

Sagamore Avenue Sewer Extension Public Meeting

City of Portsmouth, NH

August 11, 2020



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



Agenda

- **Brief Review of July 28, 2020 Work Session**
 - Current Project Limits and Costs
 - Key Decision Items
 - Alternative Project Limits
 - Decision Points Summary
- **Updated Questionnaire Results**
- **Responding To Questions**
 - Alternative/Innovative Septic Technologies
 - Zoning and Development
- **Approach Options - Advantages and Disadvantages**
- **Recommendations on Other Items**
- **Next Steps**

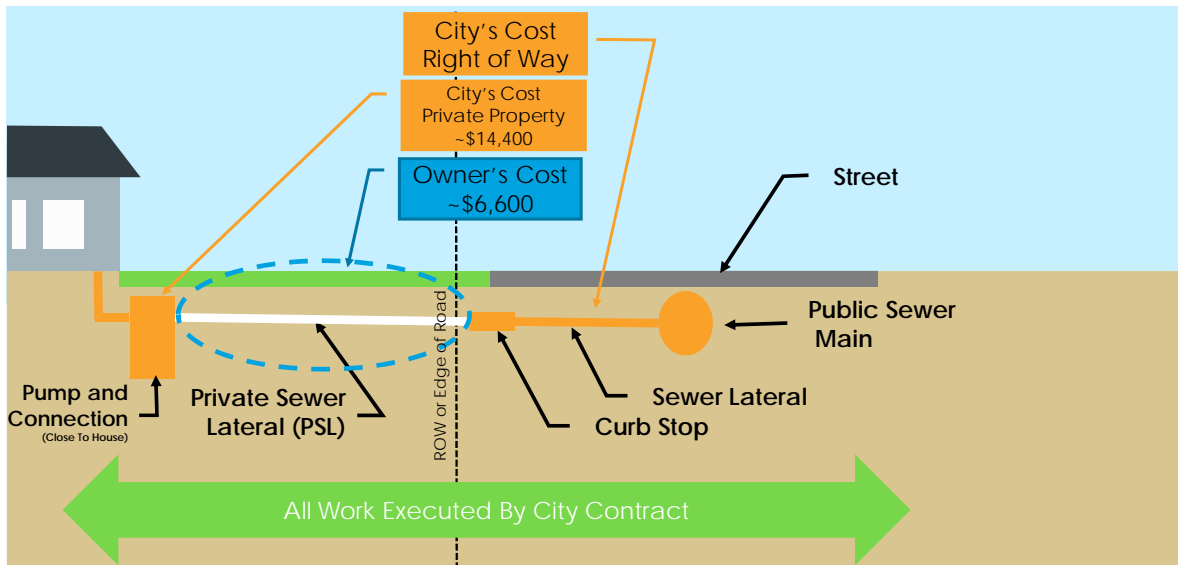


Current Project Limits and Costs: Project Limits



3

Current Project Limits and Costs: Cost Apportionment Proposal



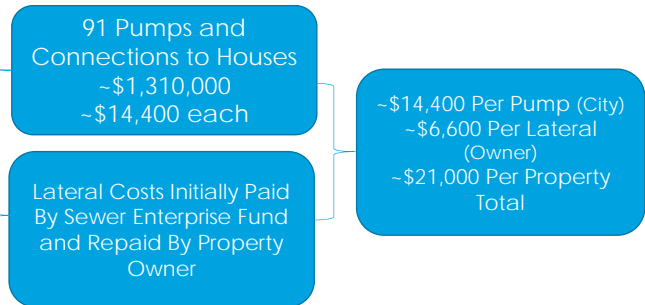
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4

Current Project Limits and Costs: Current Cost Estimate

Cost Estimate (91 Connections)

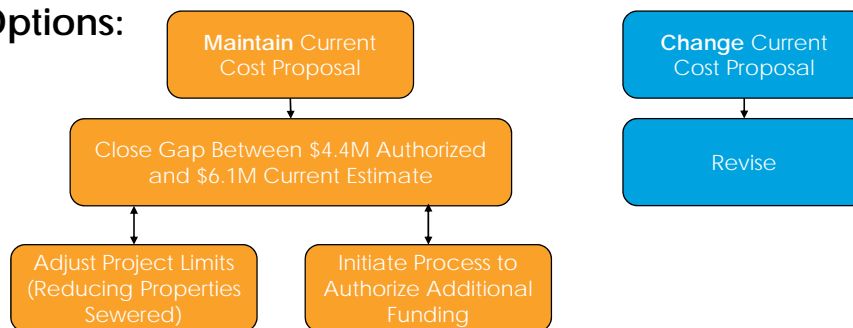
Item	Cost (\$)
Sagamore North	\$3,650,000
Sagamore South	\$1,850,000
Total City (Sewer Users)	\$5,500,000
Service Laterals North	\$420,000
Service Laterals South	\$180,000
Total Owner	\$600,000 (-\$6,600 per connection)
Total Project Cost	\$6,100,000
[If 75% Participation]	[\$5,620,000]
[If 50% Participation]	[\$5,150,000]
[If 0% Participation]	[\$4,190,000]



Key Decision Items

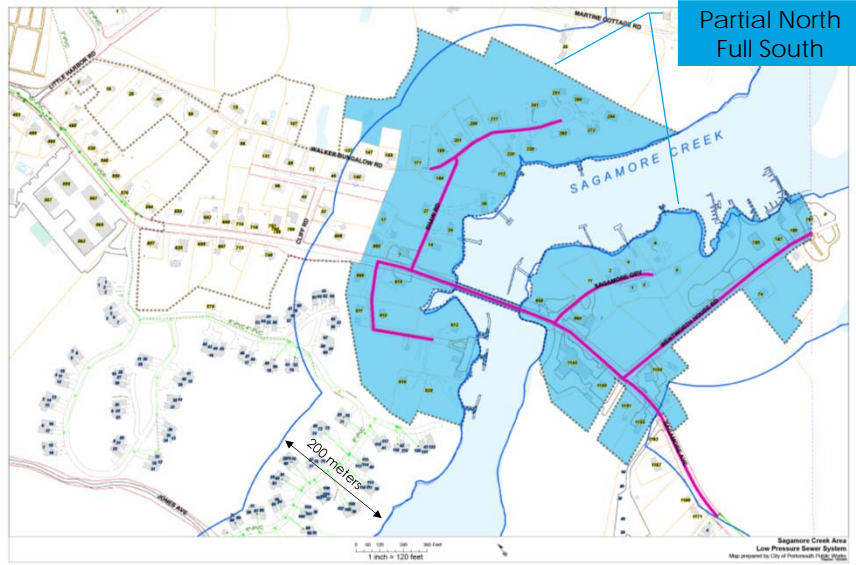
- Issue: Current Estimate Exceeds \$4.4M Project Funding
 - Added costs based on Nov 2019 cost proposal
 - Work on private property side of project
 - Limits extended to capture interested properties

Potential Options:



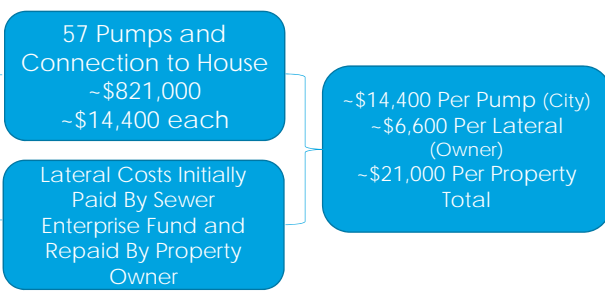
Alternative Project Limits: 57 Connections

Note: Any Changes to Project Limits in Consent Decree Are Subject to Regulator Approval



Alternative Project Limits: Estimated Cost 57 Connections

Item	Cost (\$)
Sagamore North (Over bridge)	\$2,090,000
Sagamore South	\$1,850,000
Total City (Sewer Users)	\$3,940,000
Service Laterals North	\$200,000
Service Laterals South	\$180,000
Total Owner	\$380,000 (~\$6,600 per connection)
Total Project Cost	\$4,320,000
[If 75% Participation]	[\$4,020,000]
[If 50% Participation]	[\$3,720,000]
[If 0% Participation]	[\$3,120,000]



Decision Points Summary: Cost Matrix

	100% Participation	75% Participation	50% Participation	0% Participation
Current Project Limits	\$6,100,000	\$5,620,000	\$5,150,000	\$4,190,000
Alternative Project Limits	\$4,320,000	\$4,020,000	\$3,720,000	\$3,120,000

Within \$4.4M Funding



Current Cost Proposal



Current Project Limits



Alternative Project Limits

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Updated Questionnaire Results

Details

- Distributed April 2020
- 88 mailed, 59 returned
- 67% Response Rate
- Questions Answered Based On November 2019 Cost Proposal

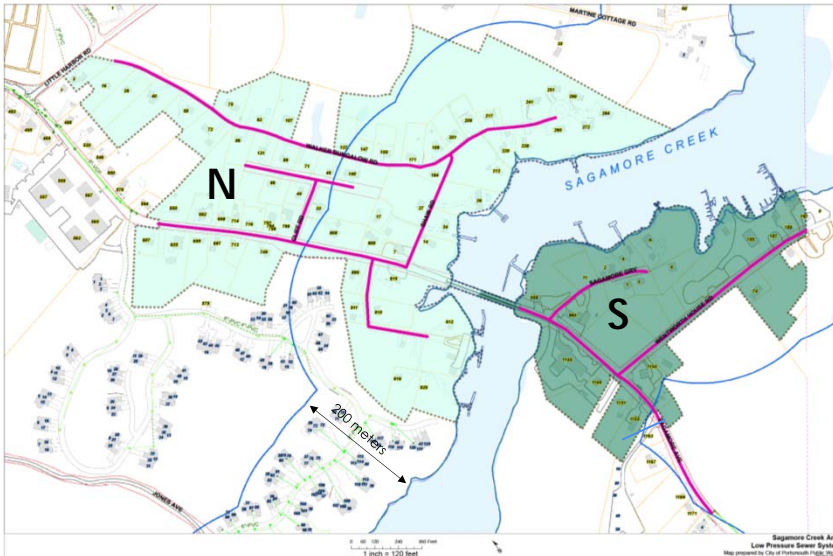
Questions

1. Will You Tie-in at Time of Construction
2. How Old is Existing Septic System
3. Condition of Existing Septic System
4. How Frequently is Septic Tank Pumped
5. When is Replacement Anticipated
6. Does Septic System Have a Pump
7. Does Septic System Have Aeration
8. Does Property Have Radon Mitigation
9. Does Property Have Finished Basement
10. Does Property Have Basement Plumbing



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Updated Questionnaire Results: Tie-in At Time of Construction

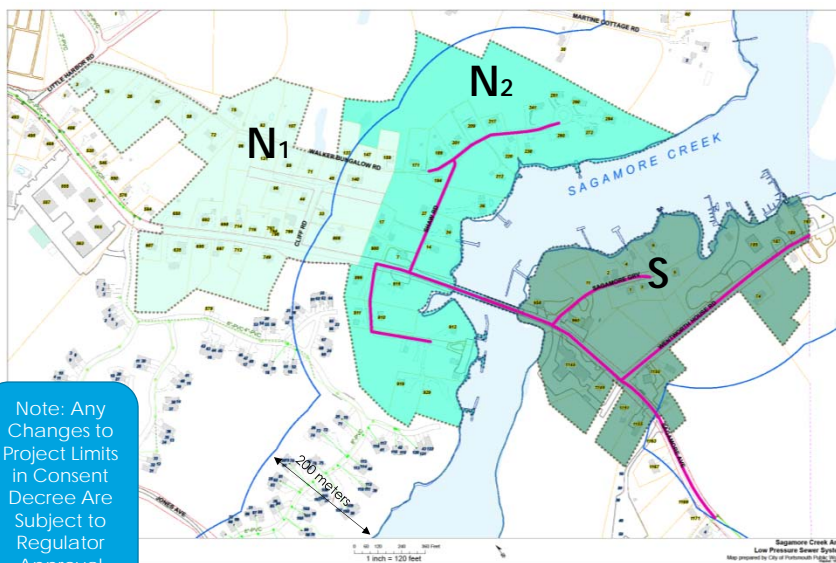


Response	N	S
Yes (10-7)*	24 (59%)	11 (69%)
Maybe (6-4)*	4	3
No (3-0)*	13	2
Total Responses	41	16

*Answer scale for question was from 0 to 10

11

Updated Questionnaire Results: Tie-in At Time of Construction By Alternative Project Limits Areas



Note: Any Changes to Project Limits in Consent Decree Are Subject to Regulator Approval

Response	N1	N2	S
Yes (10-7)*	11 (48 %)	13 (72%)	11 (69%)
Maybe (6-4)*	4	0	3
No (3-0)*	8	5	2
Total Responses	23	18	16

*Answer scale for question was from 0 to 10

12

Updated Questionnaire Results: Majority Answers

Question	Majority Answer	% of Total
1. Will You Tie-in at Time of Construction	Yes (7 to 10)	61
2. How Old is Existing Septic System	Greater Than 15 Years	49
3. Condition of Existing Septic System	Very Good	39
4. How Frequently is Septic Tank Pumped	Every 2 Years	49
5. When is Replacement Anticipated	Over 20 Years	24
6. Does Septic System Have a Pump	No	61
7. Does Septic System Have Aeration	No	69
8. Does Property Have Radon Mitigation	No	73
9. Does Property Have Finished Basement	No	42
10. Does Property Have Basement Plumbing	No	59



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13

Alternative/Innovative Septic Technologies

- **Not Being Considered For This Project**
 - EPA And NHDES Recommend Extending Sewer To Areas Around Water Bodies
 - Many Alternative/Innovative Systems Still in Piloting Phase
 - Sagamore Creek Is An Impaired Water Body
 - Aerobic treatment septic systems are often required
 - Systems Installed On Private Property
 - Not a long term municipal solution
 - Owners may not want the operation and maintenance burden
- **Homeowner Could Consider This Option To Extend Life Of Current Septic System**



Busse MBR Sewage Treatment System

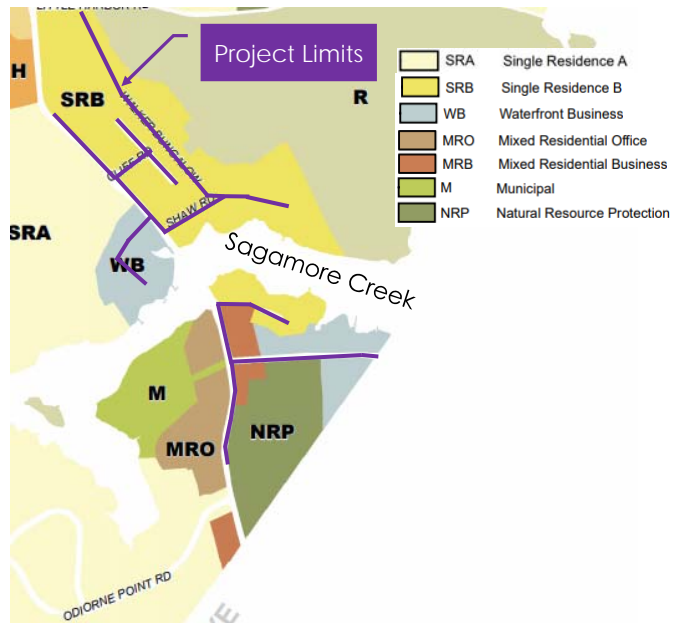


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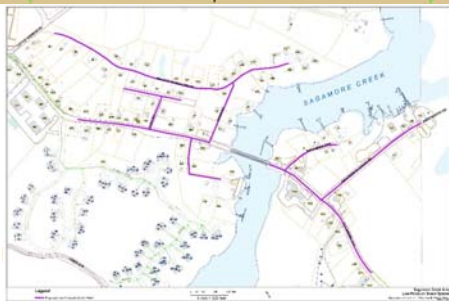
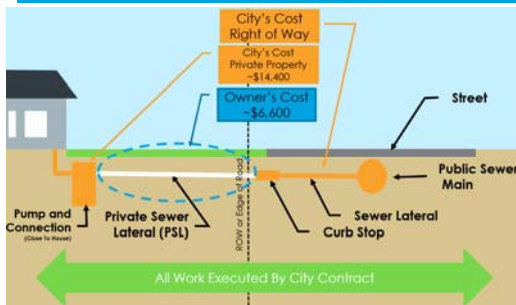
14

Development Potential

- **Single Residence A and B (SRA & SRB):** Single family dwellings at low - medium density
- **Mixed Residential Office (MRO) and Mixed Residential Business (MRB):** Limited range of small business and residential. Maximum of 8 dwelling units
- **Waterfront Business (WB):** Business dependent on the ocean or river



Current Project Limits – Current Cost Proposal Up To \$6.10M



Advantages

- Meets Consent Decree Limits
- Maximizes Environmental Benefit
- Details Of Connection Handled By City Contractor
- Consistent With Nov 2019 Cost Proposal

Disadvantages

- Additional Funding Authorization Required
- Requires Work/Coordination On Private Property
 - Additional Engineering and Design Costs
 - Additional Consumption of Staff Time

Alternative Project Limits – Current Cost Proposal Up To \$4.32M



Advantages

- Estimated Within Current Budget
- Services Properties Closest To Sagamore Creek
- Details Of Connection Handled By City Contractor
- Consistent With Nov 2019 Cost Proposal

Disadvantages

- Requires EPA Approval Under Consent Decree
- Reduces Number Of Sewered Properties
- Excludes Some Interested Properties
- Changes Piping Configuration/Design
- Requires Work/Coordination On Private Property
 - Additional Engineering and Design Costs
 - Additional Consumption of Staff Time



17

Recommendations On Other Items

- Operation And Maintenance Of E-One Pump System

Recommendation: Owner responsibility

- Replacement Of E-One Pump At End Of Life

Recommendation: Owner responsibility

- Connections At A Later Date

Recommendation: Owner responsibility

- Outstanding Loan Obligations

Recommendation: Repaid at sale of property

To take a different approach would require a significant change to ordinance, billing, rate structure, and budget



Recommendations On Other Items: Radon Gas Testing

- **Odorless, Colorless Gas that Originates from Rock**
 - Regulated action level is 4.0 picocurie per liter (pCi/L)
 - No Testing Conducted at Properties with Existing Radon Mitigation Systems
- **Testing for Properties without Radon Mitigation Systems**
 - Pre-blast radon testing
 - Post-blast radon testing
- **If Post-Blast Testing Shows Increase and is Above Action Level City to Install Mitigation System**
- **Radon Gas Testing Is Additional Project Cost**



Next Steps

- **Vote On Decision Points**
 - No later than August 31, 2020 City Council Meeting
- **September 2020 – January 2021 Permitting And Final Design**
 - Requires access on private property for wetland flagging and survey
- **February-April 2021 Bidding And Project Award**
- **April 2021 – Begin Construction**



Questions

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