



Peirce Island WWTF Upgrade  
Construction Status and Budget Summary  
and Mechanic Street Pump Station Force Mains

City Council Meeting  
October 19, 2020

# Topics of Discussion

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- Mechanic Street Force Mains Project
- Wastewater Treatment Facility Upgrade Project
  - Construction Photos
  - Treatment Performance
  - Schedule
  - Total Project Costs
  - Construction Costs To Completion



# Force Mains From Mechanic Street Wastewater Pump Station



24" Force Main (1997) At Bridge  
To Be Repaired Nov 2020

24" Force Main (~1980)  
Currently Out of Operation

16" Force Main at Bridge  
Replaced 2016

18" Force Main (~1960)  
Currently Operating

Mechanic Street Pump Station

Boat Launch

Pool

Wastewater Treatment Facility

Bridge

PERCE ISLAND RD

GARDNER ST

HUMMING ST

PICKERING ST

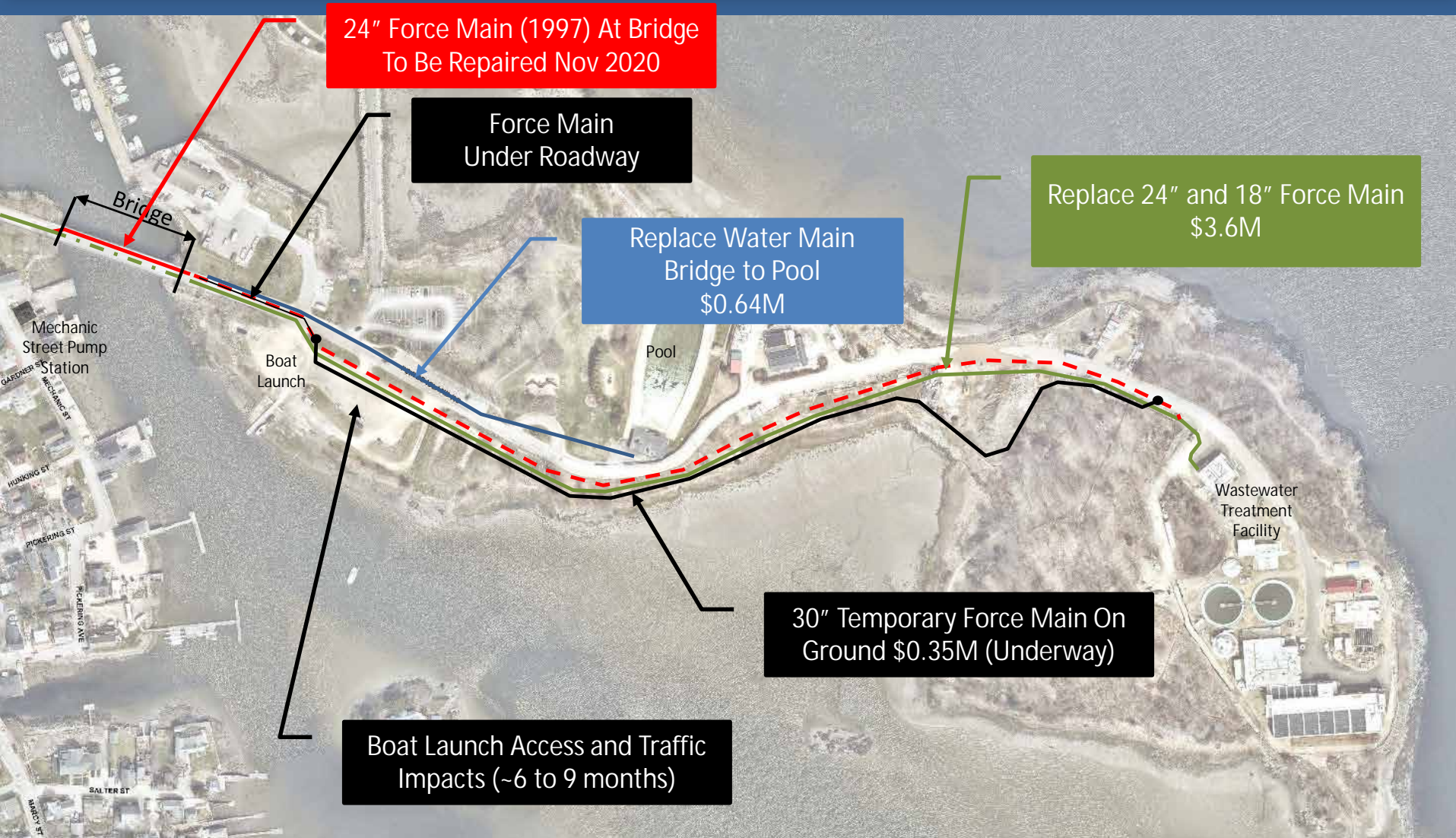
PICKERING AVE

SALTER ST

MANLY ST



# Force Mains From Mechanic Street Wastewater Pump Station



# Recommended Force Main Funding Approach To Avoid Sewer Rate Impact

- Utilize Available Monies From Existing Sewer Funds
- Delay CIP Projects Accounted For In The Sewer Rate Model
- Authorize New Bond For Force Main Replacement
  - Unscheduled emergency project





# Peirce Island WWTF Upgrade Project Site Overview November 2016



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Peirce Island WWTF Upgrade Construction  
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# Site Overview September 2020



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# Headworks Building





# Grit Building and Tanks



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# Biological Aerated Filter (BAF) and Solids Buildings





# Biological Aerated Filter (BAF)



# Solids Building





# Operations/Laboratory Building



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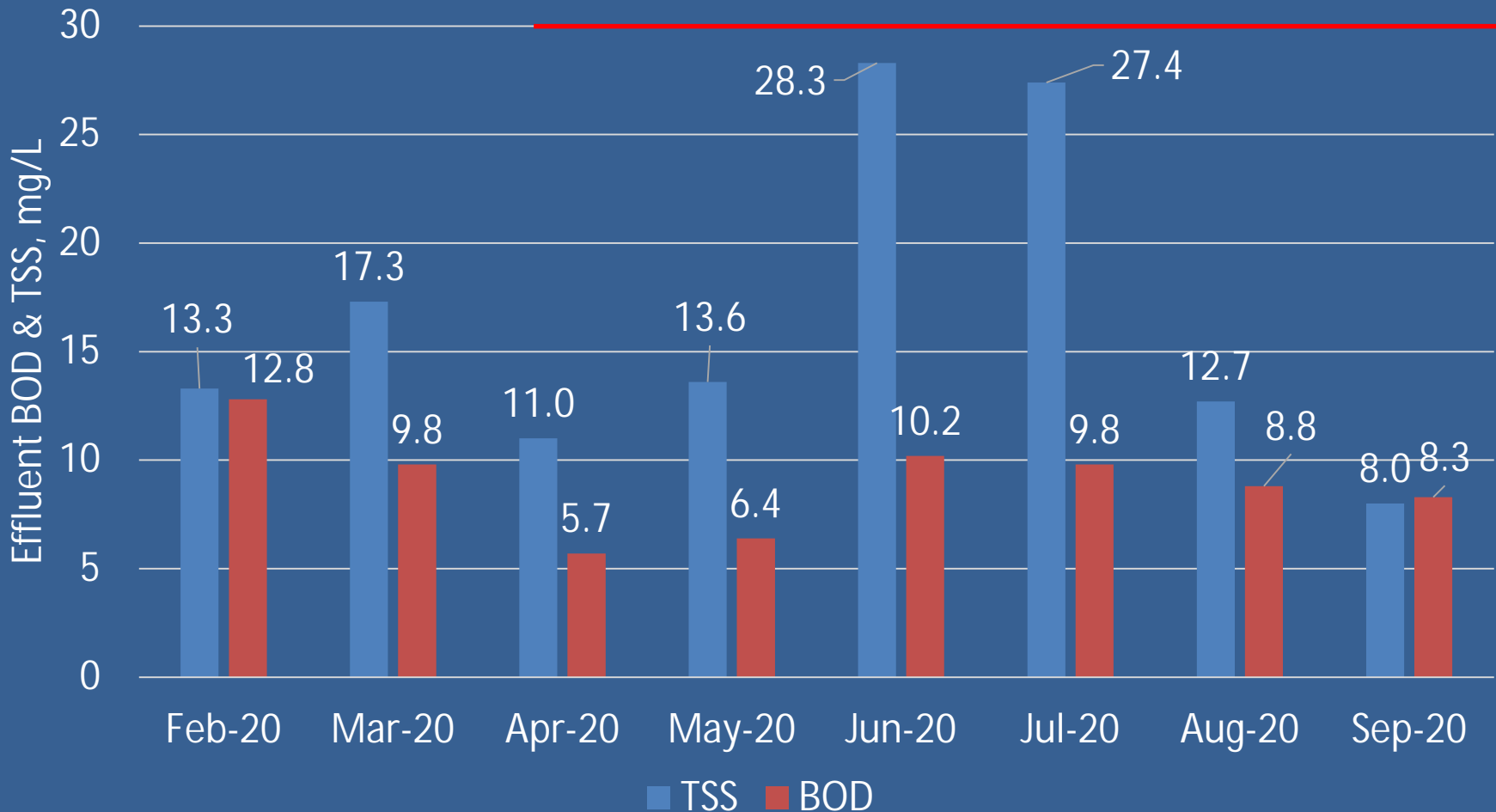


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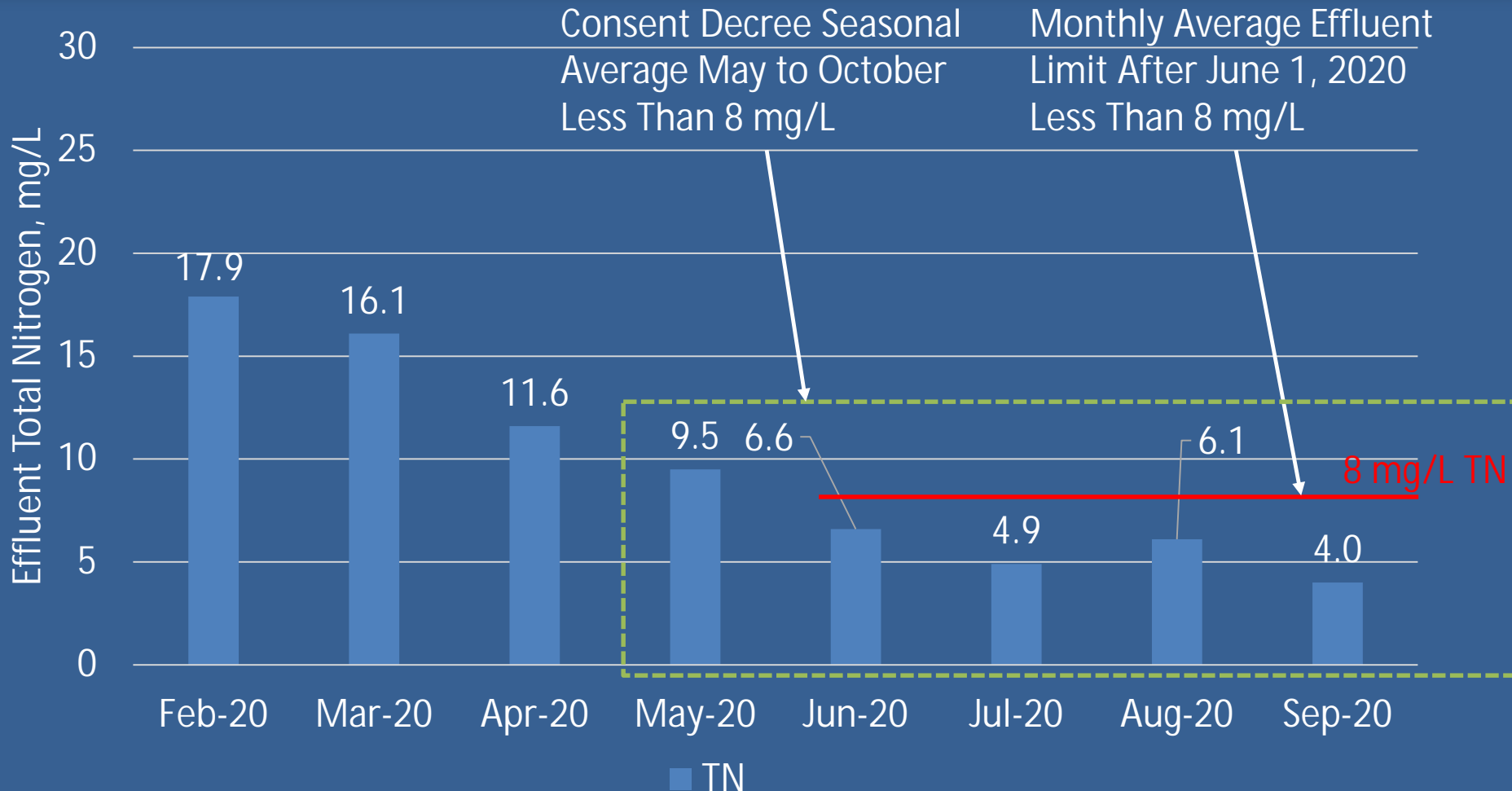
# Effluent Results

2007 NPDES Permit Monthly Average Effluent Limit After April 1, 2020





# Nitrogen Effluent Results



# Project Schedule

Milestone	Date	Status
Execute Contract to Construct Upgrades	September 1, 2016	Complete
Submit Two Additional Milestones for EPA Review and Approval	December 1, 2016	Complete
Additional Milestone 1: Transfer of the existing SCADA system to the new Headworks Building	November 21, 2017	Complete
Additional Milestone 2: Startup and testing of the Secondary Influent Pump Station in the new Solids Building	May 9, 2019	Complete
BAF Substantial Completion	<del>December 1, 2019</del> December 31, 2019	Complete
Achieve Compliance with 2007 NPDES Permit Limits	April 1, 2020	Complete
Achieve Compliance with Consent Decree Total Nitrogen Limits	June 1, 2020	Complete
Project Substantial Completion	<del>June 29, 2020</del> Tentatively Feb 13, 2021	In Progress
Project Final Completion	<del>September 29, 2020</del> Tentatively May 22, 2021	In Progress

# Total Project Costs \$91.9M

Item	Value In Million Dollars By Funding Source		
	\$10M Sewer Bond	\$81.9M Sewer SRF Loan	Water Fund
Primary Clarifier Replacement	\$1.565		
Peirce Island Bridge Improvements	\$0.511		
WWTF Design Engineering & Studies	\$5.212		
WWTF Construction Engineering	\$2.615	\$6.304	
WWTF Construction and Contingencies	\$0.097	\$75.296	\$0.347 Water Main Upgrade
WWTF Construction Mitigation and Public Art		\$0.300	
TOTAL	\$10.00	\$81.90	\$0.347

Construction  
Funding  
\$84.959



# Project Construction Costs To Completion

Item	Value in Million Dollars
Construction Funding	\$84.959
Construction Engineering	(\$8.919)
Construction Base Contract	(\$72.786)
Change Orders	(\$2.359)
Pending Change Orders	(\$0.440)
Balance Subtotal	\$0.455
<b>REMAINING WORK AND OTHER OBLIGATIONS</b>	
Public Art	(\$0.15)
Construction Mitigation	(\$0.15)
Balance Subtotal	\$0.155
Final Change Order	To Be Determined
Final Cost	To Be Determined



# Questions