

# Memo

**To:** Rockland Conservation Commission

From: Lori Macdonald, MS, Certified Wildlife Biologist

Sr. Environmental Scientist

cc: Marta Nover, BETA

**Date:** February 23, 2021

Re: Impacts to Wetland Functions and Values associated with Work within BVW's

100-Foot Buffer Zone

Notice of Intent Supplemental Documentation (DEP File # 273-0408) Shingle Mill Multi-Family Development, 0 Pond Street, Rockland, MA

<u>BETA Comment W9:</u> The Applicant needs to demonstrate that the proposed work (both construction impacts and the built development) will contribute to the interests of the Act including protection of groundwater, surface water, public water supply, and pollution prevention.

The project will result in a total of 266,903 square feet of impacts to the 100-foot Buffer Zone of Bordering Vegetated Wetlands (BVW). Grading and the proposed stormwater basins will impact approximately 123,340 square feet of BVW 100-foot Buffer Zone. Structures, the parking lots, the paved access drive and the pedestrian path will impact approximately 143,550 square feet of BVW 100-foot Buffer Zone.

Approximately 2,815 square feet of potential temporary impacts to BVW may occur during construction. These temporary impacts would be associated with the installation and maintenance of erosion controls, the cutting of vegetation, and potential rutting within wetland areas caused by construction.

# MA WPA AND ROCKLAND WETLAND REGULATIONS

# MA WPA 310 CMR 10.55 Bordering Vegetated Wetland and Associated Buffer Zone

According to 310 CMR 10.55 of the MA Wetlands Protection Regulation: "Bordering Vegetated Wetlands are likely to be significant to public or private water supply, to ground water supply, to

flood control, to storm damage prevention, to prevention of pollution, to the protection of fisheries and to wildlife habitat."

In addition, any Activities Within the Buffer Zone other than minor activities identified in 310 CMR 10.02(2)(b)2. proposed or undertaken within 100 feet of an area specified in 310 CMR 10.02(1)(a) (hereinafter called the Buffer Zone) which, in the judgment of the issuing authority, will alter an Area Subject to Protection under M.G.L. c. 131, § 40 is subject to regulation under M.G.L. c. 131, § 40 and requires the filing of a Notice of Intent. (See also 310 CMR 10.05(3)(a)2.).

## **ANALYSIS**

It is anticipated that the project including both construction impacts and the built environment will contribute to the interest of the Wetlands Project Act.

#### PUBLIC OR PRIVATE WATER SUPPLY

The proposed work within BVW 100-foot buffer zone and potential temporary construction impacts to BVW will not affect the public water supply functions and values of the wetlands on site during or upon completion of construction.

Stormwater will be pretreated and infiltrated in accordance with the MA Stormwater Management Standards. The stormwater system is designed to pretreat the first 1" of stormwater shedding from the pavement. Oils greases and gas that are transported as a part of the first flush will be held in the catch basin hoods or proprietary oil water separators. Catch basin hoods and proprietary BMPs will be maintained regularly.

Collected stormwater will discharge to underground infiltration systems located within the parking lots. Stormwater during high flows will bypass the infiltration system and discharge to lined stormwater wetlands where stormwater will be stored in the vegetation and soils and then discharge to adjacent wetland. The stormwater management system will be pretreated to remove at least 80% TSS. Heavy metals, iron and nutrients that adhere to soil particles will be detained in the catch basin sumps. Dissolved heavy metals, iron and nutrients will be taken up by the stormwater wetlands' vegetation or bound in organic soils.

The Operations and Maintenance Plan & Long-Term Pollution Prevention Plan includes measures to help increase the water quality of stormwater runoff. Measures include street sweeping, catch basin cleaning and stormwater wetland maintenance schedules. Stormwater facilities will be inspected, and accumulated sediments and trash will be removed and disposed of off-site in accordance with the site operation and maintenance schedule. Other items include a ban on the use of salt on site during snow and ice operations and removing stockpiled plowed snow from the site. Copies of the Operation and Maintenance Plan and Long-Term Pollution Prevention Plan are attached to the revised Stormwater Management Report.

During construction, the contractor will be required to prepare and adhere to a Stormwater Pollution Prevention Plan in accordance with the National Pollution Discharge and Elimination System (NPDES) Construction General Permit. Erosion and sedimentation controls will be installed and maintain during construction to avoid impacting adjacent wetland resource areas.

Temporarily impacted BVW and the 100-foot Buffer Zone will be restored upon completion of construction. Areas will be loamed and seeded as necessary with either a native Wildlife Habitat Restoration Mix or Wetland Seed Mix.

# **GROUND WATER SUPPLY**

Work in BVW's 100-foot buffer zone and potential temporary construction impacts to BVW will not affect the groundwater supply functions and values of wetlands on site during or upon completion of construction. The wetland system is a perch wetland system connected via subsurface water generally found at approximately elevation 132 to elevation 133 feet +/- throughout the project area.

When installing bedrock wells on site overburden was encountered from 0 to 55 feet below ground surface. The well casings were extended from 21.5 to 71.5 feet into bedrock. Water bearing zones were encountered at 140 to 160 feet below ground surface (bgs) at Well #1 and at 467 to 468 bgs and 582 to 584 bgs at Well #2. Well pump tests will be completed in Spring 2021 to determine if the proposed wells will result in a drawdown of wetlands on site.

Stormwater on site will be pretreated and infiltrated in accordance with the MA Stormwater Management Standards. After pretreatment of the first 1", stormwater will discharge to an underground infiltration system located within the parking lots. Stormwater during high flows will bypass the underground infiltration system and discharge to lined stormwater wetlands where water will be stored in the vegetation and soils prior to discharging to adjacent BVW.

No impact to groundwater quality is anticipated. No impact to subsurface water quality is anticipated.

A minor amount of water may be lost from the system due to evaporation and transpiration however, this loss of water from the system is insignificant and will not impact ground water supply.

The Operations and Maintenance Plan & Long-Term Pollution Prevention Plan includes measures to help increase the water quality of stormwater runoff. Measures include street sweeping, catch basin cleaning and stormwater wetland maintenance schedules. Stormwater facilities will be inspected, and accumulated sediments and trash will be removed and disposed of off-site in accordance with the site operation and maintenance schedule. Other items include a ban on the use of salt on site during snow and ice operations and removing stockpiled plowed snow from the site. Copies of the Operation and Maintenance Plan and Long-Term Pollution Prevention Plan are attached to the revised Stormwater Management Report.

During construction, the contractor will be required to prepare and adhere to a Stormwater Pollution Prevention Plan in accordance with the National Pollution Discharge and Elimination System (NPDES) Construction General Permit. Erosion and sedimentation controls will be installed and maintained during construction to avoid impacting adjacent wetland resource areas.

During and upon completion of construction herbicides, pesticides, hazardous materials, oil, grease and gas will not be used or stored within the limits of the new Zone I Wellhead Protection

Area. These materials will be stored in secondary container outside the Zone I. Spill kits will be available on site in case of an accidental spill at all times.

Temporarily impacted BVW and the 100-foot Buffer Zone will be restored upon completion of construction. Areas will be loamed and seeded as necessary with either a native Wildlife Habitat Restoration Mix or Wetland Seed Mix.

#### FLOOD CONTROL

Work in the BVW's 100-foot buffer zone and potential temporary construction impacts to BVW will not affect Flood Control functions and values of BVW on site during or upon completion of construction. The 100-year floodplain boundary has been adjusted to match the 2020 revised Preliminary Floodplain Map (Figure 6 (revised)). As a result, the project will not permanently impact the 100-year flood plain.

BVW will continue to accommodate overland flow associated with storm events.

The project has been designed to so that the peak flow rates and total volume of stormwater leaving the site are less than existing conditions during the 2-, 10-, 25- and 100-year storms.

During construction, the contractor will be required to prepare and adhere to a Stormwater Pollution Prevention Plan in accordance with the National Pollution Discharge and Elimination System (NPDES) Construction General Permit. Erosion and sedimentation controls will be installed and maintain during construction to avoid impacting adjacent wetland resource areas.

Temporary impacts to the 100-year floodplain may occur to the south of the eastern apartment building when installing approximately 100 linear feet of erosion controls and when constructing the adjacent walls and wall footings. The temporary impacts would involve the cutting of vegetation and minor earth disturbance. The areas will be restored to original grades upon completion of construction. Areas will be loamed and seeded as necessary with either a native Wildlife Habitat Restoration Mix or Wetland Seed Mix.

#### STORM DAMAGE PREVENTION

Work in BVW's 100-foot buffer zone and potential temporary construction impacts to BVW will not affect the ability of BVW to provide storm damage prevention during and upon completion of construction. BVW will continue to accommodate overland flow and provide flood protection similar to existing conditions. The project has been designed to so that the peak flow rates and total volume of stormwater leaving the site is less than existing conditions during the 2-, 10-, 25- and 100-year storms.

During construction, the contractor will be required to prepare and adhere to a Stormwater Pollution Prevention Plan in accordance with the National Pollution Discharge and Elimination System (NPDES) Construction General Permit. Erosion and sedimentation controls will be installed and maintain during construction to avoid impacting adjacent wetland resource areas.

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### PREVENTION OF POLLUTION

Work within BVW's 100-foot buffer zone and potential temporary construction impacts to BVW will not affect the ability of BVW to withhold and detain pollutants during and upon completion of construction. BVW will continue to retain pollutants in vegetation and organic soils, protecting surface and groundwater from contamination. The project will not alter wetland soils and their ability to absorb and detain pollutants. Wetland vegetation will continue to uptake and store nutrients and heavy metals in its biomass. Wetland organic soils will continue to adsorb nutrients, heavy metals, oils and grease.

No added pollutants are anticipated to be directed to BVW as a part of the project. Deep sump hooded catch basins and proprietary oil water separators will pretreat the first 1" of runoff and remove at least 80% TSS and associated nutrients, pollutants and heavy metals. At least 44% TSS pretreatment will occur prior to stormwater discharging into an infiltration facility. Dissolved nutrients, heavy metals and other metals will be directed to Stormwater Wetlands where they will be stored in the stormwater wetlands' organic soils and vegetation. Nitrogen will be detained in soils, converted to usable forms of nitrogen for uptake by vegetation or off gassed. Oils and greases that make it past the primary BMPs will be held back by vegetation in the Stormwater Wetlands and be broken down by sunlight over time.

The Operations and Maintenance Plan & Long-Term Pollution Prevention Plan includes measures to help increase the water quality of stormwater runoff. Measures include street sweeping, catch basin cleaning and stormwater wetland maintenance schedules. Stormwater facilities will be inspected, and accumulated sediments and trash will be removed and disposed of off-site in accordance with the site operation and maintenance schedule. Other items include a ban on the use of salt on site during snow and ice operations and removing stockpiled plowed snow from the site. Copies of the Operation and Maintenance Plan and Long-Term Pollution Prevention Plan are attached to the revised Stormwater Management Report.

During construction, the contractor will be required to prepare and adhere to a Stormwater Pollution Prevention Plan in accordance with the National Pollution Discharge and Elimination System (NPDES) Construction General Permit. Erosion and sedimentation controls will be installed and maintain during construction to avoid impacting adjacent wetland resource areas.

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#### PROTECTION OF WILDLIFE HABITAT

Work within BVW's 100-foot buffer zone and potential temporary construction impacts to BVW will not affect the Protection of Wildlife Habitat functions and values of wetlands on site during and upon completion of construction.

Under the MA WPA (M.G.L. c. 131, § 40) and its associated regulations as specified in 310 CMR 10.00, Vernal Pool habitat features exist within Wetland F but will not be impacted by the project.

Under the Rockland Wetland Bylaw (Chapter 407, Section 407-02 (D)), Vernal Pool habitat features exist within Wetland F but will not be impacted by the project. The Vernal Pool will still provide breeding habitat and habitat for sedentary vernal pool species. Wetland F's 100-foot Buffer Zone provides Vernal Pool habitat, however impacts will have a negligible effect on wildlife habitat. Overwintering, dispersal and migrating habitat within Wetland F's 100-foot Buffer Zone is poor and these features are not as important as onsite wetland features that provide the same function. Impacts within the 100-foot Buffer Zone will have negligible effects on wood frog and other amphibian species that use the Vernal Pool for breeding.

A complete analysis of project impacts to Wetland F's Vernal Pool Habitat Features is included in the attached memo, "Impacts to Wetland F's Functions and Values Associated with Work in the 100-Foot Buffer Zone".

There are no mapped MNHESP Estimated or Priority Habitats on site.

The installation of walls and the access road will likely impact wildlife connectivity within the site however this impact to wildlife connectivity will not result in a significant impact to wildlife populations. Species that use the site are common species.

Wildlife sign identified on site include racoon, fox or coyote, and white tail deer. Wood frog are known to use Wetland F for breeding. Other species that may be on site include skunk, mink, long tailed weasel, common garter snake, spring peepers and eastern toad.

The proposed walls along the access road will impact small, medium, and large sized mammals such as deer, coyote, fox, raccoon, mink, long-tailed weasel, skunk, amphibians and reptiles. These common species will find alternate routes around the development. Breaks in the walls are provided at the site entrance which will help maintain wildlife connectivity moving between the wetland south and wetland north of the access road.

During construction, the contractor will be required to prepare and adhere to a Stormwater Pollution Prevention Plan in accordance with the National Pollution Discharge and Elimination System (NPDES) Construction General Permit. Erosion and sedimentation controls will be installed and maintain during construction to avoid impacting adjacent wetland resource areas.

Temporarily impacted BVW and the 100-foot Buffer Zone will be restored upon completion of construction. Areas will be loamed and seeded as necessary with either a native Wildlife Habitat Restoration Mix or Wetland Seed Mix.

#### **PROTECTION OF FISHERIES**

There are no fisheries resource functions and values associated with BVW on site.

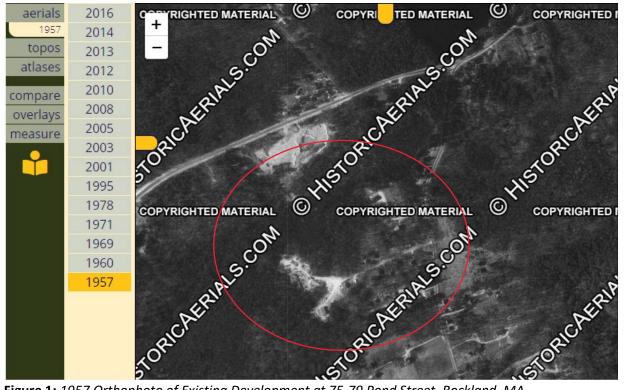


Figure 1: 1957 Orthophoto of Existing Development at 75-79 Pond Street, Rockland, MA.



Figure 2: 1960 Orthophoto of Existing Development at 75-79 Pond Street, Rockland, MA.



Figure 3: 1969 Orthophoto of Existing Development at 75-79 Pond Street, Rockland, MA.



Figure 4: 1971 Orthophoto of Existing Development at 75-79 Pond Street, Rockland, MA.



Figure 5: 1978 Orthophoto of Existing Development at 75-79 Pond Street, Rockland, MA.



Figure 6: 1995 Orthophoto of Existing Development at 75-79 Pond Street, Rockland, MA.

