



Massachusetts Water Resources Authority

**Metropolitan Water Tunnel Program
Water Supply Citizens Advisory Committee**

Program Update

January 9, 2024



Metropolitan Water Tunnel Program





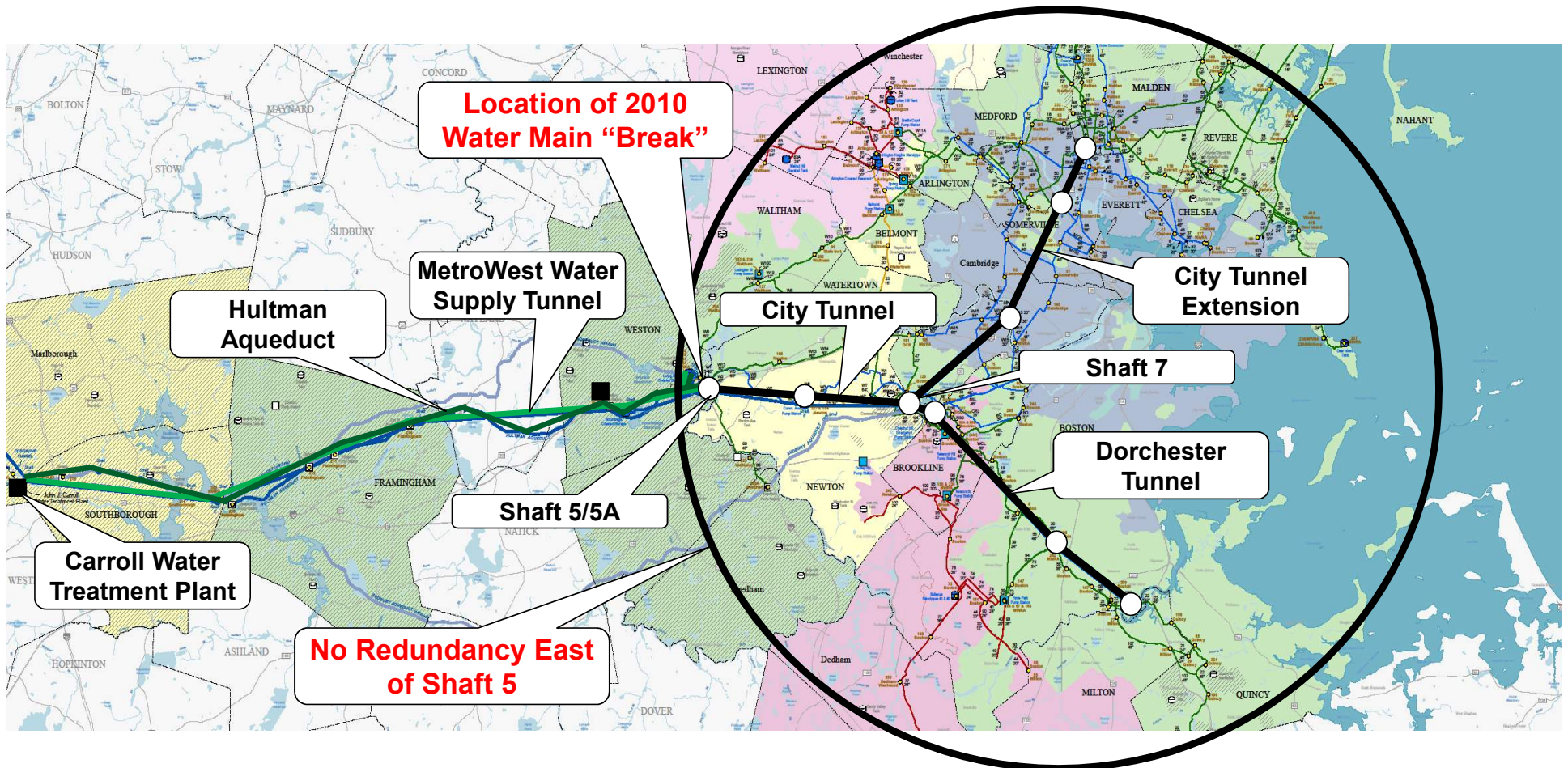
Agenda

- Metropolitan Water Tunnel Program Update
- MEPA Update
- Geotechnical Update
- Ongoing and Upcoming Work
- Thank You and Questions





Metropolitan Tunnel System Serves About 60 Percent of Water Demand in Metropolitan Area



For discussion only



Draft, Supplemental Draft, and Final Environmental Impact Report (DEIR, SDEIR, and FEIR)

- DEIR Submitted in October 2022
- SDEIR submitted in July 2023
 - SDEIR Certificate received September 2023
- Categories of Comments on SDEIR
 - Public Outreach/Engagement
 - Construction controls
 - Tree removal
 - Transportation
 - Stormwater management, flooding and climate change
 - Groundwater and Water Supply
 - Environmental Justice
- FEIR to be submitted in early 2024
 - Will include response to all comments

Massachusetts Water Resources Authority



Metropolitan Water Tunnel Program

**Supplemental Draft
Environmental Impact Report**

July 2023

MWRA Contract 7159

Volume 1

Prepared by
CDM Smith in association with
VHB and JACOBS

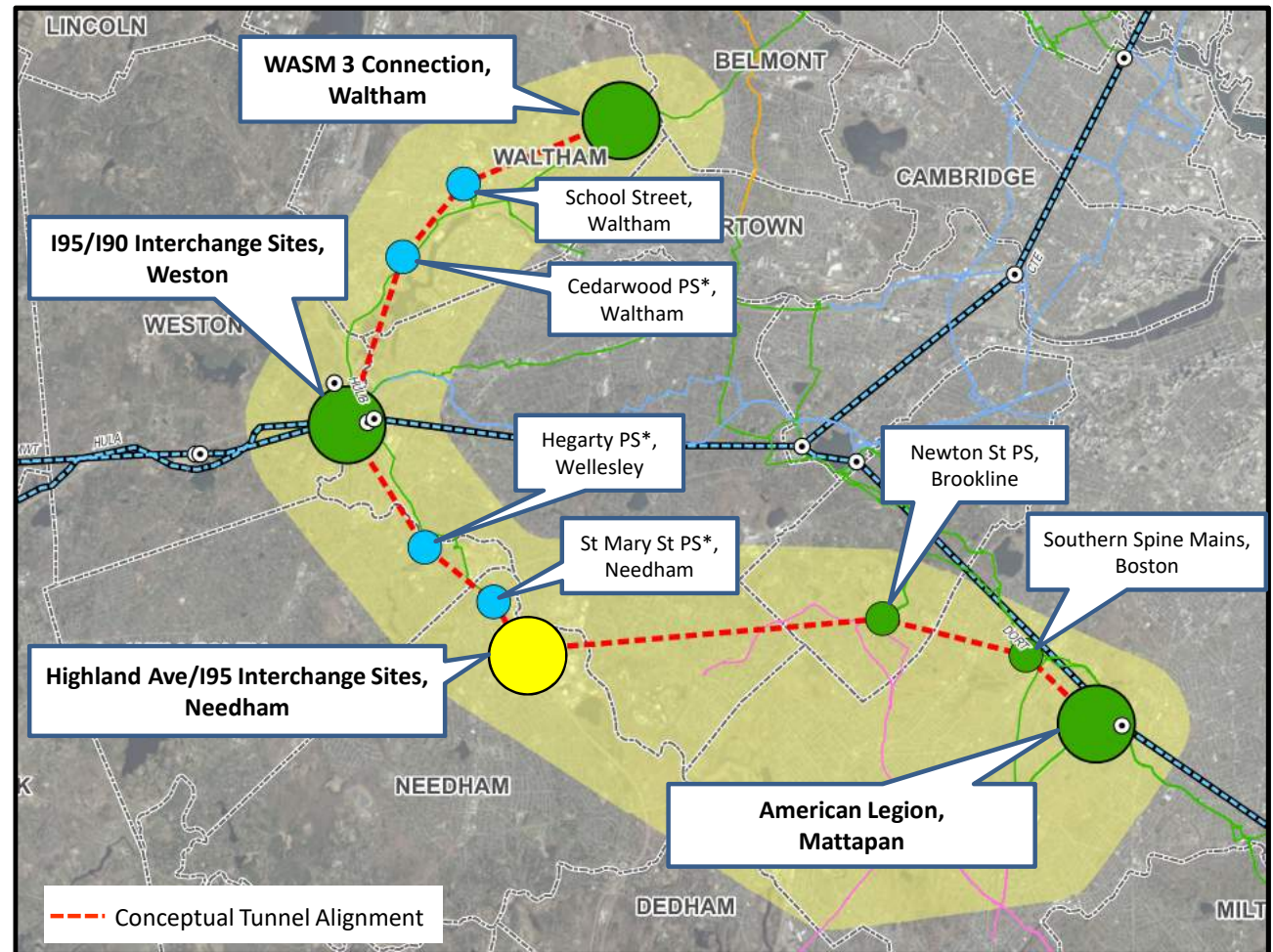
D/SDEIR and Certificates available on our website:
<https://www.mwra.com/mwtp/resources.html>

For discussion only



Metropolitan Water Tunnel Program

- ~14 miles of 10 ft diameter, hard rock, pressure tunnel
- Time to complete: 17 to 23 years (design - commissioning)
- North Tunnel - ~4.5 miles, ends in Waltham/Belmont area @ WASM3
- South Tunnel - ~10 miles, ends in Mattapan near Shaft 7C
- Anticipate first tunnel construction procurement to start in 2027



For discussion only



Metropolitan Water Tunnel Program

Construction Shaft Sites

- WASM 3 Connection, Waltham
- I90/I95 Interchange, Weston
- Highland Ave/I95 Interchange, Needham
- American Legion, Mattapan

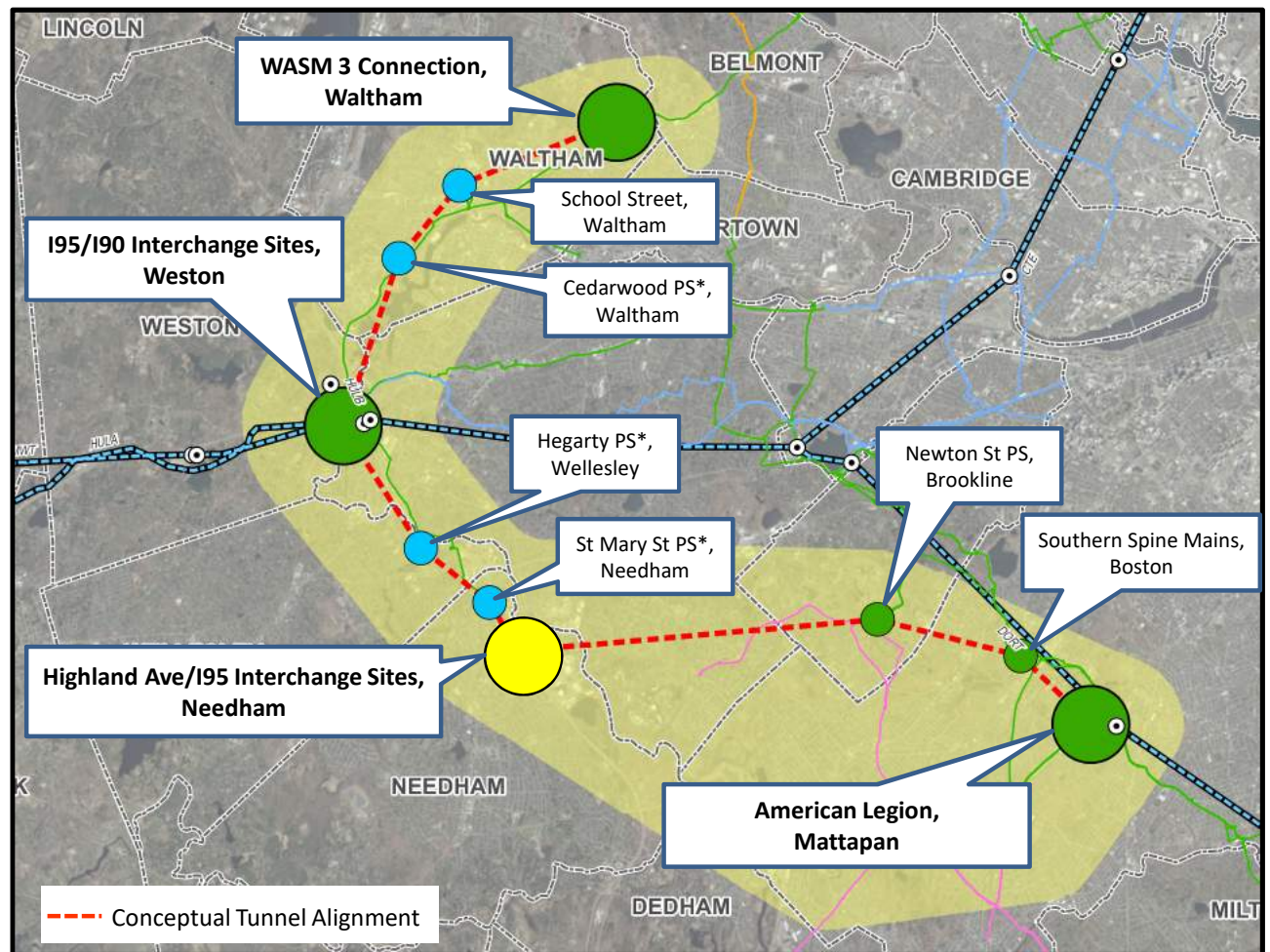
Connection Shaft Sites

- Lexington St Pump Station, Waltham
- Cedarwood Pump Station, Waltham
- Hegarty Pump Station, Wellesley
- St. Mary Street Pump Station, Needham
- Newton Street Pump Station, Brookline
- Southern Spine Mains, Boston

Final shaft locations subject to permits and real estate acquisition

* Non MWRA Pump Station

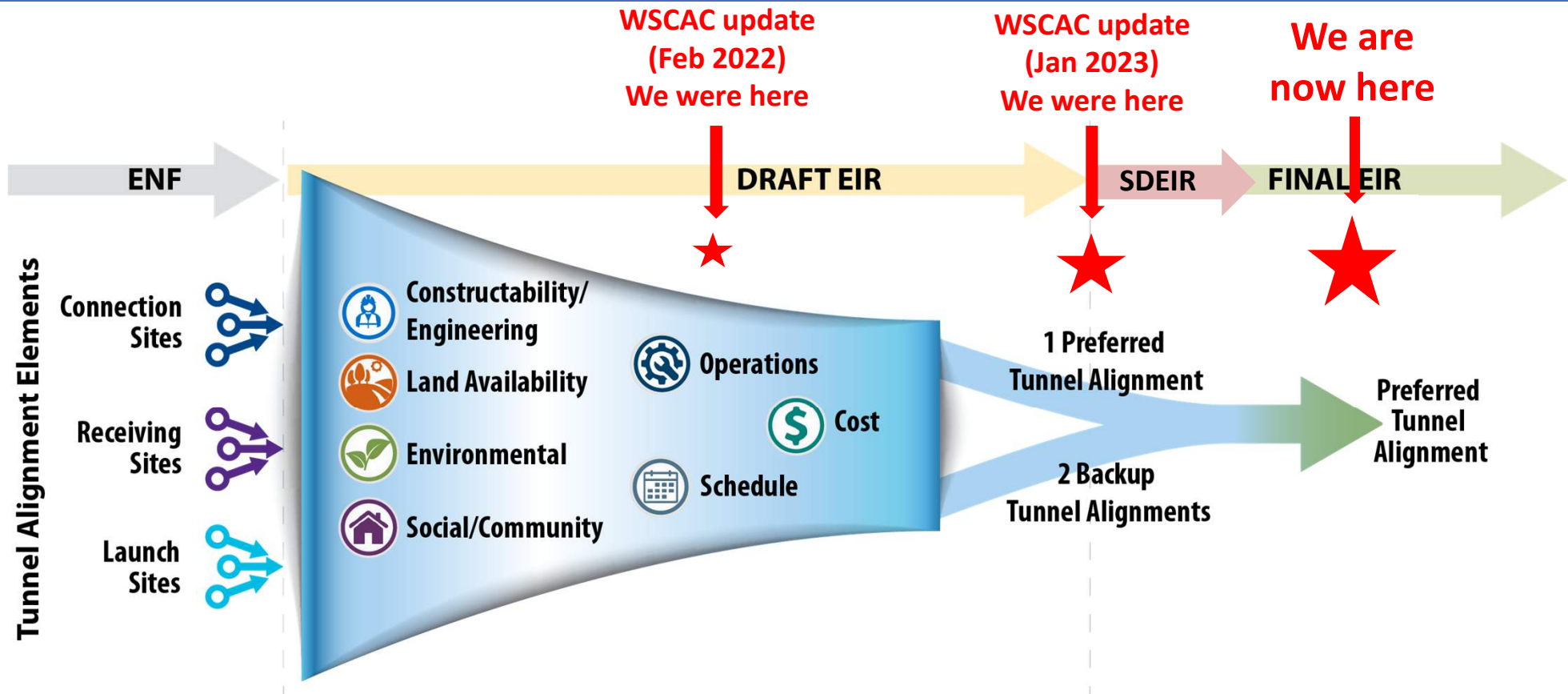
- Required Connection (required for system redundancy)
- Secondary Connection (provides local benefit)
- Construction Shaft (no connection)



For discussion only



Alternatives Evaluation Process



For discussion only



EIR Process Update

- SDEIR Comments Submitted by:
 - Secretary of the Executive Office of Energy and Environmental Affairs
 - Department of Environmental Protection, Northeast Regional Office
 - City of Cambridge Water Department
 - Charles River Watershed Association
 - Waltham Land Trust
 - Department of Environmental Protection, Waterways Regulation Program
 - Water Resources Commission
 - Department of Conservation and Recreation
 - Division of Marine Fisheries
 - Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program



SEIR Comment Overview

- General Categories of Comments on SDEIR
 - Public Outreach/Engagement
 - Construction controls (erosion, dust, soil disposal)
 - Tree removal and Land Use
 - Easements and Article 97
 - Permits and Mitigation Commitments
 - Stormwater management, flooding and climate change
 - Groundwater and Water Supply
 - Environmental Justice



SDEIR Comments – Public Outreach/Engagement

- Proactive outreach sessions
- Working Group collaboration
- Meetings upon request for public input
- Non-traditional media and Community Based Organizations (CBOs)
- Translation and interpretative services
- Incorporating feedback from stakeholders



SDEIR Comments – Construction Controls

- Soil/excavated material disposal:
 - Will be reused to extent practical
 - Soils and Materials Management Plan to be developed in final design
 - Off-site disposal at approved and licensed facilities
 - On-site storage will use best management practices to prevent erosion and runoff

- Erosion, Sediment and Dust Control:
 - Follow best practices
 - Restore and revegetate disturbed areas
 - Native seed mixes for reseeding
 - NPDES SWPPP



SDEIR Comments – Tree Removal and Transportation

- Tree Removal
 - Limit tree clearing to what's needed
 - Install tree protection where practical
 - Coordination with communities/DCR/landowners as needed for removal
 - Native trees for replanting
- Transportation and GHG
 - Restrict idling, use ultra low sulfur diesel
 - When possible, truck during off-peak hours
 - Limit potential roadway impacts (consider trenchless crossings, maintain vehicle lanes, work hours)



SDEIR Comments – Easements and Article 97

- Tunnel alignment to be finalized based on geologic conditions
- Subterranean easements along Tunnel alignment 50 feet wide and 50 feet high, centered on the tunnel, below ground
- Follow Article 97 and PLPA requirements



SDEIR Comments – Permits and Mitigation Commitments

- State, federal and local permitting and review requirements identified
- No work within NHESP Priority or Estimated Habitats (will be checked during design for any possible changes to listed species or modification to guidance)
- Section 61 Findings



SDEIR Comments – Stormwater, Flooding, and Climate Change

- Final Design:
 - Updated stormwater management standards
 - Climate resilience
 - Appropriate design storms for BMPs in accordance with requirements
 - Work in flood-prone areas/updated mapping available



SDEIR Comments – Groundwater and Water Supply

- Water supply contingency plan
- Groundwater withdrawals:
 - subject to WMA requirements
 - additional coordination with MassDEP during Final Design
- Probing and grouting to minimize groundwater influence
 - Final Design to identify high permeability rock, areas prone to higher groundwater infiltration
- Dewatering discharge will be treated to meet surface water quality standards (further detail in Final Design)



Additional Benefits of Groundwater Control

Benefits of controlling/mitigating groundwater include:

- Reduced risk of tunnel flooding and damage to tunneling equipment
- Improved working conditions in the tunnel (worker safety)
- Reduced risk of exceeding discharge permit limits
- Reduced risk of impacting production groundwater wells or surface water bodies
- Reduced risk of encountering contaminated groundwater from other sites
- Improved quality of final lining placement



SDEIR Comments – Environmental Justice

- Shaft construction method/location significant part of the alternatives analysis (avoid and minimize)
 - Proximity to existing infrastructure
 - Proximity to highways
 - Environmental resources (wetlands, etc.)
- Continued coordination with communities to address concerns
- Construction Management Plan (CMP) to document requirements (work hours, truck routes, etc.)
- Impacts are temporary
- Redundant water supply is a long-term benefit



Program Wide Geotechnical Investigation Overview

- Geotechnical investigation is continuing in all 7 communities
- Anticipate up to ~100 deep test borings along the proposed tunnel alignment plus additional shallow test borings for near surface infrastructure
 - ~40 deep test borings completed to date
- Work continuing of next ~3+ years to conduct the remaining work
- Communities and owners very responsive and supportive





Geotechnical Work Supporting the Tunnel Design



Outcrop Mapping



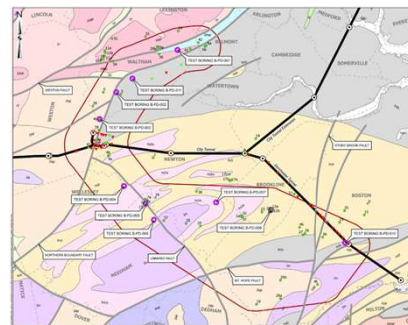
Surface Geophysics



Deep Borings



Rock Core Logging



Geologic Mapping



Tunnel Alignment



Ongoing and Upcoming Work

- Submit FEIR to MEPA early 2024
- Completed preliminary design Jan 2024
- Continue geotechnical program with geotechnical support services
- Continue to meet with community leaders and stakeholders
- Continue shaft sites real estate acquisition efforts
- Engage our Expert Review Panel regularly
- Prepare for final design and construction management professional services contracts
- Prepare for tunnel construction contracts





Where to Find Information / How to Contact Us

- <https://www.mwra.com/mwtp.html>
 - Program documents (ENF, DEIR)
 - Meeting notices, agendas, presentations, minutes
- Contact Us
 - Carmine DeMaria, Community Relations Coordinator
 - 617-305-5725
 - Carmine.DeMaria@mwra.com
 - Tunnels.info@mwra.com



Metropolitan Water Tunnel Program



Thank You!