

**IN THE COURT OF COMMON PLEAS OF CARBON COUNTY, PENNSYLVANIA  
CIVIL DIVISION**

PHILLIP C. MALITSCH and  
CHRISTOPHER MANGOLD,

Plaintiffs/Appellants

v.

PENN FOREST TOWNSHIP ZONING  
HEARING BOARD,

Defendant/Appellee

and

ATLANTIC WIND, LLC, PENN  
FOREST TOWNSHIP, and  
BETHLEHEM AUTHORITY,

Intervenors

No. 17-1011

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CARBON COUNTY  
PROTHONOTARY

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Zoning Hearing Board  
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**MEMORANDUM OPINION**

Serfass, J. - April 21, 2020

Phillip C. Malitsch and Christopher Mangold (hereinafter collectively "Appellants") initiated this case on May 22, 2017, when they filed a land use appeal concerning the "Notice of Deemed Approval" published by Atlantic Wind, LLC, on May 5, 2017 in The Times News, a newspaper of general circulation in Carbon County. In response to Atlantic Wind's notice, on May 25, 2017, the Penn

Forest Township Zoning Hearing Board filed a "Motion to Strike Notice of Deemed Approval Published May 5, 2017." Atlantic Wind then intervened in this action on June 5, 2017, followed, on June 7, 2017, by Penn Forest Township in support of Appellants, and by Bethlehem Authority on June 20, 2017. The "Motion of Atlantic Wind, LLC to Strike Motion of Appellee Penn Forest Township Zoning Hearing Board to Strike Notice of Deemed Approval Published on May 5, 2017 for Lack of Standing" was filed on July 5, 2017. Following briefing and oral argument, this Court issued a memorandum opinion dated December 29, 2017 holding that Atlantic Wind's zoning application was deemed approved and that the Penn Forest Township Zoning Hearing Board lacked standing to strike the notice of deemed approval.

Atlantic Wind and Penn Forest Township filed separate motions to "Present Additional Evidence Pursuant to MPC § 1005-A". After oral argument thereon, both motions were granted and, on February 28, 2018, this Court appointed William G. Schwab, Esquire, as Referee to receive additional evidence in this matter. After two (2) hearings were held to take additional evidence, the parties submitted to Referee Schwab proposed findings of fact and conclusions of law and the Referee then submitted to this Court his recommended proposed findings of fact and conclusions of law. Thereafter, oral argument was scheduled and held before this Court on the merits of the zoning appeal.

Upon consideration of the record in this case, including additional evidence heard by Referee Schwab, the proposed findings of fact and conclusions of law submitted by the parties and the Referee, and the oral argument of counsel, we make the following

**FINDINGS OF FACT**

1. Penn Forest Township (hereinafter the "Township") is a township of the second class situated in Carbon County, Pennsylvania.

2. The Township has a duly enacted zoning ordinance known as the "Penn Forest Township Zoning Ordinance of 2011" (hereinafter the "Zoning Ordinance").

3. The Township has a zoning hearing board created pursuant to 53 P.S. §10901 and known as the "Penn Forest Township Zoning Hearing Board" (hereinafter the "Board").

4. Bethlehem Authority is a municipal authority organized and existing under the laws of the Commonwealth of Pennsylvania.

5. Atlantic Wind, LLC (hereinafter "Atlantic Wind") is an Oregon limited liability company and a wholly owned subsidiary of Iberdrola Renewables.

6. Iberdrola Renewables is the world's largest wind energy owner and the second largest wind energy owner within the United States operating fifty-nine (59) wind energy projects in eighteen (18) states as of the date of the first hearing on the instant zoning application.

7. Atlantic Wind submitted a complete zoning application to the Board via correspondence from its legal counsel dated April 1, 2016, seeking a special exception for a proposed Wind Turbine Project to be erected on property owned by Bethlehem Authority located north and south of Hatchery Road also known as Reservoir Road.

8. The majority of the project area is located in the R-1-Rural Residential Agricultural (hereinafter "R-1") zoning district and the remainder of the project area is located in the R-2-Low Density Residential (hereinafter "R-2") zoning district.

9. On or about March 6, 2013, Atlantic Wind entered into a "Wind License and Wind Energy Lease Agreement" (hereinafter "Lease Agreement") with Bethlehem Authority, pursuant to which Atlantic Wind was authorized to submit the special exception application to the Board for the proposed Wind Turbine Project.

10. Bethlehem Authority owns real estate in Penn Forest Township identified by the following Carbon County tax parcel numbers: 37-51-A7.04; 51-51-A8.01; 23-51-A3; 12-51-A5; 37-51-A9; 37-51-A2; 52-51-A8; 37-51-A3; 23-51-A1; 37-51-A7; 13-51-A1; 25-51-A5; 25-51-A2; 37-51-A1; 38-51-A1.02; 38-51-A4; 25-51-A3; 38-51-A1.01; 25-51-A1; 12-51-A5; 37-51-A4; 24-51-A1; 24-51-A3,4; 12-51-A6; 25-51-A4; and 37-51-A6 (hereinafter the "Project Area").

11. The application treats the separate tax parcels as one parcel for land development purposes.



12. The Project Area comprises approximately nine thousand nine hundred thirty-eight (9,938) acres of real estate.

13. Atlantic Wind's special exception application proposes the construction of up to thirty-seven (37) wind turbines on Bethlehem Authority property and all pertinent infrastructure including, but not limited to, permanent meteorological towers, electrical substations, overhead and underground electrical and data cables, access roads, and an emergency service station/operations and safety building (hereinafter "Wind Energy Facility").

14. The proposed maximum wind turbine height is five hundred twenty-five (525) feet.

15. The overall scope of the site improvements is 0.86% of impervious coverage and the proposed disturbance area is 2.72%.

16. Atlantic Wind's application requests two (2) special exceptions as follows:

(i.) A special exception pursuant to Zoning Ordinance section 306.B.1 to permit a wind turbine use in the R-1 Zoning District along with appurtenant infrastructure including, but not limited to, roads, permanent meteorological towers, electrical substations, overland and underground electrical and data cables and transmission lines; and

(ii.) A special exception pursuant to Zoning Ordinance section 105.B to permit an operations and safety building as

a use not specifically provided for (and not prohibited) in any of the zoning districts.

17. Section 306.B.1 of the Zoning Ordinance permits the construction of wind turbines in R-1 zoning districts by special exception.

18. Atlantic Wind also seeks an interpretation of the Zoning Ordinance that the permanent meteorological towers are:

(i.) permitted as an integral part of the wind turbine use and necessary for the operation of the wind energy conversion system; or

(ii.) permitted as an accessory use or structure that is customary and incidental to the wind turbine use and/or permitted as an accessory structure to the wind turbine use pursuant to Zoning Ordinance section 402.A.54(n) which permits accessory electrical facilities.

19. In the alternative, Atlantic Wind requests a special exception pursuant to Zoning Ordinance section 105.B to permit the permanent meteorological towers as a use not specifically provided for (and not prohibited) in any of the zoning districts.

20. Pursuant to the Pennsylvania Municipalities Planning Code (hereinafter "MPC"), 53 P.S. § 10101, et seq., the Board advertised a public notice that the first hearing on Atlantic Wind's zoning application would take place on May 12, 2016, at the

Penn Forest Township Volunteer Fire Company No. 1, 1387 State Route 903, Jim Thorpe, Pennsylvania.

21. At the first zoning hearing on May 12, 2016, Atlantic Wind called Craig Poff, Mark Bastasch, P.E. and Michael Kissinger, P.E. as witnesses, introduced ten (10) exhibits, and rested its case.

22. Craig Poff is the director of business development for Iberdrola Renewables and is responsible for all aspects of obtaining permits for wind energy projects.

23. Mark Bastasch, a professional acoustical engineer licensed in the State of Oregon, is employed at CH2M Hill Engineers, Inc. as a principal acoustical engineer and was retained by Iberdrola Renewables to review and analyze the proposed wind turbine project for compliance with the requirements of the Penn Forest Township sound ordinance.

24. Michael Kissinger is employed as a service engineer at Pennoni Associates in charge of all land development in Southern Pennsylvania and serves as the lead project engineer/project manager relative to zoning matters for the proposed wind turbine project.

25. A total of seven (7) hearings were scheduled before the Board at the Penn Forest Township Volunteer Fire Company No. 1 on the following dates: May 12, 2016; June 26, 2016; July 14, 2016;

July 21, 2016; August 25, 2016; September 20, 2016; and May 17, 2017.

26. By agreement, neither the parties nor their counsel appeared for the zoning hearing scheduled on September 20, 2016 and the proceedings were stayed by the Board pending this Court's disposition of Atlantic Wind's petition for special relief seeking to have further hearings held at the Carbon County Courthouse based upon security concerns with the fire company venue.

27. The zoning hearing of May 17, 2017, was ultimately stricken as a result of this Court's December 29, 2017, memorandum opinion and order upholding the deemed decision.

28. Section 402.A.54 of the Zoning Ordinance lists the specific requirements for wind turbines as a principal use.

29. Principal use is defined in the Zoning Ordinance as "A dominant use(s) or main use on a lot, as opposed to an accessory use."

30. Section 801.B.2 of the Zoning Ordinance provides, "A lot within a residential district shall not include more than one (1) principal use and shall not include more than one (1) principal building unless specifically permitted by this Ordinance."

31. There is a large reservoir located within the Project Area commonly known as the Penn Forest Reservoir.

32. The Penn Forest Reservoir watershed contains eight thousand seven hundred eighty-three (8,783) acres of real property

of which Bethlehem Authority owns seven thousand two hundred twenty-two (7,222) acres.

33. The majority of the Project Area is located within the Penn Forest Reservoir watershed.

34. The Penn Forest Reservoir watershed is owned by Bethlehem Authority and kept in an undeveloped state for the purpose of maintaining the quality of the water flowing into the Penn Forest Reservoir.

35. The Penn Forest Reservoir drains into the Wild Creek Reservoir, both of which are sources of water for the City of Bethlehem.

36. On or about April 14, 2011 Bethlehem Authority entered into a "Term Conservation Easement" with the Nature Conservancy.

37. The Lease Agreement between Atlantic Wind and Bethlehem Authority provides that the "primary mission of [Bethlehem Authority is] to produce potable water" and one of the "primary uses" of the Project Area is "for the production of potable water".

38. Both the Lease Agreement and the Term Conservation Easement provide that there are no real estate taxes or other assessments levied against the Project Area.

39. In a letter dated February 25, 2015, from the Bethlehem Authority to the Federal Energy Regulatory Commission, the Chairman of the Bethlehem Authority stated, "The city's water comes entirely from surface sources around two (2) reservoirs in the

Pocono Mountains. The two (2) major components of the water supply system which the Authority controls and has a duty to protect are the reservoirs holding water, including the head waters and the streams feeding those reservoirs."

40. In that same letter, the Bethlehem Authority Chairman stated, "Protecting the authority's reservoirs necessarily requires protecting the surface waters feeding those reservoirs. To that end the authority not only owns the reservoirs, it also owns the land containing the headwaters and the streams feeding the reservoirs. To protect the headwaters and feeder streams, the authority has placed significant portions of its land in a conservation easement."

41. As required by section 116.B.2 of the Zoning Ordinance, the Penn Forest Township Zoning Officer issued the first zoning compliance review determination by correspondence dated April 19, 2016, referencing eight (8) items that required further clarification.

42. Atlantic Wind subsequently provided the requested clarification, and the Zoning officer issued a second zoning compliance review determination letter dated June 23, 2016, advising that all of her prior comments had been addressed.

**Specific Standards Governing Wind Turbine Use under § 402.A.54  
of the Zoning Ordinance**

43. In compliance with section 402.A.54.a of the Zoning Ordinance, the wind turbine setback is at least three (3) times the maximum height to the top of the turbine from any adjacent property line not owned by the Bethlehem Authority.

44. The proposed minimum distance from the closest turbine to the closest occupied dwelling property is two thousand three hundred (2,300) feet whereas the Zoning Ordinance requires only one thousand five hundred seventy-five (1,575) feet for a maximum turbine height of five hundred twenty-five (525) feet.

45. Atlantic Wind and Mr. Bastasch acknowledged that the locations of the wind turbines could be "materially changed" and could be closer to residences.

46. According to the testimony of Mr. Poff, it is "almost certain" that the location of some of the wind turbines will vary from the proposed site map.

47. In addressing section 402.A.54.b of the Zoning Ordinance, no part of any of the proposed wind turbines are located within or above the front, side, or rear setback that would apply to a principal building.

48. In addressing section 402.A.54.c of the Zoning Ordinance, Mr. Poff testified that to the extent the proposed use would cease in the future, all wind turbines and associated infrastructure would be removed within twelve (12) months after terminating operation as a wind energy facility.



49. Mr. Poff testified that the removal provision is also a requirement of the Wind License and Wind Energy Lease Agreement with the Bethlehem Authority.

50. Pursuant to Paragraph 13.3 of the Wind License and Wind Energy Lease Agreement between Atlantic Wind and Bethlehem Authority, Atlantic Wind is required to remove all "wind power facilities" within eighteen (18) months after termination of the Agreement.

51. In addressing section 402.A.54.d of the Zoning Ordinance, Mr. Poff testified that the height of the lowest position of the wind rotors is eighty-five (85) feet above the ground which is well above the twenty-five (25) feet minimum height requirement set forth in the ordinance.

52. In addressing section 402.A.54.e of the Zoning Ordinance, Mr. Poff testified that the turbines shall meet the applicable requirements of the Uniform Construction Code ("U.C.C.") and the National Electrical Code ("N.E.C.") and shall be certified by Underwriters Laboratories or an equivalent organization.

53. Mr. Poff testified that the U.C.C. and N.E.C. requirements will be complied with at the time of building permit issuance and any new electrical wiring would be proposed underground to the maximum extent feasible.

54. In addressing section 402.A.54.f of the Zoning Ordinance, Mr. Poff testified that the proposed use will conform to all applicable industry standards, including those of the American National Standards Institute.

55. Atlantic Wind agreed to submit a Certificate of Design Compliance for the proposed turbines and agreed to supplement said submission at the time of building permit issuance if the turbine manufacturer changes.

56. In addressing section 402.A.54.g of the Zoning Ordinance, and when questioned as to whether the wind turbines will be outfitted with braking systems and overspeed protection that "meets or exceeds the industry's standards", Mr. Poff replied, "Yes", while providing no specific information concerning either the braking systems or applicable industry standards.

57. In addressing section 402.A.54.h of the Zoning Ordinance, Mr. Poff testified that the color of the turbines will be non-obtrusive such as white, off-white, or gray.

58. In addressing section 402.A.54.i of the Zoning Ordinance, Mr. Poff testified that the proposed wind turbine facility will meet all lighting requirements of the Federal Aviation Administration.

59. In addressing sections 402.A.54.j and k of the Zoning Ordinance, Mr. Poff testified that there will be signage at access points but no signage whatsoever on the wind turbines.

60. In addressing section 402.A.54.l of the Zoning Ordinance, Mr. Poff testified that no guy wires are proposed.

61. In addressing section 402.A.54.m of the Zoning Ordinance, Mr. Poff testified that any interference with surrounding radio or telephone signals was unlikely but that Atlantic Wind would make efforts to avoid any interference initially, and to the extent any interference occurred, Atlantic Wind would make reasonable efforts to mitigate any such interference.

62. Mr. Poff also testified that the turbine locations were designed to avoid Federal Communications Commission transmission routes and microwave beam paths as shown on the constraints map.

63. In addressing section 402.A.54.n of the Zoning Ordinance, the Site Plan and the testimony of Mr. Kissinger confirmed that any accessory electrical facilities are compliant with the principal building setback requirements.

64. In addressing section 402.A.54.o of the Zoning Ordinance, the Site Plan introduced depicts the proposed driveways, turbines, and wooded area proposed to be cleared or preserved.

65. All aspects of the proposed wind turbine project would be accessible from Hatchery Road.

66. Atlantic Wind has agreed that no wind turbines will be closer than two thousand three hundred (2,300) feet from the

closest existing home on Lipo Drive, three thousand six hundred seventy (3,670) feet from the closest existing home on East Creek Drive, and three thousand six hundred (3,600) feet from the closest existing home on Hatchery Drive.

67. The proposed meteorological towers, operations and safety building, and the substation are necessary for the safe and efficient operation of a wind turbine project.

68. The operations and safety building is proposed to be located in an R-2 zoning district which does not allow such a support building.

69. Atlantic Wind has agreed not to erect the operations and safety building in the R-2 zone.

70. Atlantic Wind's site plan, which was offered as Applicant's Exhibit A-5-12, provides no dimensions for the proposed operations and safety building and no improvements for parking.

71. Although Mr. Poff testified that the wind turbine project would conform to applicable industry standards, no specific testimony was offered as to what those standards entail or how Atlantic Wind's proposed wind turbine project would comply.

72. Mr. Poff testified that there are several wind turbine manufacturers and that Atlantic Wind has not determined the model of wind turbine it intends to use for the project.

73. No testimony or evidence was presented as to the specific wind turbines being considered for the project or whether each type of wind turbine is certified by the Underwriters Laboratories or an equivalent organization.

74. Atlantic Wind has failed to submit any certificates or other design compliance documentation from the Underwriters Laboratories, Det Norske Veritas, Germanischer Lloyd WindEnergie, or other similar certifying organizations.

75. Although Mr. Poff agreed that the wind turbines would be outfitted with braking systems and overspeed protection that "meets or exceeds industry standards", no specific testimony or evidence was presented with regard to whether the wind turbines would be equipped with a redundant braking system to address high winds, aerodynamic speed controls, or mechanical brakes nor was any specific information provided as to what type of braking systems are utilized on wind turbines from different manufacturers or what industry standards necessitate for braking systems.

76. Atlantic Wind provided no testimony or evidence as to what efforts would be taken to avoid the disruption or loss of radio, telephone, or similar signals or how such harm would be mitigated if it occurred.

77. Atlantic Wind submitted no evidence as to how it would comply with the lighting requirements of the Federal Aviation Administration.

78. Atlantic Wind was unable to present testimony or evidence as to which wind turbines would require lighting or whether there would be any exterior lighting visible from beyond the property.

79. According to Mr. Poff, in the event of a wind turbine tower fire, the proposed response is that the local EMS secure the area and stand back.

80. When there is no one on site, the wind turbine project is to be monitored by Iberdrola's national control center in Portland, Oregon which monitors fifty-nine (59) separate sites.

81. Wind turbines are susceptible to ice accumulation.

82. Mr. Poff testified that, in his experience, melting ice chunks thrown from wind turbines can travel approximately one hundred thirty percent (130%) of the total height of the wind turbine.

83. Section 402.A.54(p) of the Zoning Ordinance provides that "The audible sound from the wind turbine(s) shall not exceed forty-five (45) A-weighted decibels, as measured at the exterior of an occupied dwelling on another lot unless a written waiver is provided by the owner of such building."

84. Mr. Bastasch prepared a technical memorandum/acoustical analysis entitled "Penn Forest Wind Project Sound Modeling" to demonstrate that the proposed wind turbine project would comply with the sound requirements of the Zoning Ordinance.

85. Mr. Bastasch's memorandum states that "The predicted results are subject to both negative and positive variance, the level of which depends on a number of factors, including timescale, metric, and methods of evaluation. As shown in Figure 1, the expected long-term average project sound level is not anticipated to exceed 45 dBA at any identified occupied dwelling. As the overall sound level is the sum of both Project and non-Project sounds, the assessment of Project-only sounds during periods of substantial non-Project sounds may require statistical or engineering methods to minimize the undue influence of non-Project sounds."

86. Based upon the testimony presented, there are two (2) standards that are accepted by the industry to measure noise from wind turbines: (i) the LEQ method which measures the average noise over an unspecified period of time; and (ii) the LMAX method which measures instantaneous maximum sound during any given time period.

87. Mr. Bastasch used the wind industry standard, called the ISO 9613-2, to model the sound level generated by the proposed wind turbines.

88. The stated accuracy for the ISO 9613-2 model is vertically between zero (0) and thirty (30) meters and horizontally one-thousand (1000) meters, or approximately three-thousand two-hundred eighty-one (3,281) feet.



89. Beyond those distances, the ISO 9613-2 model is only reasonably accurate.

90. As applied to wind turbines, the ISO 9613-2 model is only valid over a short time period between ten (10) seconds and one (1) hour and is not used to model long-term sound level over weeks or months.

91. The variance in the ISO 9613-2 standard ranges from three (3) to five (5) decibels.

92. Mr. Bastasch testified that the anticipated average sound level is not expected to exceed forty-five (45) A-weighted decibels under the LEQ metric at any identified occupied dwelling.

93. The LEQ standard measurement can vary from three (3) to eleven (11) decibels at any given time.

94. The measurement of decibels is logarithmic in nature and not linear.

95. Mr. Bastasch based his opinions on a Gamesa model wind turbine.

96. Atlantic Wind and Mr. Bastasch acknowledged that the specifications of the wind turbines actually used by Atlantic Wind could be "materially different".

97. Mr. Kissinger testified that the plan submitted by Atlantic Wind does not depict the height of the proposed meteorological towers.

98. Mr. Kissinger testified that the submitted plan does not depict the setbacks from property lines of the proposed meteorological towers.

99. Mr. Kissinger testified that the submitted plan does not depict or describe proposed lighting pursuant to Section 401.A.54.i of the Zoning Ordinance.

100. Mr. Kissinger testified that black lines on the site plan show the areas of woods proposed to be cleared or preserved.

101. Mr. Kissinger testified that the black lines referred to on the site plan depict the limited disturbance area.

102. The site plan attached to Atlantic Wind's application offers little detail concerning the wooded areas to be cleared or preserved.

103. Mr. Kissinger testified that there would be two hundred ninety-two (292) acres disturbed pursuant to the proposed plan.

104. The Bethlehem Authority objected to the construction of the PennEast Pipeline Project in the Wild Creek watershed because the project would have required the deforestation of forty (40) acres.

**Objectors' Presentation Before the Zoning Hearing Board**

105. During the course of the zoning hearings, Appellants Phillip Malitsch and Christopher Mangold were made parties over Atlantic Wind's objections as to standing.

106. Phillip Malitsch testified in opposition to the application on June 23, 2016.

107. Mr. Malitsch lives at 80 Ridge Circle, Lehighton, Pennsylvania, which abuts the property subject to the zoning application and is approximately three thousand seven hundred (3,700) feet from the closest proposed wind turbine.

108. Mr. Malitsch testified that pursuant to Mr. Bastasch's statements he will be able to hear the proposed wind turbines.

109. Mr. Malitsch will be able to see the wind turbines from his property.

110. Mr. Malitsch testified that he believes the proposed wind turbine project will have a direct impact upon him as a homeowner.

111. Mr. Malitsch is employed by Hanover Engineering as a licensed civil engineer.

112. Mr. Malitsch serves as municipal engineer for Lehigh Township, Pennsylvania.

113. Without objection, Mr. Malitsch was recognized and testified as a professional civil engineer.

114. Mr. Malitsch testified that based upon his review of the lease agreement between Bethlehem Authority and Atlantic Wind, the subject property already has a principal use for the production of potable water.

115. Alvin Christopher Mangold testified in opposition to the application on August 25, 2016.

116. Mr. Mangold has lived at 96 Lippo Way, Albrightsville, Pennsylvania for the last twenty (20) years.

117. Mr. Mangold's property abuts the proposed project and is approximately two thousand three hundred (2,300) feet from the nearest proposed wind turbine.

118. Mr. Mangold is concerned about the noise the wind turbines will generate, flickering and ice throws.

119. Mr. Mangold is concerned about potential health effects, including sleep deprivation, which he may experience if the wind turbines are constructed as proposed.

120. Mr. Mangold is concerned about possible fire hazards since dry spells occur within the area and wind turbine fires have been reported.

121. Dr. Pamela Crownson Dodds testified on behalf of the Objectors on July 14, 2016 as an expert in the field of hydro geology.

122. Dr. Dodds has a Ph.D. in geology from the College of William and Mary Virginia Institute of Marine Science.

123. Hydrogeology is the interrelationship between surface water and groundwater.

124. Dr. Dodds prepared a hydrogeological assessment of the impacts of the proposed wind turbine project to the water resources of the Bethlehem Authority.

125. In preparing her hydrogeological assessment, Dr. Dodds reviewed Atlantic Wind's site map, the geologic map of Pennsylvania, the Carbon County soil survey, the National Resources Conservation Service's photos website pertaining to the project site, the Carbon County Comprehensive and Greenway Plan, the Carbon County natural areas inventory, the Penn Forest Township Zoning Ordinance, the Penn Forest Township Subdivision and Land Development Ordinance and Pennsylvania law pertaining to Wild Creek.

126. Dr. Dodds also conducted on-site inspections of the project area.

127. Atlantic Wind neither prepared nor provided any hydro geological studies of the area where the proposed wind turbines are to be constructed.

128. Dr. Dodds testified that the site area is considered a very significant natural feature in Pennsylvania for a variety of reasons, including, from a hydrogeological viewpoint, that it has expansive areas of cinnamon ferns and other plants that require hydric soils.

129. Based upon Dr. Dodds' review, approximately twenty percent (20%) of the soils in the area where the access roads and wind turbines are planned are hydric.

130. Hydric soils are capable of supporting wetlands and typically occur in areas with seeps and springs.

131. Based upon a reasonable degree of hydrogeological certainty, the proposed wind turbine project will result in a decrease in ground water recharge.

132. Dr. Dodds testified that when tree lines are deforested, recharge to ground water does not occur and that the velocity of water from storm water drainage is increased, resulting in an increase in the amount of discharge that goes into rivers and creeks, and ultimately a degradation to the stream quality.

133. The construction of the wind turbine project will jeopardize the exceptional value classification of the Wild Creek due to increased discharge causing downstream and stream bed erosion, as well as the construction of an access road across the upper portion of the Wild Creek, which can cause degradation to the creek as a continuum and damage to the headwater areas where organisms break down organic components for downstream organisms to live.

134. The Wild Creek, a portion of which traverses the proposed site plan, is considered by Pennsylvania Code Title 25, Chapter 93 as being of exceptional value.

135. The Wild Creek is considered a first order stream, because it forms at the top of the highest elevation within the watershed.

136. First order streams are very important because they have actual headwaters, which is where organic materials are broken down by the aquatic species that then allow those materials to be used by more species downstream.

137. Using a terrain navigator pro topographical map, Dr. Dodds testified that pursuant to Atlantic Wind's proposed site plan, approximately sixteen (16) miles of access roadways will be constructed.

138. The Carbon County Comprehensive and Greenway Plan identify the proposed project area as a top priority natural feature.

139. The proposed project area is considered a top priority natural feature because of the exceptional value of water standing from the Wild Creek.

140. Based upon a reasonable degree of hydrogeological certainty, Dr. Dodds opined that the proposed project will conflict with the conservation of the natural resources that are defined as wetlands, mountainsides, high steeply sloped areas, seeps and springs and aquatic habitats along creeks preserving groundwater recharge.



141. Dr. Dodds opined that the proposed site is not suitable for wind turbines because the property's natural features could not be preserved.

142. Tammy McKenzie offered testimony on behalf of the Objectors on June 14, 2016.

143. Mrs. McKenzie lives in Somerset County, Pennsylvania near the Twin Ridges wind turbine project.

144. The Twin Ridges wind turbine project became operational on December 24, 2012.

145. The wind turbines located at the Twin Ridges project are five hundred twenty-five (525) feet in height.

146. Mrs. McKenzie's home is located approximately one thousand six hundred forty (1,640) feet from the nearest wind turbine at Twin Ridges.

147. Mrs. McKenzie testified that she has experienced flashing light, which she described as a strobe light, in her home since the construction of the wind turbines.

148. Mrs. McKenzie described the flickering light she experienced affecting her within inside her home and occurs from approximately February to May and then from August to November.

149. Mrs. McKenzie testified that she can hear noise inside her home emanating from the wind turbines.

150. Mrs. McKenzie described the noise inside her home as "thump[s]" and "thrust[s]".

151. Mrs. McKenzie and her husband's sleep has been greatly affected as a result of the noise from the wind turbines emanating inside her home.

152. During the winter months, Mrs. McKenzie testified that the noise generated from the wind turbines increases greatly when ice accumulates on the blades, which she described as sounding like an "airport or truck coming through our house".

153. Since the construction of the wind turbines, Mrs. McKenzie experiences frequent headaches as a result of fatigue or pressure in her ears.

154. Following testing at Mrs. McKenzie's home, an acoustical engineer determined that there were high levels of infrasound within the home which could have adverse effects on a person.

155. Don Paul Shearer is a certified real estate appraiser in Pennsylvania.

156. Mr. Shearer is a member of both the Society of Real Estate Appraisers and the Appraisal Institute.

157. Mr. Shearer testified on July 21, 2016 on behalf of the Objectors as an expert in real estate and real estate appraisals.

158. In order to review and analyze the effect of the proposed wind turbine project on real estate surrounding the proposed project area, Mr. Shearer reviewed the zoning

application, site maps, and inspected three neighborhoods surrounding the area.

159. There are one hundred ninety-six (196) homes within one-half mile of the proposed wind turbine project.

160. There are one thousand four hundred seventy-three (1,473) homes within one mile of the proposed wind turbine project.

161. There are two thousand nine hundred fifty-four (2,954) homes within one and one-half miles of the proposed wind turbine project.

162. There are four thousand eight hundred thirty (4,830) homes within two miles of the proposed wind turbine project.

163. In determining how property values may be diminished as a result of the proposed construction, Mr. Shearer testified that there are several factors he examines: 1) increased noise; 2) proposed or perceived health hazards; 3) loss of privacy; 4) environmental impact; and 5) effects on views.

164. Mr. Shearer testified that, in his opinion, he did not feel there would be much impact upon the values of properties located beyond two miles from the proposed wind turbine project.

165. Mr. Shearer testified that homes located within two miles of the proposed wind turbine project could experience a minimum diminution of value of twenty percent (20%) up to a maximum of forty percent (40%).

166. Richard R. James of E-Coustic Solutions, LLC, testified on behalf of the Objectors on July 21, 2016 as an expert in the measurement of noise and the impact of noise on people and communities.

167. Mr. James is an acoustician and noise control engineer certified by the Institute of Noise Control Engineering (INCE).

168. Mr. Jones has served as an adjunct instructor in the department of speech and communication services at Michigan State University and is an adjunct professor at Central Michigan University.

169. Mr. James has published peer-reviewed articles concerning wind turbines and their acoustical effect.

170. Mr. James reviewed Section 402.A.54.p. of the Zoning Ordinance which provides that the audible sound from the wind turbine(s) shall not exceed 45 A weighted decibels (dBA).

171. Mr. James testified that the opinion of Mr. Bastasch, Atlantic Wind's acoustical engineer, that the long-term average project sound level is not expected to exceed 45 dBA at any dwelling, does not demonstrate compliance with the zoning ordinance which sets forth a "not to exceed" standard.

172. Mr. James testified that Mr. Bastasch's opinion does not take into consideration measurement tolerances and model tolerances.

173. Mr. James testified that when measurement and model tolerances are combined, a margin of safety/margin of error of at least four (4) to five (5) decibels should be added to Mr. Bastasch's forty-five (45) dBA long-term average.

174. Mr. Bastasch's report contains no reference to a margin of error.

175. At night time, wind turbines can produce what is called whooshing and thumping, which studies have shown can have peaks as high as eighteen (18) dBA higher than average.

176. Mr. James testified that had Mr. Bastasch applied a safety margin of five (5) dBA, the lines on the contour map would move north and affect a greater number of homes.

177. For every six (6) dBAs, there is a doubling of the distance from the noise sources.

178. Mr. James testified that the proposed project could never be in compliance with the "not to exceed 45 dBA" requirement.

179. Mr. James testified that based upon research by the World Health Organization, by Canada Health and other organizations there is a high probability that particularly the northern ridge of the proposed wind turbines will create risks to the public health and welfare.

180. Low frequency sound emissions travel further and do not diminish as rapidly with distance as do high frequency sound emissions.

181. Wind turbines dominantly produce low frequency sound emissions.

182. Low frequency noise can disturb rest and sleep even at low sound levels.

183. The World Health Organization reports that sound levels in a home should not exceed thirty (30) dBA because, at that point, sleep interference may occur.

184. Wind Turbine Syndrome is a term used to identify symptoms associated with wind turbines such as sleep disturbance, headache, dizziness, tinnitus, and ear pressure.

185. Symptoms associated with Wind Turbine Syndrome increase dramatically when sound levels are between forty (40) to forty-six (46) dBA.

186. Dr. Wayne C. Spiggle testified on behalf of the Objectors on August 25, 2016 as an expert on the effects of commercial wind turbines on persons.

187. Dr. Spiggle earned his undergraduate degree from Berea College and his medical degree from the Medical College of Virginia in Richmond.

188. Within a reasonable degree of medical certainty, Dr. Spiggle opined that it is inevitable that some persons residing within three thousand five hundred (3,500) feet from the proposed wind turbine project will experience adverse health effects.

189. Dr. Spiggle referenced various reports and studies that found people living near wind turbines experience adverse health effects.

190. Dr. Spiggle personally interviewed over thirty (30) persons that live within one thousand six hundred (1,600) to two thousand (2,000) feet near wind turbines.

191. Dr. Spiggle testified that a lack of sleep was the most common complaint amongst those he interviewed.

**Atlantic Wind's Rebuttal Testimony Before the Referee**

192. On February 28, 2018, this Court appointed William G. Schwab, Esquire, to serve as Referee to receive additional evidence in this matter pursuant to section 1005-A of the Pennsylvania Municipalities Planning Code, 53 P.S. §11005-A.

193. Evidentiary hearings were held before Referee Schwab at the Carbon County Courthouse on June 15, 2018 and July 10, 2018.

194. Dr. Robert J. McCunney, a staff physician in the center for chest diseases at the Brigham and Women's Hospital in Boston, Massachusetts, testified on behalf of Atlantic Wind on June 15, 2018.

195. Dr. McCunney earned his bachelor's degree from Drexel University and his medical degree from Thomas Jefferson University in Philadelphia.

196. Dr. McCunney was qualified, recognized and testified as an internist board certified in occupational and environmental



medicine with a particular expertise in the potential health implications of noise exposure.

197. Dr. McCunney testified that he does not anticipate any adverse health effects from the operation of the proposed wind turbines.

198. Dr. McCunney testified that infrasound, or low frequency noise, produced by wind turbines does not adversely affect human health.

199. In referencing the Health Canada Study, Dr. McCunney stated that the findings revealed no adverse impact on sleep or the quality of life among people living in the vicinity of wind turbines.

200. Dr. McCunney's 2009 white paper titled "Wind Turbine Sound and Health Effects" was funded by the American Wind Energy Association (AWEA) and the Canadian Wind Energy Association (CWEA) both of which organizations are registered lobby groups for the wind industry.

201. The technical advisor to the authors of the aforesaid 2009 white paper was Mark Bastasch who previously testified before the Penn Forest Township Zoning Hearing Board on behalf of Atlantic Wind in this matter.

202. Mr. Bastasch assisted the AWEA and the CWEA in selecting the authors of the 2009 white paper.

203. Dr. McCunney has previously testified ten (10) or twelve (12) times concerning the topic of industrial wind turbines on behalf of the proponent of the wind energy facility.

204. Dr. McCunney admitted that there are people who have complained of adverse health effects as a result of living near wind turbines.

205. Dr. McCunney has not interviewed anyone who lives in the area surrounding the proposed Penn Forest Township wind turbine project.

206. Dr. McCunney was a speaker at the webinar forum "Wind Turbine Noise and Health: Fact vs. Fiction Simulcast" hosted by Cape and Islands Renewable Energy Collaborative on July 15, 2010.

207. While participating in the aforesaid webinar forum, Dr. McCunney recognized that sleep disruption or deprivation is one of the major complaints of people living near wind turbines.

208. While participating in the aforesaid webinar forum, Dr. McCunney stated "I have no doubt whatsoever that there are people who are annoyed by various levels of noise associated with wind turbines. That's for sure. The study shows that. Makes sense to me that humans cannot live close to wind forms; I guess the operative question is what is close?"

209. Robert O'Neal of Epsilon Associates, Inc. testified on July 10, 2018 on behalf of Atlantic Wind.

210. Epsilon Associates, Inc. is an environmental engineering consulting firm which is a principal consultant for the wind energy industry.

211. Mr. O'Neal has been doing noise impact evaluations for over thirty (30) years and is board certified by the Institute of Noise Control Engineers (INCE).

212. Mr. O'Neal was qualified, recognized and testified as an expert in the area of sound impact modeling and sound assessment.

213. Mr. O'Neal testified that IEC 61400-11 is an international standard used as a measurement method of sound for a wind turbine and the data is collected using IEC61400-11 in the LEQ metric.

214. Mr. O'Neal confirmed that the LEQ method of sound modeling is best described as an integrated average over a period of time.

215. Mr. O'Neal confirmed that the LMAX method of sound modeling represents the instantaneous maximum sound level during a given period of time.

216. Mr. O'Neal testified that the ISO 9613-2 sound propagation standard is an international standard recognized by the acoustics community to take a source of sound and predict or calculate what that source of sound would be at some distance away in the community.

217. Mr. O'Neal reviewed Mark Bastasch's technical memorandum concerning the Penn Forest Township Wind Turbine Project and testified that the analysis contained in the memorandum was prepared consistent with the standards of the industry.

218. Based upon his experience and review of the Bastasch sound modeling, Mr. O'Neal agrees with Mr. Bastasch that the expected project sound levels are not anticipated to exceed forty-five (45) A-weighted decibels at the exterior of any identified occupied dwelling on another lot.

219. Mr. Bastasch used the ISO 9613-2 standard for modeling the sound level generated by the proposed wind turbines.

220. The stated accuracy for the ISO 9613-2 is between zero (0) and thirty (30) meters vertically and one thousand (1000) meters horizontally.

221. Beyond those distances, the ISO 9613-2 standard is only "reasonably accurate".

222. As applied to wind turbines, the ISO 9613-2 standard is only valid if a short-term (e.g. less than one (1) hour and perhaps as little as ten (10) seconds) is used.

223. The LEQ long-term average could be weeks or months.

224. The variance using the ISO 9613-2 standard is anywhere from three (3) to five (5) decibels.

225. The testimony of Mr. Bastasch and Mr. O'Neal that the audible sound of the wind turbines will not exceed forty-five (45)

A-weighted decibels at the exterior of any identified occupied dwelling on another lot in compliance with Zoning Ordinance section 402.A.54.p. is not credible.

226. Mark Bahnick, a licensed professional engineer in the states of New Jersey and Pennsylvania and branch manager with Van Cleef Engineering Associates, testified on July 10, 2018 on behalf of Atlantic Wind.

227. Mr. Bahnick was qualified, recognized and testified as an expert in the field of professional and civil engineering with a specialty in public water supply engineering.

228. Van Cleef Engineering Associates was hired by the Bethlehem Authority to evaluate Atlantic Wind's application and to provide feedback relative to the potential impact on the Authority's facilities.

229. Mr. Bahnick has never designed nor been involved in any wind turbine construction projects.

230. According to Mr. Bahnick, none of Bethlehem Authority's undeveloped Penn Forest Township property is being utilized for the production of potable water.

231. Mr. Bahnick testified that the proposed project would have a de minimis impact on the Penn Forest Reservoir.

232. Mr. Bahnick testified that the proposed wind turbine project would not degrade the water resources of the Bethlehem

Authority or the quality of water going into the Penn Forest Reservoir.

233. Mr. Bahnick testified that the proposed wind turbine project would neither jeopardize the exceptional value watershed nor degrade the headwaters and streams feeding the reservoirs.

234. Mr. Bahnick testified that Bethlehem Authority maintains the Penn Forest Township property as an undeveloped state to prevent development occurring on that property because such development could have an adverse impact on the quality of water that drains into the Penn Forest Reservoir.

235. Bethlehem Authority maintains the subject property as pristine to further a government purpose which is to protect the watershed.

236. Bethlehem Authority agreed to allow the proposed wind turbine project because its evaluation of the potential impact from the project on the Penn Forest Reservoir was thought to be acceptable and because the Authority had the potential to earn revenue from the lease agreement with Atlantic Wind if the wind turbines were developed.

237. The testimony of Mr. Bahnick that none of Bethlehem Authority's undeveloped Penn Forest Township property is being utilized for the production of potable water is not credible.

238. Michael Samuels, principal and owner of Clarion Samuels Associates, testified on July 10, 2018 on behalf of Atlantic Wind.

239. Clarion Samuels Associates is a real estate appraisal and consulting firm with offices in Philadelphia, Denver, Cincinnati and Chapel Hill, North Carolina.

240. Mr. Samuels was qualified, recognized and testified as an expert in the field of real estate evaluation and appraisal.

241. Mr. Samuels was hired by Atlantic Wind to analyze what effect the proposed wind turbine project would have on real estate values of the surrounding communities.

242. Mr. Samuels testified that the proposed wind turbine project would have no adverse impact on real estate values of the homes in the surrounding communities.

243. Mr. Samuels has not prepared any real estate appraisals for property in Carbon County.

244. Mr. Samuels has not transacted any real estate sales in Carbon County.

245. Mr. Samuels has never acquired any real property near a wind turbine.

246. Mr. Samuels has not prepared any impact studies with regard to wind turbines other than the proposed Penn Forest Township wind turbine project.

247. Mr. Samuels did not interview anyone who lives in Carbon County for his impact study.

248. Mr. Samuels has never performed any analysis as to the effect, if any, of wind turbines on people's buying habits relative to real estate.

249. Mr. Samuels testified that any home located more than one-half mile from a wind turbine would not be negatively impacted as to property value.

**The Limit of One Principal Use under § 801.B.2 of the  
Zoning Ordinance**

250. Section 801.B.2 of the Zoning Ordinance limits lots within a residential district to one (1) principal use.

251. A wind turbine, other than those allowed as an accessory use under section 403 of the Zoning Ordinance, is defined as a principal use under section 301.B.1.g of the Zoning Ordinance.

252. The proposed wind turbines would constitute a principal use on the property owned by Bethlehem Authority.

253. The Bethlehem Authority property is located in R-1 and R-2 residential zoning districts and only one (1) principal use is permitted thereon.

254. Bethlehem Authority currently uses the property as a Government Facility, Other than Township - Owned Use, which is a principal use under the Zoning Ordinance.

255. In the February 25, 2015, letter from Bethlehem Authority to the Federal Energy Regulatory Commission, the Chairman of Bethlehem Authority stated that Bethlehem's water



comes entirely from surface sources and two (2) reservoirs in the Pocono Mountains. The Authority controls and has a duty to protect two (2) major components of the water supply system: (1) the reservoirs holding the water including the headwaters and streams feeding those reservoirs; and (2) the pipeline conveyance system that carries the water from the reservoirs to more than fifteen-thousand (15,000) customers.

256. The purpose of the Conservation Easement is to ensure that the protected property, including the wind turbine project area, will be retained predominantly in its natural, scenic, forested, and open-space condition, free of forest fragmentation or additional development.

257. Bethlehem Authority's Penn Forest Township property was acquired so as to prevent other exploitative or destructive uses that may jeopardize the mission of the Bethlehem Authority in its production of potable water.

258. While Atlantic Wind's application proposes that the operations and safety building be located in the R-2 zoning district, representatives of Atlantic Wind indicated that they are willing to move the building to the R-1 zoning district.

259. A wind turbine is not a permitted use in an R-2 zoning district.

260. The substation is proposed to be located next to the existing transmission lines and will connect to the existing

electrical facility. As such, it is accessory to the existing utility line use.

261. The Zoning Officer determined that the operations and safety building is permitted by special exception pursuant to section 105.B of the Zoning Ordinance.

262. Atlantic Wind agreed to remove the operations and safety building from the plan if this Court finds that it is not permitted.

263. Atlantic Wind is agreeable to moving the substation to the R-1 district in compliance with all area and bulk requirements if it is not permitted in the R-2 district.

Upon consideration of the foregoing findings of fact, our review of the briefs of counsel and our application of the relevant legal authority, we enter the following

## **II. CONCLUSIONS OF LAW**

1. The zoning hearings held in this matter before the Penn Forest Township Zoning Hearing Board on May 12, 2016, June 26, 2016, July 14, 2016, July 21, 2016, August 25, 2016 and September 20, 2016 were duly advertised and posted pursuant to the Pennsylvania Municipalities Planning Code, 53 P.S. §10101, et seq., and the Penn Forest Township Zoning Ordinance.

2. Section 908(3) of the Pennsylvania Municipalities Planning Code, 53 P.S. §10908(3), provides that the following persons shall be afforded standing before the zoning hearing board:

Any person affected by the application who has made a timely appearance of record before the board.

3. Any objector who is located in close proximity to the land involved in a zoning application normally has standing to contest the application. Active Amusement Co. v. Zoning Board of Adjustment, 479 A.2d 697 (Pa.Cmwlth. 1984).

4. The objector, Philip C. Malitsch, has standing in this matter as his property abuts the property on which the proposed wind turbines would be constructed, he will be able to hear the wind turbines from his property, he will be able to see the wind turbines from his property and he believes that the proposed project will directly impact him as a homeowner.

5. Although the closest proposed wind turbine is approximately three thousand seven hundred (3,700) feet from Mr. Malitsch's property, Craig Poff testified that the proposed location of the wind turbines was subject to change based upon various factors, which could result in the wind turbines being constructed no less than one thousand five hundred seventy-five (1,575) feet from Mr. Malitsch's property.

6. The objector, Alvin Christopher Mangold, has standing in this matter as his property abuts the subject property, and is approximately two thousand three hundred (2,300) feet from the nearest proposed wind turbine.

7. Mr. Mangold may be affected by continual noise issues, flickering of light, ice throws, possible fires and health problems.

8. The timely appeal of a deemed approval is an appeal of the merits of a special exception in the same manner as an appeal of a timely board decision approving a special exception application. Ulsh v. Zoning Hearing Board of Lower Paxton Twp., 22 A.3d 244 (Pa.Cmwlth. 2011).

9. When considering a timely appeal of a deemed approval, the trial court is required to review the merits of the application and issue its own findings of fact and conclusions of law. Nextel Partners, Inc. v. Clark Summit Borough/Clark Summit Borough Council, 958 A.2d 587 (Pa.Cmwlth. 2008).

10. As the finder of fact and the sole judge of credibility, the trial court is free to reject even uncontradicted testimony it finds lacking in credibility. Costa v. City of Allentown, 153 A.3d 1159, 1168 (Pa.Cmwlth. 2017).

11. A special exception is neither special nor an exception; it is a use expressly contemplated that evidences a legislative decision that the particular type of use is consistent with the zoning plan and presumptively consistent with the health, safety and welfare of the community. Greth Development Group, Inc. v. Zoning Hearing Bd. of Lower Heidelberg Twp., 918 A.2d 181, 188 (Pa.Cmwlth. 2007).

12. An applicant for a special exception has both the duty of presenting evidence and the burden of persuading the zoning hearing board that its proposed use satisfies the zoning ordinance's objective requirements for the grant of a special exception. Allegheny Tower Assocs., LLC v. City of Scranton Zoning Hearing Bd., 152 A.3d 1118, 1123 (Pa.Cmwlth. 2017).

13. Once the applicant meets its burden of proof and persuasion, a presumption arises that it is consistent with the health, safety and general welfare of the community, and the burden shifts to the objectors to present evidence and persuade the board that there exists a high probability that the use will generate adverse impacts not normally generated by this type of use and that these impacts will pose a substantial threat to the health and safety of the community. *Id.*

14. However, where the applicant for a special exception cannot meet the requirements of the zoning ordinance relative to the use intended, and does not challenge the validity of the ordinance or seek to have the property re-zoned, the burden does not shift and the application must be denied. See Ralph & Joanne's, Inc. v. Neshannock Twp. Zoning Hearing Bd., 550 A.2d 586, 589 (Pa.Cmwlth. 1988).

15. To be entitled to receive special exceptions, it is incumbent upon Atlantic Wind to come forward with evidence detailing how it is going to be in compliance with the requirements

necessary to obtain the special exceptions to construct and operate thirty-seven (37) wind turbines in an R-1 zoning district and to permit the construction of an operations and safety building.

16. Evidence is not a "promise" that the applicant will comply because that is a legal conclusion the Board makes once it hears what the applicant intends to do and then determines whether it matches the requirements set forth in the ordinance. Edgemont Twp. v. Springton Lake Montessori School, Inc., et al., 622 A.2d 418, 419 (Pa.Cmwlth. 1993).

17. A self-serving declaration of a future intent to comply is not sufficient to establish compliance with the criteria contained in the ordinance. Appeal of Baird, 537 A.2d 976, 978 (Pa.Cmwlth. 1988).

18. "The applicant shall establish by credible evidence that the application complies with all applicable requirements of this [Zoning] Ordinance" (Penn Forest Township Zoning Ordinance [hereinafter "Zoning Ordinance"], Section 116.C.1).

19. The principal use of wind turbine(s) is permitted in the R-1 Zoning District as a special exception (Zoning Ordinance, Section 306.B.1).

20. The specific requirements for wind turbines as a special exception are enumerated in section 402.A.54 of the Zoning Ordinance (Zoning Ordinance, section 402.A.54).

21. For wind turbines to be permitted as a special exception use, the applicant must comply with all of the specific requirements enumerated in section 402.A.54 of the Zoning Ordinance (Zoning Ordinance, section 402.A).

22. Section 402.A.54.p of the Zoning Ordinance provides that: "The audible sound from the wind turbines(s) shall not exceed forty-five (45) A-weighted decibels, as measured at the exterior of an occupied dwelling on another lot, unless a written waiver is provided by the owner of such building."

23. While it is true that zoning ordinances are to be liberally construed to allow the broadest possible use of land, it is also true that zoning ordinances are to be construed in accordance with the plain and ordinary meaning of their words. Zappala Grp., Inc. v. Zoning Hearing Board of Town of McCandless, 810 A.2d 708, 710 (Pa.Cmwlth. 2002).

24. The LMAX standard of sound measurement measures the instantaneous maximum sound at any given time and matches the plain-language meaning of the Zoning Ordinance's requirement that sound from the wind turbines shall not exceed forty-five (45) A-weighted decibels.

25. The LEQ standard of sound measurement measures the average sound level over time, has a variance of three (3) to eleven (11) decibels, and may include sounds greater than the average value.

26. The testimony of Mark Bastasch that the anticipated long-term average project sound level is not expected to exceed forty-five (45) A-weighted decibels under the LEQ method at the exterior of any occupied dwelling on another lot is not responsive to the Zoning Ordinance's requirement that the sound shall not exceed a maximum of forty-five (45) A-weighted decibels.

27. Section 402.A.54.p. of the Zoning Ordinance should be read to require any wind turbine to comply with the LMAX standard as it is a "not to exceed" standard consistent with the plain meaning of the Zoning Ordinance's sound requirement as opposed to an "average" sound level standard such as the LEQ standard.

28. Atlantic Wind has failed to produce sufficient evidence and failed to sustain its burden to show that the proposed Wind Turbine project will comply with section 402.A.54.p of the Zoning Ordinance.

29. As Atlantic Wind has failed to meet its burden of proof and persuasion regarding the specific requirements of the Zoning Ordinance for wind turbines, no presumption has arisen that Atlantic Wind's proposed use is consistent with the health, safety and general welfare of the community.

30. Although we find that no burden has shifted to the Objectors to present evidence and persuade this Court that the proposed use will generate adverse impacts not normally generated by such use and that these impacts would pose a substantial threat



to the health and safety of the community, the Objectors presented credible expert testimony and scientific evidence that the proposed use will have a detrimental effect on the health, safety and welfare of the community.

31. Section 801.B.2 of the Zoning Ordinance provides that "A lot within a residential district shall not include more than one (1) principal use and shall not include more than one (1) principal building unless specifically permitted by this Ordinance."

32. The proposed project area is within the R-1 and R-2 zoning districts.

33. Both the R-1 and R-2 zoning districts are residential zoning districts.

34. The Zoning Ordinance permits a "Government Facility" in the Project Area (both in the R-1 and R-2 zoning districts) as a special exception use.

35. The Zoning Ordinance defines a "Government Facility, Other than Township-Owned" as: "A use owned by a government, government agency or government authority for valid public health, public safety, recycling collection or similar governmental purpose, and which is not owned by Penn Forest Township. This term shall not include uses listed separately in the table of uses in Article 3, such as 'publicly owned recreation.' This term shall not include a prison." (Zoning Ordinance, section 202).

36. The Zoning Ordinance defines "use" as: "The purpose, activity, occupation, business or operation for which land or a structure is designed, arranged, intended, occupied or maintained. Uses specifically include but are not limited to the following: activity within a structure, activity outside of a structure, any structure, recreational vehicle storage or parking of commercial vehicles on a lot." (Zoning Ordinance, section 202).

37. Bethlehem Authority's use of the proposed Project Area as a purposefully undeveloped source of public water flowing into the Penn Forest Reservoir to provide the City of Bethlehem with potable water meets the definition of a Government Facility under the Zoning Ordinance as a use owned by a government authority for a valid public health, public safety or similar governmental purpose.

38. The current principal use of the proposed Project Area is for the production of potable water.

39. The proposed wind turbine project would be an additional principal use in the Project Area. (Zoning Ordinance, section 306.B.1).

40. Unless Bethlehem Authority ceases to use the Project Area for the production of potable water, the Wind Turbine Project would constitute a second principal use within a residential district in violation of section 801.B.2 of the Zoning Ordinance.

41. As Atlantic Wind does not meet the requirements of the Zoning Ordinance relative to the proposed use and does not challenge the validity of the Zoning Ordinance nor seek to have the property re-zoned, the application for a special exception to permit wind turbines in an R-1 zoning district must be denied.

42. Having failed to meet its burden of production and persuasion concerning its request for a special exception to permit wind turbines in an R-1 zoning district, Atlantic Wind's second request for a special exception to permit an operations and safety building as a use not specifically provided for (and not prohibited) in any of the zoning districts is rendered moot and denied.

43. Having failed to meet its burden of production and persuasion concerning its request for a special exception to permit wind turbines in an R-1 zoning district, Atlantic Wind's request for an interpretation of the Zoning Ordinance relative to the proposed permanent meteorological towers being permitted as either integral parts of the wind turbine use or as accessory uses or structures which are customary and incidental to the wind turbine use is rendered moot and denied.

44. Having failed to meet its burden of production and persuasion concerning its request for a special exception to permit wind turbines in an R-1 zoning district, Atlantic Wind's request for a special exception to permit the permanent meteorological

towers as a use not specifically provided for (and not prohibited) in any of the zoning districts is rendered moot and denied.

### III. DISCUSSION

As an initial matter, we note that where, as here, a deemed approval occurs because a municipality failed to timely act on a land use application, a zoning hearing board's findings are rendered irrelevant. See Nextel Partners, Inc. v. Clark Summit Borough/Clark Summit Borough Council, 958 A.2d 587 (Pa. Cmwlth. 2008). Moreover, the Pennsylvania Commonwealth Court has held that "a deemed zoning board approval no more cuts off the right to an appeal on the merits than would a timely board decision approving an application." Gryshuk v. Kolb, 685 A.2d 269, 631 (Pa. Cmwlth. 1996), aff'd after remand, 724 A.2d 1010 (Pa. Cmwlth. 1998). Therefore, the timely appeal of a deemed approval is an appeal of the merits of a special exception in the same manner as an appeal of a timely board decision approving a special exception application. See Ulsh v. Zoning Hearing Board of Lower Paxton Twp., 22 A.3d 244 (Pa. Cmwlth. 2011). In such situations, the trial court is required to review the merits of the application and issue its own findings of fact and conclusions of law. See Nextel Partners.

A. ATLANTIC WIND HAS FAILED TO PRESENT SUFFICIENT EVIDENCE AND FAILED TO SUSTAIN ITS BURDEN TO DEMONSTRATE THAT THE PROPOSED

WIND TURBINE PROJECT WOULD COMPLY WITH SECTION 402.A.54.p OF THE PENN FOREST TOWNSHIP ZONING ORDINANCE.

"An applicant for a special exception has both the duty of presenting evidence and the burden of persuading the Zoning Hearing Board that its proposed use satisfies the zoning ordinance's objective requirements for the grant of a special exception". Allegheny Tower Associates, LLC v. City of Scranton Zoning Hearing Board, 152 A.3d 1118 (Pa.Cmwlth. 2017). Section 402.A.54.p. of the Zoning Ordinance provides that "[T]he audible sound from the wind turbine shall not exceed forty-five (45) A-weighted decibels, as measured at the exterior of an occupied dwelling on another lot, unless a written waiver is provided by the owner of the buildings." In order to prove compliance with this requirement of the Zoning Ordinance, Atlantic Wind called Mark Bastasch as a professional acoustical engineer. In modeling the sound level, Mr. Bastasch used the "LEQ method" which averages sound over a period of time. Mr. Bastasch testified that "the expected long-term average project sound level is not anticipated to exceed forty-five (45) DBA." According to his report, "The expected long-term average project sound level is not anticipated to exceed forty-five (45) DBA at any identified occupied dwelling." Therefore, the evidence produced by Atlantic Wind (a long-term average sound level) to show compliance with section 402.A.54.p. of the Zoning Ordinance was not responsive to the express

requirement of that section which mandates a "shall not exceed" standard. On its face, the Zoning Ordinance specifies that a certain noise level shall not be exceeded but does not provide that noise emissions shall be averaged.

Clearly, the LEQ standard is not the appropriate method of sound measurement. The LEQ standard averages sound over a period of time which could be calculated over seconds, weeks, months or years. There is no such time period referenced in the Zoning Ordinance. In his testimony, Mr. Bastasch stated that he used a "long-term average" in calculating the noise level when the Zoning Ordinance specifically requires a "shall not exceed" standard. Moreover, the standard used by Mr. Bastasch for modeling the sound level generated by the wind turbines is the ISO 9613-2. The variance using the ISO 9613-2 is anywhere from three (3) to five (5) decibels. Therefore, applying these tolerances to the evidence presented by Mr. Bastasch, the average audible sound could be anywhere from forty (40) to fifty (50) A-weighted decibels.

We also note that the stated accuracy for the ISO 9613-2 is vertically to a height of thirty (30) meters and horizontally to a distance of one hundred (100) meters. Beyond that height or that distance, the ISO 9613-2 standard is only "reasonably accurate". The proposed wind turbines are five hundred twenty-five (525) feet high.

In its presentation, Atlantic Wind acknowledged that it has not determined the model of wind turbine it intends to use. While all of Mr. Bastasch's opinions were based on the Gamesa model wind turbine, the failure of Atlantic Wind to identify the exact model of wind turbine to be used for the project calls into serious question the accuracy of any sound generation measurement. Further, Atlantic Wind acknowledged that the locations of the wind turbines could be "changed materially" and could be closer to certain residences.

On the basis of the foregoing, we conclude that the evidence presented by Atlantic Wind is insufficient to determine that the audible sound level would not exceed forty-five (45) A-weighted decibels at the exterior of an occupied dwelling on another lot, as required by section 402.A.54.p. of the Penn Forest Township Zoning Ordinance.

B. UNLESS THE BETHLEHEM AUTHORITY CEASES TO USE THE PROJECT AREA FOR THE PRODUCTION OF POTABLE WATER, THE PROPOSED WIND TURBINE PROJECT WOULD CONSTITUTE A SECOND PRINCIPAL USE WITHIN A RESIDENTIAL ZONING DISTRICT IN VIOLATION OF SECTION 801.B.2 OF THE PENN FOREST TOWNSHIP ZONING ORDINANCE.

Section 801.B.2 of the Zoning Ordinance provides that "a lot within a residential district shall not include more than one (1) principal use and shall not include more than one (1) principal building unless specifically permitted by this Ordinance." The

Zoning Ordinance defines "Principal Use" as "A dominant use(s) or main use on a lot, as opposed to an accessory use." Pursuant to section 301.B.1.g of the Zoning Ordinance, the proposed wind turbines would be a principal use in the Project Area. If a "dominant use" or "main use" currently exists in the Project Area, permitting the Wind Turbine Project proposed by Atlantic Wind would constitute a second principal use in the Project Area in violation of section 801.B.2 of the Zoning Ordinance.

The majority of the Project Area is located in the Penn Forest Reservoir watershed which contains eight thousand seven hundred eight-three (8,783) acres, of which seven thousand two hundred twenty-two (7,222) acres are owned by the Bethlehem Authority. The Penn Forest Reservoir watershed is kept in an undeveloped state for the purpose of maintaining the quality of water flowing into the Penn Forest Reservoir which drains into the Wild Creek Reservoir, both of which are sources of water for the City of Bethlehem, the Borough of Fountain Hill, the Borough of Freemansburg, and portions of eight (8) surrounding municipalities in Northampton and Lehigh Counties with a total population of over one hundred fifteen thousand (115,000) persons consuming approximately twelve million (12,000,000) gallons of water per day.

On or about April 14, 2011, Bethlehem Authority entered into a "Term Conservation Easement" (hereinafter "Conservation



Easement") with the Nature Conservancy, a non-profit public charity organized to preserve natural areas for scientific, charitable, educational and aesthetic purposes. The Conservation Easement provides that the Project Area is "currently utilized for the production of potable water" and that it has been kept in an undeveloped state for that purpose. Furthermore, the Conservation Easement addresses the subdivision and transfer of the subject property "to related entities under the control of the [Bethlehem Authority] who will utilize the Protected Property for the production of potable water" and that the Authority reserves the right, without limitation, to maintain, replace and/or construct structures and facilities that are reasonable, customary and necessary for the collection, production and distribution of drinking water."

On or about March 6, 2013, Bethlehem Authority entered into a "Wind License and Wind Energy Lease Agreement" (hereinafter "Lease Agreement") with Atlantic Wind, LLC, pursuant to which Atlantic Wind was authorized to make application to the zoning hearing board for the Wind Turbine Project. The Lease Agreement provides that the "primary mission of [Bethlehem Authority] is to produce potable water" and that one of the "primary uses" of the Project Area is "for the production of potable water." Both the Lease Agreement and the Conservation Easement provide that there are no real estate taxes or other assessments levied against the

Project Area. While certainly not conclusive, we find that the tax-exempt status of the Project Area is an additional factor for the Court's consideration in determining whether or not there is an existing use in the Project Area.

In a letter dated February 25, 2015 from the Bethlehem Authority to the Federal Energy Regulatory Commission, John Tallarico, chairman of the Bethlehem Authority, stated, "The city's water comes entirely from surface sources around two (2) reservoirs in the Pocono Mountains. The two (2) major components of the water supply system which the Authority controls and has a duty to protect are the reservoirs holding the water, including the headwaters and the streams feeding those reservoirs." Chairman Tallarico continued:

Protecting the authority's reservoirs necessarily requires protecting the surface waters feeding those reservoirs. To that end the authority not only owns the reservoirs, it also owns the land containing the headwaters and feeder streams, the authority has placed significant portions of its land in a conservation easement.

Upon careful consideration of the testimony presented, review of the Zoning Ordinance, the Conservation Easement, the Lease Agreement and the Bethlehem Authority correspondence to the Federal Energy Regulatory Commission, we find that the production of potable water is the current "Principal Use" in the Project Area and that the Wind Turbine Project would constitute a second

"Principal Use" within a residential zoning district in violation of section 802.B.2 of the Zoning Ordinance.

#### **IV. CONCLUSION**

As Atlantic Wind has failed to demonstrate that the sound produced by the proposed wind turbines will not exceed forty-five (45) A-weighted decibels and that there will be only one (1) principal use on the proposed project area, Atlantic wind has failed to meet its burden of persuasion that the proposed wind turbine project will comply with all the objective requirements for a special exception to be granted under the Penn Forest Township Zoning Ordinance. Therefore, the deemed approval of Atlantic Wind's application for a special exception must be vacated and we will enter the following

**IN THE COURT OF COMMON PLEAS OF CARBON COUNTY, PENNSYLVANIA  
CIVIL DIVISION**

PHILLIP C. MALITSCH and  
CHRISTOPHER MANGOLD,

Plaintiffs/Appellants

v.

PENN FOREST TOWNSHIP ZONING  
HEARING BOARD,

Defendant/Appellee

and

ATLANTIC WIND, LLC, PENN  
FOREST TOWNSHIP, and  
BETHLEHEM AUTHORITY,

Intervenors

No. 17-1011

FILED  
2020 APR 21 PM 3:58  
CARBON COUNTY  
PROTHONOTARY

Theodore R. Lewis, Esquire  
Bruce K. Anders, Esquire  
Michael S. Greek, Esquire

Debra A. Shulski, Esquire  
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Counsel for Philip C. Malitsch  
Counsel for Christopher Mangold  
Counsel for Penn Forest Township  
Zoning Hearing Board

Co-Counsel for Atlantic Wind, LLC  
Co-Counsel for Atlantic Wind, LLC  
Counsel for Penn Forest Township  
Counsel for Bethlehem Authority

**ORDER OF COURT**

**AND NOW**, to wit, this 21<sup>st</sup> day of April, 2020, upon consideration of Appellants' land use appeal and the oral argument of counsel thereon, our review of the record created before the Penn Forest Township Zoning Hearing Board and the Referee appointed by this Court, the briefs of the parties, and the report of the Referee, and in accordance with our Memorandum Opinion bearing even date herewith, it is hereby **ORDERED and DECREED** as follows:

FS-18-19

1. The land use appeal of Phillip C. Malitsch and Christopher Mangold is **GRANTED**;

2. The deemed approval of the application of Atlantic Wind, LLC, for a special exception under the Penn Forest Township Zoning Ordinance is **VACATED**; and

3. The application of Atlantic Wind, LLC for special exceptions under the Penn Forest Township Zoning Ordinance is **DENIED**.

BY THE COURT:

A handwritten signature in black ink, appearing to read "S.R. Serfass", written over a horizontal line.

Steven R. Serfass, J.