

The Commonwealth of Massachusetts

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April 1, 2024

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS ON THE FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Metropolitan Water Tunnel Program

PROJECT MUNICIPALITY : Waltham, Belmont, Watertown, Weston, Newton, Wellesley,

Needham, Brookline, Boston, Dedham

PROJECT WATERSHED : Charles River and Boston Harbor

EEA NUMBER : 16355

PROJECT PROPONENT : Massachusetts Water Resources Authority (MWRA)

DATE NOTICED IN MONITOR : February 23, 2024

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62L) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I have reviewed the Final Environmental Impact Report (FEIR) and hereby determine that it **adequately and properly** complies with MEPA and its implementing regulations.

Project Description

As described in the FEIR, the Massachusetts Water Resources Authority (MWRA) is proposing to construct two new deep rock water supply tunnels (north and south alignments totaling ±14.6) that will provide redundancy for MWRA's existing Metropolitan Tunnel System, which includes the City Tunnel (constructed in 1950), City Tunnel Extension (constructed in 1963) and Dorchester Tunnel (constructed in 1976). This tunnel system has been in continuous service since construction. While the concrete lined deep rock tunnels have a long design life, some of the associated valves and piping have exceeded their design life and are currently in poor condition. A redundant system is needed to maintain and/or replace some of these valves and piping without interruption to water supply. The project will provide the redundancy to allow for system maintenance and repair, without disrupting service to over 2.5 million water customers. Under current conditions, if the Metropolitan Tunnel System is shut down, water must be supplied from open reservoirs containing nonpotable water, backup aqueducts, and undersized surface mains to distribute the nonpotable water with inadequate pressure. These backup

options require use of emergency chlorination and issuance of a boil water order to customers. The project will support MWRA's responsibility to protect public health, provide sanitation, and provide fire protection through adequate water supply.

Water from the Quabbin Reservoir and Wachusett Reservoir is conveyed to the John J. Carroll Water Treatment Plant (WTP) in Marlborough. Treated water is conveyed from the WTP through the MetroWest Water Supply Tunnel (MWWST) and the Hultman Aqueduct (Shaft 5/5A). From there, the existing Metropolitan Tunnel System conveys ± 60 percent of the metropolitan Boston area's daily demand. The new, redundant deep rock tunnels will originate near the convergence of MWWST and the Hultman Aqueduct (Shaft 5/5A) at a site located at the western most portion of the Metropolitan Tunnel System generally in the vicinity of the Interstate 95 (I-95)/Interstate 90 (I-90) Interchange. From this point, one tunnel would take a northerly route toward Waltham (North Tunnel) and the other a southerly route toward Boston and Dorchester (South Tunnel). Each tunnel will connect to existing water supply infrastructure at key locations to provide water supply redundancy to the existing system.

The Supplemental Draft Environmental Impact Report (SDEIR) contained a supplemental alternatives analysis that revised prior alternatives to relocate the terminus of the North Tunnel, Segment 1, to locations other than the City-owned Fernald Property site previously evaluated. This analysis resulted in selection of a new preferred alternative (Alternative 4A) presented in the SDEIR that proposed to use a parcel owned by the University of Massachusetts (UMass) as the terminus for North Tunnel, Segment 1. The FEIR states that since the filing of the SDEIR, MWRA has conducted additional conversations with the City of Waltham regarding the use of the Lower 190 Trapelo Road Property (previously referred to as the Lower Fernald Property and incorporated into former Alternative 10A presented in the SDEIR), and that the City has indicated a preference for this property to be utilized as the terminus of the North Tunnel over the UMass property. As discussed below, this has resulted in another change to the preferred alternative from Alternative 4A to a newly described Alternative 4B, which incorporates elements of previously studied alternatives including a new terminus point at the Lower Fernald Property.

The (new) Preferred Alternative is otherwise substantially similar to the preferred alternative identified in the SDEIR. Specifically, it would propose tunnel construction in three segments including the North Tunnel (Segment 1) and the South Tunnel (Segments 2 and 3) with the South Tunnel proceeding first. Both tunnels are proposed to begin in the Town of Weston near the terminus of the Hultman Aqueduct and MWWST. The North Tunnel Alternative would extend ± 4.5 miles to the north, ending near the Waltham/Belmont line with a connection to the existing 60-inch diameter Weston Aqueduct Supply Main Number Three (WASM3). The South Tunnel Alternative would extend ± 10.1 miles to the south, with a connection to the distribution pipes near Shaft 7C of the Dorchester Tunnel and ending in Boston (Dorchester). The new terminus point at the Lower Fernald Property is at the end of the North Tunnel route.

After preliminary and final design are complete, construction is estimated to take ± 8 to 12 years and is planned to occur between 2027 and 2040, with the new deep-rock tunnel system placed into service before or around 2040 (useful life of more than 100 years). When sizing proposed facilities, MWRA considered projected future water demands due to population and employment increases within the service area as well as increased water use efficiency. The intent of the project is not to increase total capacity of the system, but to ensure redundancy by providing a backup to the existing Metropolitan Tunnel System if it were ever out of service for planned or unplanned reasons. Temporary construction impacts will be associated with construction of the deep rock tunnels, associated construction shaft sites

and intermediate shaft sites, as well as management of material removed from the tunnel and treatment of groundwater inflow (i.e., dewatering excavated material).

Study Area

The MWRA is a Massachusetts public authority established by an act of the Legislature in 1984 to provide wholesale water and sewer services to 3.1 million people and more than 5,500 businesses in 61 communities in eastern and central Massachusetts. The MWRA water transmission system consists of Quabbin and Wachusett Reservoirs, the Ware River intake, and the deep rock tunnels and surface aqueducts that deliver water by gravity. The overall transmission and distribution system consists of ±100 miles of tunnels and aqueducts and 280 miles of surface pipeline that carry water from the source reservoirs to communities. The Quabbin and Wachusett Reservoirs, which are the main water supply sources, are located 65 and 35 miles west of Boston, respectively. Water from the reservoirs is treated at the John J. Carroll WTP in Marlborough before being conveyed to the metropolitan Boston area through the Hultman Aqueduct and the MWWST completed in 2003 which provides redundancy for the Hultman Aqueduct. Water from the Hultman Aqueduct and MWWST is then conveyed to the existing Metropolitan Water Tunnel System, which does not have a redundant system (east of Shaft 5/5A).

Each tunnel comprising the Metropolitan Tunnel System (City Tunnel, City Tunnel Extension, and Dorchester Tunnel) consists of concrete-lined deep rock tunnel sections linked to the surface through steel and concrete vertical shafts. At the top of each shaft, cast iron or steel pipe and valves connect to the MWRA surface pipe network. These pipes and valves are accessed through subsurface vaults and chambers. The tunnel and shafts themselves require little or no maintenance and represent a low risk of failure however, many of the valves and piping are in poor condition.

The Program Study Area for the project encompasses ±15 miles of deep rock tunnels and connections to existing water supply infrastructure (±200-400 ft) below the surface of several communities. Potential impacted areas in the Study Area include the communities of Boston, Belmont, Brookline, Dedham, Needham, Newton, Watertown, Waltham, Wellesley, and Weston. The Study Area includes wetlands, Areas of Critical Environmental Concern (ACECs), Outstanding Resource Waters (ORWs), historic resources, and mapped habitats for endangered species. As discussed below, the 13 shaft site locations¹ within the Study Area are within 1 mile of several Environmental Justice (EJ) Populations.² While the project was originally filed prior to January 1, 2022, when new MEPA protocols related to EJ outreach and analysis took effect, the FEIR voluntarily provides a description of public outreach activities and analysis of impacts over the 1-mile area around the 13 shaft site locations.

Changes Since Filing of the SDEIR

The previously reviewed SDEIR evaluated and ranked numerous alternatives to ultimately determine the Preferred Alternative and two backup alternatives (Alternatives 3A, 4A, and 10A). As noted, since the SDEIR was filed, the MWRA has had additional conversations with the City of Waltham, where the City has indicated that the Lower 190 Trapelo Road Property is preferred to serve as the terminus of the North Tunnel (as opposed to terminating at the UMass Property, identified as the

¹ The DEIR identified 14 site locations. The FEIR notes that the Tandem Trailer launching shaft site would include a connection tunnel to the Park Road East large connection shaft in SDEIR Alternatives 3A and 4A to provide the required connection to the Hultman Aqueduct.

² "Environmental Justice Population" is defined in M.G.L. c. 30, § 62 under four categories: Minority, Income, English Isolation, and a combined category of Minority and Income.

preferred alternative in the SDEIR). The FEIR included an updated alternatives analysis which replaced Alternative 10A (described in the SDEIR) with a new modified alternative, Alternative 4B. As stated in the FEIR, Alternative 4B is the same as DEIR Alternative 4 and SDEIR Alternative 4A, with the exception of terminating the North Tunnel at the Lower 190 Trapelo Road Property, as preferred by the City of Waltham. Alternative 10A was previously described as a route involving two tunnel segments with the terminus point at the Lower Fernald Property; however, this was dismissed in favor of Alternative 4B, which has the same terminus point but with three tunnel segments. Otherwise, the alternatives are substantively similar. Alternative 4B does not introduce any new tunnel segments beyond those previously studied, tunnel alignments, shaft sites, shaft site usage, or construction methodology, schedule, or duration as compared to the alternatives presented and evaluated in the DEIR and SDEIR. Alternative 4B is described in the FEIR as the new Preferred Alternative, as further discussed below. The FEIR states that both temporary and permanent impacts to environmental resources associated with the program remain the same as those described in the SDEIR, but provides updated impacts associated with Alternative 4B being selected as the Preferred Alternative.

Environmental Impacts and Mitigation

Proposed shaft chambers and connecting pipelines would be underground structures. Permanent above-ground features, such as concrete slabs and concrete vaults or top of shafts, would not extend more than three feet above finished grade. The FEIR provided revised estimates of project impacts for the Preferred Alternative and, separately, each of the two back up alternatives, which include (depending on the alternative) alteration of up to a maximum of 42.4 acres of land (surface impacts); creation of up to 2.7 acres of new impervious surface; up to 9.1 acres of permanent easement or land acquisition to support shaft and valve chambers; 3.8 acres of Article 97 land for which a land disposition may be required; and temporary and permanent alteration of wetlands including 1,558 square feet (sf) of Bordering Vegetated Wetlands (BVW)/Isolated Vegetated Wetlands (IVW), up to 87 sf of Bank, up to 2,668 sf of Bordering Land Subject to Flooding (BLSF), up to 2,420 sf of Land Under Water (LUW), and up to 112,574 sf of Riverfront Area (RFA). Greenhouse Gas (GHG) emissions and other air pollutants will be generated during construction period activities, including the use of heavy equipment, trucks and other emitting sources employed during construction. The FEIR provided tables comparing estimated environmental impacts associated with the Preferred Alternative and each of the two backup alternatives for land alteration and Article 97 impacts, wetlands resources, and transportation impacts.

Specific shaft site locations have been selected with the intent to avoid resource areas and sensitive receptors to the greatest extent practicable. Measures to avoid, minimize, and mitigate Damage to the Environment include avoiding direct impacts to BVW/IVW; revegetating areas disturbed during construction with native species including replacing removed trees; providing compensatory storage for loss of flood storage; identifying and providing compensatory land for parcels protected by Article 97 that would be disposed to MWRA; monitoring construction noise and vibration with implementation of mitigation if established thresholds are exceeded; implementation of a Water Supply Contingency Plan with alternate sources of water as required; and implementation of comprehensive construction-period Best Management Practices (BMPs) including erosion and sedimentation controls.

Jurisdiction and Permitting

The project is undergoing MEPA review and is subject to a Mandatory EIR pursuant to 301 CMR 11.03(4)(a)(3) because it requires Agency Actions and involves the construction of one or more new water mains ten or more miles in length. It also exceeds the Environmental Notification Form

(ENF) review thresholds pursuant to 301 CMR 11.03(1)(b)(1) for alteration of 25 or more acres of land; 301 CMR 11.03(1)(b)(3) for the disposition or change in use of land or an interest in land subject to Article 97; 301 CMR 11.03(3)(b)(1)(f) for alteration of one-half or more acres of other wetlands (RFA); and 301 CMR 11.03(6)(b)(2)(b) for the construction, widening, or maintenance of a roadway or its right-of-way that will cut five or more living public shade trees of 14 or more inches in diameter at breast height.

The project requires or potentially requires Highway Access/Construction Access Permits and land disposition/easements from the Massachusetts Department of Transportation (MassDOT); Right of Way Access License Agreement from the Massachusetts Bay Transportation Authority (MBTA); Construction and Access Permits (CAP) and land disposition/easements from the Massachusetts Department of Conservation and Recreation (DCR); Water Management Act (WMA) Water Withdrawal Permit (WM03), Section 401 Water Quality Certificate (WQC), Distribution System Modification Permit (BRPWS32), and potentially a Chapter 91 (c. 91) License from the Massachusetts Department of Environmental Protection (MassDEP); review by the Massachusetts Historical Commission (MHC) pursuant to MGL c. 9 Section 23-27C; review by the Water Resources Commission (WRC) pursuant to the WMA; and Article 97 Land Disposition legislation from the Massachusetts Division of Capital Asset Management and Maintenance (DCAMM).³ The project is subject to review under the May 2010 MEPA GHG Emissions Policy and Protocol (GHG Policy).

The project will also require an Order of Conditions from the Conservation Commissions in Waltham, Weston, Needham, Wellesley, and Boston (or in the case of an appeal, a Superseding Order of Conditions (SOC) from MassDEP) depending on the specific site selected; a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) and Dewatering and Remediation General Permit (DRGP) (potentially) from the U.S. Environmental Protection Agency (EPA); and Section 404 review from the U.S. Army Corps of Engineers (ACOE).

Because the project is being undertaken by MWRA, an Agency as defined in MEPA regulations, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment.

Review of the FEIR

The FEIR identifies changes since the filing of the SDEIR. It provides a detailed and updated description of the project, an updated alternatives analysis that includes a new proposed terminus, an assessment of environmental impacts (temporary and permanent) for the new Preferred Alternative and two backup alternatives including land alteration (including protected open space), wetlands and waterways, rare species and wildlife habitat, cultural and historic resources, hazardous materials/materials handling/recycling, transportation, air quality, noise, and community resources. It identifies measures to avoid, minimize, and mitigate impacts and provides draft Section 61 Findings. The FEIR responds to the Certificate issued on the SDEIR and comments received on the SDEIR. It identifies and describes state, federal, and local permitting and review requirements associated with the project and provides an update on the status of each of these pending actions. It includes a description and analysis of applicable statutory and regulatory standards and requirements, and a discussion of the

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³ The Certificate on the SDEIR identified the need for review by the Natural Heritage and Endangered Species Program (NHESP); as further discussed below, the FEIR clarifies that as the project does not propose any work within NHESP Priority or Estimated Habitat, review is not required.

project's consistency with those standards. The FEIR provides on update on coordination with Agencies and public outreach conducted since the filing of the SDEIR.

Alternatives Analysis

As noted above, the FEIR included an updated alternatives analysis with three project alternatives (Alternative 3A, 4A, and 4B). Alternatives 3A and 4A were evaluated and discussed in detail in the SDEIR, and carried forward to the FEIR. The SDEIR previously contemplated Alternative 10A, which differed from Alternative 3A and 4A in that it proposed the termination of the North Tunnel in the Lower 190 Trapelo Road Property (the Lower Fernald Property) and the construction of two tunnel segments, whereas Alternatives 3A and 4A involve the North Tunnel segment terminating in the UMass property and the construction of three tunnel segments. The SDEIR included a schematic layout with the limits of disturbance (LOD) for the 190 Trapelo Road (Lower Fernald Property) and the proposed post-development conditions, as well as figures depicting the environmental resources at this property including wetlands and waterways, protected open space (Article 97), c.91 jurisdictional limits, stormwater, wastewater and water supply infrastructure (including private wells), rare species and wildlife habitat, cultural and historic resources, land use including land ownership, transportation, noise, and community resources.

The FEIR replaces Alternative 10A with the newly developed Alternative 4B, which the FEIR states is the same as Alternative 4A (consisting of three tunnel segments), but with a proposed North Tunnel terminus in the Lower 190 Trapelo Road Property (the Lower Fernald Property), with this terminus site previously proposed, described, and evaluated under Alternative 10A. The FEIR describes the site selection process to identify alternative sites for the terminus of the North Tunnel, Segment 1. South of the School Street connection site, the preliminary alignment of North Tunnel Segment 1 would remain the same as described in the DEIR and SDEIR. South Tunnel Segment 2 and South Tunnel Segment 3 would remain the same as described in the DEIR and SDEIR. The FEIR updates the environmental resource analysis for each FEIR Alternative incorporating the newly developed Alternative 4B. The table below identifies the tunnel segments in each of the FEIR Alternatives:

Table 1-2 Tunnel Segments in Program Alternatives

Alternative	Segment 1	Segment 2	Segment 3		
3A	North Tunnel - Tandem	South Tunnel - Bifurcation	South Tunnel – Highland Avenue		
	Trailer Launching in Weston	Launching in Weston to	Northeast/Southeast Launching		
	to UMass Property Large	Highland Avenue Northwest	in Needham to American Legion		
	Connection in Waltham	Receiving in Needham	Receiving in Boston		
4A	North Tunnel - Tandem	South Tunnel - Highland Avenue	South Tunnel - Highland Avenue		
	Trailer Launching in Weston	Northwest/Southwest	Northeast/Southeast Launching		
	to UMass Property Large	Launching in Needham to Park	in Needham to American Legion		
	Connection in Waltham	Road West Receiving in Weston	Receiving in Boston		
4B	North Tunnel - Tandem Trailer Launching in Weston to Lower 190 Trapelo Road Property Receiving in Waltham	South Tunnel - Highland Avenue Northwest/Southwest Launching in Needham to Park Road West Receiving in Weston	South Tunnel - Highland Avenue Northeast/Southeast Launching in Needham to American Legion Receiving in Boston		

The above table summarizing the tunnel segments is republished for Alternatives 3A and 4A from SDEIR Table 2-2, as previously presented in SDEIR Section 2.5 (pg. 2-18).

High-level evaluation criteria included: engineering/constructability; land availability; environmental; social/community; operations; cost; and schedule. All three alternatives provide the required hydraulic, redundancy and operational features to meet project goals and were considered to have similar potential environmental impacts. The updated assessment in the FEIR resulted in Alternative 4B being selected as the Preferred Alternative, and Alternatives 3A and 4A being carried forward from the SDEIR as back-up alternatives. The FEIR emphasizes that the potential environmental impacts associated with each of the three alternatives are generally similar, with mitigation measures incorporated where necessary. The FEIR provided an updated rating of each alternative based on seven evaluation criteria, with Alternative 4B receiving a "Preferred" rating with a total score of 19, Alternative 4A being selected as the preferred back-up alternative with a total score of 19 as well, and Alternative 3A being selected as the second back-up alternative with a total score of 16. As described in the FEIR, Alternative 10A (previously included in the SDEIR) scored lowest of three alternatives evaluated in the SDEIR due to having a longer duration of construction, greatest complexity in terms of potential risk and less flexibility in construction contract packaging, and greatest cost, as compared to Alternative 3A and 4A.

Environmental Justice

The FEIR provides an update on outreach to EJ populations, potential impacts, and associated mitigation measures. Advanced Notification was provided to a list of community-based organizations (CBOs) and tribes/indigenous organizations (the "EJ Reference List") provided by the MEPA Office prior to filing the FEIR. As described in the FEIR, MWRA continues to conduct extensive outreach within the study area developed for outreach (as noted below, a one-mile radius was used around each project construction site to establish the Study Area for Outreach and Environmental Justice) through community meetings, working group collaboration, and regular updates to the Board of Directors and Advisory Board. Table 2-1 in the FEIR describes meetings held with organizations since the filing of the SDEIR, which includes municipal fire departments, the Water Supply Citizens Advisory Committee (WSCAC), and Charles River Watershed Association (CRWA). MWRA has continued to meet with the Working Group specifically convened for the project, which includes representatives from each of the 10 communities within the Program Study Area, the MWRA Advisory Board, WSCAC, and Metropolitan Area Planning Council (MAPC).

The FEIR states that public information sessions will be held starting in 2024 on various aspects of the project, and that prior to these meetings MWRA will post notifications in prevalent languages on MWRA's website and use various media sources to disseminate information, including non-English and/or community-specific media outlets. Interpretation services will be provided for MWRA-hosted meetings, and the meetings will be recorded and posted to the Program website along with contact information so those viewing the meeting recording can submit comments and questions. In addition to the public information sessions, the FEIR states that MWRA will hold community meetings upon request, widely disseminate a written project summary, widely disseminate fact sheets for key topics (such as traffic, noise and vibration, and natural and cultural resource impacts), and ensure outreach is communicated in clear, understandable language in a user-friendly format. Furthermore, MWRA is participating as a member of an EJ task force led by the Executive Office of Energy and Environmental Affairs (EEA) and will follow EEA guidelines pertaining to outreach to and inclusion of EJ populations in decision-making about the project. Comments from CRWA state that they are satisfied that the proposed outreach plan allow for sufficient community feedback by interested parties but encourage MWRA to seek additional methodologies to lower the barrier to participation by low-income populations by offering childcare for potential participants who might otherwise be unable to attend

(especially if attendance is low at public meetings). Comments CRWA also continue to encourage MWRA to consider compiling outreach reports that detail community responses to the project and to share those reports with stakeholders.

As noted in the Certificate on the SDEIR, the annual adt generated by the project during construction activities is estimated at ± 111 adt per year, with a maximum of up to 156 adt of diesel trucks at launching sites in the worst-case scenario. The SDEIR asserted that this conservative estimate of adt can be accommodated on roadways with no need for mitigation. The Scope on the SDEIR required the FEIR to identify measures to avoid, minimize, and mitigate impacts to EJ populations from project-related activities during and post-construction including working with Departments of Public Works (DPWs) and transportation departments in each municipality to implement mitigation measures in all areas with EJ populations. The FEIR states that potential transportation impacts may occur temporarily during construction and describes measures to mitigate these impacts, which could include restricting work within roadways to off-peak hours on weekdays and adjusting traffic signal timings. The FEIR states that MWRA will work with the DPWs and transportation departments of each affected municipality to establish appropriate transportation-related mitigation measures where needed/appropriate.

The Scope also directed the FEIR to clarify the extent of the "transportation Study Area" used to calculate air emissions for the project as compared to the "Study Area" for the project as a whole. As described in the FEIR, the transportation Study Area included construction activity at the project construction sites and the anticipated construction vehicle routes along local roadways to and from these sites to the nearest major highway. The FEIR clarified that a specific Study Area was defined/created for each of nine distinct categories of impacts evaluated by MWRA (Outreach and Environmental Justice, Land Alteration and Article 97, Wetland and Waterways, etc.). For example, a one-mile radius was used around each project construction site to establish the Study Area for Outreach and Environmental Justice, while a 500-foot distance from the limits of disturbance for each construction area and a 1,000-foot corridor for the tunnel alignment was used to establish the Study Area for Land Alteration and Article 97. Table 2-3 in the FEIR identifies the categories for which unique Study Areas were established and what criteria was used to determine the extent of each Study Area.

Land Alteration, Open Space, and Article 97

The FEIR provides an update on consultations with DCR regarding Article 97 protection and mitigation. All three alternatives carried through to the FEIR (Alternative 4B (preferred) and backup Alternatives 3A and 4A) involve the disposition of approximately 3.8 acres of Article 97 Land (0.1 acres at Ouellet Park, 0.2 acres of Southwest Corridor Park, and 3.5 acres of the Morton Street Property). The North Tunnel terminus site, proposed under the new Preferred Alternative (Alternative 4B), does not contain Article 97 Land that would require a disposition (though land dispositions and easements are still required elsewhere on the project site). The new Preferred Alternative may require one less subterranean easement as compared to Alternative 4A. The FEIR provides an assessment of land use, community resources, open space, and Article 97 resources for each alternative; a summary comparison of land use characteristics including proposed changes in impervious surface compared to existing conditions (up to 2.4 acres), temporary construction area LOD (up to 37.5 acres), permanent easements or land acquisition (up to 9 acres), and estimated Article 97 land disposition anticipated to be required (3.8 acres, as described above). The FEIR provides an update on the project's consistency with the Article 97 Policy and the Public Lands Preservation Act (PLPA).

The FEIR states that MWAR met with DCR staff on October 12, 2023 for further consultation regarding Article 97 impacts. As noted in comments from DCR and the FEIR, MWRA continues to consult with DCR to ensure that there are no feasible alternatives to the disposition of Article 97 Land, that the minimum amount of Article 97 Land is permanently impacted, and to identify appropriate mitigation to compensate for the disposition of land protected under Article 97. The FEIR indicates that this will involve providing compensatory land of equal or great value and/or by complying with alternative mitigation provisions of the EEA Article 97 Land Disposition Policy. Per the PLPA requirements, MWRA will provide public notice, conduct an alternatives analysis, identify compensatory land or funding in lieu of replacement land, complete an appraisal for subject lands, and take actions to enact Article 97 legislation before construction of the tunnel begins, as stated in the FEIR. Comments from DCR note that the Construction and Access Permits for the project, required for work on DCR property, will not be issued until MEPA review is complete and Article 97 legislation has been enacted.

Wetlands

The FEIR provides an update on temporary and permanent impacts to wetland resource areas, as required by the Scope. The project will temporarily and permanently impact BVW, IVW, Bank, BLSF, LUW, and RFA, and associated buffer zones, which were presented for each municipality in Table 4-1. Wetland impacts for Alternatives 3A, 4A and 4B are summarized in a portion of Table 4-1 below:

Table 4-1 Summary of Wetland Impacts by Municipality in Alternatives 3A, 4A, and 4B

		Alternative 3A			Alternative 4A			Alternative 4B		
	Resource	Temporary	Permanent	Total	Temporary	Permanent	Total	Temporary	Permanent	Total
Sites by	Area(s)	Impacts	Impacts	Impacts	Impacts	Impacts	Impacts	Impacts	Impacts	Impacts
Municipality	Affected	(sf/lf)	(sf/lf)	(sf/lf)	(sf/lf)	(sf/lf)	(sf/lf)	(sf/lf)	(sf/lf)	(sf/lf)
	BVW/VW (sf)	1,558	0	1,558	1,558	0	1,558	1,558	0	1,558
	Bank (sf)	43	78	121	35	52	87	35	52	87
	BLSF (sf)	1,890	1,396	3,286	1,640	1,028	2,668	1,640	1,028	2,668
	LUW/WW (sf)	2,336	1,104	3,440	1,684	736	2,420	1,684	736	2,420
	RA (sf)	158,470	4,831	163,301	124,483	4,831	129,314	124,483	4,831	129,314

RA — Riverfront Area, BLSF — Bordering Land Subject to Flooding, BVW — Bordering Vegetated Wetlands, VW — Vegetated Wetlands, LUW/WW — Land Under Waterbodies and Waterways.

Comments from MassDEP on the SDEIR noted that permanent alterations to BVW and Bank will occur due to the installation of splash pads ad culvert outlets. The FEIR states that the three alternatives presented in the FEIR (Alternative 3A, 4A, and 4B) all avoid impacts to BVW associated with splash pads and culvert outlets, as BVW is not present within the limit of disturbance at the proposed discharge locations for these three alternatives. Impacts to Bank associated with the splash pads and culvert outlets will occur; the FEIR states these impacts have been minimized to the maximum extent practicable. The FEIR confirms that the splash pads have been properly sized to regulate flows and prevent scour. MWRA will require the contractor to develop a plan to monitor the dewatering discharge outfalls during dewatering activities to ensure that scour and erosion does not occur, which will be developed during the final design phase of the project. The monitoring plan will include corrective action contingencies to address unanticipated impacts. As described in the FEIR, these corrective actions would include procedures such as modifications to discharge pipe sizes, changes to splash pad configurations, or implementation of additional discharge velocity dissipation measures. MWRA has verified that none of the waterbodies proposed for discharge are identified as Outstanding Resource Waters (ORWs), as requested by the Scope. No further comments were provided by MassDEP on the FEIR.

Fisheries

During construction at the launching and receiving sites, construction water will be generated, primarily from groundwater inflows into the tunnel excavation. Comments from DMF on the SDEIR expressed concern regarding the project's potential to impact fish migration and spawning during construction. One of the primary dewatering discharge sites (Tandem Trailer) is located near the I-90/I-95 interchange; flows will discharge into Seaverns Brook which discharges into the Charles River, which supports diadromous fish including American shad, rainbow smelt, white perch, Atlantic tomcod, and American eel. Additionally, the area between the Moody Street Dam and I-90/I-95 provides important spawning habitat for River Herring. As described in the FEIR, during construction, there is potential for water quality in surface waters to be impacted by pollutants in tunnel dewatering discharges and in discharges related to tunnel clearing, disinfection, and flushing. To minimize and mitigate potential impacts, all flows would be treated as necessary to meet water quality standards including limits for dissolved oxygen, temperature, pH, bacteria, color and turbidity, oil and grease, and taste odor. The FEIR states that, if deemed appropriate by DMF or other regulatory agencies during the subsequent design and permitting of the project, contract document would include time-of-year (TOY) restrictions on in-water, silt-producing work from April 15 to July 15 to minimize impacts to river herring spawning and migration in the Charles River.

The FEIR also includes additional information regarding noise and vibration impacts caused by tunneling, which could impact fish migration and spawning, as requested by the Scope. As described in the FEIR, any noise and/or vibration will be temporary in nature, and tunnel excavation below water bodies will be completed within a period of several days and at a depth of approximately 300 feet underground. At this distance, the FEIR stats that TBM operations have the potential to induce vibrations in the river substrate, which could have potential impacts on species residing in, on, or near the substrate for activities such as feeding or spawning. The FEIR describes vibration levels as relatively low based on vibration data, and unlikely to result in significant behavioral alterations to fish populations within the river. No further comments were provided by DMF on the FEIR.

Rare Species

Comments from NHESP submitted on the SDEIR indicated that a portion of the project under all alternatives is proposed within Priority or Estimated Habitat of rare species. The FEIR clarifies that the project does not propose any work (above or below ground) within any mapped NHESP Priority or Estimated Habitat, and as such that review by NHESP under MESA is not required. The tunnel alignment in the vicinity of the Cedarwood Pumping Station connection shaft site is the only site where construction work would take place near mapped habitat (but not within); this habitat is mapped for Bald Eagle (Haliaeetus leucocephalus). The FEIR states that MWRA consulted with NHESP via email during the preparation of the FEIR, during which NHESP specifically requested clarification as to whether vibration from tunnel construction could impact this habitat. According to the FEIR, as no guidance on vibration thresholds specific to Bald Eagles or birds currently exist, thresholds established for human perception and sensitive equipment represent the best approach for determining impacts. The existing conditions within this specific habitat were also considered when determining potential impacts. As described in the FEIR, the closest (westernmost) portion of the Bald Eagle habitat is located less than 200 feet from the MBTA commuter rail line, which is regularly exposed to vibration. As stated in the FEIR, given the existing vibration levels within the habitat polygon do not prevent Bald Eagles from returning to nest, the minimal vibration expected from construction at more than 600 feet away, and the

limited period of time that construction near the habitat is expected to occur (3 months), no significant vibration impact on Bald Eagles is expected. No further comments were provided by NHESP on the FEIR.

Mitigation and Draft Section 61 Findings

The FEIR provides final mitigation commitments and draft Section 61 Findings for use by Agencies, which are summarized below. Table 8-1 in the FEIR provides a summary of mitigation measures for the categories described below. The Section 61 Findings should be provided to Agencies to assist in the permitting process and issuance of final Section 61 Findings.

Environmental Justice

- Continued outreach to EJ populations through public information sessions and community meetings; providing interpretation services, recordings of meetings, and noticing meeting using non-English and/or community-specific media outlets
- Providing redundancy to water systems that serve EJ populations and facilitating continued access to safe drinking water and sewer service
- Implementation of BMPs to mitigate construction period impacts, including use of ultra-low sulfur diesel fuel or alternatively fueled equipment instead of diesel-fueled equipment as feasible, installing temporary noise barriers and other acoustic barriers and enclosures, managing fugitive dust, and coordinating with affected municipalities
- Provide site specific information about time and nature of construction to adjacent neighborhoods

Land Alteration and Article 97

- Revegetate/restore areas disturbed during construction activities, including replacing removed trees where required and as appropriate
- Compliance with the EEA Article 97 Land Disposition Policy and the PLPA by providing compensatory land of equal or greater value to offset the disposition of Article 97 Land and/or by complying with alternative mitigation provisions of the Policy
- Obtain subterranean easements for the tunnel alignment where it crosses beneath Article 97 properties
- Continue to work with DCR to ensure that all impacts to Article 97 Land are appropriately mitigated and all requirements of the PLPA are met

Wetlands and Waterways

- Restoration of resource areas disturbed by construction (Bank, BVW/IVW, BLSF, LUW, and Riverfront Area)
- Provision of compensatory flood storage within the same floodplain to mitigate displacement associated with dewatering discharge infrastructure
- Implementation of erosion control and sedimentation BMPs, including the installation of silt fence lines, staked straw bales, compost filter tubes and/or similar devices along the downgradient slopes at the limit-of-work at each site
- Conduct regular inspections and monitoring of discharges in accordance with NPDES Construction General Permit and/or Dewatering and Remediation General Permit
- Construction of compensatory flood storage volume areas to offset fill associated with discharge structures within BLSF

- The contractor will be required to develop a plan to monitor the dewatering discharge outfalls during dewatering activities to ensure that scour and erosion does not occur
- All discharge flows will be treated as necessary to meet water quality standards including limits for dissolved oxygen, temperature, pH, bacteria, color and turbidity, oil and grease, and taste odor

Water Supply and Water Management Act

- Conduct preconstruction survey to verify well locations and characteristics
- Conduct probing and pre-excavation grouting of water-bearing features in advance of TBM under certain prescribed conditions
- Limiting volumes of groundwater inflows to require initiation of pre-excavation and/or post-excavation grouting, implementing post-excavation drilling and cut-off grouting in water-bearing features
- Monitoring groundwater and implementing a Water Supply Contingency Plan with alternative sources
- Enabling system maintenance and repair, without disrupting service to over 2.5 million water customers
- Providing redundancy to avoid the use of backup supplies, which require use of emergency chlorination and issuance of a boil water order to customers
- Support MWRA's responsibility to protect public health, provide sanitation, and provide fire protection through adequate water supply

Traffic and Transportation

- When possible, limiting trucking to off-peak hours
- Coordination with MassDOT or local municipal officials to adjust traffic signal timings at intersections subject to potential temporary traffic increases, if necessary and where appropriate
- Installation of near-surface pipelines during off peak hours or at night where possible and necessary
- Provide temporary local detours where necessary
- Accommodation of bikes and pedestrian through on-street work zones
- Evaluation of the use of trenchless technology construction methods where feasible to limit potential roadway impacts
- Maintenance of two-way traffic whenever possible and one-lane traffic at a minimum
- Where possible and as appropriate, restripe crosswalks with high-visibility markings and construct Americans with Disabilities Act (ADA) compliant curb ramps with detectable warning panels on each corner where existing crosswalks or curb ramps are impacted

Rare Species and Wildlife Habitat

- Revegetate areas disturbed during construction with native species, including replacement of removed trees where required and as appropriate
- Compliance with time of year (TOY) restrictions for work within potential Northern Long-Eared Bat (NLEB) habitat
- Use of TOY restrictions to minimize impacts to river herring spawning and migration in the Charles River, if deemed appropriate by DMF or other regulatory agencies

Cultural and Historic Resources

• Provide vibration monitoring for sensitive buildings during construction

- Prepare an Inadvertent Discovery Plan for unanticipated finding of archaeological resources during construction
- Provide photo documentation, coordinate review of proposed plans for an affected historic resource, coordinate review of proposed plans for an affected historic resource, prepare continuation sheets for existing inventoried forms with additional information and photographs of current conditions, if requested by MHC

Climate Change

- Increase resiliency by providing redundancy in the system, reducing vulnerability associated with continued water supply during a natural hazard event
- Minimizing tree clearing to the extent practicable, revegetating disturbed areas through use of loam and seed, and planting trees as appropriate
- Constructing permanent infrastructure to accommodate future flooding conditions
- Construction of stormwater management areas sized to accommodate recommended design standards; Low Impact Development (LID) and/or structural Stormwater Control Measures (SCMs) will be implemented at each site to meet Stormwater Management Standards
- Minimizing mobile source emissions through the use of ultra-low sulfur diesel fuel or alternatively fueled equipment instead of diesel-fueled equipment as feasible, as well as limiting construction truck traffic to off-peak hours
- Where possible, electrified construction equipment, including the use of an electrified tunnel boring machine instead of one power by fossil fuels

Noise and Vibration

- Establish noise limits through preconstruction monitoring, conduct construction vibration monitoring, if necessary, at select locations to avoid no adverse impacts o nearby communities or structures
- Conduct controlled blasting and test blasts, if necessary, prior to beginning construction to demonstrate that no adverse vibrational impacts are anticipated
- Outfit construction equipment with noise-control features
- Perform construction that generates high amounts of noise and vibration during less sensitive times of day
- Install temporary noise barriers and other acoustic barriers and enclosures
- Use of quitter construction equipment and methods that would reduce construction noise
- Locate equipment away from sensitive receptors

Construction Period

- Availability of a phone number and email for the public to submit complaints or questions to regarding the project, which will be monitored and responded to by MWRA's Program Community Liaison; contact information (phone number and email) will be available on MWRA's website as well as posted at all construction sites
- Construction updates will be posted to a construction update page on MWRA's website, which will include information about the project and weekly construction activities
- Implementation of a Stormwater Pollution Prevention Plan (SWPPP), which will describe construction sequencing and temporary stabilization, placement of structures to manage stormwater runoff and erosion, and establishment of permanent vegetative cover or other forms of stabilization as soon as practicable

- Use and monitoring of erosion and sedimentation controls, including erosion-control barriers, stabilization of construction exits, temporary sediment basins, diversion swales, temporary check dams, catch basin inlet protection, and dewatering filters
- Conduct regular inspection and monitoring of treated discharges to avoid permanent and indirect effects due to construction
- Use of ultra-low sulfur diesel fuel or alternatively fueled equipment instead of diesel-fueled equipment as feasible, restrict vehicle idling, use of methods to contain dust and debris to the construction site
- Any non-road diesel equipment will be rated 50 horsepower or greater to meet EPA's Tier 4 emission limits, or be retrofitted with appropriate emissions-reduction equipment
- Require the contractor to implement and follow a Noise Control Plan (NCP)
- Development and implementation of a Soils and Materials Management Plan (SMMP) for materials handling, testing, and material reuse
- Reuse of building materials when possible
- Conduct special handling and management of contaminated soil and groundwater
- Management of fugitive dust through wet suppressions, truck wheel cleaning, covering of truck
 loads and monitoring siltation controls such as sediment basins, silt bags, or frac tanks, as well as
 more elaborate treatment systems if necessary
- Use of fencing and proper signage surrounding shaft excavation areas, where appropriate

Conclusion

Based on a review of the FEIR and consultation with MWRA, I find that the FEIR adequately and properly complies with MEPA and its implementing regulations. No further MEPA review is required, and the project may proceed to permitting. Participating Agencies should forward copies of the final Section 61 Findings to the MEPA Office for publication in accordance with 301 CMR 11.12.

April 1, 2024 Date

Rebecca L. Tepper

Comments received:

03/21/2024 Massachusetts Department of Conservation and Recreation (DCR)

03/25/2024 Charles River Watershed Association (CRWA)

RLT/ELV/elv





March 21, 2024

Secretary Rebecca L. Tepper Executive Office of Energy and Environmental Affairs Attn: Eva Vaughan, MEPA Office 100 Cambridge Street, Suite 900 Boston, Massachusetts 02114

Re: EOEEA #16355 Metropolitan Water Tunnel Program FEIR

Dear Secretary Tepper:

The Department of Conservation and Recreation ("DCR" or "Department") is pleased to submit the following comments in response to the Final Environmental Impact Report ("FEIR") submitted by the Massachusetts Water Resources Authority ("MWRA" or the "Proponent") for the Metropolitan Water Tunnel Program (the "Project").

As described in the FEIR, the Proponent will construct approximately 14 miles of new deep rock water supply tunnels that will provide redundancy for MWRA's existing Metropolitan Tunnel System. Multiple DCR properties will be impacted by the Project, requiring the disposition of fee simple and permanent easement interests in the land, which will trigger Article 97 of the Amendments to the Massachusetts Constitution ("Article 97"). The FEIR also indicates that up to six acres of DCR property will be needed as staging locations for construction, requiring temporary easements and/or DCR Construction and Access Permits ("CAP"), which may need to be re-issued given the estimated duration of the Project.

Article 97

State conservation and recreation property is protected by Article 97. Transfers of ownership or interests in DCR property must meet the requirements set forth in the Public Lands Preservation Act (M.G.L. c. 3, § 5A: the "PLPA") and the Executive Office of Energy and Environmental Affairs' Article 97 Land Disposition Policy (the "Policy") to ensure no net loss of lands protected under Article 97. Selling, transferring, or otherwise disposing of any right or interest in DCR property may occur only under exceptional circumstances, as defined in the Policy, including the determination that no feasible alternative is available and a minimum amount of land or an interest therein is being disposed for the proposed use. Such transfers also require legislative authorization by the General Court through a two-thirds roll call vote.

Two sites will require DCR to dispose of land that is protected under Article 97: the American Legion Receiving Shaft Site within the Morton Street property (approximately 3.5 acres, fee simple and permanent easement interests) and the Southern Spine Mains Connection Shaft Site within the Southwest Corridor Park, including DCR's adjacent Arborway (approximately 0.3 acres fee simple and permanent easement interests). The Project plans also show locations where the preliminary tunnel alignment is located beneath these and several other DCR properties, including the Leo J. Martin Memorial Golf Course in Weston and

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Maura T. Healey Governor

Kimberley Driscoll Brian Arrigo, Commissioner Lt. Governor

Rebecca L. Tepper, Secretary

Executive Office of Energy & Environmental Affairs

Department of Conservation & Recreation

Newton, and portions of the Charles River Reservation in Weston. The FEIR indicates that a permanent subterranean tunnel easement, approximately 50 feet wide and centered on the tunnel, will be required for DCR properties located above the final tunnel alignment. DCR notes that Table 3-8 erroneously lists the City of Newton as owner of the state's golf course.

As noted above, the Proponent has engaged with DCR regarding the Project design and compliance with the PLPA and the Policy. DCR will continue to work with MWRA to ensure that there are no feasible alternatives to the fee simple and permanent easement interests identified within the limit of work for the Project and, should no alternatives exist, that the minimum amount of interest in DCR land is being disposed of for the purpose of the Project. The Proponent will be responsible for meeting the obligations of the PLPA, including public notification, an alternatives analysis, the identification and dedication of replacement land to Article 97 purposes, an appraisal, requests for the Secretary to waive or modify the replacement land requirement or make findings relative to funding in lieu of replacement land, if applicable, and Article 97 legislation. Construction and Access Permits for this project, required for work activities on DCR property, will not be issued until MEPA review is complete and Article 97 legislation has been enacted.

Thank you for the opportunity to comment on the FEIR. Please contact the Director of Construction & Access Permitting, Sean Casey at sean.casey@mass.gov regarding temporary easements and DCR Construction and Access Permits. Questions related to Article 97 can be directed to Land Protection Specialist Loni Fournier at Loni.M.Fournier@mass.gov.

Sincerely,

Brian Arrigo Commissioner

ce: Loni Fournier, Sean Casey, Priscilla Geigis, Patrice Kish, Peter Mulcahy (DCR)



March 25, 2024

Via Email

Eva Vaughan, Environmental Analyst MEPA Office Executive Office of Energy and Environmental Affairs 100 Cambridge Street, Suite 900 Boston, MA 02114 Eva.Vaughan@mass.gov

Re: MWRA's Metropolitan Water Tunnel Program - EEA#16355 Final Environmental Impact Report

Dear Eva:

Charles River Watershed Association ("CRWA") has reviewed the Final Environmental Impact Report ("FEIR") submitted by the Massachusetts Water Resources Authority ("MWRA") for the Metropolitan Water Tunnel Project program published in the Environmental Monitor on February 23, 2024.

As recounted by the FEIR, since the Supplemental Draft Environmental Impact Report ("SDEIR") MWRA has had additional conversations with the City of Waltham, which have resulted in the development of project Alternative 4B, which combines the preferred aspects of SDEIR Alternative 4A and 10A and incorporates the City of Waltham's preferred northern terminus location of the Lower 190 Trapelo Road Property over the University of Massachusetts ("UMass") Property. Alternative 4B otherwise incorporates no changes to the project design or methodology and has environmental impacts similar to the other alternatives. All other project design specifications have similarly been unchanged since the SDEIR. The FEIR identifies 4B as the new preferred project design. Construction is anticipated to begin in 2027 or 2028.

CRWA appreciates the efforts of the Massachusetts Environmental Policy Act ("MEPA") staff and Secretary of Energy and Environmental Affairs Rebecca Tepper to ensure that this tunnel project is maximally protective of public lands, environmental quality, and underserved communities. MWRA staff have likewise been responsive to CRWA's concerns throughout the environmental review process, and CRWA appreciated the opportunity to review the Tunnel Program with MWRA staff on January 3, 2024. Accordingly, CRWA respectfully submits the following comments and looks forward to continuing to follow this project.

Environmental Justice Concerns

CRWA appreciates that the Secretary's Certificate required MWRA to address our comments regarding active outreach to EJ populations and the EJ impact assessments. CRWA has reviewed MWRA's response to these comments and its progress on its Outreach Plan. We note that MWRA will pre-register for some of its meetings to ensure appropriate interpretation services are available. CRWA is satisfied that this Outreach Plan should allow for sufficient community feedback by interested parties but encourages

MWRA to - especially if attendance is low at public meetings - seek additional methodologies to lower the barrier to participation by low-income populations by offering childcare for potential participants who might otherwise be unable to attend. Relatedly, CRWA continues to encourage MWRA to consider compiling outreach reports that detail community responses to the project and to share those reports with stakeholders. Such a measure would increase transparency, allay concerns about effective outreach, and provide an opportunity for MWRA to review and track feedback.

Land Alteration, Open Space, and Article 97

CRWA appreciates that MWRA has been communicating with the Massachusetts Department of Conservation and Recreation ("DCR") and that it remains committed to meeting the obligations of the Public Lands Preservation Act ("PLPA") and Article 97. CRWA has reviewed the responsive portions of the FEIR and will continue to track the project through the PLPA Portal.

Additional Concerns

CRWA appreciates details regarding dust control measures and management of excavated materials. We are glad to see that MWRA has considered fugitive dust emissions. As a general matter, CRWA reiterates the need for best management practices ("BMPs") to be carefully installed and maintained throughout the process. Accordingly, CRWA appreciates MWRA's statement that relevant contractors will "develop and implement a monitoring program to address construction period BMPs." We thank MWRA for its commitment to specific timelines where corrective actions are necessary. CRWA is similarly appreciative of additional details regarding the methodology of seed mix selection and emphasizes the importance of careful seeding to prevent the establishment of invasive species, which often outcompete native species following disruptive construction.

This project is enormously complex and adds critical redundancy to MWRA's service. CRWA acknowledges the work that MWRA has already accomplished to make this project more climate resilient - including the use of the Resilient Massachusetts Action Teams' Climate Resilience Design Standards Tool - and to reduce project impacts on underserved communities. It is reassuring that MWRA has been responsive to the City of Waltham in designing the now preferred Alternative 4B and that MWRA has carefully responded to the comments it has received. However, as outlined by Section 1.5.1, many permits and plans are still to be obtained and developed, including the Soils and Materials Management Plan, the National Pollutant Discharge Elimination System ("NPDES") Stormwater Pollution Prevention Plan, and information about PLPA land dispositions. As the project progresses, CRWA looks forward to reviewing further filings, plans, and permits to resolve any final questions about project sustainability and impacts. Thank you for the opportunity to provide these comments.

Respectfully,

Zeus Smith, Esq.

Associate Attorney, CRWA