



Massachusetts Water Resources Authority

Presentation to

MWRA Advisory Board Dorchester Tunnel Drilling Incident

November 21, 2024



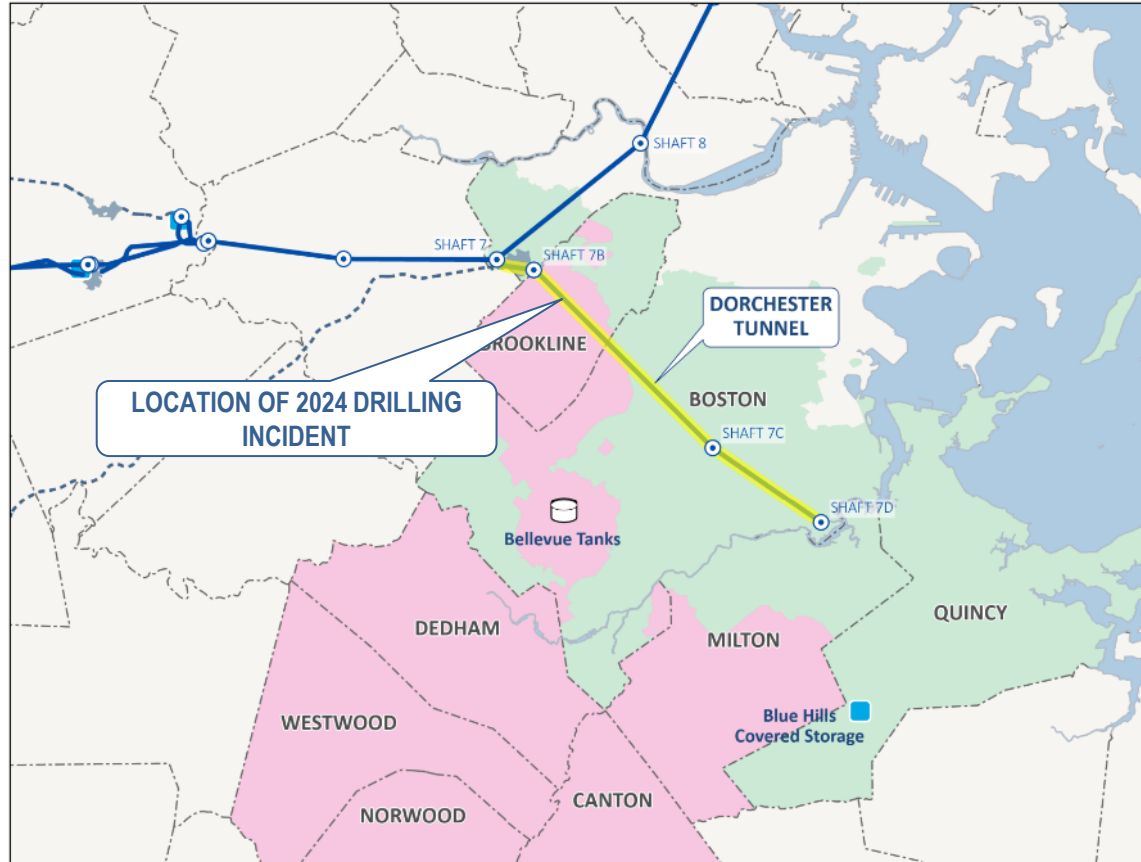
Dorchester Tunnel Drilling Incident

Wednesday October 9th 3:35 pm Brookline notified OCC that a geothermal contractor drilled into the Dorchester Tunnel at 130 Willard Road





Impacted Area



10/17/2024 MWRC GIS map2205-4



Emergency Operations Center



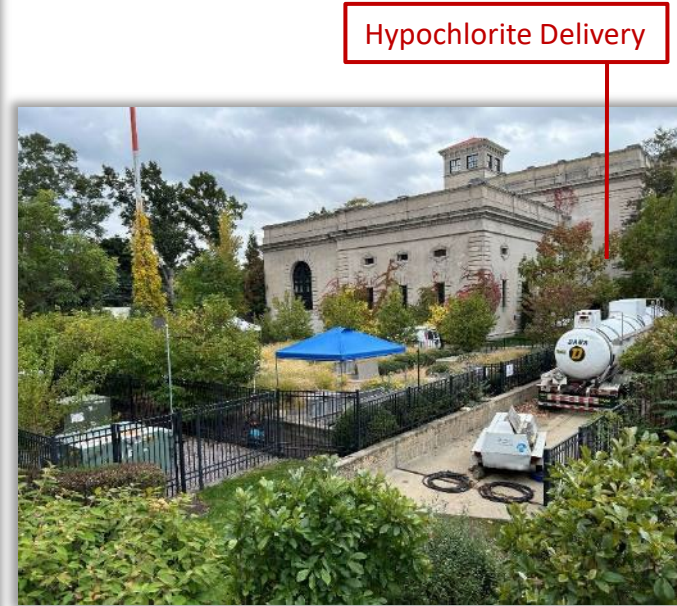
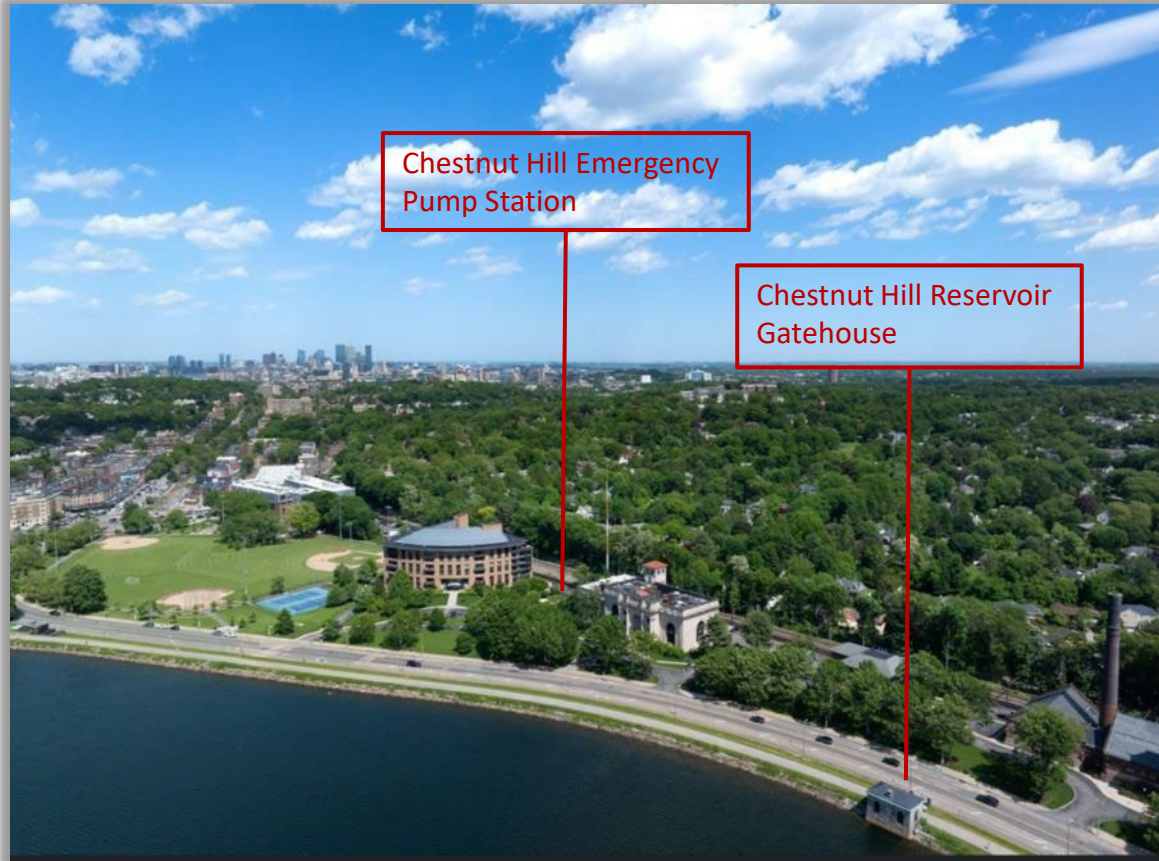


Drilling Incident Site Conditions





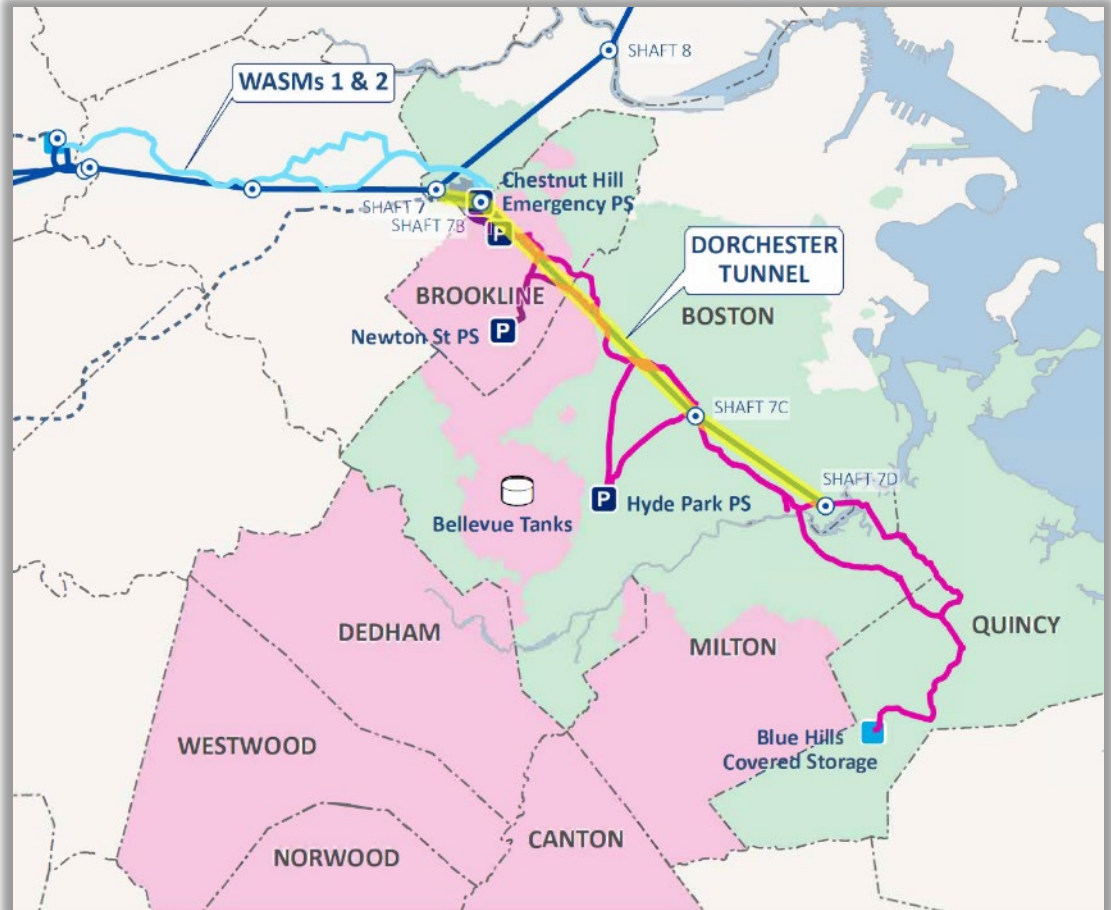
Chestnut Hill Pump Station





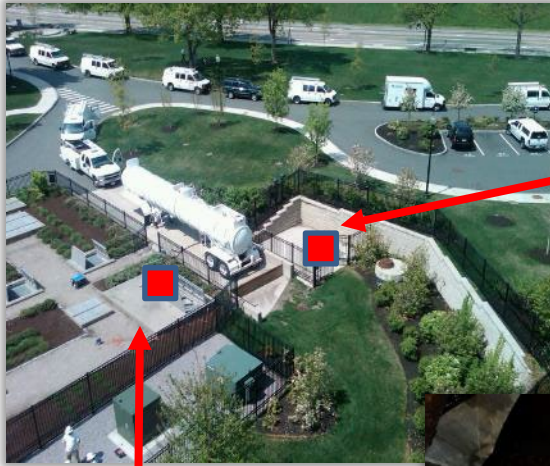
Reconfiguration of System – Dorchester Tunnel Isolation

- Configure Boston Low system to provide supply to Chestnut Hill PS
- Isolate Dorchester Tunnel
- Activate Chestnut Hill PS
- Southern Spine Mains to provide supply to SHS /SEHS
- Maintain storage at Blue Hills Tanks



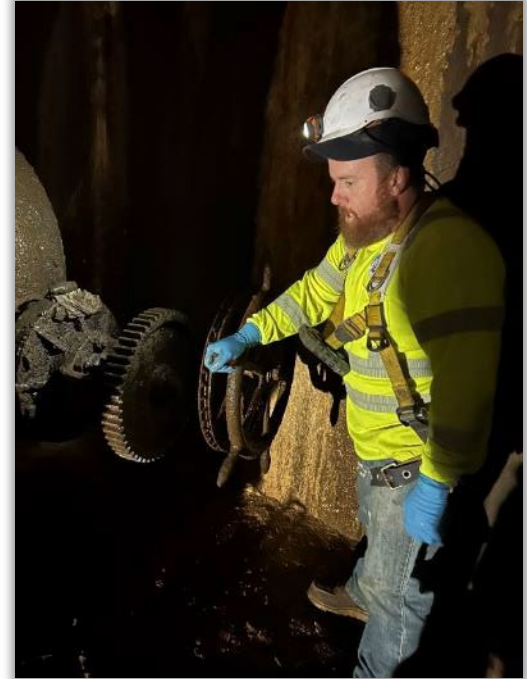


Reconfiguration of System – Dorchester Tunnel Isolation



Shaft 7B Access

Chestnut Hill Emergency PS





Reconfiguration of System – Dorchester Tunnel Isolation

27 Valves Operated
throughout Southern System





Reconfiguration of System – Dorchester Tunnel Isolation





Operation of Chestnut Hill Pump Station

Great risk of **pressure swings**

- Adjusted Surge Relief Valves
- Throttled Discharge Valves
- Installed Hydrant Reliefs
- Constant monitoring of system pressures





Controlling Tunnel Pressure

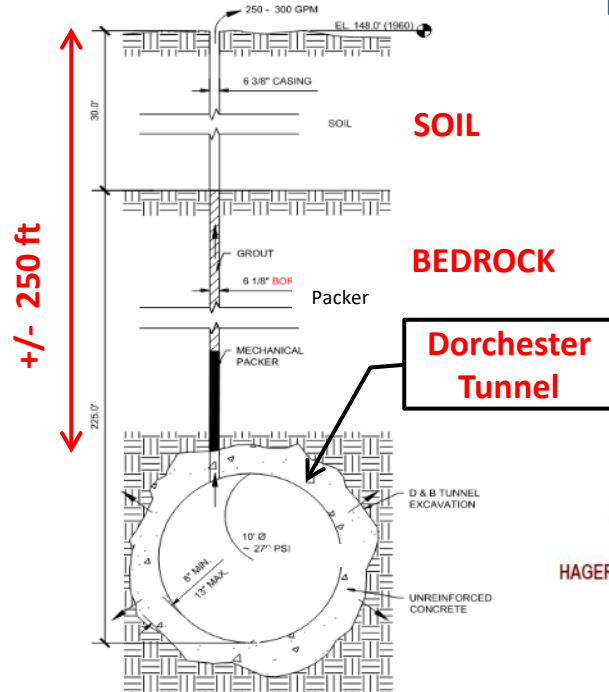
Blow-off at Shaft 7C



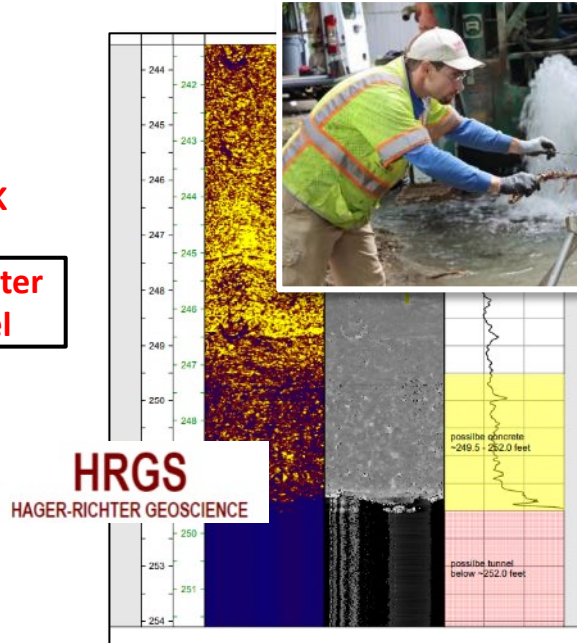


Repair Team – Rapid Response

Wednesday Evening Repair Concept



Thursday Information Gathering Finalize Repair Plan



Friday Mobilize Implement Repair





Repair Team – Friday Repair Begins

Job site technical briefing



Packer Installation





Repair Team – Friday PM to Saturday Morning



Placement of grout.
Continuous operation until
after midnight.
Collection of grout cubes
for testing.





Continuous System Monitoring

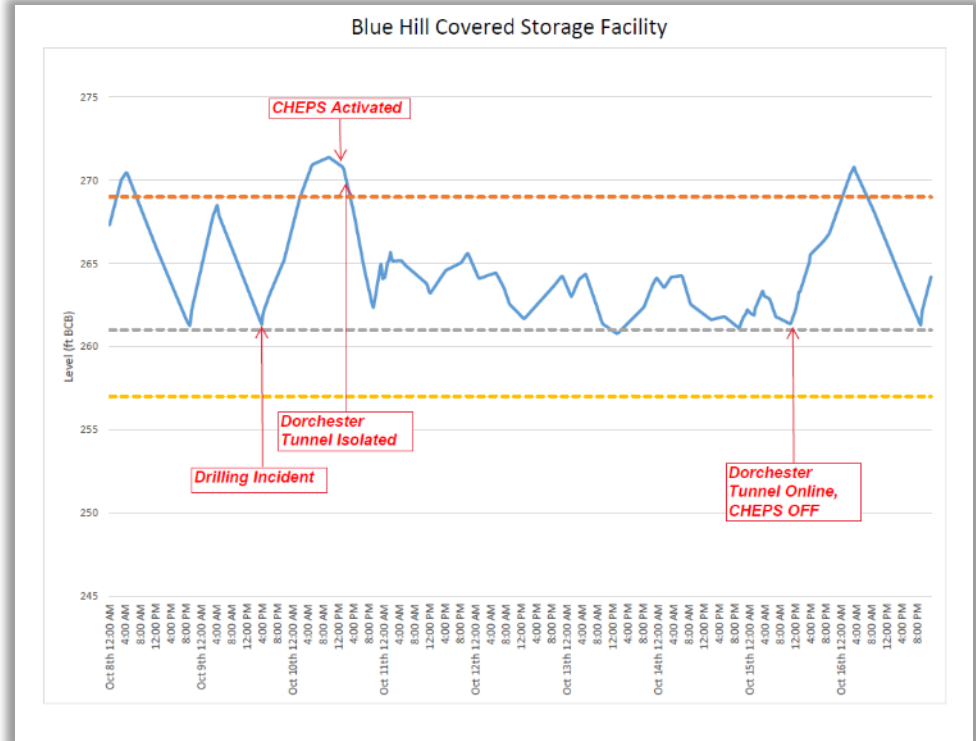
- 24/7 monitoring in OCC/EOC





Continued System Operations

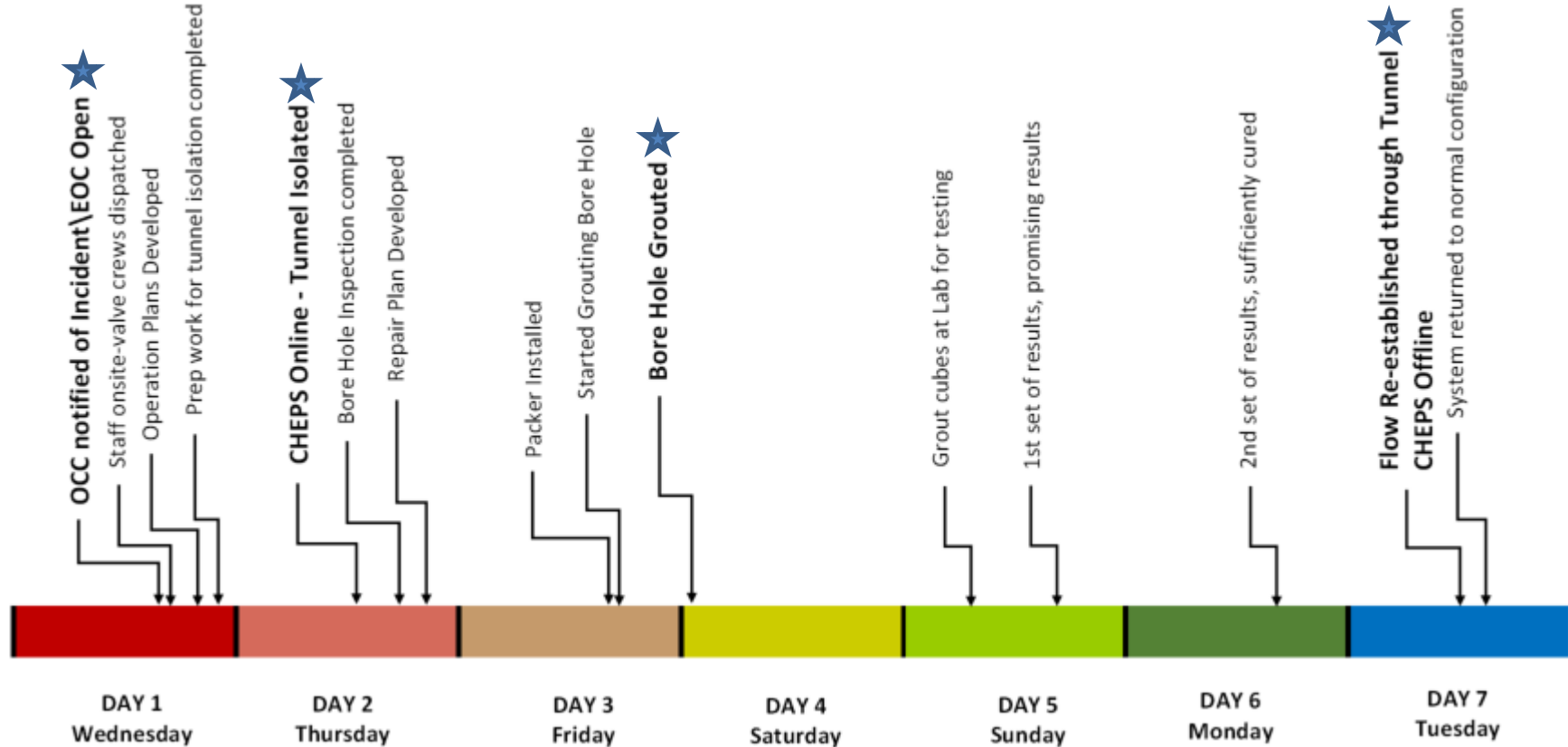
- 1st Night: Breaks in Boston and Brookline
- 2nd Night: One Break in Brighton
- 3rd Night: No Breaks





Incident Timeline

Continuous Operation of Pump Station from 12:50 pm Oct 10th to 1:10 pm Oct 15th , ~ 120 hrs





Dorchester Tunnel Drilling Incident

Questions?

