

**THE STATE OF NEW HAMPSHIRE  
BEFORE THE  
NEW HAMPSHIRE  
SITE EVALUATION COMMITTEE**

**SEC DOCKET NO. 2019-02**

**APPLICATION OF CHINOOK SOLAR, LLC FOR A CERTIFICATE OF SITE  
AND FACILITY FOR THE CHINOOK SOLAR PROJECT IN FITZWILLIAM,  
NEW HAMPSHIRE**

**PREFILED TESTIMONY OF DANA VALLEAU AND KARA MOODY  
ON BEHALF OF  
CHINOOK SOLAR, LLC  
OCTOBER 14, 2019**

**1    Qualifications of Dana Valleau**

**2    Q.     Please state your name and business address.**

3    A.     My name is Dana Valleau. My business address is TRC, 14 Gabriel Drive,  
4    Augusta, Maine 04330.

**5    Q.     Who is your current employer and what position do you hold?**

6    A.     I am employed by TRC as an Environmental Specialist.

**7    Q.     Please describe your responsibilities at TRC, including those that relate to  
8    the Chinook Solar Project that is the subject of this docket.**

9    A.     My responsibilities include project management, scoping field studies,  
10   consultation with agencies, and overseeing field studies. I also conduct fieldwork as a  
11   wetland scientist, wildlife biologist, and environmental inspector on construction sites.  
12   Additionally, I provide documentation of field study results, prepare permit applications,  
13   and perform compliance reporting.

14           Chinook Solar, LLC (“Chinook Solar”) has retained TRC to provide project  
15   management and permitting support for the Chinook Solar Project (the “Project”). As a

1 wetland scientist and wildlife biologist, I have reviewed all the surveys and studies for  
2 the Project related to natural resources, and I have visited the Project site on numerous  
3 occasions. As the result of these activities, I am very familiar with the Project.

4 **Q. What is your background and what are your qualifications?**

5 A. I have a B.S. Degree in Wildlife Management and Juris Doctorate, both from the  
6 University of Maine. I have worked in the environmental science field for over 20 years  
7 in a wide variety of capacities. I was certified as a wildlife biologist in June 2011 through  
8 The Wildlife Society, a nationally recognized certification program for professional  
9 wildlife biologists. I renewed my certification in June 2019, as certifications must be  
10 renewed every 5 years by demonstrating 80 hours of continued education and  
11 professional development. I have conducted/coordinated wetland and vernal pool surveys  
12 and assessments on electric transmission line projects such as the Central Maine Power  
13 Company Maine Power Reliability Project and also on the Kibby and Kibby Expansion  
14 Wind Power Projects in Maine. More detail on my background and experience is  
15 included in my resume, which is included as Attachment A to this testimony.

16 **Q. Have you previously testified before this Committee and/or any other state**  
17 **permitting agencies?**

18 A. Yes. I presented testimony on the results of bat field studies, as well as testimony  
19 regarding the potential effect of the Antrim Wind Project on the natural environment,  
20 particularly wetlands, vernal pools, and wildlife habitat, in connection with Antrim Wind  
21 Energy, LLC's application for a Certificate of Site and Facility in Docket 2012-01. I also

1 testified before the Maine Board of Environmental Protection, as well as before the  
2 Maine Land Use Regulation Commission on behalf of the applicant in the Kibby and  
3 Kibby Expansion Wind Power Projects.

4 **Qualifications of Kara Moody**

5 **Q. Please state your name and business address.**

6 A. My name is Kara Moody. My business address is Stantec, 482 Payne Road  
7 Scarborough Court, Scarborough, Maine 04074.

8 **Q. Who is your current employer and what position do you hold?**

9 A. I am employed by Stantec as an Environmental Project Manager.

10 **Q. Please describe your responsibilities at Stantec including those that relate to**  
11 **the Chinook Solar Project that is the subject of this docket.**

12 A. My primary responsibilities at Stantec include project management, permitting  
13 services and support, scoping field studies and permitting needs, and permit compliance.  
14 I also prepare permit applications and reports.

15 In conjunction with TRC, I have served as a Project Manager and Permitting  
16 Specialist for the Chinook Solar Project. I have worked on all aspects of project  
17 management and permitting for the Project. I have also reviewed all the surveys and  
18 studies for the Project related to natural resources. As a result, I am very familiar with the  
19 Chinook Solar Project. Additionally, my work experience in the past several years has  
20 focused on project management, permitting services, and project compliance for multiple  
21 renewable energy projects including utility-scale solar development projects and wind

1 energy facilities.

2 **Q. What is your background and what are your qualifications?**

3 A. I graduated from Antioch University in Keene, New Hampshire in 2009 with a  
4 Master of Science degree in Environmental Science and Conservation Biology. I also  
5 obtained a Bachelor of Arts degree in Biology from the University of Maine Farmington  
6 in 2003. I have been working in the environmental field for nearly 15 years. For the past  
7 several years, I have been working as an Environmental Project Manager and have  
8 experience permitting and managing various types of energy projects, including solar  
9 facilities. I was certified as a wildlife biologist in August 2013 through The Wildlife  
10 Society, a nationally recognized certification program for professional wildlife biologists.  
11 My certification was renewed in February 2018, as certifications must be renewed every  
12 5 years by demonstrating 80 hours of continued education and professional development.  
13 More detail on my background and experience is included in my resume, which is  
14 included as Attachment B to this testimony.

15 **Q. Have you previously testified before this Committee and/or any other state**  
16 **permitting agencies?**

17 A. No.

18 **Natural Environment – Dana Valleau and Kara Moody**

19 **Purpose of Testimony**

20 **Q. What is the purpose of your testimony?**

1 A. Our testimony supports Chinook Solar's Application for a Certificate of Site and  
2 Facility for the Chinook Solar Project, specifically as it pertains to the potential effects of  
3 the Project on the natural environment, including wetlands, vernal pools, wildlife and  
4 wildlife habitat. Our testimony summarizes the actions Chinook Solar has taken to map,  
5 inventory, and review the natural resources at the Project site, and to analyze potential  
6 effects of the Project on natural resources and wildlife, including an acoustic bat survey.

7 **Q. Are you familiar with the Project proposed by Chinook Solar in this matter?**

8 A. Yes. TRC has performed several field surveys for the Project pertaining to the  
9 natural environment, such as wetland delineations, vernal pool surveys, and a forest  
10 composition survey, and managed bat surveys for the site, which Tetra Tech conducted.  
11 Additionally, as project managers for the Project, we have participated in agency  
12 consultations relating to the natural environment.

13 **Wetlands, Waterbodies, and Vernal Pools**

14 **Q. Please describe the area that was reviewed for potential effects on wetlands,**  
15 **waterbodies, and vernal pools.**

16 A. The Project site is located east of NH Route 12, south of NH Route 119, and west  
17 of Fullam Hill Road. The Project is located in the Millers River Watershed and the Priest  
18 Brook and Torbell-Millers River subwatersheds. The subwatersheds are divided along a  
19 low ridge that runs northeast-southwest through the middle of the Project site. Along this  
20 divide, topography within the Project site generally slopes to the west and south towards  
21 Scott Brook or to the southeast toward Sip Pond and Millers River. Wetlands and streams

1 located along shallow swales and concave slopes east of the watershed divide drain south  
2 and off-site to Sip Pond and Sip Pond Brook. West of the watershed divide, lands slope  
3 steeply to an expansive forest-shrub wetland complex bordering Scott Brook.

4 Uplands are generally located along a low ridge toward the center of the Project  
5 site and another in the southern portion of the Project site and slope gradually to steeply  
6 towards lowlands to the southeast and west. Forested lands in the Project site are in  
7 varying stages of succession due to ongoing, recent and historic logging. Much of the  
8 Project site is in varying stages of regeneration and early successional forest stages with a  
9 network of dirt access roads and skidder trails from logging activity.

10 **Q. Please describe the methodology used by TRC to conduct an analysis of the**  
11 **Project's potential effect upon wetlands.**

12 A. TRC delineated wetlands, waterbodies, and vernal pools for the properties where  
13 Chinook Solar could build the Project. The total surveyed area included approximately  
14 497 acres. The methodology implemented by TRC is consistent with that used by  
15 environmental experts to determine wetland and vernal pool effects. TRC conducted  
16 field surveys for wetlands and surface waters in the growing seasons of 2016 through  
17 2019. The majority of the delineation effort was performed in 2016. In May and June of  
18 2019, TRC conducted a review of the wetland delineations that were done in 2016, 2017,  
19 and 2018 to confirm prior work and identify changes in hydrology and vegetation due to  
20 logging being performed on the site since the original delineations.

1 In accordance with the New Hampshire Code of Administrative Rules for the  
2 Delineation and Classification of Wetlands (Env-Wt 301), wetland delineations were  
3 conducted according to the *Regional Supplement to the Corps of Engineers Wetland*  
4 *Delineation Manual: Northcentral and Northeast Region*, v2 (USACE, 2012). This  
5 supplement follows criteria established in the United States Army Corps of Engineers  
6 (USACE) Wetlands Delineation Manual (Environmental Laboratory, Technical Report  
7 T-87-1, 1987) but is region specific, giving the wetland delineator a better tool to apply to  
8 regional vegetation communities, indicators of hydrology and indicators of hydric soils  
9 when conducting a wetland boundary determination. Additionally, all wetland  
10 delineations were conducted or reviewed by Erik Lema, a New Hampshire Certified  
11 Wetland Scientist.

12 **Q. Please describe the wetlands identified in your surveys.**

13 A. TRC identified 23 wetlands within the surveyed area. These consisted primarily  
14 of small forested wetlands that occur along skidder trails, in confined pockets in the  
15 regional bedrock, in saddle areas along the ridgeline, and in areas with poorly drained  
16 soils that support wetland vegetation. Of the 23 wetlands identified, 10 are forested  
17 wetlands, seven (7) are scrub-shrub wetland types, and six (6) are herbaceous emergent  
18 wetlands. The complete wetland, waterbody, and vernal pool study report is included as  
19 Appendix 15H to the Application.

20 **Q. What are your conclusions regarding the Project's potential effect upon**  
21 **wetlands?**

1     A.     There will be no direct impacts to wetlands as a result of Project construction or  
2     operation. The lack of wetland impact is the result of careful planning and design to avoid  
3     and minimize natural resource impacts to the greatest extent possible. The solar panel  
4     arrays and other Project components were reconfigured over the course of numerous  
5     design iterations to avoid and minimize impacts to wetlands and other natural resources  
6     to the greatest extent feasible. As such, portions of the original Project layout have been  
7     eliminated to achieve the following: 1) minimize the number of wetland crossings  
8     needed; 2) avoid and minimize Project work within Fitzwilliam's 75-foot wetland buffer  
9     in accordance with the Fitzwilliam Land Use Ordinances; and 3) maximize the distance  
10    between Scott Brook and the Project. Scott Brook is an important resource in  
11    Fitzwilliam, although the wetland complex surrounding Scott Brook was not proposed as  
12    a Prime Wetland during the 2017 proposed Prime Wetland mapping (Town of  
13    Fitzwilliam, 2017). Nonetheless, in consideration of Fitzwilliam's ordinances and  
14    viewpoints, Chinook Solar has evaluated numerous Project layout options resulting in a  
15    final design that avoids and minimizes natural resource impacts and Fitzwilliam's 75-foot  
16    wetland buffer to the maximum extent possible.

17           The Project was designed to completely avoid direct impacts to wetlands. The  
18    layout of the Project avoided all wetlands to the maximum extent possible by siting the  
19    panel locations entirely in upland areas. The large wetland complexes along the western  
20    side of the Project area and in the southeastern portion of the Project area will be left  
21    intact. The Project further avoided minor impacts to one wetland by spanning the wetland



1 using a three-sided concrete box culvert. A stream will also be spanned at this crossing,  
2 and another stream will be spanned using a three-sided concrete box culvert in another  
3 location of the Project. During construction, best management practices (“BMPs”) for  
4 working near wetlands and waterbodies will be used. During construction and operation,  
5 appropriate stormwater runoff and erosion control measures will also be implemented.  
6 Specific details of the wetland crossings and stormwater runoff and erosion control  
7 measures are provided in the Alteration of Terrain permit application, which is included  
8 as Appendix 4 to the Application.

9 **Q. Please describe the methodology used to conduct an analysis of the Project’s**  
10 **potential effect upon vernal pools.**

11 A. For purposes of the vernal pool field effort, the definitions described by the  
12 USACE Programmatic General Permit for the State of New Hampshire and the New  
13 Hampshire Department of Environmental Services (“NHDES”) rules for identifying  
14 vernal pools and vernal pool habitat were used. Vernal pool field surveys were conducted  
15 by qualified biologists familiar with vernal pool resources in New England and consisted  
16 of systematic visual meander surveys throughout the entire Project land control area. In  
17 April and May of 2016, Verdanterra conducted initial vernal pool surveys for the Project  
18 TRC then completed additional vernal pool surveys in May of 2017 and April of 2018.

19 **Q. How were vernal pools identified and classified?**

20 A. TRC and Verdanterra classified vernal pool features into three categories of  
21 origin: 1) natural vernal pools, which includes pools that meet the criteria provided in

1 state rules (Chapter Env-Wt 101.108); 2) natural-modified vernal pools, which includes  
2 pools occurring within natural wetlands that have been modified in some way but still  
3 function as breeding pools; and 3) unnatural vernal pools, which consist of depressions or  
4 impoundments created by anthropogenic activities and used by vernal pool breeding  
5 amphibians (e.g. vehicle or equipment ruts).

6 **Q. How many vernal pools were identified?**

7 A. Vernal pool surveys identified 49 vernal pools within the 479-acre survey area.  
8 TRC determined that 29 pools are unnatural vernal pools, 15 pools are natural-modified  
9 pools, and five (5) pools are naturally occurring. No rare or state-listed threatened or  
10 endangered species known to use vernal pools for at least one critical life stage were  
11 documented in any of the identified vernal pool features. Results of the vernal pool  
12 surveys are provided in the wetland, waterbody, and vernal pool study report, included as  
13 Appendix 15H to the Application.

14 **Q. What are your conclusions regarding the Project's potential effect upon**  
15 **vernal pools?**

16 A. The wetland, waterbody, and vernal pool report prepared by TRC (Appendix  
17 15H) indicates the Project will not directly impact any natural or natural-modified vernal  
18 pools.

19 **Q. Has Chinook Solar taken steps to mitigate the effect of the Project on**  
20 **wetlands and vernal pools?**

1 A. A key consideration in the design of the Project was avoiding and minimizing  
2 such effects. During the study and evaluation of wetlands and vernal pools at the Project  
3 site, the Project's impact on those resources was carefully considered, resulting in a  
4 design plan that avoids and minimizes impacts. Chinook Solar has designed roadways to  
5 minimize environmental impacts to natural resources, including routing access roads to  
6 avoid wetlands and spanning wetland and stream crossings to avoid impacts. Other  
7 Project components have been located to avoid direct wetland impact and impacts to  
8 natural and natural-modified vernal pools.

9 **Q. In your opinion, will the Project have an unreasonable adverse effect on**  
10 **wetlands or vernal pools?**

11 A. No. For the reasons described above and in the wetland, waterbody, and vernal  
12 pool report, it is our opinion that the Project will not have an unreasonable adverse effect  
13 on wetlands or vernal pools.

14 **Natural Communities and Rare Plants**

15 **Q. Please describe the methodology used by TRC for conducting an analysis of**  
16 **the Project's potential effects on natural communities and rare plants.**

17 A. TRC consulted with the New Hampshire Natural Heritage Bureau ("NHNHB") to  
18 identify any known or potential rare plant and/or natural community occurrences for the  
19 proposed site. Consultation with the NHNHB concluded that no records of exemplary  
20 natural communities or rare plant species are known to occur within the vicinity of the

1 Project site. Correspondence with the NHNHB is provided as Appendix 15C to the  
2 Application.

3 During early consultations with the New Hampshire Fish and Game Department  
4 (“NHF&G”) in 2017, the NHF&G requested an estimate of tree clearing needed for the  
5 Project, along with an estimate of the site that has been harvested by the current  
6 landowners. Subsequently, TRC conducted a forest composition survey to estimate the  
7 forest covertypes and vegetative composition within the Project footprint. During the  
8 survey, six primary forested covertypes were identified within the Project footprint. The  
9 forest composition survey results were provided to the NHF&G and NHNHB and are  
10 included as Appendix 15G to the Application. Upon reviewing the survey results, the  
11 NHNHB concluded that within the surveyed area, hemlock-beech-oak-pine forest in  
12 various stages of succession was the primary forest type, which is common in New  
13 Hampshire. The NHNHB also concluded that the area reviewed for the forest  
14 composition survey is unlikely to support any rare plant species.

15 **Q. What do the results of the forest composition survey conclude regarding the**  
16 **potential effects of the Project?**

17 A. TRC did not identify any significant natural communities or rare plants as a result  
18 of its surveys or during agency consultations. None of the surveyed communities in the  
19 Project area would qualify as “exemplary.” Based on these findings, there are no  
20 avoidance or mitigation plans specific to these resources. The forested covertypes

1 identified during the forest composition survey are described in the study report included  
2 in Appendix 15G.

3 **Q. In your opinion, will the Project have an unreasonable adverse effect upon**  
4 **natural communities or rare plants?**

5 A. No. Based on field surveys and consultation with the NHNHB, the proposed  
6 Project will not result in any effect upon significant natural communities, rare plants or  
7 communities which are likely to support rare plants.

8 **Wildlife and Wildlife Habitat**

9 **Q. Please describe the area that was reviewed for effects on wildlife and wildlife**  
10 **habitat.**

11 A. The Project site is undeveloped and forested, and it includes diverse natural  
12 resources that provide ample haven for a wide diversity of wildlife. The Project site has  
13 been subject to timber harvesting in the past several decades, and therefore it includes  
14 patches of forest in various stages of regeneration and maturity, primarily consisting of  
15 recent clear cuts and early successional stands.

16 While natural resources in and around the Project site provide abundant  
17 opportunities for many of New Hampshire's indigenous wildlife species, a desktop  
18 review of known environmental factors indicated that no known critical habitat exists  
19 within the Project site. The Official Species List generated by the U.S. Fish and Wildlife  
20 Service ("USFWS") identified the potential for northern long-eared bats to occur within  
21 the vicinity of the Project site. Northern long-eared bats are listed as a federally

1 threatened species. The assessment of the effects of the Project that pertain to bats is  
2 discussed below.

3 **Q. Has Chinook Solar taken any steps that will preserve habitat in the area?**

4 A. Chinook Solar is considering the possibility of local land conservation on portions  
5 of parcels under purchase option with Chinook Solar that will not be developed as part of  
6 the proposed Project. While this is not necessary to mitigate any potential impacts to  
7 natural communities or wildlife, such efforts could conserve lands that are similar in  
8 character to those being developed for the Project, and thus preserve in perpetuity  
9 existing natural communities and wildlife habitat on these undeveloped parcels. Chinook  
10 Solar has indicated a willingness to discuss this further with the Town of Fitzwilliam's  
11 Select Board.

12 **Q. In your opinion, will the Chinook Solar Project have an unreasonable**  
13 **adverse effect on wildlife and wildlife habitat?**

14 A. No. Chinook Solar has consulted with the NHF&G and NHNHB on multiple  
15 occasions in an effort to design the Project to avoid wildlife impacts to the greatest extent  
16 possible. The Project was designed to account for anticipated wildlife corridors through  
17 the Project area per recommendations from the NHF&G. Fencing for the solar panel  
18 arrays will be installed around discrete sections of the Project such that corridors for  
19 larger wildlife species will remain available. Additionally, fencing around the solar arrays  
20 will be installed with an approximate 6-inch gap between the ground and the fence to

1 allow smaller wildlife species to pass beneath the fence and travel through the Project  
2 area.

3 Based on consultation with the NHHNB, three records of wood turtles and one  
4 record of Blanding's turtle have been documented in the Project vicinity. Wood turtles  
5 are considered a Special Concern species in New Hampshire, and Blanding's turtles are  
6 listed as state endangered. Two of the wood turtle records identified by the NHHNB are  
7 located southwest of NH Route 12, approximately 1-mile southwest of the Project. These  
8 documented wood turtle records are associated with Stone Pond and Scott Brook. The  
9 documented Blanding's turtle and the other wood turtle record are located approximately  
10 0.8-mile east of the Project and are associated with a wetland complex connected to  
11 Tarbell Brook.

12 Upon identifying nearby NHHNB records for these turtle species, Chinook Solar  
13 consulted with the NHF&G on numerous occasions to discuss BMPs and conservation  
14 strategies to implement during construction to protect turtles. To help minimize the  
15 potential of turtles entering the Project area during construction, a perimeter silt fence  
16 will be installed around the entirety of the construction area following turtle hibernation  
17 and prior to spring emergence. The perimeter silt fence will serve as a turtle exclusion  
18 barrier. Small ramps will be installed intermittently along the interior of the perimeter silt  
19 fence so if a turtle enters the construction area, it will be able to exit the exclusion area  
20 using a ramp. An environmental monitor (qualified biologist) will also inspect the  
21 perimeter of the construction area prior to the start of construction each day to search for

1 any turtles that may have entered the exclusion area and to inspect the conditions of the  
2 perimeter silt fence. If a turtle is found within the exclusion area, it will be relocated  
3 outside of the construction area. Additionally, environmental training will be provided to  
4 all individuals working at the Project during construction and operations. Training will  
5 include information regarding BMPs to implement if a turtle is encountered in the Project  
6 area. For these reasons and those indicated in the testimony above, it is anticipated that  
7 the Project will not have unreasonable adverse effects on wildlife and wildlife habitat.

8 **Acoustic Bat Survey**

9 **Q. Are you familiar with the acoustic bat survey performed for Chinook Solar?**

10 A. Yes. As a Project Manager for the Project, Dana Valteau is familiar with the  
11 acoustic bat field survey performed for the Project. He is also experienced with the  
12 methodology for and performing bat surveys and assessing survey results.

13 **Q. Please describe the methodology used for conducting an analysis of the**  
14 **Project's potential effects on bats.**

15 A. Tetra Tech performed a summer presence/absence survey to determine the  
16 presence of northern long-eared bats within the Project land control area. The  
17 presence/absence survey was performed in accordance with the USFWS *Range-wide*  
18 *Indiana Bat Summer Survey Guidelines for Indiana Bat and Northern Long-Eared Bat*  
19 (USFWS Guidelines)<sup>1</sup>. Wildlife Acoustics Song Meter-3 BAT ultrasonic bat detectors

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<sup>1</sup> USFWS was not formally consulted because there is no trigger for formal consultation with them and no need for a federal permit for this Project.



1 were deployed at eight locations and collected data over two nights in mid-July of 2016.  
2 For both nights, detectors were programmed to begin monitoring one hour before sunset  
3 and to end monitoring at one hour after sunrise in full-spectrum mode. Each detector was  
4 equipped with a microphone that was mounted at a height of 2.5-4 meters. Acoustic data  
5 were processed using Kaleidoscope Pro v 3.1.7, and data were analyzed according to the  
6 USFWS Guidelines. A complete description of survey methodology is provided in the  
7 report included as Appendix 15E to the Application.

8 **Q. What do the results of the bat survey conclude regarding the potential effects**  
9 **of the Project?**

10 A. The ultrasonic bat detectors recorded 861 bat passes during the two survey nights.  
11 The presence of northern long-eared bat was not detected. Based on the analysis, the  
12 following four bat species are likely present within the Project land control area: big brown  
13 bat, eastern red bat, hoary bat, and little brown bat. Little brown bat is a state endangered  
14 species in New Hampshire; however, little brown bats were not detected in high numbers  
15 during the survey, representing only 3% of all bat passes recorded.

16 **Q. In your opinion, will the Project have an unreasonable adverse effect on**  
17 **bats?**

18 A. No. Potential impacts to bats as a result of the Project are limited to indirect  
19 impacts associated with habitat loss. Habitat loss from timber harvesting that removes  
20 summer roosting habitat is listed as a low-ranking threat to northern long-eared bat and  
21 little brown bat (NHFG, 2015), as white-nose syndrome has been identified as the

1 primary driver of *Myotis* population declines (USFWS, 2015). As recommended by the  
2 NHF&G, tree removal for Project construction will occur in the winter, between  
3 November 1 and March 31, to avoid potential impacts to roosting bats during the summer  
4 maternity season. Also as recommended by the NHF&G, the Project is designed to  
5 maintain forested corridors that connect potential foraging habitats  
6 (wetlands/waterbodies) for bats.

7 **Conclusion**

8 **Q. Does this conclude your testimony?**

9 A. Yes, this concludes our testimony at this time, though we reserve the right file  
10 supplemental testimony in accordance with the Committee's procedural schedule.

## **ATTACHMENT A**

## **DANA B. VALLEAU, CWB**

### **EDUCATION**

J.D., University of Maine School of Law, Portland, Maine, 1994

B.S., Wildlife Management, University of Maine, Orono, 1990

### **PROFESSIONAL REGISTRATIONS/CERTIFICATIONS**

Registered Maine Guide since 1990, Whitewater and Master Classifications.

CPR/First Aid Certification

Maine DEP Erosion and Sediment Control Practices Certified (#0129)

Maine Professional Guides Association, 1996 to present

Certified Professional in Erosion and Sediment Control (CPESC #2334)

Certified Volunteer Lake Monitor

Professional Wetland Scientist (#1590)

Certified Wildlife Biologist

### **AREAS OF EXPERTISE**

Mr. Dana Valteau has project management and technical experience in the following general areas:

- Project Management
- State and Federal Permit Applications
- FERC Pipeline Environmental Studies and Permitting
- Wind Energy Environmental Studies and Permitting
- Hydroelectric Licensing & Compliance
- Database Management
- Agency Consultation
- Water / Soil Sampling
- Radio Telemetry
- Remote Sensing and Photo-interpretation
- Wetland Delineation
- Vernal Pool Identification and Documentation
- Fish / Wildlife Studies, including RTE Species

### **REPRESENTATIVE EXPERIENCE**

Mr. Dana Valteau has over twenty years of experience working in the environmental field in a wide variety of capacities, including reviewing state permit applications, enforcing state land use laws, database management, water, biota, and soil sampling, radio telemetry, wetland delineation, fishway operations, fish and wildlife habitat identification including vernal pools, and fish and wildlife population studies. He has experience in local, state, and federal regulatory processes and permitting, a thorough understanding of environmental construction standards, and erosion control Best Management Practices. He has provided expert testimony at administrative hearings before the Maine Board of Environmental Protection, Maine Land Use Planning Commission, and the New Hampshire Site Evaluation Committee.

### **Relevant Projects**

**Walden Green Energy (formerly Eolian Renewable Energy), LLC, Antrim Wind Energy Project  
(2010 – 2012; 2014 – Present)**

Coordinated and managed all field studies related to preparing a New Hampshire Site Evaluation Committee permit application including a state Alteration of Terrain and Dredge and Fill permit applications. Consulted with federal and state agencies to scope field studies and assess potential impacts. Consultation with USFWS included developing an Avian and Bat Protection Plan and addressing Bald and Golden Eagle Act issues. Provided expert testimony regarding field studies and natural resource impacts before the New Hampshire Site Evaluation Committee for 2 separate hearings.

### **Other Relevant Experience**

#### **Maine Department of Environmental Protection, Enforcement Unit (1998 – 1999)**

Investigated complaints, conducted on-site investigation and inspection, provided technical advice and education to the public to ensure compliance with environmental laws, rules, and standards, reviewed Maine State Natural Resource Protection Act Permit-by-Rule Notifications and drafted, negotiated, and presented notices of violation and consent agreements.

#### **Maine Department of Environmental Protection, Enforcement Unit (1998 – 1999)**

Prepared educational presentations of State rules and regulations to construction and forestry professionals and municipal officials.

#### **Maine Department of Environmental Protection, Licensing Unit (1997 – 1998)**

Reviewed and evaluated Site Location of Development Permit Applications. Negotiated, drafted permits and performed compliance inspections of Site Projects.

#### **Maine Department of Environmental Protection, Geology Unit (1996 – 1997)**

Compiled and confirmed site data of potential groundwater threats and performed QA/QC on state-wide groundwater database (ORACLE) and GIS for the Maine Department of Environmental Protection (MDEP), Augusta, Maine.

#### **Maine Department of Environmental Protection, Biology Unit (1995)**

Provided assistance to MDEP biologists and engineers by collecting water, fish, and insect samples, observing field conditions, managing data, and writing reports for waste-load allocation studies, a state-wide toxin study, and a state-wide water quality survey.

### **SPECIALIZED TRAINING**

- 1998 Basic Erosion Control Practices for Contractors
- 1999 Advanced Erosion Control Practices for Contractors
- 1999 Geotechnical and Soil Bioengineering Slope Stabilization
- 2002 Advanced Hydric Soil Identification
- 2002 Delineating Hydric Soils on a Human Disturbed Site

## **ATTACHMENT B**

Kara is a Project Manager and Certified Wildlife Biologist with 15 years of professional experience in wildlife research, conservation, and natural resource management throughout New England and the Southeast. Her projects have emphasized regulating and managing natural resources and wildlife, protecting threatened and endangered species, and assessing environmental impacts. She has provided consultation services on a wide array of projects such as utility-scale solar development, utility-scale wind power projects, natural gas pipeline projects, conservation properties, and various natural resource management projects for local, state, and federal agencies. Kara's professional experience includes environmental monitoring and inspection, wildlife assessments, vernal pool investigations, invasive species management, and permitting support at the local, state, and federal levels. She also possesses a strong foundation in project planning and implementation, project management, and data analysis. Her diverse wildlife background includes experience with songbirds, shorebirds, waterfowl, small mammals, amphibians, and reptiles.

## **EDUCATION**

M.S., Conservation Biology, Antioch University,  
Keene, New Hampshire, 2009

B.A., Biology, University of Maine, Farmington,  
Maine, 2003

## **CERTIFICATIONS & TRAINING**

Certified Wildlife Biologist (renewed in 2018), The  
Wildlife Society, Washington, D.C., 2013

First Aid CPR AED, American Heart Association,  
Winslow, Maine, 2018

Apprentice Wetland Scientist, New Hampshire  
Board of Certification of Natural Scientists,  
Concord, New Hampshire, 2014

Track and Sign – Level 1, CyberTracker  
Conservation, Storrs, Connecticut, 2013

Motorboat Operator Certification, National  
Association of State Boating Law Administrators,  
Shepherdstown, West Virginia, 2011

Open Water Diver, Scuba School International,  
Mainely Scuba / Wilton, Maine, 2005

## **MEMBERSHIPS**

Member, Programs Committee Chairperson , The  
Wildlife Society, Expires 2019-05-31

## **PROJECT EXPERIENCE**

### **Renewable Energy**

Utility-Scale Solar Developments\*, New  
Hampshire (Project Manager)

Project Manager for three utility-scale solar development projects in New Hampshire ranging in size from 10 megawatts (MW) to 50 MW. Responsible for developing and executing permitting strategies, coordinating required field surveys, managing numerous subcontractors and ensuring deliverables conformed to project schedules, tracking budgets and approved scope of services, agency outreach and communication, and all aspects of local, state, and federal permitting. Permitting associated with these projects includes state and federal wetland permitting, New Hampshire Site Evaluation Committee certification, New Hampshire Department of Environmental Services Alteration of Terrain permitting, and various local permits such as Conditional Use Permits and Major Site Plan Review.

*\* denotes projects completed with other firms*

**Utility-Scale Solar Development, New Hampshire (Project Manager)**

Project Manager for a utility-scale solar development proposed in New Hampshire. Primary tasks included identifying likely permitting needs for the project, generating a detailed permitting schedule based on local, state, and federal permitting requirements, and producing a range of anticipated costs associated with field surveys and permitting for the proposed project.

**Utility-Scale Wind Development, New Hampshire (Project Manager)**

Project Manager for three utility-scale wind developments proposed in New Hampshire. Responsible for conducting site screening assessments consisting of a desktop review of natural and cultural resources in the vicinity of the potential development sites. Additional tasks included identifying issues that could potentially present risks in the development or permitting of the projects, as well as developing a schedule of anticipated field studies and permitting that would be required for the proposed projects.

**Weaver Wind Project\*, Maine (Associate Project Manager)**

Associate Project Manager for a utility-scale wind facility permitting project that required preparing a combined Site Location of Development Act and Natural Resources Protection Act (Tier 3) permit in compliance with requirements of the Maine Department of Environmental Protection. Additional tasks included reviewing reports and permit information prepared by other contributing consultants, disseminating pertinent information to team members, compiling application components according to a strict timeline, and identifying and addressing complex project requirements.

**Invasive Species Management**

**Bingham and Oakfield Wind Projects Invasive Species Monitoring & Management\*, Maine (Project Manager)**

Project Manager for invasive species monitoring and management at two utility-scale wind facilities in Maine. Invasive species monitoring and management efforts were implemented to comply with conditional requirements of federal and state permits issued for project development and methods adhered to specific procedures as outlined in multiple management plans. A key component of project management tasks included ensuring herbicide was applied properly in sensitive resource areas and consulting with state agencies to acquire waivers from permit requirements, if appropriate. Primary responsibilities included developing proposals and budgets, coordinating field efforts covering large areas and long distances, ensuring appropriate timing of surveys and management efforts, producing reports and analyzing data, and evaluating the efficacy of invasive plant treatment measures.

*\* denotes projects completed with other firms*



### **Compliance Services**

Oakfield, Bingham & Hancock Wind Projects Post-Construction Monitoring\*, Maine (Project Manager)

Project Manager for post-construction avian and bat fatality monitoring at three utility-scale wind facilities in Maine ranging in size from 17 turbines (56 MW) to 56 turbines (185 MW). Primary tasks included managing field staff and avian and bat fatality search efforts, coordinating searcher efficiency trials and carcass persistence trials per the approved protocols, managing all aspects of project budgets, and generating reports for the Maine Department of Inland Fisheries & Wildlife. Additional responsibilities included project management for bald eagle use surveys, aerial surveys of nesting bald eagles, and acoustic monitoring for bat activity. These tasks required managing weekly eagle use surveys following specific protocols, scheduling and deploying 29 acoustic detectors and microphones, coordinating acoustic data management and detector maintenance, and extensive communication with state and federal agencies, clients, and facility managers.

### **Environmental Resource Permitting**

Atlantic Bridge Project\* (Associate Project Manager)

Associate Project Manager for the permitting of a natural gas pipeline project extending across four states in New England. Responsible for: preparing, reviewing, and editing environmental resource reports to be filed with the Federal Energy Regulatory Commission (FERC); developing Section 401 Water Quality Certification applications and stormwater pollution prevention plans for project facilities located in New York and Connecticut; preparing an invasive plant species control plan; coordinating with state and federal agencies regarding impacts to natural resources and required field surveys; and collaborating with numerous partners and communicated needs to satisfy rigid schedules.

### **Wildlife Surveys and Studies**

Oakfield Wind Project Bald Eagle Aerial Nest Surveys\*, Maine (Wildlife Biologist and Project Manager)

Wildlife Biologist and Project Manager for a survey of nesting bald eagles in the vicinity of a constructed utility-scale wind facility. Aerials surveys were performed to satisfy permit compliance requirements for the project. Coordination with the Maine Department of Inland Fisheries and Wildlife and the United States Fish and Wildlife Service was completed prior to conducting surveys and following completion of surveys. Surveys were performed via a helicopter to observe location and status of bald eagle nests. A detailed monitoring report was generated to document survey results.

*\* denotes projects completed with other firms*

**Gull Research and Assessment\*, Massachusetts (Associate Project Manager)**

Associate Project Manager and Field Manager on an urban gull study that entailed conducting surveys of gull use and activity on and around the 10-acre roof of the Boston Convention and Exhibition Center. Additional responsibilities included evaluating current techniques to deter target bird activity with a focus on gull dissuasion methods and determining the federal, state, and local regulations and permitting requirements applicable to various avian deterrence or control methods.

**Piping Plover Monitoring\*, Massachusetts (Wildlife Biologist)**

Field Manager for a piping plover monitoring project. Project involved documenting visual observations of piping plovers or tracks and noting any territorial or breeding behaviors. Coordination with several federal agencies and the construction contractor to avoid and minimize any disruption to breeding piping plovers was also required.

**New England Cottontail Assessment\*, Maine (Wildlife Biologist)**

The assessment involved a habitat evaluation for the state-endangered New England cottontail on a seven-acre parcel in Southern Maine. Primary tasks consisted of surveying the site for sign of New England cottontail presence (including tracks, scat, browse, and chew marks) and conducting vegetation assessments via stem counts at plots scattered around the site to evaluate habitat.

**Fowler's Toad Acoustic Study\*, New Hampshire and Vermont (Wildlife Biologist)**

An acoustic study was performed to obtain baseline distributional and abundance data on Fowler's toad. Standard call surveys were conducted by deploying bioacoustic monitoring equipment at multiple locations along the Connecticut River. Equipment was programmed to record data daily for several weeks. Additional responsibilities included training the spectrogram viewing software to detect Fowler's toad vocalizations, analyzing acoustic recordings with the trained software program, performing data quality assurance, summarizing acoustic data, and producing a final report.

**Oyster River Bog Wildlife Assessment\*, Maine (Task Manager)**

Task Manager for a project requiring a baseline wildlife assessment on a 145-acre parcel. An initial assessment of wildlife resources was conducted within the project area by reviewing relevant documentation of wildlife and habitat surveys previously performed in and around the project area. A list of wildlife species that would likely be of interest to the regulatory agencies was generated. All species considered in the assessment were State threatened, endangered, or special concern species. Preliminary wildlife scoping was performed via meander surveys to document wildlife sign and key habitat types for the species of interest. General classifications of natural communities, cover types, and landscape features were also recorded. A detailed wildlife assessment report was produced as a result of these efforts.

*\* denotes projects completed with other firms*

## Field Services

### Maine DOT Vernal Pool Assessment\*, Maine (Environmental Scientist)

The vernal pool assessment was performed within the road right-of-way along a 2.2-mile corridor. Several areas were reviewed for vernal pool species according to the methodology outlined in the Natural Resources Protection Act, Chapter 335 (Significant Wildlife Habitat). Fieldwork consisted of documenting the quantity of egg masses present for each indicator species, the presence of adults and larvae of amphibian species, and overall site conditions.

### Maine DOT Stream Assessment\*, Maine (Environmental Scientist)

Stream assessments were conducted for two road improvement projects. Bankfull width measurements were taken from three locations both upstream and downstream of the road crossing beyond the influence of the crossing structure. Measurements were recorded based on indicators of bankfull flows, such as changes from a vertical or steep bank to a horizontal surface indicating the adjacent floodplain or changes in vegetation. Overall stream characteristics were also documented.

### Peirce Island Wastewater Facility Tree Inventory\*, New Hampshire (Environmental Scientist)

Trees and saplings were inventoried to document existing vegetative conditions within the protected shoreland zone. Following the field inventory, trees and saplings within the waterfront zone were assigned a score based on diameter. The assessment was completed by creating a grid system within the waterfront zone to determine the scores within each grid for the purposes of maintaining vegetative compliance as outlined in the New Hampshire Shoreland Water Quality Protection Act.

## PUBLICATIONS

Moody, K., Move Over for Migratory Shorebirds. Mass Wildlife, 2010.

## PRESENTATIONS

Acoustic Monitoring of Bat Activity and Post-Construction Fatality Monitoring at Wind Facilities in the Northeast. *AWEA Wind Project Siting and Environmental Compliance Conference*, 2019.

Human Disturbance Impacts on Migratory Shorebirds at Crane Beach, Ipswich, Massachusetts: Semipalmated Plovers (*Charadrius semipalmatus*), Semipalmated Sandpipers (*Calidris pusilla*), and Sanderlings (*Calidris alba*). *Wilson Ornithological Society and Association of Field Ornithologists Joint Meeting*, 2009.

\* denotes projects completed with other firms