

Chatham - Harwich Intermunicipal Agreement for Wastewater Collection and Treatment



Presentation to joint meeting of
Chatham and Harwich Boards of Selectmen
February 16, 2017

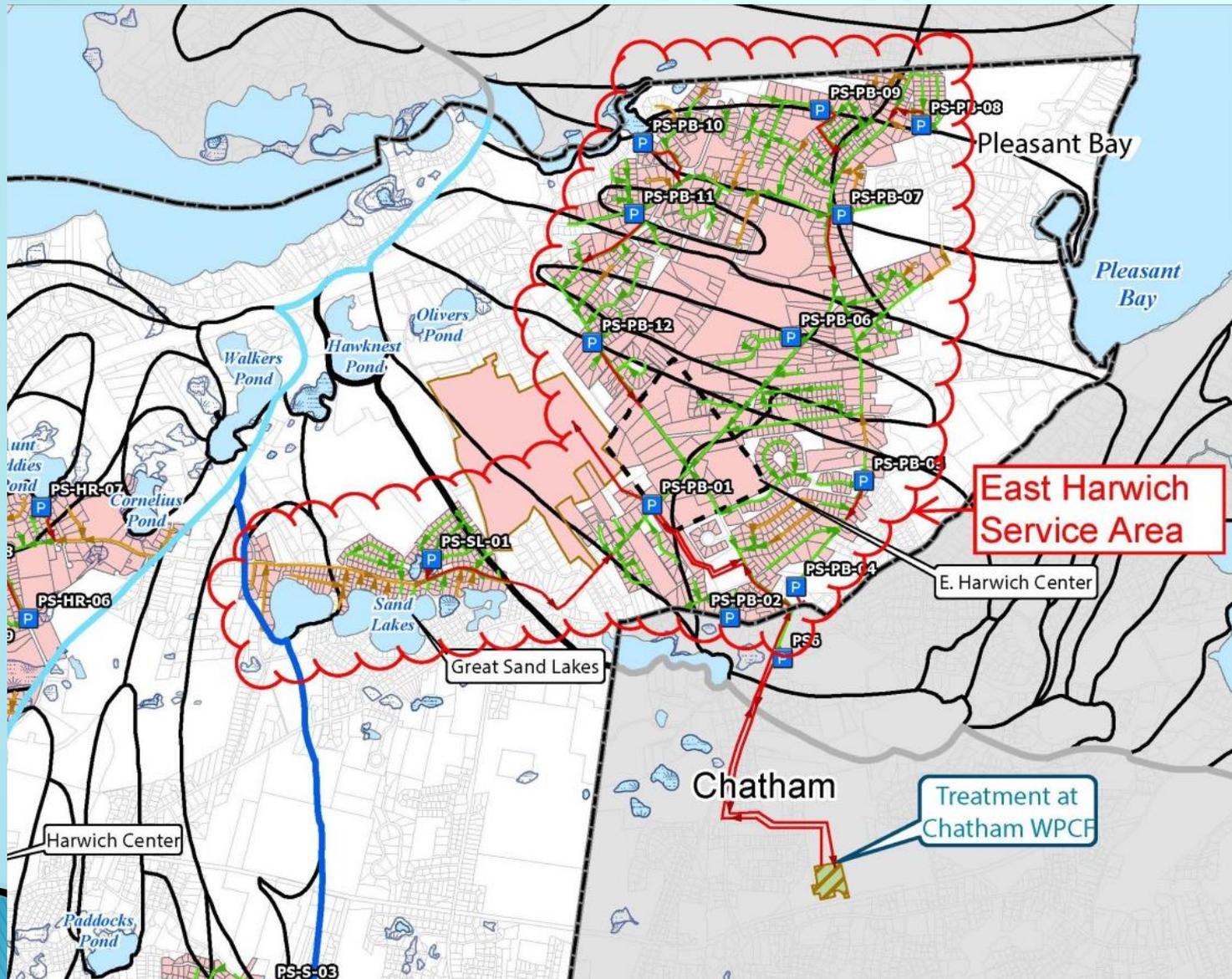
Why an Intermunicipal Agreement?

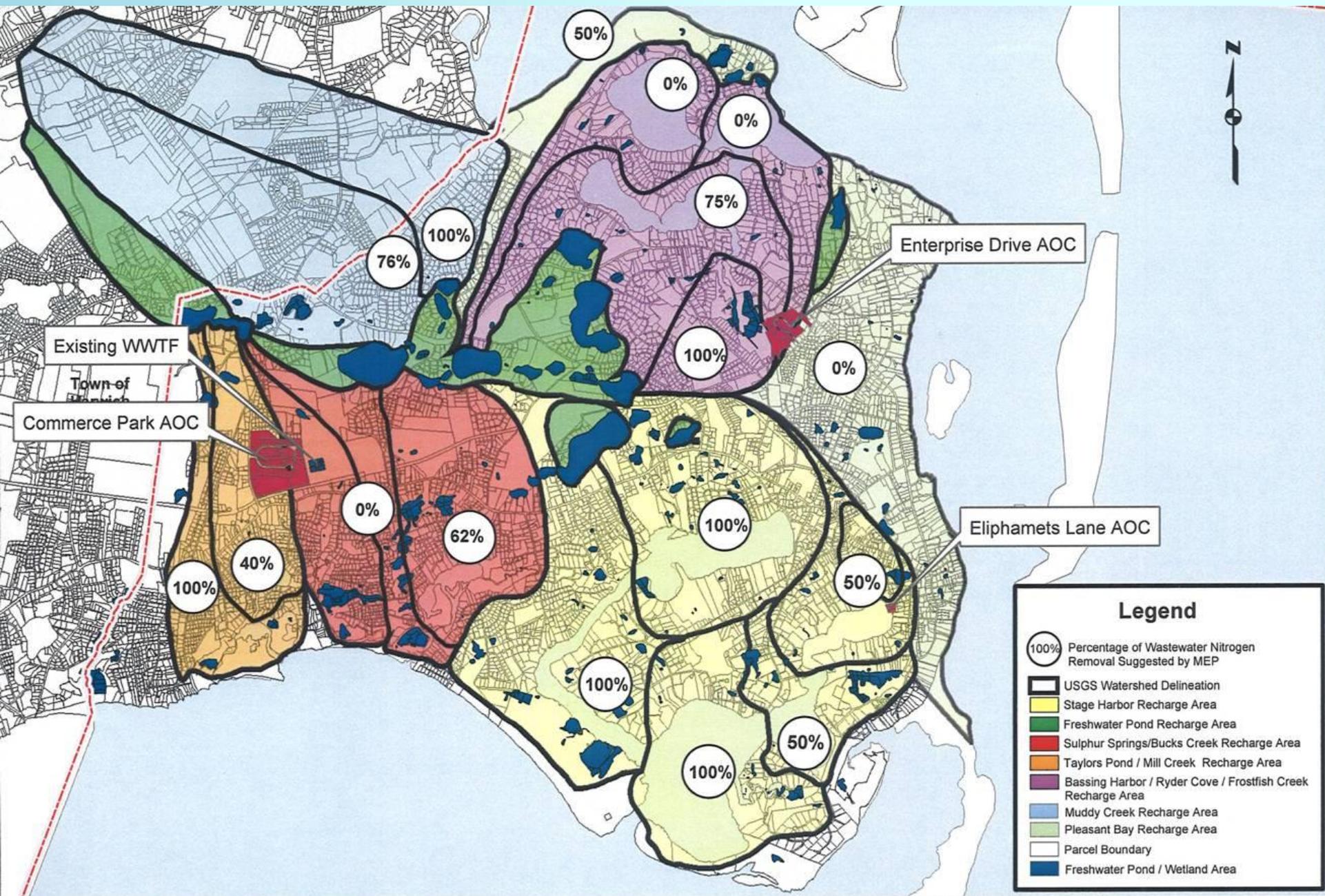
- ❖ Chatham offsets some Capital costs incurred in WPCF construction.
- ❖ Chatham offsets some O&M costs.
- ❖ Harwich avoids siting/construction of stand alone East Harwich Facility.
- ❖ Harwich minimizes Capital and Operation & Maintenance (O&M) costs.
- ❖ Enhanced protection to Chatham and Harwich Zone II's.
- ❖ Reduced Nutrient loading to shared waterbody, Pleasant Bay.

East Harwich Service Area

- ❖ Harwich flow is limited to:
 - Upper Muddy Creek sub-watershed
 - Lower Muddy Creek sub-watershed
 - Pleasant Bay sub-watershed
 - Round Cove sub-watershed
 - Great Sand Lakes Area (Chatham approval required)
- Average annual combined flow not to exceed 300,000 gpd

East Harwich Service Area





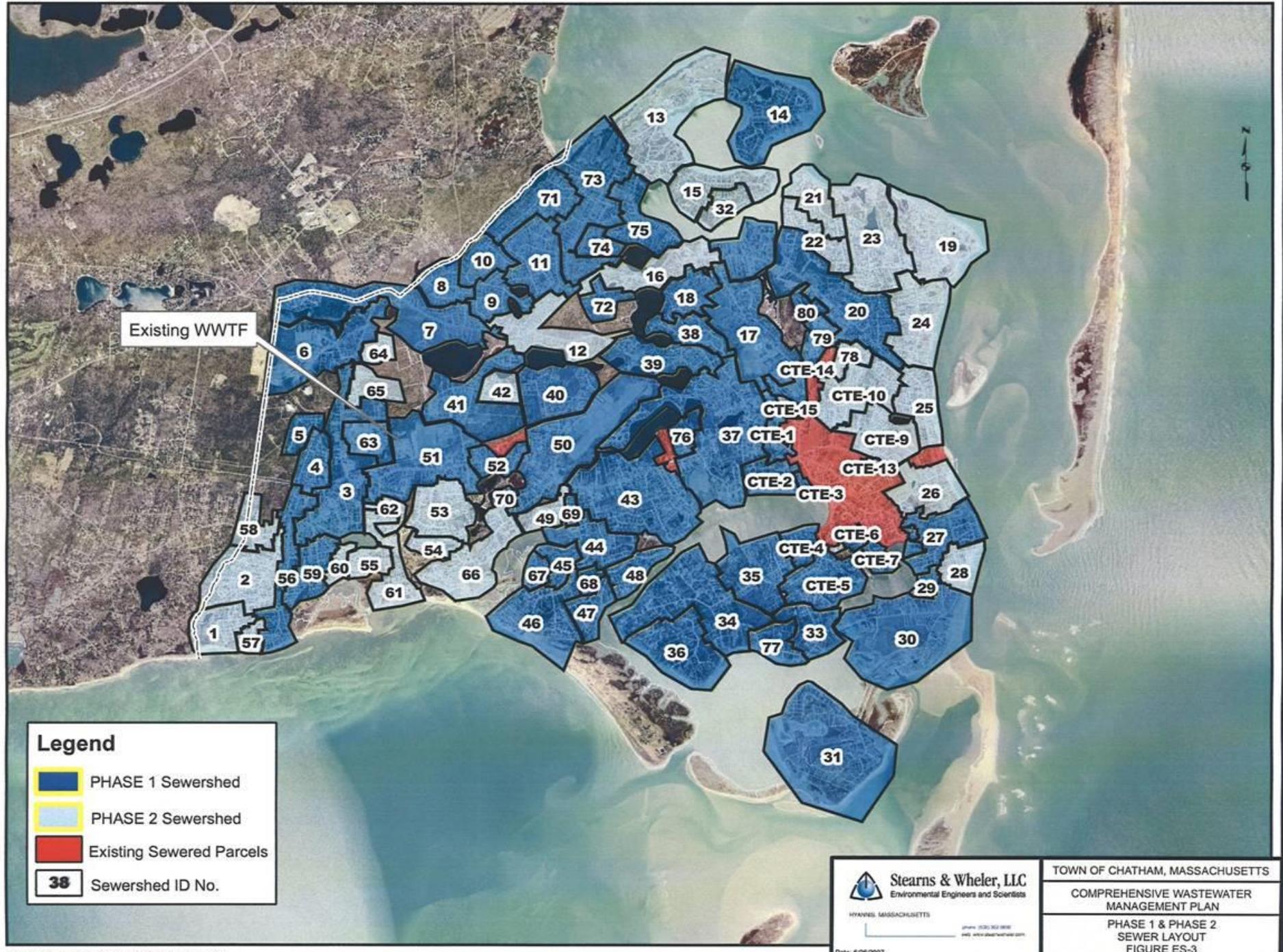
Legend

- 100% Percentage of Wastewater Nitrogen Removal Suggested by MEP
- USGS Watershed Delineation
- Stage Harbor Recharge Area
- Freshwater Pond Recharge Area
- Sulphur Springs/Bucks Creek Recharge Area
- Taylors Pond / Mill Creek Recharge Area
- Bassing Harbor / Ryder Cove / Frostfish Creek Recharge Area
- Muddy Creek Recharge Area
- Pleasant Bay Recharge Area
- Parcel Boundary
- Freshwater Pond / Wetland Area

Existing WWTF

Legend

- PHASE 1 Sewershed
- PHASE 2 Sewershed
- Existing Sewered Parcels
- 38** Sewershed ID No.



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TOWN OF CHATHAM, MASSACHUSETTS
COMPREHENSIVE WASTEWATER
MANAGEMENT PLAN
PHASE 1 & PHASE 2
SEWER LAYOUT
FIGURE ES-3

Capacity Purchase Fee

- ❖ Chatham WPCF Phase I Design Capacity – 1,300,000 gpd (average annual).
- ❖ East Harwich Service Area Projected Flow – 300,000 gpd (average annual).
- ❖ Harwich purchase equals 23.08% of current WPCF design capacity.
- ❖ Capacity Purchase Fee – determined as 23.08% of:
 - WPCF Project (Capital) Cost – net of grants.
 - Interest Costs – Year 2021–2045.

Capacity Purchase Fee

❖ Capacity Purchase Fee – calculated at \$6,765,000

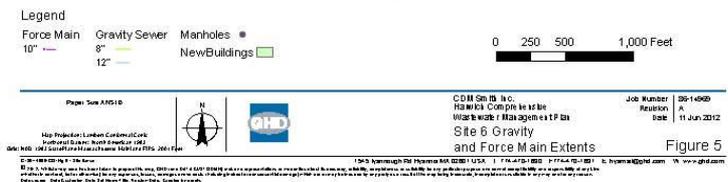
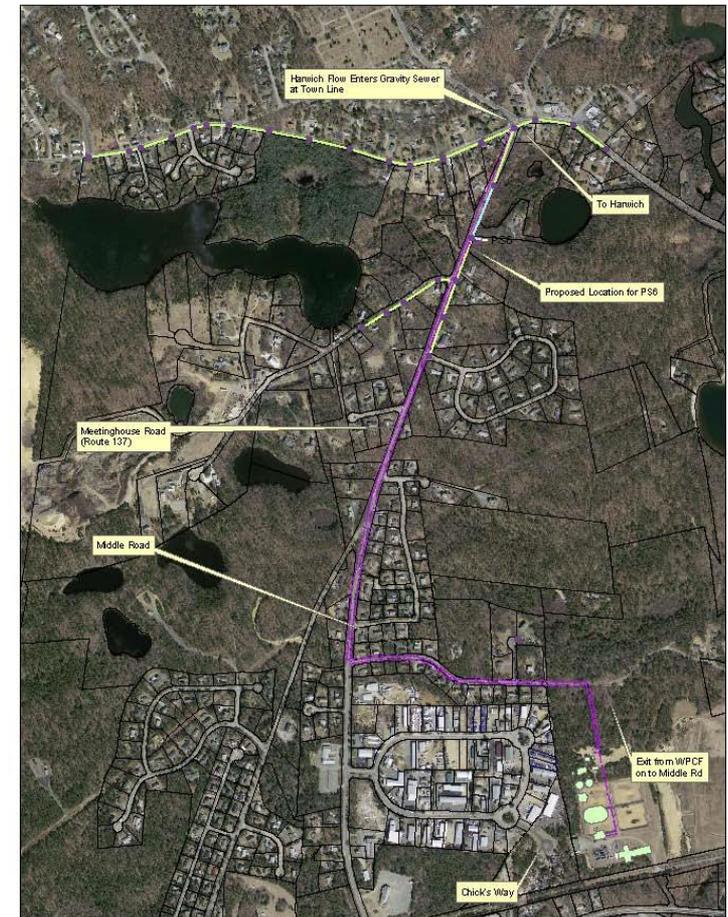
❖ Payments:

- Initial.... \$1.5M upon execution of Agreement.
- 2nd \$1.5M upon commencement of flow.
- 3rd \$1.5M upon flow over 50,000 gpd or five (5) years*.
- 4th \$1.5M upon flow over 150,000 gpd or seven (7) years*.
- Final..... \$765,000 upon flow over 250,000 or ten (10) years*.

(*whichever occurs sooner)

Collection System

- Harwich responsible for all work related to Connection Point, collection system within Harwich, and any future expansion or additions of the Connection Point needed to convey flow from Harwich.
- Harwich responsible for proportional share of costs necessary to convey wastewater from the Connection point to the WPCF.
- Harwich share based on ratio of Harwich design flow to Chatham design flow for that segment of collection system.



Operations & Maintenance Expenses (O&M)

Two types – Fixed and Flow Variable

WPCF

- ❖ Fixed O&M – 23.08% of fixed costs (Contract Services, plant maintenance, 20% of DPW Director salary, SCADA contracts, etc.).
 - Begins at time of Harwich connection.
- ❖ Flow Variable O&M – determined as % of flow from E. Harwich Service Area to Total Flow at WPCF (chemicals, electricity, natural gas, diesel, sludge removal/disposal, testing, etc.).
 - Begins once flow is measured at connection point.

Operations & Maintenance Expenses (O&M)

Collection System

- ❖ Fixed O&M – determined as % of Harwich design flow to Chatham design flow for conveyance system from Connection Point to WPCF.
 - Begins at time of Harwich connection.
- ❖ Flow Variable O&M – actual % of flow from E. Harwich Service Area to total flow measured at pump station 6 (chemicals, electricity, natural gas, diesel, testing, etc.).
 - Begins once flow is measured at connection point.

Term

❖ 25 years

- Remains in full-force on Expiration Date unless modified or notice provided to not renew.
- Non-renewal notice five (5) prior to Expiration date.
- Upon extension beyond 25 years:
 - Harwich not responsible for additional Capacity Purchase Fee.
 - Harwich remains responsible for share of O&M and projects.

Termination

- ❖ Only on or after tenth (10) anniversary of Agreement.
- ❖ Five (5) years notice required.
- ❖ Harwich responsible for paying all amounts due (O&M, etc.).
- ❖ If Chatham terminates Agreement, Chatham shall pay Harwich unamortized portion of Capacity Purchase fee remaining on termination date.

Flow Management Plan

- ❖ When Harwich flows at the connection point exceeds 80 % of purchased capacity for a 3 month period, Harwich shall present to Chatham a plan to:
 - Define measures to limit flow connections.
 - Define measure to reduce existing flows.
 - Discuss potential expansion options at Chatham WPCF.
 - Take any other appropriate action to enforce capacity allocation.

Miscellaneous

❖ Effluent Recharge

- Initially at Chatham.
- Upon reaching 80% of permitted capacity Chatham shall notify Harwich.
- Harwich, at sole cost and expense, shall construct, maintain, and repair necessary infrastructure to redirect treated effluent to Harwich for recharge within 3 years of said notice.

❖ Septage

- Accepted from properties in East Harwich Service Area upon abandonment of septic system/connection to sewer.

❖ Flow Buy Back

- Flow not used by Harwich can be bought back by Chatham.

Miscellaneous – cont.

❖ Regulations

- Harwich will adopt sewer use regulations no less stringent and as broad in scope as Chatham.

❖ Advisory Board

- Five (5) members
 - Three (3) from Chatham; Two (2) from Harwich.
 - Meet quarterly.
 - Make recommendations to Chatham on proposed improvements or other modifications to the System.

Timeline (anticipated)

❖ 2017

- ❖ IMA and funding request to Annual Town Meetings.
- ❖ Towns submit (joint) Project Evaluation Form (PEF) to MADEP State Revolving Fund (SRF).

❖ 2017 – 2019

- ❖ Design and Bidding.

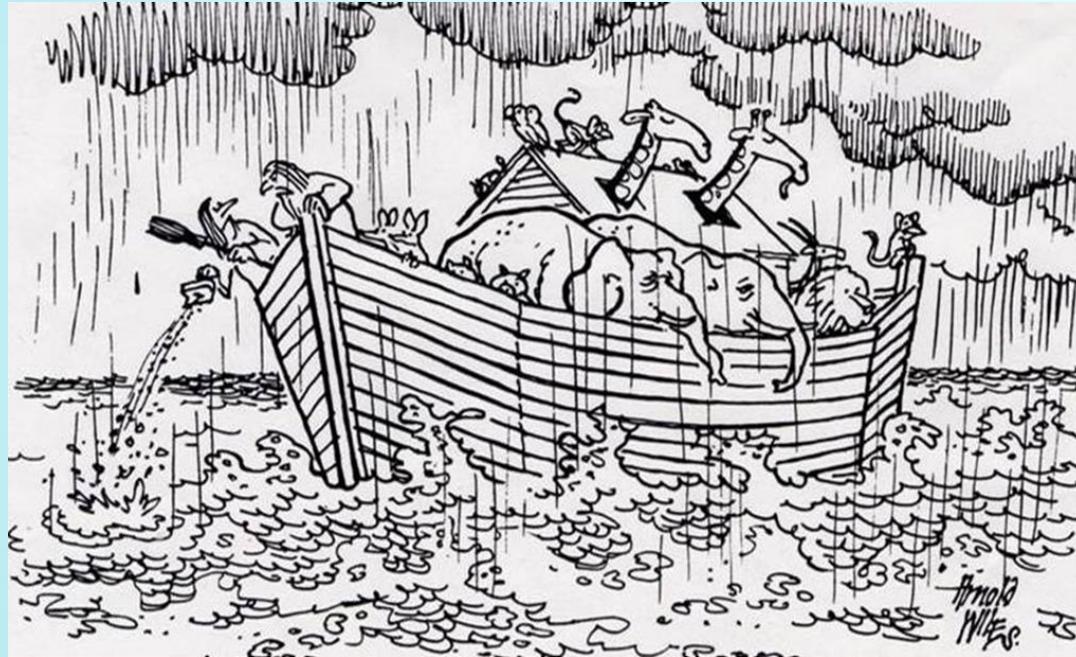
❖ 2019 – 2021

- ❖ Construction.

❖ 2021

- ❖ Begin property connections.

Questions?



“How many times must I tell you, the sea is not one vast, inexhaustible refuse dump.”

For more information visit the following websites:

<http://www.chatham-ma.gov/comprehensive-wastewaternutrient-management-plan>

<http://www.harwich-ma.gov/wastewater-implementation-committee/webforms/cwmphandbookvoter-info>