

# CAPE COD COMMISSION

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DATE: January 10, 2002

TO: Charles Sumner  
Town Administrator  
2198 Main Street  
Brewster, MA 02631-1898

FROM: Cape Cod Commission

RE: Development of Regional Impact  
Cape Cod Commission Act, Section 23

APPLICANT: Town of Brewster  
2198 Main Street  
Brewster, MA 02631-1898

PROJECT #: JR20027

PROJECT: Captain's Golf Course Expansion  
2198 Main Street  
Brewster, MA 02631-1898

BOOK/PAGE: Book- 3810/Page- 93

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## DECISION OF THE CAPE COD COMMISSION

### SUMMARY

The Cape Cod Commission (Commission) hereby approves the application of the Town of Brewster as a Development of Regional Impact (DRI) pursuant to Sections 12 and 13 of the Cape Cod Commission Act (Act), c. 716 of the Acts of 1989, as amended, for the Captain's Golf Course Expansion project. The decision is rendered pursuant to a vote of the Commission on January 10, 2002.

Captain's Golf Course DECISION  
JR20027  
January 10, 2002



### **PROJECT DESCRIPTION**

The Captain's Golf Course Expansion project consists of a new irrigation well designed to meet the irrigation needs of an existing expanded 18-hole golf course adjoining an 18-hole older golf course located in and operated by the Town of Brewster, Massachusetts. The town applied for a Water Management Act (WMA) permit in November 1999, which was submitted to the Massachusetts Environmental Policy Act (MEPA) office for its review. Due to the fact that the golf course was already constructed and would not have triggered DRI review if the well was not proposed, Cape Cod Commission Development of Regional Impact review is limited to the potential environmental impacts related to the permit pending for groundwater withdrawal.

The WMA permit application detailed a requested average volume of 0.15 Million Gallons per Day (MGD) for a period of 240 days per year, approximately half of which will be pumped from the new well. The remaining half will be pumped from the original well, in operation since 1984. The application indicates that the operational well is currently permitted for 18.3 Million Gallons per Year ( 0.100 MGD over 180 days), although current pumping is reported at 24 million gallons per year (MGY). Therefore, the applicant has requested a revised total permitted volume of 0.150 MGD over 240 days, or 36 MGY, which is a reduction from the original requested withdrawal amount of 48 MGY.

### **PROCEDURAL HISTORY**

The Cape Cod Commission and MEPA held a joint review of this project. Public hearings were held to obtain testimony on the DEIR and FEIR. As a MEPA project, the Executive Office of Environmental Affairs (EOEA) issued a Certificate on the Final Environmental Impact Report (FEIR) on June 1, 2001. The project was submitted to the Commission by the applicant on June 21, 2001. A public hearing was opened by a hearing officer at the Cape Cod Commission on July 12, 2001 at 10:00am. A public hearing was closed by a hearing officer at the Cape Cod Commission on October 9, 2001 at 10:00am. A duly noticed public hearing pursuant to Section 5 of the Cape Cod Commission Act was held on November 8, 2001 at the Brewster Town Hall. The public hearing was continued to December 6, 2001 and the record was left open for submission of written materials. The hearing on December 6, 2001 was continued until January 10, 2002.

A Subcommittee meeting was held to deliberate on the project on Thursday, December 6, 2001 at the Cape Cod Commission. At this meeting the subcommittee voted unanimously to recommend approval of the project. A final public hearing was held before the Commission on January 10, 2002. At this hearing, the Commission voted unanimously to approve the project as a DRI.

## MATERIALS SUBMITTED FOR THE RECORD

### From the proponents:

- 1) Letter from EarthTech in response to public letter from Harwich resident dated November 24, 1999
- 2) Wetlands Delineation Report conducted by Fugro East, Inc. dated December 9, 1996
- 3) General Wildlife Habitat Survey at Captain's Golf Course completed by ENSR, Inc. dated January 26, 1998
- 4) Captain's Golf Course Production Well No. 2 Report conducted by Horsley and Witten, Inc. on January 11, 1999
- 5) Fax from Maura Callahan to Scott Michaud regarding data request for information on Captain's Golf Course ENF
- 6) Environmental Notification Form dated July 30, 1999
- 7) Water Management Act Permit Application, Wells No. 1 and 2, dated November 1999
- 8) MEPA Unit/Cape Cod Commission Joint Review Application Form dated July 31, 2000
- 9) Certified abutters list dated July 31, 2000
- 10) Draft Environmental Impact Report (DEIR) dated August 7, 2000
- 11) Final Environmental Impact Report (FEIR) dated April 2001
- 12) 1999 and 2000 Captain's Golf Course monitoring well data dated April 9, 2001
- 13) Supplemental Documentation for DRI Review dated October 2001
- 14) Fax from Jillian Douglass to Scott Michaud regarding identification of well #7 dated October 10, 2001
- 15) Nitrate nitrogen data from 1985-2000 from Bob Mandt to Scott Michaud dated October 16, 2001
- 16) Comment letter from DEP SERO on proposed SEP from Maura Callahan dated October 29, 2001
- 17) Town of Brewster's proposed SEP scope of work dated November 19, 2001

### From Cape Cod Commission and Staff:

- 1 Fax sent to Maura Callahan from Scott Michaud regarding CCC Technical Bulletin #TB 91-001
- 2 Letter from Margo Fenn to Secretary Robert Durand dated August 30, 1999
- 3 Letter from Scott Michaud to EarthTech regarding nitrogen management dated October 28, 1999
- 4 Email from Sharon Rooney dated November 3, 1999
- 5 Email from Sharon Rooney dated November 4, 1999
- 6 Memorandum to Seth S. Wilkinson from Andrea Adams dated August 10, 2000
- 7 Memorandum to Steve Mann and Charles Sumner dated September 1, 2000
- 8 Subcommittee report to MEPA Unit dated September 8, 2000
- 9 Memorandum from Seth S. Wilkinson to subcommittee dated September 16, 2000
- 10 Memorandum from Seth S. Wilkinson to subcommittee dated September 31, 2000
- 11 Memorandum from Greg Smith to subcommittee dated May 3, 2001
- 12 Memorandum from Scott Michaud to Greg Smith dated May 14, 2001
- 13 Fax sent to Maura Callahan detailing map of water quality monitoring wells
- 14 Subcommittee report to MEPA Unit dated May 24, 2001
- 15 Letter to Jillian Douglass dated July 12, 2001
- 16 Email to Maura Callahan regarding description of requested information following first public hearing, dated July 20, 2001
- 17 Extension agreement dated November 19, 2001
- 18 SEP budget from Scott Michaud to Jill Douglass dated November 30, 2001
- 19 Fax from Scott Michaud outlining SEP project for December 6, 2001 subcommittee meeting

**From state/local officials:**

- 1 Meeting notice from Laura Rome, MEPA office regarding Irrigation Well #2, Captain's Golf Course ENF dated August 7, 1999
- 2 Certificate of the Secretary of Environmental Affairs on the ENF dated September 9, 1999
- 3 Letter from Pleasant Bay Resource Management Plan dated December 9, 1999
- 4 Letter from Town of Harwich Conservation Commission dated December 13, 1999
- 5 Letter from DEP regarding Water Management Act Permit application dated February 10, 2000
- 6 Certificate of the Secretary of Environmental Affairs on the Draft EIR dated September 15, 2000
- 7 Letter to the Executive Office of Environmental Affairs from the Town of Harwich Conservation Commission on the FEIR dated May 25, 2001
- 8 Letter from DEP to EarthTech regarding proposed Water Conservation Program dated October 25, 2001
- 9 Captain's Golf Course Proposed Supplemental Environmental Project Scope Water-Level Observation Plan dated November 16, 2001
- 10 Email from Charlie Sumner regarding SEP dated December 17, 2001
- 11 Email from Charlie Sumner regarding SEP dated December 18, 2001
- 12 Email from Charlie Sumner regarding SEP dated December 19, 2001

**From the public:**

1. Letter from Glenn G. Gannon to the subcommittee dated November 22, 1999
2. Letter from the Town of Harwich Conservation Commission to the DEP Watershed Management office dated December 13, 1999
3. Email from Harold C. Johnson Greg Smith dated May 17, 2000
4. Letter from Kenneth D. and Virginia F. Bennett to the subcommittee dated August 29, 2000
5. Letter from Lisa Y. and David W. Marsland to the subcommittee dated September 6, 2000
6. Email from Ruth Morris to the front desk dated September 7, 2000
7. Letter from Kenneth D. and Virginia F. Bennett to Seth Wilkinson dated September 11, 2000
8. Letter from Carmine and Gloria Criscitelli to the subcommittee dated May 16, 2001
9. Anonymous letter to the subcommittee from Brewster resident dated May 17, 2001
10. Email from Martin Gardiner to Greg Smith dated May 25, 2001
11. Email from Kenneth D. and Virginia F. Bennett to Greg Smith dated July 3, 2001

The application and notices of public hearings relative thereto, the Commission staff's notes, exhibits, and correspondence, the transcript and minutes of meetings and hearings and all written submissions received in the course of our proceedings are incorporated into the record by reference.

**TESTIMONY**

Note: see minutes in project file for complete public hearing and subcommittee meeting proceedings.

At the September 6, 2000 Public Hearing the applicant and staff summarized the issues associated with the Water Management Act Permit. Staff discussed issues associated with the

adverse impacts associated with groundwater withdrawals, particularly issues concerning impacts to rare and endangered species within the Mud and Grassy Ponds and wetlands. The Subcommittee heard oral testimony from:

- 1 Roger Cove of the Harwich Conservation Commission regarding concerns of water withdrawal effects on Mud and Grassy Ponds
- 2 Terry Bauer asked about cumulative effects of pumping
- 3 Glenn Gannon submitted a letter and asked why the project was not reviewed before the course was constructed
- 4 Bill Hand stated his concerns for the impacts to Mud Pond and noted that the pond was dry
- 5 Brian Stevens stated that the current water level in Grassy Pond is very low and that the ponds contain rare species
- 6 David Marsland stated submitted a letter stating his concerns about the impacts of the project on the wetlands, ponds and water table
- 7 Martin Gardener stated that he was concerned about the issues of drawdown on the ponds
- 8 Bill Priest stated he was concerned about the lack of long-term data and no plans to gather data on the effects of drawdown
- 9 Carla Priest asked how the alteration to the forest community to the construction of the golf course will not adversely affect the forest ecosystem
- 10 David Marsland asked for clarification on whether the well had been constructed
- 11 Bill Hand stated that he detected an odor from his water which comes from his private well
- 12 Ken Bennett stated that rainfall levels had increased but the water levels in the pond had not recovered
- 13 Carla Priest stated that the Cape Cod National Golf Course used alternative irrigation strategies

At the May 23, 2001 Public Hearing the applicant stated that the FEIR adequately addressed the issues of drawdown in the ponds, wetlands and wells of the golf course. Staff stated that there were still outstanding issues to be addressed, including specific locations of water quality monitoring wells and details on the water-monitoring program that had yet to be provided. Subcommittee heard oral testimony from:

- 1 Terry Bauer of the Harwich Conservation Commission stated that he had not received a copy of the DEIR, and had only received a copy of the FEIR one week prior to the hearing. He also did not agree with EarthTech's assertion that ground water monitoring would be cost effective or useful
- 2 Walter Babcock asked if there were any statistics for water levels at Muddy or Grass Ponds
- 3 Bill Priest stated that in 1999, 56 million gallons were pumped, and yet the town was only permitted to pump 18 million gallons annually
- 4 Brian Stevens stated that since the golf course has been pumping, rain that once collected in the ponds now drains away
- 5 Dave Marsland wanted clarification on how much water the Town needed to pump now that the turf had been established
- 6 Martin Gardiner noted that there seemed to be no punitive measures to enforce pumping limits set on the golf course
- 7 Carla Priest asked why irrigation ponds can't be used as an alternative turf irrigation system
- 8 Virginia Bennett asked about water restrictions in Harwich
- 9 Joseph Nova stated that all Brewster ponds are low due to drought conditions
- 10 John Riley asked how much water is in the aquifer, and how much can it produce

- 11 Dave Marsland asked if the first well is permitted, and why did the state allow the Town to withdraw 56 million gallons/annually if not permitted to do so
- 12 Paul Hicks, Superintendent of Brewster Water Department stated that the Town supports the water withdrawal permit
- 13 Bill Priest asked if a monitoring well were placed by Grassy Pond, would it be useful to Cape Cod Commission staff
- 14 Carla Priest spoke of concerns for rare species being impacted
- 15 Ken Bennett stated that a golf course in Hilton Head irrigated the courses with gray water

At the November 8, 2001 Public Hearing the applicant outlined the water conservation and turf management plan. Staff introduced the Supplemental Environmental Project (SEP) that would provide a water-table observation program. The Subcommittee heard oral testimony from:

- 1) Jim Bearsley felt there is a direct correlation between the well pumping and the low level in Mud and Grassy Ponds
- 2) Dave Marselin wanted to know what kind of state permits could be implemented for illegal pumping by the town
- 3) Jim Bearsley asked if the town can continue pumping from the well even though the town exceeded the amount they are permitted to pump
- 4) Jim Bearsley asked if the town was permitted to operate the well

#### **JURISDICTION**

The proposed Captain's Golf Course Project was submitted to the Commission by the applicant on June 21, 2001 because the project required the filing of an Environmental Impact Report (EIR) under Section 61-62h of Chapter 30 of Massachusetts General Laws. Section 12(i) of the Cape Cod Commission Act requires DRI review for any proposed development project for which the Secretary of EOEPA requires the preparation of an Environmental Impact Report (EIR). Due to the fact that the golf course was already constructed and would not have triggered DRI review if the well was not proposed, the scope of the DRI review included the impacts to the areas of Water Resources, Wetlands, and Wildlife/Plant Habitat.

#### **FINDINGS**

The Commission has considered the application of the Town of Brewster for the proposed Captain's Golf Course Expansion, and based on consideration of such application and upon the information presented in the public hearing and submitted for the record, makes the following findings pursuant to Section 12 and 13 of the Act:

**General Findings:**

- G1 The proposed project consists of the Town of Brewster's Water Withdrawal Permit application to Department of Environmental Protection for the withdrawal of 36 million gallons of water per year.
- G2 The project is not located within an historic district and is not adjacent to individual historic structures.
- G3 The project site does not lie within a District of Critical Planning Concern (DCPC).
- G4 The Brewster Local Comprehensive Plan (LCP) has not yet been certified.
- G5 The project is consistent with Brewster's Development Regulations.

**Natural Resource Findings:**

- NR1 The irrigation well is located in a Significant Natural Resource Area as mapped by the Regional Policy Plan, and within proximity to estimated rare species habitat as mapped by the Natural Heritage Atlas. A natural resources inventory conducted by EarthTech identified the presence of state-listed plants in the vicinity of Mud and Grassy Ponds in the Town of Harwich. The well is located approximately 2,700 feet from these ponds. The Natural Heritage and Endangered Species Program staff has indicated that they do not anticipate adverse impacts to rare species as a result of the irrigation well operation for this project. In addition, the Commission does not anticipate adverse impacts to Mud and Grassy Ponds, or to associated bordering vegetated wetlands as a result of this project.

**Water Resource Findings:**

- WR1 MPS 2.1.1.5 states that Developments of Regional Impact that withdraw over 30,000 gallons of water per day shall be required to evaluate impacts on the water table and surface water bodies.
- WR2 The applicant's existing state Water Management Act (WMA) permit for groundwater withdrawals of 18.3 million gallons per year (MGY) is inadequate for purposes of maintaining existing golf turf. The area of managed turf was expanded in 1999 by approximately 89.3 acres, doubling the number of golf tees, approaches and greens from 18 to 36.
- WR3 In 1998, the applicant supplemented an existing irrigation well with an additional well in preparation for the turf-expansion project. Both wells are located at the golf course. The applicant has requested a WMA permit for total groundwater

withdrawals of 36 MGY from the two existing irrigation wells. The WMA permit has been issued by the state at the time of this decision's execution.

WR4 Wetlands recognized by the Natural Heritage Program as rare-species wildlife habitat have been identified approximately 2,700 feet southwest of the irrigation wells, adjacent to expanded managed turf, and immediately north and northeast of Muddy Pond. Moisture available to Cape Cod's wetlands, upon which wildlife depends, is typically dependent upon the proximity of the water table. Community concerns have focused on potential impacts of expanded groundwater withdrawals and resulting drawdown of the water table on the identified wetland habitat.

WR5 The Commission conducted an analytical analysis of the expansion rate of water-table drawdown around the wells following commencement of pumping. The Commission concludes that measurable periodic drawdown of the water table at the wetlands is unlikely to result from day-to-day pumping of the irrigation wells at rates and durations necessary for effective turf management and consistent with requested groundwater withdrawals under the state's WMA. The Commission does recognize the value of water-table level monitoring to further assess the effects of pumping on the groundwater resource.

WR6 In connection with a state-issued fine levied on the applicant for exceedance of permitted groundwater withdrawals during the golf course's turf grow-in period, the applicant has submitted a request for approval of a water-level monitoring project through the state's Supplemental Environmental Project (SEP) program. The SEP program would enable the applicant to apply 75 percent of the fine proceeds to a hydrologic project designed to evaluate local or regional hydrologic conditions.

The Commission finds that the SEP scope of work submitted for state approval describes a project that is designed to evaluate potential wetland impacts from intermittent pumping from regional withdrawal points. The Commission further finds that information generated by the SEP will be useful to on-going state-sponsored efforts to simulate behavior of the Monomoy Groundwater Lens and subsequent efforts to evaluate the impacts of long-term aggregate impacts of groundwater pumping across the lens.

WR7 The Commission has reviewed the applicant's Turf Management Plan (TMP) from the standpoint of water withdrawal impacts. The TMP contains protocol that integrates information such as weather conditions and soil moisture to efficiently direct the rate and duration of turf irrigation.

In recognition of the golf course's location in a Wellhead Protection Area, the Commission provided the applicant with suggested TMP changes to improve drinking water and environmental protection. These recommendations consist of:

- Reduction in the level of nitrogen loading that results from fertilizer applications;
- Sampling of groundwater samples three times per year from existing monitoring wells and analyses for nitrogen compounds;
- Discontinued use of organophosphate pesticides that threatens avian fauna (birds), such as Dursban and Dylox; and
- Establishment of groundwater-sample-concentration thresholds for pesticides and metabolites at 50 percent of Health Advisory Levels (HAL) and Maximum Contaminant Levels (MCL), exceedance of which would trigger discontinued pesticide use until such time as the cause of the threshold exceedance is determined and corrected.

WR8 The applicant has formally incorporated the following supplemental documentation into the TMP, which includes the following measures in the 10.4 acres of land to be removed from active management:

- A reduction in the frequency of cutting to 1 or 2 times per year in these areas;
- The eventual elimination of blue grass plant types so that fescues will be permitted to dominate in these areas;
- A reduction in active watering of these areas so that there is very little, if any, watering; this reduction will be implemented by a modification to the existing irrigation sprinkler heads and computer programming;
- A significant reduction in the application of nitrogen fertilizers in this area to one (1) pound per year, and
- The elimination of the application of insecticides and fungicides within these areas, unless there is an identified problem, such as grubs.

With respect to all other areas of the 36-hole golf course, the Town of Brewster confirms its intent to implement the following practices into its Turf Management Plan:

- 18) Implementation of the nitrogen reduction practices described in the FEIR in Section 5.2.8;
- 19) Discontinuance of the use of organophosphate pesticides that threaten avian fauna (birds) such as Dursban and Dylox;

- 20) Implementation of a groundwater quality sampling program as described in Section 5.6 of the FEIR;
  - 21) Sampling from Up-Gradient Well 9 and 10, Down Gradient Wells 1PS and 2PS, and one deep well, three (3) times per year, for nitrogen loading and analysis, and
  - 22) The establishment of a maximum concentration threshold for organic pesticide chemicals at 50 percent of the Maximum Contaminant Levels (MCL) established by the United States Environmental Protection Agency in the National Primary Drinking Water Regulations.
- WR9 The applicant provided drainage and grading plans to address concerns regarding potential stormwater runoff into wetland areas from adjacent turf. The plans show that swales were constructed at the margins of managed turf to intercept and infiltrate runoff from managed turf.
- WR10 The applicant will manage water withdrawals so that they do not adversely affect surface water resources, wetlands, private wells or the safe yield of the aquifer.
- WR11 The proposed project will make use of water conservation technologies in accordance with the TMP and ODRP 2.1.1.8.
- WR12 The proposed project will minimize the use of chemical fertilizers and pesticides in accordance with the TMP and ODRP 2.1.1.9.
- WR13 Town officials and the Commission have agreed to discuss strategies and measures which might (potentially) mitigate impacts identified by the SEP.

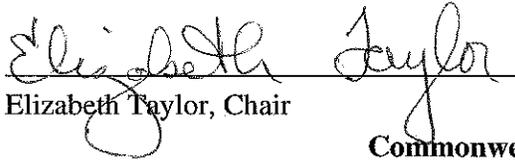
### CONCLUSION

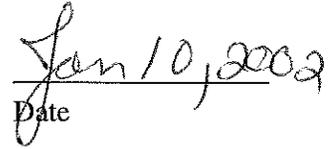
Based on the findings above, the Cape Cod Commission hereby concludes:

- 1) The project is consistent with the Regional Policy Plan as described in the Findings
- 2) The benefits of the proposed project outweigh the detriments resulting from the development. As proposed, the project will implement a hydrologic project (SEP) designed to evaluate local or regional hydrologic concerns (WR5), from which useful information that can be used to evaluate long-term aggregate impacts of groundwater pumping across the Monomoy Groundwater Lens (WR5). Also, the applicant is committed to improving the course's Integrated Turf Management Practices (WR6 and WR7) and has instituted measures to address potential stormwater runoff (WR8).

- 3) This conclusion is supported by the project's consistency with the Regional Policy Plan's Other Development Review Policies (ODRP). Such ODRPs include managing water withdrawals so that they do not adversely impact surface water bodies, private wells or the safe yield of the aquifer (WR9), using water conservation technologies (WR10), and minimizing the use of chemical fertilizers and pesticides (WR11).

The Cape Cod Commission hereby approves the Development of Regional Impact application of the Town of Brewster for its Water Withdrawal Permit application to Department of Environmental Protection for the withdrawal of 36 million gallons of water per year pursuant to Section 12 and 13 of the Act, c.716 of the Acts of 1989.

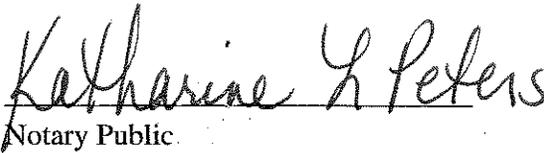
  
Elizabeth Taylor, Chair

  
Date

Commonwealth of Massachusetts

Barnstable, ss.

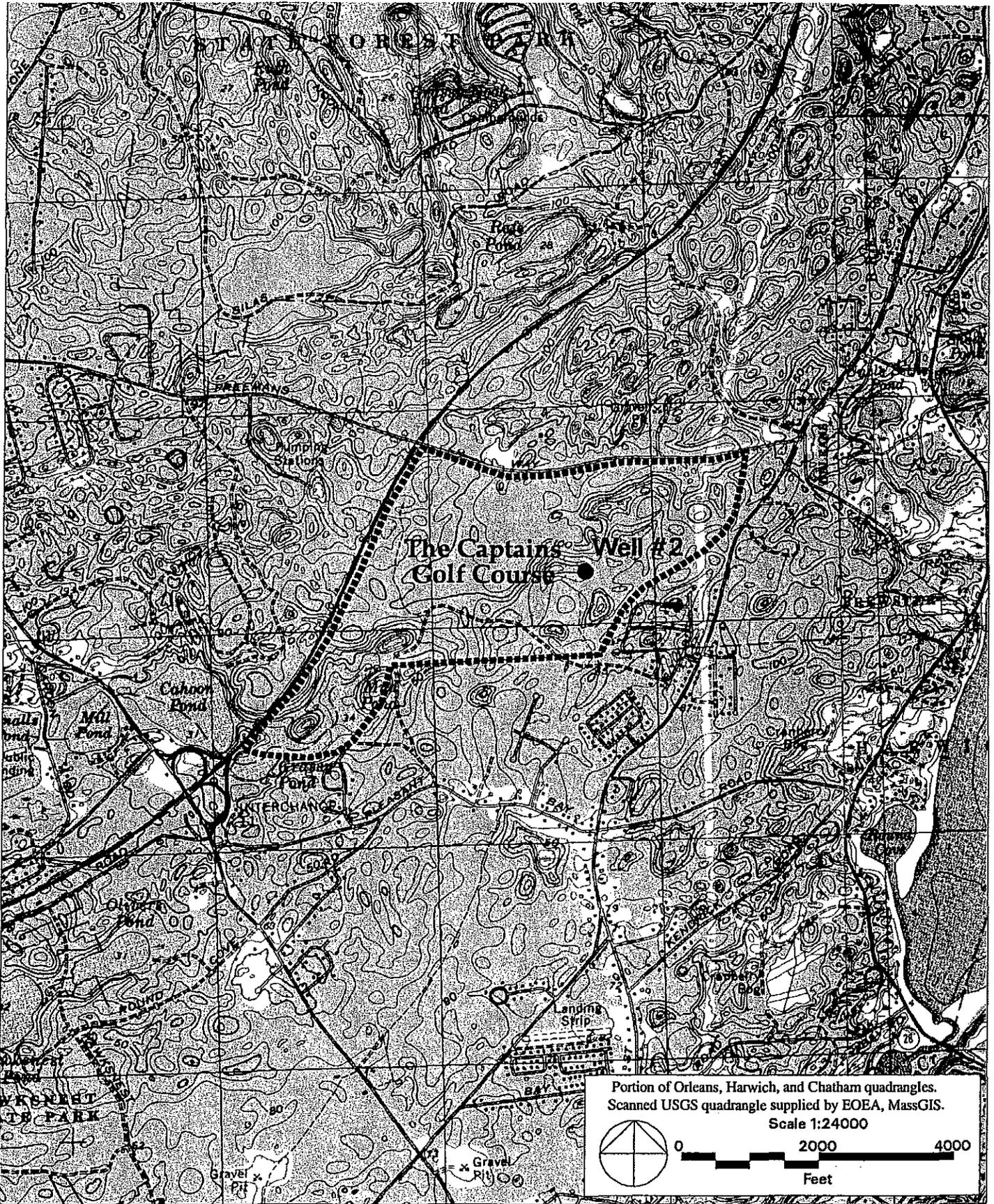
On this 10<sup>th</sup> day of Jan, 2002, before me personally appeared Elizabeth Taylor, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that she executed the same as her free act and deed.

  
Notary Public

Commonwealth of Massachusetts

My Commission expires:





Date: 12 Apr 01 12:45:38 Thursday  
User: jbr/q/44423.msp

**Figure 1 - 1**  
**Site Locus Map**  
**Brewster Captains Golf Course**  
**Well Number 2**