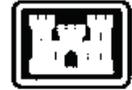


## **Appendix 5-F: Wetland Permit for Pump Test Discharge**

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# JOINT APPLICATION FORM - INSTRUCTIONS



For Permits/Determinations to undertake activities affecting streams, waterways, waterbodies, wetlands, coastal areas and sources of water supply.

## New York State

Department of Environmental Conservation (DEC)  
Office of General Services (OGS)  
Department of State (DOS)

**US Army Corps of Engineers (USACE)**  
New York District  
Buffalo District

Type or print clearly in ink. Incomplete or inaccurate information may delay processing and a final decision on your application. Individual Agencies may request that you submit additional information to complete your application.

**PERMITS REQUESTED** Check all Permits/Determinations requested from all the listed Agencies.

**Separate authorizations or determinations of no permit required must be received from each Agency in accordance with their jurisdiction prior to initiation of work.**

The applicant is responsible for obtaining any other federal, state or local permits or other approvals.

**APPLICANT / OWNER / CONTACT INFORMATION AND SIGNATURES** Signatures of the Applicant, Owner and Agent, where applicable, are required.

Applications by a Corporation must be signed by a member of the board of directors or a "high managerial agent" of the corporation as that term is defined in the § 20.20 of the Penal Law; a Partnership by a general partner; a Sole Proprietorship by the proprietor; a Limited Liability Company by member or manager in accordance with the LLC's articles of organization as filed with the Secretary of State.

Applications by a State Agency must be signed by a person duly designated by the commissioner or other agency head. Applications by Municipalities (counties, cities, towns and villages) and Public Corporations must be signed by the chief executive officer, the head of a subordinate agency or department, or a person duly designated by the chief executive officer.

Construction or work contractors may serve as a contact/agent on behalf of the applicant, but cannot be identified as the applicant or prospective permittee should a permit be issued.

**PROJECT / FACILITY LOCATION INFORMATION** Location Coordinates are expressed in New York Transverse Mercator (NYTM) units (i.e., UTM Zone 18 expanded to encompass the entire state) based on the North American Datum 1983, or Latitude and Longitude. If you are able to supply accurate coordinates, please do so. Coordinates may be obtained from DEC's online Environmental Resource Mapper ([www.dec.ny.gov/animals/38801.html](http://www.dec.ny.gov/animals/38801.html)), using the Identify  tool.

**PROJECT DESCRIPTION AND PURPOSE** Provide a complete narrative description of the proposed work and its purpose. Attach additional page(s) if necessary.

## REQUIRED APPLICATION ATTACHMENTS

Attach and submit the following to each involved Agency:

- LOCATION MAP** A US Geological Survey (USGS) Quadrangle Map, or equivalent identifying the project location. The map should include wetlands, seasonally wet streams and ditches. An acceptable location map may be obtained from DEC's online Environmental Resource Mapper ([www.dec.ny.gov/animals/38801.html](http://www.dec.ny.gov/animals/38801.html)), using the Printer  tool.
- PROJECT PLANS** A sketch plan view and cross-section drawn to scale with dimensions given, or engineering drawings showing location and extent of work. Note from which direction the photographs required in (3) are taken.

- PHOTOGRAPHS** At least 3 color photographs, taken from multiple directions, that clearly depict the site of the proposed activity, including any existing structures on the site, and the area surrounding that site. Indicate the time and date when taken.

## OTHER REQUIREMENTS

**For NY State Agencies** - State Environmental Quality Review Act regulations (SEQR), 6 NYCRR Part 617 ([www.dec.ny.gov/regs/4490.html](http://www.dec.ny.gov/regs/4490.html)) -

- If the project is an Unlisted Action, submit a completed Part 1 of a Short Environmental Assessment Form. \*
- If the project is a Type I Action, submit a completed Part 1 of a Full Environmental Assessment Form. \*

**For NYS DEC Only** - Complete the **Permission to Inspect Property Supplement** \* to provide consent for DEC inspection. Failure to grant consent can be grounds for, and may result in, permit denial.

**For USACE/NYS DOS** - If the project requires a federal permit and lies within or affects the Coastal Zone (see the DOS Coastal Area Maps at [www.nyswaterfronts.com/maps\\_regions.asp](http://www.nyswaterfronts.com/maps_regions.asp)), submit a completed Federal Consistency Assessment Form (available at [www.nyswaterfronts.com/consistency\\_federal.asp](http://www.nyswaterfronts.com/consistency_federal.asp)) to NYS DOS with a copy to USACE.

**For USACE Section 404 Clean Water Act permits and specific Nationwide permits** - a 401 Water Quality Certification must be obtained from NYS DEC.

**For Adirondack Park** - If the project is within the Adirondack Park, to determine permitting applicability contact - NYS Adirondack Park Agency, 1133 NYS Rte 86, PO Box 99, Ray Brook, NY 12977 (518) 891-4050 [www.apa.state.ny.us](http://www.apa.state.ny.us)

## SPECIAL SUPPLEMENTS AND REQUIREMENTS FOR SPECIFIC PERMIT APPLICATIONS

Applications for . . . must be accompanied by . . .

- Dams and Impoundment Structures** . . . . . Supplement D-1 \*
- Docks and Moorings** . . . . . Supplement D-2 \*
- Water Supply** . . . . . Supplement W-1 \*
- Long Island Well** . . . . . Regional specific supplement \*
- Wild, Scenic and Recreational River Systems** . . . . . Supplement WSR-1 \*
- Aquatic Vegetation, Aquatic Insect, and Fish Control** . . . . . Category specific form available at NYS DEC offices and at [www.dec.ny.gov/chemical/8530.html](http://www.dec.ny.gov/chemical/8530.html). Submit applications to the NYS DEC regional office, Attn: Bureau of Pesticides.

- USACE Section 404 Clean Water Act, and DEC Freshwater Wetlands and Tidal Wetlands** . . . Applications to disturb a wetland or waterway by placing fill or performing mechanized land clearing, ditching, channelization, dredging, or excavation activities should provide a discussion of practicable alternatives considered to avoid, minimize and/or mitigate the proposed project impacts. Particular justification should be given as to why the alternatives are not suitable.

\* Forms are available at NYS DEC offices and at [www.dec.ny.gov/permits/6222.html](http://www.dec.ny.gov/permits/6222.html)

## JOINT APPLICATION FORM INSTRUCTIONS - PAGE 2 OF 2

### SUBMISSION OF APPLICATION FORMS AND ATTACHMENTS

Separately mail the completed application to each involved Agency based on project location and permit(s) requested.

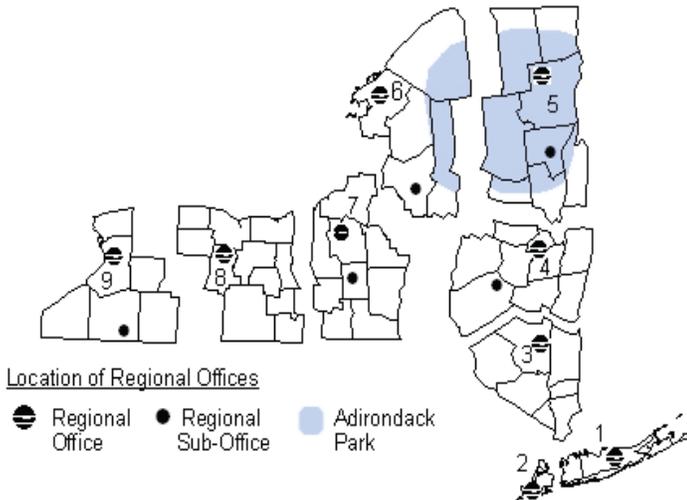
For DEC - Mail **3 copies** of Pages 1 and 2 of the Application Form and **3 copies** of all required attachments.

For Other Agencies - Mail **1 copy** of Pages 1 and 2 of the Application Form and **1 copy** of all required attachments.

### AGENCY CONTACT INFORMATION

#### NYS Department of Environmental Conservation

[www.dec.ny.gov](http://www.dec.ny.gov)



Location of Regional Offices

- Regional Office
- Regional Sub-Office
- Adirondack Park

**NYS DEC REGION 1**  
Regional Permit Administrator  
SUNY @ Stony Brook  
50 Circle Road  
Stony Brook, NY 11790-3409  
(631) 444-0365  
email: [r1dep@gw.dec.state.ny.us](mailto:r1dep@gw.dec.state.ny.us)

**NYS DEC REGION 3**  
Regional Permit Administrator  
21 South Putt Corners Road  
New Paltz, NY 12561-1620  
(845) 256-3054  
email: [r3dep@gw.dec.state.ny.us](mailto:r3dep@gw.dec.state.ny.us)

**NYS DEC REGION 6**  
Regional Permit Administrator  
317 Washington Street  
Watertown, NY 13601-3787  
(315) 785-2245  
email: [r6dep@gw.dec.state.ny.us](mailto:r6dep@gw.dec.state.ny.us)

**NYS DEC REGION 9**  
Regional Permit Administrator  
270 Michigan Avenue  
Buffalo, NY 14203-2915  
(716) 851-7165  
email: [r9dep@gw.dec.state.ny.us](mailto:r9dep@gw.dec.state.ny.us)

**NYS DEC REGION 2**  
Regional Permit Administrator  
1 Hunter's Point Plaza  
47-40 21st Street  
Long Island City, NY 11101-5407  
(718) 482-4997  
email: [r2dep@gw.dec.state.ny.us](mailto:r2dep@gw.dec.state.ny.us)

**NYS DEC REGION 4**  
Regional Permit Administrator  
1130 North Westcott Road  
Schenectady, NY 12306-2014  
(518) 357-2069  
email: [r4dep@gw.dec.state.ny.us](mailto:r4dep@gw.dec.state.ny.us)

**NYS DEC REGION 6 Sub-Office**  
Regional Permit Administrator  
207 Genesee Street  
Utica, NY 13501-2885  
(315) 793-2555  
email: [r6dep@gw.dec.state.ny.us](mailto:r6dep@gw.dec.state.ny.us)

**NYS DEC REGION 9 Sub-Office**  
Regional Permit Administrator  
182 East Union, Suite 3  
Allegany, NY 14706-1328  
(716) 372-0645  
email: [r9dep@gw.dec.state.ny.us](mailto:r9dep@gw.dec.state.ny.us)

**NYS DEC REGION 4 Sub-Office**  
Regional Permit Administrator  
65561 State Hwy 10  
Stamford, NY 12167-9503  
(607) 652-7741  
email: [r4dep@gw.dec.state.ny.us](mailto:r4dep@gw.dec.state.ny.us)

**NYS DEC REGION 7**  
Regional Permit Administrator  
615 Erie Blvd West  
Syracuse, NY 13204-2400  
(315) 426-7438  
email: [r7dep@gw.dec.state.ny.us](mailto:r7dep@gw.dec.state.ny.us)

**NYS DEC REGION 5**  
Regional Permit Administrator  
PO Box 296  
1115 Route 86  
Ray Brook, NY 12977-0296  
(518) 897-1234  
email: [r5dep@gw.dec.state.ny.us](mailto:r5dep@gw.dec.state.ny.us)

**NYS DEC REGION 7 Sub-Office**  
Regional Permit Administrator  
1285 Fisher Avenue  
Cortland, NY 13045-1090  
(607) 753-3095  
email: [r7dep@gw.dec.state.ny.us](mailto:r7dep@gw.dec.state.ny.us)

**NYS DEC REGION 5 Sub-Office**  
Regional Permit Administrator  
PO Box 220  
232 Golf Course Rd  
Warrensburg, NY 12885-0220  
(518) 623-1281  
email: [r5dep@gw.dec.state.ny.us](mailto:r5dep@gw.dec.state.ny.us)

**NYS DEC REGION 8**  
Regional Permit Administrator  
6274 E. Avon - Lima Road  
Avon, NY 14414-9519  
(585) 226-5400  
email: [r8dep@gw.dec.state.ny.us](mailto:r8dep@gw.dec.state.ny.us)

#### US Army Corps of Engineers

[www.usace.army.mil](http://www.usace.army.mil)

For DEC Regions 1, 2 and 3  
**US Army Corps of Engineers NY District**  
ATTN: Regulatory Branch  
26 Federal Plaza, Room 1937  
New York, NY 10278-0090  
email: [CENAN.PublicNotice@usace.army.mil](mailto:CENAN.PublicNotice@usace.army.mil)

For DEC Regions 1, 2,  
Westchester County and  
Rockland County -  
(917) 790-8511

For the other counties  
of DEC Region 3 -  
(917) 790-8411

For DEC Regions 4, 5  
**Department of the Army**  
**ATTN: CENAN-OP-R**  
**NY District, Corps of Engineers**  
1 Buffington Street  
Building 10, 3<sup>rd</sup> Floor  
Watervliet, NY 12189-4000  
(518) 266-6350 - Permits team  
(518) 266-6360 - Compliance Team  
email: [cenan.rfo@usace.army.mil](mailto:cenan.rfo@usace.army.mil)

For DEC Regions 6, 7, 8, 9  
**US Army Corps of Engineers**  
**Buffalo District**  
ATTN: Regulatory Branch  
1776 Niagara Street  
Buffalo, NY 14207-3199  
(716) 879-4330  
email: [LRB.Regulatory@usace.army.mil](mailto:LRB.Regulatory@usace.army.mil)

Statewide  
**NYS Department of State**  
Division of Coastal Resources  
Consistency Review Unit  
One Commerce Plaza  
99 Washington Ave, Suite 1010  
Albany, NY 12231-0001  
(518) 474-6000  
[www.nyswaterfronts.com](http://www.nyswaterfronts.com)

Statewide  
**NYS Office of General Services**  
Real Estate Development - Land Management  
Corning Tower, 26<sup>th</sup> Floor  
Empire State Plaza  
Albany, NY 12242-0001  
(518) 474-2195  
[www.ogs.state.ny.us](http://www.ogs.state.ny.us)



New York State

# JOINT APPLICATION FORM

For Permits/Determinations to undertake activities affecting streams, waterways waterbodies, wetlands, coastal areas and sources of water supply.



US Army Corps of Engineers (USACE)

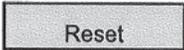
Separate Permits/Determinations must be obtained from each involved agency prior to proceeding with work. Please read all instructions.

<b>1. Check All That Apply:</b>  <b>NYS Department of Environmental Conservation</b> <input type="checkbox"/> Stream Disturbance <input checked="" type="checkbox"/> Excavation and Fill in Navigable Waters <input type="checkbox"/> Docks, Moorings or Platforms <input type="checkbox"/> Dams and Impoundment Structures <input checked="" type="checkbox"/> 401 Water Quality Certification <input checked="" type="checkbox"/> Freshwater Wetlands <input type="checkbox"/> Tidal Wetlands <input type="checkbox"/> Coastal Erosion Management <input type="checkbox"/> Wild, Scenic and Recreational Rivers <input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Long Island Well <input type="checkbox"/> Aquatic Vegetation Control <input type="checkbox"/> Aquatic Insect Control <input type="checkbox"/> Fish Control  <b>US Army Corps of Engineers</b> <input checked="" type="checkbox"/> Section 404 Clean Water Act <input type="checkbox"/> Section 10 Rivers and Harbors Act <input type="checkbox"/> Nationwide Permit(s) - Identify Number(s): _____ Preconstruction Notification - <input type="checkbox"/> Y / <input type="checkbox"/> N  <b>NYS Office of General Services (State Owned Lands Under Water)</b> <input type="checkbox"/> Utility Easement (pipelines, conduits, cables, etc.) <input type="checkbox"/> Docks, Moorings or Platforms  <b>NYS Department of State</b> <input type="checkbox"/> Coastal Consistency Concurrence	<b>2. Name of Applicant (use full name)</b> Cricket Valley Energy Center LLC		Applicant must be (check all that apply): <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator <input type="checkbox"/> Lessee		
	Street Address 31 Milk Street, Suite 1001		Taxpayer ID (If applicant is NOT an individual):		
	Post Office City <b>Boston</b>	State <b>MA</b>	Zip Code <b>02109</b>	Telephone (daytime)	Email <b>bdemeyere@advancedpowerma.com</b>
	<b>3. Name of Facility or Property Owner, if different than Applicant</b> Howland Lake Partners, LLC		Street Address PO Box 285		
	Post Office City <b>Mount Kisco</b>	State <b>NY</b>	Zip Code <b>10549</b>	Telephone (daytime) <b>212-666-2144</b>	Email
	<b>4. Contact/Agent Name</b> Sergio Smiriglio		Company Name SSEC		
	Street Address 4 Deer Trail				
	Post Office City <b>Cornwall</b>	State <b>NY</b>	Zip Code <b>12518</b>	Telephone (daytime) <b>845-534-3816</b>	Email <b>smiriglio@gmail.com</b>
	<b>5. Project / Facility Name</b> Cricket Valley Energy Project		Property Tax Map Section / Block / Lot Number See Project Location Below		
	Project Location - Provide directions and distances to roads, bridges and bodies of waters: Intersection of Route 22 and Cricket Hill Road, on the west side of Route 22. (Property Tax Map #: 706000493989, 706100465190, 706100580190, 706100585063)				
Street Address, if applicable 2241 NY Route 22					
Post Office City <b>Dover</b>	State <b>NY</b>	Zip Code <b>12522</b>	Telephone, if applicable	Email	
Town / Village / City <b>Dover</b>		County <b>Dutchess</b>			
Name of USGS Quadrangle Map <b>Dover Plains, NY</b>		Stream/Water Body Name <b>Swamp River</b>			
Location Coordinates: Enter NYTMs in kilometers, OR Latitude/Longitude in degrees, minutes, seconds					
NYTM-E _____	NYTM- N _____	Latitude <b>41.677429</b>	Longitude <b>-73.578702</b>		

6. If applicant is not the owner, both must sign the application. I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than \$10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant <i>Robert DeMeyere</i>	Printed Name <b>Robert DeMeyere</b>	Title <b>Vice President</b>	Date <b>3/26/10</b>
Signature of Owner <u>See Attached Letter</u>	Printed Name <u>See Attached Letter</u>	Title	Date
Signature of Agent <i>Sergio Smiriglio</i>	Printed Name <b>Sergio Smiriglio</b>	Title <b>Consultant</b>	Date

<b>For Agency Use Only</b>	DEC Application Number:	USACE Number:
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# JOINT APPLICATION FORM - PAGE 2 OF 2

Submit this completed page as part of your Application.

**7. Project Description and Purpose:** Provide a complete narrative description of the proposed work and its purpose. Attach additional page(s) if necessary. Include: description of current site conditions and how the site will be modified by the proposed project; structures and fill materials to be installed; type and quantity of materials to be used (i.e., cubic yds or square ft of fill material below ordinary high water, or of structures below mean high water); area of excavation or dredging, volumes of material to be removed and location of dredged material disposal or use; work methods and type of equipment to be used; pollution control methods and mitigation activities proposed to compensate for resource impacts; and where applicable, the phasing of activities.

The proposed activity is associated with a pump test program to assess groundwater well yield and to confirm that impacts to on-site wetlands and the Swamp River would not result from the use of on-site groundwater wells. Jurisdictional work will be limited to the hand-installation of piezometers for measurement purposes: 2 locations in the Swamp River (PZ-1A/B & PZ-2A/B); 1 in Wetland #5 (PZ-6), 1 in the adjacent 100ft Wetland #4/5 buffer (PZ-5A); 1 in Wetland #1 (PZ-3); and 1 in Wetland #2 (PZ-4). Approximate area of temporary disturbance is 16 square feet for the hand-driven piezometers. Testing activities are anticipated to occur over a 2-week period. Following completion of the testing program, the piezometers will be removed.

The Bedrock Well Drilling and Testing Protocol is attached for additional information on the installation and locations (map) of the above piezometers.

Proposed Use: <input checked="" type="checkbox"/> Private <input type="checkbox"/> Public <input type="checkbox"/> Commercial	Will Project Occupy Federal, State or Municipal Land? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, please specify.
---	--

Has Work Begun on Project?  Yes  No If Yes, explain.

Proposed Start Date: 04/01/2010	Estimated Completion Date: 07/30/2010
---------------------------------	---------------------------------------

8. List Previous Permit / Application Numbers (if any) and Dates:  
None required.

9. Will this project require additional Federal, State, or Local Permits including zoning changes?  Yes  No If Yes, please list:

10. Based on the permits and determinations requested and project location, check all the boxes corresponding to each of the Agencies and Offices to which you are filing an application. For Agency addresses and areas covered, refer to the Agency Contact Information on the Application Instructions - Page 2.

**NYS Department of Environmental Conservation**

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> REGION 1 Stony Brook          | <input type="checkbox"/> REGION 5 Ray Brook              | <input type="checkbox"/> REGION 7 Syracuse            |
| <input type="checkbox"/> REGION 2 Long Island City     | <input type="checkbox"/> REGION 5 Warrensburg Sub-Office | <input type="checkbox"/> REGION 7 Cortland Sub-Office |
| <input checked="" type="checkbox"/> REGION 3 New Paltz | <input type="checkbox"/> REGION 6 Watertown              | <input type="checkbox"/> REGION 8 Avon                |
| <input type="checkbox"/> REGION 4 Schenectady          | <input type="checkbox"/> REGION 6 Utica Sub-Office       | <input type="checkbox"/> REGION 9 Buffalo             |
| <input type="checkbox"/> REGION 4 Stamford Sub-Office  |  | <input type="checkbox"/> REGION 9 Allegany Sub-Office |

**US Army Corps of Engineers**

**NYS Department of State**

**NYS Office of General Services**

- NY District, NYC  NY District, Watervliet  Buffalo District

<b>For Agency Use Only</b>	<b>DETERMINATION OF NO PERMIT REQUIRED</b>
Agency Project Number _____	
_____ has determined that No Permit is required from this Agency for the project described in this application.	
(Agency Name)	
Agency Representative: Name (printed) _____	Title _____
Signature _____	Date _____



## PERMISSION TO INSPECT PROPERTY

By signing this permission form for submission with an application for a permit(s) to the Department of Environmental Conservation ("DEC"), the signer consents to inspection by DEC staff of the project site or facility for which a permit is sought and, to the extent necessary, areas adjacent to the project site or facility. This consent allows DEC staff to enter upon and pass through such property in order to inspect the project site or facility, without prior notice, between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday. If DEC staff should wish to conduct an inspection at any other times, DEC staff will so notify the applicant and will obtain a separate consent for such an inspection.

Inspections may take place as part of the application review prior to a decision to grant or deny the permit(s) sought. By signing this consent form, the signer agrees that this consent remains in effect as long as the application is pending, and is effective regardless of whether the signer, applicant or an agent is present at the time of the inspection. In the event that the project site or facility is posted with any form of "posted" or "keep out" notices, or fenced in with an unlocked gate, this permission authorizes DEC staff to disregard such notices or unlocked gates at the time of inspection.

The signer further agrees that during an inspection, DEC staff may, among other things, take measurements, may analyze physical characteristics of the site including, but not limited to, soils and vegetation (taking samples for analysis), and may make drawings and take photographs.

Failure to grant consent for an inspection is grounds for, and may result in, denial of the permit(s) sought by the application.

---

Permission is granted for inspection of property located at the following address(es):

2241 NY Route 22, Dover, NY

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**Property Tax Map #: 706000493989,706100465190,706100580190,706100585063**

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*By signing this form, I affirm under penalty of perjury that I am authorized to give consent to entry by DEC staff as described above. I understand that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.\**

See Attached Letter for Authorization

---

Print Name and Title

Signature

Date

\*The signer of this form must be an individual or authorized representative of a legal entity that:

- owns fee title and is in possession of the property identified above;
- maintains possessory interest in the property through a lease, rental agreement or other legally binding agreement; or
- is provided permission to act on behalf of an individual or legal entity possessing fee title or other possessory interest in the property for the purpose of consenting to inspection of such property.

Howlands Lake Partners LLC,  
P.O. Box 285  
Mount Kisco, NY 10549

November 3, 2009

Town of Dover  
126 East Duncan Hill Road  
Dover Plains, New York 12522

Re: Applications of Cricket Valley Energy Center, LLC

To Whom It May Concern:

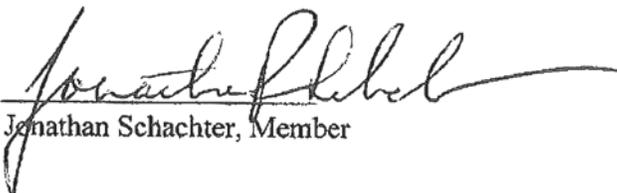
Howlands Lake Partners, LLC ("HLP"), a New York limited liability company, owns the fee interest in property (the "Property") described on Dutchess County Tax maps as:

- Lot 7061-00-580190 = approximately 54.6 acres
- Lot 7060-00-493989 = approximately 44.0 acres
- Lot 7061-00-465190 = approximately 27.0 acres
- A portion of Lot 7061-00-585063 equal to approximately 6 acres
- Total acreage approximately= 131.6 acres

Howlands Lake Partners, LLC has entered into a Purchase Option Agreement with AP Dutchess Properties, Inc., a New York corporation to purchase the Property.

Howlands Lake Partners, LLC hereby authorizes AP Dutchess Properties, Inc. or its designee, Cricket Valley Energy Center, LLC, to make applications to the Town of Dover, agencies of the County of Dutchess and State of New York and all other applicable regulatory bodies for approval of plans to develop the Property.

Very truly yours,  
Howlands Lake Partners, LLC

By:   
Jonathan Schachter, Member

# **Wetland and Swamp River Installation of Temporary Monitor Wells**

**CRICKET VALLEY ENERGY PROJECT – WATER SUPPLY PLAN**

**Rev.3**

**March 26, 2010**



# Wetland and Swamp River Installation of Temporary Monitor Wells

## CRICKET VALLEY ENERGY PROJECT – WATER SUPPLY PLAN

### **BACKGROUND**

The Cricket Valley Energy project has been planned to significantly minimize water demand through the use of air cooling and a zero-discharge system (which eliminates the need for wastewater discharge in part by maximizing water recycling and reuse). Given this scenario, it is anticipated that the summer nominal well water use is approximately 72,000-86,400 gallons per day (gpd) of water (50-60 gallons per minute [gpm] for 24 hours). Emergency, very short term, instantaneous supply rate of up to 120 gpm may be required for the facility during any unanticipated upset conditions or well supply maintenance. Following consideration of a range of options, it has been determined that the preferred approach, if feasible, will be to develop an on-site bedrock well system to meet project water needs. Review of aquifer mapping and surficial field reconnaissance has confirmed appropriate subsurface conditions, and six locations on the site have been identified.

Figure 1 (attached) illustrates the six currently drilled bedrock supply wells (identified as Wells B-1 through B-6). All the wells have been drilled and short-term tested for the project. Only four of the six wells produced sufficient water (Wells B-3, B-4, B-5, and B-6). Based on the preliminary yield of these four wells, it has been determined that the project water needs are met for reliability and backup criteria for 60 gpm and the emergency, short term, upset condition of 120 gpm.

Based on a short-term pumping test, a long-term pumping test will be conducted, including monitoring to confirm the degree to which use of wells in that location would have the potential to affect surface water, wetland and well resources in the surrounding area.

For the pump tests, each tested wellhead will be connected to 4 inch diameter flexible pipes and the generated waters will be directly pump to temporary storage tank located on-site. The tank will serve to settle out any potential solids during the test. The collected water will then be pumped (via industrial hose) to the northern portion of the site and released into an area that drains into a small tributary feeding the Swamp River. The water discharging from the hose will be controlled with a temporary check dam (i.e. rock check dam) per New York Standards and Specifications for Erosion and Sediment Control for the prevention of erosion into the surrounding area (See Figure 2).

### **Wetlands and Swamp River Monitoring (Installation of Monitoring Wells)**

The Swamp River and its associated wetlands are important environmental resources that the developers of the Cricket Valley Energy Project intend to maintain. One of the objectives of the proposed production well tests is to demonstrate that the water that will be pumped will not adversely impact the hydrology or quality of the Swamp River and its associated wetlands. A series of shallow piezometers will be installed at key locations which will monitor potential

impacts due to the pumping of the test wells. Existing NYSDEC monitoring wells, if accessible, or new test well will be drilled for these shallow piezometers, as shown in Figure 1.

The installation of wetlands monitoring points, with minimal disturbance, can be completed in one of two ways, depending on the nature of the soils at the location. If the soils are sandy/gravelly, a driven stainless steel well point can be used. If on the other hand the soils are clay rich or mucky, a PVC well screen will be used.

The point well is a stainless steel pipe that is 1.25 inches in diameter and is made using a wire wrapped around a frame to allow the entrance of water while holding back the soil. This type of well can be installed by directly pounding it into the ground using a slide hammer or a sledge. It is only appropriated for loose, saturated soils composed of sand or gravel.

If the soils are silty or mucky, as they generally are along the Swamp River, the PVC type screen [slotted pipe] will be used. A four inch hole is dug using a manual posthole digger to a depth sufficient to reach the water table. The two-inch PVC well screen is inserted in the hole and the annular space is filled with fine gravel and topped with bentonite.

Both well types are pumped for a few minutes using a small suction pump to make certain that the wells are communicating with the water table. After the monitoring period is complete the points are manually pulled out of the ground and the holes are filled in with native soils and/or bentonite pellets.

The Swamp River will be monitored by using a well point driven at least 18 inches into the sediment. A data logger will be placed inside the well point and a matching data logger will be placed on the outside of the well point. The pair of loggers will be compared to determine if there is a detectable hydraulic gradient between the water in the sediment under the stream and the stream.

A common datum will be used for both wells in the pair so that the water level data can be compared. The expected water level relationship in the well pairs is such that the deep well should have a higher water level than the shallow well. This relationship should be maintained during the pumping test. These wells will be fitted with digital data loggers for the duration of the monitoring period.

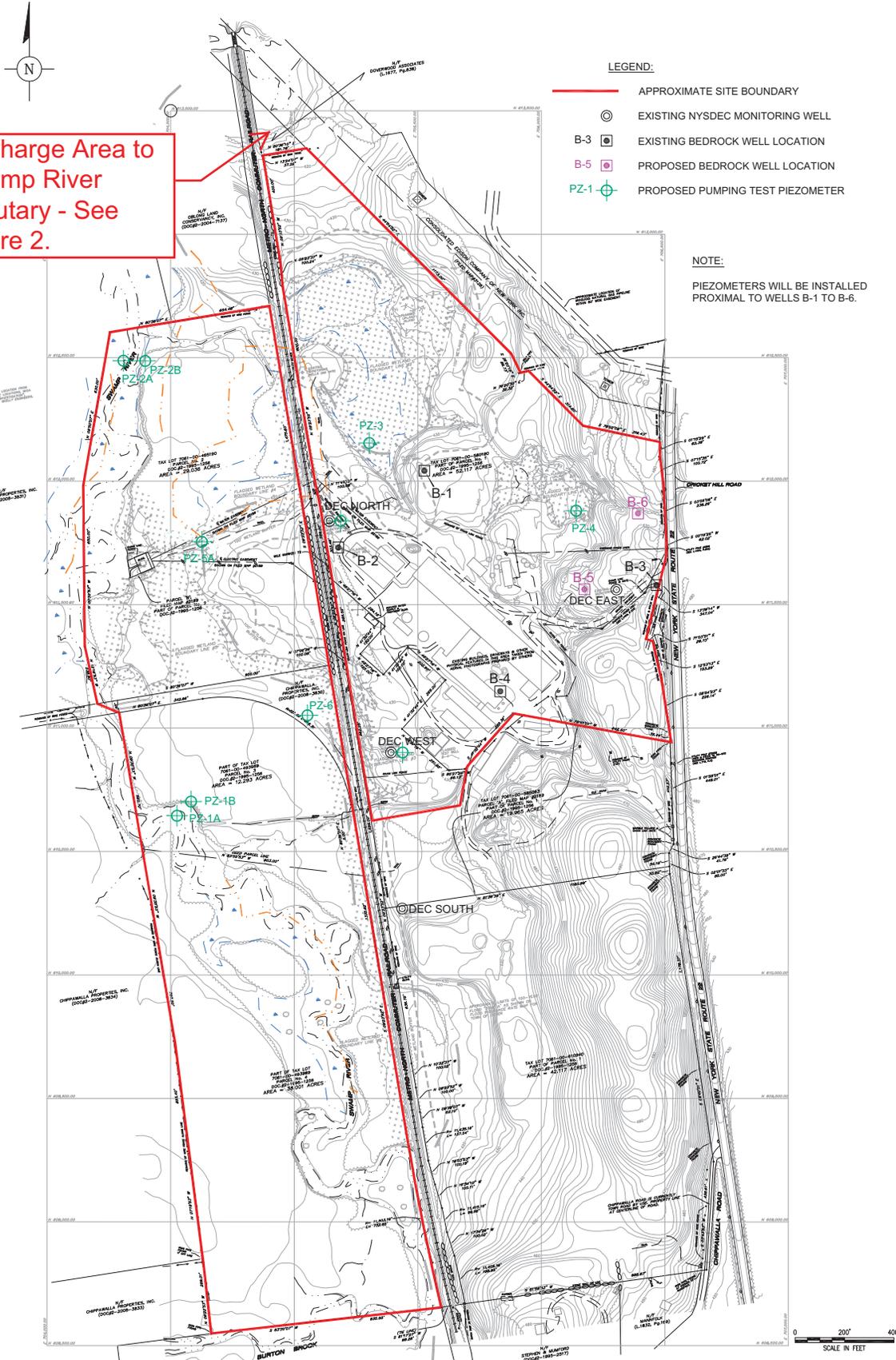
## **HEALTH AND SAFETY**

- All work will be conducted by following a site-specific health and safety plan.
- All site workers will possess the training and certification required by the Occupational Safety and Health Administration (OSHA).
- All workers will wear appropriate personal protective equipment (i.e., hard hat, hearing protection, eye protection, etc.)
- Prior to drilling, all underground and overhead utilities (such as telephone, gas, electric, water lines) will be identified and avoided.

- Daily meetings will be held on the site to review and update health and safety issues prior to starting work.
- Work areas will be surrounded with yellow “Caution” tape. All pits and holes will be covered at the conclusion of the each day’s work.

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Discharge Area to Swamp River Tributary - See Figure 2.



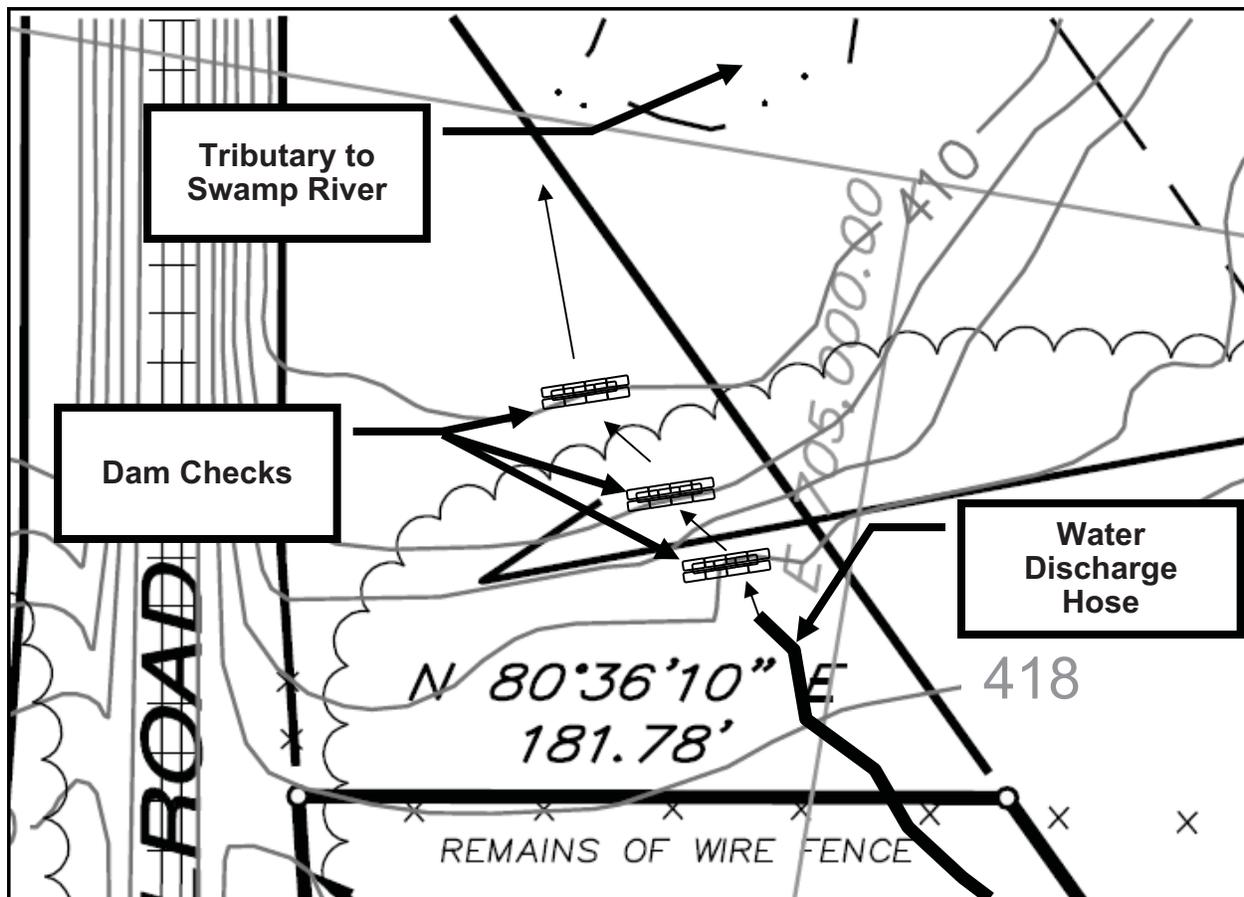
- LEGEND:**
- APPROXIMATE SITE BOUNDARY
  - ⊙ EXISTING NYSDEC MONITORING WELL
  - B-3 □ EXISTING BEDROCK WELL LOCATION
  - B-5 □ PROPOSED BEDROCK WELL LOCATION
  - PZ-1 ⊕ PROPOSED PUMPING TEST PIEZOMETER

**NOTE:**  
 PIEZOMETERS WILL BE INSTALLED PROXIMAL TO WELLS B-1 TO B-6.

CRICKET VALLEY ENERGY CENTER, LLC  
 DOVER, NEW YORK

**PROPOSED DRILLING LOCATIONS**

Figure 2: Hose Discharge – Area Erosion Control Measures  
Rock or Sand Bag Dam Check





1

Photo #1: Wetland 1, looking northeast.



2

Photo #2: Wetland 1, looking northwest.

Cricket Valley Energy Center LLC Dover, New York	
<b>Photographs of Wetland 1</b>	
	<b>Figure 2</b>



3

Photo #3: Wetland 2, looking southwest.



4

Photo #4: Wetland 2, looking north.

Cricket Valley Energy Center LLC Dover, New York	
<b>Photographs of Wetland 2</b>	
	<b>Figure 3</b>



Photo #7: Wetland 4, looking northwest.

5

Cricket Valley Energy Center LLC  
Dover, New York

**Photographs  
of Wetland 4**

**Figure  
4**



6

Photo #8: Wetland 5, looking south at emergent portion of wetland.



7

Photo #9: Wetland 5, looking west.

Cricket Valley Energy Center LLC Dover, New York	
<b>Photographs of Wetland 5</b>	
	<b>Figure 5</b>