



A hearing will be held in the Selectmen's Meeting Room at the Town Hall, 10 Nickerson Avenue, Middleborough, MA on Monday, February 23, 2015 at 7:40 PM, for the purpose of discussing an application filed by GAF Engineering, Inc. on behalf of Rocky Meadow Cranberry Bog for an Earth Removal Permit for property located at 290 Purchase Street, Middleborough, Assessors Map 063, Lot 2825. Anyone desiring to be heard on this matter should appear at the time and place designated.

Allin Frawley  
Leilani Dalpe  
John M. Knowlton  
Diane Stewart  
Stephen J. McKinnon  
BOARD OF SELECTMEN

Publish: 2/12/15

Private party responsible for payment

Town responsible for payment

Please provide Selectmen's office with amount due.

Advertiser #300074

## Jacqueline Shanley

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**From:** William F. Madden <wfmadden@gaf-eng.com>  
**Sent:** Wednesday, February 11, 2015 12:26 PM  
**To:** Jacqueline Shanley  
**Subject:** Rocky Meadow Cranberry  
**Attachments:** 20150211122237998.pdf; 8312 details rev 2-11-15.pdf; 8312 LAYOUT 2-11-15.pdf

Jackie,

Attached is a revised project plan and drawing for the above referenced project. We have also included a revised page 1 & 2 of the Earth Removal Application and phasing plan. The site plan was revised based on a couple of comments raised by another abutter who attended the Conservation Commission hearing. The project plan and earth removal application did not reflect the depth of the excavation shown on the plan, as the incorrect version was inadvertently submitted. With the exception of the earth removal volume, the changes are relatively minor.

Sincerely,

*William F. Madden, PE*

**G.A.F Engineering, Inc.**

266 Main Street Wareham, MA 02571

Office: 508.295.6600 | Fax: 508.295.6634



### PRIVILEGE AND CONFIDENTIALITY NOTICE

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## PROJECT PLAN

### **Rocky Meadow Cranberry Bog Purchase Street Middleborough, MA**

**Project Purpose:** Enlarge and combine existing tailwater pond/water supply pond to provide adequate water supply for existing cranberry operations.

**Existing Site:** Existing site consist of active cranberry bogs, water supply reservoir, and tailwater pond. Excavation is required to create the water supply/tailwater pond. A previous earth removal permit was issued for the construction of the water supply reservoir.

**Construction Period:** A three (3) year construction period is anticipated. Portions of bogs adjacent to the existing reservoir, or tailwater pond, will be excavated. Excavation will begin adjacent to the existing centrally located tailwater pond.

#### **General Conditions and Description of Construction Activities**

**General:** Excavation activities will generally consist of three (3) phases, as shown on the attached Phasing Plan. The average removal rate is approximately 92,572 cubic yards per year. We expect that approximately 200 days per year are available (primarily due to weather) for earth removal activities. Peak removal would be 40 truckloads per day (1,000cy per day).

A 100-foot buffer zone (minimum) from the edge of excavation to adjacent property lines is provided. The existing treed buffer zone between the adjacent property line and existing cranberry bog edge remain.

Dewatering is not proposed. Excavated material will be stockpiled or loaded directly into trucks. Should dewatering be required, water would be pumped into the adjacent cranberry bogs.

The volume of material to be removed is approximately 277,715 cubic yards, with not more than 5,000 cubic yards of sand to remain on site for use as bog maintenance sand. The interior face of the reservoir will be maintained with a 2:1 slope (horizontal to vertical). The proposed water supply reservoir/tailwater pond will have a capacity of 172ac-ft, which is suitable for the cultivation of the remaining 40 acres (4.3 acre ft/acre of bog). Dust control will

be provided for by sprinkling water over site access drives. Exterior faces of dikes and pond slopes will be covered with topsoil and seeded. Erosion control blankets will be placed on slopes steeper than 2:1.

Temporary low flow dikes will be constructed at the perimeter of the Phase I excavation area and across existing bog acreage so that cultivation practices can continue in the Phase II and Phase III areas. Low flow dikes will extend 18"-24" above existing bog elevations.

Low flow dikes will be constructed of the bog strippings, excluding the vines.

**Restoration:**

Interior slopes of the irrigation pond/tailwater recovery pond will be sloped at 2:1 and prepared with topsoil and seed above the water line. All other disturbed areas will receive the same surface treatment.

**Other:**

No rock crushing is proposed. A portable screening plant will be used to screen sand for bog maintenance. A water truck or sprinkler system will be used for dust control.











February 18, 2015

Board of Selectmen  
Town Hall Building  
10 Nickerson Avenue  
Middleborough, MA 02346

**Re: Initial Engineering Review  
Earth Removal Application  
Rocky Meadow Cranberry Bog  
ADE Project #2518.33**

Dear Board Members:

Atlantic Design Engineers, Inc. (ADE) has completed our initial engineering review of the site plans and application materials for the above-referenced project relative to a request to construct a water supply/tailwater pond under the Earth Removal bylaw. The plans are revised dated 2/9/15 and are prepared by GAF Engineering, Inc. for Rocky Meadow Cranberry Bog.

We have the following comments:

1. Please provide a copy of the Conservation Commission Order of Conditions, if issued for the project.
2. A 100-foot buffer to the property lines has not been provided to the Wessen property or to the Blais Builders property at the southwest corner of the site. In addition, the remaining property line buffers, though 100 feet in width, are only partially treed.
3. The following items were checked off in the submitted Checklist but could not be found in the information provided:
  - A.1 Water Resource Protection District – Not shown.
  - B.6 Treed buffer zone between edges of excavation and abutters – The buffer zones provided are only partially treed.
  - B.8 Distance of reservoir or excavations from property line of abutters – Only shown in a few areas.
  - B.12 Site of proposed de-watering pond, discharge or overflow – Not shown.
  - B.23 Fencing – Not shown.
4. No information is provided on the plans for the existing access road. Are any improvements (safety or otherwise) needed to this road or at the site entrance at Rocky Meadow Street to accommodate the size and increased volume of trucks entering/exiting the site?

5. De-watering plans, methodologies, details are not provided.
6. A construction entrance tracking pad should be shown on the plans, including location and details.
7. It is recommended that slopes steeper than 3:1 should be stabilized with an erosion control blanket. Please amend the appropriate notes on the Site Plan and in the Project Plan.
8. The SWPPP, if required for construction activities and compliance with the NPDES program, when finalized, should be made a part of the permit conditions and should be provided to the Town. Copies of all inspection/correction reports should also be provided to the Town.
9. Please address any potential impacts to adjacent private wells and septic systems due to the enlargement of the reservoir.
10. The water elevation and bottom elevation labels on sheet 1 are mixed up.
11. The proposed dike road is filling portions of the 100-year Flood Zone (A) to Rocky Meadow Brook. Has compensating storage been provided that has unrestricted hydraulic connection to Rocky Meadow Brook?
12. The plans are labeled "Progress Set – Not For Construction". The final construction plans should be provided to Board prior to commencement of work to determine consistency with the approved progress set.

Please call if you have any questions or comments.

Sincerely,

**ATLANTIC DESIGN ENGINEERS, INC.**



Richard J. Tabaczynski, P.E.  
Project Manager

CC: GAF Engineering



## Town of Middleborough

### CONSERVATION COMMISSION

20 CENTRE STREET  
MIDDLEBOROUGH, MASSACHUSETTS 02346

PHONE: 1-508-946-2406  
FAX: 1-508-946-2309

### MEMORANDUM

TO: ✓ Board of Selectmen

CC: Ruth Geoffroy, Town Planner  
Robert Buker, Health Officer  
Robert Whalen, Building Commissioner  
Chris Peck, DPW Director

FROM: Patricia Cassady, Conservation Agent 

DATE: February 18, 2015

RE: Earth Removal Permit: Rocky Meadow Cranberry Bog, 290 Purchase Street (Map 63, Lot 2825)

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The Conservation Commission is currently reviewing an application under a Request for Determination of Applicability for the construction and expansion of an existing water supply/tailwater pond on Land in Agricultural Use. The next hearing for this proposal will be on Thursday, February 19, 2015 at 8:30 PM. The Conservation Commission is currently awaiting revised plans to show proposed changes from the original submittal.

There is currently an outstanding Order of Conditions for a past project on the property which involved the proposed expansion of a reservoir for existing active cranberry bogs under DEP File# SE220-970. This Order of Conditions was issued November 8, 2005 and expired on November 8, 2012 (this includes the added permit extension act). We have recently spoken to GAF Engineering about them requesting a Certificate of Compliance for this project. They need to record the Order of Conditions and submit an as-built plan. A site inspection will not be able to be done till the snow is gone.

The Commission will want to know why this previous expansion of a reservoir was not enough for the current cranberry operation and will want to know why the proposed expansion before them right now is necessary.

Another question that has come up is that concerning the adjacent housing development to this cranberry bog property called Eastwood Estates. Currently there is an Order of Conditions for this project under DEP File # SE220-993. A replication area still needs to be created for the

Earth Removal Permit: Rocky Meadow Cranberry Bog, 290 Purchase Street (Map 63, Lot 2825)

crossing of cranberry bogs at the entrance roadway for this project. The replication area would be a cranberry bog. There has been talk about putting the replication at the 290 Purchase Street property for this earth removal since the proposed location under the Order of Conditions at Eastwood Estates may not be logistically viable for the owner of the bogs. If a replication is proposed at 290 Purchase Street a new Notice of Intent will need to be filed with the Conservation Commission. If the replication is not completed and 75% successful after two growing seasons the project will be in violation of the Massachusetts Wetlands Protection Act. The Order of Conditions for Eastwood Estates will expire on June 1, 2016.

If you have any questions regarding this application don't hesitate to contact the Conservation Department at 508-946-2406.

pjc



**Town of Middleborough**  
20 Centre Street, Second Floor  
Middleborough, Massachusetts 02346

**Robert J. Whalen**  
**Building Commissioner**  
Tel. 508-946-2426  
Fax 508-946-2305

February 17, 2015

Middleborough Board of Selectmen  
Middleborough Town Offices  
10 Nickerson Ave  
Middleborough, MA 02346

RE: W.R.P.D. Application for Earth Removal Permit, Rocky Meadow Cranberry Bog  
290 Rocky Meadow Street, Assessor's Map: 063 Lots: 2825.

Honorable Board,

I have received the plans submitted by William F. Madden, P. E. of G.A.F. Engineering on behalf of Rocky Meadow Cranberry Bog for an earth removal permit for the above referenced property. This permit is for the enlargement and combine existing tailwater pond/water supply pond to provide adequate water supply for existing cranberry operations.

I have no comment.

Respectfully submitted,

Robert J. Whalen  
Building Commissioner

Incorporated 1669



CRANBERRY CAPITAL  
OF THE WORLD



**DIVISIONS**

Highway  
Sanitation  
Insect & Pest Control  
Tree Warden  
Wastewater  
Water

***Town of Middleborough***

*Massachusetts*

Department of Public Works

48 Wareham Street

Middleborough, MA 02346

Phone 508-946-2481 Fax 508-946-2484

Christopher Peck  
D. P. W. Director

February 17, 2015

Mr. Allin Frawley, Chairman  
Board of Selectmen  
Town Hall  
10 Nickerson Ave  
Middleborough, Ma 02346

**Subject: Rocky Meadow Cranberry Bog- Earth Removal Permit Review Letter**

Dear Mr. Frawley,

At the request of the Board of Selectmen I have reviewed the Earth Removal Permit Application as submitted by Rocky Meadow Cranberry Bog. As part of the submittal I received the following:

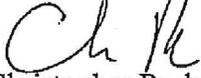
- Earth Removal Permit Application and attached information dated January 15, 2015, prepared for Rocky Meadow Cranberry Bog, prepared by GAF Engineering, Inc.
- Project Plan prepared by Rocky Meadow Cranberry Bog
- Associated plans and details prepared by GAF Engineering, Inc., dated November 11, 2014.

The Department of Public Works comments are as follows:

1. The estimated number of cubic yards being removed stated in the "Earth Removal Application" is less than what is stated in the provided "Project Plan". Please clarify.
2. The Applicant should provide "Caution Trucks Entering and Exiting" signs along both sides of Rocky Meadow Street. The signs will help alert vehicles that trucks may be in the roadway.
3. The Applicant should provide a construction entrance/crushed stone apron in the area of the proposed access driveway. The purpose of the construction entrance is to prevent sediment from being tracked from the proposed driveway onto Rocky Meadow Street during the earth removal project. The construction entrance should be maintained throughout the duration of the project. The apron should be a minimum 18 feet wide by 50 feet long and be comprised of 1 ½ inch crushed stone placed a minimum depth of 8 inches. The other acceptable option would be to pave the access driveway at the same length and width.

4. The proposed 2:1 slopes of the earth removal area may be subject to erosion during both on-going and post construction. The Applicant has provided a method of temporary stabilization under the seeding and mulching notes but additional measures such as stump grindings may be required if the provided methods are not sufficient.

Very Truly Yours,



Christopher Peck  
Director of Public Works

Cc: Town Manager



## Town of Middleborough

### CONSERVATION COMMISSION

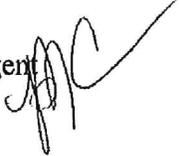
20 CENTRE STREET  
MIDDLEBOROUGH, MASSACHUSETTS 02346

PHONE: 1-508-946-2406  
FAX: 1-508-946-2309

### MEMORANDUM

TO: Board of Selectmen

CC: Ruth Geoffroy, Town Planner  
Robert Buker, Health Officer  
Robert Whalen, Building Commissioner  
Chris Peck, DPW Director

FROM: Patricia Cassady, Conservation Agent 

DATE: February 18, 2015

RE: Earth Removal Permit: Rocky Meadow Cranberry Bog, 290 Purchase Street (Map 63, Lot 2825)

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Earth Removal Permit: Rocky Meadow Cranberry Bog, 290 Purchase Street (Map 63, Lot 2825)

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If you have any questions regarding this application don't hesitate to contact the Conservation Department at 508-946-2406.

pjc



## Town of Middleborough

Massachusetts

PLANNING DIRECTOR  
Ruth McCawley Geoffroy

Planning Board

Telephone (508) 946-2425  
Fax (508) 946-1991

February 10, 2015

Allin Frawley, Chairman  
Middleborough Board of Selectmen  
10 Nickerson Avenue  
Middleborough, MA 02346

Re: Earth Removal Permit, Rocky Meadow Cranberry Company, 290 Purchase St.

Honorable Board,

The Planning Department is in receipt of an Earth Removal Application for 290 Purchase Street for construction of a water supply/tailwater recovery reservoir. The application proposes to excavate 114,000 c.y. of gravel from an area of existing cranberry bogs to create a 15.56 acre reservoir approximately 6' deep. Earth removal is proposed to last 3 years. As with any earth removal proposed for agricultural use, there are legal and policy concerns that the Town should be aware of, which merit discussion.

1. There is no 100' buffer between the earth removal project and the abutting Blais Builders (40') and Wessen (60') residential properties.
2. The issue of Earth Removal being accessory or incidental to a permitted agricultural use (cranberry bog construction) is covered under the Massachusetts Supreme Judicial Court case of Henry v. Board of Appeals of Dunstable which is explained in and attached to Town Counsel's 12/1/94 correspondence (see Attachment) . The case, Old Colony Boy Scouts of Am v. Zoning Board of Appeals of Plymouth, 31 Mass. App. Ct. 46 (1991) is a second case that relates to Earth Removal for the purpose of constructing cranberry bogs.
3. Evidence should be submitted that substantiates the need to excavate existing cranberry bogs and convert them through earth removal to a water supply/tailwater recovery reservoir.

If you have any questions or wish to discuss this matter further please do not hesitate to contact me.

Sincerely,

  
Ruth McCawley Geoffroy, AICP  
Middleborough Planning Director

Attachment

Cc: Middleborough Planning Board  
Middleborough Conservation Commission

22  
0005

DECAS, MURRAY & DECAS ATTORNEYS AT LAW  
132 NORTH MAIN STREET • MIDDLEBORO • MASSACHUSETTS 02346 • (508) 947-4433

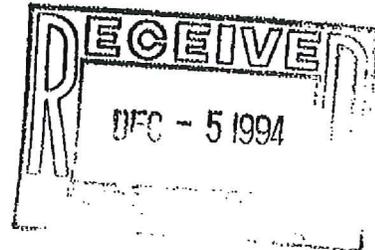
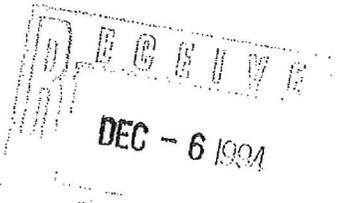
GEORGE C. DECAS  
DANIEL F. MURRAY  
WILLIAM C. DECAS

REPLY TO POST OFFICE BOX 201  
MIDDLEBORO, MA 02346-0201  
FAX (508) 947-7147

WAREHAM OFFICE  
219 MAIN STREET  
(508) 295-2115

December 1, 1994

William Gedraitis  
Building Inspector  
Town of Middleborough  
Town Hall  
Nickerson Avenue  
Middleboro, MA 02346



Dear Bill:

I enclose a copy of a recent opinion of the Massachusetts Supreme Judicial Court (Henry v. Board of Appeals of Dunstable). The case is significant in that it illustrates that earth removal may be illegal under zoning in a zoning district which prohibits earth removal even if the earth removal is for the purpose of creating a permitted use.

In the Henry case the land owner proposed to remove a large quantity of soil in order to create a tree farm, an agricultural use. The court stated that excavation is permitted in such cases only if it is incidental to the permitted agricultural use. An incidental use must not be the primary use of the property; it must be a subordinate and minor use. An incidental use must also bear a reasonable relationship to a primary use. The court concluded that the proposed excavation was not incidental to the tree farm. The excavation was therefore illegal under zoning.

We previously discussed that earth removal in residential districts is allowed under zoning if it is for the purpose of creating a permitted agricultural use. Underlying this concept was the assumption that there was no limit to the scale and duration of an earth removal operation so long as it creates an agricultural use. It was thought that a property owner must be able to take reasonable steps to prepare property for a permitted use. The Henry case makes clear that the scale and duration of an earth removal operation are relevant factors in a zoning analysis to determine whether a particular earth removal project is incidental to the permitted use. The Henry case does not mean that every earth removal operation which creates an agricultural use is illegal. What it requires is a case by case analysis of the

*(11) Ruth Beatty*

C

William Gedraitis  
Page 2  
December 1, 1994

relevant factors to determine if a proposed excavation is  
incidental to the anticipated agricultural use.

Very truly yours,

Daniel F. Murray

DFM:f  
Enclosure  
94-103

cc: Board of Selectmen ✓  
Town Manager

KATHLEEN B. HENRY vs. BOARD OF APPEALS OF DUNSTABLE.

*Misdemeanor* September 9, 1994. - November 16, 1994.

Present: Liacos, C.J., Wilkins, Abrams, Nolan, & Lynch, JJ.

Zoning, Agriculture, Material removal. Words, "Agriculture," "Horticulture," "Incidental."

Civil action commenced in the Superior Court Department on August 25, 1987.

The case was heard by Robert H. Bohn, Jr., J., on a statement of agreed facts.

After review by the Appeals Court, the Supreme Judicial Court granted leave to obtain further appellate review.

Robert J. Sherer (Francis A. DiLuna with him) for the plaintiff.  
Richard W. Larkin, Town Counsel, for the defendant.  
Tara Zedeh, Special Assistant Attorney General, for Department of Food and Agriculture, amicus curiae, submitted a brief.

ABRAMS, J. We granted the defendant board's application for further appellate review to consider its claim that the excavation and removal of 300,000 to 400,000 cubic yards of gravel from a hilly five-acre portion of the plaintiff's thirty-nine acre plot is not incidental to an agricultural or horticultural use of the land and therefore is subject to the local zoning by-law prohibiting commercial earth removal. See generally § 15 of the zoning by-law of the town of Dunstable.

The plaintiff's property is in an R-1 residential district within the town of Dunstable. In an R-1 district an owner may remove or transfer earth within the property boundaries. However, Dunstable's zoning by-law prohibits commercial earth removal in an R-1 district as of right. The plaintiff applied to the Dunstable board of selectmen (selectmen) for a special permit. The selectmen denied the plaintiff's

application.

The board denied the permit on the ground that the removal operation would be "injurious, noxious or offensive to the neighborhood" within the meaning of the applicable by-law. The plaintiff appealed to the Superior Court on the parties' stipulation of facts. A Superior Court judge determined that the proposed use was exempt from regulation by the Dunstable zoning by-law, under G. L. c. 40A, § 3 (1992 ed.),<sup>1</sup> as incidental to an agricultural use, and that the plaintiff could proceed with the earth removal operation. The Appeals Court affirmed. Henry v. Board of Appeals of Dunstable, 36 Mass. App. Ct. 54 (1994). We allowed the board's application for further appellate review. We reverse the judgment of the Superior Court.

I. Facts. We summarize the following from the parties' stipulation of facts. Kathleen B. Henry owns thirty-nine acres of land on High Street in Dunstable, a rural area classified as an R-1 residential district. The plaintiff's plot is forest land within the meaning of G. L. c. 61 (1992 ed.), and has been under a G. L. c. 61 forestry management plan for over ten years.

For the past several years, the plaintiff has used a portion of this property to cultivate 1,000 trees to restore the forest and to begin a Christmas tree farm. After consulting experts, the plaintiff realized that a "cut your own" Christmas tree farm would be much more profitable than a saw log operation. During winter, neither mechanized farming equipment nor customers of a "cut your own" operation would be

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<sup>1</sup>General Laws c. 40A, § 3 (1992 ed.), reads in pertinent part: "No zoning ordinance or by-law shall . . . unreasonably regulate or require a special permit for the use of land for the primary purpose of agriculture [or] horticulture . . . ."

able safely to have access to the proposed five acre area unless the steep grade of the land, created by an esker, is leveled by removing 300,000 to 400,000 cubic yards of gravel.

To realize her contemplated "cut your own" tree farm, the plaintiff planned to hire a contractor to remove 100,000 cubic yards of gravel annually until the necessary gravel was removed (at least three to four years). The contractor would sell the gravel at the market rate, currently one dollar per cubic yard, and share any profits with the plaintiff, which she planned to invest in startup costs of the "cut your own" operation. Eight years after completion of the excavation and planting a sustainable annual crop of 700 to 1,000 Christmas trees is expected, which currently would sell for thirty dollars a tree.

II. Incidental use. Because § 3 of the Zoning Act, G. L. c. 40A (1992 ed.), does not define "agriculture" or "horticulture," we look to the plain meaning of those terms in deciding whether the plaintiff's activity is agricultural. See, e.g., Building Inspector of Peabody v. Northeast Nursery, Inc., ante 401, 405 (1994). The planting of evergreen trees for either a saw cut operation or a "cut your own" Christmas tree farm is within the commonly understood meaning of agriculture or horticulture. The board does not contend otherwise.

The board asserts that the plaintiff's proposed earth removal does not qualify for the exemption because it is a major independent commercial quarrying project, separate and apart from any agricultural or horticultural use. Two statutory provisions provide guidance in interpreting whether the scope of the agricultural use exemption for a proposed evergreen farm includes an initial, large-scale excavation project. First, G. L. c. 128, § 1A (1992 ed.), defines "agriculture"

and "farming" to include practices by a farmer on a farm incident to or in conjunction with the growing and harvesting of forest products.<sup>2</sup> Second, G. L. c. 61A, § 2 (1992 ed.), defines "horticultural use" to include uses "primarily and directly" related to or "incidental," and "customary and necessary" to commercial raising of nursery or greenhouse products and ornamental plants and shrubs.<sup>3</sup> Thus, the scope of the agricultural or horticultural use exemption encompasses related activities. Because the proposed excavation of 300,000 to 400,00 cubic yards of gravel is not primarily agricultural or horticultural, the issue is whether the proposed excavation is incidental to the creation of a "cut your own" Christmas tree farm.

Uses which are "incidental" to a permissible activity on zoned property are permitted as long as the incidental use does not undercut the plain intent of the zoning by-law. 2 E.C. Yokley, *Zoning Law and Practice* § 8-1 (4th ed. 1978). An accessory or "incidental" use is permitted as "necessary, expected or convenient in conjunction with the principal use of the land." 6 P.J. Rohan, *Zoning and Land Use Controls*,

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<sup>2</sup>Section 1A provides in part: "'Agriculture' and 'farming' shall include . . . the growing and harvesting of forest products upon forest land . . . , and any practices, including any forestry or lumbering operations, performed by a farmer, who is hereby defined as one engaged in agriculture or farming as herein defined, or on a farm as an incident to or in conjunction with such farming operations . . . ."

<sup>3</sup>Section 2 provides: "Land shall be deemed to be in horticultural use when primarily and directly used in raising . . . nursery or greenhouse products, and ornamental plants and shrubs for the purpose of selling such products in the regular course of business or when primarily and directly used in raising forest products under a program certified by the state forester to be a planned program to improve the quantity and quality of a continuous crop for the purpose of selling such products in the regular course of business; or when primarily and directly used in a related manner which is incidental thereto and represents a customary and necessary use in raising such products and preparing them for market."

§ 40A.01, at 40 A-3 (1994). Determining whether an activity is an "incidental" use is a fact-dependent inquiry, which both compares the net effect of the incidental use to that of the primary use and evaluates the reasonableness of the relationship between the incidental and the permissible primary uses. In analyzing the plaintiff's proposed earth removal project, the focus is on the "activity itself and not . . . such external considerations as the property owner's intent or other business activities." County of Kendall v. Aurora Nat'l Bank Trust No. 1107, 170 Ill. App. 3d 212, 218 (1988).

The word "incidental" in zoning by-laws or ordinances incorporates two concepts: "It means that the use must not be the primary use of the property but rather one which is subordinate and minor in significance. . . . But 'incidental,' when used to define an accessory use, must also incorporate the concept of reasonable relationship with the primary use. It is not enough that the use be subordinate; it must also be attendant or concomitant. To ignore this latter aspect of 'incidental' would be to permit any use which is not primary, no matter how unrelated it is to the primary use." Harvard v. Maxant, 360 Mass. 432, 438 (1971), quoting Lawrence v. Zoning Bd. of Appeals of N. Branford, 158 Conn. 509, 512-513 (1969).

The plaintiff's activity meets neither aspect of an incidental use. The proposed gravel removal project is a major undertaking lasting three or four years prior to the establishment of the Christmas tree farm. That project cannot be said to be minor relative to a proposed agricultural use nor is it minor in relation to the present operation. Nor can the quarrying activity be said to bear a reasonable relationship to agricultural use. Jackson v. Building Inspector of Brockton, 351

Mass. 472 (1966) (construction of new building to operate agricultural machine on farm in residential district was reasonably related to farming activities and thus permitted under zoning ordinance). We conclude that the net effect of the volume of earth to be removed, the duration of the project, and the scope of the removal project are inconsistent with the character of the existing and intended agricultural uses.

We think that the plaintiff's case is governed by Old Colony Council-Boy Scouts of Am. v. Zoning Bd. of Appeals of Plymouth, 31 Mass. App. Ct. 46 (1991). In Old Colony Council, the Boy Scouts of America applied for a permit under a Plymouth zoning by-law to excavate 460,000 cubic yards of earth in order to create a cranberry bog near a campsite in a "Rural Residential District." Id. at 49. The Plymouth zoning board of appeals denied the application on the ground that a special permit was required for such an excavation project. The plaintiff appealed to the Superior Court which affirmed the denial of the permit. The Appeals Court also affirmed on the ground that, considering the volume of earth to be excavated, the duration of the project, and the funds involved, the excavation was not incidental to the proposed cranberry bog. Id. (because "the proposal involved the removal of 460,000 cubic yards of fill over a two and a half year period and an excavation which would provide substantial funds in excess of the cost of constructing the bog, the judge was warranted in upholding the boards's conclusion that the excavation of material was not incidental to the construction and maintenance of a cranberry bog").

In its reasoning, the Appeals Court stated the plain meaning of "incidental" to be "something minor or of lesser importance." Id. at 48

& n.2, quoting Webster's Third New Int'l Dictionary 1142 (1971) ("subordinate, nonessential, or attendant in position or significance") and American Heritage Dictionary 664 (1976) ("[o]ccurring as a fortuitous or minor concomitant: incidental expenses"). Applying this definition of "incidental" use, the court then considered the net effect of the proposed activity on the surrounding area.

In our view, the Appeals Court in Old Colony Council, *supra*, correctly considered the "net effect" that the proposed cranberry bog would have had in the rural residential area and concluded that the effect was so great that the excavation could not be said to be incidental (or attendant or minor) to the cranberry bog. *Id.* at 49 (given amount of gravel to be excavated, estimated duration of excavation of project, and profit to be made from the excavation, excavation was not incidental to proposed cranberry bog). Interpreting accessory use provisions to require both that an incidental use be minor relative to the principal use and that the incidental use have a reasonable relationship to the primary one is essential to preserve the power and intent of local zoning authorities. Any other construction of the statute would undermine local zoning by-laws or ordinances. Applying the same reasoning to this case, considering the amount of gravel to be removed, the duration of the excavation and the monies to be realized from the excavation, the removal of gravel cannot be said to be minor or dependent on the agricultural use.<sup>4</sup>

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<sup>4</sup>The Appeals Court cited, 36 Mass. App. Ct. 54, 58 (1994), out-of-State cases in support of its conclusion. See, e.g., Atwater Township Trustees v. Demczyk, 72 Ohio App. 3d 763 (1991) (excavation to create lake and track for horses on fifteen year old horse farm held incidental to agricultural activity); VanGundy v. Lyon County Zoning Bd., 237 Kan. 177 (1985) (quarrying rock to construct pond for irrigation was

The magnitude of the plaintiff's mining operation, if permitted, would be "a de facto quarry operation to be carried on in violation of the [Dunstable] zoning [by-law]." County of Kendall v. Aurora Nat'l Bank Trust No. 1107, supra at 219. We conclude the special permit was properly denied because, "[t]o hold otherwise would be to allow the statutory exemption to be manipulated and twisted into a protection for virtually any use of the land as long as some agricultural activity was maintained on the property. The [town's] zoning power would thus be rendered meaningless. The Legislature cannot have intended such a result when it created a protected status for agricultural purposes." Id.

This matter is remanded to the Superior Court for entry of a judgment affirming the board's denial of a permit.

So ordered.

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incidental to primary agricultural activities). However, in each of the cited cases, the net effect of the "incidental" use was minor in comparison to the primary use, especially because the agricultural use predated the excavation. Furthermore, to the extent that those cases are inconsistent with the result we reach, we decline to follow them.



ENGINEERING,  
INC.

ENGINEERS  
SURVEYORS

January 15, 2015

Town of Middleboro  
Board of Selectmen  
Town Hall  
10 Nickerson Avenue  
Middleboro, MA 02346

**RE: Earth Removal Permit Application  
Rocky Meadow Cranberry Bog  
290 Purchase Street  
Map 063, Lot 2825  
G.A.F. Job No. 14-8312**

Honorable Selectmen:

On behalf of our client, Rocky Meadow Cranberry Bog, G.A.F. Engineering, Inc. submits the attached Earth removal Permit Application. The project involves the construction of a water supply/tailwater recovery reservoir. Enclosed for your review you will find 8 copies of the application and supporting documentation along with the filing fee in the amount \$300.00.

- Earth Removal Application and Water Management Act Permit
- Copy of Deeds
- Farm Plan (September, 2014)
- Application for License
- Certified Abutters List
- Assessor's Location Map
- Checklist for Plans & Project Plan
- Project Plan
- Plans entitled "Proposed Tailwater Pond & Earth Removal Permit Plan" prepared for Rocky Meadow Cranberry Bog, dated November 11, 2014

Thank you for your anticipated consideration of this request. Please feel free to contact me with any questions.

Sincerely,  
**G.A.F. Engineering, Inc.**

William F. Madden, P.E.

WFM/jld

Copy to: Steven F. Ward  
Town Clerk

Enclosure

266 MAIN ST.  
WAREHAM, MA  
02571  
TEL 508.295.6600  
FAX 508.295.6634

gaf@gaf-eng.com

**TOWN OF MIDDLEBOROUGH**  
**EARTH REMOVAL APPLICATION**  
**and renewal form**

**1. General Information**

Name of Applicant: Rocky Meadow Cranberry Bog

Address of Applicant: 46 Myles Standish Drive

Town or City: Carver, MA 02330

Owner of Property: Steven F. & Pauline M. Ward

Location of Property: 290 Purchase Street

Assessor's Parcel and Map Numbers Map 063 Parcel 2825

Map \_\_\_\_\_ Parcel \_\_\_\_\_

Map \_\_\_\_\_ Parcel \_\_\_\_\_

**2. Permit Status**

New Application or Renewal: New

Request for an Extension of Time for existing permit. \_\_\_\_\_

Existing Permit Number: \_\_\_\_\_

Parcel(s) Acreage: 66.4± Acres

Estimated Number of Cubic Yards to be Removed: 113,500 cubic yards

Requested Time Frame of Permit 3 years

Brief Project Description and Reasons for Request:

Construction of a water supply/tailwater pond on land in agricultural use.

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### 3. Project Plan

Has a Project Plan being submitted with this Application? Yes

**An Application for an Earth Removal Permit will not be accepted by the Board of Selectmen for a public hearing, unless submitted with this application.**

### 4. Planning Information

#### a. Proposed Traffic Route from site to unloading of materials.

Off the existing dike road take a left onto Rocky Meadow Street, then a left onto Purchase Street. Stay on Purchase street until you come to the intersection of Purchase and Rte. 58 (Main Street). Take a left and follow to Rte. 44, then you can either go left or right onto Rte. 44.

- b. Has a plan and Notice of Applicability (NOA) or Intent (NOI) been submitted to the Town of Middleborough's Conservation Commission? Yes
- c. Has Order of Conditions by Conservation Commission been issued: If so what is project number and date of conditions : N/A
- d. Provide a copy of the Order of Conditions so they may be attached to the permit. N/A
- e. Is there a Department of Environmental Protection – Water Management Act Registration or Permit for this property? Yes  
Permit No. \_\_\_\_\_ Registration No. 4-24-182.6
- f. Has a Farm Plan been completed? Yes Please provide a copy.
- g. Expected Date of Project Completion: January 2018

### 5. Engineering General Information

Engineering Firm Name: G.A.F. Engineering, Inc.

Engineer's Contact/Name : William F. Madden, P.E.

Street: 266 Main Street

Town/City Wareham, MA 02571

Phone Number: 508-295-6600

**7. Financial Obligations**

Do you owe any property taxes, water, sewer or any other financial obligation to the Town of Middleborough that is not current? \_\_\_\_\_yes      \_\_\_\_\_no

**8. Authorization of Applicant**

a. Have you authorized the engineer to speak on your behalf regarding project questions that may come up prior to the public hearing?

\_\_\_\_\_ yes      \_\_\_\_\_no

William F. Madden agent  
Signature of Applicant

William F. Madden  
Printed Name of Applicant

Phone Number: 508-295-6600



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
SOUTHEAST REGIONAL OFFICE  
20 RIVERSIDE DRIVE, LAKEVILLE, MA 02347 508-946-2700

DEVAL L. PATRICK  
Governor

IAN A. BOWLES  
Secretary

TIMOTHY P. MURRAY  
Lieutenant Governor

LAURIE BURT  
Commissioner

November 21, 2008

Steven F. Ward & Pauline M. Ward  
46 Myles Standish Drive  
Carver, MA 02330

RE: MIDDLEBORO – BRP  
Reg. No. 4-24-182.16  
WMA  
Approval of Transfer  
Transmittal No.: X223900

Dear Mr. & Mrs. Ward:

Enclosed please find your verified registration statement, number **4-24-182.16**, for water rights under the Water Management Act (M.G.L. 21G). This registration is in response to your application to transfer water rights for cranberry cultivation of 65.0 registered acres and four withdrawal points off Rocky Meadow Street/Purchase Street on the Middleboro/Carver town line from Rocky Meadow Farms, LLC. Your registration expires on January 1, 2018. Further information regarding the Water Management Act program is printed on the reverse side of this letter.

Please note that the signature on this cover letter indicates formal issuance of the attached document. If you have any questions regarding this letter, please call Jim McLaughlin at (508)946-2805.

Very truly yours,

Richard J. Rondeau, Chief  
Drinking Water Program  
Bureau of Resource Protection

jm/encl.

cc: Duane LeVangie, WMP/Boston (with attachment)  
Y:\DWP Archive\SERO\Middleboro-42418216-WMA-2008-11-21

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD# 866-539-7622 or 617-574-6868.

DEP on the World Wide Web: <http://www.mass.gov/dep>

Printed on Recycled Paper

## WATER MANAGEMENT ACT – CRANBERRY BOG INFORMATIONAL SHEET

Enclosed please find your verified registration statement for water rights under the Water Management Act (M.G.L. 21G). Please note annual reporting requirements, your renewal date, and any conditions that may apply. The regulations governing this statement can be found at 310 CMR 36.00-36.16. DEP's Timely Action and Fee Provision, 310 CMR 4.00, authorizes an annual compliance fee for Water Management Act registrations and permits. Please also note that this registration is for cranberry cultivation only; any change in use is subject to Department review and may require a permit application.

Please be aware that if you increase your planted acreage through the purchase of formerly unregistered bogs or through construction of new bogs, there are thresholds that may require you to obtain a Water Management Act withdrawal permit. Permits are required for:

- Increases in acreage by more than 4.66 acres of "old style" bogs above your registered acreage in each river basin. Old style bogs do not employ Best Management Practices (BMP's).
- Increases in acreage by more than 9.3 acres above your registered acreage in each river basin, including acreage Certified by NRCS as employing BMP's.
- Addition of new withdrawal points not previously registered which withdraw in excess of 100,000 gallons per day or 9 million gallons in a consecutive three-month period of time.

Also, prior to commencement of any on-site activity subject to jurisdiction under the Massachusetts Wetlands Protection Act (M.G.L. c. 131, s40) and its Regulations (310 CMR 10.00), you must file a Request for Determination of Applicability or Notice of Intent application with the local Conservation Commission. You will receive either a negative Determination of Applicability or an Order of Conditions approving/regulating the proposed project.

The withdrawal registration program is intended to provide a procedure and deadline for persons making existing withdrawals above the threshold quantity to file a registration statement with the Department for their existing withdrawals to enable the Department to document baseline water use to manage the surface and groundwater of the Commonwealth. Except as expressly provided herein, the enclosed Renewal Registration Statement shall not be construed or operate as barring, diminishing, adjudicating or in any way affecting any legal or equitable right of the Department with respect to any pending administrative or judicial action, or any such future action, including without limitation any pending enforcement action or permit appeal, or any legal or equitable right of the Department to pursue any claim, action, suit, cause of action, or demand that the Department may have with respect to any matter covered by this Renewal Registration Statement.

### **BRIEF EXPLANATION OF THE CONSERVATION CREDIT PROGRAM:**

Effective September 8, 2004, a Conservation Credit Program is available to registered, and some permitted, cranberry bog owners. Renovating existing registered bogs to meet BMP standards with a farm plan can earn credits, applied as registered acreage to the registration. Any newly constructed bogs must be irrigated using the same withdrawal point as the renovated bogs to qualify for the credits. Credits can not be applied to previously constructed bogs after September 8, 2005. The credit program is administered through the Conservation Districts. Contact the Plymouth County Conservation District for more detailed information.



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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20 RIVERSIDE DRIVE, LAKEVILLE, MA 02347 508-946-2700

DEVAL L. PATRICK  
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LAURIE BURT  
Commissioner

REGISTRATION STATEMENT FOR VERIFIED WATER WITHDRAWAL

Verified Registration under MGL c. 21G for the water withdrawal identified below  
is accepted by the Department of Environmental Protection (the Department).

GENERAL INFORMATION

Registration Number: 4-24-182.16 River Basin: Buzzards Bay

Registrant: Steven F. Ward & Pauline M. Ward  
46 Myles Standish Drive  
Carver, MA 02330

Number of withdrawal points: 4

Groundwater: 0

Surface water: 4

Locations: Rocky Meadow Bk. & 2 reservoirs, Rocky Meadow St., Middleboro- 3 surface points  
1 reservoir, Purchase St., Carver: 1 surface point

Use: Cranberry Production

Acres: 65 acres

Acreage Distribution:  
Rocky Meadow St., Middleboro/Carver: 65 acres

Average Volume per Day (MGD): 0.58

Days of Operation: 365

Total Annual Volume (MGY): 211.8

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD# 866-539-7622 or 617-574-6868.

DEP on the World Wide Web: <http://www.mass.gov/dep>

Printed on Recycled Paper

CONDITIONS AND REQUIREMENTS

Compliance with registration conditions is required by 310 CMR 36.08. Those applicable are described below.

Metering

Install source meter for withdrawal point: N/A

Calibrate meter: N/A

Records

The Registrant is required to maintain withdrawal records as follows:

Annual records of bog acreage in production. Individual records of water withdrawal are required to be maintained, if the Department so notifies the Registrant in the future.

Verification:

The Department verified registrations based on the results of a water use study conducted by the University of Massachusetts Cranberry Experiment Station, and on documentation of acreage in production from 1981-1985.

OTHER CONDITIONS and REQUIREMENTS:

REPORTING

The Registrant is required by 310 CMR 36.11 to file an annual statement of withdrawal by the date specified by the Department on the form sent to the Registrant for this purpose. The Registrant shall include all withdrawal records from the previous calendar year with the annual report, including any interim monthly reports that the Department has required the Registrant to keep, in accordance with 310 CMR 36.08.

REGISTRATION RENEWAL

This registration statement expires on January 1, 2018, unless a renewal registration request is filed with the Department prior to that date, in accordance with 310 CMR 36.10.

REGISTRATION TRANSFER

Transfer of this registration is governed by the provisions of 310 CMR 36.09. Note that registrations for cranberry cultivation verified using the results of the Cranberry Water Use Study may be transferred as provided in 310 CMR 36.09(1) only if the transfer is for continued cranberry cultivation.

**NOTE:** Regulations are subject to change. The applicant is responsible to comply with current regulations.

November 21, 2008

\_\_\_\_\_  
Richard J. Rondeau  
Bureau of Resource Protection

\_\_\_\_\_  
Date

PL-08-541

10/21/08 1:07PM 01  
000000 #1558  
FEE \$2416.80  
CASH \$2416.80

PLYMOUTH  
DEEDS REG#18  
PLYMOUTH

CANCELLED

86155  
Received & Recorded  
PLYMOUTH COUNTY  
REGISTRY OF DEEDS  
21 OCT 2008 01:22PM  
JOHN R. BUCKLEY, JR.  
REGISTER  
Bk 36462 Pg 286-288

**QUITCLAIM DEED**

**Rocky Meadow Farms, LLC**, a Massachusetts Limited Liability Company having its usual place of business at 113 East Grove Street, Middleboro, MA 02346

For consideration paid and in full consideration of Five Hundred Thirty Thousand and 00/100 (\$530,000.00) dollars

grants to **Steven F. Ward and Pauline M. Ward, as joint tenants**, of 46 Myles Standish Drive, Carver, MA 02330

**with quitclaim covenants**

The property, together with the buildings thereon, being more particularly shown on a plan recorded herewith entitled, "Plan of Land on Purchase Street and Rocky Meadow Street in Middleborough, Massachusetts, which Plan is dated September 30, 2008, Drawn by Outback Engineering Incorporated, Scale 1" = 100', Owner: Rocky Meadow Development Corp."

Said parcel of land contains 66.4 acres of land according to said Plan.

Together with the benefit of:

1. All rights reserved of record to do any and all acts necessary for the growing, maintenance and harvesting of cranberries on the areas depicted as "Existing Cranberry Bog" and "Proposed Restrictive Easement" on plans of record, including but not limited to plans recorded in Plan Book 46, Page 943, Plan Book 49, Page 52, Plan Book 49, Page 341, Plan Book 49, Page 342;
2. Rights reserved over Lot 1 on plan recorded in Plan Book 37, Page 398, as set forth in deed recorded in Book 29352, Page 85;
3. Agricultural easements reserved in deed recorded in Book 33428, Page 35, as affected by:
  - a. Easement in Book 34955, Page 111 and release in Book 34955, Page 114;

St. + Rocky Meadow St  
Middleboro  
Property Lot 2825 Purchase  
Address

b. Easement in Book 35061, Page 343 and release in Book 35061, Page 347.

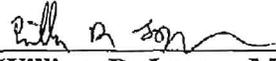
Subject to emergency access easement set forth in said deed recorded in Book 33428, Page 35.

Being the same premises conveyed from Rocky Meadow Development Corp. to Rocky Meadow Farms, LLC, by deed dated May 26, 2006, and recorded at the Plymouth County Registry of Deeds in Book 32753 at Page 138. Also see confirmatory deed from Rocky Meadow Development Corp. to Rocky Meadow Farms, LLC, which deed is dated September 24, 2008, and recorded at the Plymouth County Registry of Deeds prior hereto.

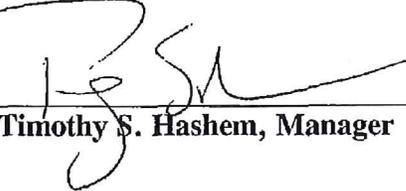
The above described premises do not constitute all or substantially all of the property of the Grantor Limited Liability Company in the Commonwealth of Massachusetts.

**PROPERTY ADDRESS: Map 63, Lot 2825, Purchase Street and Rocky Meadow Street,  
Middleboro, MA 02346**

Rocky Meadow Farms, LLC,  
By Its Managers:

By:   
William R. Logan, Manager

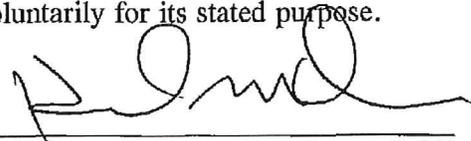
By:   
Richard B. Burr, Manager

By:   
Timothy S. Hashem, Manager

THE COMMONWEALTH OF MASSACHUSETTS

Plymouth: ss

On this 20<sup>th</sup> day of October, 2008, before me, the undersigned notary public, personally appeared William R. Logan, Richard B. Burr, and Timothy S. Hashem, as Managers of Rocky Meadow Farms, LLC, proved to me through satisfactory evidence of identification, which were Massachusetts driver's licenses, to be the persons whose names are signed on the preceding or attached document, and acknowledged to me that they signed it voluntarily for its stated purpose.

  
- Notary Public

My commission expires: Howard M. Kellman

10-4-13



NOTARY PUBLIC  
STATE OF MASSACHUSETTS  
COMMISSION EXPIRES  
OCTOBER 4, 2013

Marginal Reference:  
Book 32753, Page 138

## CONFIRMATORY QUITCLAIM DEED

**Rocky Meadow Development Corp.** a corporation duly established under the laws of the Commonwealth of Massachusetts and having its usual place of business at 433 Purchase Street, Swansea, MA 02777

For consideration paid and in full consideration of less than one hundred (\$100.00) dollars

grants to **Rocky Meadow Farms, LLC**, a Massachusetts Limited Liability Company having its usual place of business at 113 East Grove Street, Middleboro, MA 02346

**with quitclaim covenants**

The property, together with the buildings thereon, being more particularly shown on a plan recorded herewith entitled, "Plan of Land on Purchase Street and Rocky Meadow Street in Middleborough, Massachusetts, which Plan is dated September 30, 2008, Drawn by Outback Engineering Incorporated, Scale 1" = 100', Owner: Rocky Meadow Development Corp."

Said parcel of land contains 66.4 acres of land according to said Plan.

Together with the benefit of:

1. All rights reserved of record to do any and all acts necessary for the growing, maintenance and harvesting of cranberries on the areas depicted as "Existing Cranberry Bog" and "Proposed Restrictive Easement" on plans of record, including but not limited to plans recorded in Plan Book 46, Page 943, Plan Book 49, Page 52, Plan Book 49, Page 341, Plan Book 49, Page 342;
2. Rights reserved over Lot 1 on plan recorded in Plan Book 37, Page 398, as set forth in deed recorded in Book 29352, Page 85;
3. Agricultural easements reserved in deed recorded in Book 33428, Page 35, as affected by:
  - a. Easement in Book 34955, Page 111 and release in Book 34955, Page 114
  - b. Easement in Book 35061, Page 343 and release in Book 35061, Page 347.

PL-08  
541  
Property address: Map 63, Lot 2825, Purchase Street and Rocky Meadow Street, Middleboro

Subject to emergency access easement set forth in said deed recorded in Book 33428, Page 35.

Meaning and intending:

1. To confirm, and hereby confirming, the deed from the grantor herein to the grantee herein dated May 26, 2006 and recorded at Plymouth Deeds in Book 32753, Page 138.
2. To convey, and hereby conveying, the premises conveyed to the grantor herein by deed from James J. DiBurgo et al dated October 15, 2004 and recorded in Book 29352, Page 85, with the exception of:
  - a. Those portions thereof previously conveyed by the grantor herein by deeds of record, and
  - b. That portion thereof lying within the Town of Carver.

The purpose of this deed is to amend and correct the description of the premises as described in a deed from Rocky Meadow Development Corp. to Rocky Meadow Farms, LLC, which deed is dated May 26, 2006, and recorded at the Plymouth County Registry of Deeds in Book 32753 at Page 138.

The above described premises do not constitute all or substantially all of the property of the Grantor corporation in the Commonwealth of Massachusetts.

**PROPERTY ADDRESS: Map 63, Lot 2825, Purchase Street and Rocky Meadow Street,  
Middleboro, MA 02346**

IN WITNESS WHEREOF, the said Rocky Meadow Development Corp. has caused its corporate seal to be hereto affixed and these presents to be signed, acknowledged and delivered in its name by Barry McNeill its Treasurer hereto duly authorized, this 24<sup>th</sup> day of September, 2008.

Rocky Meadow Development Corp. (for authority see Corporate Vote recorded in the Plymouth County Registry of Deeds in Book 30516, Page 298)

By: *Barry McNeill, Treasurer*  
Barry McNeill, Treasurer

THE COMMONWEALTH OF MASSACHUSETTS

Plymouth: ss

On this September 24, 2008, before me, the undersigned notary public, personally appeared Barry McNeil, proved to me through satisfactory evidence of identification, which was a Massachusetts driver's license, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose, as Treasurer of Rocky Meadow Development Corp..

*[Signature]*  
- Notary Public  
My commission expires: *Craig Medeiros*  
*2-15-13*



CRAIG MEDEIROS  
Notary Public  
Commonwealth of Massachusetts  
My Commission Expires  
February 15, 2013

MASSACHUSETTS  
NOTARY PUBLIC  
CRAIG MEDEIROS  
2008-2013

**Farm Conservation Plan Outlining the  
Implementation of  
Best Management Practices for  
Cranberry Production  
*Steven Ward, Rocky Meadow Bog  
Carver/ Middleboro, Mass***



***A Product of Plymouth County Conservation District and the USDA NRCS  
Wareham Field Office***

***Prepared by Nicole Kerstetter, Conservation Planner, MACD  
September 2014***

***In Cooperation with the Plymouth County Conservation District***

<b>Conservation Plan – Table of Contents</b>	
<b>General Maps</b>	
	Loci map
	Resource Maps
	Plan Map
	Soils Map
	Soils Descriptions
	Proposed Tail Water Recovery Area Map
<b>Conservation Plan Narrative</b>	
	Conservation Plan/ Practices Map
	Introduction/Resource Inventory
	Plan Overview
	Planned Practices and Practice Narratives
<b>Appendixes</b>	
	MA 635- Cranberry Bog Irrigation System: Operation & Maintenance Recommendations
	UMass /NRCS Producer Self-Assessment
	Nutrient Management Planning for Cranberries
	Record of Nutritional Amendments
	Integrated Pest Management
	2013 Northeast United States Cranberry Pesticide Chart

## **INTRODUCTION:**

### **FARM OVERVIEW AND OBJECTIVES**

The Rocky Meadow Bog is owned and operated Steve Ward. The farm consists of 65 acres of cranberry bog, with additional support land including work space, reservoirs and wetlands. The planning objective at this time is to improve production & farm efficiencies and sustain the farming resources. At the present time, the water supply for the bog is being enlarged and old undersized and failing water control structures have been replaced, or will be replaced as needed.

The land owner has plans to mine gravel, and construct a new Tailwater Recovery pond and renovate existing bog. This farm plan addresses supporting the existing cropland and does not include the non-farming activities that are occurring.

### **CONSERVATION PLAN**

The Conservation Farm Plan is a resource management system (RMS) developed and promoted by USDA, which utilizes a combination of conservation practices and management measures that if installed, will prevent resource degradation and permit sustained use. These practices meet criteria established for treatment of soil, water, air, plant and animal resources.

## NATURAL RESOURCES INVENTORY

**SOIL:** Although ideally suited for cranberry cultivation and gravel resources, the soils on this farm are severely limited for other agricultural uses. The wetland soils are not suited for development and the upland soils are excessively drained for most crops.

**WATER:** The water source for this string of bogs is Rocky Meadow Brook and an impounded reservoir within the Rocky Meadow drainage area. Rocky Meadow Brook is also the receiving body for discharge. It is also used by many other cranberry bogs as is the Weweantic River. A small tail water recovery system was installed to collect flood water in a sump pond and pump it to irrigation water hole. A more reliable reservoir is planned for installation in 2015.

**AIR:** Air quality is generally good in this location. The operator has taken steps to reduce carbon emissions from the farming operation by cycling pumps for frost protection. Pumps are right sized to minimize fuel use and emissions and have been computerized to maximize efficiencies..

**PLANTS:** Vegetation is limited by the excessive droughtiness in the uplands and tolerance for anaerobic conditions in the wetlands.

**ANIMALS:** The site is adjacent to other bogs and wetlands. There is abundant and varied wildlife habitat opportunity.

**HUMANS:** The surrounding uplands are being converted to residential land use which in some cases includes dikes, field edges, ditches, access roads and elements of the farm management system. Private Wells surround the bog beds; pets and children have access to ditch water and treated cropland. Every farm management decision is made in consideration of the impact on residential neighbors. This is the largest resource challenge and limiting factor in planning for future farm improvements.

### **Total Farm Offsite and Onsite Impacts**

All flumes and dikes are kept in good condition to ensure that all agrichemicals are kept on the property. The operator holds all chemigated water until it can be safely released. There is Tail water Recovery System in place, which is utilized when water conservation and water quality best management practices are indicated.

**Before a specific construction project is started, a review of the permit process shall be made and all necessary Federal, State and Local permits shall be obtained. Assistance and guidance is available from NRCS. 508-295-7962**

**PLAN OVERVIEW**

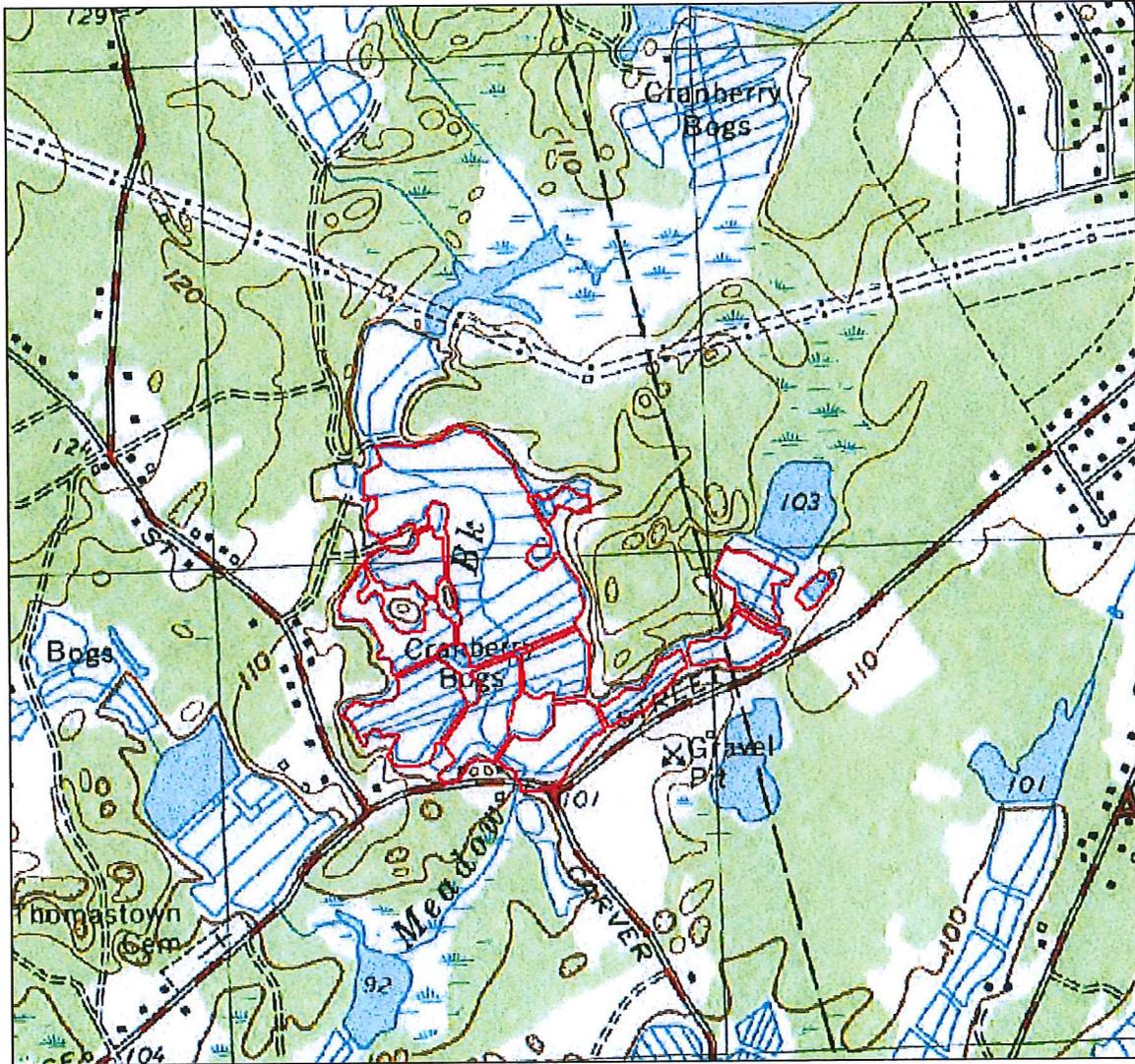
<p><b>Farm Type:</b> <b>Town:</b> <b>County:</b> <b>State:</b></p> <p><b>Watershed:</b></p> <p><b>FSA References</b>     <b>Tract Number(s):</b>     <b>Farm Number(s):</b></p> <p>    <b>Food Security Act Determination:</b>     <b>Highly Erodible Land Determination:</b>     <b>Wetland Determination:</b></p> <p><b>Total Acres:</b>     <b>Cranberries:</b></p> <p><b>Water Resources:</b></p>	<p>Cranberries Carver/Middleboro Plymouth Massachusetts</p> <p>Weweantic River</p> <p>246 176</p> <p>NHEL Completed Completed</p> <p>+100ac (approximate) 65ac</p> <p>Irrigation Reservoir (2) Irrigation Pond</p>
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### Location Map

Customer(s): STEVEN F WARD  
District: PLYMOUTH CONSERVATION DISTRICT

Field Office: WEST WAREHAM SERVICE CENTER  
Agency: USDA/NRCS  
Assisted By: NICOLE KERSTETTER

Legal Description: 41.887455,-70.812206



1 inch = 1,000 feet



### Resource Concern Map

Customer(s): STEVEN F WARD  
 District: PLYMOUTH CONSERVATION DISTRICT

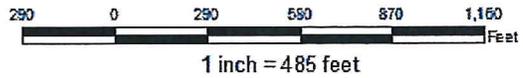
Field Office: WEST WAREHAM SERVICE CENTER  
 Agency: USDA/NRCS  
 Assisted By: NICOLE KERSTETTER

Legal Description: 41.887455,-70.812206



**Legend**

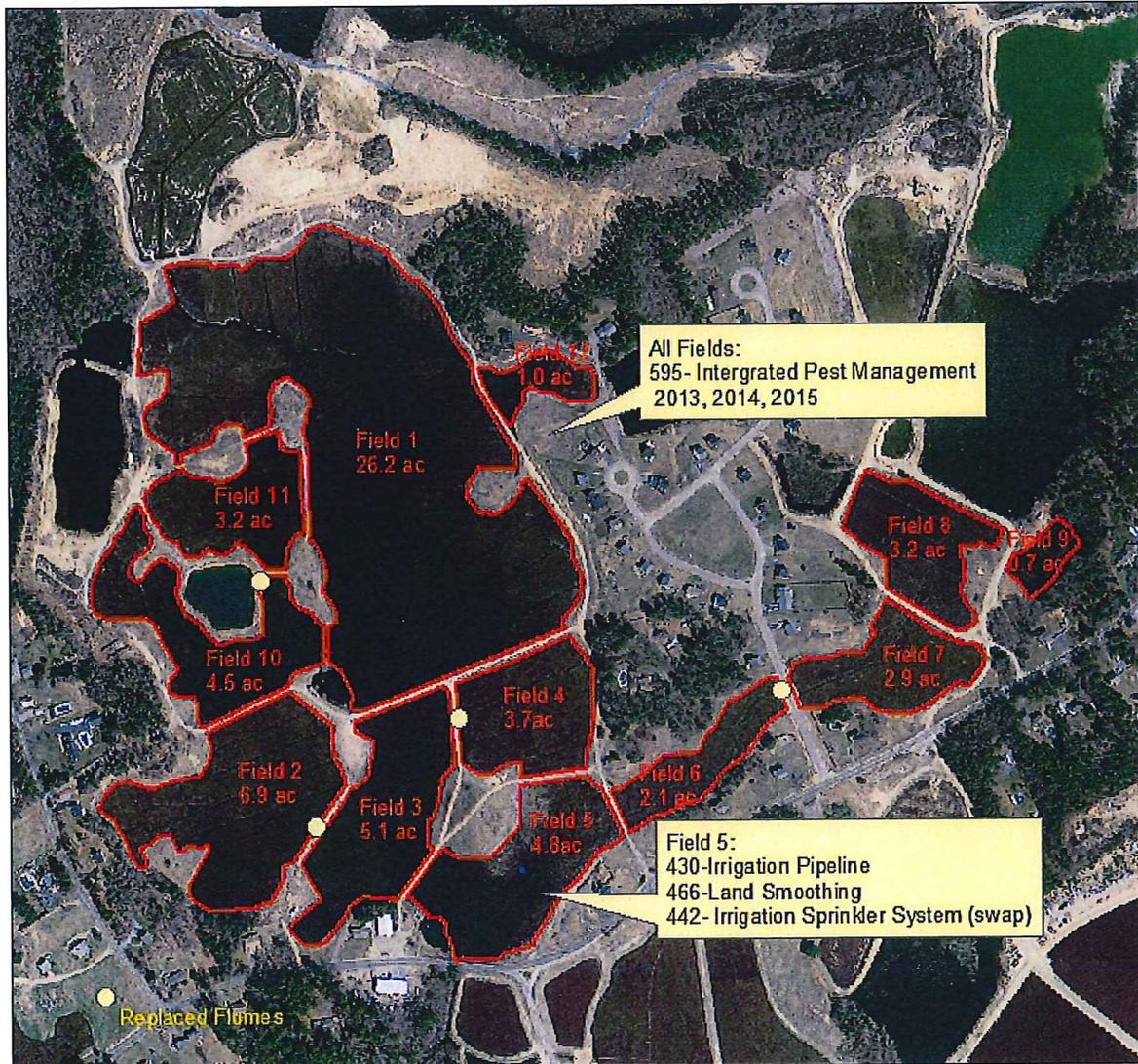
-  NHPSP Priority Habitats of Rare Species
-  Sole Source Aquifers
-  High Yield
-  Medium Yield
-  DEP Approved Zone IIs
-  IWPA's
-  T246
-  towns\_a\_ma001
-  towns\_a\_ma023



### Plan Map

Customer(s): STEVEN F WARD  
District: PLYMOUTH CONSERVATION DISTRICT

Field Office: WEST WAREHAM SERVICE CENTER  
Agency: USDA/NRCS  
Assisted By: NICOLE KERSTETTER



**Soils Information for Rocky Meadow Bog:**  
(Taken from Web Soil Survey-<http://websoilsurvey.sc.egov.usda.gov>)



## **Nontechnical Soils Report - The Rocky Meadow Farm Bogs - North Carver Plymouth County Massachusetts**

Map Symbol	Description
---------------	-------------

### AU GRES AND WAREHAM ASSOCIATION

- AuA AU GRES AND WAREHAM LOAMY SANDS, 0 TO 3 PERCENT SLOPES**  
 Both components are in capability subclass 4W indicating very severe limitations that reduce the choice of plants or require very careful management, or both. Water in or on the soil may interfere with plant growth or cultivation. The components are poorly drained; water is removed so slowly that the soil is saturated or remains wet for long periods. Depth to bedrock is greater than 60 inches.
- The AU GRES component has a seasonal high water table That is normally between 0.5 and 1.5 feet below the surface from NOV. through MAY.
- The WAREHAM component has a seasonal high water table that is normally between 0 and 0.5 feet below the surface from SEPT. through JUN.
- Both components have severe limitations for use as a septic tank absorption field because of wetness and poor filtration. There is severe limitation for local roads and streets due to wetness. For dwellings with basement, there is severe limitation because of wetness and for small commercial buildings, there is severe limitation due to wetness.

### PEAT

- Pe PEAT**  
 The map unit is in capability subclass 5W indicating little or no erosion hazard but other limitations, impractical to remove, that limit agronomic use. Water near the soil surface interferes with plant growth or cultivation. The map unit is very poorly drained; water is removed from the soil so slowly that free water remains near the surface. Depth to bedrock is greater than 60 inches. A seasonal high water table is normally between 0 and 1.0 feet below the surface from JAN through DEC.
- This map unit has severe limitation for use as a septic tank absorption field because of wetness. There is severe limitation for local roads and streets due to wetness, low strength and frost action. For dwellings with basement, there is severe limitation because of wetness and low strength and for small commercial buildings, there is severe limitation due to wetness and low strength.

### SANDED MUCK

- Sb SANDED MUCK**  
 The map unit is in capability subclass 4W indicating very severe limitations that reduce the choice of plants or require very careful management, or both. Water in or on the soil may interfere with plant growth or cultivation. The map unit is very poorly drained; water is removed from the soil so slowly that free water remains near the surface. Depth to bedrock is greater than 60 inches. A

seasonal high water table is normally between 0 and 1.0 feet below the surface from JAN through DEC.

This map unit has severe limitation for use as a septic tank absorption field because of wetness. There is severe limitation for local roads and streets due to wetness, low strength and frost action. For dwellings with basement, there is severe limitation because of wetness and low strength and for small commercial buildings, there is severe limitation due to wetness and low strength.

### CARVER SERIES

THE CARVER SERIES CONSISTS OF VERY DEEP, EXCESSIVELY DRAINED SOILS ON OUTWASH PLAINS, DELTAS AND MORAINES. TYPICALLY, THESE SOILS HAVE A DARK GRAY OR BLACK COARSE SAND SURFACE LAYER 7 INCHES THICK. THE SUBSOIL LAYERS FROM 7 TO 25 INCHES ARE STRONG BROWN AND YELLOWISH BROWN COARSE SAND. FROM 25 TO 29 INCHES THE SUBSOIL IS BROWNISH YELLOW COARSE SAND. THE SUBSTRATUM FROM 29 TO 60 INCHES IS LIGHT YELLOWISH BROWN COARSE SAND. SLOPES RANGE FROM 0 TO 45 PERCENT.

#### CaA CARVER COARSE SAND, 0 TO 3 PERCENT SLOPES

The map unit is in capability subclass 7S which has very severe limitations that make the soil unsuited to cultivation and that restricts its use to grazing. Droughtiness is a significant limitation. The map unit is excessively drained; water is removed very rapidly. Depth to bedrock is greater than 60 inches. The water table is normally more than 6.0 feet below the surface.

This map unit has severe limitation for use as a septic tank absorption field because of poor filtration. There is slight limitation for local roads and streets. For dwellings with basement there is slight limitation and for small commercial buildings, there is slight limitation.

#### CaB CARVER COARSE SAND, 3 TO 8 PERCENT SLOPES

The map unit is in capability subclass 7S which has very severe limitations that make the soil unsuited to cultivation and that restricts its use to grazing. Droughtiness is a significant limitation. The map unit is excessively drained; water is removed very rapidly. Depth to bedrock is greater than 60 inches. The water table is normally more than 6.0 feet below the surface.

This map unit has severe limitation for use as a septic tank absorption field because of poor filtration. There is slight limitation for local roads and streets. For dwellings with basement there is slight limitation and for small commercial buildings, there is moderate limitation due to slope.

#### CaC CARVER COARSE SAND, 8 TO 15 PERCENT SLOPES

The map unit is in capability subclass 7S which has very severe limitations that make the soil unsuited to cultivation and that restricts its use to grazing. Droughtiness is a significant limitation. The map unit is excessively drained; water is removed very rapidly. Depth to bedrock is greater than 60 inches. The water table is normally more than 6.0 feet below the surface.

This map unit has severe limitation for use as a septic tank absorption field because of poor filtration. There is moderate limitation for local roads and streets due to slope. For dwellings with basement, there is moderate limitation because of slope and for small commercial buildings, there is severe limitation due to slope.

### Proposed Tailwater Recovery

Customer(s): STEVEN F WARD  
District: PLYMOUTH CONSERVATION DISTRICT

Field Office: WEST WAREHAM SERVICE CENTER  
Agency: USDA/NRCS  
Assisted By: NICOLE KERSTETTER



**MANAGEMENT SPECIFIC TO ROCKY MEADOW BOG**

- 356 - Dike
- 430 - Irrigation Water Conveyance, Pipeline (Plastic Mainline)
- 442 - Irrigation System, Sprinkler (lateral lines and heads)
- 436 - Irrigation Storage Reservoir
- 447-Irrigation System, Tailwater Recovery
- 449 - Irrigation Water Management
- 466 – Land Smoothing
- 587 - Water Control Structure
- 590- Nutrient Management
- 595- Integrated Pest Management

**WATER MANAGEMENT** includes the management of the water supply for irrigation, harvest, winter flood, and late holding water. The primary water source for Rocky Meadow Farms is Rocky Meadow, headwaters for the Rocky Meadow Brook to the Weweantic River. Drain water from upstream bogs and wetlands enters this bog system from two locations on the north. The easterly flow is impounded in a shallow reservoir, and is used for flooding. It can also be directed through another staging pond for storage. Water entering the system from the westerly stream flows through sections 1, 3 & 5 to the discharge flume. Those sections of the bog system are flow-through. I

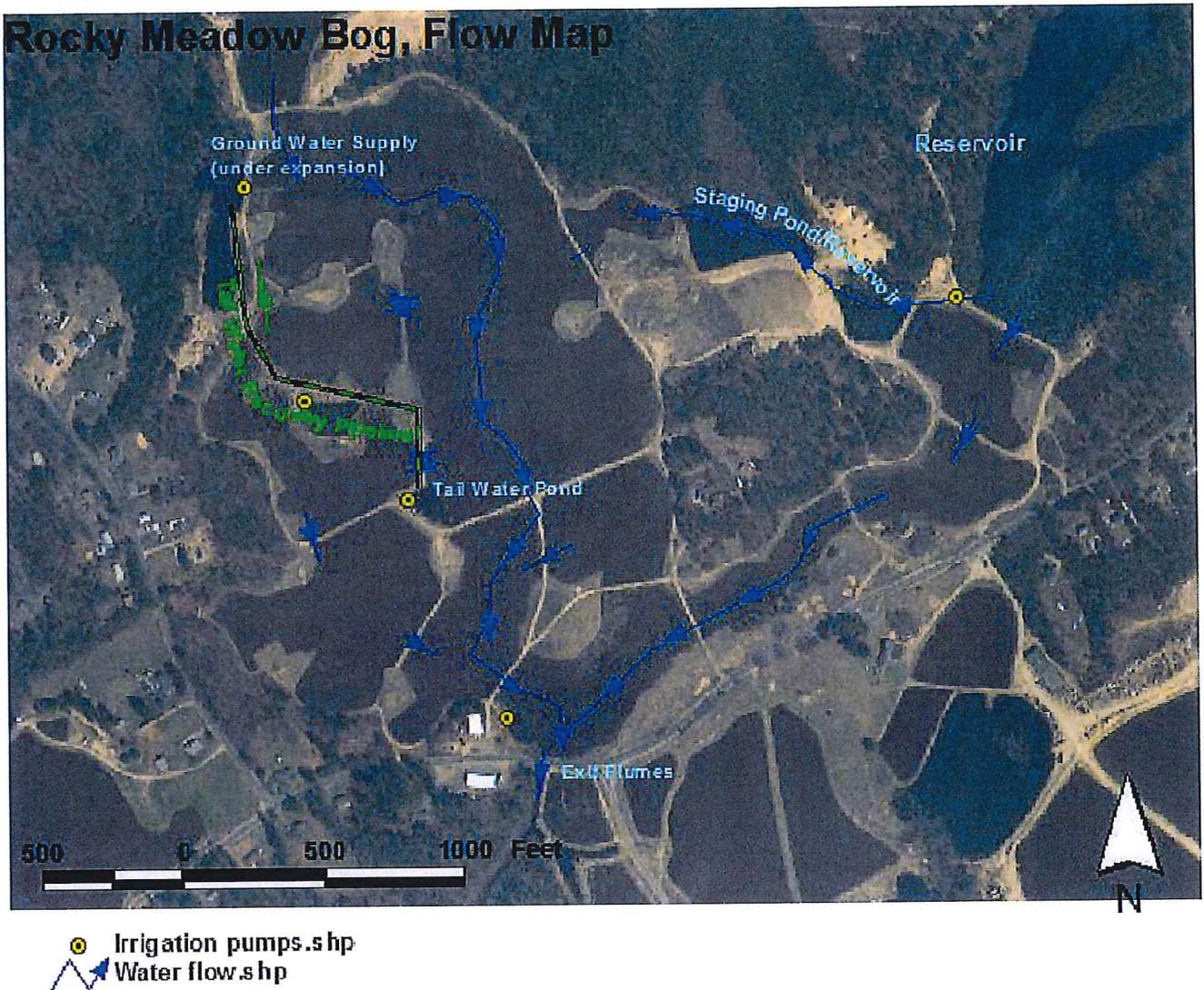
During seasons of low water the reliance on upstream discharge is uncertain. A more reliable ground water supply is under construction in concert with gravel mining activity. Intake and release is depicted on the next page. Upper Staging Pond, See Map

Tail water recovery is practiced to every extent possible. Surface water is collected in two irrigation ponds depicted on the map and used for irrigation. A pump and pipeline is used to move water from the small tail water pond to the upper irrigation pond.



*Upper Staging Pond, See Map*

### Rocky Meadow Bog, Flow Map



356-DIKE

Dikes are embankments constructed of earth or other suitable materials to protect land against overflow or to regulate water. Dikes for cranberry bog water management include perimeter and interior dikes to temporarily impound water for harvesting, trash removal, pest control, and winter flooding or other management purposes including maintaining water quality.

**Assessment:** Dikes appear to be in fair to good condition.

**Decisions:** Maintain as needed

#### **430 - IRRIGATION water conveyance, pipeline (plastic Mainline)**

Irrigation water conveyance pertains to that part of the irrigation system that carries water to the irrigation sprinkler system (mainline). Water conveyance is through underground thermoplastic pipelines ranging from 1/2" to 18" in diameter which are closed to the atmosphere and subject to internal pressures of 80 lb./sq." or greater. The intent of this practice is to prevent loss of water quality, damage to the landscape and to make possible proper management of irrigation water by reducing water conveyance losses.

**Decisions:** Producer will continue Irrigation improvements as outlined and scheduled in his NRCS Contract

#### **442-SPRINKLER IRRIGATION SYSTEM**

A sprinkler irrigation system (laterals and heads) is a planned water delivery method, using sprinkler heads under pressure. The system should uniformly distribute water to maintain adequate soil moisture for optimum plant growth without causing excess water loss or reduced water capacity.

Sprinkler systems for cranberry bogs are also used for protection of crops from frost damage, for the application of fertilizers and pesticides and for plant temperature control during periods of intense heat.

**Assessment:**

Generally: 1 1/4" and 1 1/2" diameter lateral lines are utilized on all bogs to facilitate homogeneous water and agrichemical distribution. The Rocky Meadow Farms Bogs utilizes Rainbird ® 5/32" heads and at spacing of 50' x 60'.

**Decisions:** Producer will replace irrigation system on Bog 5, with assistance from NRCS. Renovations scheduled for the next several years will impact the irrigation system on the property and upgrades will be made as necessary.

#### **466 - LAND SMOOTHING**

Land smoothing is the practice of removing irregularities on the land surface by the use of special construction equipment. In cranberry bogs, land smoothing is practiced to construct a more level bed to reduce the amount of water used during flooding operations. Squaring off bogs is a form of land smoothing to straighten crooked edges and odd shaped pieces. Straightening of edges make harvesting and mowing more efficient and facilitates better irrigation coverage.

**Assessment:**

**The Rocky meadow bogs are out of grade and would benefit from leveling and renovating.**

**Decisions:**

**Fields will be renovated, squared off, and separated into smaller bogs, as outlined in the Producer's NRCS contract and as economically viable.**

#### **449-IRRIGATION WATER MANAGEMENT**

Irrigation water management is a method of determining and controlling the rate, amount and timing of irrigation water in an efficient manner.

The purpose of this practice is to effectively use available irrigation water supply in managing and controlling the moisture environment of crops to promote crop response, to minimize soil erosion and loss of plant nutrients, to control undesirable water loss and to protect water quality. The irrigator will have the knowledge and capability to manage and apply water in such a manner that these objectives can be reasonably attained. The knowledge should include:

1. How to determine when irrigation water should be applied based on the rate of water used by crops and on the stages of plant growth and weather.
2. How to measure or estimate the amount of water required for each irrigation and leaching needs.
3. The normal time needed for the soil to absorb the required amount of water and how to detect changes in intake rate.
4. How to adjust stream size, application rate, or irrigation time to compensate for changes in such factors as intake rate or the amount of water to be applied.
5. How to evaluate the uniformity of water application.

**Assessment:**

**The individual sprinkler systems for the bogs are used for frost protection, supplemental irrigation water, temperature control and pesticide application (chemigation). The operator has an excellent understanding concerning the**

**proper operation of the sprinkler systems and provides for efficient water use while protecting the water supply and the resource base**

#### **436 – IRRIGATION STORAGE RESERVOIR/ POND**

The irrigation reservoir should be sized to hold in storage enough water for the crop needs seasonally with opportunity to recharge. Cranberries are historically registered with Massachusetts Department of Environmental Protection to withdraw 10 acre/ft of water per acre per year, based on “old style” bog to meet their annual water needs. That water volume per acre may be reduced by installing water conservation measurers such as tail water recovery systems, bog leveling and water conserving irrigation systems.

**Assessment:** The water supply for the Rocky Meadow Bog derives from surface water within a perched water table. Therefore, it is susceptible to drought during the dry season and a torrent of water moving through the system during high water season.

**Decisions:** An existing small ground water supply is being developed to provide a consistent supply as noted on the map. At some future date the manager would like to level the bogs and improve the irrigation system as funds allow.

#### **447 - IRRIGATION SYSTEM, TAILWATER RECOVERY**

A tail water recovery system is a facility used to collect, store, and transport irrigation tail water for reuse in a farm irrigation/ flood distribution system. Tail water recovery systems for cranberry bog water management are used to conserve water supplies by collecting surface runoff for reuse on the bogs and protecting water quality by storing chemigated water onsite.

##### **Assessment (present condition):**

**A Tailwater recovery system has been installed at Rocky Meadow Bog consisting of a collection sink with a pump and pipeline from the base of bog #1 to an irrigation pit at the top of the same bog. While this is effective to collect tail water, at the neediest water season, there is no tail water to collect. A reliable water supply is required.**

##### **Decisions:**

**Producer plans to expand and connect the existing Tailwater Recovery Ponds. The present plan is to take sections of field 10 and 11 out of production and build an expanded Tailwater Storage area. Producer has consulted with a Professional Engineer and NRCS for assistance.**

#### **608 - SURFACE DRAINAGE, MAIN OR LATERAL**

Surface drainage in cranberry bogs consists of open drainage ditches and/or stoned filled and tilled ditches constructed to dispose of surface water. The practice includes main, lateral and perimeter ditches. Main and lateral ditches may also be used to distribute water for flooding and for frost control, if necessary.

**Assessment:**

The main ditch at (Rocky Meadow Brook) is routinely maintained against excessive amounts of accumulated vegetation which would severely impair stream flow. Precautions are also taken to prevent treated irrigation water from spraying directly into the stream with the use of half heads and screens. An annual ditch maintenance program is in place and several hundred feet of perimeter and lateral ditches are cleaned each year.

**Decision:**

A by-pass channel (Canal) will be constructed when field 1 is renovated. This is planned from the top of Field 1, straight through to the exit flume at the bottom of the string.

**587 - WATER CONTROL STRUCTURE**

Flumes are water control structures (WCS) usually constructed of steel, aluminum or concrete which are installed in a dike that conveys water, controls the direction of flow or maintains a desirable water surface elevation.

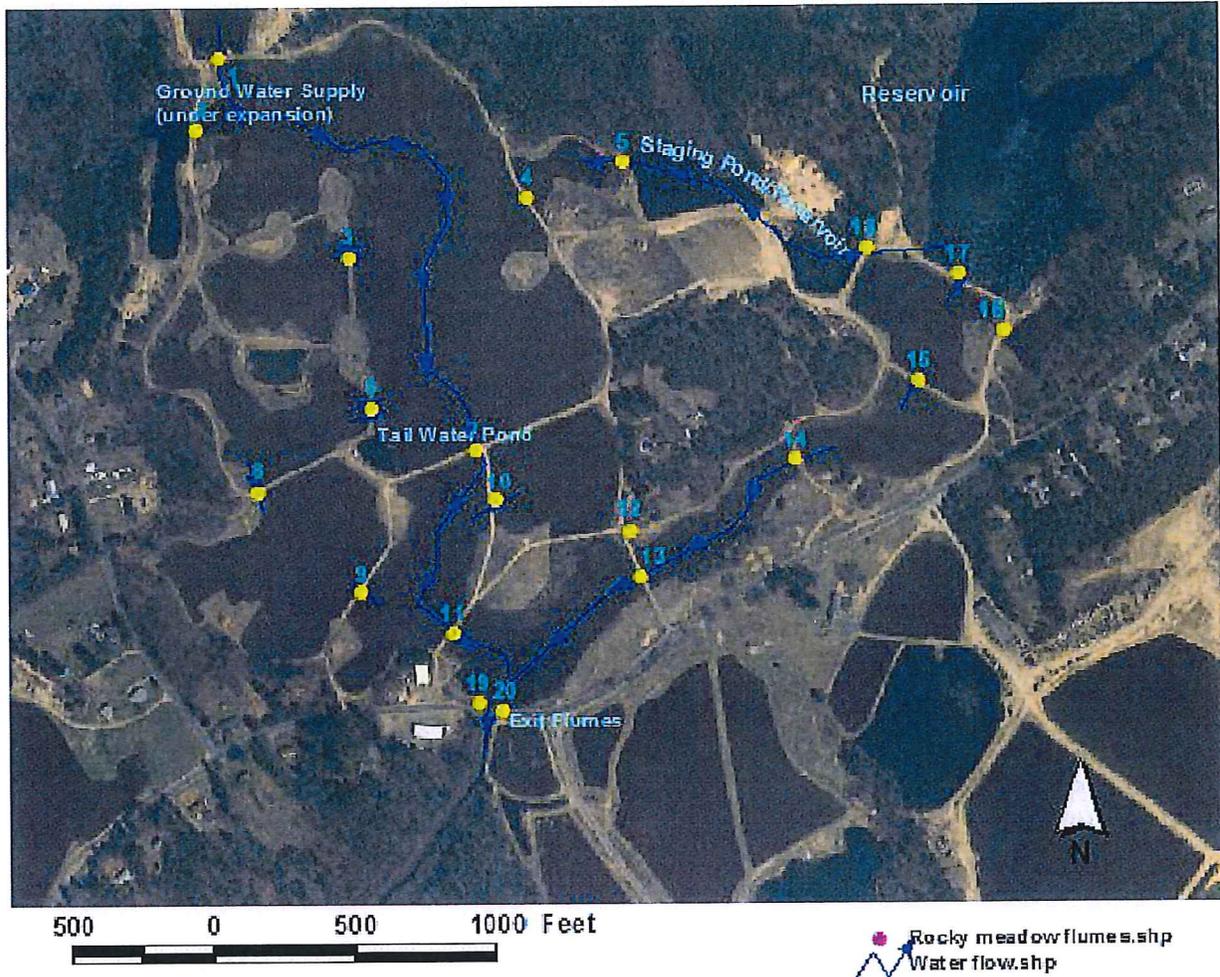
The primary purpose of a WCS is to control the stage, discharge, distribution, delivery, or direction of flow of water in open channels or water use areas. They are also used for water quality control, holding back sediment and impounding chemical laden water until it has sufficiently degraded (for its specified detention time) for discharge from the bog system.

**Assessment:**

**See flume map on next page.**

**587-WATER CONTROL STRUCTURE cont...**

### Rocky Meadow Bog, Flume Map



**Decision:** Producer has replaced Flume numbers : 9, 15, 14, and 16 as outlined in his NRCS Contract. He will continue to replace flumes as necessary, and economically feasible.

### **590-NUTRIENT MANAGEMENT PLANNING FOR CRANBERRIES**

Nutrient Management is the management of the amount, form, placement, and timing of applications of plant nutrients and fertilizers. The goal of nutrient management planning is protection of environmental water resources (surface and ground) by minimizing leaching of nutrients.

The producer will employ a nutrient management process with the goal of optimizing crop yield while having the least negative impact on water. As native perennial plants, cranberries need less fertilizer than most crops. The Producer will follow these guidelines:

- Adapt low phosphate fertilizer formulations for producing bogs (Seek UMass Cranberry Station guidance.)
- Carefully select fertilizer and crop production materials to meet specific needs of the variety of cranberry vines at the particular stage of growth.
- Maintain records of application dates and number of applications. Detailed records kept over a period of time, along with Tissue and Soil Test results, will contribute to the decision making process.

See Appendix for Fertilizer Application Checklists

#### **Assessment**

Producer will maintain the management practice of Nutrient Management and follow recommendations issued by the UMass Cranberry Station

- Complete Self Assessment for Nutrient and Pest Management Developed by UMass Cranberry Station and approved by NRCS.

### **595-PEST MANAGEMENT**

Pest Management is a conservation practice that manages agricultural pest infestations (including weeds, insects and diseases) to reduce adverse effects on plant growth, crop production and environmental resources. The practice establishes the elements of an Integrated Pest Management (IPM) approach. This approach requires an understanding of the dynamic nature of pest management and includes combinations of appropriate biological, chemical and cultural control techniques. The purpose of this strategy is to promote favorable crop results while minimizing environmental impacts. The goal is to use a multi-disciplinary approach to controlling the most economically threatening pests, while optimizing favorable crop yields. IPM programs utilize various techniques to monitor weather, pest life cycles and crop development; it also integrates cultural, biological and chemical control strategies to maintain pests below economically damaging levels. Potential control strategies will be based on established economic thresholds and will employ techniques that minimize environmental impacts.

#### **Monitoring/Observation**

Appropriate monitoring techniques, such as weekly sweep sets, weed mapping and close observation will be used in order to determine pest infestation levels; techniques will be based on the recommendation of the UMass Extension Cranberries Chartbook.

#### **Selection of Management Techniques**

Pest Management methods will be selected on the basis of degree of control, cost and environmental risk. Timing will be based on economic thresholds (when established) as well as the operator's experience and site-specific conditions. Implementation of methods will follow the guidelines recommended in the "Cranberries Chart Book".

#### **Education/Training**

Operator will possess a valid pesticide applicator certification and will attend the appropriate continuing education workshops to keep informed of research developments, or will contract with a licensed custom applicator that does.

#### **Record Keeping**

The operator will maintain, in a format appropriate to the operation, records of dates, locations times of applications, rates and formulations used, split doses, and weather conditions. Records should be consistent with those required by DFA and Handlers.

### **OPERATION, SAFETY AND MAINTENANCE**

Calibrate equipment where applicable to ensure recommended pesticide rates are applied. Protect pesticides from weather and when disposing of any pesticides, proper care should be taken to comply with all applicable local, state and federal laws.

#### **Assessment:**

The operator will use Integrated Pest Management principles or will contract a certified IPM provider. The operator will be current with new technologies and practices as they develop. Course work offered by the Cranberry Experiment Station and workshops sponsored by the Cape Cod Cranberries Growers Association are will be attended by the operator. The operator's will secure a pesticide license or use a provider with a current valid license to apply any restricted use pesticides.

## 595-PEST MANAGEMENT cont...

The operator and consultant will be thoroughly familiar with the technical information necessary to manage pests within their system and they utilize all available IPM management tools, which include cultural, chemical and biological methods of pest control. The landowner will monitor the bogs weekly through the growing season.

The operator will follow the recommendations of the Massachusetts Integrated Pest Management, Standards for Cranberries. The operator is in contact with extension entomologists and plant pathologists from the Cranberries Experiment Station where information is readily available and can be used almost immediately by the operator. The operator will subscribe to the Cranberry Experiment Station's IPM Newsletter.

Only pesticides approved and registered for cranberries in the state are used. The operator will adhere to all state and federal pesticide laws. EPA approved chemigation backflow equipment has been installed on all pumping facilities.

Records of pesticide applications, including date, field identification, targeted pest; pesticide name, formulation, rate and number of acres treated are maintained. Water will be held for the recommended period of time following all pesticide application. Records of dates of holding-water after pesticide applications are maintained.

The operator makes every effort to preserve and protect surface and ground water quality. A deliberate effort is made to protect the resource base. The operator will continue to monitor the pest management program to ensure maximum production while preserving and protecting surface and ground water quality. Closely monitor weather before applying agrochemicals and fertilizers. Utilize economic thresholds in pest management plan.

### **Decisions:**

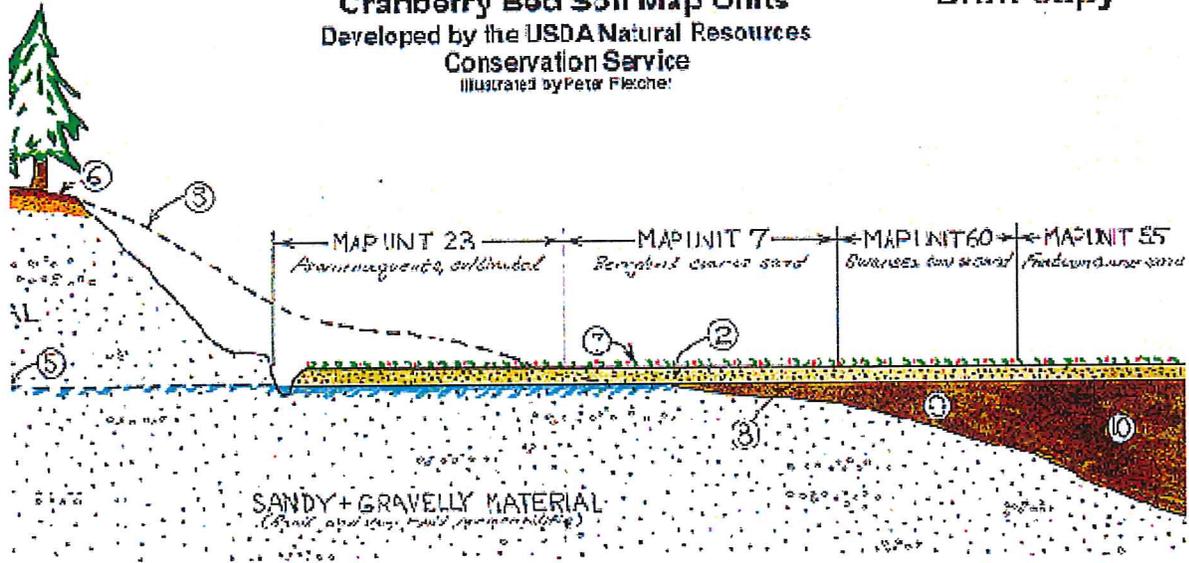
- Closely monitor weather before applying agrochemicals.
- Maintain IPM and Pesticide certification by continually updating training.
- Review Pest Management Best Management Practices (BMP) and IPM information (provided in farm planning workbook).
- Close Flumes tightly whenever chemicals are applied to cranberry beds and hold water for the required period of time.

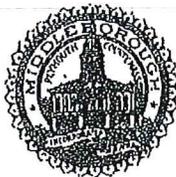
# PLYMOUTH COUNTY, MASSACHUSETTS SOIL SURVEY UPDATE

## Cranberry bed soil map units

**Cranberry Bed Soil Map Units**  
Developed by the USDA Natural Resources  
Conservation Service  
Illustrated by Peter Flechner

Draft copy





Town of Middleborough  
Massachusetts

BOARD OF SELECTMEN  
APPLICATION FOR LICENSE (PLEASE TYPE OR PRINT CLEARLY)

DATE January 12, 2015  
NAME OF APPLICANT Rocky Meadow Cranberry Bog  
ADDRESS OF APPLICANT 46 Myles Standish Drive, Carver, MA 02330  
ASSESSORS MAP & LOT Map 125, Parcel 9  
DAYTIME TELEPHONE 508.866.9679

NAME OF BUSINESS Rocky Meadow Cranberry Bog  
OWNER OF PROPERTY TO BE LICENSED Steven F. & Pauline M. Ward  
ADDRESS OF PROPERTY TO BE LICENSED 290 Purchase Street  
ASSESSORS MAP & LOT Map 063, Lot 2825

TYPE OF LICENSE REQUESTED (Check One)

- |   |                            |
|---|----------------------------|
| 2 <sup>nd</sup> Hand _____                | WRPD _____                 |
| Class I Automobile Dealer License _____   | Earth Removal Permit _____ |
| Class II Automobile Dealer License _____  | Liquor License _____       |
| Class III Automobile Dealer License _____ | Junk Dealer _____          |
| Entertainment _____                       | Other <u>Earth Removal</u> |

Anticipated Start Date for Business: \_\_\_\_\_  
Days & Hours of Operation: 7:30 a.m. to 4:30 p.m. Monday through Friday

Has the applicant previously held a similar license in the Town of Middleborough or elsewhere?  
If yes, explain:

\_\_\_\_\_

Signature \_\_\_\_\_

DATE OF HEARING: \_\_\_\_\_

Please bring to the Treasurer/Collector's office @ the Town Hall Annex, 20 Center Street, 3<sup>rd</sup> floor to obtain confirmation/signature that no outstanding taxes/municipal charges exist.

Dear Treasurer/Collector:

Please inform this department as to whether or not the above listed property owner/applicant/petitioner owes the Town of Middleborough any outstanding taxes and/or municipal charges that remain unpaid for more than one year.

Does Property Owner/Applicant/Petitioner owe Taxes/Municipal Charges? No

\* \$58.00  
Balance



RECEIVED  
JAN 13 2015  
MIDDLEBORO BOARD OF ASSESSORS

### CERTIFIED ABUTTERS LIST REQUEST

Date: January 12, 2015

LOCUS: Map Map 063 Lot 2825 Unit \_\_\_\_\_

Property Address: 290 Purchase Street

Board or Office For: Board of Selectmen *300 ft*

Subdivision/Reason for Project: Earth Removal

Owner's Name(s) & Address: Steven F. & Pauline M. Ward

46 Myles Standish Drive, Carver, MA 02330

Applicant Name & Address: Rocky Meadow Cranberry Bog

(if different from Owner)

46 Myles Standish Drive, Carver, MA 02330

CONTACT NAME & PHONE #: Cindie Aadland, G.A.F. Engineering, Inc. 508-295-6600

\*Selectman's Office, Zoning Board and Planning Board require a certified abutter's list of all abutters within 300' in all directions including across the street. If it is for a Liquor License, all schools and churches within 500' will be included on the list.

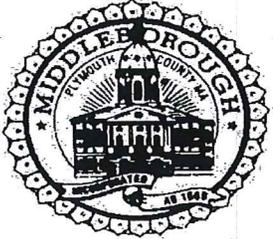
\*Planning Board also requires a Form E to be included with the submission of the list.

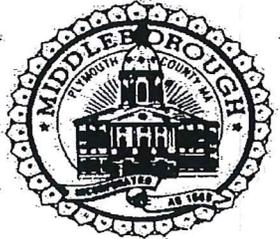
\*Road Completion will include every parcel that abuts the roadway (locus lots) and every direct abutter to those lots (non-locus lots). The locus and non-locus lots will be listed on separate pages.

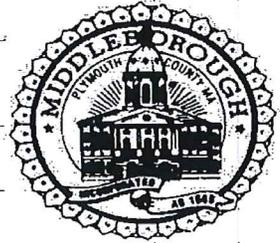
**FEES:** The Abutters list fee is \$25.00 for the first page or the first 13 abutters and then \$2.00 for each additional abutter on the remaining pages. The first \$25.00 is due with the submission of the request.

**NO REFUNDS:** Once the abutter's list request is submitted and completed by this office, absolutely no refunds will be given.

**THE CERTIFICATION MAY TAKE UP TO 10 WORKING DAYS:** The Contact Person will be notified once the certified abutter's list is complete.

<b>LOCUS</b>		<b>OWNER NAME</b>	<b>APPLICANT NAME</b>	<b>PAGES</b>			
Map 63 Lot 2825 290 Purchase Street		Steven & Pauline Ward	Rocky Meadow Cranberry Bog	1 OF 3			
<b>REASON FOR PROJECT</b>		<b>NAME OF BOARD</b>	<b>CONTACT #</b>	<b>DATE</b>			
Earth Removal		Selectmen	508 295-6600	1/13/2015			
<b>parcel ID</b>	<b>Location</b>	<b>Owner name</b>	<b>C/O Owner</b>	<b>Mailing Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>
063-2856	AUGUSTUS WAY	GREYSTONE REALTY INC		3 CHESTER AVE	BERKLEY	MA	02779
063-3536	AUGUSTUS WAY	MCGOURTHY, MICHAEL D ETAL TRUSTEES		PO BOX 1223	MIDDLEBORO	MA	02346
063-4526	8 AUGUSTUS WAY	GOURDIN, NICOLE E		8 AUGUSTUS WAY	MIDDLEBORO	MA	02346
063-3776	12 AUGUSTUS WAY	MCPECK, TIMOTHY		12 AUGUSTUS WAY	MIDDLEBORO	MA	02346
063-3745	16 AUGUSTUS WAY	PUTNAM, ANILA		16 AUGUSTUS WAY	MIDDLEBORO	MA	02346
063-3715	18 AUGUSTUS WAY	DICARLO, JAY MICHAEL & KRISTINE E		18 AUGUSTUS WAY	MIDDLEBORO	MA	02346
063-2896	22 AUGUSTUS WAY	GREGOR, TIMOTHY & ALEXIS D		22 AUGUSTUS WAY	MIDDLEBORO	MA	02346
055-2056	30 AUGUSTUS WAY	SYLVIA H KING TRUST		30 AUGUSTUS WAY	MIDDLEBORO	MA	02346
055-1226	31 AUGUSTUS WAY	DOYLE, BRETT & LUNETTA, JILL		31 AUGUSTUS WAY	MIDDLEBORO	MA	02346
063-5336	4 CAPTAIN HALL RD	SHAW, SUZANNE L & MORRELL, DENNIS M		4 CAPTAIN HALL RD	MIDDLEBORO	MA	02346
063-2985	PURCHASE ST	HANNULA, WAYNE & ELAINE TRS		88 SOUTH MAIN ST	CARVER	MA	02330
063-2767	280 PURCHASE ST	SANTOS, MICHAEL A & DANIELLE L		280 PURCHASE ST	MIDDLEBORO	MA	02346
063-2799	281 PURCHASE ST	PARK, EDWARD & SHIRLEY		281 PURCHASE ST	MIDDLEBORO	MA	02346
063-2818	282 PURCHASE ST	WILLIAMS, CHRISTINE		PO BOX 153	BUZZARDS BAY	MA	02532
063-2881	287 PURCHASE ST	DIBURGO, GARY J & RUTH		1946 WEST STATE HIGHWAY 248	GALENA	MO	65656

<b>LOCUS</b>		<b>OWNER NAME</b>	<b>APPLICANT NAME</b>	<b>PAGES</b>			
Map 63 Lot 2825 290 Purchase Street		Steven & Pauline Ward	Rocky Meadow Cranberry Bog	1 OF 3			
<b>REASON FOR PROJECT</b>		<b>NAME OF BOARD</b>	<b>CONTACT #</b>	<b>DATE</b>			
Earth Removal		Selectmen	508 295-6600	1/13/2015			
<b>parcel ID</b>	<b>Location</b>	<b>Owner name</b>	<b>C/O Owner</b>	<b>Mailing Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>
063-3781	297 PURCHASE ST	HANNULA, WAYNE & ELAINE TRS		88 SOUTH MAIN ST	CARVER	MA	02330
063-2188	318 PURCHASE ST	CORREIA, FRANCISCO V		318 PURCHASE ST	MIDDLEBORO	MA	02346
063-2137	320 PURCHASE ST	DIBURGO, JAMES & FRANCOISE		320 PURCHASE ST	MIDDLEBORO	MA	02346
063-2244	322 PURCHASE ST	LORING, LYNN E		322 PURCHASE ST	MIDDLEBORO	MA	02346
055-5745	186 ROCKY MEADOW ST	POWERS, DAVID W & ELIZABETH A		186 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
055-5846	192 ROCKY MEADOW ST	VALCORBA, STEVEN M & SANDY L		192 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-249	198 ROCKY MEADOW ST	LADD, DOUGLAS & KATHLEEN		198 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1015	199 ROCKY MEADOW ST	COLE, MARTIN & CLARE		199 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-253	200 ROCKY MEADOW ST	TAYLOR, PAMELA J & ROB E		200 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1051	201 ROCKY MEADOW ST	MOSCATO, CHARLES I		201 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-286	202 ROCKY MEADOW ST	LADD, KATHLEEN		202 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1058	203 ROCKY MEADOW ST	PIERCE, JAMES & DIANA		205 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1061	204 ROCKY MEADOW ST	MAYO, ANDREW W & CATHY A		204 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1082	205 ROCKY MEADOW ST	PIERCE, JAMES & DIANA		205 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1065	206 ROCKY MEADOW ST	SEVIER, PATRICK & NEYSA		206 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1089	207 ROCKY MEADOW ST	ELLIS, FRANCIS E JR		62 SILVA ST	CARVER	MA	02330

<b>LOCUS</b>		<b>OWNER NAME</b>	<b>APPLICANT NAME</b>	<b>PAGES</b>			
Map 63 Lot 2825 290 Purchase Street		Steven & Pauline Ward	Rocky Meadow Cranberry Bog	3 OF 3			
<b>REASON FOR PROJECT</b>		<b>NAME OF BOARD</b>	<b>CONTACT #</b>	<b>DATE</b>			
Earth Removal		Selectmen	508 295-6600	1/13/2015			
<b>parcel ID</b>	<b>Location</b>	<b>Owner name</b>	<b>C/O Owner</b>	<b>Mailing Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>
063-1099	208 ROCKY MEADOW ST	DARLING, DORRANCE & KIM M		208 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1834	209 ROCKY MEADOW ST	STEINMAN, GAVIN A & KIA L		209 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1917	210 ROCKY MEADOW ST	WESSEN, SEAN M & TRACEY M		210 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1861	211 ROCKY MEADOW ST	LEAVENS, GERARD F & KASIE A		211 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1944	212 ROCKY MEADOW ST	BLAIS BUILDERS INC		106 WEST GROVE ST, UNIT 2-5	MIDDLEBORO	MA	02346
063-1895	215 ROCKY MEADOW ST	MORSE, GEORGE H III & KAREN L		215 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-1972	216 ROCKY MEADOW ST	SAVAGE, STACEY P		216 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-2754	220 ROCKY MEADOW ST	DERBY, SCOTT		220 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
063-2758	266 ROCKY MEADOW ST	GABOUREL, GLENN & CHERYL ETAL		266 ROCKY MEADOW ST	MIDDLEBORO	MA	02346
045-6486	WALL ST	CARVER-MIDDLEBORO CRANBERRY	C/O NORRIE, JOHN	P O BOX 240	PLYMPTON	MA	02367
054-838	86 WALL ST	CRAIG, TAYLOR J & DIANA C		107 ROCKY MEADOW ST	MIDDLEBORO	MA	02346



Middleborough Assessor's Office  
10 Nickerson Avenue  
Middleborough, MA 02346

## ABUTTER'S LIST CERTIFICATION PAGE\*

January 13, 2015

Selectmen

Board Name for Certification

This is a certified abutter's list for 300 feet in every direction including across the street of

Map 63 Lot 2825 290 Purchase Street

Joanne Nelson, Clerk

Middleborough Board of Assessors

(This list consists of 3 pages with 42 abutter's lots)

\*Please note there is no additional charge for this page and it is intended to certify the information on the preceding or attached document (s)

**Notification to Abutters Under the  
Massachusetts Wetlands Protection Act**

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following.

- A. The name of the applicant is Rocky Meadow Cranberry Bog
- B. The applicant has filed an Earth Removal Permit Application with the Board of Selectmen for the municipality of Middleboro seeking permission to remove, fill, dredge or alter an Area Subject to Protection Under the Wetlands Protection Act (General Laws Chapter 131, Section 40). Project Description: Construction of a water supply/tailwater pond.
- C. The address of the lot where the activity is proposed is 290 Purchase Street  
Map 063, Parcel 2825
- D. Copies of the Notice of Intent may be examined at the Middleboro Conservation Commission between the hours of 9:00 AM and 3:00 PM on the following days of the week: Monday through Thursday

For more information, call: (508) 946-2406

Check One: This is the applicant \_\_, representative \_\_, or other X (specify):

Middleboro Conservation Commission

- E. Copies of the Notice of Intent may be obtained from either (check one) the applicant \_\_, or the applicant's representative X, by calling this telephone number (508) 295-6600 between the hours of 8:00 AM and 4:30 PM on the following days of the week: Monday through Friday
- F. Information regarding the date, time, and place of the public hearing may be obtained from Middleboro Conservation Commission by calling this telephone number (508)946-2406 between the hours of 9:00AM and 3:00 PM on the following days of the week: Monday through Thursday  
Check One: This is the applicant \_\_, representative \_\_\_\_, or other X (specify):  
Middleboro Conservation Commission.

**NOTE:** Notice of the public hearing, including its date, time, and place, will be published at least five (5) days in advance in the Middleboro Gazette  
(Name of Newspaper)

Note: Notice of the public hearing, including its date, time, and place, will be posted in the City or Town Hall not less than forty-eight (48) hours in advance.

NOTE: You also may contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact D.E.P., call (508) 946-2800.

### 300' ABUTTERS LIST

Prepared for  
Town of Middleborough

#### Map 034, Lot 4315

MAP	LOT	OWNER
063	3536	Michael D. McGourthy Trs., Et al P.O. Box 1223 Middleboro, MA 02346
063	2856	Greystone Realty, Inc. 3 Chester Avenue Berkley, MA 02779
063	4526	Nicole E. Gourdin 8 Augustus Way Middleboro, MA 02346
063	3776	Timothy McPeck 12 Augustus Way Middleboro, MA 02346
063	3745	Anila Putnam 16 Augustus Way Middleboro, MA 02346
063	3715	Jay Michael & Kristine E. DiCarlo 18 Augustus Way Middleboro, MA 02346
063	2896	Timothy & Alexis D. Gregor 22 Augustus Way Middleboro, MA 02346
055	2056	Sylvia H. King Trust 30 Augustus Way Middleboro, MA 02346
055	1226	Brett Doyle & Jill Lunetta 31 Augustus Way Middleboro, MA 02346
063	5336	Dennis M. Morrell & Suzanne Shaw 4 Captain Hall Road Middleboro, MA 02346

### 300' ABUTTERS LIST

Prepared for  
Town of Middleborough

#### Map 034, Lot 4315

MAP	LOT	OWNER
063	2985 3781	Wayne & Elaine Hannula Trs. 88 South Main Street Carver, MA 02330
063	2767	Michael A. & Danielle L. Santos 280 Purchase Street Middleboro, MA 02346
063	2799	Edward & Shirley Park 281 Purchase Street Middleboro, MA 02346
063	2818	Christine Williams P.O. Box 153 Buzzards Bay, MA 02532
063	2881	Gary J. & Ruth DiBurgo 1946 West State Highway 248 Galena, MO 65656
063	2188	Francisco V. Correia 318 Purchase Street Middleboro, MA 02346
063	2137	James & Francoise DiBurgo 320 Purchase Street Middleboro, MA 02346
063	2244	Lynn E. Loring 322 Purchase Street Middleboro, MA 02346
055	5745	David W. & Elizabeth A. Powers 186 Rocky Meadow Street Middleboro, MA 02346
055	5846	Steven M. & Sandy L. Valcorba 192 Rocky Meadow Street Middleboro, MA 02346

### 300' ABUTTERS LIST

Prepared for  
Town of Middleborough

#### Map 034, Lot 4315

MAP	LOT	OWNER
063	249	Douglas & Kathleen Ladd 198 Rocky Meadow Street Middleboro, MA 02346
063	1015	Martin & Clare Cole 199 Rocky Meadow Street Middleboro, MA 02346
063	253	Rob E. & Pamela J. Taylor 200 Rocky Meadow Street Middleboro, MA 02346
063	1051	Charles I. Moscato 201 Rocky Meadow Street Middleboro, MA 02346
063	286	Kathleen Ladd 202 Rocky Meadow Street Middleboro, MA 02346
063	1058 1082	James & Diana Pierce 205 Rocky Meadow Street Middleboro, MA 02346
063	1061	Andrew W. & Cathy A. Mayo 204 Rocky Meadow Street Middleboro, MA 02346
063	1065	Patrick & Neysa Sevier 206 Rocky Meadow Street Middleboro, MA 02346
063	1089	Francis E. Ellis Jr. 62 Silva Street Carver, MA 02330
063	1099	Dorrance & Kim M. Darling 208 Rocky Meadow Street Middleboro, MA 02346

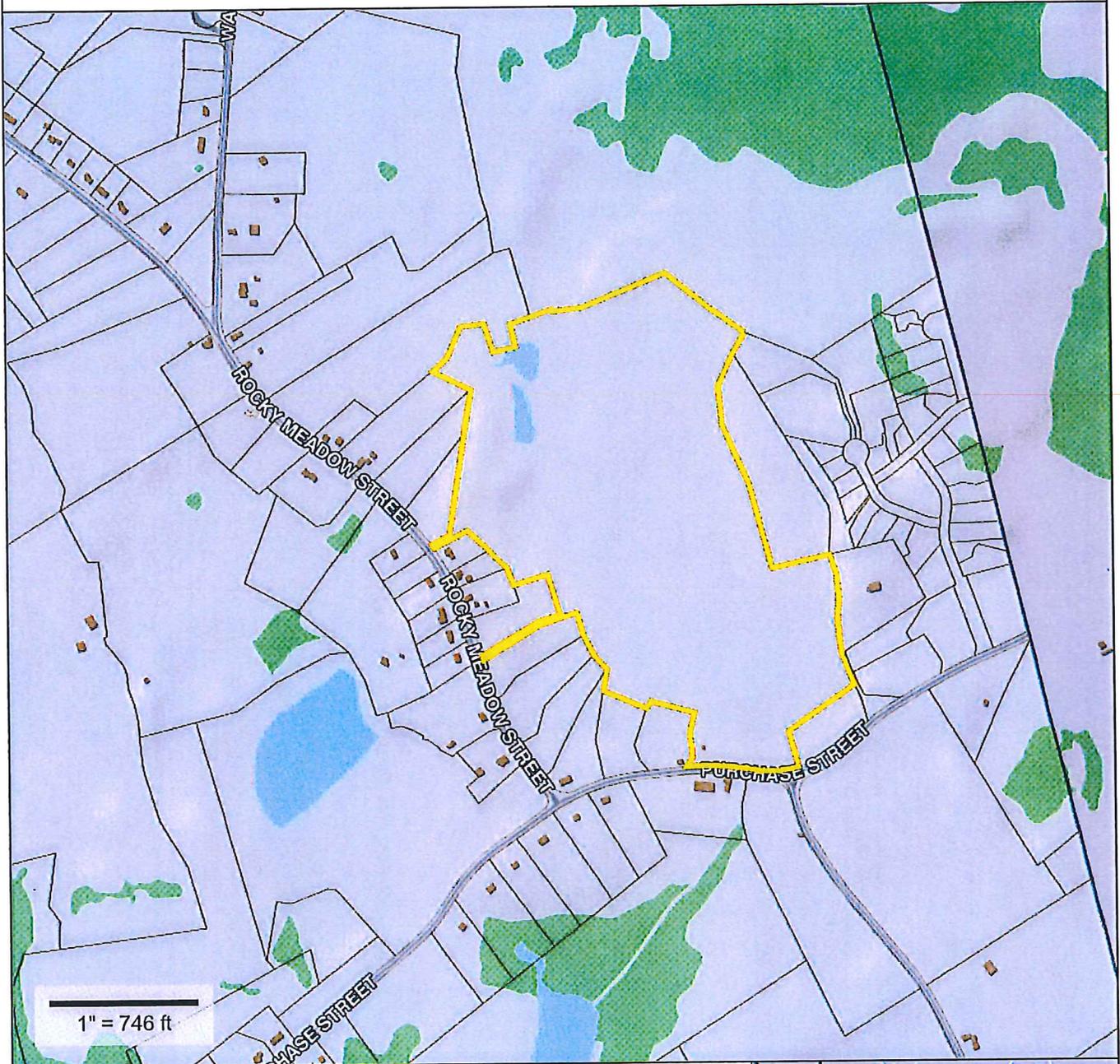
### 300' ABUTTERS LIST

Prepared for  
Town of Middleborough

#### Map 034, Lot 4315

MAP	LOT	OWNER
063	1834	Gavin A. & Kia L. Steinman 209 Rocky Meadow Street Middleboro, MA 02346
063	1917	Sean M. & Tracy M. Wessen 210 Rocky Meadow Street Middleboro, MA 02346
063	1861	Gerard F. & Kasie A. Leavens 211 Rocky Meadow Street Middleboro, MA 02346
063	1944	Blais Builders, Inc. Unit 2-5 106 West Grove Street Middleboro, MA 02346
063	1895	George H. Morse III & Karen L. Morse 215 Rocky Meadow Street Middleboro, MA 02346
063	1972	Stacey P. Savage 216 Rocky Meadow Street Middleboro, MA 02346
063	2754	Scott Derby 220 Rocky Meadow Street Middleboro, MA 02346
063	2758	Glenn & Cheryl Gabourel, Et al 266 Rocky Meadow Street Middleboro, MA 02346
045	6486	Carver-Middleboro Cranberry C/O John Norrie P.O. Box 240 Plympton, MA 02367
051	838	Taylor J. & Diana C. Craig 107 Rocky Meadow Street Middleborough, MA 02346

# ASSESSORS



### Property Information

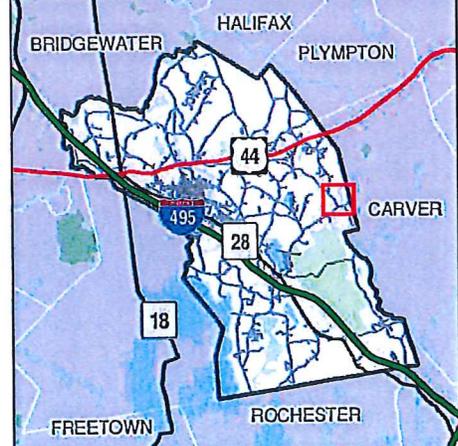
Property ID 063-2825  
Location 290 PURCHASE ST  
Owner WARD, STEVEN F & PAULINE



### MAP FOR REFERENCE ONLY NOT A LEGAL DOCUMENT

The Town makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 12/31/2012



## Base Map Legend

### Major Roads

-  State Route
-  U.S. Highway
-  Interstate
-  Town Bound
-  Parcels
-  Railroad
-  Edge of Pavement
-  Bridges
-  Buildings
-  Building
-  Roads
-  Parking
-  Water Bodies
-  Major Ponds
-  Ponds
-  Major Streams
-  Swamp
-  Federal and State Open Space
-  Surrounding Towns

## CHECKLIST

PLEASE COMPLETE CHECKLISTS FOR PLANS AND PROJECT PLAN AND INITIAL

PLANS	CHECK	INITIALS
<b>A. Cover page that shows:</b>		
1. Name of project	<input checked="" type="checkbox"/>	<u>WFM</u>
2. General directional and town locus	<input checked="" type="checkbox"/>	<u>WFM</u>
3. Water Resource Protection District limits	<input checked="" type="checkbox"/>	<u>WFM</u>
4. Engineering Firm Name and address	<input checked="" type="checkbox"/>	<u>WFM</u>
5. Flood Map limits (if applicable)	<input checked="" type="checkbox"/>	<u>WFM</u>
6. Zoning District limits	<input checked="" type="checkbox"/>	<u>WFM</u>
<b>B. Civil Drawing Sheet 1 – that show at a minimum:</b>		
1. Existing streets	<input checked="" type="checkbox"/>	<u>WFM</u>
2. Property lines and names of adjacent properties/abutters	<input checked="" type="checkbox"/>	<u>WFM</u>
3. Existing tree lines	<input checked="" type="checkbox"/>	<u>WFM</u>
4. Existing and proposed topographical contours (5-foot minimum)	<input checked="" type="checkbox"/>	<u>WFM</u>
5. Town roadways	<input checked="" type="checkbox"/>	<u>WFM</u>
6. Proposed treed buffer zones between edge of excavation and abutters	<input checked="" type="checkbox"/>	<u>WFM</u>
7. Proposed buffer zones between property excavation and town street(s)	<input checked="" type="checkbox"/>	<u>WFM</u>
8. Distances of proposed reservoir or excavations from Property lines of abutters.	<input checked="" type="checkbox"/>	<u>WFM</u>
9. Location and type of proposed excavation and work	<input checked="" type="checkbox"/>	<u>WFM</u>
10. Locations of stockpiling of materials	<input checked="" type="checkbox"/>	<u>WFM</u>
11. Proposed reservoir volume, slopes and bottom elevations	<input checked="" type="checkbox"/>	<u>WFM</u>
12. Site of proposed dewatering pond, discharge and overflow Structure	<input checked="" type="checkbox"/>	<u>WFM</u>
13. Any proposed buildings, structures or utilities	<input checked="" type="checkbox"/>	<u>WFM</u>
14. Roadway systems and gates, and proposed paving areas	<input checked="" type="checkbox"/>	<u>WFM</u>
15. Proposed areas of agricultural uses	<input checked="" type="checkbox"/>	<u>WFM</u>
16. Indications of phased operations	<input checked="" type="checkbox"/>	<u>WFM</u>
17. Areas to be seeded	<input checked="" type="checkbox"/>	<u>WFM</u>
18. Existing and proposed slopes with limits of final grading	<input checked="" type="checkbox"/>	<u>WFM</u>
19. Locations of ditches	<input checked="" type="checkbox"/>	<u>WFM</u>
20. Wetlands and water resource areas	<input checked="" type="checkbox"/>	<u>WFM</u>
21. Elevations of water (high, low) as applicable	<input checked="" type="checkbox"/>	<u>WFM</u>
22. Drainage patterns with directional arrows showing flow	<input checked="" type="checkbox"/>	<u>WFM</u>
23. Fencing	<input checked="" type="checkbox"/>	<u>WFM</u>
24. Professional Engineers Civil stamp	<input checked="" type="checkbox"/>	<u>WFM</u>
25. Date of preparation	<input checked="" type="checkbox"/>	<u>WFM</u>
Other information as appropriate to good engineering design		

**C. Civil Drawing Sheet Number 2 (as applicable)**

1.	Pond specifications with erosion controls	<u>√</u>	<u>WFM</u>
2.	Erosion controls	<u>√</u>	<u>WFM</u>
3.	Side Flow Profile	<u>√</u>	<u>WFM</u>

**PROJECT PLAN**

The purpose of the project plan is to provide a written description of the property, past activities, state permit requirements and how the project will move through construction. The project proponent is encouraged to “paint a picture” of how the project will proceed over the requested permit time period. The following items must be included in the project plan.

- Purpose of project
- Description of site and prior work
- Reasons for earth removal permit
- Describe past earth removal activities and compliance issues that may have occurred.
- How project will be constructed with phases and time lines provided
- Time duration requested for permit

Describe:

The phases, associated time lines and anticipated yardage to be removed each year.

Describe the buffer zones that are to be maintained from the site excavation or pond limits to the property lines, keeping in mind that a treed buffer zone is desired by the Board of 100 feet from individual property lines, and 200 feet from town roadways.

Any specific site conditions that special attention.

Proposed dewatering system for the area should include the abutters who have overburden wells in the area (20000 feet in circumference).

Note that there may be a requirement of determining hydrological affects if abutters complain of insufficient waters in their wells.

If ponds – reservoirs – tailwater recovery systems are to be constructed, please utilize the Soil Conservation Service – Pond Specifications for Excavated Ponds, contained in the Appendix as guidelines.

Estimated volume of material to be excavated and removed from site.

Estimated volume of materials to be kept on site

Maximum sloping

Show volume of pond required for bog size.

Criteria for excavation of ponds and water storage areas

Dust control measures

Erosion control measures

Final topsoil and planting

Completed record plans are required to receive the Town’s Certificate of Completion

## PROJECT PLAN

### **Rocky Meadow Cranberry Bog Purchase Street Middleborough, MA**

**Project Purpose:** Enlarge and combine existing tailwater pond/water supply pond to provide adequate water supply for existing cranberry operations.

**Existing Site:** Existing site consist of active cranberry bogs, water supply reservoir, and tailwater pond. Excavation is required to create the water supply/tailwater pond. A previous earth removal permit was issued for the construction of the water supply reservoir.

**Construction Period:** A three (3) year construction period is anticipated. Portions of bogs adjacent to the existing reservoir, or tailwater pond, will be excavated. Excavation will begin adjacent to the existing centrally located tailwater pond.

#### **General Conditions and Description of Construction Activities**

**General:** Excavation activities will generally consist of three (3) phases, as shown on the attached Phasing Plan. The average removal rate is approximately 38,000 cubic yards per year. We expect that approximately 200 days per year are available (primarily due to weather) for earth removal activities. Peak removal would be 40 truckloads per day (1,000cy per day).

A 100-foot buffer zone (minimum) from the edge of excavation to adjacent property lines is provided. The existing treed buffer zone between the adjacent property line and existing cranberry bog edge remain.

Dewatering is not proposed. Excavated material will be stockpiled or loaded directly into trucks. Should dewatering be required, water would be pumped into the adjacent cranberry bogs.

The volume of material to be removed is approximately 114,000 cubic yards, with not more than 5,000 cubic yards of sand to remain on site for use as bog maintenance sand. The interior face of the reservoir will be maintained with a 2:1 slope (horizontal to vertical). The proposed water supply reservoir/tailwater pond will have a capacity of 200ac-ft, which is suitable for the cultivation of the remaining 40 acres (5 acre ft/acre of bog). Dust control will be

provided for by sprinkling water over site access drives. Exterior faces of dikes and pond slopes will be covered with topsoil and seeded. Erosion control blankets will be placed on slopes steeper than 2:1.

Temporary low flow dikes will be constructed at the perimeter of the Phase I excavation area and across existing bog acreage so that cultivation practices can continue in the Phase II and Phase III areas. Low flow dikes will extend 12"-18" above existing bog elevations.

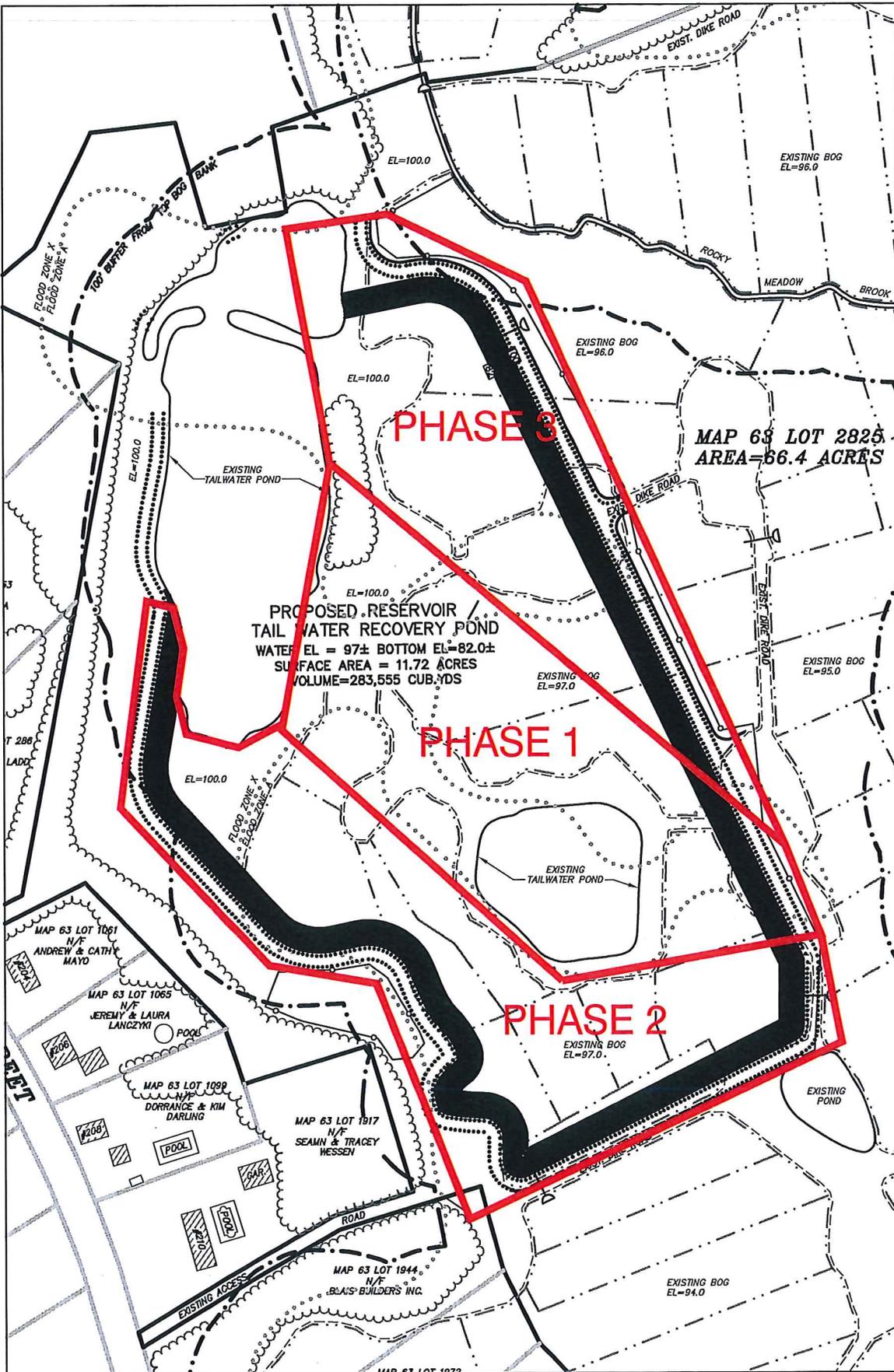
Low flow dikes will be constructed of the bog strippings, excluding the vines.

**Restoration:**

Interior slopes of the irrigation pond/tailwater recovery pond will be sloped at 2:1 and prepared with topsoil and seed. All other disturbed areas will receive the same surface treatment.

**Other:**

No rock crushing is proposed. A portable screening plant will be used to screen sand for bog maintenance. A water truck or sprinkler system will be used for dust control.



SCALE: 1"=200'

ROCKY MEADOW CRANBERRY BOG

MIDDLEBOROUGH, MA

**PHASE PLAN**



ENGINEERING, INC.

## QUARTERLY PLAN

ROCKY MEADOW CRANBERRY BOG  
PURCHASE STREET  
MIDDLEBORO, MA

### **QUARTER #1**

- Review conditions for compliance
- Monitor erosion controls
- Inspect and repair erosion controls and signage
- Construct low flow dikes with bog strippings
- Conduct bulk excavation of the area designated as Phase I

### **QUARTER #2**

- Review conditions for compliance
- Monitor erosion controls
- Inspect and repair erosion controls and signage
- Construct low flow dikes with bog strippings
- Conduct bulk excavation of the area designated as Phase I
- Monitor and repair low flow dikes
- Continue with the bulk excavation in the area designated as Phase I

### **QUARTER #3**

- Review conditions for compliance
- Monitor erosion controls
- Inspect and repair erosion controls and signage
- Construct low flow dikes with bog strippings
- Conduct bulk excavation of the area designated as Phase I
- Monitor and repair low flow dikes
- Continue with the bulk excavation in the area designated as Phase I

### **QUARTER #4**

- Review conditions for compliance
- Monitor erosion controls
- Inspect and repair erosion controls and signage
- Construct low flow dikes with bog strippings
- Conduct bulk excavation of the area designated as Phase I
- Monitor and repair low flow dikes
- Continue with the bulk excavation in the area designated as Phase I