

## **2.0 Notice of Intent Narrative**

This Needham General Wetland Protection Bylaw Notice of Intent (NOI) is being submitted by Coneco Engineers & Scientists, Inc. (Coneco) on behalf of the Wellesley Country Club (WCC) for proposed work within a portion of the WCC located at 0 Forest Street in Needham, Massachusetts. This project is proposed in accordance with the Article 6 of the Town of Needham General Bylaws, and is not subject to the Massachusetts Wetlands Protection Act.

The project involves restoration an area on the Wellesley Country Club Property within the Town of Needham (Figure 1). The parcel is bordered by the Wellesley/Needham Town Line along the northern parcel boundary, on the east by Brookside Road, on the west by Forest Street, and residential properties to the south.

The proposed restoration includes removal of accumulated sediment within an isolated wetland, limited grading within the 100-foot buffer zone, and replanting of the buffer zone. Erosion and sedimentation controls will be installed at the limits of work prior to the commencement of construction activities to limit additional impacts to all wetland resource areas and buffer zones.

One wetland (Wetland M) was identified at the project site (Sheet 1). Resource Areas associated with the restoration of Wetland M subject to the protection under the Needham Wetland Bylaw includes; Freshwater Wetland and the associated 100-foot Buffer Zone. These Resource Areas were identified in the vicinity of proposed project elements by Coneco wetland scientists in accordance with the Needham Wetlands Regulations.

## **2.1 Existing Conditions and History of the Action**

The Wellesley Country Club is located at 294 Wellesley Avenue in Wellesley Massachusetts and consists of several separate parcels of land. The subject parcel where the proposed restoration will occur is located on a portion of the WCC property in the town of Needham, Massachusetts. The approximate 10 acre parcel is bordered by the Wellesley/Needham Town Line to the north, Brookside Road to the east, Forest Street to the west, and residential properties to the south.

A temporary storage and stockpile area used for golf course operations is located off Brookside Road in the southeastern portion of the WCC property in both Wellesley and Needham. This area was formerly two of the course golf holes and has been used in golf course operations since at least the 1960s. The limits of the cleared stockpiling area follow the old golf holes and extend into the 100-foot buffer zone to an isolated wetland (Sheet 1). The area has historically been used as a temporary storage area for brush cuttings, excess loam and topsoil, and other materials generated during regular operations and maintenance of the golf course.

In March 2011 the WCC entered into an agreement with a company to remove the stockpiled materials from this area as a routine housekeeping measure. Prior to beginning

these operations Coneco delineated the isolated wetland. During the site reconnaissance, a Coneco wetland scientist evaluated all wetland resource areas in the vicinity of the site that would potentially be subject to jurisdiction under the Massachusetts Wetlands Protection Act (WPA) regulations as well as the Town of Needham Wetland Protection Bylaw. One jurisdictional wetland resource area (Wetland M) was identified in the area. A description of the wetland resource area identified in the vicinity of the site is provided in Section 2.2.

In early April the WCC received a form letter from the Town of Needham Conservation Department (dated April 11) advising property owners that it is illegal to dump materials into wetlands. As a proactive measure, the WCC contacted the Needham Conservation Officer to follow-up on this letter. The WCC was then informed that a resident of Wellesley had made a complaint to the Needham Conservation Officer about the Club's operations on this parcel of land in Needham. On April 21<sup>st</sup> the Needham Conservation Officer conducted a site visit with Bill Sansone (WCC Golf Course Superintendent) and Michael Toohill (Coneco) to inspect the area. During the site visit it was apparent that some of the stockpiled material was located within 100 feet of an isolated vegetated wetland and that the toe of a stockpile of wood chips had encroached on the wetland line. There was also a small "delta" of sediment at the edge of the wetland that appears to have come from a loam stockpile in the buffer zone.

## **2.2 Wetland Resource Areas**

Wetland resource areas at the site were delineated by a Coneco wetland scientist in March 2011. Wetlands at the site were delineated in accordance with both state and local guidelines. At the state level, wetlands were delineated in accordance with *Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands Protection Act* (Massachusetts Department of Environmental Protection, 1995), and at the local level, in accordance with the Town of Needham Wetlands Protection Regulations.

Wetland Resource Areas in the vicinity of proposed project elements were delineated and marked in the field using sequential alpha-numeric identifiers on pink flagging tape. Wetland M is an isolated wetland area subject to the jurisdiction of the Town of Needham Wetland Protection Bylaw. The edge of Wetland M was marked in the field as wetland series M-1 to M-14. Dominant vegetation identified in this area included red maple (*Acer rubrum*), glossy buckthorn (*Rhamnus frangula*), honeysuckle (*Lonicera sp.*) and swamp azalea (*Rhododendron viscosum*) in the tree and shrub layers. Most of the interior of Wetland M is a small pond (approximately 1,250 square feet in surface area and approximately 1 to 2 feet deep in the center) which has neither a defined inlet nor outlet and appears to be an expression of the ground water table. The watershed to the wetland is very small (approximately ½ acre) and the pond falls short of the criteria of holding ¼ acre feet of water to an average depth of 6 inches. Therefore, the area likely does not serve as Isolated Land Subject to Flooding. While the area within Wetland M has the function characteristics of a wetland, it is not subject to jurisdiction under the WPA as a BVW because it is not a bordering vegetated wetland, as required under 310 CMR 10.55(2).

Upland areas in the vicinity of the proposed restoration area, including wetland buffers, are a combination of upland forest, unpaved stockpiling areas, and paved roadway (Brookside Road). The area to the west of the wetland is cleared of vegetation for the purposes described above and will be partially restored as part of the proposed project. Brookside road is located approximately 10-15 feet west of the wetland edge and is separated from the wetland by a narrow band of upland vegetation. The forested uplands immediately adjacent to the isolated wetland to the north, west and south are dominated by a combination of white pine (*Pinus strobus*) flowering crab apple (*Malus sp.*) and oak species (*Quercus alba* and *Q. rubra*).

According to the MassGIS and the Massachusetts Natural Heritage Atlas (13<sup>th</sup> Edition, October 2008), there are no potential or certified vernal pools, no Estimated Habitats of rare wildlife, and no Priority Habitats of rare species mapped at or in the vicinity of the site. In addition, the site is not located within an Area of Critical Environmental Concern (ACEC) according to the 2008 Massachusetts ACEC List (September 2008, Executive Office of Environmental Affairs). The site does not contain Outstanding Resource Waters listed in the Massachusetts Surface Water Quality Standards (314 CMR 4.00).

According to the Federal Emergency Management Agency (FEMA), National Flood Insurance Program, Flood Insurance Rate Map (FIRM) for the Town of Needham MA (Community Panel # 255215 0002 C) the proposed project areas are mapped as Zone C. Zone C is defined by FEMA as areas of minimal flooding (greater than 500 year event).

### **2.3 Proposed Activities, Impacts, and Mitigation**

The temporary storage and stockpile area used for golf course operations is located off Brookside Road in the southeastern portion of the WCC property in both Wellesley and Needham. This area was formerly two of the course golf holes and has been used in golf course operations since at least the 1960s. The limits of the cleared stockpiling area follow the old golf holes and extend into the 100-foot buffer zone to the isolated wetland. In March the WCC entered into an agreement with a company to remove the stockpiled materials from this area as a routine housekeeping measure.

Following the April 21<sup>st</sup> site visit with the Needham Conservation Commission Agent, WCC installed erosion controls consisting of silt fence and straw bales to protect the wetland from potential impacts from sediment runoff from the adjacent unpaved area and material stockpiles. Prior to the installation of the erosion controls a small amount of wood chips and stockpiled topsoil had encroached into the edge of the wetland.

In order to remedy this incidental impact to the wetland, the WCC is proposing to remove the stockpiled material from the buffer zone and the eroded material within the wetland and buffer zone. Once removed, all disturbed areas within the wetland and buffer will be re-graded to the natural contours and replanted with appropriate native plant materials and/or seed mix as provided on the enclosed restoration plan (Sheet 2). The proposed project at the WCC involves the removal of a small area (approximately 5 feet by 10 feet) of

accumulated sediment within an isolated wetland, removal of a small area of wood chips (approximately 1 by 15 feet) from the edge of the wetland, and restoration of the 100-foot buffer zone in Needham. A professional wetland scientist will be present on-site to oversee the restoration process.

Planting and seeding has been divided into three zones, and a gravel drive is also proposed. The proposed seed mixes and shrub species to be planted are provided in Table 1 below. On the steeper disturbed slopes the slope will be graded and seeded with an erosion control mix consisting of mostly bent, rye, and fescue grasses. Upslope of that first zone a row of shrubs will be planted and the remaining ground seeded with a conservation mix (mostly fescues) used at the golf course. Immediately upslope of the shrub zone will be a 15 feet wide gravel path for equipment coming in from Brookside Road to the materials recycling area outside of the 100-foot buffer zone. This gravel path will help "formalize" the route to be taken through the buffer zone and will help minimize erosion (currently the travel route is bare earth and tends to get rutted after rainstorms). On the opposite side of the gravel path will be the third seeding zone. All disturbed areas north of the path within the buffer zone will be graded and seeded with conservation mix. Concrete slabs (already onsite) will be used to mark the "entrance" and "exit" from the buffer zone. WCC will also post signage at either end of the path through the buffer zone.

Table 1 – Restoration Area Plant Species

<u>Zone</u>	<u>Common Name</u>	<u>Species Name/Seed Mix<sup>1</sup></u>	<u>Plant Size / Application Rate</u>	<u>Number</u>
<b>Zone 1 – Steep slope near wetland edge</b>	<b>Conservation Shade Seed Mix</b>	<b>Ernst Mix ERNMX-114<sup>1</sup> (or equivalent)</b>	<b>3-5 lb / 1,000 sq. ft.</b>	<b>2.5 lb</b>
<b>Zone 2 – Shrub and low grass</b>	<b>Serviceberry Spice bush Low bush Blueberry</b>	<b>Amalanchier canadensis Lindera benzoin Vaccinium angustifolium</b>	<b>2-3' 18-24" 6-12"</b>	<b>4 10 12</b>
	<b>Low-Growing Wildflower/Grass Seed Mix</b>	<b>Ernst Mix ERNMX-156<sup>2</sup> (or equivalent)</b>	<b>½ lb / 1,000 sq. ft.</b>	<b>3.5 lb</b>
<b>Zone 3 – Upland buffer bordering gravel path</b>	<b>Conservation Seed Mix</b>	<b>Ernst Mix ERNMX-114<sup>3</sup> (or equivalent)</b>	<b>3-5 lb / 1,000 sq. ft.</b>	<b>1 lb</b>

1. Species Composition Based on 2011 Ernst Conservation Seed Catalog
2. ERNMX-129, species composition: Chewings Fescue (*Festuca rubra* ssp *commutata*), Creeping Red Fescue, 'Pennlawn' (*Festuca rubra*, 'Pennlawn'), Annual Ryegrass (*Lolium multiflorum* (L. *perenne* var. *italicum*)), Rough Bluegrass (*Poa trivialis*), Kentucky Bluegrass (*Poa pratensis*)
3. ERNMX-156, species composition: Sheep Fescue, Variety Not Stated (*Festuca ovina*, Variety Not Stated), Annual Ryegrass (*Lolium multiflorum* (L. *perenne* var. *italicum*)), Lance Leaved Coreopsis (*Coreopsis lanceolata*), Blue Chicory (*Cichorium intybus*), Partridge Pea (*Chamaecrista fasciculata*), Ox Eye Daisy (*Chrysanthemum leucanthemum*), Black Eyed Susan (*Rudbeckia hirta*), Corn Poppy (*Papaver rhoeas*), Common Yarrow (*Achillea millefolium*), Plains Coreopsis (*Coreopsis tinctoria*)
4. ERNMX-114, species composition: Creeping Red Fescue, 'Pennlawn' (*Festuca rubra*, 'Pennlawn'), Kentucky Bluegrass, (*Poa pratensis*), Kentucky Bluegrass, 'Argyle' (*Poa pratensis*, 'Argyle'), Annual Ryegrass (*Lolium multiflorum* (L. *perenne* var. *italicum*)), Perennial Ryegrass (*Lolium perenne*)

Existing and proposed conditions of the project area as well as the limits of resource areas and buffer zones are depicted on the enclosed project plans (Sheets 1 and 2). Prior to construction, erosion and sediment controls will be installed along all work areas within the buffer zone. Erosion/sedimentation control installations include placement of strawbales and filter-fabric fencing or chip bags/compost bags around disturbed areas. On-going stabilization of disturbed areas will be undertaken as the work progresses. Restoration/stabilization measures include seeding, mulching, and placement of stabilization fabric where required.

#### **2.4 Conformance with the Massachusetts Wetland Protection Act**

The wetland area (Wetland M) identified at the site does not meet the definition of an Area Subject to Protection under the M.G.L. c. 131, § 40 or the WPA regulations (310 CMR 10.00) and is not subject to the jurisdiction of the Act.

The internal portion of Wetland M consists of an isolated ground water fed depression which generally contains water most of the year. This area contained standing water to a depth of approximately 12 to 18 inches (maximum) at the time of delineation. According to the WPA Regulations (310 CMR 10.04), inland ponds are defined as "any open body of fresh water with a surface area observed or recorded within the last ten years of at least 10,000 square feet. Ponds may be either naturally occurring or man-made by impoundment, excavation, or otherwise". While standing water is present within the depression, the surface area of the standing water is approximately 1,250 square feet which less than the minimum area required to meet the definition of a pond under the MA WPA Regulations (310 CMR 10.04).

In addition, the area was reviewed to determine whether the area meets the definition of Isolated Land Subject to Flooding (ILSF) (310 CMR 10.57(2)(b)). Based on the analysis of the contributing area (approximately ½ acre), the size of the depression, and the depth of the depression, the depression does not appear to hold the requisite volume of water to meet the definition of ILSF (1/4 acre-foot to an average depth of 6 inches or more).

#### **2.5 Conformance with Town of Needham Wetland Protection Bylaw**

Under the Article 6 of the Needham Wetlands Protection Bylaw and Regulations the following areas are subject to jurisdiction: (a) Any freshwater wetland, including marsh, wet meadow, bog, or swamp (b) Any bank of a lake, pond, river, stream, or other watercourse (c) Any waterbody or waterway, including any lake, river, pond, stream, or watercourse (d) Any land within 100 feet of any of the areas set forth in Section 1.02 (1) (a-c) above (the 'Buffer Zone') (e) Any land subject to flooding or inundation by groundwater or surface water.

As previously stated, the WCC is proposing to remove the accumulated sediment within a vegetated wetland and restore the impacted wetland and buffer zone. As such, activities are proposed within both vegetated wetlands and the 100 foot buffer zone.

Part II of the Needham Wetland Protection Regulations further defines and establishes performance standards for inland wetlands. The following describes how the proposed restoration will meet the performance standards for each of the affected resource areas.

**2.02(3) Performance Standards for Work in a Vegetated Wetland**

- (a) Any proposed work, permitted by the Commission, in a Vegetated Wetland shall not destroy or alter any portions of said Vegetated Wetland, nor shall the proposed work impair in any way the Vegetated Wetland's ability to perform any of the functions in Section 2.02(1).

*The WCC is seeking a permit for work within a vegetated wetland. The work will include removal of accumulated sediment (approximately 50 square feet to a depth of 6 inches) and reestablishment of the natural grades. The proposed work is intended restore the functions of the wetland as described in Section 2.02(1) of the Needham Wetlands Protection Regulations.*

- (b) No stormwater runoff may be allowed to discharge directly to a Vernal Pool.

*The proposed project only involves restoration of a Vegetated Wetland and buffer zone. In order to protect the area from impacts by stormwater discharge during construction, erosion and sediment controls will be installed along all work areas within the buffer zone prior to the start of construction. Erosion/sedimentation control installations include placement of strawbales and filter-fabric fencing or chip bags/compost bags around disturbed areas. On-going stabilization of disturbed areas will be undertaken as the work progresses. Restoration/stabilization measures include seeding, mulching, and placement of stabilization fabric where required.*

- (c) Any proposed work, permitted by the Commission, shall meet the performance standards specified in Section 2.06(3).

*The proposed restoration will meet the performance standards specified in Section 2.06(3) as described below.*

**2.06(3) Performance Standards for land within 100 feet of a water body, water way, bank, or vegetated wetland (the buffer zone)**

- (a) No construction within 25 feet of the limit of Bank or Vegetated Wetland may be permitted. Construction is here defined to include all roadways, driveways, buildings, decks, clearing and grading, stormwater detention basins, and point-source discharges. Any construction within the Buffer Zone must be designed to preserve a minimum of 25 feet of undisturbed natural vegetation and soils adjacent to a Vegetated Wetland or Bank.

*There are no roadways, driveways, buildings, decks, stormwater detention basins, clearing, or point-source discharges proposed for the project. Limited grading may be*

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*required to reestablish the natural contours within the 100 foot buffer zone as depicted on the attached project plans.*

- (b) Where the Buffer Zone provides wildlife habitat (i.e., is forested, meadowland, or otherwise undeveloped except for lawful existing lawn and ornamental or vegetable gardens), no alteration of vegetation or construction within 50 feet of the limit of Vegetated Wetland or Bank is permitted.

*The WCC is seeking authorization for work proposed within 50 foot of the limit of the Vegetated Wetland. The work will include the removal (by hand) of accumulated sediment within a vegetated wetland requiring temporary access through the buffer and the restoration of the impacted wetland and buffer zone. Buffer Zone vegetation will not be disturbed during this process.*

- (c) No construction may be permitted within 100 feet of a Vernal Pool, as defined in Section 1.04 above.

*The work will include removal of accumulated sediment, reestablishment of the natural grades, and planting of native wetland plant species. There is no "construction" associated with the project.*

- (d) No work within the Buffer Zone shall impair the water quality, water temperature, or wildlife habitat of the adjacent Water Body, Waterway, Bank, or Vegetated Wetland.

*The proposed restoration will not impair the water quality, water temperature, or wildlife habitat of the adjacent Water Body, or Vegetated Wetland. When completed, the proposed restoration will result in an improvement of these features to the pre-disturbance conditions.*

- (e) Where new point-source discharges are proposed within the Buffer Zone, a comprehensive stormwater management system shall be designed that will not degrade the values or functions of the receiving or downstream Water Bodies, Waterways, or Vegetated Wetlands, surface water, or ground water. Such stormwater management systems shall employ Best Management Practices. Any point-source discharge must be designed to discharge water at non-erosive velocities equal to 2 c.f.s (cubic feet per second) or less.

*No new point-source discharges are proposed for the project.*

- (f) Where stormwater detention basins (including any infiltration or recharge basins) are proposed within the Buffer Zone, these shall be designed to be maintenance-free, selfcleaning, and to deter acts of vandalism. The inlet and outlet shall be designed to avoid scour and erosion of the basin bottom and discharge channel. The basin must be designed to avoid or minimize direct flows between the inlet and outlet, and to maximize the stormwater residence times.

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*No stormwater detention basins (including any infiltration or recharge basins) are proposed within the Buffer Zone associated with the project.*

- (g) Erosion and sedimentation controls must be utilized for any construction within the Buffer Zone which will result in exposed soils. An erosion and sedimentation control plan must be prepared which provides specifications for temporary and permanent soil stabilization, using Best Management Practices. No silt or sediment may be permitted to enter wetland resource areas during or subsequent to construction.

*Prior to construction, erosion and sediment controls will be installed along all work areas within the buffer zone. Erosion/sedimentation control installations include placement of straw bales and filter-fabric fencing or chip bags/compost bags around disturbed areas. On-going stabilization of disturbed areas will be undertaken as the work progresses. Restoration/stabilization measures include seeding, mulching, and placement of stabilization fabric if required.*

## **2.6 Summary**

The Wellesley Country Club is proposing to restore a small portion of an isolated vegetated wetland and the associated 100-foot buffer zone in an area located to the west of Brookside Road in Needham. The area has historically been used as a temporary storage area for brush cuttings, excess loam and topsoil, and other materials generated during regular operations and maintenance of the golf course. Runoff of stockpiled material located within the buffer zone adjacent to Wetland M resulted in accumulation of sediment into the wetland. The proposed restoration will include the removal of the accumulated sediment within the wetland and buffer zone, minor re-grading to restore the natural contours of the buffer and replanting the area with appropriate plant materials.

The Applicant requests that the Needham Conservation Commission issue an Order of Conditions under the Needham Wetlands Protection Bylaw allowing the project to proceed.