

VERMONT AGENCY OF NATURAL RESOURCES  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

INDIVIDUAL WETLAND PERMIT

In the matter of:

Keystone Development Corporation  
c/o Frank Von Turkovich  
300 Swift Street  
South Burlington, VT 05403

**Application for the installation of a 2.5 megawatt (AC) solar array with proposed impacts to 52,227 square feet of wetland and 65,404 square feet of buffer zone from proposed woody vegetation clearing and support structures.**

0 Sunset Cliff Road, Burlington, VT

File #: 2013-251  
DEC ID #: EJ10-0473

Date of Decision: May 8, 2015  
Decision: **Issued**  
Expiration Date: May 8, 2020

Any activity in a Class I or Class II wetland or its associated buffer zone is prohibited unless it is an allowed use under the Vermont Wetland Rules (VWR) or unless it receives a permit allowing such activity. 10 V.S.A. § 913. Applicants for an individual permit for a proposed activity in any Class I or Class II wetland or its buffer zone must demonstrate that the proposed activity complies with the VWR and will have no undue adverse effects on protected functions and values. VWR § 9.5(a).

The Vermont Agency of Natural Resources (Agency) received an application dated December 18, 2013 with final revisions submitted October 20, 2014 from Keystone Development Corporation (permittee) seeking an individual Vermont Wetland Permit for a project involving activities in a wetland and associated buffer zone located in Burlington, Vermont. The Agency gave notice of the application in accordance with the VWR. The Agency considered all comments received during the public comment period during review of the application and issuance of this permit.

**DECISION AND PERMIT CONDITIONS**

1. Based on the Findings contained in this permit below, the Secretary has determined that the proposed project will comply with 10 V.S.A. chapter 37 and the VWR and will have no undue adverse effect on protected functions and values of the wetland. The permittee has demonstrated that the project will have no undue adverse effects on the protected functions and values of the significant wetland and associated buffer zone, provided the project is conducted in accordance with the following conditions:

- A. All activities in the wetland and buffer zone shall be completed, operated, and maintained as set forth in the permit application #2013-251 and the supporting materials submitted with the permit application including the *South Forty Solar Farm Revised Vegetation Management Plan*, prepared by Karina Dailey and April Moulart dated September 26, 2014 and the *Wetland Impact Plan* drafted by Jeremy M. Matosky dated April 1, 2014. No material or substantial changes shall be made to the project without the prior written approval of the Vermont Wetlands Program. Project changes may require a permit amendment and additional public notice.
- B. The permittee shall record this permit in the land records of the City of Burlington for all properties subject to the permit. Within 30 days of the date of issuance of this permit, the permittee shall supply the Vermont Wetlands Program with a copy of the recording of this permit.
- C. The permittee shall notify the Vermont Wetlands Program in writing or by email prior to the start of the approved project.
- D. **Prohibitions:** No additional activities are allowed in the wetland and associated buffer zone without the approval of the Secretary unless such activities are allowed uses under VWR § 6. No draining, dredging, filling, grading, or alterations of the water flow is allowed. No cutting, clearing, or removal of vegetation within the wetland and buffer zone is allowed with the exception of the proposed project area as approved by this permit.
- E. All construction activities in the wetland and adjacent 50-foot buffer zone shall be completed within five years of the issuance date of this permit or this permit will expire. Any request for an extension must be received by the Agency at least 30 days prior to the end of the five year period in order to prevent the expiration of the permit. A request for extension may be considered a minor modification at the discretion of the Secretary. Pursuant to VWR § 9.1, projects may not be extended beyond ten years of the issuance date.
- F. The wetland boundary delineation is valid for five years. The delineation will need to be re-evaluated by a qualified wetland consultant if the project is not constructed during the five-year period and a request for an extension is submitted.
- G. Within 30 days of completion of the work approved by this permit, the permittee shall supply the Vermont Wetlands Program with a letter certifying that the project was constructed in compliance with the conditions of this permit.
- H. The permittee shall follow the erosion prevention and control requirements of the stormwater construction permit # 7302-9020. In addition, a continuous line of orange snow fence or flagging tape shall be installed along the limits of disturbance prior to the start of construction. A continuous line of silt fence shall be properly installed by the permittee immediately upgradient of the snow fence or tape prior to any construction and shall be regularly maintained. Care shall be taken to ensure that silt fence is installed on the contour and not in areas of concentrated flow such as stream channels or ditches. Sediment shall be cleaned out before and after any significant storm event or when sediment has reached less than half the height of the

fence. Removed sediments shall be disposed of in a stable, upland area outside the 50-foot buffer zone at least 100 feet from waters of the State and stabilized immediately with seed and mulch at a minimum. All sediment barriers and construction fencing shall be removed following the successful establishment of vegetation.

- I. The permittee shall not conduct activities in a manner that would result in rutting, compaction, or other non-permitted disturbance of soils and vegetation. This may be achieved by conducting construction, operations, and maintenance activities that require the use of heavy equipment or machinery within the Class II wetland or its buffer under, in order of preference: frozen or dry conditions, with the use of mats, or with low-ground pressure equipment.
- J. All contractors' equipment shall be cleaned so as to contain no observable soil or vegetation prior to work in wetlands and buffer zones to prevent the spread of invasive species. The permittee shall monitor and control invasives in the portion of the wetland in question in accordance with the Vegetation Management Plan. No herbicide treatment shall take place without prior approval from the Vermont Wetlands Program.
- K. The permittee shall retain an environmental compliance monitor to ensure the permittee complies with the conditions of this permit. A preconstruction meeting will be scheduled by the permittee with the monitor and the Vermont Wetlands Program prior to project commencement. The monitor shall submit weekly reports to the Vermont Wetlands Program and shall immediately notify the Agency of any non-permitted disturbance to the wetland or buffer zone. A site inspection with the Vermont Wetlands Program will be scheduled by the permittee within 20 days of the completion of construction and installation.
- L. The area of the solar array may be mowed no more than once each calendar year and shall occur no earlier than August 1, and shall be conducted in a way which allows shrubby vegetation to persist the majority of the year. Mowing within and adjacent to the rare plant population may occur no more than once each calendar year and shall not occur before October 15 of any given year.
- M. Before the permittee may commence construction of the project, the permittee must submit a vegetation monitoring plan to the Vermont Wetlands Program and the Program must approve the plan. The permittee shall have a qualified botanist monitor vegetation in the wetland and buffer zone near proposed solar arrays following installation for a minimum of three years. This assessment shall occur annually during the growing season and shall quantify the density of vegetation within solar arrays, and evaluate the health of the rare plant population.
- N. Under the Vermont Wetland Rules, the decommissioning of the project shall not take place until the Vermont Wetlands Program has issued a Vermont Wetland Permit or has approved the wetlands restoration plan..
- O. The rare plant population shall not be transplanted, unless given specific guidance by the Vermont Department of Fish and Wildlife's Natural Heritage Program.

- P. The permittee shall provide an annual report in digital form to the Vermont Fish and Wildlife Department and the Vermont Wetlands Program by January 31 following each monitoring year. The annual report shall include reporting for the non-native invasive species monitoring and control, reporting which may be required by the Natural Heritage Program, and contain methods, results, discussion, and any proposed mitigation.
2. The Secretary maintains continuing jurisdiction over this project and may at any time order that remedial measures be taken if it appears that undue adverse impacts to the protected functions and values of the wetland or buffer are occurring or will occur.
  3. This permit does not relieve the permittee of the responsibility to comply with any other applicable federal, state, and local laws, regulations, and permits.
  4. The permittee shall allow the Secretary or the Secretary's representatives, at reasonable times and upon presentation of credentials, to enter upon and inspect the permitted property for the purpose of ascertaining compliance with this permit, the VWR, and the Vermont Water Quality Standards, and to have access to and copy all records required to be prepared pursuant to this permit.
  5. The Agency accepts no legal responsibility for any damage direct or indirect of whatever nature and by whomever suffered arising out of the approved project. This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to public or private property, or any invasion of personal rights, or any infringement of federal, state, or local laws or regulations. Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under other laws.
  6. Within 15 days of the date of the decision, the permittee, any person entitled to notice under VWR § 9.2, or any person who filed written comments regarding the permit application may request in writing reconsideration of the decision by the Secretary in accordance with VWR § 9.6.
  7. Any person with an interest in this matter may appeal this decision pursuant to 10 V.S.A. § 917. Pursuant to 10 V.S.A. chapter 220, any appeals of this decision must be filed with the Vermont Public Service Board pursuant to 10 V.S.A. § 8506. Any appeal under this section must be filed with the Clerk of the Public Service Board within 30 days of the date of this decision; the appellant must file with the Clerk an original and six copies of its appeal. The appellant shall provide notice of the filing of an appeal in accordance with 10 V.S.A. § 8504(c)(2), and shall also serve a copy of the Notice of Appeal on the Vermont Department of Public Service. For further information, see the Rules and General Orders of the Public Service Board, available online at [www.psb.vermont.gov](http://www.psb.vermont.gov). The address for the Public Service Board is 112 State Street, Montpelier, Vermont, 05620-2701 (Tel. # 802-828-2358).

## FINDINGS

1. The Agency received a complete application from Keystone Development Corporation for a Vermont Wetland Permit on December 18, 2013, with final revisions submitted October 20, 2014.
2. The wetland and adjacent 50-foot buffer zone are located off of 0 Sunset Cliff Road and throughout the project parcel with the exception of an upland knoll in the northeast portion. The wetland is confined by roads and backyards.
3. Alan Quackenbush and Laura Lapierre, Wetlands Program Managers, conducted separate site visits to the subject property with April Moulaert, Karina Dailey, and Frank Von Turkovich on November 28, 2012 and May 2, 2014 respectively.
4. The subject wetland meets the presumptions listed in VWR § 4.6a and 4.6g, and the Secretary has determined based on an evaluation of the functions and values of the subject wetland that it is a significant wetland and therefore is designated as a Class II wetland.
5. The wetland is approximately 22 acres in size and is half forested wetland with a small Wet-Sand-Over-Clay-Forest natural community, 30% regenerative scrub shrub and 20% wet meadow. The wetland is described in greater detail in Sections 7 and 8 of the permit application.
6. The project consists of the installation of a 2.5 megawatt (AC) solar array and the clearing of tall trees to increase solar capacity within forested wetland buffer. The project is described in greater detail in Sections 10 and 11 of the permit application.
7. Proposed impacts to the wetland and buffer zone, summarized in Section 12 of the permit application, are as follows:

<b>Wetland Alteration:</b>		<b>Buffer Zone Alteration:</b>	
Wetland Fill:	91 sq.ft.		
Temporary:	0 sq.ft.	Temporary:	0 sq.ft.
Other Permanent: :	52,136 sq.ft.	Permanent: :	65,404 sq.ft.
<b>Total Wetland Impact</b>	<b>52,227 sq.ft.</b>	<b>Total Buffer Zone Impact:</b>	<b>65,404 sq.ft.</b>

8. The protected functions of the wetland complex include the following: water storage for flood water and storm runoff (VWR § 5.1), surface and groundwater protection (VWR § 5.2), wildlife and migratory bird habitat (VWR § 5.4), exemplary wetland natural community (VWR § 5.5), and threatened and endangered species habitat (VWR § 5.6).
9. The following functions are either not present or are present at such a minimal level as to not be protected functions: fish habitat (VWR § 5.3), education and research in natural sciences (VWR § 5.7), recreational value and economic benefits (VWR § 5.8), open space and aesthetics (VWR § 5.9), and erosion control through binding and stabilizing the soil (VWR § 5.10).
10. The subject wetland is significant for the water storage for flood water and storm runoff function as demonstrated in Section 16 of the permit application. The solar array posts,

- totaling 91 square feet within the wetland will not significantly offset the storage of water. The majority of the impacts from this project is the removal of woody vegetation (trees and shrubs). The area to be cleared has a dense herbaceous cover which will continue to persist and absorb excess water. Since roots will not be pulled, shrubs will continue to grow within the solar array and management areas to a lesser extent. Based on the factors described in Section 16.2 of the application, as confirmed through a site visit by Agency staff, the proposed project will not result in an undue adverse impact to this function.
11. The wetland is significant for the surface and ground water protection function as described in Section 17 of the permit application. The solar array posts, totaling 91 square feet within the wetland will not significantly reduce the vegetative cover which assimilate nutrients. The majority of the impacts from this project is the removal of woody vegetation (trees and shrubs). The area to be cleared has a dense herbaceous cover which will continue to persist. Since roots will not be pulled during clearing, shrubs will continue to grow within the solar array and management. Both herbaceous and woody vegetation will be present throughout the wetland and will continue to aid in the retention and filtration of excess nutrients. Based on the factors described in Section 17.2 of the application, as confirmed through a site visit by Agency staff, the proposed project will not result in an undue adverse impact to this function.
  12. The wetland is significant for the wildlife and migratory bird habitat function as described in Section 19 of the permit application. The wetland provides wintering habitat for whitetail deer and wood frog breeding habitat. Because of the urban surroundings, the wetlands potential to serve wildlife is lowered. The wetland will continue to have a variety of habitat types and a portion will be left untouched, including the forested wetland portion with past confirmed amphibian breeding. Based on the factors described in Section 19.2 of the application, as confirmed through a site visit by Agency staff, the proposed project will not result in an undue adverse impact to this function.
  13. The wetland is significant for the exemplary wetland natural community function as demonstrated in Section 20 of the permit application. The exemplary natural community is located outside of the project footprint. The 50 foot buffer of adjacent upland will have select trees removed due to shading, which could make the community more vulnerable to invasive plant encroachment. For this reason, the permittee shall monitor and control invasive plants for the life of the project. Based on the factors described in Section 20.2 of the application, as confirmed through a site visit by Agency staff, the proposed project will not result in an undue adverse impact to this function.
  14. The wetland is significant for the rare, threatened and endangered species function as demonstrated in Section 21 of the permit application. A rare, State ranked S2 rush species is located within the fenced in project area. Panels are located outside of the populations and maintenance mowing will take place later in the fall. In addition the populations will be monitored by a qualified botanist. Based on the factors described in Section 21.2 of the application, as confirmed through a site visit by Agency staff, the proposed project will not result in an undue adverse impact to this function.
  15. Under 10 V.S.A. § 913 and VWR § 9.5, the Secretary may authorize activities in a Class II wetland or in its buffer zone if the Secretary determines that it complies with the VWR and will have no undue adverse effect on the protected functions and values. Based on the

permit application, the site visits by Agency staff, and the foregoing findings and analysis, the Secretary has determined that the proposed project will have no undue adverse effects on the protected functions and values of the subject Class II wetlands.

16. The permittee has undergone several iterations of wetland avoidance on this site starting in 2012. The project footprint avoids the significant natural community and is restricted to the historically farmed portions. Shade tree management within the buffer is restricted to the tallest trees and native herbaceous vegetation will be allowed to grow underneath the solar panels with minimal maintenance.

Pursuant to VWR § 9.5(b), the permittee has demonstrated that the proposed activity in the subject wetland cannot practicably be located outside the wetland or on another site owned, controlled, or available to satisfy the basic project purpose. All practicable measures have been taken in this proposal to avoid adverse impacts on protected functions, as described in the application.

17. Several public comments have been received and are addressed in the attached responsiveness summary.

David K. Mears, Commissioner  
Department of Environmental Conservation

E-SIGNED by Laura Lapierre  
by: on 2015-05-08 18:46:58 GMT

Laura Lapierre, Program Manager  
Wetlands Program  
Watershed Management Division

Dated at Montpelier, Vermont  
this eighth day of May, 2015

DM/LVPL