

OFFICE OF ADJUDICATIONS

IN THE MATTER OF : **APPLICATION NO. DIV-200204024**

THE COUNTRY CLUB OF DARIEN : **FEBRUARY 1, 2005**

PROPOSED FINAL DECISION

The applicant, The Country Club of Darien, has filed an application with the Department of Environmental Protection (DEP) Inland Water Resources Division for a water diversion permit. General Statutes §22a-368. The applicants propose to withdraw water from an irrigation pond that receives surface water from the Goodwives River and from five on-site bedrock wells in quantities greater than 50,000 gallons per day for the purpose of irrigating the an 18-hole golf course, tennis courts, lawn and ornamental landscape. DEP staff has determined that this proposed regulated activity is necessary and will not significantly affect long-range water resource management or impair proper management and use of the state's water resources. General Statutes §22a-371. Staff has prepared a draft permit authorizing the project.

A hearing in this matter was held on December 2, 2004, at the Country Club of Darien for the purpose of taking public comments on the application. Members of the public spoke generally on the application and many testified under oath. Almost all public comments addressed downstream flooding issues that were not relevant to the issues to be considered in this proceeding.

The parties submitted the attached Agreed Draft Decision for my consideration. (Attachment A.) Regs., Conn. State Agencies §22a-3a-1(3)(A)(i). I have reviewed the draft decision, the record and relevant public comments. I have assessed the application with regard to

relevant statutes and regulations. General Statutes §§22a-365 through 22a-378; Regs., Conn. State Agencies §22a-377(c). I adopt the Agreed Draft Decision as my Proposed Final Decision and recommend the Commissioner issue the requested permit. (Attachment B.)

February 1, 2005
Date

/s/ Jean F. Dellamarggio
Jean F. Dellamarggio, Hearing Officer

ATTACHMENT A

IN THE MATTER OF

: APPLICATION NO. DIV-200204024

THE COUNTRY CLUB OF DARIEN

: JANUARY 19, 2005

AGREED DRAFT DECISION

The Country Club of Darien (the “Applicant”) applied to the State of Connecticut Department of Environmental Protection (“DEP”) for an Individual Water Diversion Permit to divert waters of the State for the irrigation of an 18-hole golf course, tennis courts, lawns and ornamental landscape (“Diversion”). Conn. Gen. Stat. §22a-365 *et seq.* Staff of the DEP Inland Water Resources Division (“IWRD”) has prepared a draft permit (“Draft Permit”) that would authorize the Diversion (Attachment B).

The Applicant’s application is complete and complies with all relevant statutes and regulations. Connecticut Water Diversion Policy Act, Conn. Gen. Stat. §22a-365 through §22a-378 and Section 22a-377(c)-2 of the Regulations of Connecticut State Agencies. The Diversion is necessary for meeting the irrigation needs of the Applicant and is the most feasible and prudent option for meeting those needs with no significant adverse impacts. I recommend that the Draft Permit be issued.

I. FINDINGS OF FACT

A. Procedural History

On June 27, 2001, the Applicant voluntarily entered into a Consent Order (DIV-2000-1027V) with DEP. (DEP Exhibit 18). The Consent Order temporarily limited the Applicant to a diversion of 288,000 gallons of water per day for a three-year period. (Exhibit DEP-18, Paragraph B(1)(a)). The three-year period was subsequently extended to June 27, 2005. (Exhibit DEP-19, Paragraph b). The Consent Order also required the Applicant to submit an Individual Water Diversion Application on or before November 1, 2002. (Exhibit DEP-18, Paragraph B(1)(f)).

Accordingly, the Applicant filed its Individual Water Diversion Permit Application (“Application”) in October 2002 (Exhibits APP-5, DEP-2). Notice of this Application was published in accordance with Conn. Gen. Stat. §22a-6g (Exhibit APP-15).

Staff of IWRD, other divisions at DEP and the Connecticut Department of Health reviewed the Application. (Exhibits DEP-3, DEP-4, DEP-5, DEP-6, DEP-7, DEP-8, DEP-9). In response to staff comments, the Applicant submitted supplemental information. (Exhibits APP-16, APP-20, APP-26, APP-27).

After concluding that the Application was complete and was submitted on the prescribed form, and following its technical review of the Application and the supplemental information, the DEP published notice of its tentative determination to approve the Application and issue a Draft

Permit (Exhibit DEP-1, Attachment A, Tr. 12/2/2004 at 4) that would authorize the requested Diversion. (Exhibit DEP-12 and DEP-13).

A petition for a public hearing, dated October 1, 2004, as allowed for in Conn. Gen. Stat. §22a-371, was filed with Connecticut DEP. (Exhibit DEP-14, Tr. 12/2/2004 at 3). DEP published a Notice of Public Hearing, dated November 2, 2004, and mailed the notice to the Public Hearing Public Notice Service List. (Exhibit DEP-15 and DEP-16). A site visit was conducted on November 10, 2004. Members of the public provided oral testimony, most of which dealt with flooding issues that were not relevant to the activities regulated under Conn. Gen. Stat. §22a-368. (Tr. 12/2/2004 at 46-58).

The hearing was held on December 2, 2004 at The Country Club of Darien Clubhouse. (Tr. 12/2/2004 at 2). The Applicant and DEP staff presented evidence as to the completeness of the Application and its compliance with applicable statutory and regulatory requirements. (Tr. 12/2/2004 at 8-40, 40-45).

B. The Diversion Application

1. Need for the Diversion

The Applicant will use the diverted water for the irrigation of an 18-hole golf course, tennis courts, lawns and ornamental landscape located at 300 Mansfield Avenue, Darien, Connecticut (the "Site"). (Exhibits APP-1, APP-5, Tr. 12/2/2004 at 10). The DEP staff concurs that water is needed at the Applicant's Site for the reasons specified.

2. Reasons for the Diversion

The Applicant's reasons for the Diversion are based on the need to irrigate an 18-hole golf course, tennis courts, lawns and ornamental landscape on the Site. (Exhibits APP-1, APP-5, Tr. 12/2/2004 at 10).

3. Description of Existing Water System

The Applicant has requested an Individual Water Diversion Permit to divert water for the irrigation of an 18-hole golf course, tennis courts, lawns and ornamental landscape on the Site. (Exhibits APP-1, APP-5, Tr. 12/2/2004 at 10).

The irrigation process involves the distribution of water from the main irrigation pond on the Site. The irrigation pond receives surface water from the Goodwives River and is augmented with ground water from the bedrock irrigation wells on the Site. (Exhibit APP-5, Attachment A, Attachment B). The upstream drainage area tributary to the main irrigation pond on the Site is approximately 504 acres. (Exhibit APP-5, Attachment A, Attachment B). The upstream watershed does not support a permanent flow within the Goodwives River, which often renders it dry during the summer months. (Exhibit APP-5, Attachment A, Attachment B). During the irrigation season, the groundwater from the irrigation wells on the Site will be used to augment the natural flow of the Goodwives River into two irrigation ponds on the Site. Water for irrigation of the course and the Site is then pumped from the main irrigation pond located to the west of the sixth hole fairway onto the Site. There are currently five irrigation wells on the Site: PW-1, PW-1R, PW-2, PW-3 and PW-4. PW-1 is located near PW-1R. Due to hydraulic interference between

the two wells, the wells will not be operated simultaneously and PW-1R serves as a standby well. (Exhibits APP-1, APP-5, APP-9, APP-22, Tr. 12/2/2004 at 11-12, 33-34).

The Applicant installed a new state of the art irrigation system on the Site in 2001-2002. The installed irrigation system is a fully automatic, centrally computer controlled, enhanced double row fairway system. (Tr. 12/2/2004 at 23-24). The irrigation control system operates selected sprinklers at various locations at any given time during the watering schedule to spread the irrigation water out evenly throughout the golf course and takes into consideration weather conditions and turf conditions. (Tr. 12/2/2004 at 25).

The sprinkler systems on the Site are from Toro with nozzles to evenly apply water when operating together. All the sprinklers are pressure regulated so the amount of water used by each is consistent and prevents over-watering. The sprinklers have low friction losses and are equipped with state of the art nozzles with high water application uniformities. The enhanced double row fairway design allows for reduced water use per square foot and is less susceptible to wind, operated at lower pressure, and provides for lower precipitation rates for higher application efficiencies. (Tr. 12/2/2004 at 23-24).

All sprinklers on the system have the ability to be adjusted against the evapotranspiration rate, which is a combination of evaporation from the plants and the soil, as well as transpiration from the plant material. Each sprinkler is individually controlled, which allows for the most effective and conservative application of water. (Tr. 12/2/2004 at 25).

The irrigation system has a water budgeting feature which allows for a quick and easy adjustment of the amount of water to be applied on the Site. The system is designed so that in the event of a water emergency or phased restrictions, specific areas can go unwatered, such as rough and other nonplay areas. (Tr. 12/2/2004 at 26).

4. Location of Withdrawals and Discharges

The location of withdrawals and discharges, as described in number B.3 above are depicted on Plate #1, entitled "Aerial Photograph of Golf Course," prepared by Leggette, Brashears & Graham, Inc., and dated 10/18/02 (Exhibit APP-9 and Exhibit APP-5, Attachment O, Tr. 12/2/2004 at 11-12).

5. Quantity, Frequency and Rate of Water Diversion

The Draft Permit proposes authorization to withdraw: (1) a maximum of 375,000 gallons per day (gpd) from the irrigation pond, and (2) a total maximum of 400,000 gpd from among five bedrock wells (PW-1, PW-1R, PW-2, PW-3, PW-4) to be conveyed to the irrigation pond and/or the Goodwives River. (Exhibit DEP-1, Attachment A, Tr. 12/2/2004 at 13-14, 40). The Diversion would be allowed from April 1 through October 31. (Exhibit APP-5, Attachment A, Pages 2-3, Attachment B, Page 3).

The quantity in the Draft Permit is less than requested in the Application. In the Application, based on studies completed by its irrigation consultant, the Applicant requested a permit allowing: (1) diversion of up to 444,000 gpd from the irrigation pond; specifically, 408,000 gpd for the present golf course and 36,000 for other irrigation purposes; and (2) diversion

of up to 469,000 gpd of groundwater from the on-site irrigation wells, which number included the requested 444,000 gpd plus an estimated 25,000 gpd of peak daily evaporative losses from the irrigation pond. (Exhibits APP-1, APP-5, Attachment A, Page 2, Attachment B, Pages 3-4, Attachment M, Tr. 12/2/2004 at 13, 27).

The Applicant agrees to accept the Draft Permit authorizing a maximum withdrawal of 375,000 gpd from the irrigation pond and a maximum withdrawal of 400,000 gpd from among the five bedrock wells. (Tr. 12/2/2004 at 14).

6. Time Period of Permit

The term of the Draft Permit is 15 years. (Exhibit DEP-1, General Conditions, Paragraph 10, Attachment A, Tr. 12/2/2004 at 17).

7. Effect of the Proposed Diversion

The Applicant conducted studies and evaluated any potential environmental impacts of the proposed Diversion and concluded that the Diversion would not have a significant adverse environmental impact, as determined through an evaluation of the following items:

a. Water Supplies

The Diversion has been shown to have no adverse affect on monitored ground water users in the immediate vicinity of the Site (Exhibit APP-5, Attachment A, Page 2, Attachment B, Page 5, and Attachment H). A 72-hour pumping test of four irrigation wells and monitoring of off-site residential wells was conducted in October, 2001, during the annual low-flow period. (Exhibits APP-6, APP-7, APP-8, Tr. 12/2/2004 at 14-16, 18-20). The wells sustained a pumping rate of approximately 590,000 gpd, significantly higher than the proposed ground water diversion limit of 375,000 gpd in the Draft Permit. (Exhibit APP-5, Attachment A, Page 2, Attachment B, Page 5, Attachment H) Because the surrounding area appears to be entirely developed, either as residential properties or dedicated open space, the density of private wells is not expected to increase. (Exhibits APP-18, 19). Further, the DEP has included in the Draft Permit a Residential Well Guarantee (Exhibit DEP-1, Paragraph 9, Attachment A, Tr. 12/2/2004 at 17 and 43-44) to further safeguard the water supply wells within a 2,500-foot radius of the Applicant's well. (Exhibits APP-18, 19). In addition, the Draft Permit requires the Applicant to measure the water levels in the pond on a daily basis and to meter the withdrawals from the bedrock wells and from the pond. (Exhibit DEP-1, Paragraphs 4, 5, 6, and 7, Attachment A, Tr. 12/2/2004 at 17 and 42).

b. Water Quality

The operation of the proposed Diversion will not impact surface water quality in the Goodwives River. Under natural conditions, the chemical composition of ground water from bedrock will be similar to that of surface water from streams draining areas underlain by the same type of bedrock, particularly during low flow periods. In addition, there is evidence that downstream surface water quality may benefit from the Diversion (Exhibit APP-5, Attachment B, Page 5, Attachment Q). Specifically, a biometric water quality evaluation completed on the Goodwives River indicated that the surface water flowing onto the Site was of poor quality, but the water flowing off of the Site and into the Goodwives River is of good quality. (Exhibit APP-5, Attachment I, Attachment Q, Tr. 12/2/2004 at 34). The Draft Permit contains a requirement that

the Applicant construct and utilize a low flow pond structure. (Exhibit DEP-1, Paragraph 1, Attachment 1, Exhibit APP-5, Attachment Q, and Tr. 12/2/2004 at 40).

c. Wastewater Treatment Needs

The proposed Diversion has no wastewater treatment requirements.

d. Flood Management

The Applicant has adopted a Flood Contingency Plan (Exhibit App-5, Attachment L).

e. Water-Based Recreation

The proposed Diversion has no impact on water-based recreation.

f. Wetlands Habitats

Wetland and soil delineations were conducted by a certified soil scientist in the area of the irrigation pond. (Exhibit APP-5, Attachment F). The Diversion and the pond expansion project on the Site will result in the environmental benefit of continuing an approximately 4-foot wide fringe of wetland growth along the pond edge and the creation of an approximately 0.22 acres of a new wetland fringe growth habitat and diversity. (Exhibit APP-5, Attachment Q, Attachment I and Attachment H, Tr. 12/2/2004 at 38). The pond project was permitted by DEP on May 7, 2002 and received local approval from the Town of Darien Environmental Protection Commission on August 1, 2001. (Exhibits APP-1, DEP-17, Tr. 12/2/2004 at 39).

g. Waste Assimilation

The proposed Diversion has no waste assimilation issues. (Exhibit APP-1).

h. Agriculture

Because the surrounding area appears to be entirely developed, either as residential properties or dedicated open space, the Diversion will not have any adverse impacts to agriculture.

i. Fish and Wildlife

Fish and wildlife surveys and population census via systematic habitat sampling were conducted at locations upstream, onsite, and downstream of the golf course. The studies indicated that the proposed Diversion could have a positive impact on fish and wildlife in the vicinity of the diversion. (Exhibit APP-1, APP-5, Attachment I).

Town of Darien Environmental Protection Commission issued a permit for expansion activities in the wetland, recognizing the potential benefits for on-course and downstream habitat. (Exhibit APP-5, Tr. 12/2/2004 at 39).

The DEP has indicated that stream surveys have indicated a lack of diversity in fish communities in downstream areas from the Site. It is important to recognize that Goodwives River goes dry entering the Applicant's Site for extended periods in most years and remains dry

through the Applicant's Site. (Exhibit APP-20, Pages 1-2). Further, the Applicant is aware that downstream Gorham Pond and the nearby sections of the Goodwives River have been substantially impacted by sedimentation from road sand applied to state and local roadways in its watershed, and other sources including runoff from construction sites and residential development. (Exhibit APP-20, Page 3). As a result, the pond system is shallow, is warm in summer, has limited turnover of stored water, is eutrophic, and likely has low dissolved oxygen content in the summer, and is also impacted by the documented natural summer-season low flows and lack of flow in the vicinity of the Applicant's Site, all of which are understood to be detrimental to fish populations. (Exhibit APP-20, Page 3). Accordingly, Applicant's proposed diversion will have a minimal impact to fish populations that may exist in a stream with diminished flows that historically goes dry on a regular basis in the summer season and that may exist in a highly development-impacted watershed. (Exhibit APP-20)

j. Low-Flow Requirements

The Applicant did not directly evaluate the impacts of the existing groundwater withdrawal on the Goodwives River because the Goodwives River is an intermittent stream that does not typically flow during peak irrigation periods. (Exhibit APP-5, Attachment A, APP-20, Page 2, APP-27). The pumping test was conducted during this dry part of the year, as is routine for pumping tests of bedrock wells and as required by the Consent Order, so stream gages were not installed. (Exhibit APP-5, Attachment H, APP-20, Page 2). Furthermore, although there was a trickling flow in the Goodwives River through the Site at the time of the test, the flow was so small that it was meandering among the cobbles in the stream bed, with the tops of the cobbles being dry. (Exhibit APP-20, Page 2).

It is not likely that the Diversion will impact the intermittent nature of this stream. Small streams in small drainage basins that are underlain by till-mantled bedrock are typically intermittent. (Exhibit APP-20, page 2). Stream flow is sustained by groundwater discharge during hot, dry parts of the year, when rainfall that normally recharges groundwater and supplies surface water flow is taken up by evapotranspiration. (Exhibit APP-20, Page 2). If the basin is small enough and is underlain by glacial till, there is not enough groundwater discharge to sustain year-round stream flow during average years. (Exhibit APP-20, Page 2).

Further, a review for historical information on the Goodwives River in the region indicates that the river was dammed to form Mather's Pond (also referred to as Dorchester Pond) approximately 0.5 miles upstream of the Country Club property. According to the web page for the Darien Land Trust, **"The Stephen Mather's Homestead overlooks the open south field and Dorchester Pond, one of Stephen Mather's first projects when developing the ideas for The National Park Service. Dorchester Pond was created by restricting the Goodwives River flow into a natural valley which now is a beautiful backyard view for six homes that border it and the Stephen Mather Road that crosses over."** (<http://dlt.darien.org/mather.htm>). The timing of this impoundment is not stated, but it would have occurred prior to Stephen Mather's death in 1930, and therefore pre-dates the construction of the golf course in the 1950s. It can not be ascertained what the effect this damming has had on the downstream flow of the Goodwives River, but due to the small size of the watershed, it isn't likely that the river flowed year-round prior to this. Of course, replacing an open stream channel with a relatively shallow pond impoundment would have resulted in an increase in mid-summer evaporation losses. (Exhibit APP-20, Page 3).

There is no long-term gauging data for the Goodwives River. However, using the DEP method to estimate the amount of flow in a small stream, the 7Q10 flow rate of the River at the Site is 0.005 cfs (cubic feet per second), or about 2 gpm. This is, effectively, a no-flow condition. (Exhibit APP-20, Page 2, DEP-10). In addition, the Draft Permit contains a requirement that the Applicant construct and utilize a low flow pond structure. (Exhibit DEP-1, Attachment 1 and Tr. 12/2/2004 at 40). Further, the Draft Permit requires the Applicant to monitor flows downstream of the Goodwives River and to maintain a record of the daily measurements. (Exhibit DEP-1, Attachment 1 and Tr. 12/2/2004 at 41).

8. Alternatives

As part of its Application, the Applicant considered the following options: (1) no action; (2) no increase to previous authorized quantity of water diversion, supplemented by purchase of public water; (3) increase in permitted quantity and no new wells; and (4) increase in permitted quantity with new wells and pond expansion. (Exhibits APP-1, APP-5, Attachment J, Tr. 12/2/2004 at 16-17).

The “no action” alternative was rejected because it would limit the Applicant to diverting a maximum of 288,000 gpd which is insufficient to properly maintain the facilities at the Site. The Applicant’s irrigation consultant determined that 408,000 gpd is required on days of peak demand to sustain adequate turf on the 18-hole course. (Exhibits APP-1, APP-5, Attachment J, Tr. 12/2/2004 at 16).

The “purchase of public water” as a supplemental alternative was rejected because the Applicant would be required to purchase up to 156,000 gpd of potable water, if available, to meet demand on peak days. Also, the use of high quality potable water for irrigation is not the best use of a valuable resource. Further, there would be a financial impact to the Applicant. Therefore, this option was not feasible or prudent. (Exhibits APP-1, APP-5, Attachment J, Tr. 12/2/2004 at 16).

The “increase in permitted quantity and no new wells” option was rejected based on the low yields of certain wells (PW-1 and PW-2) which was insufficient to meet the irrigation demands for the Site. (Exhibits APP-1, APP-5, Attachment J, Tr. 12/2/2004 at 16).

Given the issues discussed, the increase in the permitted quantity with new wells and the pond expansion was deemed the most appropriate supply source for providing the needed irrigation water and minimizing environmental disturbances. (Exhibits APP-1, APP-5, Attachment J, DEP-10). Also, the pond expansion project has numerous environmental benefits including the mitigation of peak flood flows in downstream reaches of Goodwives River, periodic low-flow releases of cooler water from the new outlet pipe, elimination of sources of erosion, creation of a new wetland fringe habitat within the irrigation pond, and enabling the localized runoffs during storm events to pass through biofiltration and enhance the environmental character of the area. (Tr. 12/2/2004 at 34-38).

9. Conservation Measures

The Applicant has voluntarily implemented a number of conservation measures to reduce the usage of water on the Site, as set forth in its “Long-Range Water Conservation Plan.” (Exhibit APP-5, Attachment M, APP-27). These measures in the Long-Range Water Conservation Plan

include the Applicant's pond expansion project to increase the storage of water; the installation of two new irrigation wells to augment yield and spread the withdrawals over a larger area; the installation of an improved irrigation system to disburse water more effectively; the aeration of the fairways to conserve water; the application of wetting agents to the fairways and calcium chloride to the tennis courts to use moisture more efficiently; the implementation of hand-watering operations to more conservatively and precisely apply water to droughty parts of the site; and the use of light-weight mowing to reduce compaction with a resulting decrease in water usage. (Exhibits APP-1, APP-5, Tr. 12/2/2004 at 28, 36-38). If water restrictions or reduced water availability become an issue, the irrigation system can be modified to use less water. (Tr. 12/2/2004 at 28).

The Draft Permit requires the Applicant to implement the Long-Range Water Conservation Plan (Exhibits DEP-1, Paragraph 2, Attachment A, Tr. 12/2/2004 at 17, 26, 41). Further, the Draft Permit requires the Applicant to reduce its maximum authorized withdrawal by: (i) 15% under a Phase I Water Supply Emergency, as declared by the Aquarion Water Company of Connecticut; (ii) 20% under a Phase II Water Supply Emergency as declared by the Aquarion Water Company of Connecticut; and (iii) 25% under a Phase III Water Supply Emergency, as declared by the Aquarion Water Company of Connecticut. (Exhibit DEP-1, Paragraph 2).

10. Interbasin Transfer

The Diversion does not involve an interbasin transfer. (Exhibits APP-1, APP-5).

II. CONCLUSIONS OF LAW

A. The Diversion Application

Section 22a-369 of the General Statutes requires that an application for a diversion permit include information the Commissioner has deemed necessary to fulfill the purpose of the Connecticut Water Division Policy Act. §22a-365 through 22a-380. The information includes the following: (1) the need for the diversion; (2) the reasons for the diversion and the use of the diverted water; (3) a description of the existing water system where the diversion is proposed; (4) the locations of withdrawals and discharge of water the Applicant proposes to divert; (5) the quantity, frequency and rate of water the Applicant proposes to divert; (6) the length of time for which the diversion permit is sought; (7) the effect of the proposed diversion on public water supplies, water quality, waste water treatment needs and waste assimilation, flood management, water-based recreation, wetland habitats, agriculture, fish and wildlife, and low-flow requirements; (8) the alternatives to the proposed diversion, including a study of cost factors, feasibility and environmental effects of the alternatives; (9) conservation measures instituted by the Applicant prior to the Application and the Applicant's long-range water conservation plan, including actions outlined in the statute, and (10) in the case of an interbasin transfer (which this is not), an environmental report.

The Applicant presented sufficient evidence on all this required information. Therefore, the Application complies with §22a-369.

B. Statutory and Regulatory Standards for Diversion Permit Issuance

In deciding whether to issue a diversion permit, the Commissioner must consider all relevant facts and circumstances that include, but are not limited to, those listed in General Statutes § 22a-373 and those set out in § 22a-377(c)-2(f) of the Regulations of Connecticut State Agencies. There is substantial evidence to support the issuance of the draft diversion permit, based on consideration of each of the substantive issues outlined below.

The proposed diversion would have no substantial adverse impact on related needs for public water supply, including existing and projected uses, safe yield of reservoir systems and reservoir ground water development. 22a-373(b)(1); 22a-377(c)-2(a), (d)(1) and (2).

The Applicant has fully evaluated the effect of the proposed withdrawal on all flow dependent resource needs within the watershed. That evaluation shows that the proposed diversion would not have a significant adverse impact on public water supplies. Further, the Diversion will decrease Applicant's dependence on public water supply.

The diversion would have no substantial impact on existing and planned water uses on the areas affected, including flood management, water-based recreation, wetland habitats or waste assimilation. There would be no adverse impacts, including thermal effects, on fish and wildlife as a result of flow reduction, alternation or augmentation for the diversion. §22a-373(b)(2), (b)(6) and (b)(7); 26-310; 22a-377(c)-2(a)(2) (d)(3), (f)(2) and (3).

The Applicant has fully evaluated the effect of the proposed withdrawal and confirmed that there is no substantial impact on existing and planned water uses. The Applicant has developed and implemented a flood management plan. The Applicant's studies have shown that the proposed pond expansion project will result in the creation of a new wetland fringe growth habitat. Studies have indicated that the operation of the Diversion will have a positive impact on fish and wildlife in the vicinity of the Diversion. The Diversion will have no impact on water-based recreation or waste assimilation.

The proposed diversion is compatible with the policies and programs of the State of Connecticut dealing with long-range planning, management, allocation and use of water resources of the state. §22a-373(b)(3); §22a-377(c)-2(f)(5).

The proposed diversion is in conformance with DEP's "Report of the Advisory Committee On Potential Best Management Practices for Golf Course Water" and with the "Conservation and Development Policies Plan for Connecticut."

The proposed diversion would have no significant adverse impacts on existing water conditions, including watershed characterization, groundwater availability potential, evapotranspiration conditions and water quality. §22a-373(b)(5); 22a-377(c)-2(d)(3) and (f)(1).

The proposed Diversion will have no significant adverse impact on groundwater availability, as demonstrated by the results of Applicant's 72-hour pumping test of four irrigation wells and monitoring of off-site residential wells. Further, studies completed in connection with

the pond expansion project indicate that the project will mitigate peak flood flows in downstream reaches of the Goodwives River. Also, the Diversion will not influence the intermittent nature of the Goodwives River because of the small, till covered watershed, its lack of base flow, and the fact that the withdrawals are made from bedrock.

The water to be diverted is necessary and the diversion proposed by the Applicants was the most prudent and feasible alternative selected of those reviewed, including conservation. §22a-373(b)(8); §22a-377(c)-(2)(d)(4).

The Diversion is necessary based upon the Applicant's need to irrigate an 18-hole golf course, tennis courts, lawns and ornamental landscape on the Site. (Exhibits APP-1, APP-5, Tr. 12/2/2004 at 10).

The Applicant evaluated four alternatives for irrigating the Site. Three alternatives were rejected based on adverse environmental, reliability and cost considerations. The Applicant's choice of an increase in the permitted quantity with new wells and the pond expansion was deemed the most appropriate supply source for providing the needed irrigation water and minimizing environmental disturbances.

The proposed diversion would have a positive impact on economic development and the creation of jobs. §22a-373(b)(4); §22a-377(c)-(2)(d)(2).

The proposed Diversion is critical to the viability of the Applicant's business, namely the operation of a golf course.

The diversion is not inconsistent with any action taken by the Attorney General pursuant to §§3-126 and 3-127 and there is no evidence that it would be in substantial conflict with the interests of any municipalities affected by the diversion. §22a-373(b)(9), (10).

The proposed Diversion would not affect interstate waters; therefore, the provisions of §§ 3-126 and 127 are not relevant to this Application.

III. CONCLUSIONS / RECOMMENDATION

The Application for a water diversion permit complies with all applicable statutory and regulatory requirements. The Diversion is necessary to meet the needs of the Applicant and based on consideration of all the alternatives, is the most feasible and prudent option.

The Diversion would have no substantial adverse impact on related needs for water supply, as it would have a minimal impact on flow at the site and downstream, even under drought conditions. The Diversion would not have an adverse impact on groundwater, aquifers, nearby public well fields and certain private wells abutting the Site. The Diversion would have no substantial adverse impact on existing and planned uses in the areas affected including flood management, water-based recreation, wetland habitats and waste assimilation. The Diversion is

compatible with the state's policies and programs for long-range planning, management, allocation and use of the state's water resources. The Diversion would have no significant impact on existing water conditions, including watershed characterization, groundwater availability potential, evapotranspiration and water quality.

Accordingly, the Draft Permit should be issued.

**ATTACHMENT B
DRAFT PERMIT**

PERMITTEE: The Country Club of Darien, Inc.

PERMIT NO.: DIV-200204024

TOWN: Darien

WATERS: Goodwives River, unnamed pond, groundwater

Pursuant to Connecticut General Statutes section 22a-368, The Country Club of Darien, Inc. (the "permittee") is hereby authorized to divert the waters of the state at the Country Club of Darien in Darien (the "site") in accordance with permittee's application dated October 30, 2002, filed with this Department on October 31, 2002 and described herein. The purpose of the diversion is to irrigate an 18-hole golf course and other areas including lawn, landscaped areas, and clay tennis court surfaces.

AUTHORIZED ACTIVITY

The permittee is authorized to withdraw 1) a maximum of 375,000 gallons per day (gpd) from the irrigation pond, and 2) a total maximum of 400,000 gpd from among five bedrock wells known as PW1, PW-1R, PW-2, PW-3, PW-4 to be conveyed to the irrigation pond and/or the Goodwives River in accordance with plans entitled "Country Club of Darien / Darien Connecticut", dated 10/18/02, prepared by Leggette Brashears & Graham, and documentation submitted as a part of the application.

PERMITTEE'S FAILURE TO COMPLY WITH THE TERMS AND CONDITIONS OF THIS PERMIT SHALL SUBJECT PERMITTEE AND PERMITTEE'S CONTRACTOR(S) TO ENFORCEMENT ACTIONS AND PENALTIES AS PROVIDED BY LAW.

SPECIAL CONDITIONS

1. **Low-flow Pond Outlet Structure.** The permittee shall, by April 15, 2005, install a low flow pond outlet structure as described in plans entitled "Irrigation Pond and Wetlands Expansion – Pond Site Plan", dated February 25, 2003 by Stearns and Wheler, LLC
2. **Water Conservation Plan.** The permittee shall implement water conservation measures as described within Attachment M of the permittee's application under the section entitled "Conservation Plan Triggers". These "triggers" shall include a 15 percent reduction of the maximum authorized withdrawals listed above in "Authorized Activity" under a Phase I Water Supply Emergency as declared by the Aquarion Water Company of Connecticut, a 20 percent reduction of the maximum authorized withdrawals listed above in "Authorized Activity" under a Phase II Water Supply Emergency as declared by the Aquarion Water Company of Connecticut, and a 25 percent reduction of the maximum authorized withdrawals listed above in "Authorized Activity" under a Phase III Water Supply Emergency as declared by the Aquarion Water Company of Connecticut.
3. **Water Conservation Plan Development.** The permittee shall submit a report of any additional water conservation measures instituted for the preceding calendar year annually

to the Commissioner no later than January 15 of each year after the issuance date of authorization approval, and shall continue every January 15 thereafter, for the duration of this authorization. Suggested measures include development of additional on-site storage, planting of more drought resistant grasses, increasing the efficiency of the irrigation system, and reductions in irrigated area.

4. **Flow Measurement.** Within 120 days of the issuance of this authorization, the permittee shall install a flow measurement weir within the Goodwives River downstream of the irrigation pond and upstream of the permittee's property line, to measure such flow on a regular daily basis. Installation, calibration, and measurements shall conform to the procedures described in the US Geological Survey Techniques of Water Resources Investigation, Book 3, Chapters A6, A7, A8 and A10, (see <http://water.usgs.gov/pubs/twri/index.html>). The weir shall be maintained for the duration of this authorization.
5. **Pond Level Measurement.** The permittee shall install a sturdy and durable water surface elevation measuring device at the irrigation pond. This device shall be maintained for the duration of this permit period.
6. **Metering of Withdrawals.** Prior to initiating the authorized withdrawal of water, the permittee shall install a totalizing flow meter to measure the total amount of water withdrawn from the irrigation pond and each of the five bedrock wells, and shall for the duration of this authorization continuously operate and maintain such meters. In the event of meter malfunction or breakage, the permittee shall repair or replace such meter within 72 hours.
7. **Record Keeping and Reporting (pond level, stream flow and withdrawals).** The permittee shall maintain a regularly scheduled, daily record of a) the weir discharge as required in special condition #4, b) the surface water elevation, in feet above mean sea level, of the irrigation pond as required in special condition #5, c) the amount of water withdrawn from the irrigation pond and each of the bedrock wells for which withdrawals are authorized herein as required in special condition #6. The permittee shall, for the duration of this authorization, submit a copy of said records for the preceding calendar year annually to the Commissioner no later than January 15 of each year. Such record shall be signed by the permittee and individual(s) responsible for actually preparing such record, each of whom shall certify in writing as follows:

“I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53-157b of the General Statutes, and in accordance with any other applicable statute.”

8. **Meter Calibration and Reporting.** The permittee shall annually test and calibrate the irrigation pond source meter, and test calibrate all other source meters once every other

year, to within two percent accuracy as shown through a post-calibration test, and shall submit the results of the accuracy test and calibration for the preceding year annually to the Commissioner no later than January 15 of each year.

9. **Residential Well Guarantee.** Any owner of a water supply well within 2,500 feet of any irrigation well located on the site, who believes the yield of their well(s) has been significantly impacted by the permittee's operation of their irrigation well(s) should notify the permittee and the Department of this situation. The permittee shall respond by having their hydrogeologic consultant evaluate the situation, report to the permittee, the Department and to the concerned well owner(s) their findings as to the existence, nature, extent and/or cause of the alleged impact. In the event that the permittee's hydrogeologic consultant or the Department determines that pumping of ground water on the site for irrigation results in more than a negligible loss in the yield of the subject well(s), the permittee shall mitigate this loss in yield of the affected well by implementing, at its cost, one or more of the following actions:
 - a) If pre-permit yield can be restored by setting the pump at a lower depth in the existing well, the pump will be lowered in the well as necessary.
 - b) If the affected well is too shallow to accommodate resetting the pump to restore pre-permit yield, but is capable of being deepened, the well will be deepened and the pump reset to restore pre-permit yield.
 - c) If lowering the pump or deepening the well are insufficient methods to restore pre-permit yields, a new well that reestablishes pre-permit yield will be installed on the property of the affected well owner.
 - d) If none of the above actions restore adequate household supplies, the well owner will be connected to the public water supply.
10. **Chemigation.** The permittee shall not use the irrigation system for the purpose of chemigation without the appropriate discharge permit and pesticide application permit from the Commissioner.
11. **Irrigating with Treated Water.** The permittee shall not discharge treated, potable water into the waters of the state without a permit as required under section 22a-430 of the Connecticut General Statutes.
12. **Recording and Reporting Violations.** Within 48 hours after the permittee learns of a violation of this permit, the permittee shall report the violation in writing to the Commissioner. Such report shall include the following information:
 - a. The provision(s) of this permit that has been violated;
 - b. The date and time the violation(s) was first discovered and by whom;
 - c. The cause of the violation(s), if known;
 - d. If the violation(s) has ceased, the duration of the violation(s) and the exact date(s) and time(s) it was corrected;
 - e. If the violation(s) has not ceased, the anticipated date when it will be corrected;
 - f. Steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented;
 - g. The signatures of the permittee and of the individual(s) responsible for actually preparing such report, each of whom shall certify as follows:

“I have personally examined and am familiar with the information submitted in this document, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute.”

GENERAL CONDITIONS

1. The permittee shall notify the Commissioner in writing two weeks prior to: (A) commencing construction or modification of structures or facilities authorized herein; and (B) initiating the diversion authorized herein.
2. The permittee may not make any alterations, except de minimis alterations, to any structure, facility, or activity authorized by this permit unless the permittee applies for and receives a modification of this permit in accordance with the provisions of section 22a-377(c)-2 of the Regulations of Connecticut State Agencies. Except as authorized by subdivision (5) of section 22a-377(b)-1(a) of the Regulations of Connecticut State Agencies, the permittee may not make any de minimis alterations to any structure, facility, or activity authorized by this permit without written permission from the Commissioner. A de minimis alteration means an alteration which does not significantly increase the quantity of water diverted or significantly change the capacity to divert water.
3. All structures, facilities, or activities constructed, maintained, or conducted pursuant hereto shall be consistent with the terms and conditions of this permit, and any structure, facility or activity not specifically authorized by this permit, or exempted pursuant to section 22a-377 of the General Statutes or section 22a-377(b)-1 of the Regulations of Connecticut State Agencies, shall constitute a violation hereof which may result in modification, revocation or suspension of this permit or in the institution of other legal proceedings to enforce its terms and conditions.
4. Unless the permittee maintains in optimal condition any structures or facilities authorized by this permit, the permittee shall remove such structures and facilities and restore the affected waters to their condition prior to construction of such structures or facilities.
5. In issuing this permit, the Commissioner has relied on information provided by the permittee. If such information was false, incomplete, or misleading, this permit may be modified, suspended or revoked and the permittee may be subject to any other remedies or penalties provided by law.
6. If construction of any structures or facilities authorized herein is not completed within three years of issuance of this permit or within such other time as may be provided by this permit, or if any activity authorized herein is not commenced within three years of issuance of this permit or within such other time as may be provided by this permit, this permit shall expire three years after issuance or at the end of such other time.

7. This permit is subject to and does not derogate any rights or powers of the State of Connecticut, conveys no property rights or exclusive privileges, and is subject to all public and private rights and to all applicable federal, state, and local law. In constructing or maintaining any structure or facility or conducting any activity authorized herein, the permittee may not cause pollution, impairment, or destruction of the air, water, or other natural resources of this State. The issuance of this permit shall not create any presumption that this permit should be renewed.
8. In constructing or maintaining any structure or facility or conducting any activity authorized herein, or in removing any such structure or facility under paragraph 4 hereof, the permittee shall employ best management practices to control storm water discharges, to prevent erosion and sedimentation, and to otherwise prevent pollution of wetlands and other waters of the State. The permittee shall immediately inform the Commissioner of any adverse impact or hazard to the environment which occurs or is likely to occur as the direct result of the construction, maintenance, or conduct of structures, facilities, or activities authorized herein.
9. This permit is not transferable without the prior written consent of the Commissioner.
10. This permit shall expire on [15 years].
11. **Certification of Documents.** Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this permit shall be signed by the permittee or a responsible corporate officer of the permittee, a general partner of the permittee, and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachment may be punishable as a criminal offense in accordance with Section 22a-376 under 53a-157 of the Connecticut General Statutes."

12. **Submission of Documents.** Any document or notice required to be submitted to the Commissioner under this permit shall, unless otherwise specified in writing by the Commissioner, be directed to:

Director
DEP/Inland Water Resources Division
79 Elm Street
Hartford, CT 06106-5127

The date of submission to the Commissioner of any document required by this permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this permit, including but not limited to notice of approval or disapproval on any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" as used in this permit means any calendar day. Any document or action which is required by this permit to be submitted or performed by

a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

This authorization constitutes the permit required by section 22a-368(b) of the Connecticut General Statutes.

Issued as a permit of the Commissioner of Environmental Protection on

Gina McCarthy
Commissioner

PARTY LIST

Proposed Final Decision in the matter of The Country Club of Darien, LLC

PARTY

REPRESENTED BY

Applicant

John H. McClutchy, Jr.
Timothy O'Neill
The Country Club of Darien
300 Mansfield Avenue
Darien, CT 06820

Franca L. De Rosa, Esq.
Brown Rudnick Berlack Israels LLP
CityPlace 1
185 Asylum Street
Hartford, CT 06103

DEP Staff

Doug Hoskins
DEP Inland Water Resources Division
79 Elm Street
Hartford, CT 06106

Self