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February 15, 2024

Littleton Conservation Commission
37 Shattuck Street
1st Floor, B100
Littleton, MA 01460

Re: Supplemental Information
NOI Filing, DEP File No. 204-0995 – Littleton Well and Water Main Extension

Dear Members of the Commission:

On behalf of the Littleton Electric Light & Water Departments (LELWD), Weston & Sampson Engineers, Inc. is providing clarification to various questions and comments from previous Littleton Conservation Commission public hearings for the Littleton Well and Water Main Extension Project.

Clarifications:

1. Stormwater Test Pits and Stormwater Design/Precipitation Data

   At the February 6, 2024, Littleton Conservation Commission public hearing (the hearing), it was confirmed by the Conservation Commission Agent that the stormwater test pit results that were submitted by Weston & Sampson had been reviewed by the Commission's third-party peer review consultant, Green International Associates, and that the test pit results were approved by Green as confirming the proposed stormwater management design. There was also a question from the Commission about the precipitation frequency data used in the stormwater analysis, and whether precipitation data from future climate projections was considered in the design. The proposed design was analyzed using the most current precipitation frequency data provided by NOAA, the Atlas 14 precipitation data set. Additionally, as a request from MEPA during the review of a Single EIR submission, the stormwater design was analyzed using projected 2070 precipitation data for the 50-year, 24-hour storm event obtained from the ResilientMass Action Team RMAT Design Tool. Per Atlas 14, the precipitation estimate for the current 100-year storm event is 7.68-inches in a 24-hour period. During this event, the proposed design provides 2.03-feet of freeboard, as the peak water surface elevation in the basin reaches 230.97-feet. Using the projected 2070 50-year storm event precipitation data from the RMAT tool, which projects 9.20-inches of rainfall in a 24-hour period, the peak water surface elevation reaches 231.91-feet, providing 1.09-feet of freeboard.

2. The Commission requested that the LELWD provide at least 1:1 mitigation for the proposed tree removals in the planting and restoration plan.

   At the February 6, 2024, hearing, the tree planting plan was presented. The project proposes to remove 58 trees within the 100-foot buffer zone to facilitate construction. Tree clearing within forested areas is limited to the space needed to construct the gravel and paved access road, well site, and stormwater basin, with limited space for restoration plantings. The LELWD assessed the project site and has coordinated with the adjacent property to ensure that they can plant as many trees as possible on the adjacent site where they would be likely to survive, and without overcrowding them. To mitigate the impacts of the proposed tree removals, LELWD proposes to restore and enhance the habitat through targeted tree and shrub plantings. Plantings are proposed in the open area next to the parking lot at the 151 Taylor Street property and proposed access road to enhance this edge habitat, as well as within the 100-foot buffer zone with plantings along the proposed access road. There is also opportunity to plant and restore an existing cleared access road within the forest. The full species list, planting areas, the wildlife value of each species, and additional planting specifications are provided in the Buffer Zone Restoration & Enhancement Plan that was submitted to the Commission on February 1, 2024.

   The goal of the restoration areas is to enhance the value of these areas for wildlife, particularly for species likely to use the upland forest edge habitat. Part of the existing access road proposed for planting is adjacent to a forested wetland that may support reptile and amphibian species. The area is within NHESP-mapped

habitat for species including the blue-spotted salamander (*Ambystoma laterale*) and Blanding's turtle (*Emydoidea blandingii*). Thus, the goal is to enhance this area, which is currently a sparse access road. Planted shrubs and coarse woody debris will provide food, cover, and perching habitat for a variety of wildlife species.

The restoration plan that was submitted proposed a total of 52 tree plantings and 122 shrub plantings. At the February 6, 2024, public meeting, the Commission requested for the applicant to plant trees at a minimum 1:1 ratio of the 58 proposed trees to be removed. To address this request, the LELWD proposes to plant 12 additional trees at another town-owned property at 74-76 Whitcomb Avenue along the open field across the street from the new Water Treatment Plant. This will now allow for providing greater than a 1:1 mitigation for the proposed tree removals, plus the additional 122 understory shrub plantings. A *Supplemental Tree Plantin Plan – 74 & 76 Whitcomb Avenue, Littleton, MA* technical memorandum was submitted to the Commission on February 14, 2024, which includes a planting plan for the 12 additional trees proposed at 74-76 Whitcomb Avenue.

3. Special Conditions related to monitoring and replacing plantings.

At the February 6, 2024, hearing there was discussion on potential conditions related to monitoring plantings. The LELWD is amenable to including conditions requiring monitoring trees and shrub plantings for a period of up to two years, providing seasonal monitoring reports for a period of two years after installation, and maintaining a targeted success rate of 75% survivorship wherein if less than 75% of the trees and shrubs survive, the applicant shall replace the failed plantings.

4. Existing parcel characteristics

At the January 16, 2024, hearing, the Commission was presented with an aerial site plan of the overall parcel of land for the proposed access road and well station. The overall property encompasses approximately 59 acres of land. The tree cover for the property is approximately 33 acres with the balance of the area either open water (Beaver Brook) or wetlands. The proposed tree removal within the 100-foot buffer zone for this project is approximately 0.4 acres. These values are being provided in this letter as they were discussed at the February 6, 2024, hearing, as noted during discussions on limited ability to replant within the existing parcel and as related to the design intent to minimize disturbance to the overall parcel's habitat.

5. LELWD Shade Tree Program

In addition to the trees and shrubs proposed under this project's restoration plan, the LELWD also offers an annual Free Shade Tree Program to its customers to help save energy and help the environmental. Trees are planted by LELWD crews in a location mutually agreeable to the homeowner and LELWD. Since 2016, the LELWD has planted 1,110 under this program as outlined in the table below:

Year	Applicants	Trees Planted	Species
2016	67	129	Misc.
2017	88	150	October Glory Red Maple
2018	101	180	Autumn Blaze Red Maple
2019	58	130	October Glory Red Maple
2020	74	140	Autumn Blaze Red Maple
2021	90	161	American Sycamore
2022	57	110	American Red Maple
2023	63	110	Redpointe Maple
	TOTAL:	**1,110**	

6. Additional information relative to an assessment of wildlife habitat on the project site is provided below.

Pursuant to 310 CMR 10.01(2), protection of wildlife habitat is one of eight interests protected within areas subject to review under the Massachusetts Wetlands Protection Act (WPA). Weston & Sampson (W&S)

wetland scientists conducted three detailed wildlife habitat evaluations (WHEs) in accordance with the WPA and the Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands guidance document published by MassDEP in January 2024. Within the town of Littleton, the project proposes impacts to Bordering Land Subject to Flooding (BLSF), Riverfront Area (RFA), and the 100-foot buffer zone. W&S evaluated the impact areas within BLSF, RFA, and the 100-foot buffer zone for important wildlife habitat features and summarized the findings in a report that was submitted to the Littleton Conservation Commission on January 16, 2024. The report included a narrative, the detailed WHE forms, and site photographs of the impact areas.

Additional information was requested by the Commission at the February 6, 2024, public hearing. Specifically, information regarding wildlife (including bats and birds of prey) that had the potential to be affected by the project was requested. In the context of the WPA, "wildlife habitat" is defined at 310 CMR 10.04 as "an Area Subject to Protection under M.G.L. c. 131, § 40, which due to its plant community, composition and structure, hydrologic regime or other characteristics provides important food, shelter, migratory or overwintering areas or breeding areas for wildlife." Important wildlife habitat functions mean important food, shelter, migratory or overwintering areas, or breeding areas for wildlife. It is important to note that these important wildlife habitat features can be observed at any time of the year, in the absence of snow cover.

The WPA protects important wildlife habitat features within areas subject to its jurisdiction. The WPA also reviews work proposed in NHESP-mapped Estimated Habitats of Rare Wildlife. The project is located within mapped habitat for eastern meadowlark (*Sturnella magna*), Blanding's turtle (*Emydoidea blandingii*), and blue-spotted salamander (*Ambystoma laterale*). The NHESP issued a conditional "no take" authorization for the water main portion of the project on December 15, 2023 (NHESP File No. 23-4202). A Blanding's turtle protection plan will be submitted to NHESP for written review and approval prior to the start of construction. The LELWD is in consultation with NHESP regarding the well construction portion of the project.

Important Wildlife Habitat Features within the Project Site:

Important habitat features that were observed within jurisdictional areas proposed to be impacted by the project included the following features listed below. Please refer to the WHE report that was submitted on January 16, 2024, for additional information.

- Wildlife food sources, including hard mast and fruit/berry producing plants. Sources of food identified on site included acorns from red oak and white oak trees (present within the BLSF and 100-foot buffer zone impact areas), and highbush blueberry (*Vaccinium corymbosum*) (present adjacent to the BLSF impact area). Acorns and berries are consumed by several birds and mammals. Oak trees also provide good cover for mammal and bird species and nesting sites for songbirds. Deer browse the leaves, and a variety of mammals eat the acorns.

- Trees with Cavities – One red oak tree measuring 6-12" DBH containing small cavities from woodpecker activity was observed in the 100-foot buffer zone impact area. This tree is proposed to be removed to construct the infiltration basin and access road leading to the proposed well. It is important to note that no trees with cavities were observed within the BLSF and RFA impact areas. Additionally, both live and dead trees containing cavities were commonly observed elsewhere on site, in the areas that will remain undisturbed.
- Standing Dead Trees – Four standing dead trees (snags) were observed within the 100-foot buffer zone impact area measuring 6-12" DBH each. There were no larger snags observed within the impact area, and no snags were observed in the RFA or BLSF impact areas. Snags are a common wildlife habitat feature throughout the site, especially within the expansive emergent marsh that borders Beaver Brook. There will be no impacts within this area.

- Cover/Perches/Nesting Habitat - The BLSF impact area contains some trees with visibility of the open water in the adjacent wetland system. The wetland itself will not be impacted by the project. Some of the trees surrounding the wetland provide visibility of open water habitat and could serve as perches for birds such as kingfishers and flycatchers. The wetland is surrounded by trees around its perimeter that could serve as perching sources. There will still be many perching areas post-construction, as the wetland is not being impacted by the project.

There was also a small log pile observed within the 100-foot buffer zone impact area on the ground. This could serve as cover for small mammals, snakes, and amphibians. Course woody debris (CWD) on site will be preserved to the maximum extent practicable and is a common feature throughout other portions of the site, which will remain undisturbed by the project. Although very little CWD was observed within proposed impact areas jurisdictional under the WPA, the applicant recognizes the importance of this feature for wildlife. The Buffer Zone Restoration & Enhancement Plan includes a requirement that approximately 5% of the restoration area shall be covered in coarse woody debris consisting of tree branches or logs that will provide cover for amphibians, snakes, and small mammals. Three to five brush piles shall be placed in the buffer zone restoration areas for the same purpose.

- Exposed Areas of Well Drained, Sandy Soil Suitable for Turtle Nesting – The project site is located within NHESP-mapped habitat for Blanding's turtles. The existing cleared footpath leading to the proposed well location contains sandy soils that could potentially provide nesting habitat for turtles. However, this area receives little sunlight as it is surrounded by mature forest. There are open grassy areas that exist around the perimeter of the parking lot upgradient of the project site that likely provide more suitable nesting habitat.

Relation to the WPA:

BLSF:

Pursuant to 10 CMR 10.57(4)(a)3, work in those portions of BLSF found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions. On the project site, the BLSF impact area consists primarily of an opening in the tree canopy that is already cleared within an existing footpath and where an existing well is present. There will be some tree removals in BLSF, as depicted on the plans, but the path itself is already relatively open.

The LELWD is proposing a Buffer Zone Enhancement to mitigate for the proposed tree removals as described above and discussed at the February 6th public hearing.

RFA:

According to 310 CMR 10.58(1), "riverfront areas are important wildlife habitat, providing food, shelter, breeding, migratory, and overwintering areas. Riverfront areas promote biological diversity by providing habitats for an unusually wide variety of upland and wetland species, including bald eagles, osprey, and kingfishers. Large dead trees provide nesting sites for bird species that typically use the same nest from year to year. Sandy areas along rivers may serve as nesting sites for turtles and water snakes. Riverfront areas provide food for species such as wood turtles which feed and nest in uplands but use rivers as resting and overwintering areas. Riverfront areas provide corridors for the migration of wildlife for feeding or breeding."

The proposed work in RFA within the town of Littleton is limited to installation of the raw water main within a MassDOT easement along an existing maintained highway embankment adjacent to Route 2. The RFA impact areas along the highway shoulder consist of herbaceous vegetation dominated by grasses and mugwort (*Artemisia vulgaris*), with no shrubs or trees. This area is heavily disturbed from the adjacent highway and contains invasive species including Asian bittersweet (*Celastrus orbiculatus*) and poison ivy (*Toxicodendron radicans*) that are not particularly conducive to wildlife. Additionally, following installation of the water main, this area will be restored with a native seed mix. The project will not result in a loss of the RFA that could provide a corridor for the migration of wildlife, nor will it inhibit the ability of wildlife to be able to move across riverfront areas between uplands and Beaver Brook.

There are areas significant to wildlife habitat present on site within RFA; however, these areas will not be impacted by the project. These areas include a large emergent marsh system that borders on Beaver Brook. The open water likely provides habitat for birds of prey and waterfowl. Many standing dead trees were observed within the marsh. According to the Buffer Zones and Beyond: Wildlife Use of Wetland Buffer Zones

and their Protection under the Massachusetts Wetlands Protection Act by Lynn Boyd[1], the following species are known to utilize these types of habitats with dead trees: Hooded Merganser, Tree Swallow, and Wood Duck. It is possible that Belted Kingfishers use the site for nesting and hunting over open water in Beaver Brook.

Birds of Prey:

The Commission asked specifically about raptors and bats and their potential use of the site.

Birds of prey that are most likely to utilize the site would likely include generalist species that can live in suburban areas such as Red-tailed Hawks, Red-shouldered Hawks, and Cooper's Hawks. These species thrive in a variety of habitats.

Certain bird species require distance from human activity, including Great Blue Heron, Bald Eagle, and Osprey[1]. These species may use the project site but would be likely to use the emergent wetland system and Beaver Brook, rather than the surrounding upland areas where work is proposed as part of this project. According to the NHESP, in Massachusetts, Bald Eagles use the Quabbin Reservoir, the Connecticut River, the Merrimack River, and the Assawompsett Pond complex throughout the year as both nesting and wintering habitat[2]. They require a long distance of shoreline habitat with stands of forest for nesting and perching. It is possible that they would utilize the shoreline along Beaver Brook; however, they typically prefer coastal areas and larger inland waters.

Northern Harriers prefer areas of open grassland and marsh. It is possible that they would use the emergent wetlands on site but would be more likely to use an area that has more open adjacent grasslands. American Kestrels prefer open grassland habitats. It is possible that they would use the maintained grass area between the forest and the parking lot on site, but they are unlikely to use the impact areas within the forest.

Bats and Other Mammals:

Other species that may use wildlife habitat features within the project site include beavers, who inhabit wetlands but forage in adjacent upland areas. No signs of beaver activity were observed within the RFA, BLSF, or buffer zone impact areas. White-tailed deer are another species that are likely to use the site. Deer are common across Massachusetts.

Bats are another mammal that may utilize the site. Several bat species use wetlands for feeding on insects and use adjacent upland areas for roosting[1]. In the winter months, most of the bat species in Massachusetts overwinter in caves, mines, buildings, or rock crevices. None of these features are present within the project site impact areas. Some bat species, including the Little Brown Bat (*Myotis lucifugus*) typically roost in buildings in the summer months. Thus, they are unlikely to use the project site. Other species, like the Big Brown Bat (*Eptesicus fuscus*), which are more common, utilize both buildings and trees for their summer habitat. Big Brown Bats may use this site for foraging, particularly in the wetland areas[3]. The federally endangered northern long-eared bat (*Myotis septentrionalis*) can live almost anywhere where there are trees. During the summer, they roost in cavities or crevices of both live and dead trees[4]. There are no known mapped maternity roost trees nor hibernacula for the northern long-eared bat within the town of Littleton according to the NHESP map[5].

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[1] Boyd, 2001. Buffer Zones and Beyond: Wildlife Use of Wetland Buffer Zones and Their Protection Under the Massachusetts Wetland Protection Act. Boyd, Lynn. Wetland Conservation Professional Program. Department of Natural Resources Conservation. University of Massachusetts. July, 2001.

[2] Massachusetts Division of Fisheries & Wildlife Natural Heritage & Endangered Species Program (2019). Bald Eagle Fact Sheet. https://www.mass.gov/doc/bald-eagle-factsheet/download#:~:text=In%20Massachusetts%2C%20Bald%20Eagles%20use,both%20nesting%20and%20wintering%20habitat.

[3] Massachusetts Division of Fisheries and Wildlife. Conservation of Bats in Massachusetts. 2024 Commonwealth of Massachusetts. https://www.mass.gov/info-details/bats-of-massachusetts

[4] U.S. Fish & Wildlife Service. Northern Long-Eared Bat (Myotis septentrionalis). Environmental Conservation Online System. https://ecos.fws.gov/ecp/species/9045

[5] https://mass-eoeea.maps.arcgis.com/apps/Viewer/index.html?appid=de59364ebbb348a9b0de55f6febdfd52

Bats in New England tend to favor trees with exfoliating or peeling bark and cavities on live or standing dead trees as roosting sites.[6] Old or late successional trees tend to be more likely to exhibit sloughing bark and furrows which provide roosting habitat. Studies have shown that the Indiana Bat (*Myotis sodalis*) utilizes trees with an average DBH (diameter at breast height) of approximately 18" for its maternity roost trees[7]. Snags also tend to increase the likelihood of bat presence, since they have the potential to serve as roosting trees and also attract insects that bats feed on.[6] Bats also are attracted to forests with some gaps and openings for them to hunt.

Within the project site, bats may use some of the larger trees and may feed within the forested wetlands or the large marsh within the site. During the WHE, wetland scientists looked for signs of exfoliating bark and cavities within the trees proposed to be removed. Only one tree with cavities was observed within the 100-foot buffer zone impact area (and none within the BLSF or RFA impact areas). Trees were of varying sizes, and many were smaller than 12" DBH. Trees with exfoliating bark were not commonly observed throughout the impact area. Within the project site, four snags were observed within the impact area during the WHEs, measuring 6-12" DBH each. These are relatively small and while they could be used by bats, they would likely prefer to utilize larger trees.

Wildlife Habitat Assessment Summary:

Alteration to the wildlife habitat located within the Littleton Well and Water Main Extension project site will not substantially reduce its capacity to provide the important wildlife habitat functions listed in 310 CMR 10.60(2). Important wildlife habitat features that were observed within the impact areas are generally common throughout the overall project site. The project proposes no impacts to Bordering Vegetated Wetlands; impacts to resource areas are limited to BLSF and RFA. The RFA impact areas along the highway shoulder exhibit heavy disturbance and provide limited wildlife habitat value. Additionally, the applicant is coordinating with NHESP to ensure there will be no adverse impacts to rare species habitat, and a turtle protection plan will be provided and implemented for the project.

We look forward to discussing the project at the next meeting on February 20th. If you have any questions regarding this submittal, please contact me at (978) 573-4024 or mcmanust@wseinc.com.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.

Tara E. McManus, PE
Vice President

P:\MA\Littleton MA\Digital Property New Source Approval\008 Permitting\NOI Littleton\Response to Comments\2024.02.15 Additional Info Provided to Con Com\Cover Letter.docx

[6] New England Forestry Foundation (March 14, 2022). Habitat for tree-dwelling bats. https://newenglandforestry.org/bat-forest-habitat/
[7] Conserve Wildlife Foundation of New Jersey. Bats in New Jersey. https://www.conservewildlifenj.org/downloads/cwnj_626.pdf