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CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: Phase C-1Wankinco Cranberry Bog Expansion ADM Tihonet Mixed Use Development
PROJECT MUNICIPALITY	: Carver
PROJECT WATERSHED	: Buzzards Bay, Wankinco River sub-basin
EEA NUMBER	: 13940
PROJECT PROPONENT	: ADM Development Services LLC
DATE NOTICED IN MONITOR	: September 22, 2010

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** the preparation of an Environmental Impact Report (EIR).

Project Description

The proposed cranberry bog is located within the Phase C area of the ADM Tihonet Mixed Use Development site. Phase C-1, the Wankinco Cranberry Bog Expansion consists of construction of a 16.5 acre cranberry bog, a 2.5 acre reservoir and tailwater recovery pond, a 196 square foot pump house, and 13 acres of bog roads and graded areas located on 56 acres of land adjacent to an existing 152-acre bog system. The remaining 24 acres of land in the Phase C-1 area will be permanently protected as forested open space.

The Phase C-1 bog expansion will take approximately five years to complete and will result in 32 acres of land alteration and up to 100 truck trips per day during the construction period. The average daily water demand for the bog is estimated to be 90,000 gallons per day. The bog expansion is located within potential endangered species habitat and within an area considered to be highly sensitive for archaeological resources.

MEPA History and Context

The Phase C-1 Wankinco Bog Expansion is a component of the ADM Tihonet Mixed Use Development project, which is proposed as a phased development over the next 25 years or more. The site currently contains the corporate headquarters of the A.D. Makepeace (ADM) Company, and includes cranberry bogs as well as undeveloped lands considered ecologically significant due to the presence of BioMap Core Habitat, Priority Habitat for rare and endangered species, and the underlying sole source aquifer. The conceptual Master Plan for the entire project site envisions a mixed-use village community that will incorporate principles of smart growth, open space preservation, low impact development, traditional village design, and pedestrian orientation. The Proponent proposes the use of Transfer of Development Rights (TDR) to concentrate development in certain areas and ensure conservation of ecologically significant lands.

The Environmental Notification Form (ENF) for Phase C-1, located in Carver, has been filed in accordance with the Special Review Procedure (SRP) established for the project (January 29, 2007). A Notice of Project Change/Draft Environmental Impact Report (NPC/DEIR) for a revised Phase B development was also filed concurrently with the Wankinco Bog ENF in September 2010. The NPC/DEIR was submitted in response to the Scope outlined in the Certificate on the Expanded Environmental Notification Form (EENF), which was issued on September 12, 2008. A Certificate on the NPC/DEIR is also being issued today.

A Final Amended Record of Decision was issued on October 28, 2009 granting a waiver to allow the Proponent to proceed with Phase A of the project prior to completing an EIR for the entire project. Portions of Phase A, including the Phase A2 medical office building, are under construction.

Permits and Jurisdiction

The ADM Tihonet Mixed Use Development project is undergoing environmental review and subject to the requirements for an EIR because it requires state agency permits and exceeds MEPA review thresholds, including several thresholds for a mandatory EIR. Phase C-1 is undergoing environmental review pursuant to Section 11.03(1)(b)(1) of the MEPA regulations because it will result in 25 or more acres of land alteration. Phase C-1 also includes land that is potential habitat for state-listed species. The project as a whole is being reviewed pursuant to Section 11.03(2)(b)(2) of the MEPA regulations because it will result in greater than two acres of disturbance of designated priority habitat that results in a take of a state-listed endangered or threatened species or species of special concern.

The proposed Phase C-1 Wankinco Cranberry Bog Expansion requires a Conservation and Management Permit from the Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program (NHESP), and an Order of Conditions from the Carver Conservation Commission (and, on appeal only, a Superseding Order from the Massachusetts Department of Environmental Protection (MassDEP)). The project is also subject to review by the Massachusetts Historical Commission (MHC) and may be subject to federal consistency review by the Massachusetts Office of Coastal Zone Management (CZM). The proposed water withdrawals may be accommodated under the Proponent's existing Water

Management Act registration after credits are earned from renovations of the existing Wankinco Bog.

The Phase C-1 Wankinco Cranberry Bog Expansion is not receiving financial assistance from the Commonwealth. However, the Proponent may apply for financial assistance from the Commonwealth for other project phases, including grants from the Massachusetts Technology Collaborative and the Massachusetts Opportunity Relocation and Expansion (MORE) Program. If the project involves financial assistance from the Commonwealth, MEPA jurisdiction will be broad and extend to all aspects of the project likely to cause damage to the environment as defined in the MEPA regulations. In the absence of financial assistance, MEPA jurisdiction would extend to aspects of the project within the subject matter of required state permits that are likely to cause damage to the environment as defined in the MEPA regulations. In this case, MEPA jurisdiction for the entire project, including Phase C, would extend to water supply, wastewater, wetlands, water quality, rare species, historical and archaeological resources, transportation, land alteration and stormwater.

Review of the ENF

Alternatives

The Phase C-1 development area is zoned Residential Agricultural (RA). The alternatives considered in the ENF include an As-of-Right, 31-lot subdivision and a Special Permit 28-lot subdivision. Both would result in less land alteration overall compared to the preferred alternative but would involve creation of 5-6 acres of additional impervious area and would not provide the same outcome in terms of protected open space under a Transfer of Development Rights (TDR) as in the preferred alternative. The subdivisions would also result in greater traffic and wastewater impacts. Water withdrawal for the proposed bog is higher, 90,000 gpd compared to approximately 7,115 to 7,877 gpd for the subdivision alternatives.

Land Alteration

The proposed bog expansion will result in alteration of 32 acres of land that is potential rare species habitat. No new impervious area is proposed. The Proponent has committed to permanent protection of 24 acres of open space in the vicinity of the bog and will transfer development rights for the Phase C-1 open space area to a future Phase C development using TDR as a mechanism, as provided for in the Carver Zoning Bylaw. The Proponent is also working with NHESP on a mitigation plan for rare species impacts. I encourage the Proponent to continue to seek opportunities to minimize the amount of land alteration for bog roads and grading to the extent feasible during project design and implementation.

Wetlands and Waterways

A portion of the project falls with a Buffer Zone to a Bordering Vegetated Wetland. As identified in the ENF, the proposed work will require the filing of a Request for Determination of Applicability and/or Notice of Intent with the Carver Conservation Commission and the MassDEP prior to the commencement of work.

Water Management Act

The Proponent is registered with the Water Management Act (WMA) to cultivate more than 158 acres at their Wankinco Bog in Carver. Large portions of that bog are scheduled to be renovated, which will earn acreage credits on the WMA registration. As indicated in MassDEP's comment letter, construction of the 16.5-acre Phase C1 bog expansion will be allowed without further WMA permitting after the credits are earned.

Groundwater

Water for the proposed cranberry bog will be supplied by an on-site groundwater-fed reservoir to be supplemented by existing surface water supplies at East Head Reservoir. The water will be delivered to the bog by a series of pumps and piping. Excess water will be returned to the reservoir or diverted to existing adjacent bogs via a series of ditches, flumes and canals. The proposed irrigation system with tailwater recovery is used to conserve water by collecting surface runoff and return flows for reuse on the bogs.

Construction of the bog includes creation of multiple confining layers to attenuate the transport of nitrogen to groundwater. The bog will be constructed in accordance with town of Carver earth removal bylaws and the UMass Cranberry Station Best Management Practices (BMP) Guide.

Wastewater Management and Nutrient Loading

The Special Review Procedure (SRP) for the project takes into account the long-term timeline for Phase C and requires the filing of an ENF, and potentially an EIR, for each subsequent phase of the project, which should include a cumulative impact assessment. Nitrogen loading, and potential impacts to the Wareham River and Buzzards Bay, is one of the impact areas for which a cumulative analysis is required (Certificate on the EENF, dated September 12, 2008).

I acknowledge the comments from the Coalition for Buzzards Bay regarding nitrogen analysis and offsets. However, as indicated in the MassDEP comment letter and in the NPC/DEIR, methods to calculate nitrogen outputs, attenuation, and final impacts are not well developed and watershed divides in the Wareham River watershed are not yet approved by the MassDEP. These are important issues to be addressed in developing nitrogen-neutral alternatives and standards for issuing permits. The Proponent has agreed to work with the MassDEP Wastewater Management Program on a process to develop standardized methods for nitrogen impact analysis, which will take some time. The proposed joint efforts between the Proponent and MassDEP will likely include, but not be limited to: refinements in groundwater models; a better method for cranberry bog impact assessment based on bog design, construction and operation; and a system to account for nitrogen removal that may occur before a Groundwater Discharge Permit is issued for the project.

As noted in the MassDEP comment letter, a Groundwater Discharge Permit (GWDP) may be required for future Phase C developments, and the impacts of nitrogen in wastewater and

stormwater generated by these developments and previous phases will be addressed as part of this permit process. Likewise, nutrient impacts from fertilizer applications on cranberry bogs or other agricultural practices will be addressed, as required by the Certificate on the EENF.

Although the Scope for the DEIR required a comprehensive nitrogen management plan, including a nitrogen-neutral alternative and offset measures, I am satisfied that the Proponent has made a good faith effort to respond to the Scope at this point in time, as I noted in my Certificate on the NPC/DEIR issued today. Cumulative nitrogen impacts and offsets will be addressed in future project filings when a Groundwater Discharge Permit is required.

Rare Species

The Proponent conducted a rare species habitat assessment and is coordinating with the NHESP on permitting including development of a mitigation plan. The Permit is expected to result in the protection of important habitat for Eastern Box Turtles and other state-listed species elsewhere on the property, most likely in the vicinity of existing open space. The permitting of Phase C-1 is being coordinated with permitting and mitigation planning for Phase B. I note that a revised Section 61 Findings with additional detail on the mitigation plan is required in an FEIR for Phase B as outlined in the Certificate on the NPC/DEIR issued today.

Fisheries Resources

As indicated in the comment letter from Marine Fisheries, streams and ponds within the project site provide habitat for several fish species. The Proponent should consider the recommendations from Marine Fisheries to minimize impacts. These include adequate maintenance of water levels to allow diadromous fish passage from mid-March through mid-November and minimization of nutrient release from the cranberry bogs.

Cultural Resources

Results of the archaeological survey conducted for the Phase C-1 Wankinco Bog Expansion areas identified one ancient archaeological site (the Wankinco Bog Site) and two archaeological find spots. The MHC indicates in its comment letter that the site may meet the criteria of eligibility for listing in the National Register of Historic Places because it contains information on Native American occupation and land use. The Proponent has indicated to the MEPA Office that the project will be designed to avoid the Wankinco Bog Site and findspots. The Proponent should continue consultations with MHC regarding protection of significant cultural resources.

Air Quality and Greenhouse Gas (GHG) Emissions

Although the entire project requires an EIR, and is therefore subject to the Executive Office of Energy and Environmental Affairs (EEA)/MEPA Greenhouse Gas Emissions Policy and Protocol, the Phase C-1 component will have minimal stationary or mobile GHG emissions and does not require further analysis of GHG emissions in an EIR. I note that cumulative GHG

emissions have been addressed in the NPC/DEIR filed for Phase B and will be addressed in future Phase C filings also.

The Proponent has committed to implement construction-related air quality mitigation measures including working with contractors to promote diesel-engine retrofits and use of ultra low sulfur diesel fuel.

Construction

The project will result in an increase of approximately 100 truck trips per day in the project area during the 5-year construction period. The Massachusetts Department of Transportation (MassDOT) in its comment letter indicates that the traffic associated with earth removal and construction, which is temporary in nature, will not significantly affect state highway. The Proponent has identified a truck route for transport of soil materials from the site in order to minimize transportation impacts in the vicinity of the project.

Phase C-1 may require a NPDES Stormwater Permit for Construction Activities. The proponent can access information regarding the NPDES Stormwater requirements as indicated in the MassDEP comment letter.

Cumulative Impacts

As required by the Special Review Procedure, the ENF includes a cumulative impact analysis. A summary of cumulative impacts for Phases A, B, and C-1 is provided and a reference to the NPC/DEIR for Phase B, which was filed concurrently and includes additional detail regarding cumulative impacts, including wetlands and nitrogen loading.

As noted above, Phase C-1 will result in alteration of 32 acres of land. The total amount of land alteration proposed for Phase A, B, and C-1 combined is 134.6 acres. Phase C-1 will not result in any new impervious area or wetlands alteration. The total impervious area proposed for Phases A, B, and C-1 combined is 25.9 acres. Phase A and B will result in 67,850 square feet (sf) of Riverfront Area alteration, 175 sf of Land Under Water impact and 175 linear feet of Bank alteration. Phase C-1 includes a 196-sf pump house. Phases A, B and C-1 combined include 495,746 sf of building structures. Phase C-1 will result in 100 truck trips per day during the construction period. Phases A, B, and C-1 combined will result in 9,478 vehicle trips per day. Phase C-1 will use on average 90,000 gpd of water. Phases A, B, and C-1 combined require 143,885 gpd of water. Phase C-1 will not generate wastewater flows. Phases A and B combined will generate approximately 54,209 gpd of wastewater and involve construction of 0.9 miles of water mains and 0.4 miles of sewer mains. The NPC/DEIR estimates that the cumulative increase in nitrogen output (in pounds (lbs) per year) from the project will be 924 lbs per year for Phase A, 713 lbs per year for Phase B, and 98,000 lbs per year for Phase C (includes a 1,000 lbs/year increase in Nitrogen output from cranberry bogs). The nitrogen loads calculations in the NPC/DEIR represent gross nitrogen outputs and not the actual nitrogen load or impact to specific water bodies, which would require additional analysis that considers factors such as sub-watershed divides and attenuation rates. As noted above, I expect that additional analysis of nitrogen impacts will be provided in future project filings.

Mitigation

The Proponent has committed to measures to avoid and minimize or mitigate environmental impacts associated with Phase C-1. These measures include:

- Permanent protection of land on the project site as mitigation for impacts to rare species habitat;
- Permanent protection of forested open space using a TDR to a future development area;
- Water conservation measures including tailwater recovery;
- Integrated Pest Management (IPM) to reduce impacts related to chemical use on-site;
- Construction and operation BMPs to reduce nitrogen load to groundwater and surface waters;
- Erosion and sedimentation controls during construction to avoid and minimize impacts to wetlands and water quality;
- Design modifications to avoid impacts to an archaeological site;
- Working with contractors to minimize air quality impacts during construction; and
- Designated truck route to reduce traffic impacts in the project area.

Conclusion

The ENF has sufficiently defined the nature and general elements of Phase C-1 for the purposes of MEPA review, and has proposed measures to avoid and minimize, or mitigate environmental impacts. I am satisfied that any outstanding issues can be addressed during state and local permitting. Based on review of the ENF and comments received, and in consultation with state agencies, I have determined that no further MEPA review is required for Phase C-1 of the project.

November 12, 2010

DATE

Ian A. Bowles, Secretary

Comments Received:

11/01/10	Massachusetts Historical Commission
11/05/10	Massachusetts Department of Transportation
11/05/10	Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program
11/05/10	Division of Marine Fisheries
11/05/10	The Coalition for Buzzards Bay
11/09/10	Department of Environmental Protection, Southeast Regional Office

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