Section 5 – Water Resources

List of Acronyms and Abbreviations – Section 5

%	percent
7Q10	The lowest stream flow for seven consecutive days that would be expected to occur once in ten years, representing a “low flow” characteristic used in hydrology and water resource assessment
Chazen	The Chazen Companies
CVE	Cricket Valley Energy Center, LLC
DCDOH	Dutchess County Department of Health
DEIS	Draft Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Act
former Rasco parcel	the 57-acre land south of the Project Development Area now optioned by CVE and formerly utilized by RASCO Materials LLC
gpd	gallons per day
gpm	gallons per minute
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NOI	Notice of Intent
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSSWDM	New York State Stormwater Management Design Manual
the Project	the Cricket Valley Energy Center
Project Development Area	the 57-acre portion of the 193.5-acre Property proposed for development
Property	the 193.5-acre property optioned by CVE
remote Laydown Site	the 38.8-acre construction worker parking and laydown site located approximately 2.5 miles north of the Property
SEQRA	State Environmental Quality Review Act
SPCC Plan	Spill Prevention, Containment and Countermeasures Plan
SPDES	State Pollutant Discharge Elimination System
SWPPP	Stormwater Pollution Prevention Plan

USACE	U.S. Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

5. WATER RESOURCES

This section provides an update on water resource-related issues since the Draft Environmental Impact Statement (DEIS) was filed, followed by a brief summary of Project impacts and proposed mitigation. Topics addressed in this section for the DEIS include surface waters, hydrogeology, water use and discharge, groundwater, and stormwater management. Comments received on the DEIS associated with water resource issues are provided in Section 5.3, along with responses and reference to sections where additional information is provided for some topics.

5.1 Project Refinements Since the DEIS

No change in the Project footprint is proposed. However, since the DEIS was filed, Cricket Valley Energy Center, LLC (CVE) has had the opportunity to option approximately 57 additional acres to the south of the Project Development Area (Figure 5-1). This adjacent parcel, formerly the location of the RASCO Materials facility (the former Rasco parcel), had not previously been available. With the addition of this parcel, CVE has the opportunity to clean up a broader area of the Property and also to accommodate the majority of the temporary construction worker parking and laydown proximate to the Project Development Area. This will greatly reduce the amount of environmental impact related to construction worker travel from the remote Laydown Site. The remote Laydown Site will still be planned for some level of use, but its use will not likely be as intensive.

This additional area has been evaluated both for its wetland potential and wildlife habitat characteristics, and potential impacts are addressed in Section 3 of this Final Environmental Impact Statement (FEIS). CVE will remediate environmental conditions associated with historical use of the former Rasco parcel, as detailed in Section 2 of the FEIS. Following remediation, CVE is proposing temporary use of an approximately 13-acre portion of the former Rasco parcel to support construction laydown and parking (see Figure 5-2). Of the 13-acre area, approximately 5 acres is currently developed (previously used by RASCO Materials), approximately 6 acres is comprised of waste pile material, and approximately 2 acres contain small diameter trees. While there will be no water demand associated with the temporary laydown and parking area, a Stormwater Pollution Prevention Plan (SWPPP) will be implemented to manage stormwater runoff during construction, as discussed in detail in Section 5.3.1.

All construction and operation activities associated with the Project will be conducted in accordance with a SWPPP and the Erosion and Sediment Control requirements of the Dover Town Code, using Best Management Practices. This will ensure minimal impact to surface

waters, on-site wetlands and subsurface conditions at the Property and the surrounding areas. Additional information on the preliminary SWPPPs that have been prepared for the Project (separate plans for the Project Development Area, former Rasco parcel, and remote Laydown Site) is provided in Section 5.3.1 of the FEIS.

5.2 Summary of Project Impacts and Proposed Mitigation Measures

The Project has incorporated proven water conservation measures to minimize water demand and associated resource impacts during construction and operations to make it one of the most water-efficient electrical generating facilities of its type. These measures include: highly efficient combined cycle technology; air-cooled condensers; a Zero Liquid Discharge system; rooftop rainwater capture; and carefully designed stormwater management systems.

The Project proposes to use on-site bedrock wells to meet water needs. A pumping test program was developed to demonstrate that the extraction of up to 120 gallons per minute (gpm) from the deep bedrock aquifer would not have an adverse impact on: private well water supplies in the areas surrounding the site; wetlands within and adjacent to the Property; and the Swamp River. The testing program was intended to demonstrate that the primary and backup wells have sufficient production to supply water at a continuous rate of 60 gpm (the anticipated peak summer water demand), and at a short-term supply rate of 120 gpm (the maximum amount required during unanticipated upset conditions). The pumping test confirmed there would be no significant impacts on offsite wells, wetland areas, or the Swamp River due to the Project's water withdrawal from the primary well.

Additionally, the New York State Department of Environmental Conservation (NYSDEC) is currently developing regulations for water withdrawal permits for facilities that have a capacity to withdraw 100,000 or more gallons per day (gpd). Although its proposed summer water demand is only 87,000 gpd, the Project will be subject to this regulation once it becomes effective. The proposed regulations include reporting requirements, which will provide an ongoing assessment of actual water withdrawals compared to estimates provided in the DEIS.

The section of the Swamp River abutting the CVE Property has been identified by stream gauging to experience the most robust stream gain of the entire river. The *Site Water Budget Report* (DEIS Appendix 5-C), prepared by The Chazen Companies (Chazen), concludes that, due to this advantageous location within the watershed, the Property is fully capable of supporting the Project's proposed average water consumption under both average and drought conditions, with no permanent off-site drawdown impacts of any type. It should be noted that this conclusion is conservative, as it does not take into consideration the additional

water that is expected to be generated from CVE's 3.4-acre rooftop rainwater capture system. That additional water, which is not part of the assessment, is estimated to supplement the water budget by an annual average of more than 7 gpm.

As noted in Section 5.1, detailed consideration of stormwater has been incorporated in the design of the Project, and the preliminary SWPPP presented in Appendix 5-A of the DEIS provides details associated with construction and operational Best Management Practices within the Project Development Area. The design incorporates control of stormwater discharge from the Project Development Area by three bio-retention facilities and one stormwater management basin. These facilities have been designed to provide quantity controls by attenuating stormwater runoff and releasing runoff to off-site locations at a rate equal to or less than that which existed prior to development of the Property. For all design points and design storms the peak rate of runoff will not be increased. Therefore, the Project will not have a significant impact on the adjacent or downstream properties or receiving water courses. Updated drawings reflecting the preliminary SWPPP for the Project Development Area are provided in Appendix 5-A of the FEIS.

Careful attention has also been focused on developing preliminary SWPPPs for the 13-acre portion of the former Rasco parcel where temporary construction use is proposed and the remote Laydown Site. Because each of these locations will disturb greater than 5 acres during this temporary use, written authorization of coverage under the NYSDEC General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-10-001) will be sought by filing a Notice of Intent (NOI) with NYSDEC. No permanent impervious areas are proposed and no change in site hydrology is anticipated. Design elements and Best Management Practices have been incorporated into both temporary work areas to address: temporary erosion and sediment control measures; restoration of soils to pre-development or better conditions (in the case of the former Rasco parcel) in accordance with New York State Stormwater Management Design Manual (NYSSWDM) Section 5.1.6; and re-vegetation. The proposed stormwater collection systems consist of pipes, open drainageways and on-site stormwater management facilities to collect and convey stormwater during construction. The design of sediment traps to be used will have the capacity to not only adequately retain sediment storage volume, but also to detain runoff prior to its discharge off-site. All such measures are designed to minimize soil loss, retain eroded soils and prevent sedimentation from reaching water bodies or adjoining properties. Additional detail is provided in Section 5.3.1 of the FEIS.

5.3 Responses to Comments on the DEIS

Table 5-1 provides a summary of comments received relative to water resources, and provides a response or guides the reader to more detailed information located within the DEIS or this FEIS.

Table 5-1 Responses to Comments on the DEIS Regarding Water Resources			
Author	**Comment**	**Comment Number**	**Response**
Peter Rostenberg	I draw your attention to the fact that the Swamp River aquifer flows to Connecticut.	5-2	The Swamp River flows in a northerly direction from the Town of Pawling, New York to the Town of Dover, New York where it empties into the Ten Mile River. From this confluence, the Ten Mile River flows southerly and easterly to the Housatonic River in the State of Connecticut. Project studies have been conducted to assure that no impact to those downstream will occur, whether in New York or Connecticut.
Tonia Shoumatoff and Elaine LaBella, Housatonic Valley Association	HVA is pleased that the project will incorporate several water conservation measures to minimize water use during construction and operation of the facility. The project will rely on groundwater wells for process and domestic uses. During the pump testing, two existing wells at Dover Knolls as well as many neighboring properties were monitored. The DEIS indicated that the water withdrawals for the proposed facility should not adversely impact neighboring wells. However, additional wells will be necessary to serve the new residences and commercial properties at Dover Knolls. These future wells were not considered in the DEIS.	9-3	The importance of studying the cumulative impact of the Project with other proposed uses in the Town of Dover and the greater region is acknowledged. With these concerns in mind, the Project's Site Water Budget Report, included as Appendix 5-C to the DEIS, considered other proposed projects under review, including the Knolls of Dover development. The section of the Swamp River abutting the Property has been identified by stream gauging to experience the most robust stream gain of the entire river (DEIS Appendix 5-C). The Site Water Budget Report concludes that, due to this advantageous location within the watershed, the Property is fully capable of supporting the Project's proposed average water consumption under both average and drought conditions (DEIS Appendix 5-C). It should be noted that this conclusion is conservative, as it does not take into consideration the 3.4-acre rooftop rainwater capture system which will supplement the water budget by an annual average of more than 7 gpm (DEIS Appendix 5-C). As concluded in the Site Water Budget Report, under both average and drought conditions, significant flow capacity remains available for other projects currently under review by the Town of Dover. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.

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			Additionally, CVE has committed to install a stream gauging station downstream of the Project on the Swamp River to monitor flow. During public meetings with local residents and local environmental groups, attendees concluded that the Route 22 bridge, where a United States Geological Survey (USGS) stream gauging station had been previously sited, would be the most advantageous location for gauging to occur.
Tonia Shoumatoff and Elaine LaBella, Housatonic Valley Association	HVA requests that the DEIS include a regional evaluation of the cumulative impact of the groundwater needs of this project, Dover Knolls and all other large developments within the Ten Mile River watershed either under construction or currently going through the local approval process.	9-4	The importance of studying the cumulative impact of its facility with other proposed uses in the Town of Dover and the Harlem Valley is acknowledged. With these concerns in mind, the Project's Site Water Budget Report (DEIS Appendix 5-C) was commissioned to specifically analyze whether CVE's water consumption, in conjunction with other proposed projects in the area, will be sustainable. Chazen, which has been involved in Harlem Valley watershed investigations since 1997, was chosen to conduct this study based on their knowledge and expertise of Harlem Valley hydrogeology. Their conclusion is that the Project water withdrawal needs are locally sustainable and that there will be no permanent off-site drawdown effects on the aquifer. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand. Additionally, CVE has committed to install a stream gauging station downstream of the Project on the Swamp River to monitor flow. During public meetings with local residents and local environmental groups, attendees concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, would be the most advantageous location for gauging to occur.

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Tara Shoureck, Wingdale Resident	...water is of concern as well. The nearby Great Swamp, and our town's drinking water supply will be affected one way or another. Weather is dynamic, and right now we are experiencing great rainfall and had a record setting winter snowfall in this area of the country. We also have had periods of drought as well. The tremendous amounts of water that will be needed to run this plant has got to have some impact on the Town of Dover, and when we potentially pollute our water, we also pollute ourselves.	10-8	The importance of the Great Swamp, the Swamp River and the Harlem Valley watershed to the community has been recognized throughout the Project review process. Since its first Town Meeting in April 2009, the Project has made considerable efforts to re-engineer its facility to minimize water use, including the addition of a Zero Liquid Discharge system to internally recycle water, and a rooftop rainwater capture system to supplement the water supply. Through these efforts, the Project will be one of the most water-efficient power plants in the region. To ensure that the town's drinking water supply will not be affected, a long-term pump test program was developed and approved by NYSDEC (see DEIS Section 5.4.4 for a detailed discussion of the pump test and approved protocol). This pump test was designed to monitor neighboring wells, adjacent wetlands, and the Swamp River to ensure the Project's water consumption would have no adverse impact. As discussed in DEIS Section 5.4.4.5, the Project's main well can be operated indefinitely at its design rate and, when tested at maximum water needs (120 gpm), it did not produce any discernible effects on any of the monitored off-site private wells, nor any of the on-site wetlands. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.
Venna Currow, Wingdale Resident	Environmentally, approving this project will hinder the quality of life as we know it. Our water…will be much more polluted…	11-1	To ensure that sensitive water resources, such as neighboring wells, wetlands, or the Swamp River will not be affected by the Project's water consumption, a long-term pump test program was developed and approved by NYSDEC (see DEIS Section 5.4.4 for a detailed discussion of the pump test and approved protocol). The Project has also included a Zero Liquid Discharge system so that no process wastewater will be discharged from the site into nearby surface waters. In addition, a SWPPP utilizing Best Management Practices, including state-of-the-art

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			bio-retention facilities, will ensure that receiving waters will not be adversely impacted by stormwater from the Project site. Finally, restoration of wetlands on the Project site that have been significantly degraded by past industrial activities will improve water quality.
C.L.J. Wood, Oblong Land Conservancy	The project incorporates a number of conservation measures and pump tests have been run that would indicate that the needs of the project should not exceed local capacities. However, the fact remains that the communities in the valley rely upon an aquifer that is a finite resource. The Swamp River is also a slow moving stream with limited capacity to self-cleanse. Were the water resources to become contaminated or subject to chronic depletion present and future residents of the area would have nowhere to turn. In view of this we believe it prudent to look at water resources on a regional basis and consider the needs of CVE against the long term implications of additional piecemeal development in the area as well as large scale projects such as Dover Knolls.	12-5	The Project's Site Water Budget Report (DEIS Appendix 5-C) was commissioned to specifically analyze whether the Project's water consumption, in conjunction with other proposed projects in the area, including the Knolls of Dover, will be sustainable. The Chazen Companies, which has been involved in Harlem Valley watershed investigations since 1997, was chosen to conduct this study based on their knowledge and expertise of Harlem Valley hydrogeology. Their conclusion is that the Project water withdrawal needs are locally sustainable, and that there will be no permanent off-site drawdown effects on the aquifer. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand. The Project includes a Zero Liquid Discharge system so that no process wastewater will be discharged from the site into nearby surface waters. In addition, a SWPPP utilizing Best Management Practices, including state-of-the-art bio-retention facilities, will ensure that receiving waters will not be adversely impacted by stormwater from the Project Development Area, former Rasco parcel, or remote Laydown Site. Finally, restoration of wetlands on the Property, including the former Rasco parcel, that have been significantly degraded by past industrial activities will improve water quality. Additionally, CVE has committed to install a stream gauging station downstream of the Project on the Swamp River to monitor flow. During public meetings with local residents and local environmental groups,

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			attendees concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, would be the most advantageous location for gauging to occur.
C.L.J. Wood, Oblong Land Conservancy	Given the critical importance of this resource it would be prudent to examine the practicality of crafting and implementing a permanent monitoring regime so that the town is forewarned of changes in aquifer levels and water quality. Such a regime should be coupled with the requirement on the part of CVE to change its operating model to maintain a certain level of resource availability. In order to guarantee adequate groundwater supplies for neighboring residents, and unlimited supplies to sensitive resources like the several fens in the area and the wetlands and the Swamp River, this is a measure that would help ensure protection of these water resources.	12-6	As discussed in Section 5 of the DEIS, the Project's maximum withdrawal of water would have a negligible effect on groundwater supplies for neighboring residents as well as on-site and nearby wetlands or Swamp River resources. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand. Additionally, CVE has committed to install a stream gauging station downstream of the Project on the Swamp River to monitor flow. During meetings with local residents and local environmental groups, attendees concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, would be the most advantageous location for gauging to occur.
Michael Purcell, Pawling Resident	Monitoring the prevailing winds and northerly downdrafts in the Harlem Valley air shed at the valley's higher elevations should be a CVE priority to protect air and water quality within the Swamp River and Ten Mile River watershed.	19-6	By not having a significant impact on either air quality or acid deposition, the Project will not significantly contribute to indirect sources of water pollution. In fact, because the Project will result in lower regional emissions, it will contribute to reducing these indirect impacts.
Evelyn Chiarito and Joseph Chiarito, Dover	The 1999 Chazen Companies study of the Harlem Valley aquifer indicates that the Harlem Valley towns from Amenia to Patterson all share the same aquifer, which	23-1	The importance of studying the cumulative impact of the Project with other proposed uses in the Town of Dover and the Harlem Valley is acknowledged. With these concerns in mind, the Project's Site Water Budget Report (DEIS Appendix 5-C) was commissioned to specifically

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Plains Residents	provides water for 20,000 people. Draw-down on this aquifer by the Dover Knolls complex (1,376 units), other recently approved and proposed housing developments, existing homeowners, adjacent Dover High school, Wingdale Elementary and Dover Elementary schools, and Cricket Valley Energy (all high volume water users) should be evaluated. It is all the same aquifer.		analyze whether the Project's water consumption, in conjunction with other proposed projects in the area, will be sustainable. Chazen, which has been involved in Harlem Valley watershed investigations since 1997, was chosen to conduct this study based on their knowledge and expertise of Harlem Valley hydrogeology. Their conclusion is that the Project water withdrawal needs are locally sustainable and that there will be no permanent off-site drawdown effects on the aquifer. To ensure that the town's drinking water supply will not be affected, a long-term pump test program was developed and approved by the NYSDEC (see DEIS Section 5.4.4 for a detailed discussion of the pump test and approved protocol). As discussed in DEIS Section 5.4.4.5, the Project's main well can be operated indefinitely at its design rate and, when tested at maximum water needs (120 gpm), it did not produce any discernible effects on any of the monitored off-site private wells, nor any of the on-site wetlands. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand. Additionally, CVE has committed to install a stream gauging station downstream of the Project on the Swamp River to monitor flow. During meetings with local residents and local environmental groups, attendees concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, would be the most advantageous location for gauging to occur.

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Evelyn Chiarito and Joseph Chiarito, Dover Plains Residents	Also, what will be the effect [*of the water being withdrawn from the aquifer*] on the adjacent Great Swamp (DP-22) and its sensitive habitats and ecological preserves such as the Mostachetti-Slocum Preserve and Carruth Preserves held by the Oblong Land Conservancy as well as Nature Conservancy Nellie Hill Preserve and Perry Preserve?	23-2	To ensure that the sensitive water uses will not be affected by the Project's water consumption, a long-term pump test program was developed and approved by NYSDEC (see DEIS Section 5.4.4 for a detailed discussion of the pump test and approved protocol). As discussed in DEIS Section 5.4.4.2, given the Project's proximate location to the Swamp River and its associated wetlands, including the adjacent Carruth Preserve, it was important to demonstrate that Project water withdrawal would not have an adverse impact on the system of wetlands associated with the Swamp River (i.e., DP-22). A series of temporary piezometers were installed to record water level changes in the wetlands and Swamp River before, during and after the pump test. The results of this monitoring is included in Appendix 5-E of the DEIS, which concludes that the Project's proposed maximum water withdrawal will not have any discernible impact to the Swamp River and adjacent wetlands.
Evelyn Chiarito and Joseph Chiarito, Dover Plains Residents	Some method of monitoring aquifer depletion should be put in place and maintained by the applicant.	23-3	The anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand. In addition, CVE has committed to install a stream gauging station downstream of the Project on the Swamp River to monitor flow. During meetings with local residents and local environmental groups, attendees concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, would be the most advantageous location for gauging to occur.

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Evelyn Chiarito and Joseph Chiarito, Dover Plains Residents	The DEIS should evaluate the cumulative impact on regional groundwater.	23-4	The Project's Site Water Budget Report (DEIS Appendix 5-C), was commissioned to specifically analyze whether the Project's groundwater consumption, in conjunction with other proposed projects in the area, will be sustainable. Chazen, which has been involved in Harlem Valley watershed investigations since 1997, was chosen to conduct this study based on their knowledge and expertise of Harlem Valley hydrogeology. Their conclusion is that the Project water withdrawal needs are locally sustainable, and that there will be no permanent off-site drawdown effects on the aquifer.
Evelyn Chiarito and Joseph Chiarito, Dover Plains Residents	I realize that Cricket Valley will clean up the site but am wondering if aquifer draw-down can also cause deep well contamination to be drawn up into the water supply?	23-5	CVE has drilled six separate on-site wells, with depths ranging from 600 to 1,000 feet deep. During the long-term pumping test, which concluded that there would be no discernible drawdown effects, the water quality of the Project wells was tested by a Dutchess County Department of Health (DCDOH) listed laboratory. The laboratory assessment of the current water thresholds indicated that the water was potable, although some wells did contain "total coliform," which is a group of naturally occurring bacteria. The coliform will be treated by the Project's potable water system, as required by DCDOH drinking water requirements. With these water quality results in mind, CVE does not believe there is any "deep well contamination" beneath or surrounding the CVE Property. In addition, CVE also conducted a Phase II Environmental Site Assessment that tested groundwater from an existing array of NYSDEC monitoring wells installed downgradient from the site, adjacent to the Metro-North rail line. Laboratory analysis of samples from these wells – discussed in greater detail in Section 2 of the FEIS – supports the conclusion that the Project's groundwater withdrawal wells will not encounter significantly contaminated groundwater.

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Mark Chipkin, Pawling Resident	The Cricket Valley Power Plant will remove clean water from our aquifer, and in exchange they will add air, visual and noise pollutants to our environment...	25-3	See Section 5.4.4.4 and Appendix 5-C of the DEIS for a discussion confirming that the level of water use proposed will not have a discernible effect on aquifer water availability. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand. Sections 4 and 6 of the DEIS and this FEIS address potential impacts to air quality, visual resources and aesthetics, and noise.
Mark Chipkin, Pawling Resident	Cricket Valley can do so much more to give to the Dover Community: new acreage of trees and parks can be purchased, trees can be planted to offset the carbon dioxide and other greenhouse gases that will be pumped daily into our air, a plant can be built to remove toxins from existing water ways and the aquifers. Air pollution monitoring systems, educational scholarships and the support of local land acquisition and environmental programs are some possible examples of appropriate give backs to our community.	25-7	CVE has engaged in a wide variety of community outreach efforts (such as Advisory Working Groups, Open Houses, and newsletters) to share Project information and listen to concerns and priorities of the Dover community and its neighbors. Project design refinements and potential community benefits have resulted from these discussions. For instance: · CVE has made considerable efforts to refine the proposed facility design to minimize water use, maximize water recycling and eliminate the need for process wastewater discharge, all of which are a financial commitment to good stewardship. · CVE has been working with local land acquisition groups, including the Oblong Land Conservancy, to place the land west of the Metro-North rail line (approximately 79 acres) into permanent conservation. · CVE continues to support the advancement of Dover's youth through a scholarship, awarded annually to a graduating Dover High School Senior. · CVE will monitor and report water usage to NYSDEC, consistent with anticipated permitting requirements, and has committed to install a stream gauging station to monitor flow downstream of the

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			Project on the Swamp River. · The Project will displace the operation of older, less efficient power plants resulting in a net decrease in greenhouse gas emissions (see Appendix 1-A in the DEIS). · The Project will remediate an abandoned industrial site, including restoration of previously impacted wetlands on the site. Other community benefits are also proposed that are not specifically integrated into the Project's siting and design. These will be part of a Community Benefits Package to be negotiated with the Town of Dover.
Tamara Wade, Wingdale Resident	While CVE states that they will not be releasing contaminated water back into the environment do the emissions of the facility not create air pollution to our air which in turn contaminate ground water and ridge waters that inevitably return to our water supply? I think it would be best to have continual monitoring of the aquifer and nearby residential wells in conjunction with random testing of wells throughout Dover in the event that permitting is granted, performed by experts of the Town Boards choice, at the expense of CVE.	31-6	By not having a significant impact on either air quality or acid deposition, the Project will not significantly contribute to indirect sources of water pollution. In fact, because the Project will result in lower regional emissions, it will contribute to reducing these indirect impacts. CVE will monitor the water quality in its systems, and will monitor and report usage to NYSDEC consistent with anticipated permitting requirements. In addition, CVE has committed to install a stream gauging station downstream of the Project on the Swamp River to monitor flow. During meetings with local residents and local environmental groups, attendees concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, would be the most advantageous location for gauging to occur.

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Tamara Wade, Wingdale Resident	I am concerned about future diminished water supply from being over drawn particularly in times of drought. How does drawing from below bedrock not affect main aquifer? …If water volume is removed below, will the water above not seep to fill that void?	31-7	As discussed in DEIS Section 5.4.4.4, review of the Property's topographic setting suggests that groundwater recharged on higher elevation lands northeast of the Property may be expected to migrate naturally toward and under the Property, contributing to available groundwater resources available to CVE (see DEIS Figure 5-2). The pumping test results discussed in detail in DEIS Sections 5.4.4.2 and 5.4.4.3 indicate that site pumping from the deep aquifer does not draw down groundwater from the shallow aquifer. The section of the Swamp River abutting the CVE Property has been identified by stream gauging to experience the most robust stream gain of the entire river. The *Site Water Budget Report* (DEIS Appendix 5-C) concludes that, due to this advantageous location within the watershed, the Property is fully capable of supporting the Project's proposed average water consumption under both average and drought conditions, with no permanent off-site drawdown impacts of any type. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.
Tamara Wade, Wingdale Resident	I feel this concern [*water use*] would be best mitigated by mandating that CVE provides adequate storage tanks on site, purchases and transports the majority of water necessary for operations thereby generating business and employment, and sparing our aquifer for life sustaining purposes.	31-8	On-site water storage tanks, described in Section 1.3.6 of the DEIS are proposed to allow for appropriate water management. Use of an off-site water supply transported to the Project would not eliminate the need for careful evaluation of potential impact to other users, no matter where the water source. Such an analysis has been completed for the Swamp River watershed and, as discussed in Appendix 5-C of the DEIS, careful consideration of Project water needs, as well as regional and cumulative effect, indicate that Project water withdrawal needs are locally sustainable and that there will be no permanent off-site drawdown effects on the aquifer.

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Tamara Wade, Wingdale Resident	Perhaps they might purchase seawater from our rising seas that are said to be due to global warming, from fossil fuel burning emissions. Then they could employ more people to desalinate the water, and perhaps utilize the salt in the event there is increased need of de-icing the roads when heat generated by the facility causes vapors that could potentially create fog and ice on nearby roads.	31-9	As noted above, the environmental and community impact associated with transporting water from off-site sources would be significant. Additional water supplies are also not needed for this Project, given the relatively small volume of water that will be needed and the results of studies that indicate that Project water withdrawal needs are locally sustainable (see Appendix 5-C of the DEIS for Site Water Budget Report). The importance of the Harlem Valley watershed is acknowledged. Since the Project's first Town Meeting in April 2009, CVE has made considerable efforts to re-engineer its facility to minimize water use, including the addition of a Zero Liquid Discharge system to internally recycle water, and a rooftop rainwater capture system to supplement the water supply. Through these efforts, the Project will be one of the most water-efficient power plants in the region.
Tamara Wade, Wingdale Resident	As for location I am certain it is ideal for the needs of Advanced Power's Cricket Valley Energy project. However, we need to prove that it is a wise location with regard to being…within proximity to…aquifer, wetlands….	31-21	It is recognized that the Project needs to be the right fit for Dover and surrounding communities. CVE has worked closely with The Chazen Companies to assess potential impacts to the aquifer and wetlands. The Chazen Companies, which has been involved in Harlem Valley watershed investigations since 1997, has demonstrated through a robust pump test and monitoring program, as detailed in Sections 5.4.4.2 and 5.4.4.3 of the DEIS, that no significant impact to the aquifer or wetlands will result from Project water use.
Graham Trelstad, AKRF	As mitigation for potential natural resource impacts of the proposed project, continued monitoring of the Great Swamp water quality should be considered. In particular, the Great Swamp should be monitored for potential acid rain and [*nitrogen oxide*] NO_x impacts.	32-14	Protection of the Swamp River and the Great Swamp CEA has been a priority throughout design of the Project, including through careful study of the potential impact of water use. Impacts to water quality from stormwater runoff were thoroughly addressed in Section 5.6.4 of the DEIS, while acid rain and nitrogen oxide impacts were addressed in Section 4.5.7 of the DEIS. In addition, the Project will restore previously impacted wetlands that currently drain to the Swamp River and

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			remediate upland areas adjacent to them. Further, the Project has committed to preservation of the 79-acre portion of the Property west of the railroad track which abuts the Swamp River. Given the lack of impact potential of the Project, the benefit to the Swamp River CEA resulting from site remediation and restoration, and the preservation of wetland areas currently bordering the Swamp River, an overall benefit to the Great Swamp is anticipated to result from the Project.
Graham Trelstad, AKRF	Page 5-19 discusses the use of treated effluent to meet all or a portion of the project's water needs. The possibility of using effluent from the Knolls of Dover project is mentioned but dismissed because of its stage in the approvals process. However, since the Knolls of Dover project is now further along in the process, the use of its wastewater should be reconsidered.	32-33	As discussed in DEIS Section 5.4.4.2, the proposed Knolls of Dover project is planned to have a wastewater treatment plant that could, at some future point, provide treated effluent to meet all or a portion of the Project's water needs. While that project has been approved by the Town of Dover, until it has an operating track record to demonstrate consistent volume and quality of discharge, a practical assessment of that source cannot be completed. CVE is open to consideration of feasibility of use of this water source in the future.
Graham Trelstad, AKRF	It is noted that the proposed project would have a minor impact on a well on Cricket Hill Road. Portions of Cricket Hill Road have a perched water table that causes flooding and septic system problems with residences. Will the proposed project have any impact on the perched water table of Cricket Hill Road?	32-34	Perched water is found where low-permeability geologic horizons delay recharge to deeper groundwater horizons. It occurs where a water table is isolated from the regional aquifer by an impervious boundary, such as un-fractured rock or a low permeability formation such as a clay layer. As the commenter asserts, this condition exists for some residences atop Cricket Hill. Two of these residences (Mills and Nast) were monitored as part of the long term pumping test (DEIS Appendix 5-E) and, as expected due to the perched nature of the water table, there was no discernible impact. The long-term pumping test – conservatively pumping at twice the

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			maximum summer demand (120 gpm) – indicated that use of a series of back-up wells at levels greater than the anticipated demand could have a minor impact on three off-site wells, including one well at the corner of Route 22 and Cricket Hill Road. This residence is located approximately 1 mile north of the Cricket Hill residences affected by the perched water table. Because this test, which modeled an exaggerated Project water demand, revealed only minor impacts, the Project's operation under a realistic range of circumstances is not anticipated to have a discernible impact on offsite wells.
Graham Trelstad, AKRF	The proposed project would have a minor impact on three off-site wells during emergency conditions. Mitigation for these off-site properties should be considered.	32-35	The Project's primary well has been shown to have no discernible impact on any of the off-site wells monitored during the long-term pumping test (see DEIS Section 5.4.4.5). In the event of an emergency, a series of back-up wells could be utilized to support Project water demand. The long-term pumping test – conservatively pumping at twice the maximum summer demand – indicated that use of this series of back-up wells at levels greater than the anticipated demand could have a minor impact on three off-site wells. Because this test, which modeled an exaggerated Project water demand, revealed only minor impacts, the Project's operation under a realistic range of circumstances is not anticipated to have a discernible impact on offsite wells. During a short-term emergency, the facility could rely upon its one million gallon storage tank for water demand while pumping the backup wells at a much lower rate. The facility could also reduce water use during the summer months by reducing inlet evaporative cooling to the gas turbines and reducing plant output capability. This will effectively reduce water consumption to the winter level of approximately 11.5 gpm. At this use level, the plant is able to operate for more than 56 days on water stored in the storage tanks maintaining 318,360 gallons for fire suppression. In the unlikely

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			event that an interruption extends beyond 56 days, the facility can bring in additional water supplies by tanker truck. Minimum consumption rates can be met with no more than two 8,000 gallon trucks per day supplying water to the facility.
Graham Trelstad, AKRF	The proposed Water Supply Alternatives should consider phasing in the use of treated effluent from the Dover Knolls project as it is constructed and occupied.	32-59	As discussed in DEIS Section 5.4.4.2, the proposed Knolls of Dover project is planned to have a wastewater treatment plant that could, at some future point, provide treated effluent to meet all or a portion of the Project's water needs. While that project has been approved by the Town of Dover, until it has an operating track record to demonstrate consistent volume and quality of discharge, a practical assessment of that source cannot be completed. CVE is open to consideration of feasibility of use of this water source in the future.
Graham Trelstad, AKRF (Berger Engineering and Surveying)	[*Stormwater management plan information provided in Appendix 5-A and 5-B is summarized and noted as adequate*.] No design plans and details were provided with the DEIS. The reports in Appendix 5-A and Appendix 5-B are sufficient for DEIS level in that they provide the necessary building blocks to develop storm water control and treatment, and erosion and sediment control plans which would meet the town requirements for limiting the impact runoff from the project will have on the town. When a chapter 65 permit is prepared site-specific details and practices should be provided.	32-64	See Section 5.3.1 for an update of the stormwater management plans. Preliminary SWPPPs have been developed to address the temporary use of the former Rasco parcel (Appendix 5-B of the FEIS) and remote Laydown Site (Appendix 5-C of the FEIS) during the construction period. These preliminary SWPPPs provide additional design details to support the Project's application for a Chapter 65 permit (Erosion and Sediment Control) to the Town of Dover.

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T. Michael Twomey, Entergy	The DEIS presents the results of and aquifer pump test as evidence that the bedrock groundwater wells will supply the plant's long-term water needs without impacting the Swamp River…The testing, however, is insufficient to support this conclusion…The DEIS reports that the piezometers showed "no observable impact to the monitored water levels due to the pumping test…" To the contrary, the Site Water Budget Report included in the DEIS states that "the proposed project withdraws groundwater from aquifers which otherwise naturally support baseflow entering the Swamp River" and notes the pump test shows that, because the primary water source (Well 4) "draws water from such deep portions of the aquifer, there is a considerable delay, measured at least in days and likely measured in weeks, between when a peak pumping rate begins and when associated flow reductions could begin to reduce aquifer outflow rates entering the Swamp River."…Thus, the Water Budget Report acknowledges that there is indeed a measurable, though delayed, impact of pumping from the Project's primary water well in the deep bedrock aquifer and indicates that the tests performed likely do not indicate the	33-2	As discussed in Section 5.3.2 of the FEIS and confirmed by the wetland monitoring described in DEIS Section 5.4.4.2, alteration of the wetlands is not anticipated due to Project water use. The testing referenced in Comment 33-2 refers to the long-term pump test discussed in DEIS Section 5.4.4. Although the Project's supply wells are not public water supply wells, the New York State Pumping Test Guidelines (Appendix 10, Technical and Operational Guidance Series 3.2.1) for public water supply wells were used as the standard. Based upon these guidelines, a pump test protocol was developed and the test was conducted for 72 hours, after aquifer stabilization, to obtain a meaningful, measurable response. The test charts for the wetland test points located in Wetlands 4 and 5, namely PZ5a/ PZ5b Surface and PZ6 Shallow/PZ6 Surface, can be found in DEIS Appendix 5-E, Figures 35 and 36, and are included in this FEIS as Figures 5-3 and 5-4. Review of the test chart for "PZ6 Shallow/PZ6 Surface," shows no hydraulic influence that can be attributed to the pumping test. The other chart ("PZ5a/PZ5b Surface"), however, shows a water level decline in both points starting about 24 hours after the start of the first 72-hour pumping test on Well 4. The total recorded water level decline is about 0.1 foot over the duration of the first 72-hour test period and an additional 0.1 foot for the second 72-hour set of tests. A cursory review of this chart, without considering the Site Water Budget Report (DEIS Appendix 5-C) and the combined relationship of both to the Swamp River, might lead to an impression of a connection between the pumping tests and water level. When the pumping tests and Site Water Budget Report are viewed together, it is clear that this is not the case, as discussed in Section 5.3.2 of the FEIS.

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	true extent of groundwater impact. As a result, the withdrawal of 15 million gallons per year from the Swamp River groundwater recharge area could potentially adversely affect the Great Swamp and the Swamp River, particularly during the dry summer season, when the plant could be withdrawing up to 87,000 gallons per day from the watershed. Such a loss of water input could reduce the flow of the Swamp River and adversely affect the Great Swamp and its riparian habitats.		Section 5.3.2 explains that groundwater level fluctuations observed during the pump tests were determined to be independent of the pump tests, indicating that the Project's proposed water use, even at the elevated rates of the pump tests, would not have a significant adverse impact on groundwater. This is also consistent with the Site Water Budget Report which documented that the aquifer formation near the Property supports a significant share of groundwater discharging naturally into the Swamp River. The discharge quantity was shown to be significantly greater than the quantity of water consumed by the proposed Project. Project impacts on the local hydrogeologic environment are therefore judged to be insignificant, and the Project will have no impact on site wetland ecological viability, just as the Well Pump Test recorded no measureable impacts in the test piezometers.
T. Michael Twomey, Entergy	In particular, the reduced water flow could adversely impact Wetlands 4 and 5, which, as noted, are within the Great Swamp. According to the Site Water Budget Report, the pumping test revealed a similar delayed effect on the Wetlands 4 and 5 located to the west of the railroad tracks. These 45 acres of wetlands also could be permanently damaged or lost by the reduction in groundwater recharge caused by the plant's operation...Although no actual digging, filling, excavating, grading or dredging will occur in these wetlands, a loss of water input which could change the functions and values of the wetland constitutes a direct impact which	33-3	Alteration of the wetlands is not anticipated because of Project water use, as discussed in FEIS Section 5.3.2 and confirmed by the wetland monitoring described in DEIS Section 5.4.4.2 and DEIS Appendix 5-E. As summarized in the Site Water Budget Report (DEIS Appendix 5-C), groundwater volumes entering the riparian corridor (i.e., Swamp River and associated wetlands) near the Project site far exceed the Project's proposed maximum water demand even during drought periods, ensuring that Wetlands 4 and 5 should not suffer a loss of available groundwater. The variations in water level noted by the commenter do not correlate to the testing periods, nor did these variations meaningfully dewater the wetlands.

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	must be considered in the SEQRA *[State Environmental Quality Review Act]* review process.		
T. Michael Twomey, Entergy	…Because these wetlands might be adversely impacted *(i.e.,* permanently altered or lost) due to the Project's withdrawal of water, they are subject to federal permitting under CWA § 404….	33-4	It is agreed that Wetlands 4 and 5 would be considered jurisdictional under Section 404 of the Clean Water Act. As discussed in Sections 3.3.3.1 and 5.3.2 of the FEIS, alteration of the wetlands is not anticipated due to Project water use, confirmed by the wetland monitoring described in DEIS Section 5.4.4.2, DEIS Appendix 5-E, and discussed further below in Section 5.3.2. Even if that were not the case, Section 404 of the Clean Water Act regulates the discharge of fill to waters of the U.S., including jurisdictional wetlands, not alteration of wetland hydrology from groundwater withdrawals. No such activity is planned within Wetlands 4 and 5 and, therefore, no permit is required.
T. Michael Twomey, Entergy	Based on its assertion that the groundwater withdrawals will have no effect on the Great Swamp, or the Swamp River, the DEIS also concludes that potential indirect impacts on the bog turtle will be insignificant. *See* DEIS, p. 5-1. However, as discussed above, the DEIS's assertion that the groundwater withdrawals will have no impact on Wetlands 4 and 5 west of the railroad track has not been clearly demonstrated. The reduction of water flowing into the Great Swamp could destroy important habitat for the bog turtle, necessitating appropriate action under the federal and/or state Endangered Species Acts. Therefore, FWS must be informed of	33-5	As discussed in Section 5.3.2, alteration of the wetlands is not anticipated due to Project water use, as confirmed by a long-term pump test of the Project's wells and associated wetland monitoring described in DEIS Section 5.4.4.2, DEIS Appendix 5-E, and discussed further below in Section 5.3.2. No significant change in hydrology is proposed. CVE also consulted with the USFWS regarding the bog turtle and other species, providing information regarding pump test data. As outlined in Section 3 of the FEIS, no impact to bog turtles or their habitat is anticipated.

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	the Project's potential to impact the Great Swamp and a full consultation pursuant to Section 7 of the Endangered Species Act must be undertaken to ascertain the impacts on the bog turtle.		
T. Michael Twomey, Entergy	…the available Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Maps…indicate that a portion of the Property, located east of the railroad where construction is proposed, is in fact located within the Floodplain Overlay District…Thus, compensatory flood areas may be required to prevent adverse effects on nearby property owners. Town of Dover Code §81-12, and applicable construction standards must be adhered to protect the construction from flood damage.	33-23	The Town of Dover Town Board approved a revised Federal Emergency Management Act (FEMA) floodplain map in April 2012 (provided in Appendix 3-C of the FEIS); the adjusted floodplain overlay district does not extend east of the Metro-North railroad track. Work within state-regulated wetlands is limited to Wetland 2, where only a very small finger of marginal wetland will be altered; this will be fully replaced, resulting in no net loss. In fact, the clean-up of previously developed portions of the Property is expected to contribute to safeguarding the quality of the state-regulated wetlands associated with the Swamp River. No flood storage volume will be compromised by the Project and therefore no compensatory flood storage would be required nor would special flood damage protection be required for Project design.
James Utter, Friends of the Great Swamp	…we applaud CVE for changing their cooling system from a water-based system to an air-cooled system. Collection of water from rooftops of CVE buildings is also a positive step towards reducing the hydrologic impact of the plant. …we request that CVE agree to fund flow-gauge monitoring of the Swamp River, above and below the site, as well as piezometric monitoring of groundwater levels in three representative off-site wetlands. If stream flows are significantly reduced by the plant, or if	34-2	We note the Commenter's recognition of the Project's shift to an air-cooled system to reduce water use and its development of a rainwater collection system to supplement its water resources. In addition to these efforts, CVE has committed to install a stream gauging station downstream of the Project on the Swamp River. During a series of public meetings with local residents and environmental groups, attendees concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, is the most suitable location. It should be noted that comprehensive hydrological studies, including a long-term pump test, were undertaken that demonstrate that the Project will not discernibly affect stream flow or wetland hydrology, even under drought conditions. Anticipated NYSDEC permitting requirements will

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	groundwater levels in the wetlands are drawn down significantly, plant operations must then be adjusted to reduce the impact to acceptable levels.		formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.
James Utter, Friends of the Great Swamp	The DEIS also addresses the possibility of CVE using treated effluent from Dover Knolls to reduce or eliminate water withdrawal from the aquifer, if DK is approved. The cost of establishing this system is the responsibility of DK and the reduction in water withdrawn by CVE could partially mitigate the large amount of water DK projects withdrawing from the aquifer.	34-3	As discussed in Section 5.4.4.2, the proposed Knolls of Dover project is planned to have a wastewater treatment plant that could, at some future point, provide treated effluent to meet all or a portion of the Project's water needs. While that project has been approved by the Town of Dover, until it has an operating track record to demonstrate consistent volume and quality of discharge, a practical assessment of that source cannot be completed. CVE is open to consideration of feasibility of use of this water source in the future.
James Utter, Friends of the Great Swamp	Water quality could be affected by waste water discharges into the Swamp River, or indirectly from pollutants released into the air that settle out onto the land or water. CVE responded to the first of these by adopting Zero Liquid Discharge technology in the current plan. If this system works as described, pollutant discharges would not appear to be an issue.	34-4	As noted in the comment, no wastewater discharges are proposed, other than the discharge of sanitary waste through an on-site septic system. So there will be no direct discharges to the Swamp River. Because the Project will not have a significant impact on either air quality or acid deposition, it will not significantly contribute to indirect sources of water pollution. Since the Project will result in lower regional emissions, it will contribute to reducing these indirect impacts.
James Utter, Friends of the Great Swamp	Indirect sources of water pollution may be more difficult to address and are directly related to the Air Quality issues.	34-5	Because the Project will not have a significant impact on either air quality or acid deposition, it will not significantly contribute to indirect sources of water pollution. Since the Project will result in lower regional emissions, it will contribute to reducing these indirect impacts.

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John Fila, Wingdale Resident	The depletion or adverse impact on the primary aquifer in our area-and beyond- may be of critical importance – and a pivotal factor. The aforementioned Athens plant uses water from the Hudson river. Presumably there was a need for a significant quantity of cooling water. A need which simply could not be met using the local groundwater supply.	35-3	The installation of air cooling, a Zero Liquid Discharge system, and rooftop rainwater capture will reduce water use considerably (more than 98 percent compared with an equivalent wet-cooled facility), and the Project's resulting water demand is, therefore, compatible with the aquifer's water budget. These findings are confirmed by the analyses documented in DEIS Appendix 5-E: Well Test Report and supported in DEIS Appendix 5-C: Site Water Budget Report.
John Fila, Wingdale Resident	In addition, the cumulative impact must be considered, including aquifer use by the nearby Dover Knolls development, at full build-out, as well as provisions projecting long term growth in the area. All, in a worst case scenario i.e. drought conditions.	35-4	The importance of studying the cumulative impact of the Project with other proposed uses in the Town of Dover and the Harlem Valley is acknowledged. With these concerns in mind, the Project's Site Water Budget Report (DEIS Appendix 5-C) was commissioned to specifically analyze whether the Project's water consumption, in conjunction with other proposed projects in the area (including the Knolls of Dover), will be sustainable. Chazen, which has been involved in Harlem Valley watershed investigations since 1997, was chosen based on their knowledge and expertise of Harlem Valley hydrogeology. As concluded in the Site Water Budget Report, the Project water withdrawal needs are locally sustainable, there will be no permanent off-site drawdown effects on the aquifer, and significant flow capacity remains available for other projects currently under review by the Town of Dover, even during very dry or drought conditions (see DEIS Appendix 5-C). In addition, CVE has committed to install a stream gauging station downstream of the Project on the Swamp River.

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Sibyll Gilbert, Oblong Land Conservancy	The Housatonic Valley Association (HVA), has requested that monitoring stations be established to detect declining water levels, so that appropriate action can be taken when levels fall below established parameters. The Oblong Land Conservancy supports that request.	36-1	CVE has committed to install a stream gauging station downstream of the Project on the Swamp River. Meetings with local residents and environmental groups have concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, is the most appropriate location for the gauging station. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.
Ryan Courtien, Town Supervisor, Town of Dover	ES-4: "ensuring that no process wastewater will be discharge." Is it possible for wastewater to be discharged?	37-5	No wastewater discharges are proposed for the operation of the Project, other than the discharge of sanitary waste through an on-site septic system as described in Section 5.5.4 of the DEIS.
Ryan Courtien, Town Supervisor, Town of Dover	Figure 1-6: Well B-3 should have some protection from tampering due to its location outside of the fenced area and its proximity to RT. 22. Consideration also toward wells B-5 and B-6.	37-31	The Project's primary well will be located the within the perimeter fencing which secures the complete operations of the Project. Three on-site wells will be located outside of the secure, fenced Project area. All on-site wells currently have locks and will continue to be secured with padlocked steel well caps to protect against tampering; these will be periodically checked by operational staff to confirm locks are secure. In addition, Well B-3 (due to its location proximate to Route 22) will also be protected by bollards, pursuant to the requirements of Chapter 145-15.E(1)(c) of the Town of Dover Zoning Code.
Ryan Courtien, Town Supervisor, Town of Dover	Figure 1-11: How does the Rooftop Rain Capture system handle snow; especially a lot of snow like we saw in Winter 2011?	37-35	The rooftop rainwater capture system, described in Section 5.4.4.6.3 of the DEIS, will capture snow as it melts.

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Ryan Courtien, Town Supervisor, Town of Dover	2-33: The permanent sediment and stormwater control measures should be included on all slopes 20% or greater.	37-77	The preliminary SWPPPs, included as Appendix 5-A of the DEIS (Project Development Area), with plan updates provided in Appendix 5-A of the FEIS; Appendix 5-B of the FEIS (former Rasco parcel) and Appendix 5-C of the FEIS (remote Laydown Site) have been designed to meet the latest New York State requirements as outlined in the New York State Stormwater Management Design Manual, August 2010. This includes temporary erosion and sediment control measures, such as an erosion control blanket, on slopes between 15 – 30 percent and permanent erosion and sediment control measures, such as permanent turf reinforcement mats on slopes 30 percent or greater. The preliminary SWPPPs will be used to guide the Project's Section 65 permit application (Erosion and Sediment Control) with the Town of Dover.
Cristina Bleakley, Dover Resident	How the Great Swamp is going to be affected by this plant? Was the study made by Cricket Valley a true reading of how our resources will be affected and what is the long time effect?	40-3	The importance of the Great Swamp, the Swamp River and the Harlem Valley watershed to the community is acknowledged. Since its first Town Meeting in April 2009, CVE has made considerable efforts to re-engineer its facility to minimize water use, including the addition of a Zero Liquid Discharge system to internally recycle water, and a rooftop rainwater capture system to supplement the water supply. Through these efforts, the Project will be one of the most water-efficient power plants of its type. To ensure that the town's drinking water supply will not be affected, a long-term pump test program was developed and approved by the NYSDEC (see Section 5.4.4 of the DEIS for a detailed discussion of the pump test and approved protocol). This pump test was designed to monitor neighboring wells, adjacent wetlands, and the Swamp River to ensure the Project's water consumption would have no adverse impact. As discussed in Section 5.4.4.5 of the DEIS, the Project's main well can be operated indefinitely at its design rate and, when tested at maximum water needs (120 gpm), it did not produce any discernible effects on any of the monitored off-site private wells or on-site wetlands. Note that

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			anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.
William Sena, Dover Resident	You're going to be running steam, and you're going to cool it back down, and you're going to accumulate a lot of water. You're going to get the runoff for the water from the buildings and everything else, which sounds really good, but what happens if you have an overabundance of water? You know, I'm sure -- what's going to happen with the overabundance of water?	T1-9	In addition to reducing the need for water, a benefit of the air cooled system that will be used at the Project is the avoidance of accumulating water. In this closed system, used steam that is condensed to water in the air cooled condensers will be reused to make new steam in a closed cycle system, thus avoiding "accumulating" water. The Project will employ a Zero Liquid Discharge system from which water will also be recycled. To the extent that recycled water and captured rainwater is available, groundwater withdrawal will be reduced, avoiding any overabundance of water. Detailed information on how the Project will handle stormwater runoff, including 100-year storm conditions, is described in Section 5.6 and in Appendix 5-A of the DEIS. Updated preliminary SWPPPs for the proposed laydown areas, which are detailed in Section 5.3.1, include Best Management Practices and Preliminary Design Calculations for Stormwater Volume that will be reviewed in detail as part of the Project's Section 65 (Erosion and Sedimentation Control) permit with the Town of Dover.
Brigid Casson, Dover resident	I am curious as to whether the effect of any heat generated from the plant will impact the Swamp River and their ecosystem of the Swamp River. And although I know the water -- it's a self-contained unit, I'm curious about the heat generated.	T1-16	Heat from the Project will not impact the Swamp River or its ecosystem, as no discharge of heated water is proposed. Rather, heat will be recirculated to make additional energy through the combined cycle process, with cooling occurring in the air-cooled condenser and as exhaust gases exiting the stack. Neither the air-cooled condenser nor the stack will result in discernible ground level heat.

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Jessica Abrams, Greene County, NY	We also have to understand the footprint that we're now removing from that very land. What is the impact of this going forward on retention, the impact on the Village, the infrastructures. We want to make sure we reduce that as much as possible.	T2-22	The Project will remediate an abandoned industrial site, including both the Project Development Area and the former Rasco parcel. This remediation will include restoration of previously impacted wetlands on the site, which will have a positive impact on water quality. Stormwater management systems have been carefully designed, prioritizing water reuse and conservation and using bioretention swales. See Section 5.3.1 of the FEIS, DEIS Appendix 5-A and FEIS Appendices 5-A, 5-B and 5-C for a discussion of the proposed stormwater management plans, addressing the impacts of the footprint on retention. The Project will be relatively self-contained, and will not add significant demand for town services or infrastructure. Avoiding and minimizing impact to the community and the environment has been a priority for the Project.
Peter Rustenberg, Sherman, CT	If you look at a map of the Hudson River watershed, most of the maps, in fact, all of the maps I've seen, have it ending at the Connecticut State line. However, the fact is the best native brook trout stream in the seven counties north of New York City is Connecticut water. We provide that. And it goes into Haviland Hollow Brook. And the water from the Swamp River comes to Connecticut…I think we have to recognize that watersheds cross State and political boundaries.	T2-24	The Swamp River flows in a northerly direction from the Town of Pawling, NY to the Town of Dover, NY where it empties into the Ten Mile River. From this confluence, the Ten Mile River flows southerly and easterly to the Housatonic River in the State of Connecticut. As detailed in the DEIS Appendix 5-C, the Project's Site Water Budget Report measured both the upstream and downstream flow rates of the Swamp River and concluded that the Property is fully capable of supporting the Project's proposed average water consumption budget under both average and drought conditions, without significant impact to those flow rates. Because the Project incorporates a Zero Liquid Discharge system, there will be no process wastewater discharge to the Swamp River and, therefore, no discharge to the water bodies of Connecticut.

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Jim Utter, Friends of the Great Swamp	When I first started in, you folks were planning to withdraw a million gallons a day from the ground water…Now they said it's going to be 100,000, or something in that order. If they are able to do that, then I think that's great.	T2-31	The importance of the Great Swamp, the Swamp River and the Harlem Valley watershed to the community is acknowledged. Since its first Town Meeting in April 2009, during which Dr. Utter's concerns were raised, the Project has made considerable efforts to re-engineer its facility to minimize water use, including the addition of a Zero Liquid Discharge system to internally recycle water, and a rooftop rainwater capture system to supplement the water supply. Through these efforts, the Project will be one of the most water-efficient power plants of its type. It is anticipated that the summer nominal water needs will be approximately 72,000 – 86,400 gpd of water, the equivalent of 50 – 60 gpm for 24 hours. See DEIS Appendix 5-E.
Jim Utter, Friends of the Great Swamp	Part of the problem that we see is withdrawing water from ground water will effect surface water. It's going to draw down in the wetlands and streams. And with the turnover of water in the Swamp River being so low, it has very little current in this area, drawing it down at all can be a serious problem.	T2-32	As discussed in Section 5.3.2, alteration of the wetlands is not anticipated due to Project water use, confirmed by the long-term pump test and associated wetland monitoring described in DEIS Section 5.4.4.2 and discussed further below. CVE has committed to install a stream gauging station downstream of the Project on the Swamp River. Meetings with local residents and environmental groups have concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, would be the most advantageous location for gauging to occur. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.
Jim Utter, Friends of the Great Swamp	I also am glad to see that there's plans to not discharge it back in. I don't know where it's going. But the early plan was to discharge a lot of it back into the surface water. And that bothered me too.	T2-33	CVE has incorporated a Zero Liquid Discharge system into the Project. Water is continually recycled throughout the Project using this system, such that no process wastewater discharge is required. Rather, residual solids filtered from the water as it recirculates are accumulated and disposed of at a licensed solid waste landfill.

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Jim Utter, Friends of the Great Swamp	I think a serious problem is for Dover to look at what is going to be happening in the area. Because one of the goals of the EIS process is to look at cumulative impacts. As was mentioned before, there are at least three major projects proposed. One of them has been put on hold now, 22 Wind Rose. But right on the same stem, not very far apart, is Dover Knolls, which still plans to take a million gallons a day out of the ground water, and Cricket Valley. This is water impact. It's also traffic impact. It's all sorts of impacts. I think the Town really needs to make sure that the cumulative impacts from a long-range standpoint are considered in all of this. So that they are laid out and there are clear decisions made by the Planning Board. Where they want Dover to be in 25 years and how much should each project take from or add to the Town. It's a little hard to anticipate the economic downturn that stopped Wind Rose. But these are serious issues that affect the natural environment but also affects the community and social environment and the whole culture of the area.	T2-34	The importance of studying the cumulative impact of the Project with other proposed uses in the Town of Dover and the Harlem Valley is acknowledged. With these concerns in mind, the Project's Site Water Budget Report (DEIS Appendix 5-C), was commissioned to specifically analyze whether the Project's water consumption, in conjunction with other proposed projects in the area, including the Knolls of Dover, will be sustainable. The Chazen Companies, which has been involved in Harlem Valley watershed investigations since 1997, was chosen based on their knowledge and expertise of Harlem Valley hydrogeology. Their conclusion is that the Project water withdrawal needs are locally sustainable and that there will be no permanent off-site drawdown effects on the aquifer. CVE has committed to install a stream gauging station downstream of the Project on the Swamp River. Meetings with local residents and environmental groups have concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, would be the most advantageous location for gauging to occur. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.

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Mark Chipkin, Pawling Resident	…The other thing I wanted to mention is that in taking all this water and producing all those greenhouse gases, I don't see much here in terms of what Cricket Valley Energy is giving back…	T3-10	The Project incorporates significant benefit by minimizing water needs, maximizing water recycling and eliminating the need for process wastewater discharge, all of which are a financial commitment to good stewardship. In addition, through displacement of older, less efficient power plants in the region, the Project will result in a net reduction of over 650,000 tons per year of GHG emissions. The Project will remediate an abandoned industrial site, including both the Project Development Area and the former Rasco parcel. This remediation will include restoration of previously impacted wetlands on the site, which will have a positive impact on water quality. CVE has engaged in a wide variety of community outreach efforts (such as Advisory Working Groups, Open Houses, and newsletters) to share Project information and listen to concerns and priorities of the Dover community and its neighbors. Project design refinements and potential community benefits have resulted from these discussions; these conversations continue as CVE works with the Town of Dover Town Board to discuss components of a formal community benefits package. For example, CVE has been working with local land acquisition groups, including the Oblong Land Conservancy, to place the land west of the Metro-North rail line, approximately 79 acres, into permanent conservation. In addition, CVE continues to support the advancement of Dover's youth through a scholarship, awarded annually to a graduating Dover High School Senior pursuing an advanced degree in engineering or environmental science. The Project will also fund and execute the cleanup of an abandoned industrial complex which currently represents a potential environmental liability. The Project will comply with environmental regulations intended to safeguard the environment and community. Other Project features such

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			as jobs, taxes, and scholarships are important community benefits, but in no way are considered to be a replacement for good environmental stewardship.
Chris Wood, Pawling Resident, Oblong Land Conservancy	The project includes a number of conservation measures and pump tests have been run that would indicate that the needs of the project should not exceed local capacities. However, the fact remains that the communities in the valley rely upon an aquifer. This is just a finite resource. The Swamp River is a slow moving stream with limited capacity to self-cleanse. Were the water resources to become contaminated or subject to chronic depletion present and future residents of the area would have nowhere to turn.	T3-23	Alteration of the wetlands is not anticipated due to Project water use, confirmed by the wetland monitoring described in DEIS Section 5.4.4.2 and discussed further in Section 5.3.2. The Project's Site Water Budget Report (DEIS Appendix 5-C) was commissioned to specifically analyze whether the Project's water consumption, in conjunction with other proposed projects in the area, including the Knolls of Dover, will be sustainable. Chazen, which has been involved in Harlem Valley watershed investigations since 1997, was chosen to conduct this study based on their knowledge and expertise of Harlem Valley hydrogeology. Their conclusion is that the Project water withdrawal needs are locally sustainable. Further, under proposed regulations at 6 NYCRR Part 601, the Project may be required to obtain a water withdrawal permit. Once these regulations become effective, CVE will seek to obtain required water withdrawal permits, which are expected to carry with them stringent reporting requirements on the quantities of water withdrawn. CVE has committed to install a stream gauging station downstream of the Project on the Swamp River. Meetings with local residents and environmental groups have concluded that the Route 22 bridge, where a United States Geological Survey (USGS) stream gauging station had been previously sited, would be the most advantageous location for gauging to occur. As discussed in Section 5 of the DEIS and Section 5 of this FEIS, CVE has incorporated a Zero Liquid Discharge system into the Project. Water is continually recycled using this system, such that no process

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			wastewater discharge is required. With no discharge of process wastewater, that potential pathway for contamination of groundwater supplies will be avoided.
Chris Wood, Pawling Resident, Oblong Land Conservancy	In view of this, we believe according to the water resources on a regional basis to serve the needs of CVE against the long-term implications of additional piecemeal development in the area, as well as large-scale projects such as Dover Knolls…given the critical importance of this resource, it will be prudent to examine the practicality of crafting and implementing a permanent monitoring regime so that the town is forewarned of changes in aquifer levels and water quality. Such a regime should be coupled with a requirement on the part of CVE to change its operating model to maintain a certain level of resource availability. In order to guarantee adequate groundwater supplies for nearby residents and unlimited supplies for sensitive hydrological resources like the several fens in the area and the wetlands in the Swamp River, this is a measure that would help ensure protection of these water resources.	T3-24	The importance of studying the cumulative impact of the Project with other proposed uses in the Town of Dover and the Harlem Valley is acknowledged. With these concerns in mind, the Project's Site Water Budget Report (DEIS Appendix 5-C) was commissioned to specifically analyze whether the Project's water consumption, in conjunction with other proposed projects in the area, including the Knolls of Dover, will be sustainable. Chazen, which has been involved in Harlem Valley watershed investigations since 1997, was chosen based on their knowledge and expertise of Harlem Valley hydrogeology, and their conclusion is that the Project water withdrawal needs are locally sustainable and that there will be no permanent off-site drawdown effects on the aquifer. CVE has committed to install a stream gauging station downstream of the Project on the Swamp River. Meetings with local residents and environmental groups have concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, would be the most advantageous location for gauging to occur. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.
Tyler Davis, Dover Plains	…It seems like no matter what happens, even with the best technology available, the town of Dover will take a hit when it comes to	T3-29	As detailed in the DEIS (Appendix 5-C), the Project's Site Water Budget Report measured both the upstream and downstream flow rates of the Swamp River and concluded that the Property is fully capable of

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Resident	water quality, air quality and noise, and to me, that's a problem, because it seems like we're not gonna benefit directly by anything, that there is some type of grid on a regional level, on a national level. What about us? If we're gonna have this huge thing in our town, I want something back.		supporting the Project's proposed average water consumption budget under both average and drought conditions (DEIS Appendix 5-C), without significant impact to those flow rates. Because the Project incorporates a Zero Liquid Discharge system, there will be no process wastewater discharge. CVE has engaged in a wide variety of community outreach efforts (such as Advisory Working Groups, Open Houses, and newsletters) to share Project information and listen to concerns and priorities of the Dover community and its neighbors. Project design refinements and potential community benefits have resulted from these discussions; these conversations continue as CVE works with the Town of Dover Town Board to identify components of a formal community benefits package. For example, CVE has been working with local land acquisition groups, including the Oblong Land Conservancy, to place the land west of the Metro-North rail line, approximately 79 acres, into permanent conservation. In addition, CVE continues to support the advancement of Dover's youth through a scholarship, awarded annually to a graduating Dover High School Senior pursuing an advanced degree in engineering or environmental science. The Project will also fund and execute the cleanup of an abandoned industrial complex which represents a potential environmental liability. The Project will comply with environmental regulations intended to safeguard the environment and community. Other Project features such as jobs, taxes, and scholarships are important community benefits, (see Section 6.7 of the DEIS), but in no way are considered to be a replacement for good environmental stewardship.

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Mike Purcell, Pawling Resident	… if we have this added emissions in the Harlem Valley, what's that gonna do to our watershed… if the nitrogen readily absorbs to water vapor? So, if you have fog or if you have some instance where it's raining or it's precipitation or clouds,… this stuff can adhere to the water molecules and it stays in the water, it doesn't really reabsorb into the ground too well, but it does get into the streams and waterways. And once nitrogen's in there it's like a nutrient, so you get algae growing and things like that and then you have problems with the…fish and wildlife, too much nitrogen in your drinking water, you get those problems. So, I was wondering about that and like what has Cricket Valley done or what are they gonna do about monitoring that, because I looked at where their monitoring stations are, there's one in Torrington, Connecticut, at a wastewater treatment plant, and there's one up in Cornwall, Connecticut, Cornwall Hill, and… that doesn't really tell me what's happening…in Dover, in Amenia, in Pawling, so I was… wondering why wasn't that addressed in the DEIS. … why not test the water as it is now in these headwater systems, because there's…supposed to be swamps and stuff	T3-37	In accordance with the New York State Acid Deposition Control Act, a "Source Specific Acidic Deposition Impacts" analysis was conducted to provide quantification of the Project's contribution to the New York State total deposition of sulfates and nitrates at 18 defined receptors in New York State, New England, and Canada. The DEIS (Section 4.3.4.2) included analyses of impacts of Project emissions on sensitive vegetation and soils as well as contributions to acid deposition and ambient concentrations of nitrogen dioxide (NO_2). The analyses concluded that the Project's impacts would not have a significant impact on sensitive natural resources. Further, by displacing regional emissions of nitrogen oxides (NO_x) from older, higher emitting generators, as well as directly offsetting 115 percent of the Project's NO_x emissions, nitrogen deposition to Long Island Sound will decrease. In addition, as discussed in Section 5.3.3 below, CVE has committed to install a stream gauging station downstream of the Project on the Swamp River, which would be capable of monitoring water quality.

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	up on top of West Mountain, East Mountain, the lakes and rivers. That's what really supplies our aquifers. As the rain comes down to the top of these mountains and drains down to the valley bottom, it recharges our drinking water, it's part of that system, so you might want to know what you have now before you do anything else, and then, you know, moving on, you can test it. So, there has been some testing done like that. I was part of a study that checked the macroinvertebrate communities in the Swamp River Watershed, and two of the sites found acid depositions, which could be from, you know, who knows what, but most likely from acid rain, which is caused by nitrogen oxide, so it might be something to keep looking at.		
Mike Purcell, Pawling Resident	I know that towns in Dutchess County that have these water problems, they're very expensive to fix for the community…You know, if you get too much pollution in the water from any source, it's gonna cost the taxpayer money and…you can kind of tell a source to stop polluting, but...that doesn't always work out. …A power plant might be good economically for some things, but in the long run…you gotta take a closer look at what's really out there.	T3-38	The Project will incorporate a Zero Liquid Discharge system and, therefore, no process wastewater discharge will occur. In addition, Project designs incorporate Best Management Practices relative to the storage of fuel, lubricating oils, and chemicals. Since the Project's combustion turbines and the majority of other ancillary equipment will consume only natural gas, only small quantities of fuel, lubricating oil, and chemicals will be stored on site. As discussed in Section 5.6.4.2 of the DEIS, all tanks, equipment, and vessels containing fuel and lubricating oils will be inside a concrete containment, sump, or curbed/diked area as required for spill control and management. In addition, Best Management Practices related to chemical storage will be

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			addressed as part of a Spill Prevention Control and Countermeasure (SPCC) Plan with the Town of Dover and JH Ketcham Hose Co. as part of the Project's Special Permit process.
Mike Purcell, Pawling Resident	…I don't know how many structures [studies?] Cricket Valley's done in the field here, and there's probably plenty they could do by monitoring water and air, you can maybe get some baseline studies to see…what's out there, because…the Harlem Valley's a real special place…You've got more wildlife here than anywhere else in New York State almost, species-wise, you've got all kinds of birds, fish, turtles, whatever you want, animals; they're all out there.	T3-39	The Project will not use or be located in areas west of the Metro-North railroad track near the Swamp River. By maintaining this distance, CVE intends to preserve the high quality habitat located in that area. Detailed groundwater studies have been completed for the Project (described in Appendix 5-C and Appendix 5-Eof the DEIS and summarized below in Section 5.3.2) to confirm that the Project's use of groundwater would not have an indirect effect on the Swamp River or its adjacent wetlands. Project impacts on wildlife are further addressed in Section 3 of the FEIS.
Alan Surman, Dutchess County Legislator	One idea that I advanced earlier, if there was a continued need for water, since this place will be so close to Dover Knolls and Dover Knolls will be producing up to 500,000 gallons of effluent and be going through tertiary cleaning, conceivably one day we could force a pipeline up there for a mile and a half and they could use treated wastewater and they don't have to touch the groundwater at all.	T3-44	The water demand for the Project is very small and can easily be met through the use of bedrock wells without adverse impact. As discussed in DEIS Section 5.4.4.2, the proposed Knolls of Dover project is planned to have a wastewater treatment plant that could, at some future point, provide treated effluent to meet all or a portion of the project's water needs. Use of this treated effluent may be technically feasible (depending upon the consistent volume and quality of the discharge), but would require several miles of new water line along Route 22. While that project has been approved by the Town of Dover, until it has an operating track record to demonstrate consistent volume and quality of discharge, a practical assessment of that source cannot be completed. CVE is open to consideration of feasibility of use of this water source in the future.

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Carol Moran, Dover Resident	I did not participate in it [*the well testing program*], in part because my well is under my house and it would mean having somebody there in the house and I didn't want that. The negative well effects that were reported in there from the two wells, test wells, that you did that are closest to me, or the negative well effects on the neighbors, were glossed over, and that's your job in presenting this, because it's not just concerned with the immediate neighbors, but it made me, as many other things, like your selecting a period of heavy rainfall in which to do your testing, it made me doubt your serious intent of coming up with unbiased information as opposed to information that would support your points of view.	T3-57	The original plan for pump testing was to conduct the analysis during April 2010. However, due to the large amount of rain in March and April 2010, CVE delayed the pump test to prevent results from being skewed. The tests were instead conducted in late June 2010, during a time when water levels were near 7Q10 conditions (i.e., the lowest stream flow for seven consecutive days that would be expected to occur once in ten years). The pump test was designed to monitor neighboring wells, adjacent wetlands, and the Swamp River to ensure the Project's water consumption would have no adverse impact. As discussed in DEIS Section 5.4.4.5, the Project's main well can be operated indefinitely at its design rate and, when tested at maximum water needs (120 gpm), it did not produce any discernible effects on any of the monitored off-site private wells, nor any of the on-site wetlands. The long-term pumping test – conservatively pumping at twice the maximum summer demand (120 gpm) – indicated that use of a series of back-up wells at levels greater than the anticipated demand could have a minor impact on three off-site wells (Wilson, Cablevision and MacEntee wells). However, as discussed in DEIS Appendix 5-E, impacts to these wells cannot be considered significant since, in each case, the water level changes were less than those caused by the owner's use of the well. Because this test, which modeled an exaggerated Project water demand, revealed only minor impacts, the Project's operation under a realistic range of circumstances is not anticipated to have a discernible impact on offsite wells. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.

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Manna Jo Green, Rosendale, NY, Environmental Director for Hudson River Sloop Clearwater	Oh, one other thing somebody mentioned, septic system, you know, from a large facility, and I'd like to encourage the use of an advanced wetland system…basically, it's using plants to process wastewater, and that cuts down on the consumption of chemicals and it cuts down on the use of energy, so the more we can cut down on the use of energy, the better.	T3-64	Consistent with New York State Department of Health requirements, a septic system will be used for sanitary waste disposal. Based upon a review of Dutchess County soil mapping, anticipated wastewater quantities (500 gpd), and previous soil borings, it is recommended that on-site sanitary waste be treated through a preliminary subsurface treatment using a fill pad based upon Dutchess County Department of Health standards. Additives such as stimulators or enhancers (e.g., chemicals) are not required in a properly designed and maintained system. The plant will have periodic monitoring and maintenance as required to ensure the septic system is operating per design standards. No additional wastewater treatment is required or proposed. The Project will utilize natural plantings to filter stormwater through the use of bio-retention ponds, which incorporate many of the pollutant removal mechanisms of a forested ecosystem. The Project's stormwater management plan currently incorporates three of these bioretention areas as discussed in DEIS Section 5.6.3.

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Jessica Wade	…I know the Vincents brought up that they were concerned about the water quality, and I know that their children played in the river. I grew up in the river and I also played in the river, and it's important to know what you're swimming around in…	T3-69	CVE has incorporated a Zero Liquid Discharge system into the project. Water is continually recycled throughout the project, using this system, such that no process wastewater will be discharged. In addition, Project designs incorporate Best Management Practices relative to the storage of fuel, lubricating oils, and chemicals. Since the Project's combustion turbines and the majority of other ancillary equipment will consume only natural gas, only small quantities of fuel, lubricating oil, and chemicals will be stored on site. As discussed in Section 5.6.4.2 of the DEIS, all tanks, equipment, and vessels containing fuel and lubricating oils will be inside an environmental concrete containment, sump, or curb dike area as required for spill control and management. In addition, Best Management Practices related to chemical storage will be addressed as part of a SPCC Plan with the Town of Dover and JH Ketcham Hose Co. as part of the Project's Special Permit process.

5.3.1 Updated Stormwater Pollution Prevention Plans

The preliminary SWPPP prepared for the Project Development Plan Area and presented in Appendix 5-A of the DEIS, with updated plans provided in Appendix 5-A of the FEIS, continues to reflect the stormwater management system and Best Management Practices designed to protect offsite wetlands and waterways. The following sections provide information regarding the preliminary SWPPPs that have been developed to address the two temporary work areas planned for the construction period: the 13-acre portion of the former Rasco parcel that is planned for construction worker parking and laydown; and the remote Laydown Site that will be used for laydown and some peak period construction worker parking. Although temporary uses, considerable effort has occurred to develop plans that protect surrounding properties and restore the land following its temporary use. The three preliminary SWPPPs are intended to support not only the NYSDEC stormwater discharge review process, but the Project's Section 65 permit addressing erosion and sediment control with the Town of Dover.

5.3.1.1 Preliminary SWPPP – Former Rasco Parcel

Temporary use and restoration of a 13-acre portion of the former Rasco parcel during the Project's construction period has carefully considered appropriate design and management measures to protect off-site properties, including wetlands and waterways. The proposed use of this parcel is temporary, and will not result in any permanent impervious surface or significant change in site hydrology. The preliminary SWPPP prepared for this parcel, provided in Appendix 5-B of the FEIS, outlines the temporary stormwater management system and erosion control measures proposed, as well as the intent to restore the site (in accordance with NYSSWDM Section 5.1.6) and re-vegetate it in order to improve it from its existing, disturbed condition.

Erosion control measures, designed to minimize soil loss, and sediment control measures, intended to retain eroded soil and prevent it from reaching water bodies or adjoining properties, have been recommended in accordance with the following documents:

- NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-0-010-001 (effective January 29, 2010 through January 28, 2015)

- New York State Standards and Specifications for Erosion and Sediment Control, NYSDEC (August 2005)

- New York State Storm Water Management Design Manual (August 2010)

- Town of Dover Erosion and Sediment Control Ordinance (Town Code Chapter 65)

As discussed in the preliminary SWPPP provided in Appendix 5-B, the proposed stormwater collection system consists of pipes, open drainageways and on-site storm water management facilities that will adequately collect and convey the storm water generated by the proposed activities during construction. Best Management Practices incorporated in the design include: four sediment control and detention facilities; one rip-rap outlet sediment trap; temporary grass-lined swales; silt fencing; temporary seeding; stone inlet protection barriers; erosion control blankets; and a stabilized construction entrance with dust control. The design of certain sediment traps will be enhanced to not only provide for adequate sediment storage volume, but detain runoff prior to its discharge off-site to control the rate of runoff under even a 100-year storm event.

Pre- and construction phase surface runoff rates were evaluated for the 1, 10, and 100-year 24-hour storm events. The design is intended to attenuate runoff generated during the 1, 10, and 100-year 24 hour rainfall events such that the peak rates of runoff during construction will not exceed the rates that existed prior to development of the Project. Through the installation of the proposed erosion and sediment control features, stormwater will be appropriately attenuated and the temporary use of the former Rasco parcel will not have an adverse impact on the adjacent or downstream properties or receiving water courses. See Appendix 5-B of the FEIS for further detail.

5.3.1.2 Preliminary SWPPP – Remote Laydown Site

CVE has updated the Conceptual Stormwater Report for the remote Laydown Site (presented as DEIS Appendix 5-C) to ensure plans are in accordance with the Erosion and Sediment Control requirements of the Dover Town Code. A preliminary SWPPP for the remote Laydown Site, incorporating Best Management Practices to ensure minimal impact to surface waters and on-site wetlands, is provided in Appendix 5-C of the FEIS.

Although the use of the remote Laydown Site is anticipated to be less intensive due to the availability of the former Rasco parcel, the stormwater management design has been developed to be protective even at maximum use. As with the former Rasco parcel, the design of certain sediment traps at the remote Laydown Site will be enhanced to not only provide for adequate sediment storage volume, but detain runoff prior to its discharge off-site to control the rate of runoff under even a 100-year storm event. For all design points and design storms, the peak rate of runoff will not increase during the course of construction.

In addition to modified sediment traps, additional Best Management Practices such as a stabilized construction entrance; dust control; temporary seeding; stone check dams; temporary sediment traps; and temporary grass-lined diversion swales have been incorporated into the design. Through the use of these Best Management Practices, use of the remote Laydown Site will not have a significant impact on the adjacent or downstream properties or receiving water courses. A detailed discussion of the remote Laydown Site's preliminary SWPPP is presented as Appendix 5-C to the FEIS.

5.3.2 Regional & Cumulative Effect

The importance of studying the cumulative impact of the Project with other proposed uses in the Town of Dover and the Harlem Valley is acknowledged. With these concerns in mind, the Project's Site Water Budget Report (DEIS Appendix 5-C) was commissioned to specifically analyze whether the Project's water consumption, in conjunction with other proposed projects in the area, will be sustainable. Chazen, which has been involved in Harlem Valley watershed investigations since 1997, was chosen based on their knowledge and expertise of Harlem Valley hydrogeology. Their conclusion is that the Project water withdrawal needs are locally sustainable and that there will be no permanent off-site drawdown effects on the aquifer.

Specific concerns were raised as to whether the use of the Project's water supply wells would adversely impact the Swamp River and its associated wetland system. These concerns were addressed as part of the Project's Well Pump Test Report (DEIS Appendix 5-E) and Site Water Budget Report (DEIS Appendix 5-C). The purpose of the Well Pump Test Report was to demonstrate that the Project's supply wells are suitable to supply the amount of water that the Project requires, and to determine if the use of the on-site supply wells would have an adverse impact on neighboring private wells, on-site wetlands, or the Swamp River. Further, the collected pump test data were used to prepare the Project's Site Water Budget Report.

Given the Project's proximate location to the Swamp River and its associated wetlands, it is important to demonstrate that Project water withdrawal would not have an adverse impact on the system of wetlands within the Project area, including wetlands associated with the Swamp River. As detailed in Section 5.4.4 of the DEIS, a series of temporary piezometers was installed to record water level changes in the wetlands and Swamp River before, during and after the pump test. Monitoring of the wetland and Swamp River piezometers for the period starting May 11, 2010 and continuing to June 25, 2010 showed no observable impact to the monitored water levels due to the pumping test. Water level changes observed were all due to climatic conditions such as warm dry periods and sporadic, isolated rain events typical of late spring and early summer.

A review of the on-site monitoring charts, specifically the chart for PZ5a/PZ5b (Figure 5-3), shows that at the end of the second pumping test there is an upward deflection of the water level. This deflection may give the impression that the shutting down of the pumping test resulted in a general water level rise. However, several points must be reviewed to fully understand what the data provided in the chart for PZ5a/PZ5b reflect.

The water level decline observed in PZ5a and PZ5b starts about 24 hours after the start of the first 72-hour pumping test and continues until about 24 hours before the end of the first 72-hour pumping test. The water level declines again at the end of the first 72-hour pumping test until the water level rapidly recovers at the end of the second 72-hour pumping test. This pattern shows no actual correlation with the pumping tests for a number of reasons:

- Since the drawdown starts about 24 hours after the start of the pumping test the recovery would be expected to start about 24 hours after the end of the test but does not.

- Drawdown continues during the entire four day recovery period even though no well was being pumped.

- A sudden and sharp recovery at the end of the second 72-hour pumping test does not symmetrically reflect the drawdown, strongly indicating that it is not related to the pumping test.

- A short recovery period during the first test, unrelated to any rain event recorded, shows that the water level drawdowns in these monitoring points were not related to the pumping tests.

- A drawdown period prior to the test period is similar to the drawdown period during the test period. Both drawdown periods are associated with a time period without significant rainfall, strongly indicating that the observed water level drawdowns were associated with rain and lack of rain events rather than the effects of the pumping tests.

- The static water levels in the production wells prior to any pumping were 26 feet below land surface for Well 4, 46 feet below land surface for Well 3 and 32 feet below land surface for Well 5. Well 4 is located at a similar elevation as the wetlands on the site, within a few feet. However there is a considerable difference in water level elevation between the bedrock aquifer and the surface water in the site wetlands. The difference in the bedrock and surface water levels shows that there is a significant

hydraulic separation between the two. Therefore, pumping the bedrock well should have no appreciable impact on the wetlands.

Further, the Well Pump Test Report results show that a similar upward deflection exists in the *upstream* Swamp River chart indicating that the rise in water level is separate from the pumping test since the pumping test could not have influenced an upstream portion of the Swamp River to the observed level of 0.2 feet.

As indicated above, the Well Pump Test Report identified no clear wetland impacts. This is also consistent with the Site Water Budget Report, which was commissioned to specifically analyze whether the Project's water consumption, in conjunction with other proposed projects in the area, including the Knolls of Dover, will be locally sustainable. The Site Water Budget Report concludes that the section of the Swamp River abutting the CVE Property has been identified by stream gauging to experience the most robust stream gain of the entire river. Due to this advantageous location within the watershed, the Property is fully capable of supporting the Project's proposed average water consumption under both average and drought conditions, with no permanent off-site drawdown impacts of any type. With this in mind, the Site Water Budget Report also finds that the Project will have an insignificant impact on the local hydrogeologic environment because of the robust aquifer discharges occurring in the vicinity of the Property. The proposed Project impact is therefore effectively *de minimis*, and will have no impact on site wetland ecological viability, just as the Well Pump Test recorded no measureable impacts in the test piezometers.

It should be noted that the conclusion of the Site Water Budget Report is conservative, as it does not take into consideration the 3.4 acre rooftop rainwater capture system which will supplement the water budget by an annual average of more than 7 gpm.

5.3.3 Monitoring Recommendations

CVE has committed to install a stream gauging station downstream of the Project on the Swamp River. During public meetings with local residents and environmental groups, participants have concluded that the Route 22 bridge, where a USGS stream gauging station had been previously sited, would be the most advantageous location for gauging to occur. Meetings to discuss the installation and monitoring of a stream gauging station have been held, and will continue to be held as part of CVE's Advisory Working Group on Water, Wetlands, and Wildlife, which meets at CVE's offices in Dover Plains, New York. Note that anticipated NYSDEC permitting requirements will formalize monitoring and reporting obligations to verify that Project water usage is consistent with the assessed demand.

5.3.4 Potential Use of Treated Effluent

As discussed in DEIS Section 7.9.2, a review of the United States Environmental Protection Agency (USEPA) databases did not indicate the location of any substantial wastewater treatment plants (which could be a potential source of treated effluent as water supply) discharging within a reasonable distance from the site.

As discussed in DEIS Section 5.4.4.2, the proposed Knolls of Dover project, a large residential development located approximately 2.5 miles south of the CVE Property, is planned to have a wastewater treatment plant that could, at some future point, provide treated effluent to meet all or a portion of the Project's water needs. While that project has been approved by the Town of Dover, until it has an operating track record to demonstrate consistent volume and quality of discharge, a practical assessment of that source cannot be completed. CVE is open to consideration of feasibility of use of this water source in the future.

5.4 Conclusions

The Project has incorporated proven water conservation measures to minimize water demand and associated resource impacts during operations and construction and to make it one of the most water-efficient electrical generating facilities in the region. These measures include a highly efficient combined cycle technology; air cooled condensers; a Zero Liquid Discharge system; a rooftop rain capture system; and stormwater management systems incorporating Best Management Practices.

The Project proposes to use on-site, bedrock water wells to meet its water needs. A pumping test program was developed to demonstrate that the extraction of water for the Project would not have an adverse impact on: private well water supplies in the areas surrounding the site; wetlands within and adjacent to the Property; and the Swamp River. The testing program confirmed there would be no significant impacts on offsite wells, on-site and off-site wetland areas, or the Swamp River, due to the project's water withdrawal from the primary well. Water budget calculations on the aquifer indicate that the site is fully capable of supporting its proposed average water consumption under both average and drought conditions, and that the site's overall water budget needs are therefore self-sufficient and would generate no permanent off-site drawdown impacts of any type.

All construction and operation activities at the Property, including the temporary parking and laydown associated with a portion of the former Rasco parcel and the remote Laydown Site, will be conducted in accordance with the preliminary SWPPPs, using Best Management

Practices, and with the Erosion and Sediment Control requirements of Section 65 of the Town of Dover Town Code. This will ensure minimal impact to surface waters, on-site wetlands, receiving water courses, downstream properties, and subsurface conditions at the site and surrounding areas.

5.5 References

NYSDEC, 2010, New York State Stormwater Management Design Manual (August 2010)

NYSDEC, 2010, SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-0-010-001

NYSDEC, 2005, New York State Standards and Specifications for Erosion and Sediment Control

Town of Dover, 1999. Zoning Code. Adopted April 28, 1999.