**STATE OF CONNECTICUT**
**CONNECTICUT SITING COUNCIL**

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| **Petition of BNE Energy Inc. for a Declaratory Ruling for the Location, Construction and Operation of a 3.2 MW Wind Renewable Generating Project on New Haven Road in Prospect, Connecticut ("Wind Prospect")** | **Petition No. 980** |
| | **February 16, 2011** |

**PETITIONER BNE ENERGY INC.'S INTERROGATORY RESPONSES TO SAVE PROSPECT CORP'S SECOND SET OF INTERROGATORIES DATED FEBRUARY 9, 2011**

Petitioner BNE Energy Inc. ("BNE") submits the following responses to the Second Set of Interrogatories issued by Save Prospect Corp's dated February 9, 2011.

**Q46. Please provide a more detailed map of the project site located at 178 New Haven Road(the "Site") showing the breeding bird survey points relative to the Site boundary and proposed activities on-site, and indicate why these point locations were chosen.**

**A46.** See map attached hereto as Exhibit 1. Breeding bird survey point count locations were chosen along a roughly linear transect bisecting the Site, with the exception of a few points. Point locations were chosen in order to ensure good spatial coverage of the Site, ensure proposed turbine locations were sampled and ensure that representative land cover types present at the Site were sampled. Major bird habitat types (e.g. grasslands and woodlands) were targeted. The linear transect and 5-minute survey design was selected based on West's experience completing similar surveys, state and federal guidelines and present knowledge of field survey designs.

**Q47. Were the breeding bird survey points located in the vicinity of the proposed turbines in a manner that would adequately collect data to analyze breeding bird use within 500 meters of each proposed turbine location?**

**A47.** Yes. One BBS point was located at each proposed turbine location and other BBS points were established approximately 100 m (328 ft) apart along the Transect; therefore, at least 4 points were located within 500-m of each proposed turbine location.

**Q.48. Why was breeding bird survey data collected at 12 points?**

**A48.** The number of points to sample (12) was selected based on the minimum number of survey points West determined should be included in the BBS survey, and the maximum number which could be completed in a single morning (from sunrise to no later than 10:00 AM). Due to difficulty walking through the underbrush of the largely forested Site, it was determined during point setup that no more than 12 5-minute points could be surveyed in a single morning between sunrise and 10:00 AM.

**Q49. Please provide documentation demonstrating that the protocol used for the breeding bird survey provides a statistically relevant sample size.**

**A49.** The aim of the breeding bird study is to record information about the relative abundance and species composition of breeding songbirds throughout representative habitats in the study area. The sampling design was considered to have an adequate number of points and survey rounds to meet this aim, though a priori statistical tests to determine survey effort (i.e. a power analysis) were not conducted. Rather, as stated above, the maximum number of points which could be logistically sampled in a single morning per survey round within as many representative habitats as possible within the Site were selected. This survey approach is consistent with federal draft recommendations and state (e.g. Maine and New York) guidelines for completing pre-construction BBS surveys. The ratio of survey points (12) to the number of proposed turbines (2) is actually higher than what is typically surveyed for larger wind-energy projects in the region and the nation.

**Q50. Why were the late June through mid-July breeding bird survey dates chosen?**

**A.50.** The dates were selected to maximize survey coverage of the peak breeding bird season (i.e., surveys were designed to occur when the most number and greatest species richness of breeding birds would be expected to occur).

**Q51. Why were no spring or summer nighttime call-back surveys conducted to inventory nocturnal species (e.g., owls and nightjars)?**

**A51.** Nocturnal surveys were not included in the survey design due to: 1) the vast majority of pre-construction wind energy breeding bird surveys do not include nocturnal bird surveys, and 2) impacts to nocturnally active resident birds have generally been low in the eastern US (e.g. see data from post-construction studies completed in New York, New Hampshire and Pennsylvania).

**Q52. Why were no early spring surveys conducted to observe species such as American Woodcock (Scolopax minor)?**

**A52.** The objective was to sample during the season when the majority of breeding birds would be present. Some species (e.g. Scolopax minor) may breed earlier in the season, however, the majority of woodland passerines and other species with the potential to breed within available habitats at the site are likely to occur during the survey period – June to mid-July.

**Q53. Were multi-season surveys conducted at the Site or was this 2010 data compared to other breeding bird survey sites with respect to species richness and diversity on this Site? If so, where is this comparative analysis?**

**A53.** No.

**Q54. Why were no data collected on spring and fall migratory bird use?**

**A54.** 1. Based on existing information derived from several sources, the Site does not appear to be located in an area which would concentrate migratory birds, and impacts to migrating birds are not anticipated to be high relative to other wind energy projects.

a. The majority of waterfowl and waterbirds migrating through Connecticut are concentrated along coastal portions of the state. While ponds and other waterbodies in the area may occasionally be used by migrating individuals or small groups, the town of Prospect does not appear to provide significant stopover habitat for migratory waterfowl or other waterbirds. The area is several miles from the nearest major river system, does not contain extensive agricultural lands (which have been known to attract hungry migrant geese), and is roughly 12 to 15 miles inland from the Connecticut coast. No likely stopover habitat in the forms of large wetlands or open agricultural fields are located within the Site. The Prospect area is not included in the CTDEP Migratory Waterfowl GIS data layer that depicts areas with high concentrations of migratory waterfowl, and is not identified as a Waterfowl or Waterbird Focus Area by the Atlantic Coast Joint Venture (ACJV). The ACJV is a partnership of 18 state and federal agencies, regional conservation groups, and others coordinating to protect habitat for native birds in the Atlantic Flyway. The nearest Focus Area identified by the ACJV is approximately nine miles to the southeast, along the marshes of the Quinnipiac River and New Haven Harbor (Atlantic Coast Join Venture 2010). Waterfowl and waterbirds migrating to and from the Quinnipiac River/New

Haven Harbor Focus Area or the Connecticut coast may pass over Prospect and the Project site in flight, however, most migrating waterbirds fly at night (and to a lesser extent during daytime) at altitudes of 500 to 1,000 feet or more (Bellrose, 1976). This phenomenon has been confirmed with radar at many locations for ducks, geese, loons, and other birds (Kerlinger 1982, Kerlinger and Moore 1989). Impacts to waterfowl and waterbirds observed at numerous operating commercial wind energy facilities throughout the United States, including at large sites with high migration activity (e.g. Top of Iowa, Iowa), revealed that waterfowl are not particularly susceptible to collision with wind turbines (Koford et al. 2005). No waterfowl or waterbird fatalities have been documented at the closest operational wind facility (Lempster Wind, Lempster New Hampshire; Tidhar et al 2010).

b. Most songbirds migrate at night, when air conditions and temperatures are more favorable (Kerlinger 1995). In the midwestern and eastern United States, night migrating songbirds have accounted for a majority of the fatalities at wind turbines. In general, the documented level of fatalities has not been large in comparison with the source populations of these species, nor have the fatalities been suggestive of biologically significant impacts to species. Nocturnally migrating songbirds documented at the closest operational wind facility (Lempster Wind, Lempster New Hampshire) have been within the range observed within the region and the nation, and impacts are estimated as resulting in the loss of individuals per annum (Tidhar et al 2010). The observed level of mortality is also minor when compared to other potential sources of avian mortality (Erickson *et al*., 2001). The results of pre-construction surveys of nocturnal migration using radar, which include characterizations of passage rate and flight altitude, do not correlate with observed mortality of birds at operational wind energy sites (Tidhar et al 2010).

c. The Northeast Hawk Watch Association (NEHWA) and the Hawk Migration Association of North America (HMANA) monitor the numbers and types of hawks migrating annually over specific mountains or hilltops where regular raptor passage occurs. The majority of hawk watch sites in Connecticut are located along the hills of southern Litchfield County and western Fairfield County, with numerous count sites in Woodbury, Southbury, and Newtown, approximately 15 miles or more to the west of the Project site. The Site is not located in an area with physiographic features likely to concentrate raptor migration during fall or spring. While broad front raptor migration may occur over the Site, this is likely to be primarily comprised of broad-winged hawks, which have not been highly susceptible to wind energy induced mortality. Raptor mortality from collision with turbines has also been low at most

operating wind power projects outside of California (NWCC 2010). In instances where concentrated hawk migration does occur around wind energy sites, evidence to date shows that risk to migrating raptors is not great and not likely to be biologically significant (NWCC 2010, Erickson et al 2003). The Site does not contain a high prey base for migrating or resident raptors, an important factor in contributing to mortality at operating facilities (Smallwood 2008 and NWCC 2010). No raptor fatalities have been documented at the closest operational wind facility (Lempster Wind, Lempster New Hampshire; Tidhar et al 2010).

d. While few shorebirds may pass over the Site during migration periods, the Site lacks suitable stopover habitat and existing research has demonstrated that very few shorebirds collide with wind turbines or other tall structures (Erickson et al. 2001). No shorebird fatalities have been documented at the closest operational wind facility (Lempster Wind, Lempster New Hampshire; Tidhar et al 2010).

**Q55. Please provide an analysis of the potential impacts of the proposed activities on forest-interior bird habitat and populations. This impact analysis should extend beyond the footprint of the turbine to include the 500 meter area of avoidance described by Pearce-Higgins et al. (2009).**

**A55.** BNE objects to this interrogatory because it is overly broad and unduly burdensome.

**Q56. Please describe the impact of the high representation of "unidentified passerine" on reported species richness and species diversity.**

**A56.** The number of unknown passerine observations made was due to dense understory and forest canopy which limited the potential for the surveyor to visually identify birds. The dense vegetation also masked call “signatures”, which were often distant and infrequent – which again limited the potential for auditory identifications. Many auditory observations were also chirps and not easily identifiable to species, as would be the case with songs. As a result, species richness and bird diversity estimates were affected, however, the degree to which these results were affected is uncertain as species diversity was relatively low while survey effort was average to good for a pre-construction survey effort.

**Q57. Did the analysis of bird use and impacts account for the differential in visual detection and identification between the two habitat types surveyed?**

**A57.** The analysis did not account for differences in visual detection and

identification between habitat types. Survey methodology was selected with a range of detection (100-m) which was considered adequate for visual or auditory detection of birds within the sampled area. Mean use per survey point analysis was included in the BBS report for all birds and different bird types.

**Q59 [sic]. Q58. Did you compare the results from the forested data points to breeding bird survey results in similar forested habitats within the same eco-region?**

Results of the pre-construction breeding bird surveys completed at the Site were compared with other available sources of information and indicate that the Site is not located in an area with high bird species diversity, regionally important breeding bird habitat or high breeding bird use. While 119 bird species were identified as confirmed breeders in either the Mount Carmel quadrangle or the eight surrounding quadrangles of the CT Breeding Bird Atlas, only 35 unique bird species were identified during site surveys. Cumulatively, three species (8.6% of all species) comprised 29.9% of the individual observations: unidentified passerine (58 observations), eastern towhee (56 observations), and American robin (43 observations). All other species composed less than ten percent of the observations individually. A comparison was made with data collected as part of the US Geological Surveys Breeding Bird Survey program. There are three breeding bird survey routes that at least partly occur within 15 miles of the Project site and likely include similar habitats to those found in Prospect, including woodland and small areas of open field. These routes, named North Woodbury (Route No. 18008), Southington (Route No. 18015), and Westbrook (Route No. 18006) after the town nearest the start of the survey route, are located northwest, northeast, and southeast of the Project site, respectively. Data collection periods vary by survey route. The number of species observed during the 10-year period from 2000 to 2009 ranged from a low of 40 on the Southington BBS to a high of 72 on the North Woodbury route. In May 2008 CTDEP initiated a long-term (5-10 year) bird banding program just a few miles from the Project site, in the west block of the Naugatuck State Forest. In 2008 CTDEP captured 26 species of breeding birds over a period of seven sessions at the Naugatuck State Forest banding station. The majority of the species captured at the State Forest banding station also could potentially breed at the Project site, although several species are unlikely to occur due to habitat deficiencies. The understory of the Project site is a virtual monoculture of Japanese barberry, and the overall lack of variation in the shrub layer may make the site less attractive for species such as hooded warbler and black-throated blue warbler which prefer a dense, but diverse understory, while species like ovenbird tend to prefer more open understory than exists at the Project site. While barberry does produce fruit, it is considered of minor food value to terrestrial birds.

**Q59. Please describe the impact of the proposed wind turbines on the 12 bird species (both in terms of breeding and migratory use) that are listed as species of conservation concern by national conservation organizations and the CT Department of Environmental Protection due to declining populations.**

No sensitive or protected species were recorded during scheduled breeding bird surveys. A review of all publically available fatality monitoring data from the US was completed to assess the level of impacts to all state listed threatened, endangered and sensitive species. A total of 76 studies were analyzed, of which 21 studies were completed in the Northeastern region. Fatalities observed at operating projects have been low and are described below. The majority of impacts to these species were observed outside of the Northeastern US and occurred at projects considerably larger than that of Prospect Wind. The vast majority of formal post-construction mortality studies completed in the Unites States have been completed at facilities with substantially larger numbers of turbines and MW capacity. For example, the mean project size for studies below is 53.8 turbines (range: 3-195).

| Species | # of Fatalities Reported | # of US Facilities from which Fatalities were Reported | # of Northeastern Facilities from which Fatalities were Reported |
|---|---|---|---|
| Northern saw-whet owl | | | |
| Saltmarsh sharp-tailed sparrow | | | |
| Henslow's sparrow | | | |
| Seaside sparrow | | | |
| Grasshopper sparrow | 4 | 4 | |
| Blue-winged teal | 3 | 3 | |
| Great egret | | | |
| Short-eared owl | 15 | 11 | |
| Long-eared owl | 4 | 4 | |
| Upland sandpiper | 2 | 2 | 1 |
| American bittern | | | |
| Broad-winged hawk | 3 | 3 | 3 |
| Whip-poor-will | | | |
| Piping plover | | | |
| Common nighthawk | 6 | 3 | |
| Northern harrier | 3 | 3 | |
| Sedge wren | | | |
| Bobolink | 21 | 7 | 7 |
| Little blue heron | | | |

| | | | |
|---|---|---|---|
| Snowy egret | | | |
| Alder flycatcher | 1 | 1 | 1 |
| Horned lark | 55 | 34 | 1 |
| Peregrine falcon | | | |
| American kestrel | 162 | 26 | 3 |
| Common moorhen | 2 | 2 | |
| Common loon | | | |
| American oystercatcher | | | |
| Bald eagle | | | |
| Yellow-breasted chat | | | |
| Least bittern | | | |
| Black rail | | | |
| Red-headed woodpecker | | | |
| Eskimo curlew | | | |
| Yellow-crowned night-heron | | | |
| Northern parula | 2 | 1 | 1 |
| Savannah sparrow | 23 | 12 | 4 |
| Ipswich sparrow | | | |
| Glossy ibis | | | |
| Pied-billed grebe | | | |
| Vesper sparrow | 19 | 8 | |
| Purple martin | 9 | 3 | 2 |
| King rail | | | |
| Roseate tern | | | |
| Common tern | | | |
| Least tern | | | |
| Eastern meadowlark | 2 | 2 | |
| Brown thrasher | | | |
| Barn owl | 15 | 6 | |
| Golden-winged warbler | | | |
| Sharp-Shinned Hawk | 8 | 7 | 5 |

**Q60. Please provide the education and experience in conducting bat acoustic surveys and call analysis for all members of the WEST field team in Connecticut.**

**A60.** Jeff Gruver led the bat analysis team for WEST. Jeff Gruver's resume is attached hereto as Exhibit 2. Jeff Gruver has completed or supervised dozens of acoustic bat analyses for West. He has presented talks and conducted workshops on bat acoustic analysis at regional and national scientific meetings and symposiums.

**Q61. How does the pre-construction bat sampling protocol used at the Site differ from those used at other wind energy facilities across the eastern United States?**

**A61.** Survey protocols and analysis methods used were consistent with approaches used across the country for pre-construction wind-energy studies (e.g. Cape Vincent Wind, New York) and recommended in state (e.g. New York, Pennsylvania, Maine) guidelines and federal (draft) recommendations, as well as by scientists working in the fields of bat bio-acoustics and bat ecology (e.g. Kunz et al 2007, Arnett et al 2008, Brintsky 2004).

**Q62. Please describe the calibration methods and sensitivity settings used on the Anabat detector systems.**

**A62.** Anabat detectors record bat echolocation calls with a broadband microphone. Calls were recorded to a compact high-capacity flash memory card; data were subsequently transferred onto a computer for analysis. The echolocation sounds were then translated into frequencies audible to humans by dividing the frequencies by a predetermined ratio. A division ratio of 16 was used for this study. Bat echolocation detectors also detect other ultrasonic sounds, such as those sounds made by insects, raindrops hitting vegetation, and other sources. Depending on the environment in which the unit was placed, a sensitivity level of 5.5 or six was used to reduce interference from these other sources of ultrasonic noise. To ensure similar detection ranges among anabat units, microphone sensitivities were calibrated using a BatChirp ultrasonic emitter (Tony Messina, Las Vegas, Nevada) as described in Larson and Hayes (2000).

**Q63. Please compare the effective range limit of the bat detector system in comparison to the nacelle height of the proposed wind turbines and the rotor swept area.**

**A63.** The detection range of Anabat detectors and SM2Bat Units depend on a number of factors, such as echolocation call characteristics, microphone sensitivity, habitat, the orientation of the bat, and atmospheric conditions (Limpens and McCracken 2004; Ian Agranat, President & CEO Wildlife Acoustics, pers. comm. 2010). The

detection range of Anabat detectors is generally less than 30 m (98 ft) due to atmospheric absorption of echolocation pulses (Fenton 1991).

**Q64. Please explain why ground microphone systems were used to monitor bat activity when there was a meteorological tower on Site that could have sampled within the rotor swept area.**

**A64.** Ground-based Anabat sampling has been a standard component of pre-construction acoustic bat monitoring at commercial wind-energy sites for several years. Over recent years, scientists working in this field (e.g. Kunz et al 2007, WEST) have recommended acoustic sampling within the rotor swept zone, however, this is not always possible because elevating detectors to sufficient height may not be feasible because: 1) suitable structures may not be present, or 2) because suitable structures may not be altered without risking damage to the structure or other equipment. At the Site, the second scenario was the reason why an elevated detector could not be deployed – placement of a detector (or means of elevating a detector such as a Bat Hat system) would have required lowering the meteorological tower to the ground which may have damaged meteorological instrumentation and resulted in study delay. As such, two ground based detectors were deployed at the Project – one was located in an existing forest clearing while the second was located at a proposed turbine location. This sampling design allowed for comparative analysis between bat activity at a proposed turbine location with an open canopy clearing.

A current conclusion reached by biologists working in the field of wind-energy/wildlife interactions is that bat activity indices derived from pre-construction acoustic studies show a rough correlation with post-construction fatality patterns (see final bat report and NWCC 2010). This conclusion is based on ground—based Anabat sampling.

**Q65. What factors lead to the conclusion that the Site is not located in the vicinity of concentrations of the state-listed eastern red and hoary bats?**

**A65.** The results of acoustic Anabat surveys indicated that passes by eastern red bats (32 calls) accounted for only 1.4 % of total passes recorded and only 4.5% of all mid-frequency calls (Table 2, Bat Acoustic Report). All (100%) of eastern red bat activity was recorded at station PA1 (Table 2; Figure 9). The majority of recognizable eastern red bat activity occurred between August 6 and August 19 (31.2%; Figure10), with peak activity within a 7-day period occurring between August 8 and 17, 2010 (mean of 0.64 bat passes/detector-night; Table 4). Bat calls identified to species by the SM2 detector indicated 16.6 % of calls were eastern red bats. All of the eastern bat calls were recorded at the PA1 station, which was situated in a cleared grassland area – a man-made habitat not respective of the natural landscape of deciduous forest dominating the site. These results indicate that low numbers of eastern red bats were active at the site and that the majority of activity may have been migratory, and not resident activity.

The majority of the site is comprised of dense forest. Bats active at low altitudes within the forest cover dominating the site are likely to be species such as northern long-eared bat or little brown bat which have the size and anatomy to able to maneuver between the trees and are known to forage in intact forest habitats (Lacki et al. 2007). Owing to their call structure, generally larger body size and wing shape, these bats are predicted to forage primarily in open relatively uncluttered air space (Norberg and Rayner 1987, Lacki et al. 2007). For this reason, it is not surprising that the majority of low frequency bat passes were detected at station PA1. All but one hoary bat call was recorded at station PA1. The small number of recognizable hoary bat calls recorded within the study area may be due to their relative abundance, to the conservative approach taken to determine species identification, or to not being as readily detectable by ground-based detectors. Passes by hoary bats (51 passes) comprised only 2.2% of total passes detected within the study area and 4.7% of all LF passes. All but one hoary bat call was recorded at station PA1 (see above and Bat Acoustic Report).

**Q66. Please summarize the effort that was conducted to reach the conclusion that the "PWRA is not in the vicinity of any known bat colonies or features likely to attract large numbers of bats."**

**A66.** A review of publically available information, a habitat assessment and results of acoustic surveys were evaluated to reach this conclusion.

**a.** Overwintering habitat: There is no suitable habitat on the Project site to support overwintering bats – no caves or mines are present which could serve as hibernaculum. The closest known hibernaculum to the Project site is located in Roxbury at the former Roxbury Iron Mine, approximately 20 miles to the northwest in Litchfield County.

**Breeding Habitat** The project contains forestlands and some forested wetlands which likely support tree-roosting bat species common to the region. These habitat types are not unique to the project; nor do they occur in greater abundance or quality relative to the surrounding region, based on landcover imagery and the results of the habitat analysis. Tree-roosting bat species which are likely to occur within the region are largely solitary roosting and do not generally occur in large aggregations (Harvey 1999, BCI 2010, DeGraaf and Yamaski 2001). All three species of migratory tree bat known to occur in Connecticut are not thought to be abundant (CTDEP 1999d). Silver-haired bats seem to prefer to roost in old growth high elevation coniferous forest which is a habitat type avoided by development on the Site to the extent practicable. Hoary bat also prefers coniferous forests, but will use regenerating deciduous forests, including maple, cherry, and hemlock (Godin 1983, Shump and Shump 1982). Hoary bats will roost in the dense foliage in tree crowns, and individuals will travel up to 24 miles round-trip on the first foraging flight of the night (Bat Conservation International 2010d). Hoary bats do not aggregate in large breeding colonies. Eastern red

bat, perhaps the most abundant migratory tree bat in North America, prefers to roost in more exposed positions than other bats, usually on a tree branch or the stem of a leaf. This species will roost in both deciduous or evergreen trees, and generally roosts solitarily, with the exception of mothers and their young. Roost sites must be open underneath to allow easy exit and entry (Majer and Nelson 2001). The majority of the site contains a thick understory of vegetation. Red bats are typically found in lowland habitats, and the adjacent New Naugatuck Reservoir property, which is lower and has a riparian corridor associated with it, may offer more appealing roosting habitat than the Project site itself.

**Q67. Please summarize your knowledge of the role of permanent water and wetlands as attractants for bats.**

**A67.** BNE objects to this interrogatory because it is overly broad and unduly burdensome. Subject to this objection and without waiving the same, BNE responds as follows: see numerous sources describing bat ecology (e.g. Lacki Hayes and Kurta 2007).

**Q68. Given the availability of specific technical guidance for proper protocols for pre-construction biological surveys in neighboring NY and NJ, why were these protocols not followed?**

**A68.** BNE and its representatives consulted with the CT DEP on March 19, 2010 and had a follow-up meeting on October 22, 2010 regarding pre-construction wildlife surveys for the Site. CT DEP requested pre-construction acoustic bat surveys be completed and, pursuant to this request, this survey was implemented utilizing protocols consistent with federal guidelines (USFWS), consistent with guidelines in other states and consistent with protocol used for the development of other wind facilities throughout the country. In addition, BNE voluntarily completed a breeding bird survey to provide baseline data on species composition and use of the breeding bird community at the Site. The protocol for the BBS survey was consistent with federal guidelines (USFWS), consistent with guidelines in other states and consistent with protocol used for the development of other wind facilities throughout the country.

**Q69. Given that the vast majority of bat mortality occurs during the fall migratory period, please explain how one can conclude the likely level of impact without providing data on the bat activity during the fall migratory period?**

**A69.** Data for this period is included in the final Bat Acoustic Report attached to the pre-filed testimony of David Tidhar dated February 16, 2011 at Exhibit 2.

**Q70. Please explain how the low-frequency bats comprise almost 46% of the total bat activity but the bat survey report concludes that hoary bats only represent 2.7% of the total bat activity.**

**A70.** While some bat species produce a call that has a distinctive sonogram (i.e., the shape on a frequency-time graph), there is much overlap and variation among some species. For this reason, a conservative approach to species identification was used. For each Anabat station, bat passes were sorted into three groups, based on their minimum frequency, that correspond roughly to species groups of interest. For example, the species of Myotis bats in Connecticut generally have echolocation with minimum frequencies near 40 kilohertz (kHz), whereas species such as the eastern red bat (Lasiurus borealis) typically have echolocation calls that fall between 30 and 40 kHz, and species such as big brown (Eptesicus fuscus), silver-haired (Lasionycteris noctivagans), and hoary bat (Lasiurus cinereus), have echolocation frequencies that fall at or below 25 kHz. Therefore, passes were classified as high-frequency (HF; more than 40 kHz), mid-frequency (MF; 30 to 40 kHz), or low-frequency (LF; less than 30 kHz). To establish which species may have produced passes in each category, a list of species expected to occur in the study area was compiled from range maps (Harvey et al. 1999, CDEF 1999). Within these categories, distinctive passes made by two *Lasiurus* species, hoary bat and eastern red bat, were identified. Echolocation calls that had a distinct U-shape and that exhibited variability in the minimum frequency across the call sequence were identified as belonging to the *Lasiurus* genus (C. Corben, pers comm.). Hoary and eastern red bats were distinguished based on minimum frequency. Hoary bats typically produce calls with minimum frequencies between 18 and 24 kHz, whereas eastern red bats typically emit calls with minimum frequencies between 30 and 43 kHz (J. Szewczak, pers comm.). Only sequences containing three or more calls were used for species identification. These are conservative standards. Given the high intra-specific variability of *Lasiurus* calls and the number of call files that were too fragmented for proper identification, it is likely that more hoary and eastern red bat calls were recorded than were positively identified.

For additional information see response to Q65.

**Q71. Please explain how the mid-frequency bats comprise over 35% of the total bat activity but the report concludes that eastern red bats only represent 1.2% of the total bat activity.**

**A71.** See responses to Q65 and Q70 for additional information.

**Q72. What is the source and level of accuracy of the topography shown on the plans that comprise Exhibit F to the petition?**

**A72.** The source of the topography shown on the plans is from the State of Connecticut, Department of Environmental Protection. All 2004 Statewide Aerial Survey imagery and data products are defined under State of Connecticut contract award number RFP-990-A-14-0518-C (dated Feb 22, 2000). The Connecticut

Statewide LiDAR dataset consists of x, y, and z point-data from an interpolated surface model ("bare-earth") derived from an Airborne LiDAR Topographic Mapping System (ALTMS). This data underwent automated processes to interpolate and create 2 foot elevation contours from the 20-foot posting LiDAR 2000 point data. The horizontal positional accuracy of the 20-foot posting LiDAR 2000 point data is approximately 3 feet on the ground.

**Q73. How were the wetland flags placed in the field by VHB located and transferred to the plans? What is the level of accuracy?**

**A73.** Wetland boundary flag locations have been located in the field using a GPS receiver utilizing available real-time Satellite-Based Augmentation System (WAAS) corrections. Resulting positions have been post-processed against a nearest Continuously Operating Reference Station (CORS) tied to the National Spatial Reference System (NSRS). Resulting positions have been post-processed using generally accepted survey adjustment methods with an ultimate expected horizontal accuracy of less than one meter.

**Q74. Do all of the plans that comprise Exhibit F conform to A-2 and T-2 standards?**

**A.74.** All of the plans that comprise Exhibit F do not conform to A-2 and T-2 standards. The plans in Exhibit F are schematic drawings for review by the Connecticut Siting Council and not for construction. All construction documents will meet A-2 and T-2 standards. Such documents will be submitted in the anticipated development and management phase of this petition. This is typical procedure for any contested proceeding with the Council.

**Q75. How will the slash and stumps from clearing approximately 8 acres of trees be handled? Will stumps be buried on-site? If chipped, where is the stockpile area and how much volume will be generated?**

**A75.** As indicated on plans in Exhibit F the area of trees to be cleared is approximately 5 acres. Harvested trees will be utilized as log length firewood and hauled off-site. Tree tops and woody debris (excluding stumps) not suitable for firewood will be chipped. Wood chips will be trucked off-site or utilized on-site for erosion control. Stumps will be loaded into a dumpster and trucked to a State Registered D.E.P. Approved Wood Recycling Facility. The nearest such facility is “Freezer Hill Mulch Co” 0.2 miles down the road at the Bethany town line.

**Q76. Where is the dewatering wastewater treatment detail?**

**A76.** The plans in Exhibit F are schematic drawings for review by the Connecticut Siting Council and not for construction. Dewatering wastewater treatment details have not been developed. Dewatering details will be developed in accordance with Section 5-13-1 of the Connecticut Guidelines for Soil Erosion and Sediment Control in the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q77. Where is the soil stockpile for turbine 1?**

**A77.** All soil/cut and fill material will be stockpiled at the single temporary laydown area to the north and east of Tower 1.

**Q78. How much earthwork (total volume of cut and fill) is required to execute the plans?**

**A78.** As provided on plan sheet C-500, during the construction phase total cut is estimated to be 37,996 cubic yards and total fill is estimated to be 9,098 cubic yards. During the post-construction phase total cut is estimated to be 3,518 cubic yards and the total fill is estimated to be 18,935 cubic yards.

**Q79. Is the total earthwork balanced, or will there be a net import or export of earth materials?**

**A79.** Total earthwork for the project is not balanced. There will be an excess of cut material estimated at 15,000 cubic yards that will be spread on-site post construction.

**Q80. How much specialized earth material (bank-run gravel, process gravel, rip-rap, etc.) will be required, in terms of yardage and truck trips?**

**A80.** It is estimated that 270 cubic yards of rip rap and 1,470 cubic yards of process gravel will be needed requiring approximately 70 truck loads. Again, this will be finalized in the anticipated development and management phase of this petition. This is typical procedure for any contested proceeding with the Council.

**Q81. Why is no grading shown for downslope blade at each assembly area?**

**A81.** The areas for the down slope blades at each assembly area do not require grading. The construction method to be used will allow those blades to hang off the slope. The intent is to trim or remove trees as necessary to permit the blade to "hang over" and be lifted into place. Soil disturbance in this area is not required.

**Q82. Will any off-site grading be required (see Note 10 on the construction schedule)? If so, have grading rights been obtained? If they are not available, how will this affect the plans?**

**A82.** Off-site grading will be required in the area between the end of the pavement on Kluge Road and the project property boundary. BNE has engaged the Town of Prospect in discussions to obtain permission.

**Q83. Please explain the conflict with Erosion Control Note 9 C-201 and grading for Tower assembly area on same sheet, which it shows as a 1:1 slope.**

**A83.** Realizing the minimum requirements in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, in an effort to reduce the construction footprint as much as possible, we have designed many slopes as 1:1 vice 1:2. This will require more attention to slope stabilization during construction through the use of temporary seeding and erosion control blankets and other erosion control measures. This method will only be utilized after geotechnical evaluations including soil analyses indicate it can be done with no increased risk, otherwise we will redesign at 1:2. Again, this will be finalized in the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q84. How will the discharge from the temporary diversion ditch be conveyed down the slope at Station 1+75 of the access road, to the roadside ditch?**

**A84.** Water on the north side of the Access Road flows west to a rip rap collection point at approximate station 2+25 where it is conveyed to the south side of the Access Road by a concrete pipe to a rip rap apron. Again, this will be finalized in the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q85. Why doesn't the erosion control barrier downslope of the access road Station 1+00 and 5+00 conform to the requirements of the Erosion Control Manual?**

**A85.** BNE objects to this interrogatory because it is vague and ambiguous.

**Q86. Why doesn't the stabilization of the slopes for the Tower assembly area on C-201 conform to the requirements of the Erosion Control Manual?**

**A86.** BNE objects to this interrogatory because it is vague and ambiguous.

**Q87. Why is no grading shown for western leg of the blade assembly area on C-201? Why doesn't this grading conform to the requirement that the blade assembly area be graded flat to within 6" shown on the plans?**

**A87.** The areas under the turbine blade pointing west do not require grading. The construction method to be used will allow those blades to hang off the slope. The intent is to trim or remove trees as necessary to permit the blade to "hang over" and be lifted into place. Soil disturbance in this area is not required. Again, these are typical details that are finalized during the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q88. Please provide site plans (including grading, erosion control, access, utilities, sanitary facilities) for the proposed support building. How much Site disturbance be required to make this facility operational? Was this included in the area of disturbance calculations?**

**A88.** Site plans for the proposed support building have not been fully developed. The site disturbance for the proposed building area, however, was included in the disturbance calculations. Detailed site plans for the support building will be finalized and included in the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q89. Why don't the temporary sediment basins conform to the requirements of the Erosion Control Manual with respect to height, width and slope of the containment berm? Where is the outlet?**

**A89.** This project uses temporary sediment traps as per drawing C-503. References to basins on other sheets are typographical errors and will be corrected.

**Q90. How do the plans prevent stormwater from reconcentrating and causing erosion and sedimentation into wetlands downgradient of the two sediment basins?**

**A90.** The temporary sediment trap apron acts as a level spreader to prevent concentration that would cause erosion and sedimentation into wetlands down gradient of the two temporary sediment traps.

**Q91. Please explain the discrepancy between the grading shown for the sediment basins and the details. Will grading the basin south of the lower blade assembly area in accordance with the requirements of the detail, result in grading into the wetlands?**

**A91.** Modified plans for the lower turbine area as a result of coordination with the Connecticut Water Company have been filed on February 16, 2011. Blade assembly, tower assembly, and temporary sediment trap have all been moved east (up gradient) and further from the wetlands.

**Q92. Please explain the discrepancy between the proposed grading for the West facing slope of blade assembly area for turbine, the Erosion control plan notes, which do not permit slopes steeper than 2:1 without a plan designed and sealed by a geo-technical engineer, and the CT Sediment and Erosion Control Manual.**

**A92.** Realizing the minimum requirements in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, in an effort to reduce the construction footprint as much as possible, we have designed many slopes as 1:1 vice 1:2. This will require more attention to slope stabilization during construction through the use of temporary seeding and erosion control blankets and other erosion control measures. This method will only be utilized after geotechnical evaluations including soil analyses indicate it can be done with no increased risk, otherwise we will redesign at 1:2. Again, this will be finalized in the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q93. How will the side slopes and bottom of the temporary roadside ditches be stabilized? What runoff velocities will occur for the 10 year through 100 year storms and how will the ditch bottom and sides be stabilized? Please provide calculations showing that the ditches will be stable and have adequate capacity to pass the design storm.**

**A93.** Plan sheets show stabilization with temporary seeding in accordance with Connecticut Guidelines for Soil Erosion and Sediment Control section 5-3-2. Hydrographs have been provided for 2, 10, 25, and 100 year storm events. Calculations will be provided in the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q94. What measures are included in the design to control seepage and stabilize cut slopes in areas with a hardpan, or where seasonal high groundwater is likely to be encountered?**

**A94.** The plans in Exhibit F are schematic drawings for review by the Connecticut Siting Council and not for construction. The anticipated development and management phase of this proceeding will include filing of construction drawings and will include geotechnical analyses to provide design for seepage and seasonal high groundwater issues.

**Q95. Where is the design or detail for the level spreaders shown on sheet C-310 and C 311? How will the road drainage be accommodated during the time period required to complete the regarding and establish a stable vegetative surface? Is this even feasible on the grades shown?**

**A95.** Level Spreader details will be added with the final construction drawings

as shown on page 5-10-4 of the Connecticut Guidelines for Soil Erosion and Sediment Control. The level spreaders will be designed in accordance with the CT Guidelines and final details provided. The road drainage will be accommodated by sheet flow by the new drainage contours that tie into existing contours of the undisturbed areas. The level spreaders are feasible when constructed in accordance with Connecticut Guidelines for Soil Erosion and Sediment Control. Again, this will be finalized in the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q96. How will the 1:1 slope shown on C-309 on the upslope side of the access road be stabilized?**

**A96.** Disturbed areas on post construction plan sheets get re-vegetated with permanent vegetation as shown on drawings C-312 and C-313 as upland meadow in accordance with Connecticut Guidelines for Soil Erosion and Sediment Control Section 5-3-5.

**Q97. Why is there a discrepancy between the Erosion Control narrative and the plans with respect to stabilization of slopes steeper than 2:1?**

**A97.** Realizing the minimum requirements in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, in an effort to reduce the construction footprint as much as possible, we have designed many slopes as 1:1 vice 1:2. This will require more attention to slope stabilization during construction through the use of temporary seeding and erosion control blankets and other erosion control measures. This method will only be utilized after geotechnical evaluations including soil analyses indicate it can be done with no increased risk, otherwise we will redesign at 1:2. Again, this will be finalized in the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q98. How will the stormwater on the downslope side of the permanent access road be handled? Will it be allowed to sheet flow over the embankment? If so, how will the embankment be stabilized while the sheet flow is occurring?**

**A98.** Disturbed areas on post construction plan sheets get re-vegetated with permanent vegetation as shown on drawings C-312 and C-313 as upland meadow in accordance with Connecticut Guidelines for Soil Erosion and Sediment Control Section 5-3-5.

**Q99. How will the success of the proposed restoration and enhancement areas be monitored and what plans are in effect to address any remedial measures that may be required?**

**A99.** Monitoring of the Upland Meadow Creation and Restoration Areas will be conducted by a qualified third party inspector for several growing seasons following Project construction to ensure that the Restoration Areas are reestablished, that no invasive species colonize in those areas, and that the adjacent slopes are properly stabilized. BNE will institute remedial measures to the extent necessary.

**Q100. Please provide calculations demonstrating the adequacy of the proposed temporary sediment basins.**

**A100.** Preliminary calculations were provided with the submitted Erosion and Sediment Control Plan. Final calculations will be provided in the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q101. Please provide calculations showing the adequacy of the soil stockpile area to accommodate the required soil volume? Will any soil be removed from the site?**

**A101.** The proposed stockpile area is sufficient to contain the maximum volume of soil expected. Calculations will be provided in the anticipated development and management phase of this proceeding. This is typical procedure for any contested proceeding with the Council.

**Q102. Given the fact that Wood Frog (Rana sylvatica), a vernal pool obligate species, was identified at the Site, why were no in-season amphibian surveys conducted at the Site and why was there no assessment of the terrestrial habitat value of the Site for vernal pool obligate species?**

**A102.** No potential vernal pool habitat was identified during the wetland delineation or during subsequent site visits on June 23, August 10 and November 22, 2010. The delineated wetlands on the Property are characterized as hillside seepage areas. Hillside seepage wetlands typically lack the physical characteristics necessary to provide vernal pool habitat (e.g., topographical depressions to support seasonal pools). The wetlands identified on the Property do not contain topographical depressions. In addition, these wetlands possess a gradient which prevents seasonal high ground or surface water from ponding. Rather than ponding, surface water within these wetland systems is subject to diffuse and channelized conveyance that do not support vernal pool habitat.

The wood frog observation was made by a biologist from Western Ecosystems Technology, Inc., at breeding bird survey point 9, which is at Turbine Location Two. The location of this observation was approximately 400 feet east of the western Property boundary. Wood frog juveniles and adults, on average, disperse approximately 1,550 feet from a breeding pool

(Berven and Grudzien). While the wetlands on the Property do not provide suitable vernal pool habitat, the uplands may indeed provide terrestrial habitat for some obligate vernal pool species such as wood frogs that are likely utilizing breeding pools located off-site. While no off-site assessments for vernal pool habitat were performed, it is reasonable to assume that suitable vernal pool habitat may exist within a depressional wetland system located approximately 300 to 400 feet west of the Property in the vicinity of this location. In order to address the assumed presence of eastern box turtle on the Property, a number of protection measures will be utilized to avoid mortality to this species during construction. These measures, which are detailed in a letter from CTDEP dated October 26, 2010 (Volume 3, Exhibit I, Attachment C), include inspection of the work area by a qualified professional followed by establishment of exclusionary fencing and monitoring. In addition to eastern box turtle, this exclusionary fencing will also provide a barrier to species such as wood frog. Following construction, exposed areas adjacent to Turbine Two will be planted with a native herbaceous seed mixture and the exclusionary fencing removed. Assuming these protocol are utilized, it is anticipated that development of the Project will have no impact in the wood frog.

**Q103. Is there a report or data subsequent to the Interim Bat Acoustical Study submitted with BNE's petition? If so, please provide all such data and reports.**

**A103.** The final bat acoustical study is attached to the pre-filed testimony of David Tidhar dated February 16, 2011 at Exhibit 2.

**Q104. Have West, Inc. or VHB performed any additional investigations or studies since the date of the studies submitted with BNE's petition. If so, please provide all such data and reports.**

**A104.** All reports have been finalized and submitted to the record in this proceeding. WEST's final bat acoustic study is filed with the pre-filed testimony of David Tidhar dated February 16, 2011 at Exhibit 2.

**Q105. Please provide the weather conditions during each bird survey (temperature, cloud cover, precipitation) as well as the start and end time and the specific field personnel.**

**A105.** See table attached hereto as Exhibit 3.

**Q106. What investigation or analysis have you done with respect to the impact of the proposed wind turbine facility construction or operation on groundwater contamination at the site or adjoining sites?**

**A106.** See response to interrogatory Q14 of Save Prospect Corp.'s interrogatories.

**Q107. Do BNE or its principals have any past or present relationship with Epsilon, Inc. or any of its principals?**

**A107.** BNE objects to this interrogatory because it is irrelevant to this proceeding. Subject to this objection, and not waiving the same, BNE does not have any past or present relationship with Epsilon, Inc., and is not aware of any past or present relationship with any of its principals.

BNE ENERGY INC.

By: /s/ Carrie Larson

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## CERTIFICATION

This is to certify that a copy of the foregoing has been mailed this date to all parties and intervenors of record.

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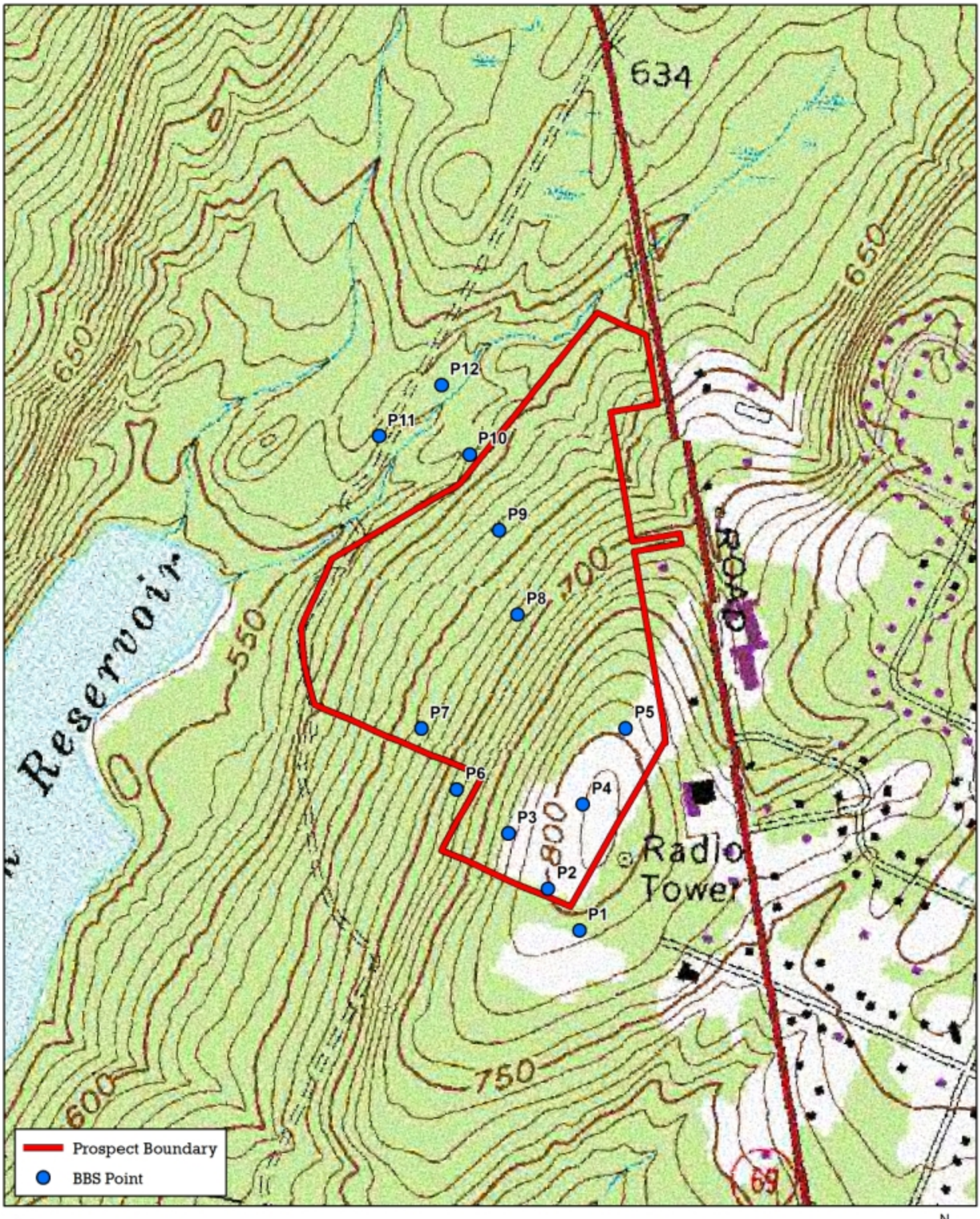
/s/
Carrie L. Larson

ACTIVE/72955.3/BMONDSCHEIN/2379730v1

# EXHIBIT 1




Data Source: USGS Topo. 1:24,000
Projection: Universal Transverse Mercator
Datum: North American Datum 1983
Created By: J.R. Boehrs Date: 02/15/2011

0 50 100 200 300 Meters
0 250 500 1,000 Feet

N
W E
S

# EXHIBIT 2

# Jeff Gruver, *Research Biologist*

## PROFESSIONAL EXPERIENCE

| | |
|---|---|
| 2007-Present | *Research Biologist,* Western EcoSystems Technology, Inc., Laramie, Wyoming |
| 2004-2007 | *Research & Graduate Teaching Assistant,* University of Calgary, Canada |
| 2002-2003 | *Research Zoologist,* Wyoming Natural Diversity Database, Laramie, Wyoming |
| 2000-2001 | *Graduate Teaching Assistant,* University of Wyoming, Laramie, Wyoming |
| 2000-2002 | *Graduate Research Assistant,* University of Wyoming, Laramie, Wyoming |
| 1999-2000 | *Research Technician,* Western EcoSystems Technology, Inc., Laramie, Wyoming |
| 1998 | *Wildlife Biologist,* Weyerhaeuser Company, Springfield Oregon |

## EDUCATION

M.S.
University of Wyoming
Laramie, Wyoming
2002
Zoology and Physiology

Non-Degree
Oregon State University
Eugene, Oregon
1998
Wildlife Science

B.S.
The Pennsylvania State University
1993
Economics

## SCIENTIFIC ORGANIZATION MEMBERSHIPS

The Wildlife Society

North American Symposium on Bat Research

## SPECIALTY AREAS

**Wind Power Studies:** Design and implementation of studies to assess impacts of wind power development on bats and bat populations. Studies included use of acoustic detection and interpretation of echolocation data to assess relative risk to bats, meta-analysis of acoustic study results from broad spatial and temporal perspectives, exploration of quantitative methods for assessing species presence and relative abundance based on acoustics.

**Habitat Conservation Planning:** Attended Habitat Conservation Planning for Endangered Species Training (June 2010) at the USFWS National Conservation Training Center, Shepherdstown, WV.

**Bat Ecology, Physiology and Conservation:** Over 14 years experience studying bats in forested and non-forested habitats, primarily using radio-telemetry to investigate habitat relationships. Investigation of physiological and ecological responses of bats to environmental conditions.

## SELECTED PROFESSIONAL PUBLICATIONS


Barclay, R.M.R., E.F. Baerwald, and **J.C. Gruver**. 2007. Variation in bat and bird fatalities at wind energy facilities: assessing the effects of rotor size and tower height. Canadian Journal of Zoology 85: 381-387.

**Gruver, J.C.** and D.A. Keinath (2006, October 25). Townsend's Big-eared Bat (*Corynorhinus townsendii*): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region. Available: http://www.fs.fed.us/r2/projects/scp/assessments/townsendsbigearedbat.pdf

Seville, R.S. and **J.C. Gruver**. 2004. Species of Eimeria (Apicomplexa: Eimeriidae) from bats (Chiroptera: Vespertilionidae) in central Wyoming. Journal of Parasitology 90(2):348-351.

Hayes, J.P., and **J.C. Gruver**. 2000. Vertical stratification of activity of bats in an old-growth forest in western Washington. Northwest Science. 74(2):102-108.

# EXHIBIT 3

| station | date | observer | start time | end time | vis | cloud cover | temp | units | speed low | speed high | unit | ppt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6/28/2010 | CV | 4:49 | 4:54 | POOR | 95 | 25 | C | 2 | 3 | MPH | NONE |
| 2 | 6/28/2010 | CV | 5:09 | 5:14 | FAIR | 95 | 23 | C | 1 | 1 | MPH | NONE |
| 3 | 6/28/2010 | CV | 5:56 | 6:01 | POOR | 95 | 23 | C | 1 | 1 | MPH | NONE |
| 4 | 6/28/2010 | CV | 5:27 | 5:32 | FAIR | 95 | 24 | C | 6 | 9 | MPH | NONE |
| 5 | 6/28/2010 | CV | 5:40 | 5:45 | FAIR | 95 | 24 | C | 5 | 9 | MPH | NONE |
| 6 | 6/28/2010 | CV | 6:13 | 6:18 | POOR | 95 | 23 | C | 0 | 0 | MPH | NONE |
| 7 | 6/28/2010 | CV | 6:28 | 6:33 | FAIR | 95 | 24 | C | 0 | 0 | MPH | NONE |
| 8 | 6/28/2010 | CV | 6:57 | 7:02 | FAIR | 95 | 23 | C | 0 | 0 | MPH | NONE |
| 9 | 6/28/2010 | CV | 7:25 | 7:30 | FAIR | 95 | 24 | C | 0 | 1 | MPH | NONE |
| 10 | 6/28/2010 | CV | 7:37 | 7:42 | FAIR | 95 | 24 | C | 0 | 0 | MPH | NONE |
| 11 | 6/28/2010 | CV | 8:08 | 8:13 | | 95 | 24 | C | 0 | 0 | MPH | NONE |
| 12 | 6/28/2010 | CV | 7:57 | 8:02 | | 95 | 24 | C | 1 | 1 | MPH | NONE |
| 1 | 7/5/2010 | CV | 7:55 | 8:00 | GOOD | 10 | 23 | C | 0 | 0 | MPH | NONE |
| 2 | 7/5/2010 | CV | 7:41 | 7:46 | GOOD | 10 | 25 | C | 2 | 2 | MPH | NONE |
| 3 | 7/5/2010 | CV | 4:48 | 4:53 | POOR | 80 | 20 | C | 0 | 0 | MPH | NONE |
| 4 | 7/5/2010 | CV | 7:18 | 7:23 | GOOD | 15 | 24 | C | 1 | 1 | MPH | NONE |
| 5 | 7/5/2010 | CV | 7:08 | 7:13 | GOOD | 15 | 20 | C | 0 | 0 | MPH | NONE |
| 6 | 7/5/2010 | CV | 5:06 | 5:11 | POOR | 80 | 19 | C | 0 | 0 | MPH | NONE |
| 7 | 7/5/2010 | CV | 5:21 | 5:26 | FAIR | 50 | 19 | C | 0 | 0 | MPH | NONE |
| 8 | 7/5/2010 | CV | 5:44 | 5:49 | FAIR | 40 | 20 | C | 0 | 0 | MPH | NONE |
| 9 | 7/5/2010 | CV | 5:58 | 6:03 | FAIR | 30 | 19 | C | 0 | 0 | MPH | NONE |
| 10 | 7/5/2010 | CV | 6:20 | 6:25 | FAIR | 20 | 19 | C | 0 | 0 | MPH | NONE |
| 11 | 7/5/2010 | CV | 6:32 | 6:37 | FAIR | 15 | 19 | C | 0 | 0 | MPH | NONE |
| 12 | 7/5/2010 | CV | 6:43 | 6:48 | FAIR | 15 | 18 | C | 0 | 0 | MPH | NONE |
| 1 | 7/12/2010 | CV | 8:35 | 8:40 | GOOD | 35 | 28 | C | 0 | 0 | MPH | NONE |
| 2 | 7/12/2010 | CV | 4:54 | 4:59 | POOR | 15 | 23 | C | 0 | 0 | MPH | NONE |
| 3 | 7/12/2010 | CV | 7:31 | 7:36 | FAIR | 10 | 22 | C | 0 | 0 | MPH | NONE |
| 4 | 7/12/2010 | CV | 7:43 | 7:48 | GOOD | 25 | 27 | C | 0 | 0 | MPH | NONE |
| 5 | 7/12/2010 | CV | 5:07 | 5:12 | | 15 | 21 | C | 1 | 2 | MPH | NONE |
| 6 | 7/12/2010 | CV | 7:18 | 7:23 | FAIR | 15 | 22 | C | 0 | 0 | MPH | NONE |
| 7 | 7/12/2010 | CV | 7:05 | 7:10 | FAIR | 15 | 22 | C | 0 | 0 | MPH | NONE |
| 8 | 7/12/2010 | CV | 6:47 | 6:52 | FAIR | 15 | 21 | C | 0 | 0 | MPH | NONE |
| 9 | 7/12/2010 | CV | 5:36 | 5:41 | POOR | 15 | 21 | C | 0 | 0 | MPH | NONE |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | 7/12/2010 | CV | 5:59 | 6:04 | POOR | 15 | 20 C | 0 | 0 MPH | NONE |
| 11 | 7/12/2010 | CV | 6:12 | 6:17 | POOR | 15 | 20 C | 0 | 0 MPH | NONE |
| 12 | 7/12/2010 | CV | 6:24 | 6:29 | FAIR | 15 | 20 C | 0 | 0 MPH | NONE |