

### 4.3 WATER RESOURCES

***The following comments are all related to potential impacts to streams, wetlands, and/or regulated adjacent areas, and associated jurisdiction:***

**Written Comment 1A:**

Projects that propose to disturb regulated wetland areas, buffer areas and protected streams require permits from DEC and the U.S. Army Corps of Engineers (USACE). DEC wetland permit regulations at 6 NYCRR 663.2(z) define a “regulated activity” as any form of draining, dredging, excavation, or mining, either directly or indirectly; any form of dumping, clear cutting or filling, either directly or indirectly; erecting any structures, constructing roads, driving pilings, or placing any other obstructions whether or not changing the ebb and flow of the water; any form of pollution, including but not limited to installing a septic tank, running a sewer outfall, discharging sewage treatment effluent or other liquefied wastes into or so as to drain into a wetland; or any other activity which substantially impairs any of the several functions or benefits of wetlands which are set forth in section 24-0105 of the (Freshwater Wetlands) Act. These activities are subject to regulation whether or not they occur upon the wetland itself, if they impinge upon or otherwise substantially affect the wetland and are located within the adjacent area.

**Written Comment 1B:**

Before DEC can consider a permit application, wetland delineations prepared for the project must be verified by agency staff. DEC jurisdiction and resulting acreage impacts may vary based on DEC verification of wetland delineations. It is DEC policy that wetland impacts are not permitted, even with mitigation, until other alternatives have been explored, including avoidance, minimization or reduction of impacts. Generally applicants are required to: 1) Examine alternative project designs that avoid and reduce impacts to wetlands; 2) Develop plans to create or improve wetlands or wetland functions to compensate for unavoidable impacts to wetlands; 3) Demonstrate overriding economic and social needs for the project that outweigh the environmental costs of impacts on the wetlands.

**Written Comment 1D:**

Simple re-grading to pre-construction contours following excavation in a wetland area may not be enough to restore the full function of the existing wetland area. Any clearing or grading that disturbs wetland soils can result in permanent impacts to wetlands. Grading a wetland or adjacent area can substantially alter surface water drainage and flow patterns, may temporarily increase erosion, and may eliminate fish and wildlife habitat. Clear-cutting removes the vegetative cover of the wetlands and may reduce their ability to absorb water and serve as habitat, and can also cause soil erosion. Dredging or excavation may increase water depth and

remove wetland vegetation, thus altering the basic characteristics of, and perhaps destroying, wetlands. Fish and wildlife feeding or reproductive capacities may be altered, as may cover types, turbidity, sediment deposition, and erosion patterns. Clearing vegetation and any form of soil disturbance can lead to the introduction of invasive plants. Any of these activities can cause the permanent loss of benefits provided by wetlands and may, in fact, destroy wetland entirely.

**Written Comment 1F:**

Clarification is needed on page 54 where stated “Based upon the current Project layout, it is anticipated that there will be no permanent impacts to wetlands/streams, including NYSDEC regulated wetlands, within the generating site or along the buried transmission route. **All wetland impacts along the buried transmission line will be temporary and upon completion of construction, impacted areas will be restored and allowed to regenerate naturally.** (emphasis added).” DEC may require seeding of a cover crop in disturbed wetland areas to prevent establishment of invasives. It is previously stated that there are no impacts to State regulated wetlands or adjacent areas, but this statement implies that the impacts along the transmission route may include State wetland impacts. Please clarify whether this is intended to mean impacts to Federally regulated wetland only.

**Written Comment 1H:**

Page 4: Reference to 1.7 acres of temporary wetland disturbance, but no details are given. It should be explicitly stated that this is regarding wetlands under Federal jurisdiction only.

**Written Comment 1K:**

Page 47: Impacts from buried 115kV line. Again, please verify this is only impacts to Federally regulated wetlands.

**Written Comment 1M:**

Page 56: No permanent impacts = no mitigation. Not entirely true. As stated above we may require mitigative measures to prevent introduction of invasives and assure wetland vegetation re-establishment. But, such changes may have permanent impacts as noted in the comment above.

**Response to Written Comments 1A, 1B, 1D, 1F, 1H, 1K, 1M:**

If necessary, a Joint Application for Permit will be provided to the USCOE and NYSDEC to request authorization to undertake project-related activities that would affect wetlands as described in Section 3.2.2 of the DEIS. In addition, site visits will be conducted by both agencies

to verify jurisdictional wetland boundaries prior to processing the Joint Application for Permit. However, as discussed in Section 2.2 of this FEIS, the Project is no longer anticipated to result in any impacts (temporary or permanent) to streams, wetlands, or regulated adjacent areas.

**Written Comment 1C:**

The DEC guidance document, *Freshwater Wetlands Regulation Guidelines on Compensatory Mitigation*. October 26, 1993, states that “Temporary disturbances, where pre-construction conditions are essentially restored, for example when laying a pipeline, do not require *compensatory* mitigation since there is no permanent loss. However, impacts to the wetland still must be first avoided and then minimized as with any other project, and efforts to reduce disturbances during construction, such as erosion control, will still be required.” USACE defines “permanent” impacts as the loss of waters of the United States, and includes the area where fill is placed plus areas that are adversely affected by flooding, excavation or drainage as a result of a project. Where the project area is restored to pre-construction contours and elevation, it is not included in the calculation of permanent loss of waters (permanent impacts). This includes temporary construction mats (e.g., timber, steel, geotextile) used during construction activities and removed upon the completion of the work. However, where certain functions and values of waters of the United States are permanently adversely affected (such as the conversion of a forested wetland to an herbaceous one in a permanently maintained utility right-of-way (ROW), USACE requires mitigation to reduce the adverse affects of the project to the minimal level. The wetlands analysis in the DEIS should be refined to apply the full range of potential impact criteria to the proposed construction activity in the determination of total area of permanent impact; not just those areas proposed for permanent placement of fill. This is necessary to quantify the total affected area for permitting and requirements for mitigation.

**Response to Written Comment 1C:**

As currently proposed, the Project will not result in any impacts (temporary or permanent) to streams, wetlands or regulated adjacent areas. This determination is based on significant site-specific investigations and delineations conducted by qualified wetland biologists. While some portions of identified wetlands do contain forested habitat (e.g., delineated Wetlands TLA, TLD, and TLE), there will be no temporary or permanent impact to such habitat due to the anticipated construction methodology (e.g., directional bore). Please see Section 2.2 of this FEIS for additional information.

**Written Comment 1E:**

Section 3.2.1.2.1 states that “Review of NYSDEC mapping indicates that while there are no wetlands or adjacent areas (wetland buffers) within the Project Site (generating site or along the transmission line), there are several wetlands located within the river valleys in the vicinity of the Project Site that are regulated under Article 24 of the Environmental Conservation Law.” NYSDEC review concurs that there are no mapped State-regulated wetlands or their associated 100-foot adjacent areas directly impacted by this proposed project. In the event that the project area is modified, this would have to be re-evaluated. The state regulated wetlands in the vicinity of the Project Site are not expected to be directly impacted based on the information provided, as long as there is adequate erosion and sedimentation control.

**Response to Written Comment 1E:**

Comment noted. In the event the Project is modified, a comprehensive review of potential permit/jurisdictional implications will be conducted, including a review of potential impacts to state-regulated wetlands and adjacent areas. Please also note that all project activities, including those in relative proximity to state-regulated wetlands, are subject to the sediment and erosion control measures set forth in the Project SWPPP.

**Written Comment 1G:**

Page 3: There is no mention of wetlands in the environmental impacts table, nor forest fragmentation specifically.

**Response to Written Comment 1G:**

In the potential impacts to Water Resources, impacts to wetlands falls under “temporary disturbance”. In addition, “vegetation clearing/disturbance” and “loss or alteration of habitat” is listed as potential impacts to Biological Resources.

**Written Comment 1I:**

Page 34: Table 3 should include NYSDEC Article 24 Permit is for impacts to wetlands and 100-foot adjacent area.

**Response to Written Comment 1I:**

Comment noted. Please see Section 3.0 (corrections to the DEIS) of this FEIS.

**Written Comment 1J:**

Page 46: States no mapped wetlands. However, wetlands of greater than 12.4 acres may be unmapped but still present on the project site. Were any unmapped wetlands found on the site? Was there a search for such wetlands?

**Response to Written Comment 1J:**

There are no NYSDEC mapped wetlands within the Project Site, which includes the generating site and along the proposed transmission line route. However, there are 16 federally mapped wetlands within the Project Site. The NWI mapped wetlands are all less than 12.4 acres, ranging in size from 0.2 to 4.7 acres. In addition, EDR conducted wetland reconnaissance and delineation studies within the Project footprint during the 2008 and 2009 growing seasons. Five wetland/streams were delineated within the potential area of disturbance (assuming traditional construction practices), which are located along the proposed transmission line, none of which are greater than 12.4 acres in size.

EDR only delineated wetlands (and calculated buffers associated with state regulated wetlands) within the Project footprint, which is the area of potential temporary or permanent impact. Project construction will not affect areas outside the Project footprint.

**Written Comment 1L:**

Transmission line is 100 foot wide. If route needs to be maintained by periodically cutting vegetation to prevent woody growth, then it is a permanent disturbance resulting from wetland conversion rather than a temporary impact.

**Response to Written Comment 1L:**

The buried transmission line right-of-way will not be maintained by periodic vegetative cutting, and following installation all disturbed areas will be allowed to naturally re-vegetate. With respect to wetlands, it is currently anticipated that all wetland disturbance along the buried transmission line route will be avoided; most likely through directional bore installation.

**Written Comment 1P:**

The following guidance pertains to work involving the crossing of water bodies and work in close proximity to regulated streams as well as culvert design.

1. If work occurs within 50' of the top of a bank of a DEC classified C(t) or C(ts) stream, erosion control planning will be necessary. This should be part of the storm water management plan for the site.

2. All underground collection lines and culvert crossings shall be done in the dry.
3. All work is prohibited in a protected trout stream from 15 October through 31 May.
4. Siltation prevention measures shall be installed and maintained during the project to prevent movement of silt and turbid waters from the project site and into any watercourse, stream, water body or wetland.
5. Before trenching through stream banks, upland sections of the trench shall be backfilled or plugged to prevent drainage of possible trench water into the stream.
6. Underground collection lines and culvert installations shall be done in one operation without any delay between construction phases.
7. All permanent culverts crossings shall be entrenched a minimum of 1 foot below bed elevation.
8. All permanent culvert crossings shall be designed to meet a 25 year flood event. This can be accomplished either by conveying the flood entirely through the culvert or with an overflow spillway that directs the water immediately back to the stream.
9. All permanent culverts and culverts in longer than 60 days shall have a rocked headwall and a downstream splash upon extending 3 times the culvert diameter to prevent erosion. Rock size should be of an even mix from 6 to 18 inches in diameter.
10. Care must be taken to design and build culverts correctly – particularly when it involves crossing a navigable water body or a state regulated stream. Please see our website for an overview on proper culvert design: <http://www.dec.ny.gov/permits/49060.html>. The particular details of culvert design must be worked out in consultation with the DEC and must address concerns such as 25 year flood event design, maintaining channel geometry, proper use of rip rap, cofferdam specifications, work in the dry, culvert slope, etc.

**Response to Written Comment 1P:**

As discussed in Section 3.2.3 of the DEIS, erosion and sedimentation impacts during construction will be minimized by the implementation of an erosion and sedimentation control plan developed as part of the State Pollution Discharge Elimination System (SPDES) General Permit for the Project. Erosion and sediment control measures shall be constructed and implemented in accordance with a SWPPP to be prepared and approved by the NYSDEC prior to construction, and at a minimum will include the measures set forth in the Preliminary SWPPP provided in Appendix C of the DEIS. In addition, as noted in Section 3.2 of the DEIS, Project access road are not expected to cross either state or federally-regulated streams or wetlands. Therefore, it is not expected that culverts would be placed in streams or wetlands.

**Written Comment 54KK:**

Appendix F, page 4, states that GZA contacted the Allegany County Health Department, who reported that they do not maintain records on residential wells. However, the Town of Allegany is located in Cattaraugus County, so the Cattaraugus County Health Department should be contacted to obtain their records.

**Response to Written Comment 54KK:**

GZA acknowledges that the Town of Allegany is located in Cattaraugus County. GZA has indicated that the Water Supply Survey report erroneously identified the Allegany County Department of Health (ACDOH) as the agency contacted for information pertaining to available records for residential wells. GZA actually contacted the Cattaraugus County Department of Health (CCDH) who indicated they do not maintain files pertaining to residential water wells and thus no information was available for the Survey Area. However, the CCDH does maintain data for individual addresses if they have recently inspected the property for another reason. This data could not be included in the DEIS/FEIS, but once detailed site investigation at specific turbine locations begins, the Applicant can inquire about an individual nearby residence prior to construction.

***The following comments are all related to potential impacts to water wells:*****Written Comment 13E:**

Water supply issues – I would ask that you pay very special attention to the effects this project may have on wells, springs and any other water source within the project area. The potential damage this type of project could have on water sources is unknown at this point, but certainly warrants close scrutiny. Damage could occur from blasting, digging or cumulative vibration of the turbines. Any damage done would not be readily fixed and could have long-term consequences.

**What would homeowners do if they lost their source of water? What plans does Everpower have for homeowners if this should happen?**

**Written Comment 37A:**

Although we have previously submitted input the evening of the open comments, we want to follow up with some questions related to our biggest concerns. **First we would like to know what protection you can guarantee for our water source?** Based on the surveys sent to the Chipmonk residents back in December of 2008 by Everpower and as shown in the following excerpt from CRA-Everpower Comments and Responses, it is clear they expect some impact.

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2.) Although the chance of impact to local wells and springs is minimal, as outlined in this Section, the applicant shall explain under Proposed Mitigation what procedures shall be implemented should local wells/springs be negatively impacted due to the Project.

Our source of water is a developed free-flowing spring that provides us better water than any bottled water could provide. This spring has been running constant for longer than any of us have been alive. We also had an option of using all well water, but the quality and mineral and iron contents would have necessitated using a filtration system at an estimate of \$4,000 to make this usable. **How does the town envision our water supply will be mitigated if our spring water is affected? Having to resort to drilled water well, with lesser quality, would not be acceptable in our view.**

**Written Comment 46C:**

How will you correct our quality of water that we have now when they are through blasting out the hills and rocks. You can't guarantee that our water quality will be as good.

**Written Comment 54I:**

In Section 3.2 – Water Resources, the applicant indicates that should blasting cause adverse impacts to local water wells, mitigation measures may include providing potable water to the affected residence. The mitigation measures shall be permanent solutions. Temporary potable water will be deemed unacceptable mitigation.

**Written Comment 54LL:**

DEIS p. 54 and Appendix A state that blasting could affect building foundations and water supply wells, although this impact is identified as unlikely to occur. However, no mitigation is proposed for this potential impact. (Appendix A states only “specific corrective actions will be developed...”). Propose substantive mitigation measures for this impact.

**Oral Comment 13A:**

My name is Jose Sanchez and me and my wife live at the top of Chipmonk. I've been listening to all of these comments about the noise and everything. And about a year ago we received a letter which I haven't heard anybody talk about, about our well and what type of well we had our water and that we needed to test this and everything. And it came from EverPower.

So I guess my question is why did they send me this letter. And obviously they're expecting problems to happen to my water. Who is going to be responsible when there are problems to my water? That's all I have.

**Oral Comment 24C:**

What happens when they're breaking down? What happens like the neighbor of Chipmonk who has questions about the water. That's one of the things I was wondering about. What's going to happen to our water quality in Chipmonk? We've dealt with oil well pollution crap for years. We don't need to deal with destruction of our hilltops causing more runoff and destruction of that.

**Response to Written Comments 13E, 37A, 46C, 54I and 54LL, and Oral Comments 13A and 24C :**

Impacts to local water wells are not anticipated, nor have the commenters provided evidence asserting otherwise. As stated in Section 3.2.2.1.2 of the DEIS, *"Installation of turbine foundations has the greatest potential for impacts to groundwater. If blasting is necessary, it can generate ground vibration, fracture bedrock, and impact groundwater levels. However, the residents within the Project Site are located at elevations lower than the proposed turbines, in addition, based on the anticipated minimum distance to existing resources (at least 2,500 feet) and the assumption that some private water supply wells will be located in close proximity to these structures (typically within 100 feet), it is highly unlikely that blasting (if necessary) would physically damage the individual wells or affect the groundwater flow to these wells (and subsequently the well yield). Further, it is the opinion of GZA that the identified water wells are not expected to experience negative impacts (i.e., change in production or quality) from wind turbine construction activities, including the possibility of blasting. This opinion is due to the depth of wells, distance from proposed turbines, and elevation relative to proposed turbines (Appendix F)."*

As indicated in Section 2.6.6 (Foundation Construction) of the DEIS, *"The foundation is anticipated to be a spread type footing. This foundation type is approximately 10 feet deep, approximately 50 to 60 feet in diameter, and requires approximately 500 cubic yards (cy) of concrete. Once the foundation concrete is sufficiently cured, the excavation area around and over it is backfilled with the excavated on-site material."*

Because foundations are anticipated to be only approximately 10 feet deep, because of the elevation of the turbine foundations relative to adjacent residences (e.g., the closest residences on Fourmile Road are approximately 600 feet below the base of the nearest turbines), and because there are no homes within 2,500 feet of a turbine foundation, the potential for impacts to local water wells is extremely low.

It should also be noted that the oil well industry (and associated subsurface extraction) has been operating in this area for more than 100 years. As indicated in the *Allegany Wind Power Project Phase 1B Archeological Survey* (provided in Appendix M of the DEIS), “JMA observed and recorded several oil-industry-related structures, features, and equipment throughout the Project Area. As a whole, these elements represent an industrial landscape organized by various independent and corporate oil producers from the late nineteenth into the mid-twentieth century. Their endeavors were largely aimed at extracting oil from various pools within the greater Bradford Field, a currently active field that stretches between northwestern Pennsylvania and southwestern New York and is a significantly productive field within the northern Appalachian oil fields (Fettke 1938:5-7; Ross 1996:1). Profits from these efforts were in large measure responsible for economic development of the surrounding region in the twentieth century (Doty, et al. 1940:815)...Wells provided direct access to the oil pools of a field and within the northern Appalachian oil fields, could reach depths of 2,000 feet or more (Caplinger 1997a:33).” Many of these wells have been drilled and operated in close proximity to area residences, and these wells have a much greater potential to result in impacts to local water wells.

#### Blasting

Notwithstanding the above, if blasting is determined to be necessary, a pre-blasting survey will be conducted that includes a survey for all private water wells and springs (hereafter referred to as “water sources”) within 3,000 feet of the blasting site. The survey will include water quality and production assessment, performed by an independent laboratory / inspection firm whose credentials are acceptable to the Town. These inspections will serve to document conditions that exist prior to the start of construction. Upon completion of blasting, a post-blasting water source survey will also be conducted and a comparison of the established baselines. The Town’s Environmental Monitor will deem any decrease in quality or production as an adverse impact. If a water source is adversely impacted by the Project, the impacted residence will be provided potable water by the Project sponsor as a temporary measure, and will continue to be provided potable water until a permanent solution that meets the baseline flow and water quality characteristics has been provided by the Project Sponsor to the satisfaction of the Environmental Monitor. Such permanent mitigation measures may include reconditioning of the existing water source, installation of a filtering system or drilling of a new well at the residence. If any complaints of damage are received they will be promptly addressed through the Complaint Resolution Process (see DEIS Appendix G).