

February 27, 2020

# Dennis, Harwich, and Yarmouth DHY Clean Waters Community Partnership

**CDM  
Smith**



# Presentation Agenda

- Introductions & Welcome
- Overview of DHY
- Presentation on State Revolving Fund (SRF) Loan Program
- Third Party Review Findings
- Three Town Boards of Selectmen Discuss DHY
- Schedule and Potential Next Steps
- Questions and Comments

# Introduction - Tonight's Objectives

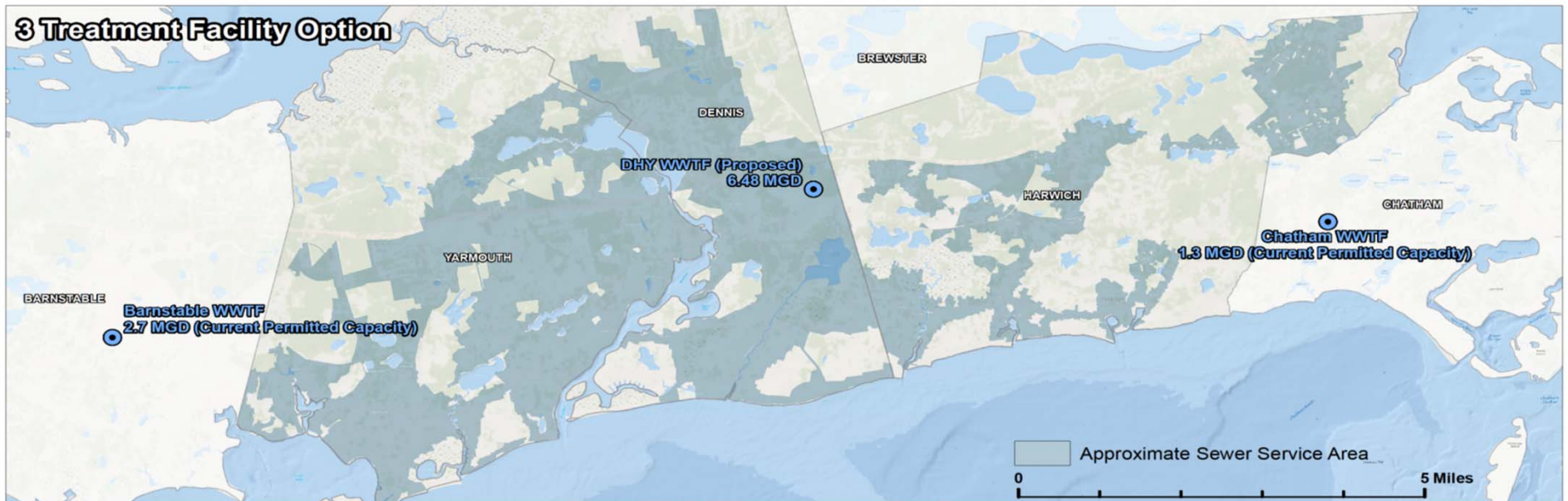
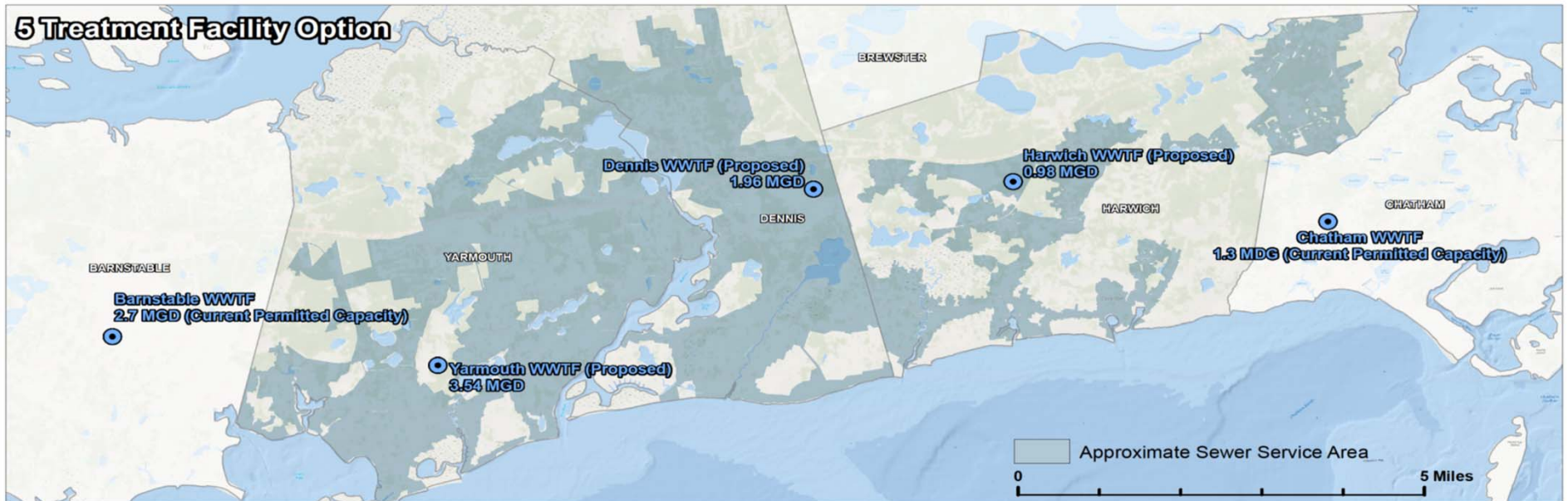
- Update on DHY Partnership
- Overview of SRF Loan Program
- Results of 3<sup>rd</sup> Party Agreement & Project Cost Estimates Review
- Select Board discussions on DHY agreement
- Schedule and determine next steps going forward

# DHY Clean Waters Partnership Subgroup

- Dennis
  - Tom Andrade
  - Diane Chamberlain
  - David Johansen
  - Paul McCormick
  - Elizabeth Sullivan
  - John Terrio
- Harwich
  - Larry Ballantine
  - Don Howell
  - Dan Pelletier
  - Joseph Powers
  - Griffin Ryder
- Yarmouth
  - Rich Bienvenue
  - Jeff Colby
  - Mark Forest
  - Daniel Knapik
  - Curt Sears
- Facilitator
  - CDM Smith



# Why DHY Makes Sense



# DHY Clean Waters Community Partnership - Status

- DHY Subgroup formed - June, 2017
- Special Legislation signed by the Governor— October 11, 2019
- Town Meetings to address DHY Agreement – April/May, 2020.

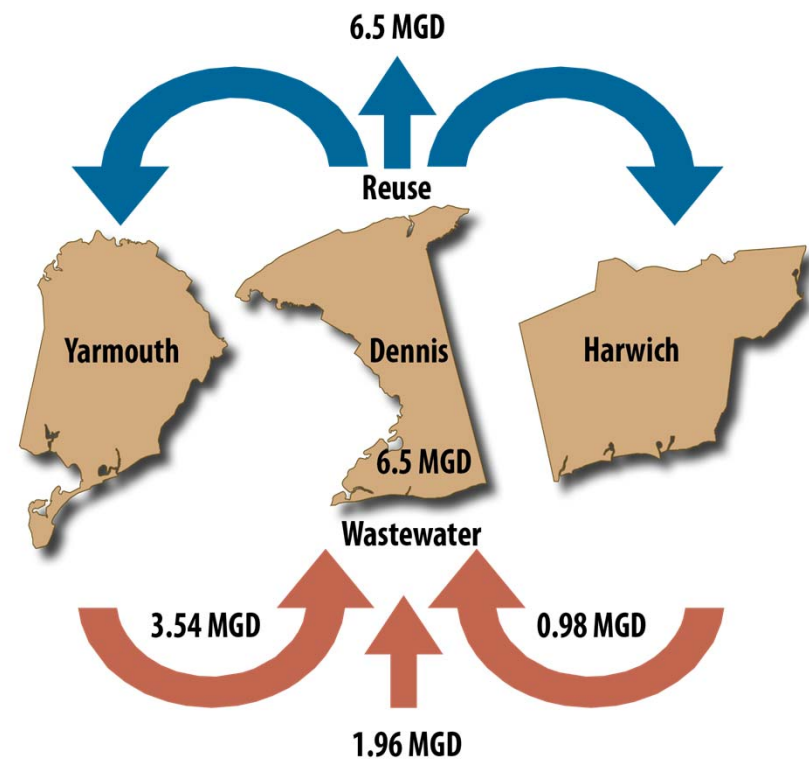
# Overview of DHY Partnership

- DHY Working Group Members: Town Administrators, Representative from Board of Selectmen, and designated staff from all three towns;
- Three State grants obtained for these discussions and evaluations; and
- Website developed: [www.dhycleanwaters.org](http://www.dhycleanwaters.org)
  - Overview
  - Special Legislation
  - Draft Agreement
  - Meeting Minutes
  - Presentations

# Estimated Wastewater Flow by Town

	Wastewater Flow at Buildout	% of DHY WWTF
Dennis	1.96 MGD	30%
Harwich	0.98 MGD	15%
Yarmouth	3.54 MGD	55%
Total	6.5 MGD	

Community Partnership – Dennis, Harwich, and Yarmouth



MGD – million gallons per day

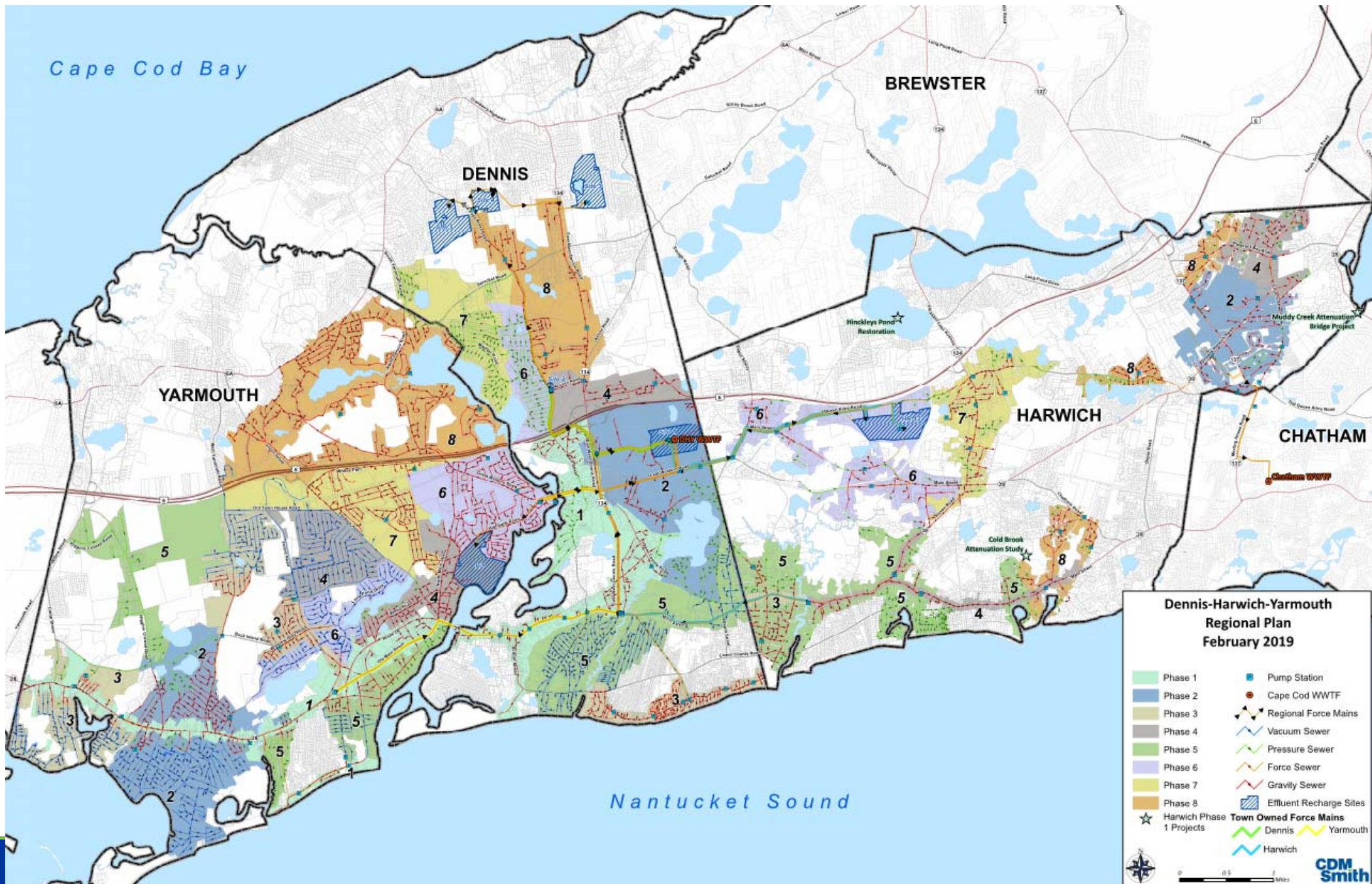


# Estimated Savings

Community	Equivalent Annual Savings
Dennis	36%
Harwich	38%
Yarmouth	33%
Overall	35%

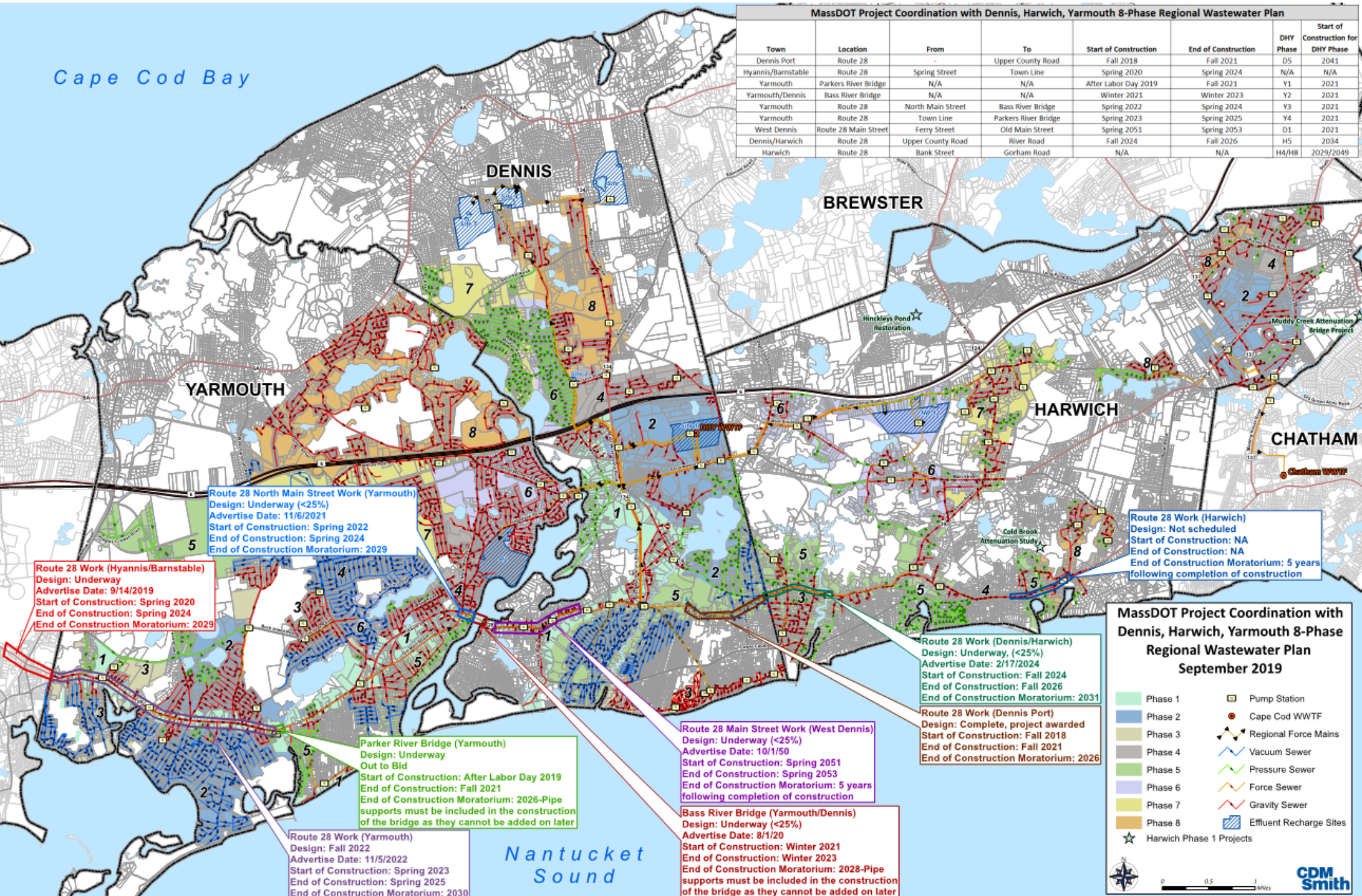
- Combined savings of capital and annual operating costs
  - Availability of Labor & contractors
  - Material & equipment needs
  - Potential SRF financing benefit
- Improved treatment with consistent year-round flow

# DHY Community Partnership - Wastewater





# Coordination with MassDOT Projects



# State Revolving Fund (SRF) Loan Program

# Third Party Review Findings



# Selectmen Discussions





# Schedule and Potential Next Steps

- Subgroup meetings continue to be held monthly.
- Town Engineers to meet with W&S and CDM to resolve any review issues
- Communities continue to conduct informational meetings using DHY facilitator.
- February – March 2020: Selectmen endorse DHY Agreement.
- April - May 2020: Each community votes to approve DHY Agreement at Town Meeting and potential funding for first phase of design.
- June/July 2020: Communities submit Final CWMP/Notice of Project Change to MEPA Office.

## Schedule and Potential Next Steps (Cont'd)

- June/July 2020: Towns' to procure OPM services
- June/July 2020: Communities appoint DHY Commissioners.
- Summer 2020: Access to \$1,000,000 Environmental Bond Bill.
- Summer 2020: DHY Commissioners select an Executive Director.
- Communities confirm initial flow commitments.
- DHY to procure OPM services prior to engineering/design
- Two-year design followed by three years of construction/connections. (Begin operation 2025)

# Closing Remarks

- Website developed: [www.dhycleanwaters.org](http://www.dhycleanwaters.org)



# Overview of DHY Partnership Costs

Cost projected to Year 2022

# DHY Shared Infrastructure Costs and Savings

DHY Shared Conveyance, WWTF, and Effluent Recharge Cost Comparison	Capital Costs		O&M Costs		Equivalent Annual Costs (EAC)		Annual Savings	
	Town	Regional	Town	Regional	Town	Regional	\$ / year	%
Dennis	\$90 M	\$64 M	\$4.5 M	\$2.6 M	\$8.5 M	\$5.5 M	\$3.0 M	36%
Harwich	\$67 M	\$34 M	\$2.1 M	\$1.6 M	\$5.1 M	\$3.1 M	\$2.0 M	38%
Yarmouth	\$132 M	\$115 M	\$8.9 M	\$4.8 M	\$14.8 M	\$9.9 M	\$4.8 M	33%
<b>Total</b>	<b>\$289 M</b>	<b>\$213 M</b>	<b>\$15.5 M</b>	<b>\$9.0 M</b>	<b>\$28.4 M</b>	<b>\$18.5 M</b>	<b>\$9.8 M</b>	<b>35%</b>

\*EAC assumes 30 year loan at 2% interest

<b>Dennis</b>	<b>Capital Costs</b>		<b>O&amp;M Costs</b>		<b>Equivalent Annual Costs (EAC)</b>		<b>Annual Savings</b>
	<b>Town</b>	<b>Regional</b>	<b>Town</b>	<b>Regional</b>	<b>Town</b>	<b>Regional</b>	<b>\$ / year</b>
Collection System	\$213.2 M	\$208 M	\$2.5 M	\$2.4 M	\$12.0 M	\$11.7 M	\$0.26M
Shared Conveyance to WWTF	\$0.0 M	\$5 M	\$0 M	\$0.1 M	\$0.0 M	\$0.3 M	-\$0.3M
WWTF	\$65.0 M	\$45 M	\$4.3 M	\$2.3 M	\$7.2 M	\$4.3 M	\$2.9 M
Effluent Recharge with PRB	\$24.6 M	\$15 M	\$0.2 M	\$0.2 M	\$1.3 M	\$0.8 M	\$0.5 M
Non-Traditional Technologies	\$9.7 M	\$9.7 M	\$86,400	\$86,400	\$519,594	\$519,594	\$0
<b>Total</b>	<b>\$313 M</b>	<b>\$281 M</b>	<b>\$7.1 M</b>	<b>\$5.2 M</b>	<b>\$21.1 M</b>	<b>\$17.8 M</b>	<b>\$3.3 M</b>



<b>Harwich</b>	<b>Capital Costs</b>		<b>O&amp;M Costs</b>		<b>Equivalent Annual Costs (EAC)</b>		<b>Annual Savings</b>
	<b>Town</b>	<b>Regional</b>	<b>Town</b>	<b>Regional</b>	<b>Town</b>	<b>Regional</b>	<b>\$ / year</b>
Collection System	\$236.8 M	\$248 M	\$2.4 M	\$3.0 M	\$13.0 M	\$14.1 M	-\$1.1 M
Shared Conveyance to WWTF	\$0.0 M	\$2 M	\$0.0 M	\$0.01 M	\$0.0 M	\$0.1 M	-\$0.1 M
WWTF	\$67.3 M	\$29 M	\$2.0 M	\$1.4 M	\$5.0 M	\$2.7 M	\$2.2 M
Effluent Recharge with PRB	\$6.8 M	\$9.3 M	\$0.1 M	\$0.2 M	\$0.4 M	\$0.6 M	-\$0.2 M
Non-Traditional Technologies	\$4.4 M	\$4.4 M	\$0.1 M	\$0.1 M	\$0.3 M	\$0.3 M	\$0
<b>Total</b>	<b>\$315 M</b>	<b>\$293 M</b>	<b>\$4.6 M</b>	<b>\$4.7 M</b>	<b>\$18.6 M</b>	<b>\$17.8 M</b>	<b>\$0.8 M</b>

<b>Yarmouth</b>	<b>Capital Costs</b>		<b>O&amp;M Costs</b>		<b>Equivalent Annual Costs (EAC)</b>		<b>Annual Savings</b>
	<b>Town</b>	<b>Regional</b>	<b>Town</b>	<b>Regional</b>	<b>Town</b>	<b>Regional</b>	<b>\$ / year</b>
Collection System	\$324 M	\$334 M	\$3.7 M	\$3.7 M	\$18.2 M	\$18.6 M	-\$0.5M
Shared Conveyance to WWTF	\$0 M	\$8 M	\$0.0 M	\$0.2 M	\$0.0 M	\$0.6 M	-\$0.6M
WWTF	\$105 M	\$81 M	\$8.6 M	\$4.2 M	\$13.3 M	\$7.8 M	\$5.5 M
Effluent Recharge with PRB	\$26 M	\$26 M	\$0.3 M	\$0.3 M	\$1.4 M	\$1.5 M	-\$0.04M
Non-Traditional Technologies	\$224,000	\$224,000	\$11,400	\$11,400	\$21,402	\$21,402	\$0
<b>Total</b>	<b>\$456 M</b>	<b>\$450 M</b>	<b>\$12.6 M</b>	<b>\$8.5 M</b>	<b>\$33.0 M</b>	<b>\$28.6 M</b>	<b>\$4.4 M</b>

# Overall Wastewater Program Costs: Together vs. Alone

Wastewater Program Cost Comparisons	Capital Costs		O&M Costs		Equivalent Annual Costs (EAC)		Annual Savings	
	Town	Regional	Town	Regional	Town	Regional	\$ / year	%
Dennis	\$313 M	\$281 M	\$7.1 M	\$5.2 M	\$21.1 M	\$17.8 M	\$3.3 M	16
Harwich	\$315 M	\$293 M	\$4.6 M	\$4.7 M	\$18.6 M	\$17.8 M	\$0.8 M	4
Yarmouth	\$456 M	\$450 M	\$12.6 M	\$8.5 M	\$33.0 M	\$28.6 M	\$4.4 M	13
<b>Total</b>	<b>\$1084 M</b>	<b>\$1025 M</b>	<b>\$24.3 M</b>	<b>\$18.4 M</b>	<b>\$72.7 M</b>	<b>\$64.1 M</b>	<b>\$8.6 M</b>	<b>12</b>