

STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

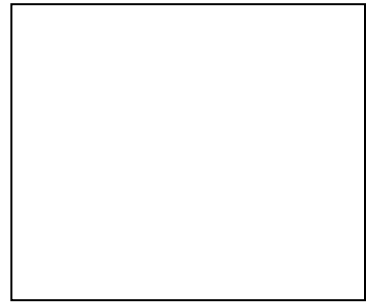
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Application of Cassadaga Wind Project for  
a Certificate under Article 10 of the Public Service Law

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Case No. 14-F-0490

REBUTTAL TESTIMONY OF  
BENJAMIN R. BRAZELL  
PRINCIPAL  
ENVIRONMENTAL DESIGN & RESEARCH,  
LANDSCAPE, ARCHITECTURE, ENGINEERING  
& ENVIRONMENTAL SERVICES, D.P.C.  
217 MONTGOMERY STREET, SUITE 1000  
SYRACUSE, NEW YORK, 13202



1    **Q:    Please state your name, employer, and business address.**

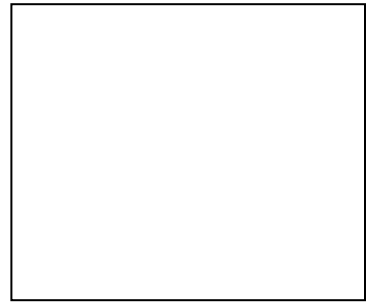
2    A:    Benjamin R. Brazell, Environmental Design & Research, Landscape,  
3        Architecture, Engineering & Environmental Services, D.P.C. (“EDR”), 217  
4        Montgomery Street, Suite 1000, Syracuse, NY 13202-1942.

5    **Q:    Did you file pre-filed testimony in this matter?**

6    A:    Yes.    Please see attached as Exhibit BRB-1 my pre-filed testimony and  
7        credentials.

8    **Q:    What is your experience conducting environmental impact assessments for**  
9        **wind power projects in New York State and elsewhere?**

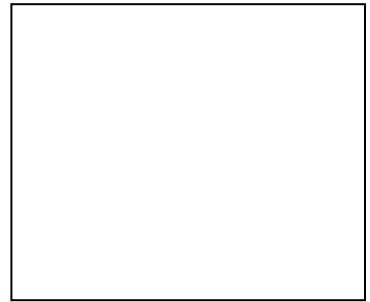
10   A:    I have been overseeing various studies and analyses for wind power projects since  
11        joining EDR in February 2004. I have been directly involved in the preparation of  
12        multiple Environmental Impact Statements (EISs) for wind power projects in New  
13        York, and Applications for Certificates of Environmental Compatibility and  
14        Public Need (Certificate Application) for wind power projects in Ohio, totaling  
15        over two dozen EISs/Certificate Applications. EDR was also responsible for the  
16        preparation and management of multiple stand-alone support studies and permit  
17        applications for each of these projects, such as wetland and stream delineations  
18        and state and federal wetland permitting, visual impact assessments, and cultural  
19        resources surveys. A list of all these projects and associated studies prepared by  
20        EDR is includes as Exhibit BRB-2. In addition to the Cassadaga Wind Project, I



1 am currently working on numerous other Public Service Law (PSL) Article 10  
2 proceedings including: Baron Winds Project (Case No. 15-F-0122), Galloo Island  
3 Wind Energy Facility (Case No. 15-F-0327), North Ridge Wind Farm (Case No.  
4 16-F-0268), Mad River Wind Farm (Case No. 16-F-0713), Bluestone Wind Farm  
5 (Case No. 16-F-0559), Heritage Wind Farm (Case No. 16-F-0546), Mohawk  
6 Solar Project (Case No. 17-F-0182), and the Horse Creek Wind Farm (Case No.  
7 12-F-0575). I also served as Principal-in-Charge for the Jericho Rise Wind Farm  
8 (Franklin County), which was constructed and became operational in 2016, and  
9 the Arkwright Summit Wind Farm (Chautauqua County), which is currently  
10 under construction. Both of these projects were reviewed and approved through  
11 preparation of EISs in accordance with the State Environmental Quality Review  
12 Act (SEQRA), and the Arkwright project also received approval from the New  
13 York State Department of Environmental Conservation (NYSDEC) under Article  
14 15 and 24 of the Environmental Conservation Law (ECL).

15 **Q: What is the purpose and scope of your testimony in this proceeding?**

16 A: To provide rebuttal testimony for certain environmental impacts associated with  
17 the Cassadaga Wind Project (Project or Facility), proposed by Cassadaga Wind  
18 LLC (the Applicant). Specifically, this rebuttal addresses certain portions of  
19 direct testimony provided by Anne Rothrock (New York State Department of  
20 Environmental Conservation [NYSDEC]), Christopher Legard (NYSDEC),



1           Jeremy Rosenthal (New York State Department of Public Service [NYSDPS]),  
2           Daniel Connor (NYSDPS), and the Staff Policy Panel (NYSDPS).

3    Wetlands and Streams

4    **Q:    Can you briefly describe where in the record information can be found**  
5           **regarding the Facility's impacts to wetlands and streams?**

6    A:    A significant amount of information is in the record regarding the identification of  
7           wetlands and streams and an evaluation of impacts on such resources. This  
8           information is briefly summarized as follows:

- 9           • Exhibit 22 of the Application identifies wetland resources and discusses  
10           wetlands impacts,
- 11          • Exhibit 23 of the Application identifies stream resources and discusses  
12           stream impacts,
- 13          • Appendix M of the Application contains detailed Preliminary Design  
14           Drawings that includes wetland and stream resources,
- 15          • Appendix RR of the Application contains the Wetland Delineation Report,
- 16          • an updated Wetland/Stream Field Delineation map was filed on November  
17           22, 2016,
- 18          • the Applicant's response to DPS IR-1 contains a detailed table of  
19           wetland/stream avoidance, mitigation and minimization (the Applicant's



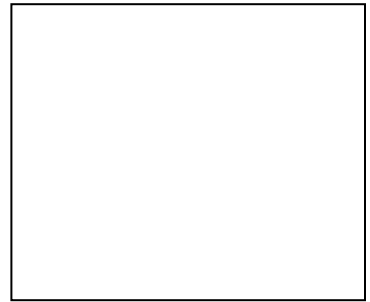
1 response to DPS-IR-1 is attached to Jeremy Rosenthal's testimony as  
2 Exhibit JR-1 page 1),

- 3 • the Applicant also submitted a supplement to DPS- IR-1 on March 31,  
4 2017 with an updated drawing set specific to wetland/stream impacts  
5 which is attached hereto as Exhibit BRB-3,
- 6 • the Applicant's response to DPS IR-46 contains an updated table of  
7 wetland/stream avoidance, mitigation and minimization and is attached  
8 hereto as Exhibit BRB-4,
- 9 • the Applicant's supplement to DPS IR-1 on March 31, 2017 also  
10 contained a Conceptual Stream and Wetland Mitigation Plan, which is  
11 attached hereto as Exhibit BRB-3,
- 12 • with this testimony I am also providing updated wetland/stream impact  
13 drawings attached hereto as Exhibit BRB-5,
- 14 • and the Applicant's response to DEC IR-3 contains an updated wetland  
15 mitigation plan attached hereto as Exhibit BRB-6.

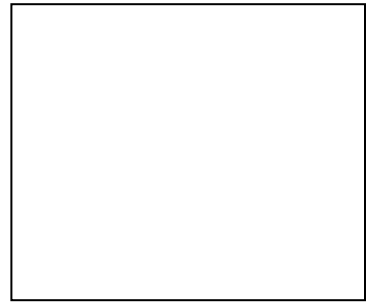
16 **Q: Can you describe how wetland and stream resources were identified within**  
17 **the Facility Site?**

18 A: Yes. Investigations were first conducted in the spring of 2015, associated with an  
19 initial Facility layout provided by the Applicant, which included a total of 75  
20 turbines. In support of these investigations, EDR created a set of field maps

Benjamin R. Brazell  
EDR



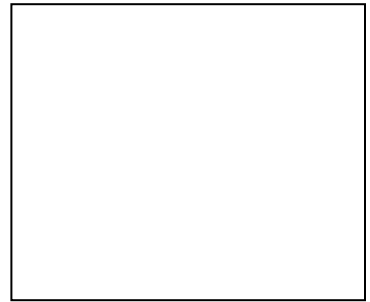
1 (depicting the preliminary location of project components along with mapped  
2 wetlands and streams on aerial base mapping) and conducted reconnaissance-  
3 level field investigations of the initial layout. EDR provided the results of our  
4 field investigations to the Applicant, along with specific layout/component  
5 alignment changes that were recommended to avoid/minimize impacts to  
6 resources such as wetlands and streams. Subsequently, wetland and stream  
7 delineations were conducted by EDR personnel during the fall of 2015, in  
8 accordance with the three-parameter methodology described in the U.S. Army  
9 Corps of Engineers (Corps) *Wetland Delineation Manual* (Environmental  
10 Laboratory, 1987), and further described by the *Regional Supplement to the Corps*  
11 *of Engineers Wetland Delineation Manual: North Central and Northeastern*  
12 *Region* (USACE, 2012). Wetland boundaries were defined in the field by  
13 sequentially numbered pink surveyor's flagging marked "wetland delineation",  
14 the locations of which were documented using Global Positioning System (GPS)  
15 technology with sub-meter accuracy. Wetland delineations within the Facility  
16 Site were conducted within a 200-foot wide corridor centered on linear Facility  
17 components (e.g., access roads, buried electrical interconnect, overhead  
18 transmission line), and within a 200-foot radius of turbines and other components  
19 such as permanent meteorological towers and substations. The results of the on-  
20 site wetland delineations are summarized in Exhibit 22 of the Application, the



1 results of the stream delineations are summarized in Exhibit 23 of the  
2 Application, and the results of the total delineation effort (both wetlands and  
3 streams) is further detailed in the stand-alone Wetland Delineation Report, which  
4 was included as Appendix RR to the Application. Additional delineations were  
5 conducted during the 2016 growing season in areas where lack of landowner  
6 access precluded delineations on specific parcels in 2015, resulting in a complete  
7 delineation of the Facility. As a result, updated delineation maps (Figure 8 of the  
8 Wetland Delineation Report) were provided to NYSDEC personnel on November  
9 11, 2016 and subsequently filed on the DMM on November 22, 2016. Finally, the  
10 delineation report originally included in the Application as Appendix RR was  
11 updated to reflect the results of the 2016 delineations, and was sent to NYSDEC  
12 and U.S. Army Corps of Engineers (Corps) personnel on February 27, 2017.

13 **Q: Did representatives from the NYSDEC or Corps conduct site visits of the**  
14 **Facility to review wetland and stream delineations?**

15 A: Yes. Prior to conducting the wetland and stream delineations in the fall of 2015,  
16 EDR invited NYSDEC and Corps personnel to review delineation methodology in  
17 the field, and as a result one Corps representative conducted a site visit with EDR  
18 personnel and an Applicant representative in October 2015 (NYSDEC personnel  
19 declined the invitation). Following receipt of the updated delineation maps on  
20 November 11, 2016, Anne Rothrock, with NYSDEC Region 9's office, conducted



1 a site visit with EDR personnel and an Applicant representative on December 9,  
2 2016. Lastly, one Corps representative and Anne Rothrock conducted a site visit  
3 with EDR personnel, RES personnel (the Applicant's wetland mitigation  
4 consultant), and an Applicant representative on March 30, 2016.

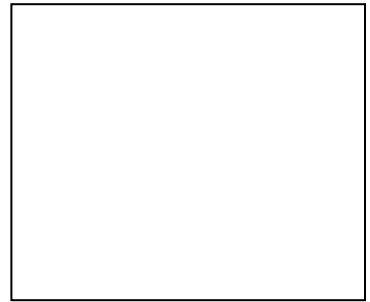
5 **Q: Did wetland impact avoidance and minimization occur prior to defining the**  
6 **Facility layout set forth in the Application?**

7 A: Yes. As indicated above, reconnaissance-level field investigations were  
8 conducted on an initial layout to identify wetland and stream resources, and the  
9 resulting data was used by the Applicant to make Facility layout adjustments and  
10 avoid and minimize impacts to such resources. The initial layout investigated in  
11 the spring of 2015 included 75 turbines, whereas the Application set forth and  
12 addressed a total of 58 turbines.

13 **Q: Was this "pre-Application" avoidance and minimization described in the**  
14 **Application?**

15 A: Briefly. Exhibit 22(n) of the Application states, "Wetland impacts have been  
16 minimized substantially due to changes in the Facility design. A 75-turbine  
17 layout, proposed early in Facility siting, was evaluated at a reconnaissance level  
18 for wetland and stream resources. This layout would have resulted in permanent  
19 impacts to 4.77 acres of wetlands. Therefore, this proposed layout represents a  
20 68% reduction in permanent wetland impacts, with just a 23% reduction in the

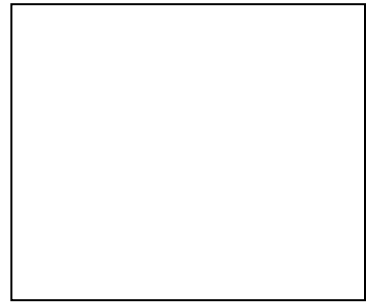




1 number of turbines.” This is also briefly described in Exhibit 9(C)(4), and the 75-  
2 turbine layout is depicted on Figure 3-1 of the Application. Please note that in  
3 accordance with the Stipulations, which were developed in consultation with  
4 multiple parties (final Stipulations were executed by the NYSDPS and NYSDEC  
5 on April 12, 2016 after approximately 5 months of negotiations), these numbers  
6 were based on a standard set of assumptions applied to Geographic Information  
7 System (GIS) calculations, and actual engineering results can result in slightly  
8 different numbers.

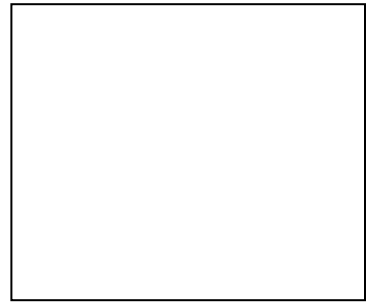
9 **Q: Is there additional information that describes wetland/stream impact**  
10 **avoidance and minimization measures?**

11 A: Yes. Exhibit 22(n) of the Application also discusses impact  
12 avoidance/minimization associated with the electrical collection and transmission  
13 lines, and states, “...the Applicant is anticipating installing collection line via  
14 directional drilling at forested wetlands where buried collection line is the only  
15 Facility component, which eliminates wetland impacts in those areas where it is  
16 used. In many cases, wetlands and streams will be spanned by either overhead  
17 collection line or transmission line, eliminating the need for in-stream work in  
18 these locations. The Applicant intends to span overhead those streams protected  
19 under ECL Article 15. Construction and operation of the Facility will be done in  
20 accordance with the standards established by ECL Article 15.” Exhibit 22(n) also



describes specific measures to be implemented during construction to minimize impacts, including the following:

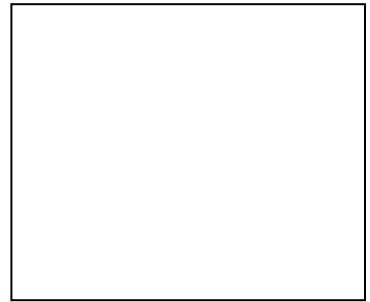
- *“No Equipment Access Areas:* Except where crossed by permitted access roads or through non-jurisdictional use of temporary matting, streams will be designated “No Equipment Access,” thus prohibiting the use of motorized equipment in these areas.
- *Restricted Activities Area:* A buffer zone of 100 feet, referred to as “Restricted Activities Area”, will be established where Facility construction traverses streams, wetlands and other bodies of water. Restrictions will include...
- *Sediment and Siltation Control:* A soil erosion and sedimentation control plan will be developed and implemented as part of the SPDES General Permit for the Facility. Silt fences, hay bales, and temporary siltation basins will be installed and maintained throughout Facility construction. Exposed soil will be seeded and/or mulched to assure that erosion and siltation is kept to a minimum along wetland boundaries. Specific control measures are identified in the Facility Preliminary Stormwater Pollution Prevention Plan (SWPPP), and the location of these features will be indicated on construction drawings and reviewed by the contractor and other appropriate parties prior to construction. These features will be inspected on a regular basis to assure that



1 they function properly throughout the period of construction, and until  
2 completion of all restoration work.

- 3 • *Work Period Restriction for Stream Crossings:* Construction in streams  
4 protected under Article 15 will comply with work period restrictions that are  
5 established to protect fish spawning and migration. The work period  
6 restriction is from October 1 to April 30 for streams with trout and from  
7 March 15 to June 15 for other protected streams (NYSDEC, 2005). However,  
8 site-specific consultation with NYSDEC stream biologists may result in less  
9 restrictive no-work periods. For example, the Final Environmental Impact  
10 Statement (FEIS) for the Arkwright Summit Wind Farm noted that NYSDEC  
11 personnel indicated that in-stream work could take place outside of the  
12 seasonal work restriction window, as determined on a case-by-case basis  
13 (EDR, 2016). Seasonal work period restrictions on in-stream work during  
14 Facility Construction will be established in consultation with NYSDEC. All of  
15 the protected streams within the Facility Site are C(T) streams, and these are  
16 anticipated to either be spanned overhead or bored locations where collection  
17 lines cross them, so as reduce impacts to streams and avoid in-stream work.”

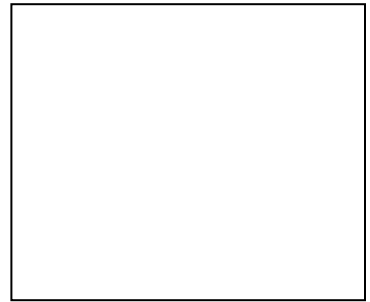
18 In addition, in response to Interrogatory Request (IR) No. DPS-1 the Applicant  
19 completed a detailed table, which was designed by NYSDPS personnel. This  
20 table identifies each wetland and stream crossing and describes why the resource



1        could not be reasonably avoided and actions taken to minimize impacts to the  
2        resource. This table includes a significant amount of information, specifically 7  
3        columns and 161 rows of information (i.e., 161 individual wetlands/stream  
4        crossings evaluated for impact avoidance and minimization). The Applicant's  
5        response to IR DPS-1 also includes example photographs depicting locations  
6        where Facility components were sited on existing disturbances, such as existing  
7        farm roads and logging roads. Although not requested, the Applicant also  
8        committed to providing detailed wetland and stream drawings to the parties by  
9        March 31, 2017 which were submitted to the parties as a supplement to DPS-1 on  
10       March 31, 2017 (see impact testimony below for additional information on these  
11       drawings). Subsequently, in response to IR DPS-46, the Applicant provided an  
12       update to the detailed spreadsheet originally provided in response to IR DPS-1 to  
13       account for further impact avoidance, minimization, and mitigation measures as  
14       demonstrated in the March 31, 2017 updates. Please also see the Updated Layout  
15       section of my testimony below.

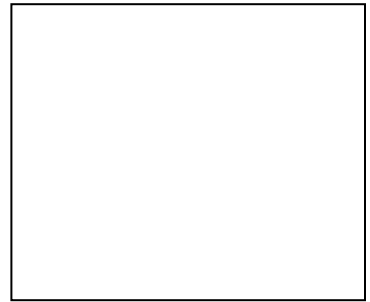
16    **Q:    Regarding wetland and stream impacts, what information is provided in the**  
17        **Application?**

18    A:    Exhibit 22(m) of the Application provides details associated with wetland  
19        impacts. Initially there is a discussion that describes the types of impacts that are  
20        anticipated due to construction of the Facility, which is followed by a discussion



1 that quantifies impact. Specifically, Exhibit 22(m) page 65 states, “Construction  
2 of the Facility is anticipated to result in disturbance of up to 23.11 acres of  
3 wetlands. Of this disturbance, 21.56 acres will be disturbed only temporarily,  
4 while 1.55 acres are anticipated to be permanently lost. These impacts represent a  
5 conservative estimate for several reasons. First, the Facility evaluated herein  
6 includes up to 58 wind turbines. Depending on the turbine model selected, fewer  
7 turbines may actually be built. In addition, the Applicant is currently in  
8 discussions with landowners who have temporary staging areas proposed on their  
9 properties. These discussions are likely to result in eliminating staging area  
10 related impacts to wetlands. Finally, the Applicant will install buried interconnect  
11 via directional drilling, where practicable, to eliminate impacts to forested  
12 wetlands in cases where buried collection line is the only Facility component.  
13 Implementation of these measures will reduce wetland impacts from the acreages  
14 presented in this Application.” This is then followed by a detailed table (Table  
15 22-6 Wetland Impacts) that provides the following information for each  
16 individual wetland impact:

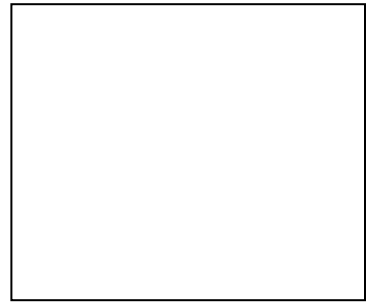
- 17 • Wetland ID
- 18 • Wetland Type (e.g., forested, emergent)
- 19 • NYSDEC Wetland ID
- 20 • Temporary Impact (square feet)



- 1           • Permanent Impact (square feet)
- 2           • Facilities Crossing Wetland (e.g., buried interconnect, access road, wind
- 3           turbine)
- 4           • Anticipated Crossing Methodology If Impact by Buried Interconnect Only
- 5           (e.g., trench, horizontal directional drill [HDD])

6           With respect to impacts, the end of Table 22-6 provides the total cumulative  
7           impact in both square feet and acres. This information is, at the very least,  
8           consistent with, and more likely exceeds, the requirement set forth in the  
9           Stipulations, which were executed by the NYSDPS and NYSDEC on April 12,  
10          2016. Specifically, Stipulation 22(m) requires Exhibit 22(m) of the Application to  
11          include “A quantification of temporary and permanent impacts to wetlands (and  
12          any state-regulated 100-foot adjacent areas) based on the proposed footprint of all  
13          Facility components and associated impact assumptions. Such impacts will be  
14          presented in a table that identifies the type of impact and associated crossing  
15          methodology.”

16          A similar level of information is provided in Exhibit 23 of the Application for  
17          streams. Specifically, Exhibit 23(b)(4) discusses impacts to streams, and states,  
18          “Potential temporary and permanent impacts to streams and open waters that  
19          could result from Facility construction and operation have been calculated using  
20          disturbance assumptions presented in 1001.22(b). The Facility is anticipated to

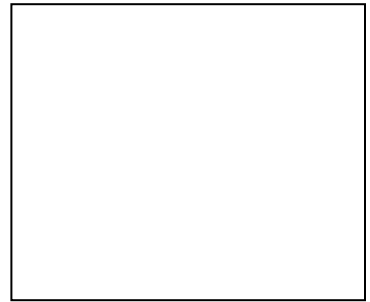


1 result in up to approximately 8,845 linear feet of temporary disturbance to  
2 perennial and intermittent streams and up to approximately 341 linear feet of  
3 permanent disturbance to perennial and intermittent streams.” This is then  
4 followed by a detailed table (Table 23-3 Stream Impacts) that provides the  
5 following information for each individual stream impact:

- 6 • Delineated Stream ID
- 7 • Type (e.g., intermittent, perennial)
- 8 • NYSDEC Stream Classification (e.g., C, C(t), B)
- 9 • NYSDEC Protected Stream (yes or no)
- 10 • Temporary Impact (linear feet)
- 11 • Permanent Impact (linear feet)
- 12 • Facilities Crossing Stream (e.g., buried interconnect, access road)
- 13 • Anticipated Crossing Methodology If Impacted by Only Collection Line
- 14 (e.g., trench, HDD)
- 15 • Utilizes Existing Access (yes or no)

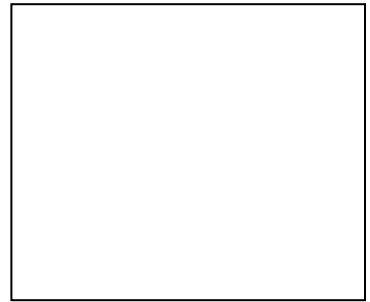
16 With respect to impacts, the end of Table 23-3 provides the total cumulative  
17 temporary and permanent impact in linear feet.

18 **Q: Regarding wetland and stream impacts, is there additional information**  
19 **provided in the case record?**



- 1 A: Yes. In response to DPS IR-1, the Applicant committed to preparing a detailed set  
2 of wetland and stream impact drawings. In accordance with this commitment, the  
3 Applicant submitted a detailed set of drawings on March 31, 2017 to the parties  
4 (Exhibit BRB-3). These drawings included the following:
- 5 • Sheet G-000: Master legend, wetland classification system, regional index  
6 depicting the organization of the detailed impact drawings (i.e., Northwest  
7 Region, Northeast Region, Central Region, Southwest Region, Southeast  
8 Region).
  - 9 • Sheet G-001: General notes (Preliminary Contractor Notes, Preliminary  
10 General Environmental Restrictions, Preliminary Specific Stream  
11 Crossing Restrictions, Preliminary Specific Wetland Crossing  
12 Restrictions, Preliminary Erosion & Sediment Control Notes) and a very  
13 detailed Wetland and Stream Impacts table.
  - 14 • Northwest Overview Sheet and Sheets NW1-NW16: detailed impact  
15 drawings
  - 16 • Northeast Overview Sheet and Sheets NE1-NE9: detailed impact drawings
  - 17 • Central Overview Sheet and Sheets C1-C23: detailed impact drawings
  - 18 • Southeast Overview Sheet and Sheets SE1-SE16: detailed impact  
19 drawings





1           • Southwest Overview Sheet and Sheets SW1-SW33: detailed impact  
2           drawings

3           • Sheets C-601 through C-604: typical civil details

4           The Applicant also provided an updated to IR DPS-1 (updated wetland/stream  
5           impact minimization and avoidance table) in response to IR DPS-46 (see Exhibit  
6           BRB-4). This testimony also includes an updated set of detailed wetland and  
7           stream impact drawings (see Exhibit BRB-5).

8   **Q: Will the Facility, as proposed, involve activities regulated by ECL Article 24**  
9   **or 15?**

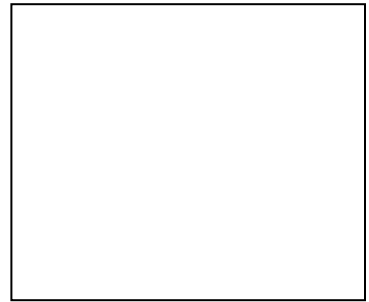
10 A: Yes. Specific to streams, Direct Testimony was provided by Christopher Legard  
11 of the NYSDEC and this opinion is consistent with page 7, lines 5 through 9 of  
12 his testimony. Specific to wetlands, direct testimony was provided by Anne  
13 Rothrock of the NYSDEC and this opinion is consistent with page 12, lines 5  
14 through 10 of her testimony.

15 **Q: In your opinion, does the case record contain sufficient information to**  
16 **describe stream impacts?**

17 A: Yes, based on all the information provided to date (as summarized in my  
18 testimony above), sufficient information exists to describe stream impacts.

19 **Q: Is this opinion consistent with Christopher Legard's direct testimony?**

20 A: Yes. This is consistent with page 7, lines 10 through 19 of his testimony.



1   **Q:    In your opinion, does the case record contain sufficient information to**  
2       **describe wetland impacts?**

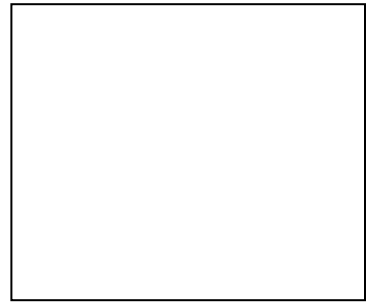
3   A:    Yes, based on all the information provided to date (as summarized in my  
4       testimony above), sufficient information exists to describe wetland impacts.

5   **Q:    Is this opinion consistent with Ms. Rothrock’s Direct Testimony?**

6   A:    No. On page 12, lines 12 through 14 of her testimony, Ms. Rothrock states, “I  
7       cannot describe specific impacts on wetlands because information is missing from  
8       the Application that would otherwise allow a detailed and specific quantification  
9       of impacts.”

10   **Q:    Can you explain this statement?**

11   A:    No. As summarized above in my testimony, the Application provides specific  
12       descriptions, information, and quantification of impacts for wetlands and streams,  
13       including detailed tables that quantify each individual impact to a wetland or  
14       stream. With regard to the impact tables provided in Exhibits 22 and 23 of the  
15       Application, specifically Table 22-6 (Wetland Impacts) and Table 23-3 (Impact to  
16       Streams), each table provides specific information on each individual  
17       wetland/stream, an indication of NYSDEC classification for each individual  
18       wetland/stream, a quantified impact for each individual wetland/stream, and the  
19       type of Facility component causing each individual impact, among other  
20       information. In other words, the same type of information is provided for impacts

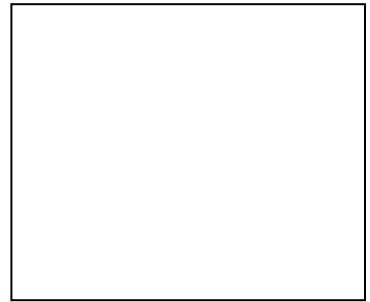


1 to wetlands and streams, and I cannot explain the inconsistency between  
2 NYSDEC testimony regarding streams and NYSDEC testimony regarding  
3 wetlands. As stated above, my opinion is consistent with Christopher Legard's  
4 opinion (i.e., we both believe the case record contains sufficient information to  
5 describe the Facility's impacts on streams).

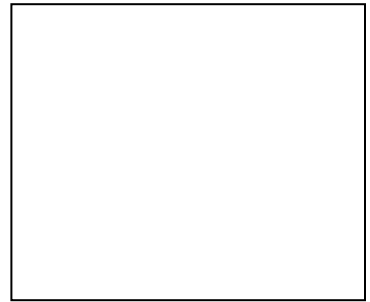
6 **Q: On page 12, lines 14 through 16 of her Direct Testimony, Ms. Rothrock**  
7 **states, "While the current record includes a project layout and delineated**  
8 **wetland boundaries, critical information remains lacking that is necessary to**  
9 **evaluate the Project and make a determination as to whether the Project**  
10 **meets regulatory standards." Can you respond to this statement?**

11 A: Yes. Generally speaking, it is my opinion that this statement represents an  
12 obvious mischaracterization and underrepresentation of the information contained  
13 in the record. This statement essentially claims that the record contains only two  
14 items with respect to describing wetland resources and impacts to those resources:  
15 1) a Facility layout and 2) delineated wetland boundaries. However, as  
16 summarized in my testimony above the record contains a significant amount of  
17 information on wetlands, including:

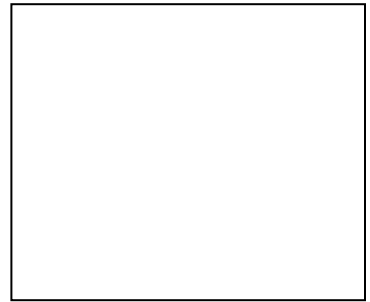
- 18 • Exhibit 22(i) of the Application describes the Facility-specific wetland  
19 delineations.



- 1           • Figure 22-2 of the Application provides mapping of all delineated  
2           wetlands and approximate wetlands.
- 3           • Exhibit 22(j) of the Application describes all wetland community types  
4           delineated on-site (e.g., forested wetlands, scrub-shrub wetlands, emergent  
5           wetlands).
- 6           • Exhibit 22(k) of the Application describes the functional assessment that  
7           was conducted for all wetlands delineated on-site.
- 8           • Exhibit 22(m) of the Application describes and quantifies wetland  
9           impacts, including Table 22-6 (Wetland Impacts) that quantifies impacts  
10          to each individual wetland.
- 11          • Exhibit 22(n) of the Application describes measures to avoid, minimize,  
12          and mitigate impacts to wetlands.
- 13          • Appendix M of the Application contains the Preliminary Design  
14          Drawings, which provides detailed drawings (plan and profile) associated  
15          with the Project components, along with existing and proposed contours,  
16          in relation to delineated wetlands and streams. This drawing set included  
17          a total of 115 sheets.
- 18          • Appendix RR of the Application contains the Wetland Delineation Report,  
19          which includes:



- 1                   ○ Narrative describing the NYSDEC and Corps regulations, physical
- 2                   characteristics and resources (i.e., physiography and soils,
- 3                   hydrology, federal and state mapped wetlands and streams), and
- 4                   wetland and stream delineation methodology and results.
- 5                   ○ Multiple tables with Project-specific information such as soils,
- 6                   state mapped wetlands and streams, and delineation results.
- 7                   ○ Multiple figures depicting Project-specific information regarding
- 8                   topography, soils, mapped wetlands and streams, and delineated
- 9                   wetlands and streams.
- 10                  ○ Routine Wetland Determination Forms that provide detailed data
- 11                  collected for each delineated feature (over 500 pages of data
- 12                  forms).
- 13                  ○ Photos of representative wetland communities.
- 14                  ○ A wetlands functions and values assessment table that includes an
- 15                  evaluation of vegetation conditions, hydrology conditions, size,
- 16                  adjacent conditions, public access, and the primary functions and
- 17                  values.
- 18                  • Updated delineation maps (Figure 8 of the Wetland Delineation Report)
- 19                  were provided to NYSDEC personnel on November 11, 2016, and
- 20                  uploaded to the DMM on November 22, 2016.

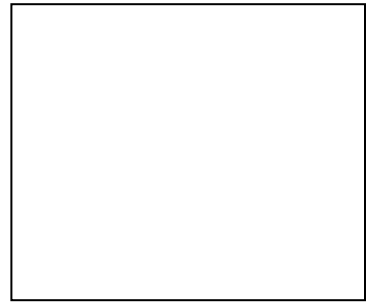


- 1           • An updated Wetland Delineation Report was sent to NYSDEC and Corps  
2           personnel on February 27, 2017.
- 3           • The Applicant's response to IR DPS-1, which was provided on January  
4           31, 2017 and includes a detailed spreadsheet that evaluates impact  
5           avoidance and minimization for each wetland and stream crossing.
- 6           • The Applicant's March 31, 2017 submittal, which included detailed  
7           wetland and stream impact drawings (see Exhibit BRB-3).
- 8           • The Applicant's response to IR DPS-46, which was provided on May 3,  
9           2017 and included an update to the detailed spreadsheet originally  
10          submitted in response to IR DPS-1 in order to account for the March 31,  
11          2017 submittal (see Exhibit BRB-4).

12   **Q: Do you have any additional comments on Ms. Rothrock's Direct Testimony**  
13   **regarding wetland impacts?**

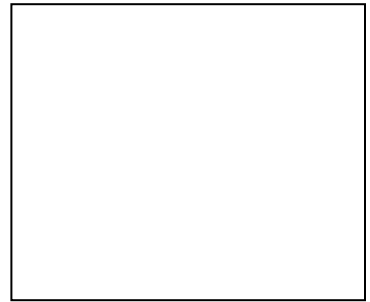
14   A: Yes. Beginning on page 12 of her testimony, Ms. Rothrock provides a list of  
15   "...necessary information that is missing from the Application..." The following  
16   summarizes and responds to each item in her list.

- 17           • A revised wetland delineation map (Rothrock testimony page 12, lines 19-  
18           20). This indicates that an adjustment to delineated wetland 6H was  
19           requested during the March 30, 2017 site visit. **Response:** While  
20           conducting this site visit with NYSDEC and Corps personnel, a small



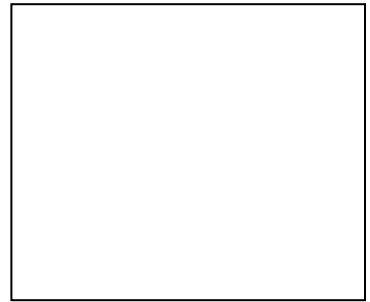
1           portion of the boundary of wetland 6H was adjusted (a total of seven  
2           wetland delineation flags and associated GPS points). As indicated this  
3           data was collected on March 30, and as such it was not possible to  
4           incorporate into the March 31 submittal. However, this has been  
5           incorporated into the updated wetland/stream impact drawings (see the  
6           “Updated Layout” section of my testimony below for additional detail).  
7           Please note that the seven flags/GPS points obtained on March 30  
8           represent a fraction of the overall delineation effort, which otherwise  
9           included over 17,500 wetland delineation/investigation GPS points. To  
10          present another way, over 120 acres of wetlands were delineated within  
11          the Facility Site, and the March 30, 2017 extension totaled only 0.04 acre.

12          • Revised preliminary notes on the first page of plan sheets (Rothrock  
13          testimony page 12, line 21). **Response:** It is unclear what “plan sheets”  
14          are being referenced in this comment. For instance, the Preliminary  
15          Design Drawings (Appendix M to the Application) include plan sheets and  
16          notes, as does the detailed wetland and stream impact drawing set  
17          submitted on March 31, 2017. For the purposes of this testimony it is  
18          assumed that this comment references the March 31st drawing set. This  
19          comment goes on to indicate that the notes need to be revised to include  
20          the following:



- 1                   ○ Note #2 under Contractor Notes should include language requiring  
2                   wetland boundaries to remain in place until construction has ended  
3                   (Rothrock testimony page 13, lines 1-3). **Response:** The lack of  
4                   this specific language does not prohibit any party from describing  
5                   or evaluating the Facility’s impacts on wetlands. In addition,  
6                   please note that this is specifically addressed in the Environmental  
7                   Compliance Manual prepared prior to construction. In my  
8                   experience, the compliance manuals prepared by EDR typically  
9                   include a section specifically dedicated to flagging, and identifies  
10                  the color of flag to be used for each respective resources (e.g., pink  
11                  with “wetland delineation” in black used for wetlands, pink and  
12                  lime used for state-regulated 100-foot buffers). Please also note  
13                  that the Applicant’s proposed Environmental Compliance and  
14                  Monitoring Program is described in Exhibit 22(n) of the  
15                  Application, including reference to an Environmental Compliance  
16                  Manual.
- 17                  ○ Note #5 under Contractor Notes should be revised to restrict wood  
18                  chips, and is not exhaustive (Rothrock testimony page 13, lines 4-  
19                  7). **Response:** The lack of this specific language in this specific  
20                  location does not prohibit any party from describing or evaluating

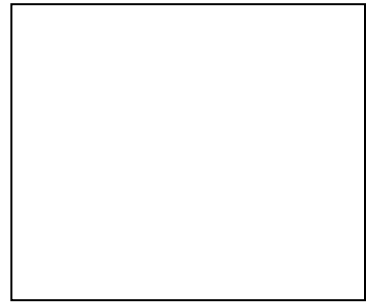




1 the Facility's impacts on wetlands. Please also note that the  
2 Application contains information that addresses this topic, and as  
3 such this was inaccurately identified as "...necessary information  
4 that is missing from the Application..." Specifically, Exhibit 22(n)  
5 of the Application, page 70 states, "A buffer zone of 100 feet,  
6 referred to as 'Restricted Activities Area', will be established  
7 where Facility construction traverses streams, wetlands and other  
8 bodies of water. Restrictions will include:

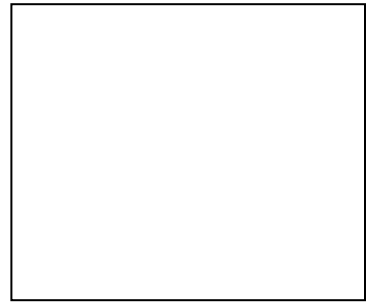
- 9       ▪ No deposition of slash within or adjacent to a waterbody;
- 10       ▪ No accumulation of construction debris within the area;
- 11       ▪ Herbicide restrictions within 100 feet of a stream or  
12       wetland (or as required per manufacturer's instructions);
- 13       ▪ No degradation of stream banks;
- 14       ▪ No equipment washing or refueling within the area;
- 15       ▪ No storage of any petroleum or chemical material; and
- 16       ▪ No disposal of excess concrete or concrete wash water."

- 17       ○ Note #1 under Specific Wetland Crossing Restrictions should  
18       require temporary access routes in any regulated wetland adjacent  
19       areas to be removed and restored following construction (Rothrock  
20       testimony page 13, lines 8-11). **Response:** The lack of this



specific language in this specific location does not prohibit any party from describing or evaluating the Facility's impacts on wetlands. Please also note that the Application contains information that addresses this topic, and as such this was inaccurately identified as "...necessary information that is missing from the Application..." Specifically, Exhibit 22(b) of the Application, page 9 states, "Although the seed mix that will be used in site restoration is not available at this time, typical upland and wetland seed mixes that could be used are summarized below (please visit <http://www.ernstseed.com/seed-mixes/> for additional detail):

- Fox sedge (31%)
- Virginia wildrye (20%)
- Lurid sedge (14%)
- Green bulrush (5%)
- Blue vervain (4%)
- Wood reedgrass (3.5%)
- Soft rush (3%)
- Blunt broom sedge (3%)
- Hop sedge (3%)

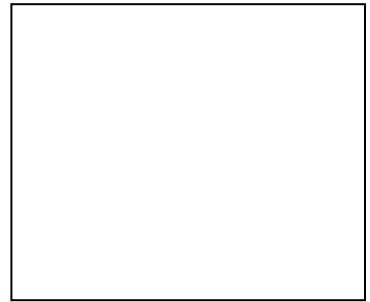


1                                   ▪ Other forbs and graminoids (each 2% or less)”

2                                   Please also note that Exhibit 22(n) of the Application, page 72 specifically  
3                                   discusses construction and restoration inspection in the context of the  
4                                   Environmental Compliance and Monitoring Program.

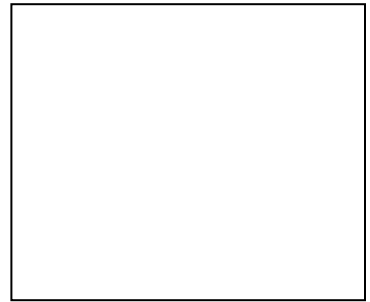
5                                   ○ Note #3 under Specific Wetland Crossing Restrictions should  
6                                   restrict temporary spoil stockpiles in state-regulated wetlands and  
7                                   require removal of spoil from state-regulated wetlands and  
8                                   adjacent areas (Rothrock testimony page 13, lines 12-15).

9                                   ***Response:*** The lack of this specific language in this specific  
10                                  location does not prohibit any party from describing or evaluating  
11                                  the Facility’s impacts on wetlands. Please also note that the  
12                                  Application contains information that addresses this topic, and as  
13                                  such this was inaccurately identified as “...necessary information  
14                                  that is missing from the Application...” Specifically, sheet C-604  
15                                  of the Preliminary Design Drawings, included as Appendix M to  
16                                  the Application, includes a Stabilized Temporary Stockpile detail.  
17                                  Please also note that Exhibit 21 of the Application specifically  
18                                  deals with Geology, Seismology, and Soils as required by 1001.21  
19                                  of the PSL. As such, Exhibit 21(f)(6) of the Application, page 5  
20                                  states, “All stockpiled soils will be located outside of wetlands and



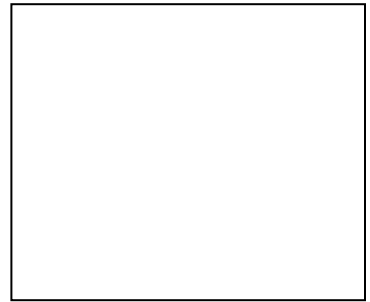
1 will be stabilized in accordance with the final SWPPP.” In  
2 addition, Exhibit 21(g) of the Application, page 7 states, “Proper  
3 methods for segregating stockpiled and spoil material shall be  
4 implemented, and excavated soil will be reused to the maximum  
5 extent possible on the site that it was excavated from, as a means to  
6 limit opportunities for proliferation of non-native flora and other  
7 invasive species. Final cut and fill storage areas will be available  
8 following Certification, and included in the construction  
9 drawings.”

- 10 • The tables that include the calculation of wetland impacts need to be  
11 revised and simplified in order to quantify temporary and permanent  
12 impacts (Rothrock testimony page 13, lines 16-17). This portion of the  
13 testimony further indicates that impacts should be calculated and clearly  
14 itemized for each type of permanent impact, and labeled with the type of  
15 impact, for state-regulated wetlands and adjacent areas. **Response:** This  
16 comment is confusing for multiple reasons: 1) it is not clear what “tables”  
17 are being referred to, and 2) it appears that all of this information was  
18 provided in the record. To the extent this comment is referencing tables in  
19 the Application, as indicated previously in my testimony detailed tables  
20 were included, including Table 22-6 (Wetland Impacts) in Exhibit 22(m).



1           Additionally, this information was further refined through submittal of the  
2           March 31, 2017 wetland and stream impact drawing set, which included  
3           an extremely detailed table on Sheet G-001. All of the information  
4           identified in this testimony is included on this table. To the extent this  
5           table is recommended for reorganization, the Applicant is more than  
6           willing to discuss how best to do so to meet the needs of the various  
7           agencies (including the Corps). However, given the table included on  
8           Sheet G-001 of the impact drawing set, it would appear that this was  
9           inaccurately identified as “...necessary information that is missing from  
10          the Application...”

11           • The wetland impact calculation table(s) includes notations for all the  
12          consultant delineated wetlands that were determined to meet state criteria  
13          for jurisdiction. The table must also include the NYSDEC Wetland code  
14          as previously listed in my testimony (Rothrock testimony page 13, lines  
15          21-22 and page 14, lines 1-2). **Response:** To the extent this testimony is  
16          referencing identification of state-mapped wetlands and associated  
17          code/ID in the various tables, this is provided in the record. Specifically,  
18          Table 22-6 in Exhibit 22 of the Application includes a column titled  
19          “NYSDEC Wetland ID” that correlates each delineated wetland ID to the  
20          state-regulated wetland ID (e.g., delineated wetland BBB correlates to

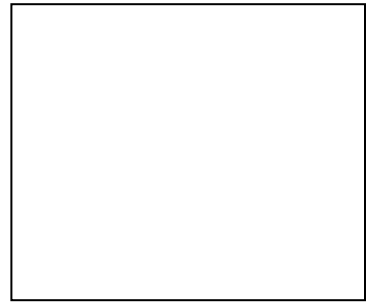


1 state-regulated wetland HA-4; delineated wetland WWW correlates to  
2 state-regulated wetland CS-8). Therefore, the Applicant believes this was  
3 inaccurately identified as “...necessary information that is missing from  
4 the Application...” The detailed impact table on Sheet G-001 simply  
5 identifies each respective feature as a “NYSDEC Regulated Wetland”.  
6 However, the updated impact drawing set (Exhibit BRB-5) contains an  
7 updated table that includes the state-regulated wetland ID, including  
8 Unmapped 1, Unmapped 2, and Unmapped 3, the names for which were  
9 first provided in testimony on May 12, 2017 (Rothrock testimony page 11  
10 lines 13 and 19, and page 12 line 4).

- 11 • Impact calculations in acres should also be provided on each line, as well  
12 as totals, for state-regulated wetlands and associated adjacent areas, as part  
13 of a revised application (Rothrock testimony page 14, lines 3-5).

14 **Response:** The lack of this information does not prohibit any party from  
15 describing or evaluating the Facility’s impacts on wetlands, and the  
16 Applicant believes this was inaccurately identified as “...necessary  
17 information that is missing from the Application...”

18 **Q: In her Direct Testimony, Ms. Rothrock makes reference to a “2017-04-**  
19 **03\_Cassadaga DEC Wetland-Stream Impact Summary Tables” (page 14,**



1           **lines 7-8). What is the relevance of this table in relation to quantifying**  
2           **wetland and stream impacts?**

3    A:    This table has no relevance to detailed wetland and stream impacts, and in my  
4           opinion this table should not have been referenced in her testimony.

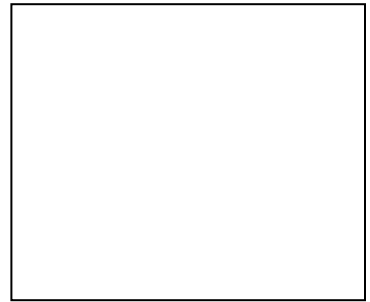
5    **Q:    Can you please elaborate?**

6    A:    Yes. As indicated above, Exhibit 22 contained a significant amount of detail  
7           regarding wetland impacts (e.g., Table 22-6). In addition, the March 31, 2017  
8           wetland and stream impact drawings contained a significant amount of detailed  
9           information, including a detailed impact table. Subsequent to the March 31, 2017  
10          filing, on April 3, 2017, NYSDEC personnel sent me two email requests, 1)  
11          asking for two separate tables, "...one which summarizes DEC stream impacts  
12          and one which summarizes all DEC wetland & AA area impacts" and 2) asking  
13          for actual size printed copies of the March 31, 2017 submittal because "The  
14          Region 9 office has difficulty printing this large enough to make them readable."

15   **Q:    Did you respond to these requests?**

16   A:    Yes. The summary tables were provided to NYSDEC on April 3, 2017. Regarding  
17          the actual size drawings, these were plotted, shipped and delivered to NYSDEC  
18          Region 9 on April 4, 2017.

19   **Q:    Did NYSDEC indicate to you that these tables were going to be used to**  
20          **support Direct Testimony or the record in any way?**



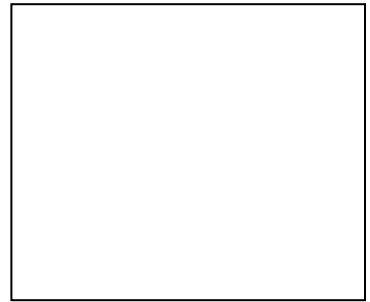
1 A: No. Given the fact that a detailed impact table was included with the March 31,  
2 2017 impact drawings, which were immediately plotted and shipped to  
3 NYSDEC's Region 9 Office, I assumed this summary table was for NYSDEC  
4 reference only and any details would be gleaned from the March 31 submittal.

5 **Q: Did Ms. Rothrock's Direct Testimony reference the "2017-04-03\_Cassadaga**  
6 **DEC Wetland-Stream Impact Summary Tables" file in the proper context?**

7 A: No. On page 14, lines 7-9, her testimony states, "While the Applicant did provide  
8 the table entitled 2017-04-03\_Cassadaga DEC Wetland-Stream Impact Summary  
9 Tables.docx to support the record..." This testimony is entirely inaccurate. As  
10 indicated above, the 2017-04-03\_Cassadaga DEC Wetland-Stream Impact  
11 Summary Tables.docx file was provided only in response to a request from  
12 NYSDEC personnel and was never intended to support the record. I note that Ms.  
13 Rothrock's testimony indicates that this table was provided "...per the  
14 Department's request..." (Rothrock testimony page 17, lines 7-8). However, to  
15 be clear this table was never provided by the Applicant to support the record, nor  
16 was the Applicant ever lead to believe it would be referenced in testimony.

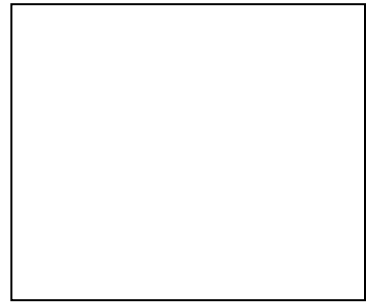
17 **Q: Page 15 of Ms. Rothrock's testimony references the "...adequacy of plans**  
18 **provided by the Applicant". Do you have any comments on this portion of**  
19 **the testimony?**



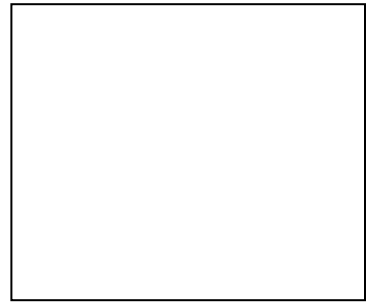


1 A: Yes. Page 15, lines 3-4 state, “The plans are not adequate for the purpose of  
2 completing a review consistent with the Part 663 weighing standards and, thus,  
3 must be revised to include the following.” **Response:** For the purposes of this  
4 rebuttal testimony, it is assumed that “the plans” she mentions are referencing the  
5 March 31, 2017 wetland and stream impact drawing set. Each of the comments in  
6 her testimony at pages 15 – 16 are responded to individually as follows:

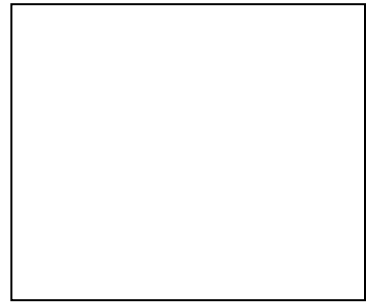
- 7 • While the impacts are shown on the plan sheets with a calculation, it is not  
8 clear what type of impact is occurring there because the type of impact is  
9 not clearly itemized and because Project components are not labeled  
10 (Rothrock testimony page 15, lines 5-7). **Response:** This comment is  
11 confusing because as stated earlier the March 31, 2017 wetland and stream  
12 impact drawings not only depict each impact based on the proposed  
13 jurisdictional activity (e.g., access road crossing a wetland), but Sheet G-  
14 001 provides a table for each impact and identifies the type of impact (e.g.,  
15 access road [“AR”]). In addition, Sheet G-000 includes a “Master  
16 Legend” for each line type, etc. that correlates to a Facility component.
- 17 • Impacts to the regulated adjacent area of Wetland B should appear on  
18 Sheet NW2 (Rothrock testimony page 15, lines 8-10). **Response:** please  
19 see the revised wetland/stream impact drawings included as Exhibit BRB-  
20 5.



- 1           • The regulated adjacent areas area depicted to surround all delineated  
2           wetlands, even when the wetland delineations are open ended because  
3           they extend farther than their survey corridor. The regulated adjacent areas  
4           should only be shown where their wetland boundary is known and then  
5           also be shown to extend off the survey corridor (Rothrock testimony page  
6           15, lines 11-17). **Response:** please see the revised wetland/stream impact  
7           drawings included as Exhibit BRB-5.
- 8           • Turbine 51 appears to be proposed approximately 100 feet from Wetland  
9           ZZ. Based on this I would expect there to at least be forest clearing  
10          impacts to the regulated adjacent areas, if not additional impacts (i.e.,  
11          access roads or fill), however, such impacts are not shown on the plan  
12          sheets and are likely not accounted for in the table (Rothrock testimony  
13          page 15, lines 18-22). **Response:** please see the revised wetland/stream  
14          impact drawings included as Exhibit BRB-5.
- 15          • The notes are contradictory on Sheet C17/Wetland RRRR/State-regulated  
16          Wetland HA-7. The Applicant states that there are no impacts to wetland  
17          RRRR, but then also states trees and vegetation will be cleared within the  
18          wetland, which is an impact. Also, a pole will be placed in the wetland  
19          which is stated as an impact elsewhere on the sheet (Rothrock testimony  
20          page 15, line 23 and page 16, lines 1-5). **Response:** The note mistakenly



- 1           says “no impact” because minor impacts will occur as reported in the table  
2           on Sheet G-001. Please see the revised wetland/stream impact drawings  
3           included as Exhibit BRB-5.
- 4           • The notes are contradictory on Sheet C23/Wetland BBB/State-regulated  
5           Wetland HA-4. The Applicant states there are no wetland impacts then  
6           separately lists clearing of forested wetlands, which is a wetland impact  
7           (Rothrock testimony page 16, lines 6-9). **Response:** This is simply a  
8           matter of different terminology. Sheet C23 clearly indicates that forest  
9           clearing will occur within this wetland, and in the context of reporting no  
10          impacts there is an associated note that states, “Crossing Method: Span,  
11          approach from either side”. This is also clearly reported on the impact  
12          table on Sheet G-001. The Applicant is more than happy to work with  
13          NYSDEC personnel to make sure their desired terminology is used;  
14          however, different terminology will not change the quantification of  
15          impacts to this wetland as already reported.
- 16          • It was not intended for the portion of Wetland YYY east of Route 60 to be  
17          included in State jurisdiction on Sheet SW25/Wetland YYY/State-  
18          regulated Wetland CS-9 (Rothrock testimony page 16, lines 10-14).  
19          **Response:** Comment noted. Please see the revised wetland/stream impact  
20          drawings included as Exhibit BRB-5.

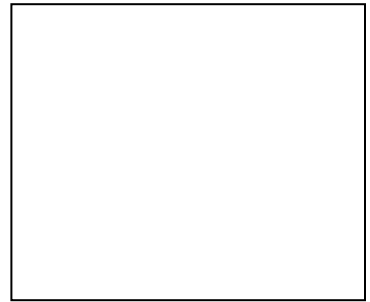


1           • An adjustment to the delineation of wetland 6H (state-regulated wetland  
2           HA-3) was requested during the March 30, 2017 site visit. Sheets SE10  
3           and SE11 have not been updated with those changes. **Response:** please see  
4           the revised wetland/stream impact drawings included as Exhibit BRB-5.  
5           Please also see my testimony above, which indicates that because of the  
6           Applicant's commitment to providing the detailed impact drawing set on  
7           March 31, 2017 it was not possible to incorporate changes made in the  
8           field on March 30, 2017.

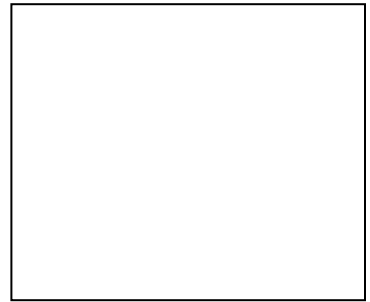
9   **Q: Page 16 of Ms. Rothrock's testimony indicates that the Applicant has not**  
10 **demonstrated that unavoidable losses or impacts on the functions or benefits**  
11 **of the wetland have been minimized. Do you have any comments on this**  
12 **portion of the testimony?**

13 A: Yes. On page 17 of her testimony there are a number of bulleted points that  
14 provide more detailed comment on this topic. Each of these points are  
15 summarized and individually addressed below.

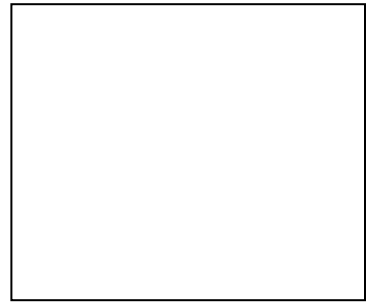
16           • Restoration of all temporary impacts needs to be proposed and clearly  
17           explained, including re-planting of trees where forest conversion will  
18           occur in areas that do not need to be maintained in a non-forested  
19           conditions as part of a right-of-way (Rothrock testimony page 17, lines 1-  
20           3). **Response:** Restoration of temporary impacts has already been



1 addressed in the Application. Specifically, when discussing impacts to  
2 forest, Exhibit 22(b) states, "...temporary impacts are those where forest  
3 would be allowed to regrow following construction (e.g. along the  
4 periphery of access roads and turbine sites). Approximately 78.5 acres of  
5 forest will be disturbed in this manner, and allowed to regrow following  
6 construction. In these areas, the Applicant will only remove stumps where  
7 necessary to install underground components, will not use herbicides to  
8 prevent sprouting, and will not remove trees as part of routine vegetation  
9 management during Facility operation. Ecological succession will restore  
10 the forested condition of these areas over time." As indicated in this  
11 language from Exhibit 22, the Applicant has stated herbicide will not be  
12 used in those areas where forest will be allowed to regrow following  
13 construction. This statement is important with respect to restoring a  
14 forested community because the use of herbicides impedes forest  
15 regrowth. Therefore, a commitment to not use herbicides will in fact  
16 promote the regrowth of a forested community, and as such the Applicant  
17 should not be subject to a requirement to "re-planting of trees where forest  
18 conversion will occur in areas that do not need to be maintained in a non-  
19 forested conditions as part of a right-of-way" as suggested in Ms.



- 1 Rothrock's testimony. Restoration and regeneration can be evaluated and  
2 documented during post-construction monitoring efforts.
- 3 • The document entitled 2017-01-31 Cassadaga\_IR Attachment Response  
4 FINAL.xlsx discusses the avoidance and minimization efforts to that  
5 point. However, the plan sheets show further avoidance and minimization  
6 as of March 31, 2017. **Response:** This comment is confusing. The  
7 January 31, 2017 spreadsheet referenced in this comment was attached to  
8 the Applicant's response to IR DPS-1, and as clearly stated in this IR  
9 response, "As indicated in the table, there are a number of locations where  
10 the Applicant continues to investigate the possibility of making layout  
11 adjustments to further minimize or avoid impacts. As such, the Applicant  
12 anticipates identifying any such adjustments by March 31, 2017 along  
13 with provided an updated drawing set specific to wetland/stream  
14 impacts..." In addition, as requested in IR DPS-46, the Applicant updated  
15 the January 31, 2017 spreadsheet. Therefore, it is unclear why this  
16 comment is referencing outdated material that was updated through  
17 subsequent interrogatory requests.
- 18 • The table provided by the Applicant per the Department's request, entitled  
19 2017-04-03\_Cassadaga DEC Wetland-Stream Impact Summary  
20 Tables.docx, appears to state... (Rothrock testimony page 17, lines 7-12).

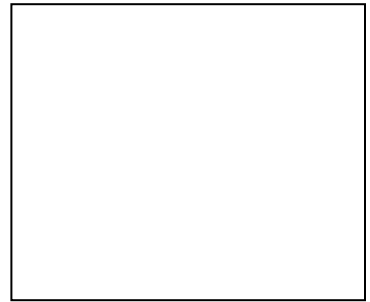


1           **Response:** As indicated in my testimony above, this table was not  
2           prepared by the Applicant to support the record. Significant detail  
3           associated with wetland/stream impacts are set forth in the Application  
4           (i.e., Tables 22-6 and 23-3), in the March 31, 2017 wetland/stream impact  
5           drawings set (i.e., “Wetland and Stream Impacts” table on Sheet G-001),  
6           and as further refined in the updated wetland/stream impact drawings  
7           included as Exhibit BRB-5.

8   **Q: Page 17 of Ms. Rothrock’s testimony indicates further avoidance and**  
9       **minimization should be explored. Do you have any comments on this portion**  
10      **of the testimony?**

11   A: Yes. Starting on page 17 and continuing through page 20 of her testimony,  
12      avoidance/minimization in specific locations is discussed. Each of these points  
13      are summarized and individually addressed below.

14           • Sheet NW1/Wetland B/State-regulated Wetland Unmapped 1: the  
15           Applicant should consider moving turbine T7 to the west to avoid  
16           regulated adjacent area impacts (Rothrock testimony page 17, lines 16-  
17           18). **Response:** Per discussions with the Applicant, this turbine cannot  
18           move further due to landowner restrictions. Please note that the access  
19           road between T7 and T8 has already been adjusted to minimize/eliminate  
20           previously proposed impacts, which required landowner negotiations.

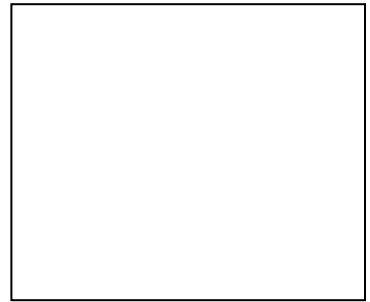


1 Please also note that based on reconnaissance-level investigations it was  
2 determined that wetlands also exist to the west-southwest (as depicted as  
3 an approximate wetland on Figure 22-2 of the Application); however, the  
4 exact boundary has not been determined because this is outside the study  
5 corridor.

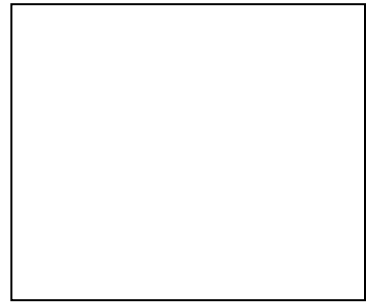
- 6 • Sheet NW2/Wetland A and B/State-regulated wetland Unmapped 1:  
7 consider moving T11 to the northeast to further minimize impacts to the  
8 regulated adjacent area (Rothrock testimony page 17, lines 19-22 and page  
9 18, lines 1-2). **Response:** According to the Applicant, this turbine cannot  
10 move any further in this direction due to a 1,500-foot setback from a non-  
11 participating structure.

- 12 • Sheet NE1/Wetland 6I and ZZ/State-regulated Wetland Unmapped 2:  
13 while impacts to Wetland ZZ appear to be avoided, impacts to associated  
14 adjacent area could be minimized further by moving T47 to the  
15 north/northeast (Rothrock testimony page 18, lines 3-6). **Response:** In  
16 addition to avoiding impacts to Wetland ZZ, T47 has also been sited to  
17 avoid impacts to an archaeological resource to the northeast (please see  
18 Sheet NE1 of Exhibit BRB-5). Therefore, further adjustment of this  
19 turbine location cannot be accommodated.

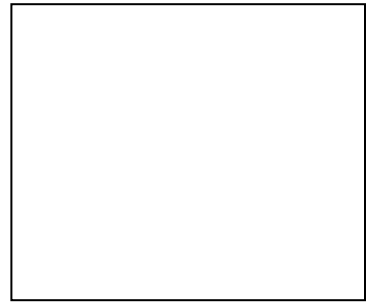




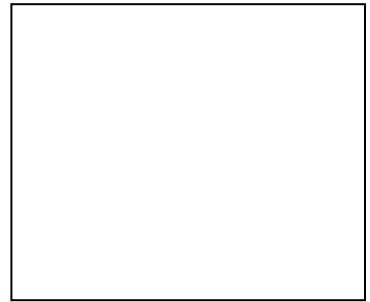
- 1           • Sheet NE2/Wetland 6I/State-regulated Wetland Unmapped 2: It is not  
2           clear if the Applicant intends to cross the wetland at the narrowest point  
3           because the wetland extends in both directions outside the corridor. It  
4           appears there may be a slightly different route that would further minimize  
5           impacts (Rothrock testimony page 18, lines 7-12). **Response:** As depicted  
6           on Sheet NE2, the access road clearly crosses the delineated portion of this  
7           wetland in the narrowest location. Based on our review of this location,  
8           including the site-specific delineations, we have no reason to believe that a  
9           significant difference in impact would result from a new route outside the  
10          study corridor. In addition, Ms. Rothrock’s testimony indicates “...there  
11          may be a slightly different route that would further minimize impacts”  
12          (page 18, lines 11-12). Ms. Rothrock has not identified the alternate route  
13          and is only raising this issue for the first time during this testimony.  
14          Moreover, during the two site visits with Ms. Rothrock on December 9,  
15          2016 and March 30, 2017 it was never suggested that a different route  
16          should be investigated in the field.
- 17          • Sheet C17/Wetland RRRR/State-regulated Wetland HA-7: Moving the  
18          proposed line to the southeast side of the road where there is less wetland  
19          and regulated adjacent area would further minimize impacts. This wetland  
20          does extend to the southeast side of the road even though the approximate



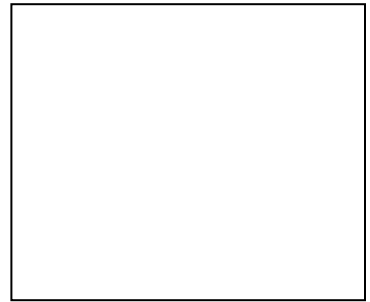
1 mapping does not show that, but there is less regulated area on that side of  
2 the road and, thus, less impact would result (Rothrock testimony page 18,  
3 lines 13-18). **Response:** The Applicant has sited the overhead collection  
4 line in this location as a result of state legislation passed specifically to  
5 allow a collection line on state-owned land in this corridor (the legislation  
6 is discussed on page 67, lines 10-14 of the Direct Testimony of Andrew  
7 Davis, which notes the legislation was signed into law on November 28,  
8 2016, as Chapter 481 of the Laws of 2016). State-owned land does not  
9 extend to the southeast on the other side of Boutwell Hill Road in this  
10 particular location, and as such this would require executing an agreement  
11 with a private landowner. In fact, there are actually two parcels in this  
12 particular location on the other side of Boutwell Hill Road, and as such  
13 this would require the Applicant to enter into negotiations and execute  
14 agreements with two landowners, and no such conversations have been  
15 initiated given the legislation passed by the State of New York. With  
16 respect to the portion of the comment that indicates the "...wetland does  
17 extend to the southeast side of the road even though the approximate  
18 mapping does not show that..." it is not clear what "approximate  
19 mapping" is being referenced. However, Figure 22-2 of the Application,  
20 which was prepared in accordance with the regulations set forth at



- 1                   1001.22(i) and Stipulation 22(i), does in fact depict approximate wetlands  
2                   on the southeast side of Boutwell Hill Road.
- 3                   • Sheet C23/Wetland BBB/State-regulated Wetland HA-4: moving the  
4                   proposed line to the west where the wetland is narrow may reduce impacts  
5                   (Rothrock testimony page 18, lines 19-21). **Response:** This suggestion has  
6                   been incorporated into the Facility layout, please see the updated  
7                   wetland/stream impact drawings included as Exhibit BRB-5.
- 8                   • Sheet SW6/Wetland EEEE/State-regulated Wetland Unmapped 3: the  
9                   location of the pole is not shown but it is stated that there will be one  
10                  placed in the wetland. The Applicant should consider placing the pole in  
11                  the associated adjacent area rather than the wetland proper in order to  
12                  reduce impacts (Rothrock testimony page 18, line 22 and page 19, lines 1-  
13                  4). **Response:** This suggestion has been incorporated into the Facility  
14                  layout, please see the updated wetland/stream impact drawings included as  
15                  Exhibit BRB-5.
- 16                  • Sheet SW6/Wetland EEEE/State-regulated Wetland Unmapped 3: moving  
17                  the line northward may further minimize impacts (Rothrock testimony  
18                  page 18, line 22 and page 19, line 5). **Response:** This suggestion has been  
19                  incorporated into the Facility layout, please see the updated  
20                  wetland/stream impact drawings included as Exhibit BRB-5.



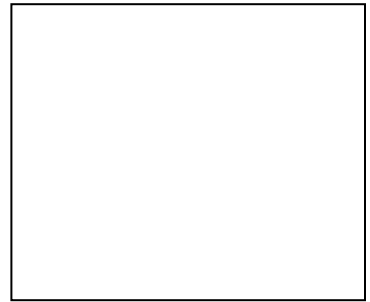
- 1           • Sheet SW7/Wetland EEEE/State-regulated Wetland Unmapped 3: moving  
2           the line northward may further reduce impacts (Rothrock testimony page  
3           19, lines 6-7). **Response:** This suggestion has been incorporated into the  
4           Facility layout, please see the updated wetland/stream impact drawings  
5           included as Exhibit BRB-5.
- 6           • Sheet SW27/Wetland WWW/State-regulated Wetland CS-8: there is  
7           minimal regulated adjacent area that will remain between the substation  
8           and the wetland. The location of the substation should be adjusted with the  
9           agricultural field to increase the undisturbed area that will remain between  
10          the substation and the wetland. This could be achieved by moving the  
11          substation east and changing the orientation 90 degrees. I also mentioned  
12          the need to minimize impacts specifically in this area to preserve as much  
13          regulated adjacent area as possible during my site visit with the Applicant  
14          on December 9, 2016 (Rothrock testimony page 19, lines 8-18).  
15          **Response:** Based on conversations with the Applicant I understand that  
16          the substation orientation and size is a function of the anticipated design  
17          requirements by National Grid. Final design requirements will not be  
18          known until after the interconnection Facilities study is complete. To be  
19          conservative, the Applicant assumed that all the available space in the  
20          field outside the delineated wetland boundary would be needed. In



1           addition, there is a well in the field just east of the existing substation that  
2           must be avoided. The need to avoid this well was discussed during the site  
3           visit with NYSDEC on December 9, 2016.

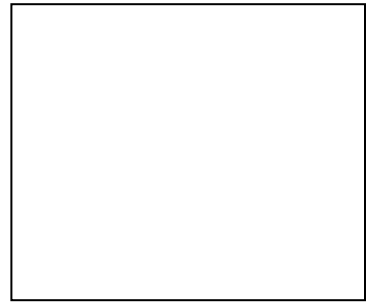
4           • Sheets SE10 and SE11/Wetland 6H/State-regulated Wetland HA-3: it is  
5           noted that the access road will follow the alignment of an existing access  
6           road, the already cleared area is rather wide and any opportunity to adjust  
7           the new alignment as far away from the wetland as possible within that  
8           cleared area should be utilized (Rothrock testimony page 19, lines 19-22  
9           and page 20, lines 1-2). **Response:** This suggestion has been incorporated  
10          into the Facility layout, please see the updated wetland/stream impact  
11          drawings included as Exhibit BRB-5.

12          • Additional opportunities for minimizing impacts by boring/horizontal  
13          directional drilling under State-regulated wetlands and adjacent areas  
14          should be evaluated (Rothrock testimony page 20, lines 3-5). **Response:**  
15          Given the lack of specificity in this comment, a location-specific response  
16          is not possible. However, given the existing case record I believe this  
17          topic has already been addressed. Specifically, Exhibit 22(m) of the  
18          Application states, "...the Applicant will install buried interconnect via  
19          directional drilling, where practicable, to eliminate impacts to forested  
20          wetlands in cases where buried collection line is the only Facility

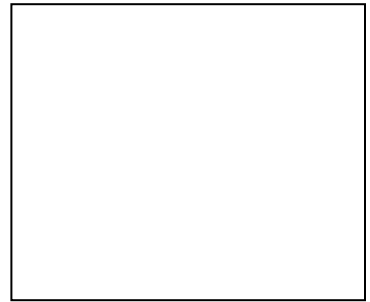


1 component. Implementation of these measures will reduce wetland  
2 impacts from the acreages presented in this Application. Temporary and  
3 permanent impacts to wetlands for each wetland proposing to be impacted  
4 are presented below in Table 22-6. Impacts were calculated based on  
5 disturbance assumptions presented in Table 22-1 of 1001.22(b).” This  
6 language in the Application is immediately followed by Table 22-6  
7 (Wetland Impacts), which specifically identifies those wetlands proposed  
8 to be crossed through use of a Horizontal Directional Drill. With respect  
9 to using a Horizontal Directional Drill under adjacent areas, this would  
10 significantly increase the cost of construction in these locations, as  
11 outlined in Seth Wilmore’s testimony.. Please also note the Applicant has  
12 agreed to extensive post-construction monitoring of temporary impacts to  
13 state-regulated adjacent areas, as outlined in this testimony, which should  
14 ensure the long-term protection of the function of the adjacent areas and  
15 associated wetland benefits.

- 16 • 2017-01-31\_Cassadaga IR Attachment\_Response\_FINAL.xlsx says  
17 “Compensatory mitigation is not necessary due to impact avoidance” in  
18 situations where wetland impacts are avoided but the associated adjacent  
19 area is still impacted. This is not correct. Mitigation is required for  
20 impacts associated with adjacent areas also, not just for wetlands

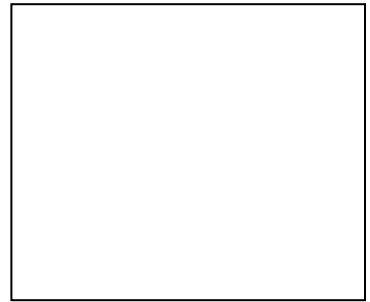


1 (Rothrock testimony page 20, lines 6-9). **Response:** Mitigation for impacts  
2 to adjacent areas will first be accomplished through proper restoration to  
3 allow for natural revegetation, which is consistent with commitments  
4 made by the Applicant as set forth in the Application. For instance,  
5 Exhibit 22(g) states, “Cleared forest land along Facility access roads and  
6 at the periphery of turbine sites will be allowed to grow back and  
7 reestablish forest habitat in areas where it was cleared, which over the  
8 long term will provide shrubland or forested habitat for species that  
9 require these types.” Additionally, the Applicant has committed to proper  
10 monitoring during construction and restoration activities to assure  
11 compliance with permit conditions. Specifically, when discussing the  
12 “Construction and Restoration Inspect” portion of the Environmental  
13 Compliance and Monitoring Program Exhibit 22(n) states, “The  
14 monitoring program will include daily inspection of construction work  
15 sites by the environmental monitor. The environmental monitor is the  
16 primary individual(s) responsible for overseeing and documenting  
17 compliance with environmental permit conditions on the Facility. The  
18 environmental monitor will conduct inspections of all areas requiring  
19 environmental compliance during construction activities, with an emphasis  
20 on those activities that are occurring within jurisdictional/sensitive areas,



1 including cultural resource areas, wetland and stream crossings, and active  
2 agricultural lands. When on-site, the environmental monitor's schedule  
3 will include participation in a daily Plan of Day (POD) meeting with the  
4 contractors to obtain schedule updates, identify in-field monitoring  
5 priorities, and address any observed or anticipated compliance issues.  
6 During the course of each visit, multiple operations are likely to be  
7 occurring throughout the Facility Site, and will need to be monitored by  
8 the environmental monitor. Activities with the potential to impact  
9 jurisdictional/sensitive resources, or with greater potential for  
10 environmental impact, will receive priority attention from the  
11 environmental monitor. For instance, installation of an access road across  
12 a protected stream would likely receive greater attention than installation  
13 of buried electrical collection lines across a successional old field.  
14 However, some level of field inspection by the environmental monitor will  
15 occur at all earth-disturbing work sites during each site visit. The monitor  
16 will keep a log of daily construction activities, and will issue  
17 periodic/regular (typically weekly) reporting and compliance audits.  
18 Additionally, when construction is nearing completion in certain portions  
19 of the Facility area, the monitor will work with the contractors to create a  
20 punch list of areas in need of restoration in accordance with all issued

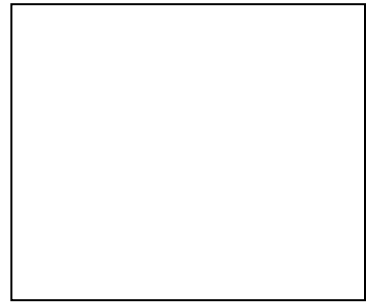




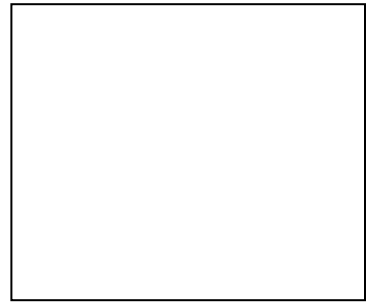
1           permits.” Please also refer to the Applicant’s response to DEC IR-3,  
2           which includes an updated Conceptual Mitigation Plan (Exhibit BRB-6).  
3           As indicated on Figure 4 (Preliminary Resource Development Map) of this  
4           plan, the Applicant has identified multiple opportunities for habitat  
5           conservation and enhancement (i.e., “Potential Bat Habitat Areas” and  
6           “NYSDEC Wetland Buffers and Upland Planting”), which can further  
7           serve as mitigation for impacts to adjacent areas to the extent needed.

8   **Q:   Page 17 of Ms. Rothrock’s testimony also states that further avoidance and**  
9   **minimization should be explored “for all impacts and the record of this**  
10   **proceeding supplemented accordingly identifying which methods were**  
11   **reviewed and, if applicable, why such method was not selected.” Do you have**  
12   **any comments on this portion of the testimony?**

13   A:   Yes. Please see the “avoidance and minimization” spreadsheet, which was created  
14       by NYSDPS personnel and originally completed by the Applicant in response to  
15       IR DPS-1, and subsequently updated by the Applicant in response to IR DPS-46  
16       (see Exhibit BRB-4 for a copy of IR DPS-46). This spreadsheet addresses  
17       avoidance and minimization for all impacts, as requested in this portion of Ms.  
18       Rothrock’s testimony (i.e., the record already contains this information).



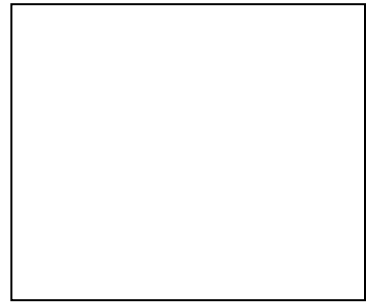
- 1   **Q:   Page 20 of Ms. Rothrock’s testimony references a Conceptual Mitigation**  
2       **Plan prepared dated March 31, 2017. Is this the most recent version of the**  
3       **mitigation plan?**
- 4   A:   No. The direct testimony states, “At this point, the Applicant has submitted the  
5       document *Cassadaga\_SWMP\_3\_31\_17 Conceptual Mitigation Plan* that was  
6       prepared by RES (Resource Environmental Solutions, LLC).” (Rothrock  
7       testimony page 20, lines 12-14). This statement is incorrect. In response to IR  
8       DEC-3 the Applicant prepared an updated mitigation plan titled *Cassadaga Wind*  
9       *Project: Conceptual Stream and Wetland Mitigation Plan (Version 2)*, which was  
10      submitted to the parties (including the NYSDEC) on May 2, 2017 (please see  
11      Exhibit BRB-6). Ms. Rothrock’s testimony on page 20 goes on to list a number  
12      of items that the original March 31, 2017 plan does not include. The Applicant  
13      believes that all of these items are addressed in the *Version 2* plan submitted on  
14      May 2, 2017. Please also note that the Corps has jurisdiction over all wetland and  
15      stream impacts, and it is the Applicant’s intent to implement a single plan that  
16      will mitigate for impacts at both the state and federal level. Therefore, the  
17      Applicant suggests that a meeting with Corps and NYSDEC personnel is  
18      necessary to assure that suitable mitigation is proposed for both agencies. In  
19      addition, on page 21 of Ms. Rothrock’s testimony there are a number of bulleted  
20      comments regarding the requirements of the mitigation plan, and these are exactly



1 the same as those bullet points in question #1 of IR DEC-3. Therefore, responses  
2 to all of these requirements have already been provided by the Applicant and are  
3 in the case record (see Exhibit BRB-6 for a copy of the Applicant's response to IR  
4 DEC-3 and associated attachments).

5 **Q: Does Ms. Rothrock's testimony provide a consistent opinion regarding the**  
6 **adequacy of the conceptual mitigation plan?**

7 A: No. Page 20 of her direct testimony states, "...the Conceptual Mitigation does  
8 not meet the requirements of 6 NYCRR § 663.5(g) or the Department's Guidelines  
9 on Compensatory Mitigation..." However, page 34 of her direct testimony  
10 provides the following proposed condition: "Prior to issuance of the certificate,  
11 the applicant must submit, at a minimum, a conceptual wetland mitigation plan to  
12 the NYSDEC Regional Supervisor of Natural Resources that describes the general  
13 objectives and approaches designed to offset all project impacts to wetland  
14 functions and benefits." The Applicant has submitted a conceptual mitigation  
15 plan that satisfies these requirements (see Exhibit BRB-6 for a copy of the  
16 Applicant's response to IR DEC-3 and associated attachments), and therefore,  
17 according to the condition proposed by Ms. Rothrock on page 34 of her direct  
18 testimony, enough information regarding mitigation has been provided to allow  
19 for issuance of a certificate.



1   **Q:   Beginning on page 21 of Ms. Rothrock’s testimony, there is a list of**  
2       **additional issues that the Applicant must consider in developing the wetland**  
3       **mitigation plan. Can you respond to these issues?**

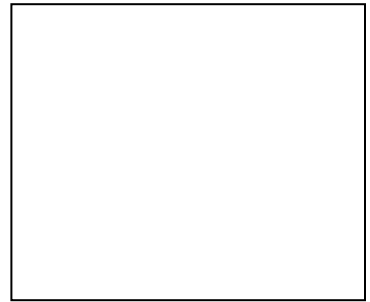
4   A:   Yes. This list of issues, which begins on page 21 and continues through page 23  
5       of Ms. Rothrock’s testimony, are all essentially the same as the remaining  
6       questions/bullet points (questions #2 through #5) in IR DEC-3. Therefore,  
7       responses to all of these requirements have already been provided by the  
8       Applicant (see Exhibit BRB-6 for a copy of the Applicant’s response to IR DEC-3  
9       and associated attachments).

10   **Q:   Did the NYSDPS provide testimony regarding wetlands and stream?**

11   A:   Yes. Jeremy Rosenthal provided testimony on wetlands and streams.

12   **Q:   Do you have any comment regarding Mr. Rosenthal’s testimony?**

13   A:   Yes. Mr. Rosenthal discusses the need for NYSDPS to conduct site visits. With  
14       respect to wetlands Mr. Rosenthal states, “The Applicant’s late submission of  
15       detailed wetland drawing sets precluded the ability to conduct field reviews to  
16       date.” (Rosenthal testimony page 13, lines 1-3) With respect to streams Mr.  
17       Rosenthal states, “The timing of the receipt of detailed stream drawing sets  
18       precluded the ability to conduct field reviews to date.” (Rosenthal testimony page  
19       14, lines 20-21 and page 15, line 1) However, I do not believe that these  
20       statements accurately represent the facts. Specifically, NYSDPS staff were



1 invited to participate in the December 2016 field visit with NYSDEC but declined  
2 (Mr. Rosenthal actually emailed me on December 2, 2016 and stated, “Ben, I  
3 spoke to Seth and I am going to pass on this trip, but look forward to getting out  
4 to the site on another occasion. Thanks, Jeremy”). In fact the NYSDEC and  
5 Corps conducted two site visits each, which suggests NYSDPS could also have  
6 conducted a site visit if so desired. Subsequent emails with Mr. Rosenthal in April  
7 2017 discuss at least one additional site visit pending with Corps personnel and  
8 the Applicant’s commitment to invite Mr. Rosenthal, which the Applicant remains  
9 committed to.

10 **Q: Does Mr. Rosenthal make any recommendations regarding the next steps for**  
11 **wetland impacts?**

12 A: Yes. Mr. Rosenthal states, “Final construction plans regarding routing and  
13 methods of traversing wetlands should be submitted to DEC and DPS staff for a  
14 coordinated review and further collaborative refinement. Subsequently, the  
15 construction plans should be submitted to the Siting Board as a compliance filing  
16 prior to construction.” (Rosenthal testimony page 13, lines 3-10)

17 **Q: Do you agree with this recommendation?**

18 A: Yes. This is consistent with the Applicant’s stated position in various  
19 discussions/meetings with the state agencies over the past few years. In addition,  
20 please also see the “Updated Layout” section of my testimony below, which



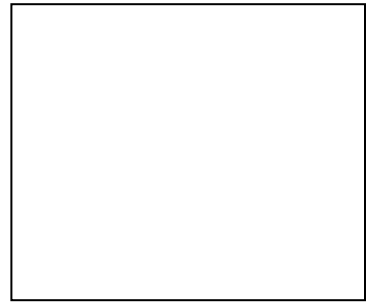
1 discusses an updated wetland and stream impact drawing set. It should also be  
2 noted that the Applicant intends on including Corps personnel on future  
3 consultations given their jurisdiction under Section 404 of the Clean Water Act.

4 **Q: Does Mr. Rosenthal make any recommendations regarding the next steps for**  
5 **mitigation?**

6 A: Yes. Mr. Rosenthal states, "...the plan is still very preliminary and, as such, the  
7 proposed mitigation is inadequate. The Applicant should submit a detailed  
8 wetland mitigation plan to New York State DEC and DPS Staff for a coordinated  
9 review and further collaborative refinement. Subsequently, the wetland mitigation  
10 plan should be submitted to the Siting Board as a compliance filing prior to  
11 construction." (Rosenthal testimony page 14, lines 5-14)

12 **Q: Do you agree with this recommendation?**

13 A: Yes. While we do not agree that the plan is "very preliminary" (see Exhibit BRB-  
14 6), we do agree that further coordination is needed (with state and federal  
15 agencies of jurisdiction). Please note that Exhibit 22(n) of the Application  
16 addresses mitigation and states, "Mitigation in New York State is somewhat  
17 complicated by the fact that the USACE generally prefers to use an approved 'in-  
18 lieu-fee' program when available, whereas the NYSDEC Article 24 regulations  
19 do not allow use of such a program. In addition, it is anticipated that the majority  
20 of wetland impacts will occur in wetlands regulated by the USACE only...



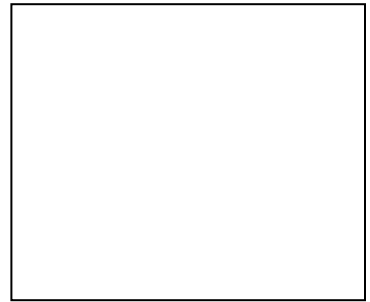
1           Therefore, the Applicant will ultimately propose compensatory mitigation that  
2           will be determined in consultation with NYSDEC and USACE.” With respect to  
3           the mitigation plan submitted to the Parties by the Applicant on May 2, 2017 (see  
4           Exhibit BRB-6), the Applicant intends to work with the agencies as suggested by  
5           Mr. Rosenthal.

6   **Q:   Does Mr. Rosenthal make any recommendations regarding the next steps for**  
7   **stream impacts?**

8   A:   Yes. Mr. Rosenthal states, “The Applicant should submit final construction plans  
9           regarding routing and methods of traversing streams to DEC and DPS staff for a  
10          coordinated review and further collaborative refinement. Subsequently,  
11          construction plans should be submitted to the Siting Board as a compliance  
12          filing.” (Rosenthal testimony page 15, lines 1-7)

13   **Q:   Do you agree with this recommendation?**

14   A:   Yes. This is consistent with the Applicant’s stated position in various  
15          discussions/meetings with the state agencies over the past few years. In addition,  
16          please also see the “Updated Layout” section of my testimony below, which  
17          discusses an updated wetland and stream impact drawing set. It should also be  
18          noted that the Applicant intends on including Corps personnel on future  
19          consultations given their jurisdiction under Section 404 of the Clean Water Act.

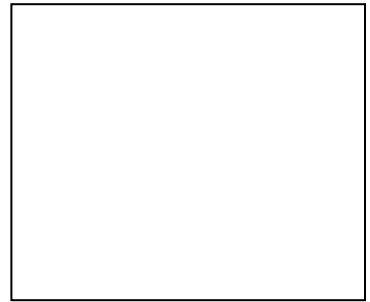


1   **Q:    With respect to wetlands and streams, are there other aspects of NYSDPS**  
2       **testimony that you wish to address?**

3    A:    Yes. Testimony prepared by the Staff Policy Panel includes as Exhibit\_(SPP-3)  
4       Staff's proposed Conditions for a Certificate of Environmental Compatibility and  
5       Public Need. I wish to address some of the Conditions related to wetlands and/or  
6       streams, which are summarized and addressed in the bullet points below. The  
7       Applicant is in agreement with any NYSDPS-proposed wetland/stream conditions  
8       not listed below.

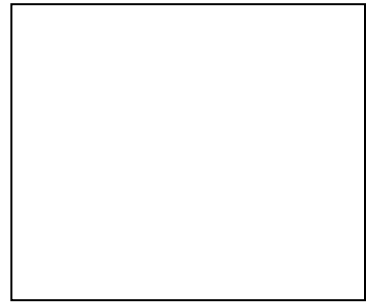
9           • Proposed Condition 39 requires the Applicant to prepare final design  
10         drawings, site plans, and construction details that would include turbine  
11         locations adhering to specific setback requirements, including 100 feet  
12         from state-jurisdictional wetlands. **Response:** As depicted on the March  
13         31, 2017 wetland and stream impact drawings and the updated wetland  
14         and stream impact drawings included in Exhibit BRB-5 (see the "Updated  
15         Layout" section of my testimony below for additional detail), there are  
16         multiple turbines located within 100 feet of the delineated boundary of  
17         state-jurisdictional wetlands. As described above in my testimony, Ms.  
18         Rothrock (NYSDEC) recommended moving some of these turbines to  
19         increase distance from the wetland; however, there are specific reasons  
20         why this cannot happen (e.g., proximity to an archaeological resource,





1 setback from non-participating residence). Therefore, the Applicant  
2 proposes to eliminate the requirement to setback turbines 100 feet from  
3 the delineated boundary of state-jurisdictional wetlands.

- 4 • Proposed Condition 64 requires the Applicant to create an In-stream and  
5 Wetland Construction Plan demonstrating how impacts to wetlands and  
6 streams will be avoided and minimized to the maximum extent  
7 practicable. The plan shall include a table that identifies all wetlands and  
8 streams within the Project area and provides the following for each  
9 resource: wetland delineation types and NYSDEC stream classifications,  
10 assessment of reasonable avoidance measures, identification and  
11 assessment of methods to minimize impacts, and references to the location  
12 of each resource where shown in the final design drawings, site plans, and  
13 construction details. **Response:** given the Applicant's response to IR DPS-  
14 1 (i.e., completion of a detailed wetlands/stream impact avoidance and  
15 minimization spreadsheet), the March 31, 2017 wetland/stream impact  
16 drawings and the updated impact drawings included in Exhibit BRB-5 (see  
17 the "Updated Layout" section of my testimony below for additional  
18 detail), and the Applicant's response to IR DPS-46 (i.e., update of the  
19 detailed wetland/stream impact avoidance and minimization spreadsheet),  
20 the Applicant believes this information substantially exists in the record.



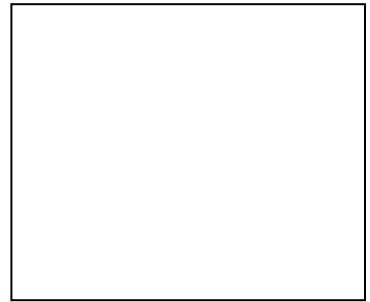
- 1           • Proposed Condition 65 requires development of a Wetland Mitigation  
2           Plan and states, “The Plan shall be developed in coordination with  
3           NYSDEC and DPS Staff, and satisfy applicable federal and State  
4           regulations.” **Response:** The Applicant suggests this language should be  
5           slightly adjusted, so as to assure all agencies with jurisdiction are in  
6           agreement with the plan, and read as follows: “The Plan shall be  
7           developed in coordination with NYSDEC and DPS Staff, *and Corps*  
8           *personnel*, and satisfy applicable federal and State regulations.”
- 9           • Proposed Condition 92 discusses work period restrictions in relation to  
10          streams protected under Article 15 of the ECL and states, “Construction in  
11          streams protected under Environmental Conservation Law (ECL) Article  
12          15 shall comply with work period restrictions that are established to  
13          protect fish spawning and migration.” **Response:** The Applicant suggests a  
14          slight modification to this language as follows: “Construction in streams  
15          protected under Environmental Conservation Law (ECL) Article 15 shall  
16          comply with work period restrictions *established in consultation with*  
17          *NYSDEC* that are ~~established to~~ *protective of* fish spawning and  
18          migration.”
- 19          • Proposed Condition 93 further discusses work period restrictions in  
20          relation to streams protected under Article 15 of the ECL and states,



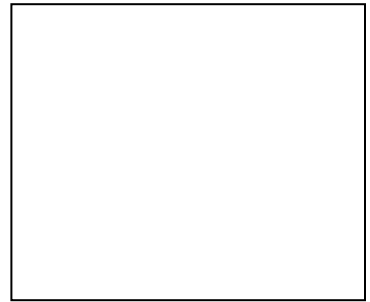
1 “Dates for the seasonal work period restrictions...shall be included in the  
2 plan and noted on final construction detail drawings.” **Response:** It is not  
3 clear what “plan” is being referenced; therefore, the Applicant suggests  
4 revising this language as follows: “Dates for the seasonal work period  
5 restrictions...shall be ~~included in the plan and~~ noted on final construction  
6 detail drawings.”

7 • Proposed Condition 97 discusses marking the boundaries of delineated  
8 wetlands following stake-out of the limits of disturbance (LOD) by the  
9 BOP contractor, and specifically states, “...the boundaries of all  
10 delineated wetlands within 100 feet of the LOD shall be clearly defined by  
11 staking, fencing or flagging boundaries...” **Response:** The Applicant  
12 suggests this language should be slightly adjusted, so as to be more  
13 protective and clearer, and read as follows: “...the boundaries of all  
14 delineated wetlands *and streams* within ~~100 feet of~~ the LOD, *and*  
15 *extending 100 feet beyond the LOD assuming such an extension remains*  
16 *on the respective parcel*, shall be clearly defined by staking, fencing or  
17 flagging boundaries...”

18 **Q: Does Christopher Legard’s (NYSDEC) Direct Testimony include proposed**  
19 **Certificate conditions?**

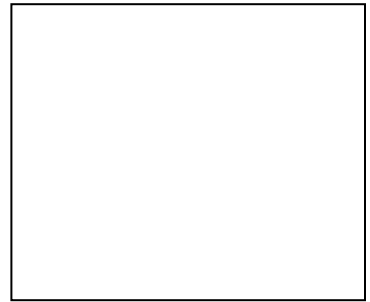


- 1 A: Yes. The Direct Testimony of Christopher Legard provides proposed Certificate  
2 Conditions for state-regulated streams (assumed to be those that are classified as  
3 C(T) and above), which are summarized and addressed in the bullet points below.  
4 The Applicant is in agreement with any NYSDEC-proposed stream conditions not  
5 listed below.
- 6 • Temporary Stream Crossings for Equipment – this proposed condition  
7 discusses the installation of pipelines through streams and the use of  
8 bridges to cross streams (Legard testimony page 13, lines 6-23 and page  
9 14, lines 1-2). **Response:** The Applicant is not installing any pipelines and  
10 has not proposed the use of bridges to cross any streams. Therefore, this  
11 condition is not applicable to the proposed Facility and as such the  
12 Applicant believes this condition should be deleted.
  - 13 • Permanent Stream Crossings – this proposed condition discusses the  
14 methods by which permanent road crossings through streams shall be  
15 installed, with multiple requirements including culvert pipes to be  
16 designed to “...safely pass the 2% annual chance storm event” and to have  
17 a width of “...a minimum of 1.25 times (1.25X) width of the mean high  
18 water channel...” (Legard testimony page 15, lines 2-12). **Response:** The  
19 Applicant notes that the NYSDPS has a similar, but technically different  
20 requirement. Specifically, NYSDPS proposed condition 96 states,



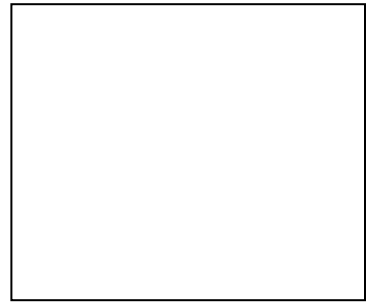
1 “Culvert openings shall be at least 1.25 times the active channel width of  
2 the stream. All culverts shall be designed to accommodate a 100-year flow  
3 event...” The Applicant requests that the Certificate contain a single  
4 condition related to culvert design goals, while still allowing flexibility on  
5 a case-by-case basis, and suggests the following: “*All culverts placed in*  
6 *regulated streams shall be designed on a case-by-case basis, and culvert*  
7 *opening shall, at a minimum, be at least 1.25 the active channel width and*  
8 *accommodate the 2% annual chance storm event).*”

9 • Water Quality and Habitat Impacts to Streams from Buried Interconnects  
10 – this proposed condition requires the use of HDD for crossings of buried  
11 cables under all streams (Legard testimony page 16, lines 14-23, page 17,  
12 lines 1-22, and page 18, lines 1-17). **Response:** this proposed condition  
13 appears to conflict, in part, with the “Trench Across Stream” proposed  
14 condition, which allows for trenching across streams if trenchless methods  
15 are determined to be not constructible or not feasible (Legard testimony  
16 page 11, lines 3-17). Therefore, the Applicant suggests this requirement  
17 should apply to state-protected streams only (i.e., those with a  
18 classification of AA, A, or B, or with a classification of C with a standard  
19 of (T) or (TS)). Please also note that any trenching through a stream with  
20 a classification of C or D would presumably still be subject to other



1 proposed and applicable conditions, such as “No Turbidity from  
2 Dewatering” (Legard testimony page 11, lines 18-23 and page 12, lines 1-  
3 4), “Turbid Discharges” (Legard testimony page 12, lines 8-19), “Water  
4 Clarity” (Legard testimony page 13, lines 3-5), and “In-Stream Work in  
5 the Dry” (Legard testimony page 14, lines 9-13).

- 6 • Native Woody Plants – this proposed condition discusses planting of  
7 native woody plants at stream crossings (Legard testimony page 20, lines  
8 9-13). **Response:** the Applicant suggests a minor addition to this  
9 condition so as to read as follows: “To reduce thermal impacts to exposed  
10 streams, native woody plants such as shrub willows, dogwoods,  
11 appropriate native trees, or other native riparian species will be planted at  
12 all stream crossings, *which are void of any such vegetation and is to be*  
13 *restored following a temporary impact, to shade the project area...*”
- 14 • Provide Sufficient Cover for Buried Interconnects in Streambed – this  
15 proposed condition requires the preparation of an “Exposure of Pipe by  
16 Stream Report” by a New York State-licensed engineer that includes a  
17 Vertical Adjustment Potential (VAP) analysis and a Lateral Adjustment  
18 Potential (LAP) analysis for each stream crossing not located in bedrock  
19 (Legard testimony page 21, lines 12-23). **Response:** This is a very unusual  
20 condition (one that EDR has never seen before in relation to any wind

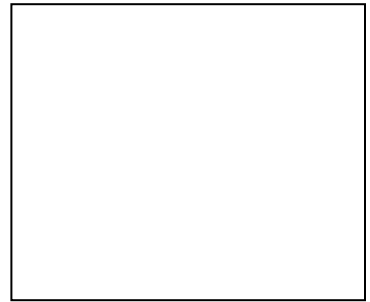


1 power project), and appears to have perhaps been copied from a permit  
2 issue for a pipeline facility. Regardless of its origin, the Applicant is not  
3 proposing to install any pipelines or any other conduits of potential  
4 pollutants/hazardous material. In addition, the Applicant has never  
5 conducted a VAP or LAP for any project. Therefore, this condition is not  
6 applicable to the proposed Facility and as such the Applicant believes this  
7 condition should be deleted.

8 **Q: Does Ms. Rothrock's (NYSDEC) Direct Testimony include any additional**  
9 **proposed Certificate conditions?**

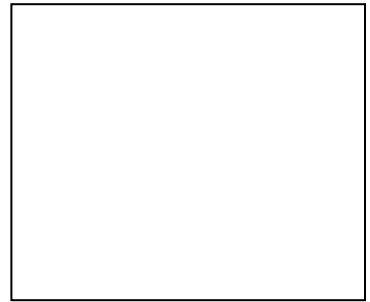
10 A: Yes. The Direct Testimony of Ms. Rothrock provides proposed Certificate  
11 Conditions specific to state-regulated freshwater wetlands, which are summarized  
12 and addressed in the bullet points below. The Applicant is in agreement with any  
13 NYSDEC-proposed wetland conditions not listed below.

14 • Preparation of a Spill Prevention, Control, and Countermeasures (SPCC)  
15 Plan (Rothrock testimony page 25, lines 3-12). **Response:** the Applicant  
16 has committed to preparing a Final SPCC Plan, but believes the timing of  
17 this should be related to the start of construction, which is consistent with  
18 a NYSDPS proposed condition related to a Final SPCC. Therefore, the  
19 Applicant suggests this condition should state, "*At least 30 days prior to*

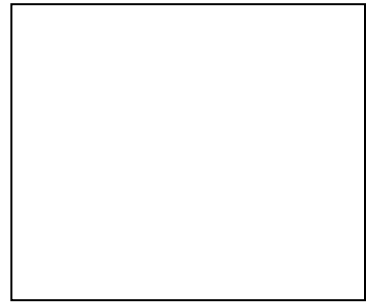


- 1           *the commencement of construction*, the certificate holder shall submit an  
2           approvable SPCC plan...”
- 3           • Identifying the boundaries of non-work areas through use of legible signs,  
4           exclusionary fencing, and erosion controls (Rothrock testimony page 26,  
5           lines 5-13). **Response:** The first sentence of this proposed condition  
6           states, “Legible ‘protected area’ signs, exclusionary fencing, and erosion  
7           controls...shall be installed along the approved work area to protect and  
8           clearly identify the boundaries of non-work areas...” Please note that it is  
9           typical practice to utilize colored flagging to mark the limits of clearing,  
10          sensitive resource areas, exclusion areas, etc. It is also typical that the  
11          flagging/marketing protocols are set forth in the Environmental Compliance  
12          Manual. Therefore, the Applicant suggests modifying the first sentence of  
13          this proposed condition to read as follows: “Legible ‘protected area’ signs,  
14          exclusionary fencing, *colored flagging*, and/or erosion controls...shall be  
15          installed along the approved work area to protect and clearly identify the  
16          boundaries of non-work areas...” This suggested modification is  
17          consistent with a similar condition proposed by NYSDPS (see NYSDPS  
18          proposed condition 97).
- 19          • To the extent possible, work which must be in a wetland...should not  
20          occur during the peak amphibian breeding season (April 1 to June 15)...

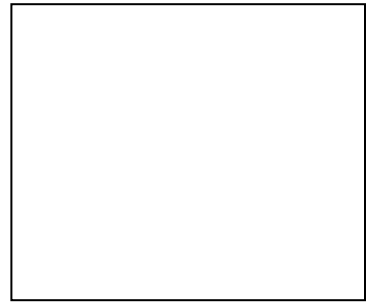




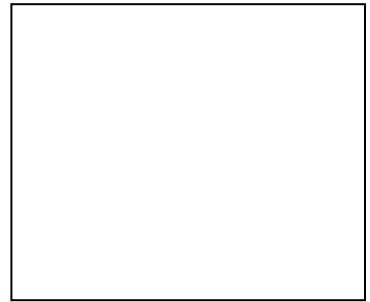
1 (Rothrock testimony page 30, lines 4-8). **Response:** This is a very unusual  
2 condition (one that EDR has not previously seen in relation to an Article  
3 24 permit). In addition, there is no documentation of a federal or state  
4 listed threatened or endangered amphibian species within the Facility Site,  
5 and therefore there is no reason to believe construction activities occurring  
6 from April 1 to June 15 would result in significant adverse impacts to  
7 amphibians. In addition, as described below in the “Updated Layout”  
8 section of my testimony, this Facility will result in relatively minor  
9 wetland impacts compared to the overall wetland resource (i.e., over 120  
10 acres of wetland were delineated, whereas less than 0.8 acre of wetland  
11 will be permanently impacted and less than 2.5 acres of wetland will be  
12 temporarily impacted). Lastly, according to the Applicant, this timeframe  
13 represents a critically important construction period over the course of the  
14 construction season, which will likely begin close to April 1 for access  
15 road construction followed by turbine pad and collection line installation.  
16 According to the Applicant, road building must begin in the early spring to  
17 allow for appropriate construction sequencing, culminating in turbine  
18 erection in mid-to late summer. Therefore, the Applicant is not agreeable  
19 to this condition.



1           • Areas of temporary disturbance in regulated wetlands and 100-foot  
2           adjacent areas...certificate holder must submit an approvable “Woody  
3           Species Replanting Plan”... (Rothrock testimony page 30, lines 16-23).  
4           **Response:** As indicated in my testimony above, Exhibit 22(b) states,  
5           “...temporary impacts are those where forest would be allowed to regrow  
6           following construction (e.g. along the periphery of access roads and  
7           turbine sites)... In these areas, the Applicant will only remove stumps  
8           where necessary to install underground components, will not use  
9           herbicides to prevent sprouting, and will not remove trees as part of  
10          routine vegetation management during Facility operation. Ecological  
11          succession will restore the forested condition of these areas over time.” A  
12          commitment to not use herbicides will in fact promote the regrowth of a  
13          forested community. In those areas where the majority of the stumps will  
14          be removed, topsoil will also be segregated and then spread over a given  
15          area during restoration. This topsoil will contain an existing seedbank  
16          derived from the disturbed area, which will also allow for regeneration of  
17          the forested/woody community. In addition, restoration efforts will be  
18          evaluated and documented during post-construction monitoring efforts.  
19          Therefore, the Applicant should not be required to prepare a “woody  
20          species replanting plan” as suggested in Ms. Rothrock’s testimony.



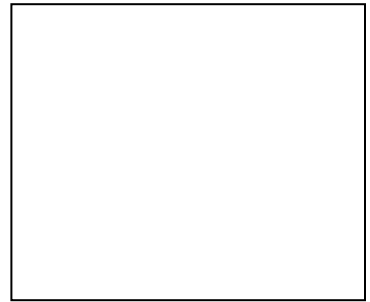
1           • A proposed condition associated with restoration of wetlands and  
2           regulated adjacent areas disturbed due to the installation of buried  
3           collection (Rothrock testimony page 31, lines 3-23 and page 32 lines 1-  
4           11). **Response:** This proposed condition states, “All wetland and  
5           NYSDEC adjacent areas disturbed during the installation of buried  
6           interconnects shall be restored in accordance with the following  
7           requirements...Replanted areas shall be monitored for 5 years and an 85%  
8           cover of native species has been reestablished over all portions of the  
9           replanted area.” However, this does not take into account the existing  
10          cover of native species. The Applicant should not be responsible for  
11          native species coverage in excess of what exists prior to construction.  
12          Rather, this should be correlated to the results of the invasive species  
13          baseline survey. This proposed condition also states, “At the end of the  
14          first year of monitoring, the certificate holder shall replace lost wetland  
15          and/or wetland adjacent area plantings if the survival rate of the initial  
16          plantings is less than 80%.” If one measure of restoration success is 85%  
17          vegetative coverage at the end of 5 years, it is unclear why initial plantings  
18          must achieve a survival rate of 80% by the end of the first year. The  
19          Applicant believes that success criteria should be related to absolute cover,  
20          which describes the percentage of total vegetation coverage of the ground



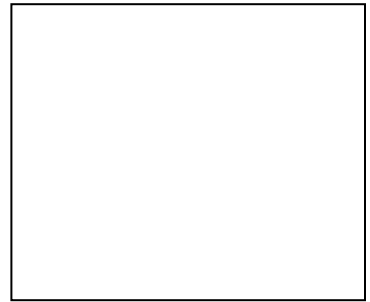
1 surface by the stems and foliage of any woody plant species, based on  
2 visual assessment within sample plots. Therefore, the Applicant proposes  
3 the following condition: Monitoring for woody vegetation establishment  
4 will take place during the growing season over a 5-year period. Random  
5 sample points will be established within temporarily disturbed wetlands  
6 and adjacent areas. At each sample point, absolute cover for each plant  
7 species present within a one by one meter plot will be visually estimated  
8 and recorded. Cover estimates for woody species will then be totaled for  
9 each sample plot. Cover data collected at these sample points will be  
10 averaged and extrapolated to the entire area of temporary disturbance  
11 within a given wetland or adjacent area. Vegetation reestablishment will  
12 be considered successful once 85% absolute cover of woody species is  
13 achieved.

- 14 • Starting on page 32 of Ms. Rothrock's testimony there is a proposed  
15 condition associated with installation of overhead transmission lines and  
16 interconnects in wetlands and state-regulated adjacent areas. This  
17 proposed condition includes a number of sub-bullets, some of which are  
18 summarized and addressed as follows:

- 19 ○ Swamp mats, tracked equipment, or low-ground-pressure vehicles  
20 must be utilized in state-regulated adjacent areas for installation of

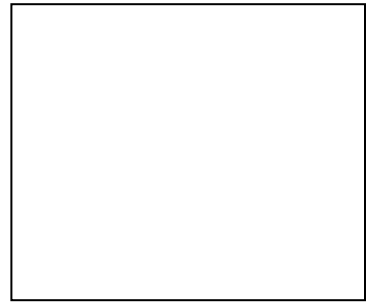


- 1 utility poles and overhead lines (Rothrock testimony page 32, lines  
2 16-18). **Response:** As indicated in my testimony above, the  
3 Applicant proposes that temporarily disturbed wetlands and  
4 adjacent areas will be monitored for successful regeneration  
5 through the establishment of sample plots and documentation of  
6 absolute cover. The Applicant is therefore subject to achieving  
7 such success criteria regardless of the construction equipment used  
8 during installation, and as such there should not be a restriction on  
9 the use of construction equipment.
- 10 ○ Swamp mats must be removed in reverse order of placement as  
11 soon as practicable, but no later than four months following  
12 installation of the overhead line (Rothrock testimony page 33, lines  
13 1-3). **Response:** This is unnecessarily restrictive, and as such the  
14 Applicant suggests the following modification (which remains  
15 protective of the resource): “*Swamp mat removal must be*  
16 *conducted from adjacent mats (i.e., removal equipment always*  
17 *stationed on a mat)* as soon as practicable...”
- 18 ○ Disturbed areas will be monitored for 5 years following the  
19 installation of overhead lines or interconnects to assure an 85%  
20 cover of native species. If after one complete growing season an

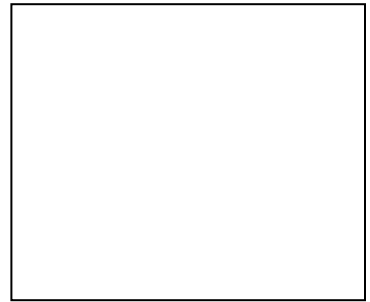


1                   85% cover of native species is not achieved, the certificate holder  
2                   must evaluate the reasons for these results and submit an  
3                   approvable “Wetland Planting Remedial Plan” for NYSDEC  
4                   approval (Rothrock testimony page 33, lines 4-8). **Response:** This  
5                   requirement does not take into account the existing cover of native  
6                   species. The Applicant should not be responsible for native  
7                   species coverage in excess of what exists prior to construction.  
8                   Rather, this should be correlated to the results of the invasive  
9                   species baseline survey.

10                  • Prior to issuance of the certificate, the applicant must submit, at a  
11                   minimum, a conceptual wetland mitigation plan to the NYSDEC Regional  
12                   Supervisor of Natural Resources that describes the general objectives and  
13                   approaches designed to offset all project impacts to wetland functions and  
14                   benefits (Rothrock testimony page 34, lines 6-10). **Response:** as indicated  
15                   previously in my testimony, the Applicant has submitted a revised version  
16                   of a Conceptual Mitigation Plan, along with additional information  
17                   regarding analysis of suitable mitigation in response to an Interrogatory  
18                   Request from the NYSDEC (see Exhibit BRB-6 of my testimony for a  
19                   copy of the Applicant’s response to IR DEC-3). Therefore, this condition  
20                   has already been satisfied. In addition, because no objection (or response)



- 1 from any party has been received, the Applicant assumes the conceptual  
2 mitigation plan is acceptable.
- 3 • Within 60 days of issuance of certificate, the certificate holder must  
4 submit an approvable “Wetland Mitigation Plan” to the NYSDEC  
5 Regional Supervisor of Natural Resources (Rothrock testimony page 34,  
6 lines 11-21 and page 35, lines 1-13). **Response:** As indicated above, the  
7 Applicant has submitted a conceptual mitigation plan to the parties (see  
8 Exhibit BRB-6). The Applicant agrees to the submittal of a final Wetland  
9 Mitigation Plan. As there have been no objections to the conceptual plan  
10 the Applicant intends on proceeding to the development of a Wetland  
11 Mitigation Plan.
  - 12 • Certificate holder must submit annual monitoring reports for a minimum  
13 of five years post-construction on the success of the wetland and adjacent  
14 area restoration, and the success of the mitigation site enhancements.  
15 These reports shall describe... “coverage of native species by section,  
16 survival rate of plantings, percent of invasive species, native species  
17 composition (%), invasive species present...” (Rothrock testimony page  
18 35, lines 14-23 and page 36, lines 1-5). **Response:** As indicated  
19 previously in my testimony, the Applicant does not believe that  
20 “plantings” are necessary to achieve regeneration of forest in disturbed



1 areas. As also previously indicated, the Applicant suggests that a meeting  
2 with Corps and NYSDEC personnel is necessary to assure that suitable  
3 mitigation is proposed for both agencies. It is fully expected that the  
4 details of mitigation performance standards, along with monitoring and  
5 reporting, will be developed in consultation with the agencies of  
6 jurisdiction. Therefore, the Applicant suggests this certificate condition  
7 should state, “*The Final Wetland Mitigation Plan will address monitoring*  
8 *and reporting criteria for temporarily disturbed wetlands and adjacent*  
9 *areas and the wetland mitigation area, and will be developed in*  
10 *consultation with the NYSDEC, NYSDPS and the Corps.*”

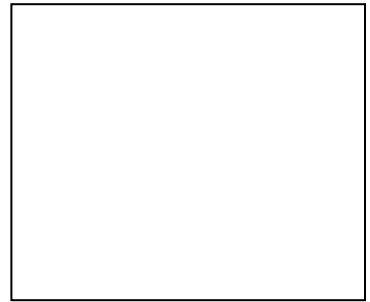
11 Invasive Species

12 **Q: Regarding invasive species, do you have any comment regarding the Direct**  
13 **Testimony of Anne Rothrock?**

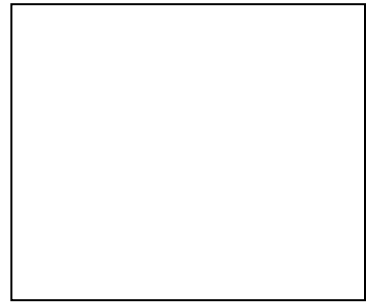
14 A: Yes. Beginning on page 23 of her testimony there are a number of bulleted points  
15 related to her review of the Facility’s Invasive Species Control Plan (ISCP). Each  
16 of these points are summarized and individually addressed below.

- 17 • The baseline survey must be done at the proper time of year (as applicable  
18 for each invasive species) to have the best chance of detecting those  
19 species (Rothrock testimony page 23, lines 17-18). **Response:** The  
20 Applicant agrees, and in fact details associated with this are currently in





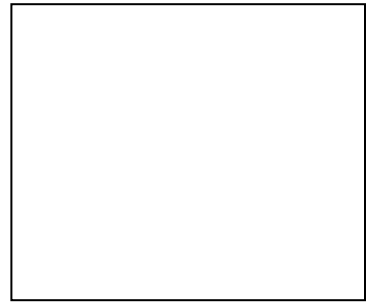
1 the record. Specifically, the response to IR DPS-2 states, “The Applicant  
2 will consult with DPS and/or DEC staff to determine the optimal time to  
3 conduct the baseline survey during the 2017 growing season.”  
4 Subsequently, on March 20, 2017 the Applicant provided a Proposed  
5 Invasive Species Survey Methodology to all parties (including the  
6 NYSDEC). The proposed survey methodology was prepared by EDR  
7 botanists and states, “...Interrogatory Request (IR) No. DPS-2 was  
8 specifically related to invasive species. In response to this IR the  
9 Applicant indicated that a baseline invasive species survey will be  
10 completed during the growing season of 2017, and consultation with DPS  
11 and/or DEC staff would take place to determine the optimal time to  
12 conduct the baseline survey during the 2017 growing season. Therefore,  
13 the primary purpose of this memorandum is to establish consensus with  
14 DPS and DEC staff on the timing and the scope/methodology of the  
15 baseline invasive species survey... The invasive plant survey will be  
16 conducted between late May and late June of 2017 by EDR staff  
17 ecologists. This timeframe will coincide with vegetative and inflorescence  
18 phenological stages to allow for accurate identification of target species.  
19 Survey methodology will consist of walking the Survey Area and visually  
20 estimating cover of NYSDEC-listed prohibited and regulated invasive



1 plant species. Invasive plant occurrences will be documented with field  
2 notes and global positioning system (GPS) point data, and assigned a  
3 density code for absolute cover...” (see Exhibit BRB-7). The Applicant  
4 has not received any response to the proposed survey methodology  
5 provided on March 20, 2017. Therefore, the survey is being conducted in  
6 accordance with the methodology proposed. Please see Exhibit BRB-7 for  
7 a copy of the Applicant’s response to IR DPS-2 and the subsequently  
8 provided Proposed Invasive Species Survey Methodology.

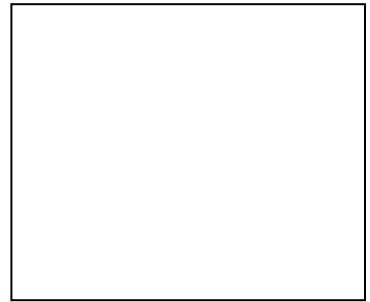
- 9 • Once baseline surveys are conducted, further avoidance and minimization  
10 must be considered, where possible, to adjust the alignment around  
11 significant invasive species infestations, thus reducing the chance of their  
12 spread due to the project (Rothrock testimony page 23, lines 19-21).

13 **Response:** The Proposed Invasive Species Survey Methodology document  
14 indicates that the results of the invasive species survey will include “A  
15 complete list of all invasive plant species observed within the Survey  
16 Area, Site specific observations for each invasive plant species detected  
17 during the survey, Map of density of absolute cover of invasive plant  
18 species within Survey Area, and Map(s) of locations of populations of  
19 invasive plant species with discrete boundaries within the Survey Area.  
20 Conclusions and recommendations will be made based on the baseline

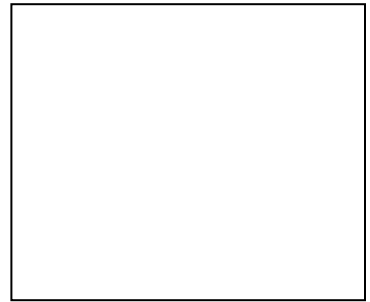


1 survey results. In addition, appendices containing information related to  
2 treatment and removal of specific invasive plant species, BMPs to restrict  
3 the spread of invasive plants, and a photo log of representative photos of  
4 each invasive plant species observed within the Survey Area will be  
5 included with the baseline report.” An evaluation of the best management  
6 practices (BMPs) to reduce the spread of invasive species should only be  
7 done following the results of the baseline survey. The Applicant is willing  
8 to commit to BMPs to control the spread of invasive species, and in our  
9 experience component relocation is not necessary to accomplish this goal.  
10 Depending on the severity of the invasive species identified during the  
11 baseline survey, BMPs could range from construction equipment  
12 sanitation to invasive species removal and off-site disposal.

- 13 • The method to ensure that imported fill and fill leaving the site will be free  
14 of invasive species (Rothrock testimony page 24, lines 1-2). **Response:**  
15 The Applicant will consult with the BOP contractor, once selected, to  
16 determine such methods.
- 17 • Detailed cleaning procedures for removing invasive species propagules  
18 from equipment should be provided (Rothrock testimony page 24, lines 3-  
19 4). **Response:** The Applicant will consult with the BOP contractor, once  
20 selected, to determine such methods.



- 1           • Restoration of temporarily disturbed areas must include mulching with  
2 straw (Rothrock testimony page 24, line 5). **Response:** The Applicant  
3 agrees, and in fact has stated this in the record. Specifically, Exhibit 22(c)  
4 of the Application states, “Following construction activities, temporarily  
5 disturbed areas will be seeded (and stabilized with mulch and/or straw if  
6 necessary) to reestablish vegetative cover in these areas. Other than in  
7 active agricultural fields, native species will be allowed to revegetate these  
8 areas.”
- 9           • Herbicide treatment in regulated wetlands is a regulated activity and  
10 authorization to do so must be obtained from NYSDEC (Rothrock  
11 testimony page 24, lines 6-7). **Response:** The Applicant agrees, and in fact  
12 has addressed the use of herbicides in the record. Specifically, the ISCP  
13 included as Appendix FF to the Application states, “Specific disposal and  
14 treatment methods for removed plant material will be determined  
15 (through consultation with the Environmental Monitor) based on the  
16 density and quantity of invasive species encountered, and may include  
17 herbicide treatment, placement in an interim designated secure container,  
18 transport in a sealed container and proper offsite disposal in a designated  
19 secure container, or leaving infested vegetative materials (including  
20 infested fill) in the area that is already infested, provided that no filling of

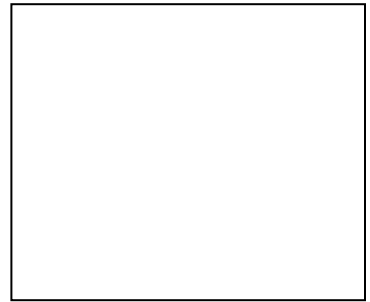


1 wetlands or adjacent areas will occur as a result. Any herbicide spot  
2 treatments would be applied by a Certified Commercial Pesticide  
3 Applicator, Commercial Pesticide Technician, or a Private Pesticide  
4 Applicator (i.e., individuals that meet the requirements set forth in 6  
5 NYCRR Part 325, Application of Pesticides), in accordance with  
6 NYSDEC approved herbicide and treatment measures.”

- 7 • The Applicant must conduct post-construction monitoring of invasive  
8 species for a minimum of five years (as opposed to two years), with  
9 extensions, as applicable (Rothrock testimony page 24, lines 8-9).

10 **Response:** The Applicant does not understand why the minimum  
11 monitoring timeframe must be five years, especially if monitoring at the  
12 end of years one and two indicates there has been no spread of invasive  
13 species. In fact, the Applicant’s position on this is supported by the  
14 NYSDPS. Specifically, testimony prepared by the Staff Policy Panel  
15 includes as Exhibit\_(SPP-3) Staff’s proposed Conditions for a Certificate  
16 of Environmental Compatibility and Public Need. Proposed Condition 62  
17 requires preparation of a Final ISCP and conducting a two-year post-  
18 construction monitoring program.

- 19 • The Applicant states their intent to discuss with NYSDEC a “reasonable  
20 definition” of no net increase of invasive species, however, the Applicant



1 has not proposed any such definition (Rothrock testimony page 24, lines  
2 10-12). **Response:** Following the results of the baseline survey, which are  
3 described in detail in Exhibit BRB-7, a definition will be proposed.

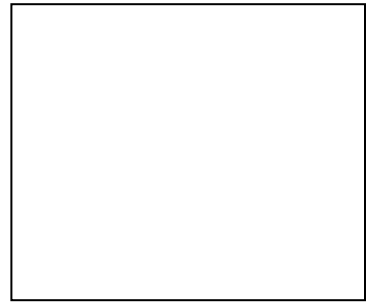
4 **Q: Does the Direct Testimony of Anne Rothrock provide any proposed**  
5 **certificate conditions associated with invasive species?**

6 A: Yes. There are two proposed conditions associated with invasive species in her  
7 testimony.

8 **Q: Do you wish to comment on these proposed conditions?**

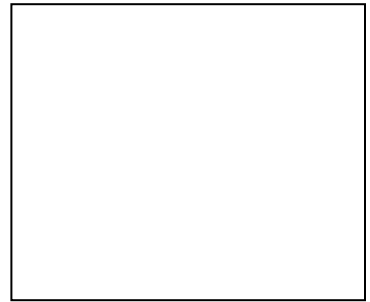
9 A: Yes. Page 37, lines 6-13 of her testimony proposes a condition associated with  
10 invasive insects. The Applicant is agreeable to this condition. However,  
11 beginning on page 36 of her testimony, a condition associated with the  
12 preparation of an approvable invasive species monitoring and control plan is  
13 proposed, which includes a number of bulleted points. Each of these points  
14 indicate what the plan must contain, and are summarized and individually  
15 addressed below.

16 • Protocols for baseline surveys to document the presence of invasive plant  
17 communities and establish a baseline measure of infestation (Rothrock  
18 testimony page 36, lines 14-15). **Response:** As previously stated, on  
19 March 20, 2017 the Applicant provided a Proposed Invasive Species  
20 Survey Methodology to all parties (including the NYSDEC) (see Exhibit



1 BRB-7). The Applicant has not received any response to the proposed  
2 survey methodology provided on March 20, 2017. Therefore, the survey is  
3 being conducted in accordance with the methodology proposed, and as  
4 such this proposed language by Ms. Rothrock should not be included as a  
5 condition to the Certificate because the survey will be complete by the  
6 time a Certificate is issued.

- 7 • Protocols for preventing new introductions of invasive species and  
8 preventing the spread of invasive species (e.g., equipment cleaning, fill  
9 sources free of invasive species) (Rothrock testimony page 36, lines 16-  
10 18). **Response:** As previously stated, the Proposed Invasive Species  
11 Survey Methodology document indicates that the results of the invasive  
12 species survey will include “A complete list of all invasive plant species  
13 observed within the Survey Area, Site specific observations for each  
14 invasive plant species detected during the survey, Map of density of  
15 absolute cover of invasive plant species within Survey Area, and Map(s)  
16 of locations of populations of invasive plant species with discrete  
17 boundaries within the Survey Area. Conclusions and recommendations  
18 will be made based on the baseline survey results. In addition, appendices  
19 containing information related to treatment and removal of specific  
20 invasive plant species, BMPs to restrict the spread of invasive plants, and



1 a photo log of representative photos of each invasive plant species  
2 observed within the Survey Area will be included with the baseline  
3 report.” An evaluation of the best management practices to reduce the  
4 spread of invasive species should only be done following the results of the  
5 baseline survey.

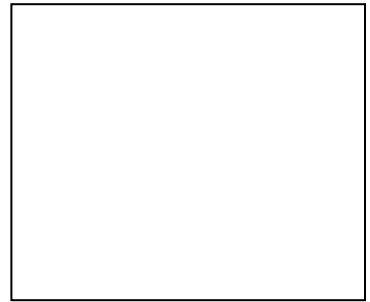
6 • Annual monitoring for a minimum of 5 years post-construction (Rothrock  
7 testimony page 36, line 19). **Response:** As previously stated, the  
8 Applicant does not understand why the minimum monitoring timeframe  
9 must be five years, especially if monitoring at the end of years one and  
10 two indicates there has been no spread of invasive species. As also  
11 previously stated, the Applicant’s position is supported by the Staff Policy  
12 Panel Proposed Condition 62. Therefore, the Applicant proposes annual  
13 monitoring for a period of 2 years post-construction.

14 • Protocols for adaptive management if performance requirements are not  
15 met (Rothrock testimony page 36, line 21). **Response:** The Applicant  
16 agrees to this condition, assuming reasonable performance standards are  
17 agreed to.

18 **Q: Did the NYSDPS provide testimony regarding invasive species?**

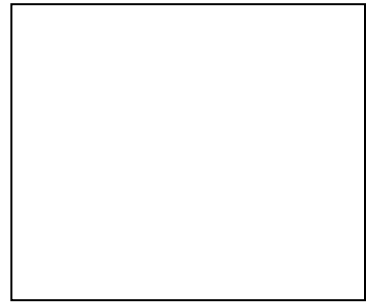
19 **A:** Yes. Jeremy Rosenthal provided brief testimony on this topic.





1   **Q:   Do you have any comment regarding Mr. Rosenthal’s invasive species**  
2       **testimony?**

3   A:   Yes. Mr. Rosenthal indicates that the Applicant has not provided adequate studies  
4       and plans to address the management of invasive species. In his testimony he  
5       references the ISCP included with the Application, and the baseline survey to be  
6       conducted in 2017. He goes on to state, “The ISCP provides a basic framework  
7       for addressing invasive species within the proposed Project site. However, it does  
8       not provide customized plans for addressing specific disturbance sites if certain  
9       invasive species concentrations are discovered in the forthcoming survey.  
10      Invasive species management will only be adequately addressed when such  
11      customized plans are provided and incorporated into the ISCP.” (Rosenthal  
12      testimony page 11, lines 16-21 and page 12, lines 1-7) **Response:** As previously  
13      stated, it is important to note that the Proposed Invasive Species Survey  
14      Methodology document states, “Conclusions and recommendations will be made  
15      based on the baseline survey results. In addition, appendices containing  
16      information related to treatment and removal of specific invasive plant species,  
17      BMPs to restrict the spread of invasive plants, and a photo log of representative  
18      photos of each invasive plant species observed within the Survey Area will be  
19      included with the baseline report.” Therefore, the Applicant has previously  
20      indicated in a supplement to IR DPS-2 that customized plans will be developed.



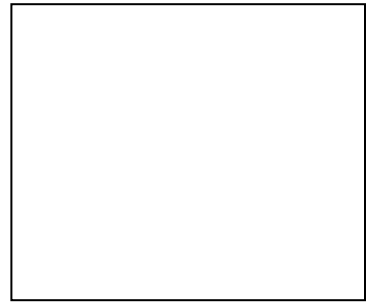
1    **Q:    Did the NYSDPS provide additional testimony regarding invasive species?**

2    A:    Yes. Testimony prepared by the Staff Policy Panel includes as Exhibit\_(SPP-3)  
3        Staff's proposed Conditions for a Certificate of Environmental Compatibility and  
4        Public Need. There are two proposed conditions associated with invasive species.  
5        Proposed Condition 62 requires preparation of a Final ISCP, conducting a two-  
6        year post-construction monitoring program, preparing a report at the end of the  
7        two-year monitoring program, which would assess if the goals of the ISCP are  
8        achieved and would be submitted to the NYSDPS, NYSDEC, and NYSDAM, and  
9        coordinating with these agencies regarding the success of the ISCP. The  
10       Applicant is fully agreeable to proposed condition 62. Staff's proposed condition  
11       63 also addresses invasive species, and requires that site-specific plans for  
12       management of areas with high concentration of invasive species identified during  
13       the pre-construction baseline survey shall be included in the ISCP. The Applicant  
14       is fully agreeable to proposed condition 63.

15    Updated Layout

16    **Q:    Are you aware that the Facility has been recently reduced from 58 turbines,**  
17        **as presented in the Application to, 48 turbines?**

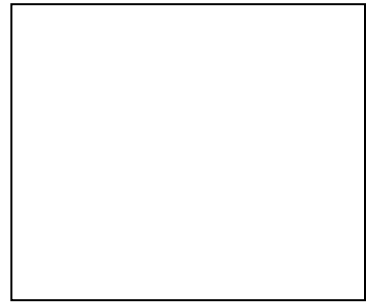
18    A:    Yes. Attached to my testimony as Exhibit BRB-8 is a map that compares the 58  
19        turbine layout to the 48 turbine layout. As indicated in the attached map, the  
20        following 10 turbines have been eliminated from the proposed Facility: T5, T8,



1 T28, T39, T44, T45, T46, T54, T56, and T58. In addition, a total of  
2 approximately 12,650 linear feet (2.4 miles) of access road and approximately  
3 20,235 linear feet (3.8 miles) of collection lines (buried and overhead) has  
4 correspondingly been removed from the Facility as a result of the removal of  
5 these 10 turbines (hereafter referred to as the “Updated Layout”). Also included  
6 in Exhibit BRB-8 is a map of the Updated Layout.

7 **Q: In relation to the Updated Layout, is there information you wish to provide**  
8 **for the record?**

9 A: Yes. In support of Exhibit 11 of the Application, EDR prepared the required  
10 Preliminary Design Drawings, which were included as Appendix M to the  
11 Application. For the convenience of the parties, the Preliminary Design Drawings  
12 have been updated to present the Updated Layout, and are included as Exhibit  
13 BRB-9 of my testimony. For the further convenience of the parties, the  
14 organization and sheet numbering of the design drawings remains the same as the  
15 original drawings included with the Application. However, due to the reduced  
16 number of turbines the following sheets no longer depict Facility components:  
17 NW-110, NE-106, NE-117, CE-102, CE-103, SW-101, SW-102, SW-103, and  
18 SW-107. In addition, a brief visual assessment memorandum has been prepared  
19 by EDR that provides updated viewshed analyses and visual simulations specific

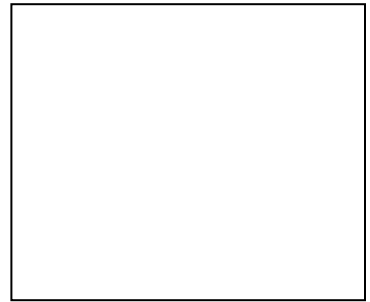


1 to the Updated Layout. This memorandum, which is included in as Exhibit BRB-  
2 10, concludes that the results of the original VIA remain accurate.

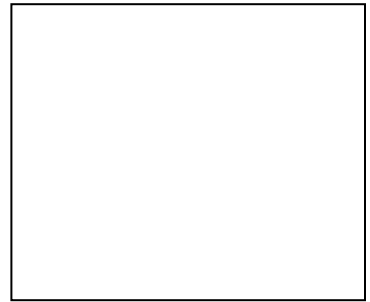
3 **Q: Have updated analyses been conducted that would allow the parties to**  
4 **understand that impact reductions between the 58 turbine layout and the 48**  
5 **turbine layout?**

6 A: Yes. In order to provide a direct comparison to some of the information provided  
7 in the Application, EDR has conducted updated analyses. Specifically, updated  
8 GIS calculations have been conducted in order to provide comparison impact  
9 numbers for Agricultural Districts, Land Use, Soils, and Vegetation, each of  
10 which are summarized below (detailed comparison tables are presented as Exhibit  
11 BRB-11 of my testimony).

12 • Agricultural Districts: As presented in Table 4-1 (Facility Impacts to  
13 Agricultural District Lands) of Exhibit 4 of the Application, portions of  
14 the Facility will be sited in three agricultural districts (District 8, District  
15 10, District 13), which remains the case for the Updated Layout. Table 4-  
16 1 of the Application also presented impacts to soils within these  
17 agricultural districts, and as indicated in “Table 4-1. Facility Impacts to  
18 Agricultural District Lands (Comparison)” included in Exhibit BRB-11,  
19 total soil impacts have been reduced by approximately 31 acres.



- 1           • Land Use: As presented in Table 4-4 (Land Use Impacts) of Exhibit 4 of  
2           the Application, the Facility will be sited in six distinct land use types as  
3           defined by the NYS Office of Real Property Services, which remains the  
4           case for the Updated Layout. Table 4-4 of the Application also presented  
5           impacts to these land use classifications, and as indicated in “Table 4-4.  
6           Land Use Impacts (Comparison)” included in Exhibit BRB-11, total land  
7           use impacts have been reduced by approximately 84 acres.
- 8           • Soils: As presented in Table 21-4 (Anticipated Impacts to Soils) of Exhibit  
9           21 of the Application, the Facility will be sited in numerous soil series,  
10          which remains the case for the Updated Layout. Table 21-4 of the  
11          Application also presented impacts to the individual soil series, and as  
12          indicated in “Table 21-4. Anticipated Impacts to Soils (Comparison)”  
13          included in Exhibit BRB-11, total soil impacts have been reduced by  
14          approximately 58 acres.
- 15          • Vegetation: As presented in Table 22-2 (Vegetation Impacts) of Exhibit 22  
16          of the Application, the Facility will be sited in five distinct cover types  
17          (forest, successional shrubland, successional old field, active agriculture,  
18          and disturbed/developed), which remains the case for the Updated Layout.  
19          Table 22-2 of the Application also presented impacts to these cover types,  
20          and as indicated in “Table 22-2. Vegetation Impacts (Comparison)”

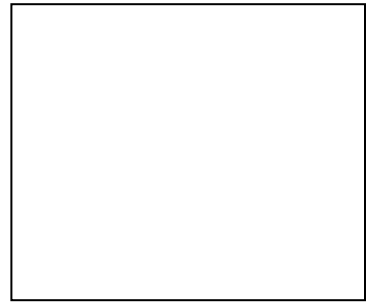


1 included in Exhibit BRB-11, total vegetation impacts have been reduced  
2 by approximately 84 acres.

3 **Q: Are there other analyses that have been conducted that would allow the**  
4 **parties to understand that impact differences between the 58 turbine layout**  
5 **and the 48 turbine layout?**

6 A: Yes. EDR also conducted updated analyses associated with shadow flicker and  
7 wetlands/stream impacts. Each of these analyses are addressed individually  
8 below.

- 9 • Shadow Flicker: As indicated in Exhibit 24 of the Application, a shadow  
10 flicker analysis was conducted for the 58-turbine layout, and a shadow  
11 flicker report was included as Appendix U to the Application. As a result  
12 of the Updated Layout, EDR conducted an updated shadow flicker  
13 analysis to determine if the reduction in the number of turbines would  
14 change the results presented in the original Shadow Flicker Report.  
15 Exhibit BRB-12 includes a memorandum that describes the results of the  
16 updated shadow flicker analysis.
- 17 • Wetland/Stream Impacts: As previously indicated, on March 31, 2017 the  
18 Applicant provided a set of detailed wetland/stream impact drawings in  
19 response to IR DPS-1. These drawings have been updated to address  
20 certain aspects of Direct Testimony from the parties (see “Wetland and



1 Stream” section above), and to address the Updated Layout. These  
2 updated wetland/stream impact drawings are included as Exhibit BRB-5,  
3 and indicate that impacts have been reduced. Specifically, permanent  
4 wetland impact (fill) now totals only 0.74 acre and temporary wetland  
5 impact (soil disturbance) now totals only 2.46 acres.

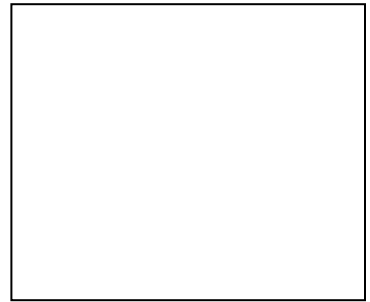
6 Specific Turbines Recommended for Removal

7 **Q: Are you aware of Direct Testimony that recommended the removal of**  
8 **specific turbines due to environmental impacts?**

9 A: Yes. The Direct Testimony of Daniel Connor recommends the removal of the  
10 following turbines: T7, T22, T36, T42, T54, and T58. As indicated above in my  
11 testimony T54 and T58 have been removed from the Facility. However, T7, T22,  
12 T36, and T42 remain in the Updated Layout.

13 **Q: Does Mr. Connor describe why these turbines should be removed from the**  
14 **Facility?**

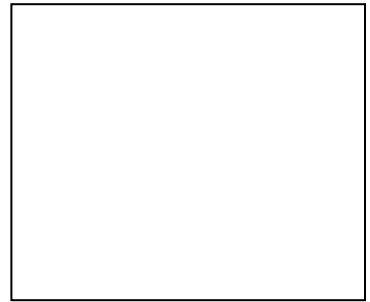
15 A: Yes. Mr. Connor indicates that heavy farming activities in the area have created a  
16 very fragmented forest throughout the Project site. This existing fragmentation  
17 makes conservation of existing forest resources in the area imperative. (Connor  
18 testimony page 5, line 21 and page 6, lines 1-4). Mr. Connor then goes on to  
19 discuss the impact to forest as a result of the specific turbines identified above.



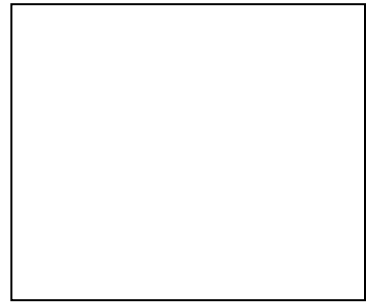
1   **Q:   Do you have any comment regarding this portion of Mr. Connor's**  
2       **testimony?**

3   A:   Yes. Mr. Connor's testimony indicates that heavy farming is the cause of forest  
4       fragmentation throughout the Facility site. However, this assumption does not  
5       appear to be supported by the record. For instance, when discussing plant  
6       communities Exhibit 22(a) of the Application indicates that active agriculture  
7       occupies approximately 28% of the Facility Site. Regardless, to address Mr.  
8       Connor's concern over fragmented forest, EDR conducted a GIS analysis to  
9       estimate the extent of interior forest within the Facility Site. A summary of this  
10      analysis is included in Exhibit BRB-13, and indicates that none of the turbines  
11      identified by Mr. Connor are located within interior forest conditions. In addition,  
12      Mr. Connor indicates that T-7, T-54, and T-58 result in impacts to a total of five  
13      wetlands and two streams. As indicated above, T54 and T58 have been removed  
14      from the Facility, and therefore T-7 remains the only turbine on this list of  
15      turbines identified for impacts to wetlands/streams. Specific to T-7, this turbine  
16      does not result in any temporary or permanent impacts to the adjacent wetland,  
17      which is clearly indicated on Sheet NW1 of both the March 31 wetland/stream  
18      impact drawings (Exhibit BRB-3) and the updated wetland/stream impact  
19      drawings (Exhibit BRB-5). In addition, as indicated in response to IR DPS-1,  
20      "The Applicant has recently confirmed with the landowner that moving the access





1 road to the field edge is acceptable, and therefore is in the process of adjusting  
2 this road... As a result, impacts to wetland A and tree clearing impacts will be  
3 significantly reduced.” (The Applicant’s response to DPS-IR-1 is attached to  
4 Jeremy Rosenthal’s testimony as Exhibit JR-1 page 1.) This adjust has been made  
5 as depicted on Sheet NW1 of both the March 31 wetland/stream impact drawings  
6 (Exhibit BRB-3) and the updated wetland/stream impact drawings (Exhibit BRB-  
7 5). Therefore, it is unclear why T7 is identified by Mr. Connor as a turbine  
8 resulting in significant wetland impacts. Lastly, Mr. Connor indicates that there is  
9 a disproportionate amount of grading and earthwork associated with T22, T36,  
10 T42, T54, and T58 (as previously stated T54 and T58 have been removed from  
11 the Facility). However, as indicated in Exhibit 21(p), “Impacts to soil resources  
12 will be minimized by adherence to best management practices that are designed to  
13 avoid or control erosion and sedimentation and stabilize disturbed areas. In  
14 addition, erosion and sedimentation impacts during construction will be  
15 minimized by the implementation of an erosion and sedimentation control plan  
16 developed as part of the State Pollution Discharge Elimination System (SPDES)  
17 General Permit for the Facility. Erosion and sediment control measures shall be  
18 constructed and implemented in accordance with a SWPPP to be prepared and  
19 approved prior to construction, and at a minimum will include the measures set  
20 forth in the Preliminary SWPPP provided in Appendix GG.” These turbines



1 (along with the rest of the Facility) will be subject to pre-approved protection  
2 measures. Therefore, from the perspective of grading and earthwork, these  
3 turbines should not result in significant adverse environmental impacts.

4 **Q: Does this conclude your testimony?**

5 A: Yes.