

South Shore Site Readiness Study South Shore Chamber Presentation

09/30/2021

Zoom meeting protocols

- Participants cannot unmute audio to avoid audio issues
- During question or comment periods, if you have a question or comment, please raise your hand and you will be recognized and asked to unmute yourself
- Please also use the chat function to ask questions or post comments
- If available, please turn your video on

Meeting agenda

1. Welcome and introduction

Renee McInnes, Chair of the South Shore Chamber of Commerce
Peter Tedeschi, Chair of the South Shore Economic Development Corp.
Peter Forman, President & CEO, South Shore Chamber of Commerce

2. Site Readiness Program context

Amanda Gregoire, VP Real Estate Services, MassDevelopment

3. Introduction to this study

Martin Pillsbury, Director of Environmental Planning, MAPC
Josh Fiala, Principal Planner, MAPC

4. Observations and conclusions

Laurie Toscano, Team Leader, Weston & Sampson
Tara McManus, Team Leader, Weston & Sampson

5. Questions and comments

1. Welcome and introduction

Renee McInnes

Chair, South Shore Chamber of Commerce

1. Welcome and introduction

Peter Tedeschi

Chair, South Shore Economic Development Corp.

1. Welcome and introduction

Peter Forman

President & CEO, South Shore Chamber of Commerce

2. Site Readiness Program context

Amanda Gregoire

VP Real Estate Services, MassDevelopment

3. Introduction to this study

Martin Pillsbury

Director of Environmental Planning, MAPC

Josh Fiala AICP AIA LEED AP

Principal Planner, MAPC

South Shore Site Readiness Study

Study partners



Study process

Core team members:

Peter Forman, President & CEO, South Shore Chamber of Commerce

Amanda Gregoire, VP Real Estate Services, MassDevelopment

Betsy Cowan Neptune, Former Chief of Economic Development, MAPC

Martin Pillsbury, Director of Environmental Planning, MAPC

Josh Fiala AICP AIA LEED AP, Principal Planner, MAPC

Tara McManus PE, Team Leader, Weston & Sampson

Laurie Toscano, Team Leader, Weston & Sampson

Gabe Crocker, Crocker Design Group

Thomas Berkley, Senior VP Development and Operations, Union Point
Development Company

South Shore Site Readiness Study

Study funding

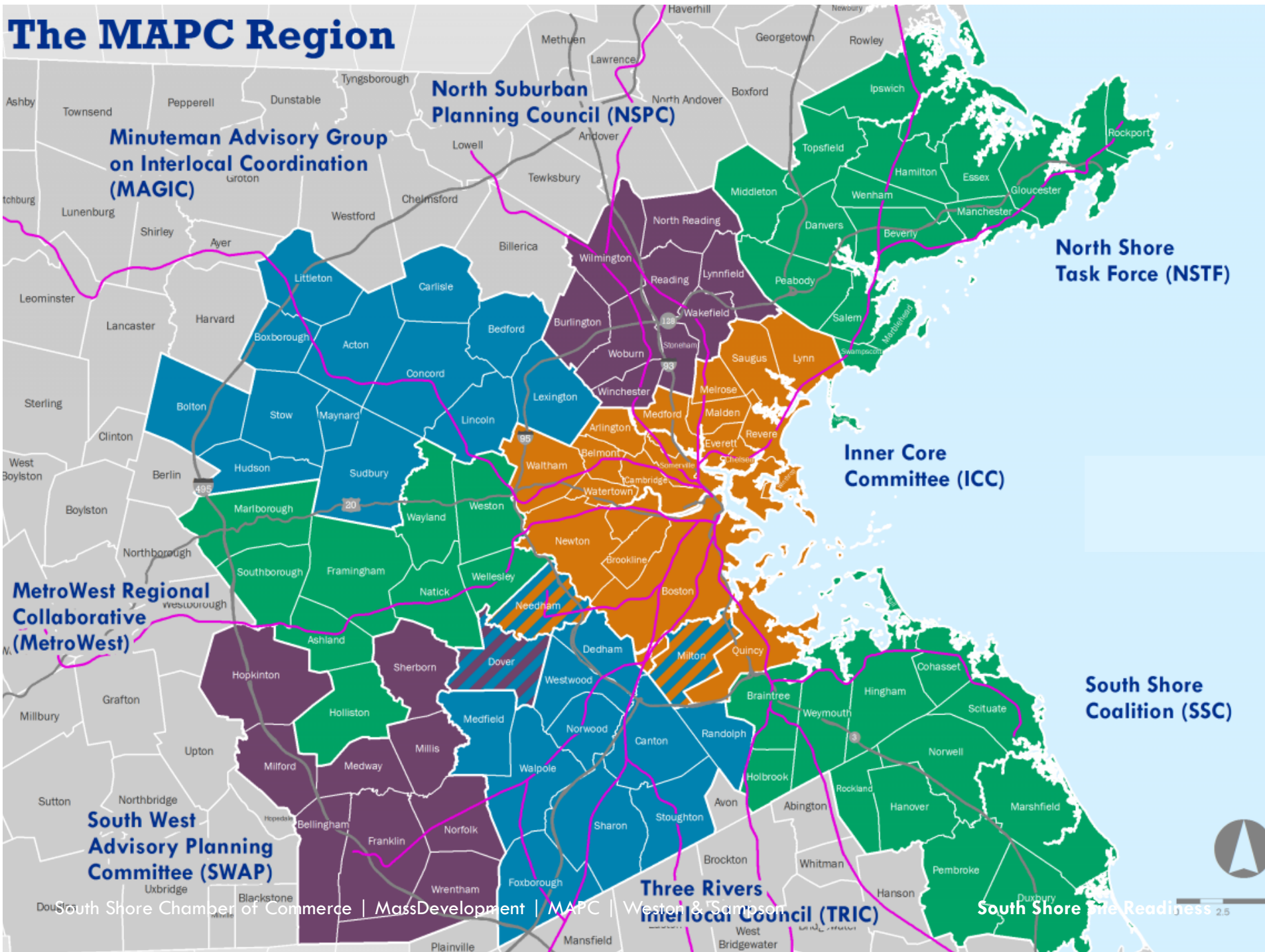
Funding generously provided by:

MassDevelopment Site Readiness Program Grant

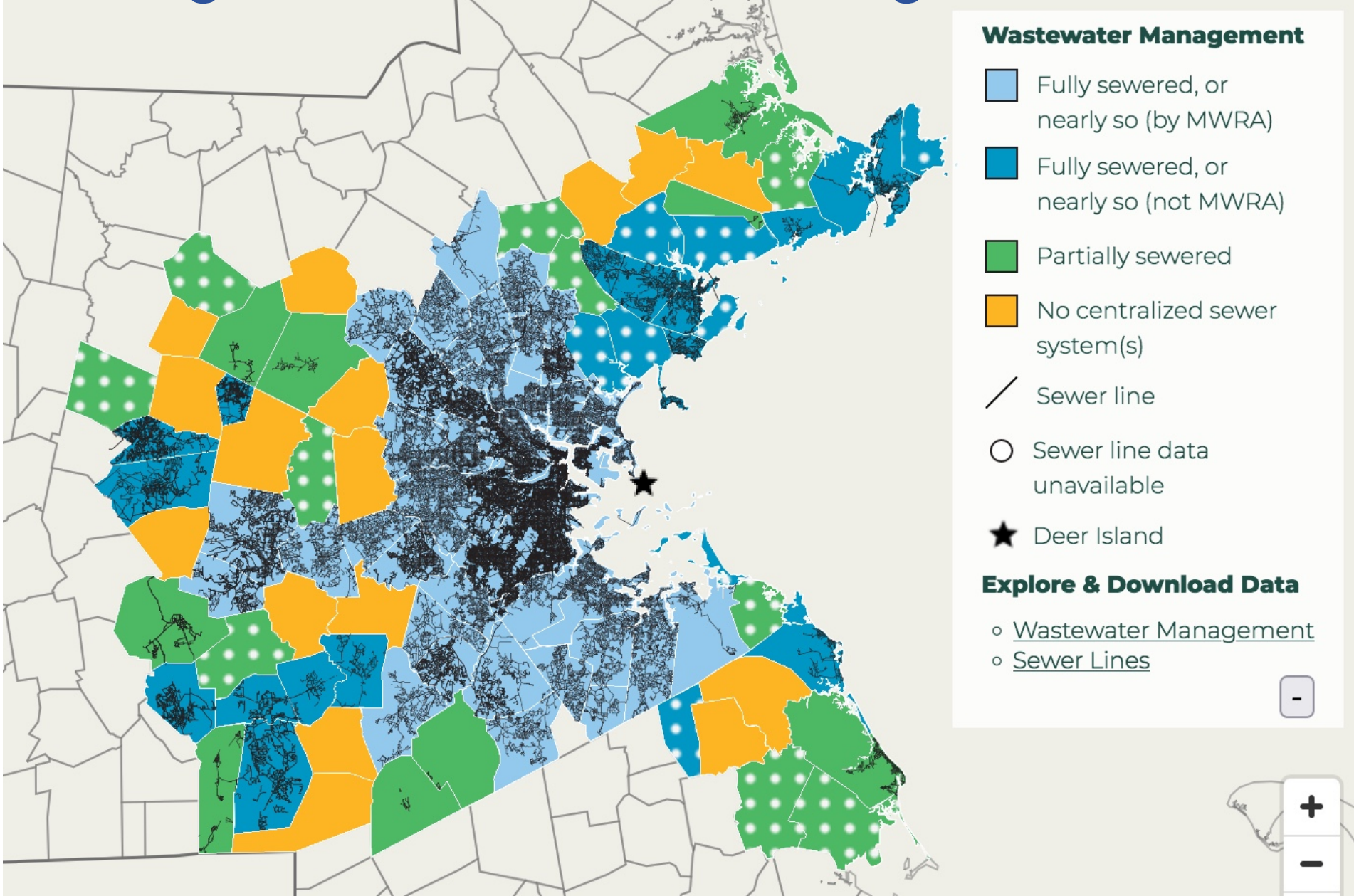
South Shore Economic Development Corporation, a subsidiary corporation of the South Shore Chamber of Commerce

Metropolitan Area Planning Council Technical Assistance

The MAPC Region



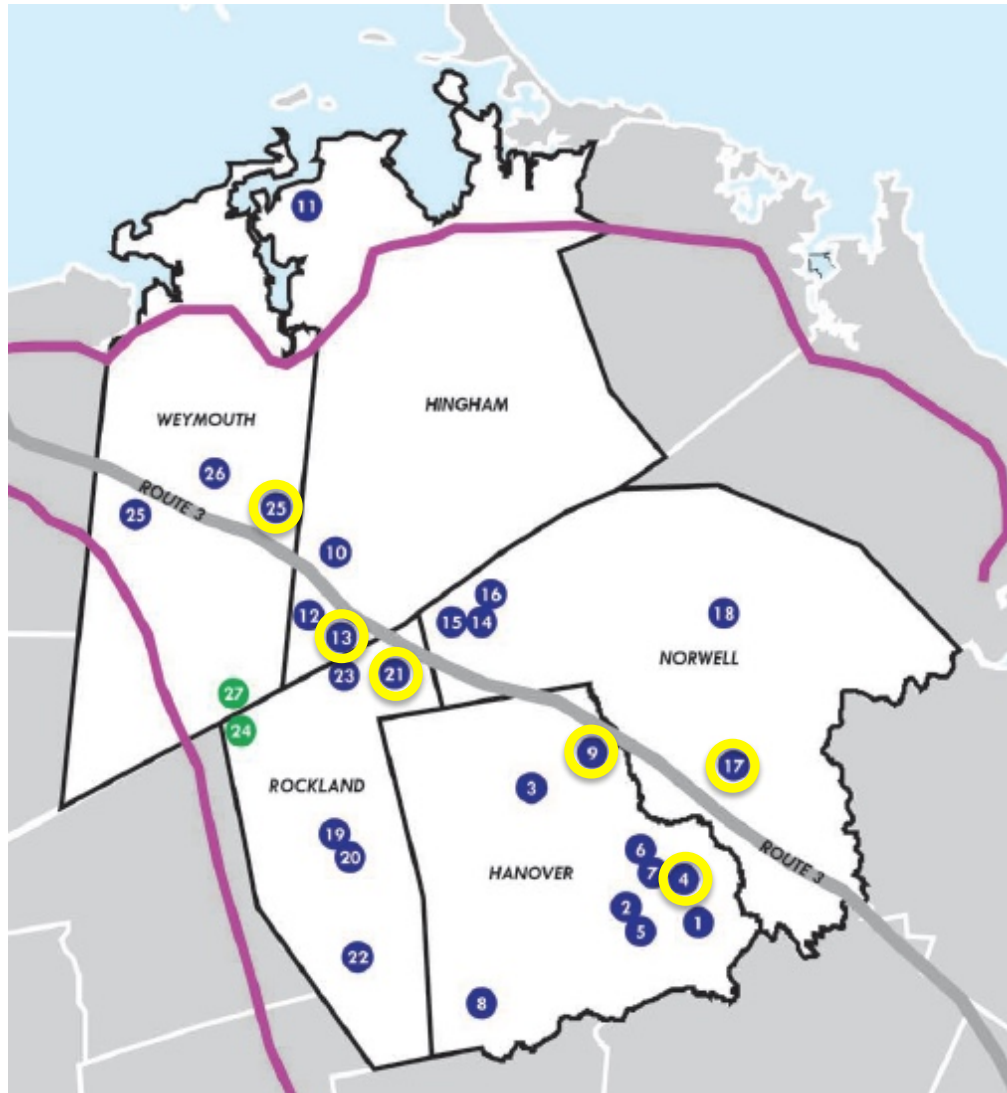
Regional Wastewater Management MAPC



Study overview and goals

- Explored water and wastewater constraints and opportunities in a corridor along Route 3 in the South Shore municipalities of Hanover, Hingham, Norwell, Rockland and Weymouth
- Analyzed six example properties in the municipalities with hypothetical build-out scenarios, water demand calculations, and wastewater capacity needs in order to ground truth more general observations
- Recommendations focus on the actions and potential partnerships that are necessary to encourage investments in water and wastewater infrastructure for a variety of future benefits including future growth
- The goals of this study were to:
 - Explore the water and wastewater infrastructure in the South Shore
 - Provide an analysis of the opportunities and constraints related to water supply and wastewater capacity

Study process – example properties



- (4) Cardinal Cushing rear property, Hanover
- (9) Unicorn Development property, Hanover
- (13) South Shore Park property, Hingham
- (17) Wildcat Lane property, Norwell
- (21) Land behind Home Depot, Rockland
- (25) Bristol Brothers property, Weymouth

4. Observations and conclusions

Tara McManus PE

Team Leader, Weston & Sampson

Laurie Toscano

Team Leader, Weston & Sampson

Existing Water Supply Conditions

- **Town of Hanover** – three groundwater treatment plants in the South Coastal Watershed with a combined Water Management Act (WMA) authorized daily annual average withdrawal of 1.38 million gallons per day (MGD)
- **Town of Hingham** – Weir River Water System also provides water to Hull, and North Cohasset with a single treatment plant in Hingham and sources located in the Boston Harbor Watershed with a combined WMA authorized daily annual average withdrawal volume of 3.51 MGD.
- **Town of Norwell** – two groundwater treatment plants with one in the South Coastal and one in the Boston Harbor Watersheds. The combined WMA authorized daily annual average withdrawal volume is 1.14 MGD.
- **Town of Rockland** – Abington & Rockland Joint Water Works with two surface water treatment plants in the South Coastal Watershed and a groundwater treatment plant in the Taunton watershed. The combined WMA authorized daily annual average withdrawal volume is 3.11 MGD.
- **Town of Weymouth** – two water treatment plants with groundwater and surface water sources in the Boston Harbor Watershed. The combined WMA authorized daily annual average withdrawal volume is 5.00 MGD.

South Shore Site Readiness Study

Water Supply Management Alternatives

Types of Water Management for South Shore Site Readiness Build-out Scenarios



MINIMAL BUILD-OUT

- Need to reserve an appropriate area to site individual wells on each property

INDIVIDUAL WELLS

- Typically, < 10,000 gpd
- Single Family or Multi Family Home
- Local control (BoH)
- Monitored & treated as needed by Owner

- > Norwell Scenarios 1 & 4
- > Assumed not applicable for others

Additional Assumptions

- Connection to an existing water system is preferred, if available.
- Assumes scenario's maximum development average daily flow unless N/A.
- Only new well/wellfields water sources are considered viable not surface water source
- Multi-family build-out refers to apartment style living (≥10 units/building therefore ≥25 people/building)
- Additional local town bylaws, planning & zoning ordinances, and/or conservation requirements may apply
- New source approval and land protection zone(s) required for Private PWS options; MEPA may be triggered depending on build-out/water use

PARCEL BUILD-OUT

- Need to reserve an appropriate area on parcel to site a well/wellfield
- New Source Approval Process (MA DEP)
- Typically, limited number of properties with limited commercial/industrial usage

PUBLIC WATER SUPPLIER / COMMUNITY OR NON-COMMUNITY

- ≥ 15 service connections or ≥ 25 people
- Typically, > 10,000 and < 100,000 gpd
- Property use-specific
- State Approval & Control (MA DEP)
- Source-specific treatment likely required

- > Hanover Cushing Scenarios 1, 2, 3 & 4
- > Hanover Unicorn Scenario 2, 3 & 4
- > Hingham Scenarios 1, 2 & 3
- > Rockland Scenarios 1 & 4
- > Weymouth Scenarios 1, 2 & 4

CLUSTER BUILD-OUT

- Connect to existing Public Water Supply is likely option – potentially supplement existing PWS source/treatment/piping
- Identifying a new source in the community > 100,000 gpd is very unlikely

PUBLIC WATER SUPPLIER

- Community-specific
- Existing PWS controlled and monitored by the State
- Local PWS connection fee
- Infrastructure improvements (treatment and/or distribution piping) likely required

- > Hanover Cushing Scenario 5
- > Hanover Unicorn Scenario 5 & 6
- > Hingham Scenarios 4 & 5
- > Weymouth Scenarios 3 & 4

Public Ownership

ALL BUILD-OUT

- Connect to MWRA – potentially create a localized Regional Water Supply across several communities

REGIONAL PUBLIC WATER SUPPLIER

- MWRA is an Existing Regional PWS
- MWRA connection fee & pipeline cost
- Region-specific (crossing community boundaries)
- State Approval & Control (MA DEP)
- Possibly create a localized Regional Water Supply of compatible water (quality and hydraulically) systems
- MWRA is in compliance with MassDEP's current PFAS regulation

- > Hanover Cushing Scenario 6
- > Hingham Scenario 6
- > Weymouth Scenario 6

Existing Wastewater Management Conditions

- **Town of Hanover** – no centralized wastewater management system, existing development relies predominantly on septic systems located on each property.
- **Town of Hingham** – two separate centralized wastewater management systems (sewer districts), the North Sewer District transmits flow to the Massachusetts Water Resources Authority (MWRA) and the Weir River Sewer District transmits flow to the Town of Hull wastewater treatment facility.
- **Town of Norwell** – no centralized wastewater management system, existing development relies predominantly on septic systems located on each property.
- **Town of Rockland** – currently has a centralized wastewater management system (sewer). The Rockland municipal sewer system transmits flow to the Rockland WWTF. The current permitted capacity is 2.5 MGD
- **Town of Weymouth** – currently a MWRA municipality and all wastewater is transmitted to the MWRA system through multiple connections throughout the City. Weymouth currently contributes approximately 8.48 MGD to the MWRA.

South Shore Site Readiness Study

Wastewater Management Alternatives

Types of Wastewater Management for South Shore Site Readiness Build-out Scenarios

Private Ownership

Private or Public Ownership

Public Ownership

MINIMAL BUILD-OUT

- Need to reserve areas on parcel for septic system
- Typically, one property owner

ONSITE SEPTIC SYSTEM

- $\leq 10,000$ gpd
- Local control (BoH)
- Limited treatment
- Monitored by Owner

➤ Norwell Scenarios 1 & 4

PARCEL BUILD-OUT

- Need to reserve areas on parcel for wastewater treatment plant (WWTP) and groundwater discharge (GWD)
- Typically, limited number of property owners

DE-CENTRALIZED WWTP'S with GWD's

- Typically, $> 10,000$ and $< 100,000$ gpd
- Property-specific
- State Control (MA DEP)
- Increased treatment
- Monitored by State Permit

➤ Hanover Cushing Scenarios 1, 2, 3 & 4
 ➤ Hanover Unicorn Scenario 2, 3 & 4
 ➤ Hingham Scenarios 1, 2, & 3
 ➤ Rockland Scenarios 1 & 4
 ➤ Weymouth Scenarios 1, 2, 3, 4, & 5

CLUSTER BUILD-OUT

- Need to reserve areas in vicinity for wastewater treatment facility (WWTF) and groundwater discharge (GWD)
- Typically, many property owners

CENTRALIZED/COMMUNITY WWTF

- Typically, $> 100,000$ gpd
- Community-specific (may serve portions of adjacent communities)
- If GWD, State Control (MA DEP)
- If SWD, Federal Control (US EPA)
- Increased treatment
- Monitored by State/Federal Permit

➤ Hanover Cushing Scenarios 5 & 6
 ➤ Hanover Unicorn Scenarios 5 & 6
 ➤ Hingham Scenarios 4, 5 & 6
 ➤ Weymouth Scenario 6

ALL BUILD-OUT

- Multi-community Centralized WWTF and GWD
- Typically, Intermunicipal (or other entity) Agreements required

REGIONAL/MULTI-COMMUNITY WWTF

- MWRA is an Existing Regional WWTF with limited wastewater capacity remaining
- Similar to Centralized WWTF option but across several communities
- Typically, $> 1,000,000$ gpd
- Region-specific (crossing community boundaries)
- If GWD, State Control (MA DEP)
- If SWD, Federal Control (US EPA)
- Increased treatment
- Monitored by State/Federal Permit

➤ Weymouth Scenarios may have a more feasible option to connect to the Existing MWRA Regional wastewater system, if system capacity constraints change

Additional Assumptions

- Connection to an existing wastewater system is preferred, if available.
- Assumes scenario's maximum development average daily flow unless N/A.
- Flow basis is regulatory for on-site systems, but typical for other options and based on per capita flows generated for this project.
- Additional local town bylaws, planning & zoning ordinances, and/or conservation requirements will apply.
- MEPA may be triggered depending on thresholds of specific project(s).

South Shore Site Readiness

Water and wastewater considerations

- **Cost benefit** – ascending water and wastewater solutions benefit public health and environmental protection
- **Inter-municipal** – neighboring municipalities have similar infrastructure limitations and may have more potential solutions working together
- **Public/private partnerships** – potential for private upfront capital investments and public operation and maintenance of systems
- **Private/private partnerships** – adjacent or nearby properties can share land resources depending water sources or effluent recharge areas
- **Regional collaboration** – inter-municipal partnerships for regional water collaboration, such as a connection to MWRA's water system and partnerships to convey water through other towns and agreements for connection fees and associated infrastructure improvements

Land use considerations

- **Smart growth and infrastructure** – improved infrastructure capacity enables the type of development envisioned by sub-regional documents such as South Shore 2030
- **Encouraging compact mixed-use development** – more high capacity and collaborative water and wastewater systems enable more sustainable models of development
- **Zoning as growth management** – if infrastructure limitations are reduced, proactive planning aligned with zoning becomes more important
- **Mutual and strategic investments** – leverage development projects to share infrastructure costs and benefits
- **Development review and assessment of infrastructure systems** – encourage analysis of infrastructure solutions, life-cycle costs, and increased collaboration through pre-development and development review processes

Next steps

- **Potential municipal actions**
 - Increased communication and coordination within municipal departments, commissions and leadership
 - Outreach and discussion about infrastructure challenges with members of the community
 - Expand inter-municipal coordination
- **Potential property owner actions**
 - Advocate for infrastructure investments
 - Explore partnerships with municipalities and other property owners
- **Potential Chamber or other stakeholder actions**
 - Convene partners and build collaboration
 - Government advocacy
 - Possible future studies
 - Identifying regional economic opportunities ties to infrastructure
 - Exploring how findings from this study might have broader implications to other communities

5. Questions and comments

Zoom meeting protocols

- During question or comment periods, if you have a question or comment, please raise your hand and you will be recognized and asked to unmute yourself
- Please also use the chat function to ask questions or post comments
- If available, please turn your video on