

Description of Work

The Dedham Country and Polo Club is a privately owned and operated recreational facility. The complex encompasses acreage in Dedham, and Westwood, Massachusetts. While the majority of the acreage consists of uplands maintained in a manicured lawn condition, there are significant wetlands on and adjacent to the site. The Rock Meadow Brook, a perennial stream, as well as several intermittent tributaries to the Brook traverse the site, and there are small impoundments or ponds, and several expansive areas of Bordering Vegetated Wetlands on the site, as well. Approximately ninety seven acres of the DCPC lies in Dedham, with approximately 30 acres of this site in a maintained, or landscaped condition.

While the majority of the maintained acreage is upland in character, there is a significant area of landscaped terrain that could be considered a wetland under local and state regulation. In the fall of 2005, the Dedham portion of the Club was evaluated for the presence of wetland indicators, including hydrophytic vegetation, hydric soils and appropriate hydrology. Based on these indicators, a wetlands delineation for the Dedham portions of the site has been proposed. This delineation has been shown on the site plans included with the Notice of Intent. Due to the landscaped nature of the area, the delineation has relied heavily on the presence or absence of hydric soils, and less on the presence of wetlands vegetation.

Upkeep of the golf course, and related facilities requires that routine maintenance of the fairways, greens and subsurface drainage system occur on a regular basis. The DCPC also maintains several ponds throughout the site, with one pond serving as a skating pond during the winter months. While many of these activities do not fall within the jurisdiction of the Dedham Conservation Commission, some areas are clearly within the purview of the Commission. In the past, activities have been reviewed by the Conservation Commission on a sporadic basis. In the interest of providing the Commission with a comprehensive overview of the activities of the DCPC, this text and the accompanying Notice of Intent have been prepared and submitted under the Massachusetts Wetlands Protection Act and the Dedham local wetlands protection bylaw.

In general, the existing layout of the course maximizes the upland acreage and many of the DCPC activities occur in areas that are upgradient of any wetland features. However, significant portions of greens and fairways do fall within low lying wetlands and have been historically and currently maintained as golf course features. The DCPC does not plan to expand or alter any areas through this filing, the filing of this Notice is to allow the Dedham Conservation Commission to comment on the ongoing maintenance of the existing acreage.

The DCPC has tried, historically, to maintain a no disturb zone along Rock Meadow Brook, and has few areas with less than a 100' no disturb zone along the waterway.

While this standard is clearly not met in all locations, the club does try to leave a buffer between the protected waterway and activities associated with the course.

The goal of this Notice of Intent filing is to receive an Order of Conditions allowing for routine and periodic maintenance of the various structures on the course. The structures included in this filing include the greens, tees, bunkers, and fairways, the existing sprinkler system, the existing drainage system and the existing foot and cart path system throughout the site. The following text is based on the historic maintenance practices of the golf course and encompasses maintenance/management activities that may take place within Bordering Vegetated Wetlands, Bordering Land Subject to Flooding, Isolated Vegetated Wetlands and riverfront areas. No work is detailed that involves new alterations, the applicant assumes that all new work will require the filing of an individual Notice of Intent application.

Periodic Maintenance

Subsurface Drainage Systems

Large areas of the course contain subsurface drainage systems designed to drain low lying areas and lower groundwater elevations and provide for drier greens and fairways. The drain lines create a well drained playing surface capable of supporting turf grass growth. These lines are historic, with many of the drains existing for decades. Many of these drain lines appear to have been laid in areas with hydric soils, effectively draining and transforming wetland areas into playable turf. These drainage systems consist of a variety of devices including perforated pipes, crushed stone, tiles and other non-permeable materials. Occasionally, these structures become damaged, or inoperable due to frost damage, cart traffic or age.

Maintenance of these structures may include cleaning, and/or replacing clogged subsurface drain lines. Cleaning involves snakes and hoses, and is generally the first repair attempted. This work is generally short term in nature (a period of hours) and results in little accumulation of sediment. Any spoils are removed from the work area and deposited in an upland stockpile. While snaking and hosing can eliminate clogs or blockage, it can not repair a crushed or damaged line, or one that has become fully clogged.

A drain line failure occasionally may require the replacement of the line. This Notice of Intent considers only the replacement of existing drain lines. The DCPC acknowledges that installation of new drainage structures, or enlargement or lengthening of existing lines, will require the filing of separate Notice of Intent.

When it is determined that a drain line needs replacement, the entire piece of pipe must be removed from the ground and a new line bedded in fresh stone. To minimize disturbance on the course, the DCPC does all practicable excavation by hand shovel. The lines are located with probes, and the sod removed over the entire length of the drain line. When the failed line is completely exposed, it is removed from the ground and disposed

of at an appropriate location. While the existing lines typically consist of clay lines, or tiles, or even perforated pvc drain line, a typical replacement is with six inch perforated pvc piping.

The DCPC typically beds its drain lines in six inches of crushed stone, with a six inch covering of stone beneath the loam and grass. The repair policy of the DCPC has not included the use of geotextile fabric, as the Club feels that it causes premature failure that is not repairable except by replacement.

Typically, the repairs involve only handwork, and all attempts are made to complete the repairs within a short period of time. Trench work is often completed within a few hours and no exposed soil is left at the end of the workday. Longer replacements may require that a trench be open for one or more days, and should this occur, backfill materials can be covered with a tarp or backed with siltation controls. Where possible, the sod is replaced in the work area, alternately an area may need to be topdressed with loam and seeded. The goal of the maintenance crew is to restore the playing areas to a fully vegetated condition immediately.

Sand Traps and Bunkers

Existing sand traps require periodic maintenance. After several seasons' play, cart and pedestrian traffic, sand bunkers may need to be rebuilt to original specifications in size and location. Sand may need be replaced or augmented to restore depth or quality as needed. Bunker edges may need to be trimmed and shaped to maintain the integrity of the bunker structure.

The DCPC acknowledges that no new sand traps or expansion of existing bunkers or trap areas will be undertaken without the filing of an individual Notice of Intent.

Mowing and Lawn Maintenance

During the spring, summer and fall months, tees, greens and fairway areas are mowed on an almost daily basis.

Portions of the site have been allowed to naturalize. In general, the naturalized areas are on the rocky slopes, or areas that are too wet to be mowed regularly. This naturalization minimizes the watering needs of the DCPC, and provides an aesthetic quality to the course. It is the policy of the club that native grass areas will be mown once per year, with the intent being to eliminate woody plant growth in meadow areas. This practice maintains the grasslands to the original design of the course as the regular mowing of native areas reduces the possibility of woody vegetation colonizing these areas. In general, this annual mowing is done at the end of the growing season, and does not impact the nesting season of any wildlife.

Tees, greens and fairway areas within resource buffer zones may require sodding and/or turf repair. It is the intent of the golf course to provide complete turfgrass coverage. Bare, exposed soil will be repaired as quickly as possible. Most repairs are completed within a matter of hours. If soil is exposed for greater than 24 hours, silt fence and/or haybales will be installed to prevent erosion of sediments.

Red stakes with green tops will mark environmentally sensitive areas of the golf course. This signage will alert maintenance employees that the limits of regularly maintained areas have been reached.

Path and Cross Culvert Maintenance

There is an established system of pedestrian and vehicular paths throughout the golf course. While the majority of the paths are within uplands, there are sections of traversed way within the jurisdiction of the Commission. Regular maintenance of these access ways includes adding fill material to fill ruts, or damaged sections, and the addition of stonedust to the traveled surfaces. Drainage of these paths is generally informal, with flows running off of either side of the path. Improvements to paths will be limited to repair of existing surfaces. Increases in width, or run, of paths will require specific review by the Conservation Commission in the form of a Notice of Intent or Request for Determination of Applicability filing.

There are also a few cross culverts running beneath the paths. While maintenance is generally limited to cleaning and insuring clear flow paths within the existing drain pipes, occasionally there is damage to a culvert that requires immediate repair. The DCPC will agree to replace, in kind, damaged culverts. The DCPC acknowledges that any changes to size or location of existing lines, or the addition of a culvert will require specific review by the Conservation Commission.

Tree Pruning, Vista Pruning and Tree Removal

Maintenance of existing trees entails regular pruning of dead branches, clipping of live material to reduce shading over some areas of turf, and the occasional removal of dead or damaged trees. Shrubbery, adjacent to playing areas, may need to be pruned to maintain existing sight lines. While the majority of these activities occurs outside of the one hundred foot buffer zone, there are areas located within the jurisdiction of the Commission that require regular attention. In general, pruning and clipping are done to improve safety conditions in areas where pedestrian traffic intersects with damaged branches, or visibility is impaired in a way that limits the safe execution of golfing. There are a few areas where pruning is done on a regular basis to improve the quality of the underlying turf, and reduce shading. The pruning is done judiciously, and tends to reduce the need for fertilizer and other chemicals on the underlying turf.

Vista pruning to maintain the existing views is done at the edge of the greens, and is used to maintain existing sight lines across the course. The applicant agrees not to increase or

change the pattern of vista pruning without the express permission of the Conservation Commission.

Fertilizer and Pesticide Programming

Maintaining the Country Club requires the regulated use of fertilizer and pest management practices. This program will be performed as specified within the IPM plan. This plan includes the following provisions:

1. Turfgrass buffer strips of at least 25' of 2" turf will be maintained around all wetlands resource areas, to the extent possible. In some instances, the original design of the golf hole may prevent higher turf in specific areas.
2. No fertilizer or pesticide will be applied immediately before a significant rain event. Adherence to this policy requires that all applications be monitored. The Dedham Country and Polo Club golf course superintendent will supervise all fertilizer and pesticide applications.
3. The pesticide storage facility conforms to all state and federal guidelines. The storage facility is a separate steel building with secondary containment.
4. Pesticides will be selected based on environmental sensitivity of the product. For example, the adsorption coefficient or ability of the pesticide product to bind to organic matter will be evaluated to reduce the potential for pesticide runoff. Pesticide products are evaluated based on target pest, mode of action and environmental sensitivity.
5. Overseed with disease resistant cultivars to reduce the need for pesticides.
6. Spot treat, whenever possible.

The DCPC has implemented of a Water Quality Monitoring Plan to include: TKN, Nitrate, Total Phosphorus, pH and specific conductivity. These reports are made twice a year and are currently filed with both the Westwood and Dedham Conservation Commissions. Monitoring adjacent streams and wetlands will allow for better treatment protocols and the minimizing of herbicides and pesticides. The Club currently monitors the flow of the Rock Meadow Brook through the course at Summer Street, Country Club Road, and the irrigation pond on the north side of the property.

Irrigation and Watering Practices

It is the goal of the DCPC to minimize watering and irrigation. Minimizing watering has a beneficial impact in that applying less water there is less dependence on the subterranean drainage system to create usable turf. The golf course sets a watering goal to replace root zone moisture. This goal generally requires heavy watering on an infrequent basis, as opposed to frequent, light watering. Deep, infrequent irrigation of turf encourages root growth and efficient watering practices. The turf will not be watered beyond field capacity, or the point at which puddles form and runoff of the maintained areas. Over the past two years, the DCPC has reduced its water consumption by 7 million gallons compared to past averages. This savings was achieved by frequent

monitoring of the course, improvements to the sprinkler system and revised watering practices.

The following provides a simplistic guideline for watering practices:

- a. Water to the root zone;
- b. Sloped, compacted and sandy soils should be watered in short, frequent intervals to minimize the potential for runoff;
- c. Water early morning to minimize evaporation and maximize retention;
- d. Allow native cool season grass areas to go dormant in summer;
- e. Do not water before heavy traffic;
- f. Develop irrigation system leak detection program and provide regular maintenance of existing systems.

It is the goal of the Club to continue to reduce the watering needs of the grounds.