22, 2004 Adopted Planning Board 138

EF-18-SD-93: CONSENT DECREE MITIGATION

Department	Public Works
Project Location	Various
Project Type	Other (Explained Below)
Commence FY	2018
Priority	A (needed within 0 to 3 years)
Impact on Operating Budget	Negligible (<\$5,001)



Description: The City of Portsmouth entered into a Consent Decree with the Environmental Protection Agency in 2009. The City moved forward with the requirements of the Consent Decree and had to modify the final schedule for the required expansion of the Peirce Island Wastewater Treatment Facility. As a result of this modification, the City committed to certain projects. Capital projects include implementing a \$500,000 green infrastructure stormwater project (previously funded) and construction of a low-pressure sewer system on Sagamore Avenue north and south of Sagamore Creek.


Useful Website Links:

- [Public Works Department](#)
- [Sewer Department](#)
- [FY19-24 CIP page](#)


	FY20	FY21	FY22	FY23	FY24	FY25	Totals 20-25	6 PY's Funding	Totals
GF	0%						\$0	\$0	\$0
Fed/State	0%						\$0	\$0	\$0
Bond/Lease	98%	\$4,400,000					\$4,400,000	\$800,000	\$5,200,000
Other	0%						\$0	\$0	\$0
Revenues	2%						\$0	\$100,000	\$100,000
PPP	0%						\$0	\$0	\$0
Totals		\$4,400,000	\$0	\$0	\$0	\$0	\$4,400,000	\$900,000	\$5,300,000

CAPITAL IMPROVEMENT PLAN FY 20-25 150


January 20, 2005 Planning Board Adopted 155




March 19, 2007 City Council Adopted-CIP FY 08-13 161




CIP FY 13-18 City Council Amended May 21, 2012 144



CAPITAL IMPROVEMENT PLAN FY 18-23 153



CAPITAL IMPROVEMENT PLAN FY 19-24 148



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Background

LPSS v Gravity

Costs

Private Lateral

Misc. Construction

Next Steps

NEXT STEPS



Next Steps

- **December 9, 2019 Sagamore Sewer Meeting**
 - Answer Additional Questions
 - Potential Questionnaire For Each Property
- **Design and Permitting Ongoing**
 - Need Right Of Access Beyond Roadway in Certain Areas
 - Additional Borings, Survey, Wetland Delineation to Be Completed
- **Schedule Discussion with New Council Regarding Proposal**
- **Bidding And Construction TBD**



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Private Lateral

Miscellaneous

Background

Next Steps

Additional Questions

ADDITIONAL QUESTIONS

