

ADDENDUM REPORT
for
ALTERNATIVES FOR THE FUTURE OF
CARLISLE'S CRANBERRY BOG

Prepared by the
Cranberry Bog Alternatives Committee
Carlisle, Massachusetts



March 2018



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Cranberry Bog Alternatives Committee – 2017-2018

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ACKNOWLEDGMENTS

The Cranberry Bog Alternatives Committee acknowledges the significant help provided by the following during the period covered by this Addendum Report.

Sylvia Willard, Carlisle Conservation Administrator
Mark Duffy, President of Carlisle Cranberries, Inc.

In addition we are grateful to the many individuals that provided guidance and information during our outreach efforts. A full list is provided in Appendix A. Amongst these, we would especially like to thank:

Daniel Lenthall, District Conservationist, Natural Resources Conservation Service,
Westford, MA

Morris Sorbello, Sorbello & Sons Farms, Fulton, NY

1. EXECUTIVE SUMMARY

This is an Addendum Report to the April 2017 report by Carlisle's Cranberry Bog Alternatives Committee (CBAC).* It contains a modified recommendation for the future of our cranberry bog, and it describes activities undertaken and information obtained since the submittal of the April 2017 report.

The major recommendation of this Addendum Report is that Carlisle continue to support the use of the bog for agriculture, specifically the growing of hay for forage. While other types of agricultural use might be desired, federal laws, economics and/or other constraints dictate against them. CBAC is making this recommendation for a continuation of agriculture as only this alternative provides significant fulfillment for several of the most important evaluation criteria including the preservation of (1) agriculture, (2) water rights, (3) recreational values, and (4) the Cranberry Bog House. With the farmer providing bog maintenance (as in kind payment for use of the land), Town maintenance costs are kept low. An expanded description of the evaluation criteria met is provided in the description of Revised Alternative 5 in **Appendix E**.

The new recommended alternative is called **Revised Alternative 5: Grow Hay without Lowering Water Table**. It is a significant modification of the original **Alternative 5: Conversion to Other Agricultural Use** in that the Town would not undertake any bog modification that would lower the water table. Specifically, the revised alternative would not have any new sub-surface drain system, and would not lower the inverts of the culverts or water control structures draining the three bog sections. The existing drainage ditches, dams and water control structures would be maintained, and a new overhead irrigation system would be added. The hay grown under these conditions would be silage.** Without the expense of a sub-surface drain system, the cost of Revised Alternative 5 is not expected to exceed \$300,000.

The evaluation criteria used by CBAC in making this recommendation, and their relative importance, are described in **Section 2**. The post-April 2017 activities undertaken and the information obtained are described in **Section 3**; details are provided in **Appendices A – E**.

Part of the post-April 2017 activities involved not only a revision of Alternative 5, but the addition of two new alternatives to consider, one (Alternative 11) involving bog mowing and the other (Alternative 12) involving the growing of wetland plants for wetlands replication and restoration projects. The reader is referred to **Appendix E** for short descriptions of the revised and new Alternatives.

*"Alternatives for the Future of Carlisle's Cranberry Bog," CBAC, April 2017.

**Grass or other green fodder compacted and stored in airtight conditions, typically in a silo, without first being dried, and used as animal feed in the winter.

Following the receipt of new information, and the addition of revised and new alternatives, CBAC members scored each alternative for each bog section. The results are shown in **Table 1** (following page). Combining the scores for each bog section, the results were as follows (score in parentheses):

1. Revised Alternative 5 – Grow Hay (**52**)
2. Alternative 11 – Bog Mowing (**35**)
3. Alternative 7 or 8 – Natural Habitat Restoration (**33** – total for the two)

Note that it is not necessary to select the same alternative for all three bog sections.

Table 1. Sum of CBAC Members' Scores for Bog Alternatives

Alternative (for the 3 bog areas only)	Irrigated Bog	Bog in Renovation	Sand-Covered Bog	Summary	RANK
				Score For All 3 Bogs	
4. Bog Renovation - Cranberry Growing with New Vines	1	1	0	2	
5. Revised Alternative 5 - Grow Hay without Lowering Water Table	18	18	16	52	1
6. Creation of Passive Recreation Area in Sand-Covered Bog	NA	NA	1	1	
7. Engineered Restoration to a Natural Habitat	6	6	5	17	3
8. Passive Restoration to a Natural Habitat	4	5	7	16	
11. Bog Mowing (2 bogs) plus Blueberries in Sand-Covered Bog	11	11	13	35	2
12. Commercial Growing of Wetland Plants for Wetland Restoration	1	1	0	2	

Instructions to members for filling out their Score Sheet:

Within each of the three columns representing the three bog areas, and considering each bog separately, insert a "3" for your first choice, a "2" for your second choice, and a "1" for your third choice. Note there will be blanks in the column for those Alternatives that were not your first, second or third choice. Note also that Alternative 6 is only being considered for the Sand-Covered Bog.

2. EVALUATION CRITERIA

The Cranberry Bog Alternatives Committee's (CBAC) April 2017 report contained only a brief identification and description of the evaluation criteria we thought were important in evaluating the alternatives for the bog's future. (See Section 3, Table 2 and Figure 4 in that report.) This Addendum Report presents a little more information, focusing on the relative importance of the identified criteria, based on scores submitted by CBAC members. The results, in order of importance, are as follows:

Most Important Criteria

- Preservation of agriculture and agricultural heritage
- Preservation or enhancement of conservation values
- Town operation and maintenance costs
- Preservation of the Cranberry Bog House
- Preservation of water rights
- Preservation or enhancement of recreational values

Second Tier of Important Criteria

- Town capital investment
- Sustainability
- Regulatory constraints and other risks
- Effect on dam classification and other costs
- Preservation of cranberry farming

Lowest Tier of Criteria

- Extended timeline for implementation
- Gain of Town revenue

The CBAC feels that any alternative chosen for the bog's future must score well on most of the criteria in the top category. Using other words, some CBAC members said they wanted the bog to remain as close as possible to the use and condition it has been in for the last 114 years supplemented by the recreational uses afforded since the purchase of the land by the Town in 1986. Any non-agricultural future use would score poorly on several of the top criteria.

3. SUMMARY OF CBAC ACTIVITIES FROM APRIL 2017 TO MARCH 2018

Outreach for Technical, Regulatory and Cost Information for Alternative 5

In April 2017, the Cranberry Bog Alternatives Committee (CBAC) submitted to the Conservation Commission (ConsCom) and the Town its report: “Alternatives for the Future of Carlisle’s Cranberry Bog.” The report presented descriptions of ten alternatives that could be considered for the future of the bog and the Cranberry Bog House. Significant additional information on factors related to CBAC’s choices and recommendations were also provided.

At a June 8, 2017 joint meeting of ConsCom and the CBAC, ConsCom gave tentative support for CBAC’s top recommendation of **Alternative 5: Conversion to Other Agricultural Use**. This Alternative was proposed to include a new, sub-surface drain system (to lower the water table 1 – 2 feet) and an overhead irrigation system; the intended crop was silage hay to be used as fodder. ConsCom asked for more information on the technical, regulatory and cost factors related to the potential implementation of this Alternative. The CBAC started this outreach for additional information with a July 2017 visit with Dan Lenthall, District Conservationist at the Natural Resources Conservation Service (NRCS) in Westford, MA. A particular objective of this meeting was to identify possible regulatory hurdles – Federal, State and local – that Carlisle would likely have to deal with. In conjunction with one Federal law, Carlisle was advised to submit to the NRCS, a form AD-1026 (“Highly Erodible Land Conservation [HELCS] and Wetland Conservation [WC] Certification”) which was done in August 2017. Other technical and cost factors were also discussed at this meeting.

From July to November 2017, the CBAC undertook a large number of outreach efforts to obtain the desired technical, regulatory and cost information pertinent to Alternative 5: Conversion to Other Agricultural Use. Individuals were contacted in the following categories (number of contacts in parentheses):

- Muck Soil Farming Experts (e.g., employees of Government Agencies, Universities, and Research Institutes) (8)
- Muck Soil Farmers (2)
- Other Technical or Regulatory Agencies (6)
- Civil Engineering Companies (5)
- Construction & Field Work Companies (2)
- Drain Tile Installers (3)
- Traveler Irrigation System Suppliers or Distributors (4)
- Suppliers of Geogrid Products (2)
- Organic Cranberry Farming (1)

At least one quarter of these contacts were unproductive, and several more were of limited help. But the sum total of the information received did appear to support a conclusion that Alternative 5 was a viable alternative for our bogs. Cost information (quotes) for the needed drain and irrigation systems were obtained. One especially

important contact included a visit to a large, successful, muck soil farming operation in New York State. The contact with an organic cranberry farming operation provided evidence that organic cranberry farming was not economically viable. A full list of the contacts made is provided in **Appendix A**. Email-style contact reports are available for many of the more important contacts.

The outreach for information was halted in November 2017 when the Town received a letter report from the NRCS providing an evaluation of our bog wetlands and a description of any further wetlands modifications that were prohibited by the US Department of Agriculture's (USDA) 1985 Food Security Act (and subsequent modifications). The NRCS letter was prompted by our August 2017 submittal of form AD-1026 and a subsequent field evaluation of our bog by the NRCS. The NRCS letters to the Town are described in a following subsection.

Submission of USDA Form AD-1026

On August 14, 2017, Sylvia Willard, Carlisle's Conservation Administrator, submitted a form AD-1026 to the NRCS Westford, MA office. A copy of the form is provided in **Appendix B**.

USDA-NRCS Legal Constraints for Alternative 5

On October 16, 2017, the NRCS sent a letter to Carlisle with their "preliminary technical determination" for seven specific sections of Carlisle's cranberry bog. The three main bog sections were classified as category "WX" wetlands, which means that the wetlands had been manipulated in the past but production of an annual crop was not made possible. Other small areas of the lands around the bogs were not considered to be wetlands. A 30-day period for appeals of this determination was described. On the advice of Town Counsel (see a following subsection), no appeal was requested. On November 20, 2017, the NRCS issued their "final technical determination" for our bog wetlands. The wetlands classification was confirmed and Carlisle was reminded that any further wetlands conversion that allowed, or would allow, the production of an annual crop would likely be considered a violation of the USDA's 1985 Food Security Act (and subsequent amendments) resulting in a loss of USDA program benefits to both the farmer and the land owner. The two NRCS letters are provided in **Appendix C**.

Although not included in the USDA-NRCS letters, the specific wording of the current Federal law (16 USC Ch. 58, Sect. 3821(d)) states that:

"Except as provided in section 3822 of this title and notwithstanding any other provision of law, any person who in any crop year beginning after November 28, 1990, converts a wetland by draining, dredging, filling, leveling, or any other means for the purpose, or to have the effect, of making the production of an agricultural commodity possible on such converted wetland shall be ineligible for those payments, loans, or programs specified in subsection (b) for that crop year and all subsequent crop years."

An "**agricultural commodity**" is defined as "...any crop planted and produced by annual tilling of the soil, including tilling by one-trip planters, or sugar cane."

Mark Duffy, Carlisle's cranberry bog and dairy farmer, informed the CBAC that commercial farmers "farm with the USDA," and that, therefore, loss of USDA program benefits was NOT a viable option for any agricultural alternative at the bog.

The NRCS has issued guidance saying that manipulated wetlands (i.e., category WX wetlands) "can be maintained but not for the purpose of, or making possible production of, an agricultural commodity."*

Town Counsel Review of USDA-NRCS Legal Constraints

Following Carlisle's receipt, in late 2017, of the Natural Resources Conservation Services' (NRCS) preliminary (and later final) technical determination for the cranberry bog, the Town requested a review of the determination by Town Counsel (Miyares and Harrington LLP, Wellesley, MA). The review was undertaken by Rebekah Lacey. Initially, on November 30, 2017, Lacey sent an email to the Town that only looked at the appeal process; she concluded that there were no grounds for appeal. In a subsequent letter dated December 12, 2017, Lacey described the legal basis for, and an explanation of, the NRCS determination. Both the email and letter are provided in **Appendix D**.

Revised and New Alternatives

Following the Town's receipt of the NRCS's wetlands determination, and Town Counsel's explanation thereof, discussions within CBAC and by Mark Duffy led to the proposal of a Revised Alternative 5, and to the proposal of two new alternatives. Short descriptions of each of these alternatives are provided in **Appendix E**.

The revised Alternative 5 evolved from discussions between Mark Duffy and individuals within the NRCS. The NRCS individuals he contacted said that the growing of hay would be allowed as long as there was no lowering of the water table in the bogs. This specifically included the elimination of any new, sub-surface drain system, and no lowering of the inverts of any culverts or water control structures that controlled the water draining each of the three bog sections. Subsequent to Mr. Duffy's conversations with the NRCS, CBAC members Lyman, Willard and Provenzano had their own meeting with Dan Lenthall, the NRCS District Conservationist in Westford, MA. In essence, he confirmed the content of the prior conversations with Mr. Duffy, adding his own simplification of the Food Security Act restrictions on the future of our bog: "Don't alter the hydrology." In the Revised Alternative 5, the existing drainage ditches, dams and water control structures would be maintained, and some modifications to interior drainage ditches possibly made to facilitate the mowing of hay. A new overhead irrigation system would still be installed, in part as this will help Carlisle maintain registered water rights. It is presumed that the farmer would provide in-kind services (e.g., bog and Bog House maintenance) in lieu of rent for the use of the land and Bog House.

*USDA, National Food Security Manual, Fifth Edition (2015), Section 514.11(D).

The two new alternatives added for CBAC to consider were:

- Alternative 11: Bog Mowing Plus Blueberries
- Alternative 12: Commercial Growing of Wetland Plants for Wetland Replication

Under Alternative 11, the two larger bogs, and the sides of the surrounding ditches, would be mowed every 2 – 5 years to control the growth of tall bushes and trees which would otherwise eventually result in a forested wetland and the loss of vistas. When the agricultural exemption to the State’s wetlands protection regulations expired (5 years after stopping agriculture), then a Notice of Intent – describing the proposed maintenance work including potential wetland alterations and restoration – would have to be submitted to ConsCom and to MassDEP, prior to any work, for their review and approval. Any Order of Conditions they issued could be valid for up to three years, but is appealable. An option for the Sand-Covered Bog in this Alternative is to plant a large number of highbush blueberries which would afford the public a pick-your-own recreational activity when the bushes produce fruit. Some irrigation may be needed for the bushes.

Under Alternative 12, the bog areas would be placed under an agricultural agreement with a commercial farmer for growing wetland plants for use in wetland restoration projects. A key issue in this case is finding a farmer to undertake this project. It has been proposed that issuing an RFP could be undertaken to determine whether this is a viable alternative. Massachusetts appears to have only one wetland plant nursery selling primarily wholesale, but there are several more large nurseries in the State, selling retail, that have some wetland plants available. Under this Alternative, the land would be in agricultural use, and would need some form of irrigation system which would allow a continuation of water rights registration. This Alternative would likely require the building of greenhouses, service roads, fences and other structures to support the operation. Public use of the land would be restricted on the land they used. It is assumed that the farmer would also be allowed use of the Cranberry Bog House, and that the farmer would provide in-kind services (e.g., bog and Bog House maintenance) in lieu of rent.

APPENDIX A
LISTING OF CONTACTS MADE FOR EVALUATION
OF ALTERNATIVE 5

The table on the following two pages identifies most of the contacts that members of the Cranberry Bog Alternatives Committee (CBAC) made between April 2017 and November 2017 in order to evaluate the technical, regulatory and cost factors related to the preferred Alternative 5: Conversion to Other Agricultural Use.

CBAC – Listing of Contacts Made Between April and November 2017

No.	By	Contacted	Contact	Comments
Muck Soil Farming Experts (e.g., employees of Government Agencies, Universities, Research Institutes)				
1	WL	Yes	Oswego County (NY) Soil & Water Conservation District (OC-SWCD)	Was redirected to Amy Langner, soil scientist with NRCS, Marcy, NY.
2	WL	Yes	John DeHollander, former director of OC-SWCD (see #1)	Provided some help & guidance doc.
	WL	Yes	Donald Lake, agricultural consultant, Erieville, NY	Not available to help
3	WL	Yes	Bob Filbrun, OARDC, Muck Crops Agricultural Research Station, Willard, OH	Offered to set up fall visits. Later did not
4	WL	Tried No reply	Institute of Food and Agricultural Sciences, University of Florida	Suggested by S. Hinton; FL has muck soil farms in two areas
5	WL	Yes	Amy Langner, Soil Scientist, NRCS, Marcy, NY	Referred to others in NRCS
6	WL	Yes	Joseph Heller, Resource Conservationist, NRCS, Middletown, NY	Offered to help set up farm visits
7	SP	Yes	NRCS Offices in NY State, esp. Oswego County. Katherine Schor, District Conservationist, Mexico, NY. Also Krista Tyrrell, NRCS-FSA, Auburn, NY	Referred to Amy Langner (see # 5), SWCD (#1) & Cornell Coop. Extension
8	DG	Yes	Jon Dahl & Darryl Warncke (ret.), University of Michigan, College of Agriculture Natural Resources, Department of Plant, Soil & Microbial Sciences.	Includes a Muck Research Farm.
Muck Soil Farmers				
1	WL	Yes	Morris Sorbello, Sorbello & Sons Farms, Fulton, NY	Onion growers. WL & MD visit on 10-7
2	JB	Yes	Mary Ruth McDonald, Research Director/Professor & Kevin Vander, Muck Crops Research Station, King, Ontario, Canada	Offered advice on muck soil farming
Other Technical or Regulatory Agencies				
1	CBAC	Yes	USDA – NRCS: Dan Lenthall, District Conservationist	Met with 4 CBAC members on 7-10-17. SW submitted AD1026 form ~ 8-14-17.
2	SW	Yes	Mass DEP, NE Regional Office – Wetlands Division (Gary Bogue)	Site visit held on 7-25-17 w/ SW & WL
3	SW	Yes	US Army Corps of Engineers (USACE) – Barbara Newman, Chief – Permits & Enforcement Branch, Regulatory Division	Clean Water Act Sections 401 and 404 regs. SW submitted info 9-11-17.
4	WL	Yes	NRCS – State Office, Amherst, MA. Deron Davis, State Conservation Engineer and State Hydraulic Engineer	Asked DD to provide initial consult and subsequent review. He declined.
5	?	No	Mass – Natural Heritage	SW: Bog no longer a priority habitat
6	MD	Yes	Cape Cod Cranberry Grower’s Association, Brian Wick, Exec. Director	Sought info on drain tile installers
Civil Engineering Companies				
1	WL	Yes	Stamsky & McNary, Acton, MA. George Dimakarakos	WL & SW met with S & M on 9-20-17
2	WL	Yes	Hancock Associates; branch office in Chelmsford, MA. Vasek Talako	Contacted 10-2-17. No interest

3	WL	Yes	Milone & MacBroom; main office in Springfield, MA. Mark Arigoni	Contacted 10-2-17. No interest
4	WL	Tried	Vreeland Design Associates, Leyden, MA David Vreeland	Prior work for Mark Duffy. No response.
5	WL	Yes	DuLac Engineering, Erieville, NY. Donald Lake (civil engineer & professor)	Recommended by DeHollander. Declined to help.
6		Not yet	G. A. F. Engineering, Inc., Wareham, MA	Recommended by KB.
7		Not Yet	Outback Engineering, Inc., Middleboro, MA	Recommended by CCCGA
Construction & Field Work Companies				
1	WL	Yes	A.R. Plante Materials & Earthworks, West Bridgewater, MA. David Plante	Recommended by CCCGA. 11-6-17 contact. DP asked to be kept in loop.
2	WL	Yes	Beaton's Cranberry Growers Services, Wareham, MA. Doug Beaton	Recommended by CCCGA. No interest.
Drain Tile Installers				
1	WL	Yes	Alleghany Farm Services, Basom, NY. Chad Klotzbach	Contacted 11-7-17. Gave quote: \$125 K.
2	WL	Yes	Zeliff Farms, Middleport, NY Peter Zeliff, Jr.	Contacted 11-15-17. No interest.
3	WL	Yes	NY Land Improvement Contractors Association, Batavia, NY Maura Dibble	Lists companies that install drainage
Traveler Irrigation System Suppliers or Distributors				
1	WL	Yes	Brookdale Fruit Farm, Hollis, NH. (Ag-Rain Water Reel) Trevor Hardy 9-13-17	Quoted \$40 K for system parts (X pump)
2	WL	Yes	Larchmont, Lexington, MA. (Micro-Rain Reels) Jeremy Needham	Visited 11-16-17. Interested. Got \$ info.
3	WL	Yes	ATS Irrigation, Inc., Brenham, TX (Micro-Rain Reels) 9-12-17	Quoted \$12,365 for MR58RL reel unit
4	WL	Yes	Smith Irrigation, Kensington, KS. Terry Smith 9-12-17	Quoted \$12,000 for T200L/580 reel unit
Suppliers of Geogrid Products (plastic mesh used to stabilize soil embankments)				
1	WL	Yes	Strata Systems, Inc., Cumming, GA	No reply to info request
2	WL	Yes	Tensar International, Alpharetta, GA	No reply to info request
Organic Cranberry Farming				
1	WL	Yes	Nantucket Conservation Foundation, Nantucket, MA Jim Lentowski 9-12-17	Losing money growing organically

APPENDIX B

US DEPARTMENT OF AGRICULTURE FORM AD-1026: HIGHLY ERODABLE LAND CONSERVATION (HELIC) AND WETLAND CONSERVATION (WC) CERTIFICATION

The following form AD-1026 was filled out by Sylvia Willard, Carlisle's Conservation Administrator, and submitted to the Natural Resources Conservation Service (NRCS) in Westford, MA on August 14, 2017.

AD-1026
(10-30-14)

U.S. DEPARTMENT OF AGRICULTURE
Farm Service Agency

COPY

HIGHLY ERODIBLE LAND CONSERVATION (HEL) AND
WETLAND CONSERVATION (WC) CERTIFICATION

Read attached AD-1026 Appendix before completing form.

PART A - BASIC INFORMATION

1. Name of Producer Town of Carlisle 2. Tax Identification Number (Last 4 digits) 046-001-106 3. Crop Year 2017

4. Names of affiliated persons with farming interests. Enter "None," if applicable.

MARK DUFFY

Affiliated persons with farming interests must also file an AD-1026. See Item 7 in the Appendix for a definition of an affiliated person.

5. Check one of these boxes if the statement applies; otherwise continue to Part B.

- A. The producer in Part A does not have interest in land devoted to agriculture. Examples include bee keepers who place their hives on another person's land, producers of crops grown in greenhouses, and producers of aquaculture AND these producers do not own/lease any agricultural land themselves. Note: Do not check this box if the producer shares in a crop.
- B. The producer in Part A meets all three of the following:
 - does not participate in any USDA program that is subject to HELC and WC compliance except Federal Crop Insurance.
 - only has interest in land devoted to agriculture which is exclusively used for perennial crops, except sugarcane, and
 - has not converted a wetland after February 7, 2014.

Perennial crops include, but are not limited to, tree fruit, tree nuts, grapes, olives, native pasture and perennial forage. A producer that produces alfalfa should contact the Natural Resources Conservation Service at the nearest USDA Service Center to determine whether such production qualifies as production of a perennial crop.

Note: If either box is checked, and the producer in Part A does not participate in Farm Service Agency (FSA) or Natural Resources Conservation Service (NRCS) programs, the full tax identification number of the producer must be provided, but establishment of detailed farm records with FSA is not required. Go to Part D and sign and date.

PART B - HELC/WC COMPLIANCE QUESTIONS

Indicate YES or NO to each question.

If you are unsure of whether a HEL determination, wetland determination, or NRCS evaluation has been completed, contact your local USDA Service Center.

YES NO

- 6. During the crop year entered in Part A or the term of a requested USDA loan, did or will the producer in Part A plant or produce an agricultural commodity (including sugarcane) on land for which an HEL determination has not been made? YES NO
- 7. Has anyone performed (since December 23, 1985), or will anyone perform any activities to:
 - A. Create new drainage systems, conduct land leveling, filling, dredging, land clearing, or excavation that has NOT been evaluated by NRCS? If "YES", indicate the year(s):
 - B. Improve or modify an existing drainage system that has NOT been evaluated by NRCS? If "YES", indicate the year(s): 2017
 - C. Maintain an existing drainage system that has NOT been evaluated by NRCS? If "YES", indicate the year(s):

Note: If "YES" is checked for Item 7A or 7B, then Part C must be completed to authorize NRCS to make an HELC/WC and/or certified wetland determination on the identified land. If "YES" is checked for Item 7C, NRCS does not have to conduct a certified wetland determination.

8. Check one or both boxes, if applicable; otherwise, continue to Part C or D.

- A. Check this box only if the producer in Part A has FCIC reinsured crop insurance and filing this form represents the first time the producer in Part A, including any affiliated person, has been subject to HELC and WC provisions.
- B. Check this box if either of the following applies to the producer and crop year entered in Part A:
 - Is a tenant on a farm that is/will not be in compliance with HELC and WC provisions because the landlord refuses to allow compliance, but all other farms not associated with that landlord are in compliance. (AD-1026B, Tenant Exemption Request, must be completed).
 - Is a landlord of a farm that is/will not be in compliance with HELC and WC provisions because of a violation by the tenant on that farm, but all other farms not associated with that tenant are in compliance. (AD-1026C, Landlord or Landowner Exemption Request, must be completed).

PART C - ADDITIONAL INFORMATION

9. If "YES" was checked in Item 6 or 7, provide the following information for the land to which the answer applies:

- A. Farm and/or tract/field number: FARM 880 TRACT 1234 Farm Fields 1,2&3
If unknown, contact the Farm Service Agency at the nearest USDA Service Center.
- B. Activity: Convert Cranberry Bog to hay and grow Hay
- C. Current land use (specify crops): Cranberry Bog
- D. County: Middlesex

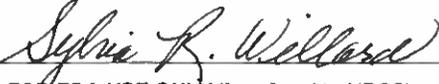
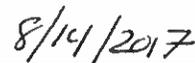
PART D – CERTIFICATION OF COMPLIANCE

I have received and read the AD-1026 Appendix and understand and agree to the terms and conditions therein on all land in which I (or the producer in Part A if different) and any affiliated person have or will have an interest. I understand that eligibility for certain USDA program benefits is contingent upon this certification of compliance with HELC and WC provisions and I am responsible for any non-compliance. I understand and agree that this certification of compliance is considered continuous and will remain in effect unless revoked or a violation is determined. I further understand and agree that:

- all applicable payments must be refunded if a determination of ineligibility is made for a violation of HELC or WC provisions.
- NRCS may verify whether a HELC violation or WC has occurred.
- a revised Form AD-1026 must be filed if there are any operation changes or activities that may affect compliance with the HELC and WC provisions. I understand that failure to revise Form AD-1026 for such changes may result in ineligibility for certain USDA program benefits or other consequences.
- affiliated persons are also subject to compliance with HELC and WC provisions and their failure to comply or file Form AD-1026 will result in loss of eligibility for applicable benefits to any individuals or entities with whom they are considered affiliated.

Producer's Certification:

I hereby certify that the information on this form is true and correct to the best of my knowledge.

10A. Producer's Signature (By)	10B. Title/Relationship (If Signing in Representative Capacity)	10C. Date (MM-DD-YYYY)
 FOR FSA USE ONLY (for referral to NRCS) Sign and date if NRCS determination is needed.	 11A. Signature of FSA Representative	 11B. Date (MM-DD-YYYY)

IMPORTANT: If you are unsure about the applicability of HELC and WC provisions to your land, contact your local USDA Service Center for details concerning the location of any highly erodible land or wetland and any restrictions applying to your land according to NRCS determinations before planting an agricultural commodity or performing any drainage or manipulation. Failure to certify and properly revise your compliance certification when applicable may: (1) affect your eligibility for USDA program benefits, including whether you qualify for reinstatement of benefits through the Good Faith process; and (2) result in other consequences.

NOTE: *The following statement is made in accordance with the Privacy Act of 1974 (5 USC 552a - as amended). The authority for requesting the information identified on this form is 7 CFR Part 12, the Food Security Act of 1985 (Pub. L. 99-198), and the Agricultural Act of 2014 (Pub. L. 113-79). The information will be used to certify compliance with HELC and WC provisions and to determine producer eligibility to participate in and receive benefits under programs administered by USDA agencies. The information collected on this form may be disclosed to other Federal, State, Local government agencies, Tribal agencies, and nongovernmental entities that have been authorized access to the information by statute or regulation and/or as described in applicable Routine Uses identified in the System of Records Notice for USDA/FSA-2, Farm Records File (Automated) and USDA/FSA-14, Applicant/Borrower. Providing the requested information is voluntary. However, failure to furnish the requested information will result in a determination of producer ineligibility to participate in and receive benefits under programs administered by USDA agencies.*

This information collection is exempted from the Paperwork Reduction Act as specified in the Agricultural Act of 2014 (Pub. L. 113-79, Title II, Subtitle G, Funding and Administration). The provisions of appropriate criminal and civil fraud, privacy, and other statutes may be applicable to the information provided. RETURN THIS COMPLETED FORM AD-1026 TO YOUR COUNTY FARM SERVICE AGENCY (FSA) OFFICE.

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers, employees, and applicants for employment on the basis of race, color, national origin, age, disability, sex, gender identity, religion, reprisal, and where applicable, political beliefs, marital status, familial or parental status, sexual orientation, or all or part of an individual's income is derived from any public assistance program, or protected genetic information in employment or in any program or activity conducted or funded by the Department. (Not all prohibited basis will apply to all programs and/or employment activities.) Persons with disabilities, who wish to file a program complaint, write to the address below or if you require alternative means of communication for program information (e.g., Braille, large print, audiotape, etc.) please contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). Individuals who are deaf, hard of hearing, or have speech disabilities and wish to file either an EEO or program complaint, please contact USDA through the Federal Relay Service at (800) 877-8339 or (800) 845-6136 (in Spanish).

If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, found online at http://www.ascr.usda.gov/complaint_filing_cust.html, or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter by mail to U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at program.intake@usda.gov. USDA is an equal opportunity provider and employer.

**APPENDIX TO FORM AD-1026
HIGHLY ERODIBLE LAND CONSERVATION (HELIC) AND
WETLAND CONSERVATION (WC) CERTIFICATION**

1. Overview

The following conditions of eligibility are required for a producer to receive any U.S. Department of Agriculture (USDA) loans or other program benefits that are subject to the highly erodible land conservation (HELIC) and wetland conservation (WC) provisions. Unless an exemption has been granted by USDA, the producer agrees to all of the following on all farms in which the producer, and any affiliated person to the producer (as specified in 7 CFR Part 12), has an interest:

- **NOT** to plant or produce an agricultural commodity on highly erodible land or fields unless being farmed in accordance with a conservation plan or system approved by the Natural Resources Conservation Service.
- **NOT** to plant or produce an agricultural commodity on a wetland that was converted after December 23, 1985.
- **NOT** to have converted a wetland after November 28, 1990, for the purpose, or to have the effect, of making the production of an agricultural commodity possible on such converted wetland.
- **NOT** to convert a wetland by draining, dredging, filling, leveling, removing woody vegetation, or any other activity that results in impairing or reducing the flow and circulation of water in a way that would allow the planting of an agricultural commodity.
- **NOT** to use proceeds from any Farm Service Agency farm loan, insured or guaranteed, or any USDA financial assistance program, in such a way that might result in negative impacts to a wetland, except for those projects evaluated and approved by Natural Resources Conservation Service.

2. Statutory and Regulatory Authority

The Food Security Act of 1985, as amended, requires producers participating in most programs administered by the Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS), and the Risk Management Agency (RMA) to comply with HELIC and WC provisions on all land owned or farmed that is considered highly erodible or a wetland unless USDA determines an exemption applies. Producers participating in these programs, and any individual or entity considered to be an affiliated person of a participating producer, are subject to these provisions. The regulations covering these provisions are set forth at 7 CFR Part 12; all such provisions, whether or not explicitly stated herein, shall apply.

3. Explanation of Terms

Agricultural commodity is any crop planted and produced by annual tilling of the soil, including tilling by one-trip planters, or sugarcane.

Highly erodible land is any land that has an erodibility index of 8 or more.

Highly erodible fields are fields where either:

- 33.33 percent or more of the total field acreage is identified as soil map units that are highly erodible; or
- 50 or more acres in such field are identified as soil map units that are highly erodible.

Perennial crop is any crop that is planted once and produces crops over multiple years. Go to www.nrcs.usda.gov/compliance for a list of perennial and annual crops.

Wetland is an area that:

- has a predominance of hydric soils (wet soils);
- is inundated or saturated by surface or groundwater (hydrology) at a frequency and duration sufficient to support a prevalence of hydrophytic (water tolerant) vegetation typically adapted for life in saturated soil conditions; and
- under normal circumstances supports a prevalence of such vegetation, except that this term does not include lands in Alaska identified as having a high potential for agricultural development and a predominance of permafrost soils.

4. NRCS and FSA Determinations

When making HELC and WC compliance determinations:

- NRCS makes technical determinations; these include:
 - For HELC compliance:
 - whether land is considered highly erodible;
 - establishing conservation plans or systems; and
 - whether highly erodible fields are being farmed in accordance with a conservation plan or system approved by NRCS.
 - For WC compliance:
 - whether land is a wetland and if certain technical exemptions apply, such as prior converted;
 - whether a wetland conversion has occurred.
- FSA's responsibilities include:
 - making eligibility determinations, such as who is ineligible based upon NRCS technical determinations of non-compliance.
 - acting on requests for application of certain eligibility exemptions, such as the good faith relief exemption.
 - maintaining the official USDA records of highly erodible land and wetland determinations. The determinations are recorded both within the geographic information system and the automated farm and tract records maintained by FSA; however, it is important to know that determinations may not include all of a producer's land. If a producer is uncertain of the highly erodible land and wetland determinations applicable to any of the producer's land, the producer should contact the appropriate USDA Service Center for assistance.

5. HELC and WC Non-Compliance - FSA and NRCS Programs

Producers who are not in compliance with HELC and WC provisions are not eligible to receive benefits for most programs administered by FSA and NRCS. If a producer received program benefits and is later found to be non-compliant, the producer may be required to refund all benefits received and/or may be assessed a penalty.

In particular, unless exemptions apply, a producer participating in FSA and NRCS programs must: not plant or produce an agricultural commodity on a highly erodible field unless such production is in compliance with a conservation plan or system approved by NRCS; not have planted or produced an agricultural commodity on a wetland converted after December 23, 1985; and, after November 28, 1990, must not have converted a wetland for the purpose, or to have the effect, of making the production of an agricultural commodity possible on such converted wetland.

A producer who violates HELC or WC provisions is ineligible for applicable FSA and NRCS benefits for the year(s) in violation. A planting violation, whether on highly erodible land or a converted wetland, results in ineligibility for benefits for the year(s) when the planting occurred. A wetland conversion violation results in ineligibility beginning with the year in which the conversion occurred and continuing for subsequent years, unless the converted wetland is restored or mitigated before January 1st of the subsequent year.

6. HELC and WC Non-Compliance - Risk Management Agency - Crop Insurance Policies Reinsured by the Federal Crop Insurance Corporation

Producers obtaining federally reinsured crop insurance will not be eligible for any premium subsidy paid by the Federal Crop Insurance Corporation (FCIC) for any policy or plan of insurance if the producer:

- has not filed a completed Form AD-1026 with FSA certifying compliance with HELC and WC provisions; or
- is not in compliance with HELC and WC provisions.

Unless an exemption applies, a producer must:

- not plant or produce an agricultural commodity on a highly erodible field, unless such production is in compliance with a conservation plan approved by NRCS;
- not plant or produce an agricultural commodity on a wetland converted after February 7, 2014; and
- not have converted a wetland for the purpose, or to have the effect, of making the production of an agricultural commodity possible on such converted wetland after February 7, 2014.

A producer is ineligible for any premium subsidy paid by FCIC on all policies and plans of insurance for the reinsurance year (July 1 – June 30) following the reinsurance year of a final determination of a violation of HELC or WC provisions, including all administrative appeals, unless specific exemptions apply. Further, a producer will be ineligible for any premium subsidy paid by FCIC on all policies and plans of insurance for a reinsurance year if they do not have a completed Form AD-1026 on file with FSA certifying compliance on or before the June 1 prior to the beginning of the subsequent reinsurance year (July 1), unless otherwise exempted. RMA will contact FSA to determine compliance with HELC and WC provisions and the filing of Form AD-1026 prior to the beginning of a reinsurance year, which begins on July 1. If the producer is not in compliance and is not exempt, the producer will be ineligible for premium subsidy for all crops with a sales closing date between the following July 1 through the next June 30.

7. Affiliated Persons

Any affiliated person of a producer requesting benefits subject to HELC and WC provisions must also be in compliance with those provisions. Ineligibility of a producer will also apply to affiliated persons of that producer. If an affiliated person has a farming interest (as owner, operator, or other producer on any farm), the affiliated person must also file Form AD-1026 certifying compliance with HELC and WC provisions in order for the producer requesting benefits to be eligible.

Use this table to determine affiliated persons who must be in compliance with HELC and WC provisions and file Form AD-1026. If you are unsure about an affiliated person determination, please contact FSA at your local USDA Service Center for assistance.

IF the producer requesting benefits is a (an) . . .	THEN affiliated persons with farming interests who must be in compliance with HELC and WC provisions and file Form AD-1026 are . . .
individual NOTE: For a minor, parents or guardians shall be listed as affiliated persons.	spouses or minor children with separate farming interests, or who receive benefits under their individual ID number. estates, trusts, partnerships, and joint ventures in which the individual filing, or the individual's spouse or minor children have an interest. corporations in which the individual filing or the individual's spouse or minor children have more than 20% interest.
general partnership limited partnership limited liability company joint venture estate irrevocable or revocable trust Indian tribal venture or group	first level members of the entity.
corporation with stockholders	first level shareholders with more than 20% interest in the corporation. Note: First level shareholders of a corporation with 20% interest or less in the corporation are not considered affiliated persons of the corporation.

IMPORTANT NOTICE:
Signature on Form AD-1026 gives representatives of USDA authorization to enter upon and inspect all farms in which the producer in Part A of Form AD-1026 has an interest for the purpose of confirming HELC and WC compliance.

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APPENDIX C

WETLANDS DETERMINATION BY THE NATURAL RESOURCES CONSERVATION SERVICE

Introduction

In September 2017, the Carlisle Conservation Commission, at the suggestion of the Natural Resources Conservation Service (NRCS), submitted an AD-1026 form requesting an evaluation of the wetlands in our cranberry bog. (See Appendix B for a copy of this form.) In October 2017, wetland scientists from the NRCS visited our bog to conduct the evaluation. Later in October, the NRCS sent their “preliminary technical determination” for seven specific segments of the bog. The three main bog areas were classified as category “WX” wetlands, which means that the wetlands had been manipulated in the past but production of an annual crop was not made possible. Other small areas of the lands around the bogs were not considered to be wetlands. A 30-day period for appeals was described. In November 2017, the NRCS issued their “final technical determination” for our bog wetlands. The wetlands classification was confirmed and Carlisle was reminded that any further wetlands conversion that allowed, or would allow, the production of an annual crop would likely be considered a violation of the USDA’s 1985 Food Security Act (and subsequent amendments) resulting in a loss of USDA program benefits to both the farmer and the land owner.

Contents

1. Preliminary Technical Determination: Letter dated 10-16-2017 addressed to Sylvia Willard, Carlisle’s Conservation Administrator from Maggie Payne, Resource Soil Scientist, NRCS. (8 pages)
2. Final Technical Determination: Letter dated 11-20-2017 addressed to Sylvia Willard, Carlisle’s Conservation Administrator from Maggie Payne, Resource Soil Scientist, NRCS. (4 pages)



United States Department of Agriculture

Natural Resources Conservation Service
451 West Street, Amherst, MA 01002 | 413-253-4350 | fax 855-596-7666 | www.ma.nrcs.usda.gov

Sylvia Willard, Administrator
Town of Carlisle
66 Westford St
Carlisle, MA 01741-1583

RECEIVED 10/16/2017

OCT 20 2017

CARLISLE
CONSERVATION COMMISSION

Dear Ms. Willard:

Based on your request (Form AD-1026 dated 9/8/2017) for wetland determinations on Tract # 1239, the following preliminary (NEW) technical determinations have been made (refer to the attached map, and form CPA-026 "Highly Erodible Land and Wetland Conservation Determination"):

WETLANDS (Fields with clearing or drainage work done since 1985 need this determination):

x The following fields are, or contain, Non- Wetland (NW):

1b, 1c, 2b, 3b

The Food Security Act does not restrict drainage in these areas.

The following fields are, or contain, Prior Converted Cropland (PC):

These areas are wetland, they were converted to agricultural use before 1985, they have remained in agricultural use, and they have a history of annual crops in them prior to 1985. The Food Security Act does not restrict drainage in these areas provided the drainage doesn't impact adjacent wetlands.

The following fields are, or contain, Farmed Wetland (FW):

These areas are wetland and they were converted to agricultural use before 1985, they have a history of annual crops in them prior to 1985, they have remained in agricultural use, and they normally experience significant seasonal ponding. Drainage measures that were in place before 1985 may be maintained, but not improved. Contact NRCS prior to maintaining drainage, to document 1985 conditions. Improving the drainage beyond 1985 conditions would violate the wetland conservation provisions of the Food Security Act. Allowing the field to grow up in brush could result in the field being considered "abandoned". You may crop these areas as long as you can do so without stumping, filling, altering or improving the drainage beyond the 1985 conditions.

The following fields are, or contain, Farmed Wetland Pasture (FWP):

Farmed Wetland Pasture is wetland that has been in agricultural use since before 1985, but it does not have a history of annual cropping prior to 1985. Drainage measures in place before

1985 may be maintained, but not improved. Contact NRCS prior to maintaining drainage, to document 1985 conditions. Improving drainage beyond 1985 conditions would violate the wetland conservation provisions of the Food Security Act. Allowing the field to grow up in brush could result in the field being considered "abandoned". You may crop these areas as long as you can do so without stumping, filling, altering or improving the drainage beyond the 1985 conditions.

The following fields are, or contain, Wetland (W):

Under normal conditions, these areas meet the three criteria of wetlands as defined by the Food Security Act (i.e., hydric soils, wetland plants, and soil or surface wetness that can support wetland plants). Draining, dredging, levelling, removing woody vegetation, filling, or other means for the purpose, or to have the effect of making the production of an agricultural commodity possible is a violation of the wetland conservation provisions of the Food Security Act (and likely, other state and federal laws).

The following fields are, or contain, Converted Wetland (CW+yr):

Under normal conditions, these areas met the three criteria of wetlands as defined by the Food Security Act (i.e., hydric soils, wetland plants, and soil or surface wetness that can support wetland plants). Your conversion of wetland by stumping, ditching, or draining after 1985 makes the area farmable, which is a violation of the wetland conservation provisions of the Food Security Act.

The following fields are, or contain, Converted Wetland (CW):

Under normal conditions, these areas met the three criteria of wetlands as defined by the Food Security Act (i.e., hydric soils, wetland plants, and soil or surface wetness that can support wetland plants). These wetlands were converted by stumping, ditching, and/or draining after 1985 but prior to Nov. 28, 1990. Drainage measures in place before 1990 may be maintained, but not improved. Improving drainage beyond 1990 conditions, and/or growing an annual crop on these areas is a violation of the wetland conservation provisions of the Food Security Act. Allowing the field to grow up in brush could result in the field being considered "abandoned."

x The following fields have been manipulated, but production not made possible (WX):

1a, 2a, 3a

Under normal conditions, these areas met the three criteria of wetlands as defined by the Food Security Act (i.e., hydric soils, wetland plants, and soil or surface wetness that can support wetland plants). These areas have been altered, but production of annual crops is not yet possible. This is not currently a violation of the wetland conservation provisions of the Food Security Act, but any further manipulation through draining, dredging, or levelling could be a violation if allowed for the production of an annual crop. Such a conversion would result in the landowner and operator to be ineligible for all USDA program benefits. Alterations could also be a violation of Section 404 of the Clean Water Act and state wetland laws.

The following fields were not inventoried for wetlands:

Since you did not indicate any planned changes in land use in these areas, we did not make determinations for them at this time. Be advised that these areas may well contain wetlands. **To**

protect your USDA benefits, contact our office for determinations on these areas before you take any action to clear, fill, or drain them.

These preliminary technical determinations will become final within 30 days. If wetland areas are converted such that production of an annual crop is possible, and/or drainage is improved beyond what is allowed, the violation of the wetland conservation provisions of the Food Security Act would be used by the Farm Services Agency (FSA) in determining your eligibility or ineligibility for USDA program benefits.

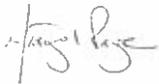
The 2104 Farm Bill connected producer eligibility for Federal Crop insurance premium subsidy to compliance with the wetland conservation provisions. Eligibility for most USDA programs (e.g. Commodity Programs, Conservation Programs, and Farm Loan Programs) is lost for any wetland conversions that occurred after December 23, 1985. However, only wetland conversions that occur after February 7, 2014, result in ineligibility for Federal Crop Insurance premium subsidy.

These wetland technical determinations may not be valid for identifying the extent of the Army Corps of Engineers (ACOE) Clean Water Act jurisdiction for this site. If you intend to conduct any activity that constitutes a discharge of dredged or fill material into wetlands or other waters, you should request a jurisdictional determination from the ACOE-New England District prior to starting the work. Likewise, this determination may not be valid for identifying the extent of wetland protected under the Massachusetts Wetlands Protection Act; therefore, you should contact your local conservation commission and/or Massachusetts Department of Environmental Protection (DEP) regarding the need for permits.

You have the right to appeal the preliminary technical determinations. Please refer to the attached description of the appeals process.

Please contact Dan Lenthall at (978) 692-1904 x3 with any questions you may have.

Sincerely,



Maggie Payne, Resource Soil Scientist

cc: Theresa Boutwell, CED, FSA, Westford, MA
Dan Lenthall, District Conservationist, Westford, MA
Tom Akin, State Resource Conservationist, Amherst, MA

FARM BILL DETERMINATION APPEALS PROCESS
for
Preliminary Technical Determinations

The preliminary (new) technical determinations will become final within 30 days unless you request one of the following appeal options:

1. Request a Field Visit

Our office will visit the site to review with you the basis for our preliminary technical determination, answer any questions you have concerning the determination, and to gather additional information from you concerning the preliminary determination. If the determination is still adverse after reconsideration by the field office, then the case will be referred to the State Conservationist for review. The State Conservationist will then issue you a final technical determination.

or

2. Request Mediation

Mediation is a process in which a trained, impartial person assists the parties to discuss issues, resolve concerns and come to their own mutually agreed upon resolution. If you choose mediation, NRCS can pay up to one half of the appropriate and reasonable costs associated with securing the services of a trained mediator. You can request mediation by contacting:

Loraine M. Della Porta, ESQ.
MA Office of Dispute and Resolution and Public Collaboration
UMASS Boston
100 Morrissey Blvd. M-1-627
Boston, MA 02125
Loraine.dellaport@umb.edu
Phone: (617) 287-4048 Fax: (617) 287-4049

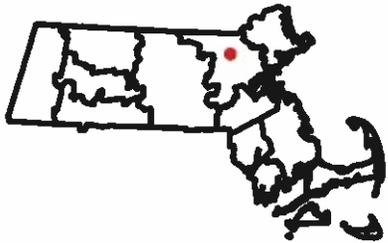
or

3. Request Expedited Final Determination

Selection of this option waves your rights for review of the preliminary technical determination and provides you a final technical determination within 10 days (instead of the normal 30 days) of receipt of your letter by NRCS.

Please address the request for options 1 or 3 to:

Dan Lenthall
District Conservationist
USDA-NRCS
319 Littleton Road, Suite 205
Westford, MA 01886



Legend

Wetland Label

 NW

 WX

 Counties

This wetland determination is valid for
 USDA Food Security Act Purposes only.
 Imagery year: 2012
 Determination: Preliminary



0 100 200 300 400
 Feet



HIGHLY ERODIBLE LAND AND WETLAND CONSERVATION DETERMINATION

Form with fields: Name Address: Town of Carlisle, 66 Westford St, Carlisle, MA 01741; Request Date: 9/8/2017; County: Middlesex; Agency or Person Requesting Determination: FSA; Tract No: 1239; FSA Farm No.: 880

Section I - Highly Erodible Land

Is a soil survey now available for making a highly erodible land determination? Are there highly erodible soil map units on this farm?

Fields in this section have undergone a determination of whether they are highly erodible land (HEL) or not; fields for which an HEL Determination has not been completed are not listed. In order to be eligible for USDA benefits, a person must be using an approved conservation system on all HEL.

Table with 5 columns: Field(s), HEL(Y/N), Sodbust (Y/N), Acres, Determination Date

The Highly Erodible Land determination was completed in the

Section II - Wetlands

Fields in this section have had wetland determinations completed. See the Definition of Wetland Label Codes for additional information regarding allowable activities under the wetland conservation provisions of the Food Security Act and/or when wetland determinations are necessary to determine USDA program eligibility.

Table with 6 columns: Field(s), Wetland Label*, Occurrence Year (CW), Acres, Determination Date, Certification Date

The wetland determination was completed in the Field It was Mailed to the person on 10/17/2017

Remarks:

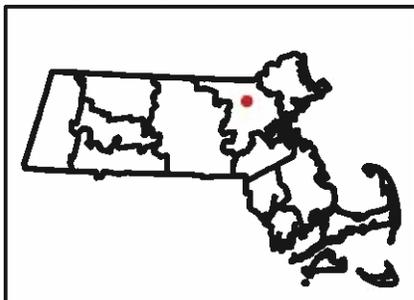
I certify that the above determinations are correct and were conducted in accordance with policies and procedures contained in the National Food Security Act Manual.

Signature Designated Conservationist Date

*DEFINITIONS OF WETLAND LABELS

AW	<u>Artificial Wetland</u> : An area that was formerly a non-wetland area under natural conditions but now exhibits wetland characteristics because of the influence of human activities. These areas are exempt from the Food Security Act of 1985, as amended. This label includes irrigation induced wetlands.
CC	<u>Commenced Conversion</u> : A wetland, farmed wetland, farmed wetland pasture, or converted wetland on which the conversion began but was not completed before December 23, 1985, was approved by FSA to continue, and the conversion was completed by January 1, 1995.
CPD	<u>COE Permit with Mitigation</u> : A converted wetland authorized by a permit issued under Section 404 of the Clean Water Act. Production of agricultural commodities is allowed subject to conditions of the permit.
CMW	<u>Categorical Minimal Effect</u> : A wetland that meets specific categories of conversion activities that have been determined by NRCS to have minimal effect, individually and cumulatively, on the functions and values of the wetland and the wetlands in the watershed.
CW	<u>Converted Wetland</u> : A wetland converted between December 23, 1985, and November 28, 1990. Production of an agricultural commodity or additional manipulation of these areas will yield USDA benefit ineligibility. Also, these areas are wetlands converted after December 23, 1985, by a county, drainage district, or similar entity. For these instances, production of an agricultural commodity or forage for mechanical harvest or additional manipulation will cause ineligibility for USDA program benefits.
CW+year	<u>Converted Wetland + (year the conversion occurred)</u> : A wetland converted after November 28, 1990, where the USDA program participant is ineligible for benefits until the wetland is restored or mitigated unless an exemption applies.
CWNA	<u>Converted Wetland Non-Agricultural Use</u> : A wetland converted after November 28, 1990, to a use other than agricultural commodity production. Label not used for certified wetland determinations completed after 2/2008.
CWTE	<u>Converted Wetland Technical Error</u> : A wetland converted or commenced after December 23, 1985, based on an incorrect NRCS determination. This label does not apply to obvious wetlands as defined in the National Food Security Act Manual.
FW	<u>Farmed Wetland</u> : A wetland that was manipulated and planted before December 23, 1985, but still meets inundation or saturation criteria. These areas may be farmed and maintained as documented before December 23, 1985, as long as they are not abandoned (i.e., management or maintenance for commodity production ceased for 5 consecutive years).
FWP	<u>Farmed Wetland Pasture or Hayland</u> : A wetland that is used for pasture or haying, was manipulated and planted before December 23, 1985, but still meets the inundation or saturation criteria. These areas may be farmed and maintained as documented before December 23, 1985, as long as they are not abandoned (i.e., management or maintenance for commodity production ceased for 5 consecutive years).
MIW	<u>Mitigation Exemption</u> : A converted wetland, farmed wetland or farmed wetland pasture of which the acreage, functions and values lost have been compensated for through an NRCS-approved mitigation plan.
MW	<u>Minimal Effect Exemption</u> : A converted wetland that is exempt from the wetland conservation provisions of the Food Security Act of 1985, as amended, based on an NRCS determination that the conversion has or will have a minimal effect, individually and cumulatively, on the functions and values of the wetland and the wetlands in the watershed.
MWM	<u>Mitigation Site</u> : The site of wetland restoration, enhancement, or creation serving as mitigation for the mitigation exemption (MIW) site.
NI	<u>Not Inventoried</u> : An area where no wetland determination has been conducted. Label not used for certified wetland determinations completed after 2/2008.
NW	<u>Non-Wetland</u> : An area that does not contain a wetland. Also includes wetlands converted before December 23, 1985, but a commodity crop was not produced and the area does not meet wetland criteria (not been abandoned).
PC	<u>Prior-Converted Cropland</u> : A wetland converted to cropland before December 23, 1985, and as of December 23, 1985, was capable of being cropped and did not meet farmed wetland hydrology criteria. These areas are not subject to the wetland conservation provisions of the Food Security Act of 1985, as amended, unless further drainage manipulation affects adjacent wetlands.
PC/NW	<u>Prior Converted Cropland/Non-Wetland</u> : An area that contains both PC and NW.
TP	<u>Third-Party Exemption</u> : A wetland converted after December 23, 1985, by a third party who is not associated with the participant, and the conversion is not a result of a scheme or device. A third party does not include predecessors in interest on the tract, drainage districts, or other local government entities.
W	<u>Wetland</u> : An area meeting wetland criteria that was not converted after December 23, 1985. These areas include farmed wetlands and farmed wetland pasture that have been abandoned.
WX	<u>Manipulated Wetlands</u> : A wetland manipulated after December 23, 1985, but the manipulation was not for the purpose of making production possible and production was not made possible. These areas include wetlands manipulated by drainage maintenance agreements.

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Legend

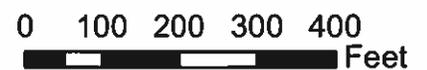
comment

- ROP1
- ROP2

COMMENTS

- N = wetland factors met for sampling unit
- Y = wetland factors not met for sampling unit

This wetland determination is valid for
 USDA Food Security Act Purposes only.
 Imagery year: 2016
 Determination: Base Map

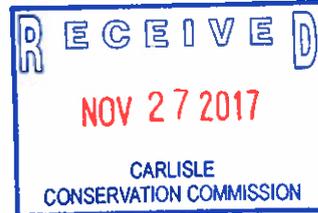




United States Department of Agriculture

Natural Resources Conservation Service
451 West Street, Amherst, MA 01002 | 413-253-4350 | fax 855-596-7666 | www.ma.nrcs.usda.gov

Sylvia Willard, Administrator
Town of Carlisle
66 Westford St
Carlisle, MA 01741-1583



11/20/2017

Dear Ms. Willard:

The purpose of this letter is to notify you that as of 11/20/2017, your preliminary technical determination for Wetlands on Tract # 1239 is a Final technical determination (refer to the attached map, and form CPA-026 "Highly Erodible Land and Wetland Conservation Determination").

You are reminded that if wetland areas are converted such that production of an annual crop is possible, and/or drainage is improved beyond what is allowed, the violation of the wetland conservation provisions of the Food Security Act would be used by the Farm Services Agency (FSA) in determining your eligibility or ineligibility for USDA program benefits.

The 2014 Farm Bill connected producer eligibility for Federal Crop insurance premium subsidy to compliance with the wetland conservation provisions. Eligibility for most USDA programs (e.g. Commodity Programs, Conservation Programs, and Farm Loan Programs) is lost for any wetland conversions that occurred after December 23, 1985. However, only wetland conversions that occur after February 7, 2014, result in ineligibility for Federal Crop Insurance premium subsidy.

These wetland technical determinations may not be valid for identifying the extent of the Army Corps of Engineers (ACOE) Clean Water Act jurisdiction for this site. If you intend to conduct any activity that constitutes a discharge of dredged or fill material into wetlands or other waters, you should request a jurisdictional determination from the ACOE-New England District prior to starting the work. Likewise, this determination may not be valid for identifying the extent of wetland protected under the Massachusetts Wetlands Protection Act; therefore, you should contact your local conservation commission and/or Massachusetts Department of Environmental Protection (DEP) regarding the need for permits.

You have the right to appeal the final technical determinations. Please refer to the attached description of the appeals process.

Please contact your District Conservationist, Dan Lenthall, at (978) 692-1904 x3 with any questions you may have.

Sincerely,

Maggie Payne, Resource Soil Scientist

cc: Theresa Boutwell, CED, FSA, Westford, MA
Dan Lenthall, District Conservationist, Westford, MA
Tom Akin, State Resource Conservationist, Amherst, MA

FARM BILL DETERMINATION APPEALS PROCESS
for
Final Technical Determinations

You have 30 days from the date of this letter to request one of the following appeal options:

1. Appeal to the Farm Service Agency County Committee

To have an appeal hearing with the FSA County Committee, you must send the Committee a written request including a brief statement explaining why you believe the NRCS determination is incorrect. The Committee can uphold the final technical determination, or request a review by the NRCS State Conservationist. Please address the request to:

Theresa Boutwell
County Executive Director
USDA-FSA
319 Littleton Road, Ste 205
Westford, MA 01886-4133

2. Appeal to the National Appeals Division (NAD)

To have an appeal hearing with NAD, you must send their regional office a written request for appeal. Include what agency decision is being appealed and a brief statement explaining why you believe the NRCS decision is incorrect. You may contact the NAD regional office at the following address:

USDA National Appeals Division
Eastern Regional Office
Post Office Box 68806
Indianapolis, IN 46268-0806
www.nad.usda.gov

Phone: 1-800-541-0457 TTY: 1-800-791-3222 Fax: (317) 875-9674



HIGHLY ERODIBLE LAND AND WETLAND CONSERVATION DETERMINATION

Name	Town of Carlisle	Request Date:	9/8/2017	County:	Middlesex
Address:	66 Westford St, Carlisle, MA 01741				
Agency or Person Requesting Determination:	FSA	Tract No:	1239	FSA Farm No.:	880

Section I - Highly Erodible Land

Is a soil survey now available for making a highly erodible land determination?	
Are there highly erodible soil map units on this farm?	

Fields in this section have undergone a determination of whether they are highly erodible land (HEL) or not; fields for which an HEL Determination has not been completed are not listed. In order to be eligible for USDA benefits, a person must be using an approved conservation system on all HEL.

Field(s)	HEL(Y/N)	Sodbust (Y/N)	Acres	Determination Date

The Highly Erodible Land determination was completed in the

Section II - Wetlands

Fields in this section have had wetland determinations completed. See the Definition of Wetland Label Codes for additional information regarding allowable activities under the wetland conservation provisions of the Food Security Act and/or when wetland determinations are necessary to determine USDA program eligibility.

Field(s)	Wetland Label*	Occurrence Year (CW)	Acres	Determination Date	Certification Date
1a	WX		17.9	10/16/2017	11/20/2017
2a	WX		14	10/16/2017	11/20/2017
3a	WX		6	10/16/2017	11/20/2017
1b, 1c, 2b, 3b	NW		1.4	10/16/2017	11/20/2017

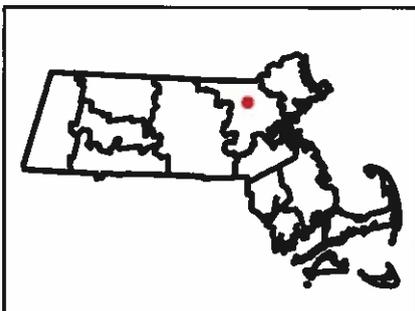
The wetland determination was completed in the Field It was Mailed to the person on 11/21/2017

Remarks: Further drainage of WX acres that make production possible may result in re-determination to CW+ label.

I certify that the above determinations are correct and were conducted in accordance with policies and procedures contained in the National Food Security Act Manual.

Signature Designated Conservationist	Date
MARGOT PAYNE Digitally signed by MARGOT PAYNE Date: 2017.11.20 10:26:36 -05'00'	11/20/2017

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Legend

Wetland Label

-  NW
-  WX
-  Counties

This wetland determination is valid for
 USDA Food Security Act Purposes only.
 Imagery year: 2012
 Determination: Final



0 100 200 300 400
 Feet

APPENDIX D

TOWN COUNSEL CORRESPONDENCE FOLLOWING THEIR REVIEW OF NRCS FINAL WETLANDS DETERMINATION

Introduction

Following Carlisle's receipt, in late 2017, of the Natural Resources Conservation Services' initial (and later final) technical determination for the cranberry bog, the Town requested a review of the determination by Town Counsel (Miyares and Harrington LLP, Wellesley, MA). The review was undertaken by Rebekah Lacey. Initially, Lacey sent an email to the Town that only looked at the appeal process; she concluded that there were no grounds for appeal. In a subsequent letter, Lacey described the legal basis for, and an explanation of, the NRCS determination. Both the email and letter are included in this Appendix.

Contents

1. Email from Rebekah Lacey, Miyares and Harrington LLP (Wellesley, MA) to Sylvia Willard, Carlisle's Conservation Administrator, dated November 30, 2017. (2 pages)
2. Letter from Rebekah Lacey, Miyares and Harrington LLP (Wellesley, MA) to Sylvia Willard, Carlisle's Conservation Administrator, Warren Lyman and Susan Provenzano, dated December 12, 2017. (10 pages) [NB: Exhibit A attached to Lacey's letter (the NRCS letter of 11-20-17 to the Town) has been removed as the same material is contained in Appendix C.]

From: Rebekah Lacey [<mailto:rlacey@miyares-harrington.com>]
Sent: Thursday, November 30, 2017 2:37 PM
To: Sylvia Willard
Cc: Timothy D Goddard; Tom Harrington
Subject: Carlisle/ConComm: Recommendation re: appeal of NRCS wetland determination

Hi Sylvia,

As the first step in addressing questions from the Con Comm and Cranberry Bog Alternatives Committee regarding the attached Natural Resources Conservation Service wetland determination, we have evaluated whether to recommend that the ConComm appeal the determination. As explained below, our recommendation is that the ConComm should not appeal the determination.

Background

The Con Comm sought a wetlands determination from the Natural Resources Conservation Service (part of the U.S. Department of Agriculture) in order to help determine the regulatory implications of a contemplated re-use of the cranberry bog property for hay production. On November 20, NRCS sent the attached determination. The determination may be appealed administratively within USDA by one of two routes, both of which require that the appeal be filed within 30 days of November 20.

The regulatory scheme at issue is the USDA requirements for various types of financial assistance to farmers, including premium subsidies for crop insurance. Essentially, converting a wetland (via draining, dredging, filling, leveling, or clearing) to land suitable for growing an annual crop makes a farmer ineligible for USDA financial assistance. However, there are some exemptions for wetlands that were converted to non-wetland land, or used for growing an annual crop, grazing, or pasture, before certain dates. An NRCS wetland determination evaluates whether wetlands are, or were, present on a property, and what the regulatory status of the wetland or former wetland areas are for USDA purposes.

The NRCS determination for the Carlisle cranberry bog property determined that the three cranberry bog areas (which constitute 17.9 acres, 14 acres, and 6 acres respectively) are all wetland that has been manipulated, but not so as to make production of an annual crop possible (category “WX”). The determination states, “This is not currently a violation of the wetland conservation provisions of the Food Security Act, but any further manipulations through draining, dredging, or levelling could be a violation if allowed for the production of an annual crop. Such a conversion would result in the landowner and operator to be ineligible for all USDA program benefits.”

This determination means that the land was determined NOT to fall into one of the other categories listed in the determination, such as “Prior Converted Cropland,” “Farmed Wetland,” or “Farmed Wetland Pasture.” These classifications provide some regulatory protection that allows farming in wetlands or former-wetland areas. We reviewed the relevant regulations and guidance to determine whether there are grounds to argue that the cranberry bog areas should have been classified as one of these categories rather than the “WX” category.

Recommendation

In our opinion, the NRCS classification appears correct, and we do not believe that there are grounds for an appeal. Cranberries are not considered an “agricultural commodity” under the USDA wetland conservation regulations. (Per 7 CFR § 12.2, an agricultural commodity is “any crop planted and produced by annual tilling of the soil.” Those regulations are attached.) On one hand, this means that drainage modifications made to facilitate cranberry production do not violate USDA’s wetland conservation requirements. (See 7 CFR §12.5, also attached.) On the other hand, this means that

cranberry growing does not create any kind of “grandfathering” that would put the land in a category such as “Prior Converted Cropland” or “Farmed Wetland.” (These classifications are also defined in 7 CFR § 12.2.)

I hope that this is helpful. Please let me know if you have any questions.

Regards, Rebekah

Rebekah Lacey

MYARES AND **H**ARRINGTON LLP

40 Grove Street • Suite 190 • Wellesley, MA 02482

Tel 617-804-2425 • Fax 617-489-1630

rlacey@miyares-harrington.com

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Christopher H. Heep
Donna M. Brewer
Jennie M. Merrill

Rebekah Lacey
Ivria Glass Fried
Eric Reustle
Blake M. Mensing
Katherine E. Stock

December 12, 2017

Sylvia Willard, Administrator
Carlisle Conservation Commission

Warren Lyman and Susan Provenzano, Co-Chairs
Cranberry Bog Alternatives Committee

66 Westford Street
Carlisle, MA 01741

Re: Cranberry Bog: Questions Concerning NRCS Determination

Dear Ms. Willard, Mr. Lyman and Ms. Provenzano:

On November 20, 2017, the federal Natural Resources Conservation Service (NRCS) issued a wetlands determination for the Carlisle Cranberry Bog, attached hereto as Exhibit A. You have asked us to evaluate what the implications of this determination are for the contemplated future use of the bog for growing hay. This is one alternative identified by the Cranberry Bog Alternatives Committee (CBAC) for future use of the bog.

1. **Background**

The Carlisle Conservation Commission recently notified the NRCS (which is part of the U.S. Department of Agriculture) that it was considering changing the crop grown on the Cranberry Bog from cranberries to hay, by filing the required USDA form AD-1026. This notification triggered the requirement for a wetlands determination by the NRCS.

Since 1985, federal legislation has imposed (and strengthened over time) requirements regarding wetlands on agricultural land. Essentially, converting a wetland (via draining, dredging, filling, leveling, or clearing) to land suitable for growing an annual crop makes a farmer ineligible for USDA financial assistance, including premium subsidies for crop insurance. However, there are some exemptions for wetlands that were converted to non-wetland land, or used for growing an annual crop, grazing, or pasture, before certain dates. An NRCS wetland determination evaluates whether wetlands are, or were, present on a property, and what the regulatory status of the wetland or former wetland areas are for USDA purposes.

Conservation Commission and Cranberry Bog Alternatives Committee
December 12, 2017
Page 2 of 5

After conducting a site visit and providing a draft determination, NRCS issued its final determination for the Cranberry Bog (Exhibit A). The NRCS determined that the three cranberry bog areas (which constitute 17.9 acres, 14 acres, and 6 acres) are all wetland that has been manipulated, but not so as to make production of an annual crop possible (category "WX"). The determination states, "This is not currently a violation of the wetland conservation provisions of the Food Security Act, but any further manipulations through draining, dredging, or leveling could be a violation if allowed for the production of an annual crop. Such a conversion would result in the landowner and operator to be ineligible for all USDA program benefits."

Mr. Lyman contacted the NRCS to ask whether lowering the water table in the bog areas and subsequent cultivation of hay would constitute a "violation of the wetland conservation provisions of the Food Security Act" as referenced in the determination, given that hay is a perennial crop rather than an annual one. In response, Maggie Payne, the NRCS Resource Soil Scientist who performed the wetlands determination, stated that it would. She stated in part (referencing a section of the NRCS National Food Security Act Manual):

Under the definition of Converted Wetland (514.40), the Manual states that "the term 'conversion' constitutes activities that have the purpose or effect of making production of an agricultural commodity possible or of increasing production." It is therefore the act of conversion to "making production possible" rather than the actual production that triggers a violation of the Food Security Act Wetland Compliance. For this reason, manipulations to drainage and the subsequent production of a perennial crop would be considered a conversion and be a violation.

You have asked us to evaluate whether this is an accurate statement of the law.

2. Analysis

- a. Is it true that draining a wetland to produce a perennial crop is a violation of the wetland conservation provisions of the Food Security Act if the alteration also makes possible the production of an annual crop, even if an annual crop is never grown?

Yes. The Food Security Act of 1985 is codified in Title 16 of the United States Code, at 16 U.S.C. §§3801-3862. Although these statutory provisions have been

Conservation Commission and Cranberry Bog Alternatives Committee
December 12, 2017
Page 3 of 5

amended by subsequent legislation, they are still typically referred to as the “Food Security Act.” The 1990 Farm Bill added a provision (now codified at 16 U.S.C. §3821(d)) stating that anyone who converts a wetland after November 28, 1990 “for the purpose, or to have the effect, of making the production of an agricultural commodity possible on such converted wetland” (emphasis added) is ineligible for specified USDA payments. An “agricultural commodity” is defined as a crop planted and produced “by annual tilling of the soil, including tilling by one-trip planters.” 16 U.S.C. §3801(a)(1).

The definition of converted wetland in the relevant regulations (at 7 CFR §12.2(a)) repeats the statutory language: “Converted wetland is a wetland that has been drained, dredged, filled, leveled, or otherwise manipulated (including the removal of woody vegetation or any activity that results in impairing or reducing the flow and circulation of water) for the purpose of or to have the effect of making possible the production of an annual commodity.” Thus, if draining a wetland results in a condition that would allow an annual crop to be grown, that is a violation of the Food Security Act whether or not such a crop is ever actually grown.

- b. What if draining a wetland does not make possible the production of an annual crop (i.e. it allows production of wetland hay, but is still too wet for any crop that requires annual tilling)?

There is an argument that this is allowed under the statute and regulations cited above. However, NRCS guidance explicitly defines this scenario as a wetland conversion.

The NRCS maintains an “Electronic Directives System”¹ containing the written policies and procedures used by NRCS employees. The National Food Security Act Manual, cited in the previously referenced e-mail from Maggie Payne of NRCS, is one of these directives.² This manual provides official NRCS guidance for the administration of the wetlands conservation program established by the Food Security Act of 1985. In Section 514.2, the manual defines the phrase “making production possible” to include wetland manipulation that “[a]fter November 28, 1990, allows forage production or pasture or hayland use.” Thus, even though hay is not an annual crop, if draining a wetland allows the production of hay, it is a violation of the Food Security Act according to USDA guidance. While guidance does not have the force of law in the way a regulation does, NRCS employees will follow the guidance in their decision-making; the Town could only obtain a decision contrary to the manual by going to court (and might not succeed there either).

¹ Available at <https://directives.sc.egov.usda.gov/Default.aspx>.

² Available at <https://directives.sc.egov.usda.gov/RollupViewer.aspx?hid=29340>.

Conservation Commission and Cranberry Bog Alternatives Committee
December 12, 2017
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- c. The NRCS regulations regarding wetland conversion include a number of exemptions at 7 CFR §12.5(b)(1) (see Exhibit B). Could the Town rely on any of those to make the conversion of the cranberry bog to hay production permissible?

In our opinion, the only exemption that the Town could use would be the “mitigation exemption” at 7 CFR §12.5(b)(1)(vi), which exempts a wetland conversion that has been authorized by a Clean Water Act permit issued by the U.S. Army Corps of Engineers, as long as that permit requires adequate mitigation replacing the values, acreage and functions of the wetlands converted. None of the other exemptions apply, for the reasons discussed below.

Exemptions (i)-(iii) are for “prior converted cropland,” “farmed wetland” and “farmed wetland pasture.” These are regulatory terms, defined at 7 CFR §12.2(a), that apply to land that was used for annual crops or pasture prior to enactment of the 1985 Food Security Act.

Exemption (iv) is for conversion that NRCS determines is “for a purpose that does not make the production of an agricultural commodity possible, such as conversions for fish production, trees, vineyards, shrubs, cranberries, agricultural waste management structures, livestock ponds, fire control, or building and road construction and no agricultural commodity is produced on such land.” As previously stated, there could be an argument that conversion that makes possible only the production of wetland hay (and not any annual crop) is allowable. However, the National Food Security Act Manual explicitly provides that wetland manipulation occurring after November 28, 1990, that allows hay production constitutes a prohibited wetland conversion.

Exemption (v) allows wetland manipulations that have a “minimal effect on the wetland functions and values of wetlands in the area,” as determined by NRCS. The National Food Security Act Manual directs each NRCS state office to develop a procedure for making “minimal effect” determinations. The Massachusetts NRCS Field Office has a written “Minimal Effect Procedure,” which states that only wetland conversions of 1/3 of an acre or less may be determined to have a “minimal effect.” The contemplated conversion of the cranberry bog to hay would involve far too large of an area to qualify for the “minimal effect” exemption.

Exemption (vii) applies to artificial wetlands, wet areas created by irrigation, and wetlands converted by third parties, and thus is not applicable to the cranberry bog.

If the Commission and the CBAC believe that the “mitigation exemption” may be a viable option and would like more information on the process for obtaining

Miyares and Harrington LLP

Conservation Commission and Cranberry Bog Alternatives Committee
December 12, 2017
Page 5 of 5

a Clean Water Act permit and the associated mitigation requirements, please let us know.

Sincerely,

A handwritten signature in black ink, appearing to read "Rebekah Lacey", with a stylized flourish at the end.

Rebekah Lacey

cc: Tim Goddard

EXHIBIT B

Code of Federal Regulations

Title 7. Agriculture

Subtitle A. Office of the Secretary of Agriculture

Part 12. Highly Erodible Land Conservation and Wetland Conservation (Refs & Annos)

Subpart A. General Provisions

7 C.F.R. § 12.5

§ 12.5 Exemption.

Effective: April 24, 2015

Currentness

(a) Exemptions regarding highly erodible land—

(1) Highly erodible cropland in production or in USDA programs during 1981 through 1985 crop years. During the period beginning on December 23, 1985, and ending on the later of January 1, 1990, or the date that is two years after the date the cropland on which an agricultural commodity is produced was surveyed by NRCS to determine if such land is highly erodible, no person shall be determined to be ineligible for benefits as provided in § 12.4 as the result of the production of an agricultural commodity on any highly erodible land:

(i) That was planted to an agricultural commodity in any year 1981 through 1985; or

(ii) That was set aside, diverted, or otherwise not cultivated in any such crop years under a program administered by the Secretary for any such crops to reduce production of an agricultural commodity.

(2) Compliance with a conservation plan or conservation system. As further specified in this part, no person shall be ineligible for the program benefits described in § 12.4 as the result of production of an agricultural commodity on highly erodible land or the designation of such land for conservation use if such production or designation is in compliance with a conservation plan or conservation system approved under paragraph (a)(2)(i) or (a)(2)(ii) of this section. A person shall not be ineligible for program benefits under § 12.4 as the result of the production of an agricultural commodity on highly erodible land or as the result of designation of such land as conservation use if the production or designation is:

(i) In an area within a CD, under a conservation system that has been approved by the CD after the CD determines that the conservation system is in conformity with technical standards set forth in the NRCS field office technical guide for such district; or

(ii) In an area not within a CD, under a conservation system that has been approved by NRCS to be adequate for the production of such agricultural commodity on highly erodible land or for the designation of such land as conservation use.

(3) Reliance upon NRCS determination for highly erodible land. A person may be relieved from ineligibility for program benefits as the result of the production of an agricultural commodity which was produced on highly erodible land or for the designation of such land as conservation use in reliance on a determination by NRCS that such land was not highly erodible land, except that this paragraph shall not apply to any agricultural commodity that was planted on highly erodible land, or for the designation of highly erodible land as conservation use after NRCS determines that such land is highly erodible land, and the person is notified of such determinations.

(4) Areas of 2 acres or less. No person shall be determined to be ineligible under § 12.4 for noncommercial production of agricultural commodities on highly erodible land on an area of 2 acres or less if it is determined by FSA that such production is not intended to circumvent the conservation requirements otherwise applicable under this part.

(5) Good faith.

(i) No person will become ineligible under § 12.4 as a result of the failure of such person to apply a conservation system on highly erodible land if all of the following apply:

(A) FSA determines such person has acted in good faith and without the intent to violate the provisions of this part;

(B) NRCS determines that the person complies with paragraph (a)(5)(ii) of this section; and

(C) The good faith determination of the FSA county or State committee has been reviewed and approved by the applicable State Executive Director, with the technical concurrence of the State Conservationist; or district director, with the technical concurrence of the area conservationist.

(ii) A person who otherwise meets the requirements of paragraphs (a)(5)(i)(A) and (a)(5)(i)(C) of this section will be allowed a reasonable period of time, as determined by NRCS, but not to exceed one year, during which to implement the measures and practices necessary to be considered actively applying the person's conservation plan, as determined by USDA. If a person does not take the required corrective actions, the person may be determined to be ineligible for the crop year during which such actions were to be taken, as well as any subsequent crop year.

(iii) Notwithstanding the good-faith requirements of paragraph (a)(5)(i) of this section, if NRCS observes a possible compliance deficiency while providing on-site technical assistance, NRCS will provide to the responsible person, not later than 45 days after observing the possible violation, information regarding actions needed to comply with the plan and this subtitle. NRCS will provide this information in lieu of reporting the observation as a violation, if the responsible person attempts to correct the deficiencies as soon as practicable, as determined by NRCS, after receiving the information, but not later than one year after receiving the information. If a person does not take the required corrective actions, the person may be determined to be ineligible for the crop year during which the compliance deficiencies occurred, as well as any subsequent crop year.

(iv) A person who meets the requirements of paragraphs (a)(5)(i) and (a)(5)(ii) of this section will, in lieu of the loss of all benefits specified under § 12.4(d) and (e) for such crop year, be subject to a reduction in benefits by an amount

commensurate with the seriousness of the violation, as determined by FSA. The dollar amount of the reduction will be determined by FSA and may be based on the number of acres and the degree of erosion hazard for the area in violation, as determined by NRCS, or upon such other factors as FSA determines appropriate.

(v) Any person whose benefits are reduced in a crop year under paragraph (a)(5) of this section may be eligible for all of the benefits specified under § 12.4(d) and (e) for any subsequent crop year if, prior to the beginning of the subsequent crop year, NRCS determines that such person is actively applying a conservation plan according to the schedule specified in the plan on all highly erodible land planted to an agricultural commodity or designated as conservation use.

(6) Allowable variances.

(i) Notwithstanding any other provisions of this part, no person shall be determined to be ineligible for benefits as a result of the failure of such person to apply a conservation system if NRCS determines that—

(A) The failure is technical and minor in nature and that such violation has little effect on the erosion control purposes of the conservation plan applicable to the land on which the violation has occurred; or

(B) The failure is due to circumstances beyond the control of the person; or

(C) NRCS grants a temporary variance from the practices specified in the plan for the purpose of handling a specific problem, including weather, pest, and disease problems, which NRCS determines cannot reasonably be addressed except through such variance.

(ii) If the person's request for a temporary variance involves the use of practices or measures to address weather, pest, or disease problems, NRCS shall make a decision on whether to grant the variance during the 30-day period beginning on the date of receipt of the request. If NRCS fails to render a decision during the period, the temporary variance shall be considered granted unless the person seeking the variance had reason to know that the variance would not be granted. In determining whether to grant a variance for natural disasters such as weather, pest, or disease problems, NRCS will consider such factors as:

(A) The percent of a stand damaged or destroyed by the event;

(B) The percent of expected crop production compared to normal production for that crop;

(C) The documented invasion of non-native insects, weeds, or diseases for which no recognized treatment exists;

(D) Whether an event is severe or unusual based on historical weather records; and

(E) Other specific circumstances caused by a natural event that prevented the implementation of conservation practices or systems, installation of structures, or planting of cover crops.

(7) Technical and minor violations. Notwithstanding any other provisions of this part, a reduction in benefits in an amount commensurate with the seriousness of the violation, as determined by FSA, and consistent with paragraph (a)(5)(iv) of this section, will be applied if NRCS determines that a violation involving highly erodible land that would otherwise lead to a loss of benefits is both of the following:

(i) Technical and minor in nature; and

(ii) Has a minimal effect on the erosion control purposes of the conservation plan applicable to the land on which the violation occurred.

(b) Exemptions for wetlands and converted wetlands—

(1) General exemptions. A person shall not be determined to be ineligible for program benefits under § 12.4 as the result of the production of an agricultural commodity on converted wetland or the conversion of wetland if:

(i) The land is a prior-converted cropland and meets the definition of a prior-converted cropland as of the date of a wetland determination by NRCS;

(ii) The land has been determined by NRCS to be a prior-converted cropland and such determination has been certified, and NRCS determines that the wetland characteristics returned after the date of the wetland certification as a result of—

(A) The lack of maintenance of drainage, dikes, levees, or similar structures,

(B) The lack of management of the lands containing the wetland, or

(C) Circumstances beyond the control of the person;

(iii) The land was determined by NRCS to be a farmed wetland or a farmed-wetland pasture and—

(A) Such land meets wetland criteria through a voluntary restoration, enhancement, or creation action after that determination,

(B) The technical determinations regarding the baseline site conditions and the restoration, enhancement, or creation action have been adequately documented by NRCS,

(C) The proposed conversion action is documented by the NRCS prior to implementation, and

(D) The extent of the proposed conversion is limited so that the conditions will be at least equivalent to the wetland values, acreage, and functions that existed at the time of implementation of the voluntary wetland restoration, enhancement, or creation action;

(iv) NRCS has determined that the conversion is for a purpose that does not make the production of an agricultural commodity possible, such as conversions for fish production, trees, vineyards, shrubs, cranberries, agricultural waste management structures, livestock ponds, fire control, or building and road construction and no agricultural commodity is produced on such land;

(v) NRCS has determined that the actions of the person with respect to the conversion of the wetland or the combined effect of the production of an agricultural commodity on a wetland converted by the person or by someone else, individually and in connection with all other similar actions authorized by NRCS in the area, would have only a minimal effect on the wetland functions and values of wetlands in the area;

(vi)(A) After December 23, 1985, the Army Corps of Engineers issued an individual permit pursuant to section 404 of the Clean Water Act, 33 U.S.C. 1344, authorizing such action and the permit required mitigation that adequately replaced the values, acreage, and functions of the wetlands converted, as determined by NRCS, or

(B) After December 23, 1985, the action is encompassed under section 404 of the Clean Water Act, 33 U.S.C. 1344, by an Army Corps of Engineers nationwide or regional general permit and the wetland values, acreage, and functions were adequately mitigated, as determined by NRCS; or

(vii) The land is determined by NRCS to be—

(A) An artificial wetland,

(B) A wet area created by a water delivery system, irrigation, irrigation system, or application of water for irrigation,

(C) A nontidal drainage or irrigation ditch excavated in non-wetland, or

(D) A wetland converted by actions of persons other than the person applying for USDA program benefits or any of the person's predecessors in interest after December 23, 1985, if such conversion was not the result of a scheme or device to avoid compliance with this part. Further drainage improvement on such land is not permitted without loss of eligibility for USDA program benefits, unless NRCS determines under paragraph (b)(1)(v) of this section that further drainage activities applied to such land would have minimal effect on the wetland functions and values in the area. In applying this paragraph, a converted wetland shall be presumed to have been converted by the person applying for USDA program benefits unless the person can show that the conversion was caused by a third party with whom the person was not associated through a scheme or device as described under § 12.10 of this part. In this regard, activities of a water resource district, drainage district, or similar entity will be attributed to all persons within the jurisdiction of the district or other entity who are assessed for the activities of the district or entity. Accordingly, where a person's wetland is converted due to

the actions of the district or entity, the person shall be considered to have caused or permitted the drainage. Notwithstanding the provisions of the preceding sentences and as determined by FSA to be consistent with the purposes of this part, the activities of a drainage district or other similar entity will not be attributed to a person to the extent that the activities of the district or entity were beyond the control of the person and the wetland converted is not used by the person for the production of an agricultural commodity or a forage crop for harvest by mechanical means or mitigation for the converted wetland occurs in accordance with this part.

(2) Commenced conversion wetlands.

(i) The purpose of a determination of a commenced conversion made under this paragraph is to implement the legislative intent that those persons who had actually started conversion of a wetland or obligated funds for conversion prior to December 23, 1985, would be allowed to complete the conversion so as to avoid unnecessary economic hardship.

(ii) All persons who believed they had a wetland or converted wetland for which conversion began but was not completed prior to December 23, 1985, must have requested by September 19, 1988, FSA to make a determination of commencement in order to be considered exempt under this section.

(iii) Any conversion activity considered by FSA to be commenced under this section lost its exempt status if such activity was not completed on or before January 1, 1995. For purposes of this part, land on which such conversion activities were completed by January 1, 1995, shall be evaluated by the same standards and qualify for the same exemptions as prior-converted croplands. For purposes of this part, land on which such conversion activities were not completed by January 1, 1995, shall be evaluated by the same standards and qualify for the same exemptions as wetlands or farmed wetlands, as applicable.

(iv) Only those wetlands for which the construction had begun, or to which the contract or purchased supplies and materials related, qualified for a determination of commencement. However, in those circumstances where the conversion of wetland did not meet the specific requirements of this paragraph, the person could have requested a commencement of conversion determination from the FSA Deputy Administrator for Farm Programs, upon a showing that undue economic hardship would have resulted because of substantial financial obligations incurred prior to December 23, 1985, for the primary and direct purpose of converting the wetland.

(3) Wetlands farmed under natural conditions. A person shall not be determined to be ineligible for program benefits under § 12.4 of this part as a result of the production of an agricultural commodity on a wetland on which the owner or operator of a farm or ranch uses normal cropping or ranching practices to produce agricultural commodities in a manner that is consistent for the area, where such production is possible as a result of natural conditions, such as drought, and is without action by the producer that alters the hydrology or removes woody vegetation.

(4) Mitigation.

(i) No person shall be determined to be ineligible under § 12.4 for any action associated with the conversion of a wetland if the wetland values, acreage, and functions are adequately mitigated, as determined by NRCS, through

the restoration of a converted wetland, the enhancement of an existing wetland, or the creation of a new wetland, if the mitigation—

- (A) Is in accordance with a mitigation plan approved by NRCS;
 - (B) Is in advance of, or concurrent with, the wetland conversion or the production of an agricultural commodity, as applicable;
 - (C) Is not at the expense of the federal government in either supporting the direct or indirect costs of the restoration activity or costs associated with acquiring or securing mitigation sites, except if conducted under a mitigation banking program established by USDA;
 - (D) Occurs on lands in the same general area of the local watershed as the converted wetlands, provided that for purposes of this paragraph, lands in the same general area of the local watershed may include regional mitigation banks;
 - (E) Is on lands for which the owner has granted an easement to USDA or in the case of a mitigation bank operated under a USDA program, an entity approved by USDA, recorded the easement on public land records, and has agreed to the maintenance of the restored, created, or enhanced wetland for as long as the converted wetland for which the mitigation occurred remains in agricultural use or is not returned to its original wetland classification with equivalent values, acreage, and functions; and
 - (F) Provides the equivalent values, acreage, and functions that will be lost as a result of the wetland conversion.
- (ii) A mitigation plan is a record of decisions that document the actions necessary to compensate for the loss of wetland values, acreage, and functions that result from converting a wetland. The mitigation plan may be a component of a larger natural resources conservation plan.
- (iii) The State Conservationist, in consultation with the State Technical Committee, may name certain types or classes of wetland not eligible for exemption under paragraph (b)(4)(i) of this section where the State Conservationist determines that mitigation will not achieve equivalent replacement of wetland values, acreage, and functions within a reasonable time frame or for other reasons identified by the State Conservationist. Any type or class of wetland that a State Conservationist identifies as not eligible for exemption under paragraph (b)(4)(i) of this section will be published in the Federal Register for inclusion in this part.
- (5) Good faith violations.
- (i) A person who is determined under § 12.4 of this part to be ineligible for benefits as the result of the production of an agricultural commodity on a wetland converted after December 23, 1985, or as the result of the conversion of a wetland after November 28, 1990, may regain eligibility for benefits if all of the following apply:

(A) FSA determines that such person acted in good faith and without the intent to violate the wetland provisions of this part; and

(B) NRCS determines that the person is implementing all practices in a mitigation plan within an agreed-to period, not to exceed one year; and

(C) The good faith determination of the FSA county or State committee has been reviewed and approved by the applicable State Executive Director, with the technical concurrence of the State Conservationist; or district director, with the technical concurrence of the area conservationist.

(ii) In determining whether a person acted in good faith under paragraph (b)(5)(i)(A) of this section, the FSA shall consider such factors as whether—

(A) The characteristics of the site were such that the person should have been aware that a wetland existed on the subject land,

(B) NRCS had informed the person about the existence of a wetland on the subject land,

(C) The person did not convert the wetland, but planted an agricultural commodity on converted wetland when the person should have known that a wetland previously existed on the subject land,

(D) The person has a record of violating the wetland provisions of this part or other Federal, State, or local wetland provisions, or

(E) There exists other information that demonstrates that the person acted with the intent to violate the wetland provisions of this part.

(iii) After the requirements of paragraph (b)(5)(i) of this section are met, USDA may waive applying the ineligibility provisions of § 12.4.

(6) Reliance upon NRCS wetland determination.

(i) A person shall not be ineligible for program benefits as a result of taking an action in reliance on a previous certified wetland determination by NRCS.

(ii) A person who may be ineligible for program benefits as the result of the production of an agricultural commodity on converted wetland or for the conversion of a wetland may seek relief under § 12.11 of this part if such action was taken in reliance on an incorrect technical determination by NRCS as to the status of such land. If the error caused the person to make a substantial financial investment, as determined by the NRCS, for the conversion of a wetland, the person may be relieved of ineligibility for actions related to that portion of the converted wetland for which

the substantial financial investment was expended in conversion activities. The relief available under this paragraph shall not apply to situations in which the person knew or reasonably should have known that the determination was in error because the characteristics of the site were such that the person should have been aware that a wetland existed on the subject land, or for other reasons.

(7) Responsibility to provide evidence. It is the responsibility of the person seeking an exemption related to converted wetlands under this section to provide evidence, such as receipts, crop-history data, drawings, plans or similar information, for purposes of determining whether the conversion or other action is exempt in accordance with this section.

Credits

[61 FR 53491, Oct. 11, 1996; 76 FR 82077, Dec. 30, 2011; 80 FR 22880, April 24, 2015]

SOURCE: 61 FR 47025, Sept. 6, 1996; 76 FR 82076, Dec. 30, 2011; 80 FR 22879, April 24, 2015, unless otherwise noted.

AUTHORITY: 16 U.S.C. 3801, 3811–12, 3812a, 3813–3814, and 3821–3824.

Notes of Decisions (28)

Current through November 22, 2017; 82 FR 55526.

End of Document

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APPENDIX E
REVISED AND NEW ALTERNATIVES

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Revised Alternative 5: Grow Hay without Lowering Water Table

Introduction

This revised version of Alternative 5 is a simplified version of the original Alternative 5. The simplification involves the elimination of any new sub-surface (drain tile) drain system and any other modification designed to lower the water table in the bogs. There would be no lowering of the inverts of the culverts or flumes that control the water leaving each bog. Maintenance of the existing drainage ditches would, however, continue. The objective remains to grow hay (producing silage, not hay bales) on as much of the three bog segments as possible. Based on information received from the NRCS-Amherst office, these revisions are expected to eliminate any violations of USDA's 1985 Food Security Act (and subsequent amendments) which could lead to loss of USDA program benefits for both the Town and the farmer in any year in which there was a violation. A side benefits of this revision is a significant lowering in the projected bog conversion costs (a new drainage system was quoted as \$125,000+).

Growing Hay in Wetlands*

Hay can be grown in wetlands, although it is not common for the production of forage. One example exists in Carlisle with the 28-acre hay field owned by the Hamiltons (230 Concord St.) which is easily seen on the south side of Westford Rd. near the center of Town. The whole field is considered wetland. Drainage ditches in the field help keep the water table low enough for growing hay. The Natural Resources Conservation Service (NRCS) has classified the soils in the field as Freetown Muck, 0 – 1% slope (Class 52A), which is the same as for the cranberry bog. Nevertheless, Hamilton said the soils in his field are – at least near the surface – very different from the bog soils. Although currently used only partly for animal grazing, the hay field has been used to produce forage in the past. Prior to the Hamilton's ownership, the fields produced hay for Guy Clark's cows. Currently the field is a wide mixture of swamp grass, fescue and timothy. Recent farming has collected hay in two forms:

- Round bales: 1 – 2 cuttings per year; 55 round bales per cutting; fed to goats
- Small bales: 1,400 bales per cutting; fed to pigs and cows

Field maintenance has involved mostly brush management. Ditches have not been cleaned since the 1990s. Two culverts were replaced a few years ago. Smaller and lighter farm equipment has to be used to prevent sinking into the wetland soils.

To aid farmers, the NRCS has published guidance on the best types of hay to grow in various soil conditions, including wetlands.**

*Much of the information in this subsection comes from a personal communication from Steve Hamilton (Carlisle) to Sylvia Willard (Conservation Administrator) on March 1, 2018.

**“Forage and Biomass Planting: Conservation Practice Specification Guide;” publication MA-512, Natural Resources Conservation Service, 2011.

Major Steps Needed for Conversion

- 1) Prepare engineering plans for maintenance work on the existing drainage ditches and some drainage alterations. This may require supplemental data on soil elevations, including the depths of ditches. Also prepare a plan for the removal of existing vegetation in the bogs. These tasks will require collaboration between the Town and a civil engineer. The engineer will estimate the cost of this work which will require that quotes be requested from contractors.
- 2) Prepare engineering plans and specifications for an overhead irrigation system using a traveler. Some design information will come from the irrigation system supplier(s). In addition to a traveler, the system will include a new pump, a buried main leading from the pump house to the three bogs, and about ten hydrants to which the traveler can be connected. Plans for the removal of the existing sprinkler system in the Irrigated Bog need to be included. A civil engineer will estimate the cost of this work.
- 3) Prepare a total project description, with cost estimates, for Town review. Include costs for supplemental tests of bog soil chemistry.
- 4) Obtain necessary funding and check on any regulatory reviews or permits needed.
- 5) Through appropriate procedures, select a farmer and negotiate a land use agreement with him/her that will provide the Town with in-kind services including maintenance of the agricultural area of the Cranberry Bog Conservation Land and the Cranberry Bog House.
- 6) Following State procurement rules, hire the necessary contractor(s) to carry out: (1) the removal of the existing sprinkler irrigation system; (2) the removal of existing vegetation on the bogs; (3) the drainage maintenance and alterations; and (4) the installation of the new irrigation system. The services of a civil engineer will be needed for project oversight, including safety checks, and the preparation of as-built plans for the irrigation system.

Summary Evaluation

Pros	Cons
Same benefits as in original CBAC report (see below copied from pages 49-50 of the report)	Similar concerns as described on page 49 of the original CBAC report (April 2017)
Avoids violations of 1985 Food Security Act	Hay crop may be limited in yield & quality by high ground water table
Less potential for soil loss due to muck oxidation or wind erosion (because water table is not lowered)	Farm equipment not as easy to move around on bogs with no sub-surface drainage and some internal ditches
Cost significantly reduced (now roughly \$250 K - \$300 K)	
Hopefully, less need to obtain an ACOE permit for CWA Section 404 regulated activities.	

Major Benefits

The major benefits of implementing Alternative 5 are as follows.

- The preservation of 36 acres (40 acres including service roads and dams/dikes) of agricultural land on a property with a significant cultural heritage of agriculture. (Agricultural preservation is a specific goal/objective of the Town's 2013 Open Space and Recreation Plan.)
- The preservation of a significant portion (about 50%) of the registered water rights we have for the Bog property. (See Section 5 of original report for details.) Absent this preservation, the Town can expect a renewed effort by the Chelmsford Water District to install a municipal well field abutting the Chelmsford bog property that could extract a significant amount of water from the River Meadow Brook watershed, with resulting adverse effects on downstream wildlife habitats, private wells, and potentially agricultural operations in drought years.
- The preservation of open vistas across the agricultural fields, considered a significant benefit to the public using the bog for passive recreation. (Without agriculture, or without any engineered restoration that would minimize tree and bush growth, the vistas would eventually be lost due to tree and bush growth.)
- Potential for continued beneficial use of the Cranberry Bog House to support agriculture by providing storage space for equipment and housing (two apartments) for agricultural workers. Although the CBAC is recommending a new well and septic system for the Bog House regardless of which alternative is chosen, having the building be part of an agricultural lease to the chosen farmer may avoid the necessity of a major Bog House renovation (described in Alternative 10) such as would be needed for rental of the apartments to the public.
- The preservation of the upper and lower bog reservoirs, as these water bodies would likely be part of the irrigation system for the new agricultural fields. The reservoirs provide important aquatic habitat as well as pleasing vistas.
- By maintaining an agricultural designation for the bogs, the dams associated with the bogs may face less stringent (and less costly) regulation.

Alternative 11 – Bog Mowing Plus Blueberries

Introduction

In this alternative, there would be no changes to the drainage, water control structures, dams or dikes. The upper and lower reservoirs, and all the pathways, would remain.

Irrigated Bog & In-Renovation Bog

Objective: Maintain bogs as wetland habitat (wetland meadows) while also preserving the vistas across the bogs. A bog management plan would be prepared to direct and regulate the following:

- First Year – Remove irrigation pipes and sprinklers from Irrigated Bog
- Every Year - Routine maintenance of dams, dikes, water control structures, and mowing of walkways.
- Every 2 – 5 Years – Mow bogs and remove any trees or high bushes growing within or on sides of bogs.

Sand-Covered Bog

Objective: Add variety to bog vistas, maintain some agriculture (and maybe some water rights), and provide a pick-your-own-blueberries season for the public. Prepare a management plan for:

- First Year – Plant a variety of high bush blueberry bushes in an open grid on the bog.
- Every Year – Routine maintenance of blueberry plants and surroundings: watering (in dry periods), mowing, pruning, fertilizing, mulching. Picking allowed after plants mature.
- After 20-30 years – Plant replacement as needed.

Summary Evaluation

Pros	Cons
Preserves wetlands meadow habitat (2 bogs)	Annual maintenance required for dams, dikes, water control structures, walkways, and blueberry plants. (Cost not estimated.)
Preserves vistas across all bogs	
Low 1 st year expenditures (irrigation system removal and purchase of blueberry bushes)	Significant costs for mowing 2 bogs every 2 – 5 years. (Cost not estimated.)
Preserves some agriculture and possibly some related (registered) water rights	Anticipate periodic repairs to water control structures and dams. Possible dam removal?
Provides a pick-your-own-blueberries recreational activity in Sand-Covered Bog (July – Sept.)	Loss of most, if not all, registered water rights
	Need to submit NOI to ConsCom for maintenance work (every 1 – 3 years)*

*After the 5-year agricultural exemption from the Wetlands Protection Act regulations runs out, all work in the wetlands or buffer zone must be described in a Notice of Intent (NOI) for review by ConsCom. The Order of Conditions they issue, with any limitations on the work, may be appealed to DEP. It is assumed that if ConsCom selected this alternative they would not subsequently deny approval for the periodic mowing and tree/brush clearing.

Alternative 12: Commercial Growing of Wetland Plants for Wetland Replication

Introduction

This Alternative, suggested in early December 2017, would involve finding a company or individual willing to use our cranberry bogs to commercially grow wetland plants for sale to the wetlands replication market. No significant research has been done on this Alternative, so the information provided below can be considered speculative. It is presumed that the selected individual or company would eventually use all three bogs, would require water for plant watering, and would also be allowed to use the Cranberry Bog House to support their business. It is further presumed that the individual or company would be willing to enter into an agreement with the Town to provide in kind services to the Town in lieu of rent. The in kind services would include maintenance of the bog, including water control structures, and the Bog House.

Discussion

No assessment has been made of the size or probable future of the wetland plants replication market in Massachusetts. A web search revealed four possible sources of wholesale quantities of wetland plants in Massachusetts: (1) New England Wetland Plants, Inc. in Amherst, MA (wholesale only); (2) Bigelow Nurseries (Northboro, MA); (3) Cavicchio Nursery (Sudbury, MA); and (4) Weston Nurseries (Hopkinton and Chelmsford, MA). An aerial view of New England Wetland Plants is provided in **Figure 1**. Note that the facility does not appear to be located in wetlands. Rather, it appears to use a combination of outdoor areas (raised and lined beds) and indoor areas (large and small greenhouses) for nursery plants (see **Figure 2**). Some retail nurseries also sell small quantities of wetland plants.

Assuming that there are few wholesale wetland plant nurseries in MA, and that there is a strong and growing market for such plants, then it might be possible to find an individual or company to use our bog for a new wetland plant nursery serving eastern MA as well as portions of NH and RI. However it is questionable as to whether or not a wetland is a suitable place for this activity given the need for site preparation and the potential difficulty of traversing the site with farm equipment. Site preparation would likely require removal of existing vegetation and the planting of a wetland-tolerant grass. It is unclear what type of irrigation system the farmer would want installed, and who would pay for it.

Although a wetland plant nursery would likely preserve vistas across the bogs, those vistas would include a number of structures, farm equipment, farm vehicles and fencing. A significant amount of human activity would likely be required, daily, for plant maintenance.

No estimate has been made of the costs of site preparation that may be required.



Figure 1. New England Wetland Plants, Inc. - Aerial Photo (Source: Google Earth)



Figure 2. New England Wetland Plants facility. (Source: Google Earth)

Summary Evaluation

Pros	Cons
Preserves agriculture & agricultural heritage	May be difficult to find willing & qualified farmer
Preserves some water rights if irrigation used	Site preparation required; could be costly
Preserves vistas across bog	Unclear who would pay for irrigation system
Maintenance of bog and Bog House would be requested in lieu of rent (in-kind services)	Vistas across bog will contain farm structures, equipment and vehicles. May need fencing.
Should be able to retain most pathways around bogs for public use (passive recreation)	Some pathways around bog may have to be restricted to farm workers and farm vehicles.
	Need to check for regulatory constraints