

Proposed Wind Project on Dunning/Evitt's Mountain: Environmental Concerns

Introduction:

While renewable energy projects are an important step away from fossil fuel consumption and have great potential to mitigate climate change impacts by reducing carbon, they must be sited properly. In Pennsylvania, the best wind resources are at higher elevations, so wind turbines are sited on forested mountains instead of degraded lands. Joseph Kiesecker, Lead Scientist for The Nature Conservancy, points out in his book, "Energy Sprawl Solutions," that it is possible to balance energy needs and conservation, but we need careful planning or we could trade one crisis for another: "land-use change and conflict." His research shows that wind projects should be built on degraded lands, instead of forested mountains, in order to protect critical wildlife and their habitats.

Such is the case for Dunning/Evitt's Mountain, a forested ridge in Bedford County that contains core forest habitat for several species of conservation need. CPV Kettle Wind, LLC is in the early permitting stages of an industrial wind turbine project proposed for the top of Dunning/Evitt's Mountain. The turbines would be constructed just south of Rt. 869 and could extend for over 5 miles along the top of the mountain in East St. Clair, South Woodbury, and Bedford Townships. Dunning/Evitt's Mountain is quite narrow in areas, so a cut and fill construction project would most likely involve:

- a. removal of trees on the top of the mountain
- b. blasting of bedrock to create rubble
- c. bulldozing and compacting the rubble to create a shelf wide enough to support wind turbine pads and roads
- d. deep sedimentation ponds below each wind turbine to control stormwater runoff – these ponds would be filled with permeable soil obtained off-site to slow runoff
- e. trenches between turbines for electric cables
- f. a swath of trees removed down the mountain so an above-ground transmission line can be run from on top of the mountain to the substation along Black Bear Lane

Potential Impacts:

- A. Degradation of watersheds
- B. Negative impacts to wildlife: Birds, Allegheny Woodrats, Bats, Rattlesnakes
- C. Forest fragmentation and associated habitat loss

A. Watershed Impacts:

Dunning/Evitt's Mountain is the source of water for several streams that rely on the slow percolation of rainwater onto the forested slopes. On the eastern side are high quality streams that support cold water fisheries such as Beaver Creek, which originates in the "kettle," formed by the curve of Dunning Mountain. Beaver Creek flows into Yellow Creek near Loysburg, contributing to one of the most important trout streams in Bedford County. Yellow Creek is classified by DEP as HQ CWF: high-quality coldwater fishery. Much of its flow is from Beaver Creek and smaller tributaries that originate on Dunning Mountain.

Furthermore, the community of Salemville depends on water that originates on the eastern slopes of Dunning Mountain. This water source could be degraded and reduced by deforestation and increased stormwater runoff from construction.

The bigger streams on the western side of Evitt's Mountain (in Dutch Corner) are Oppenheimer Run, Imlertown Run, and Pleasant Valley Run; these all flow into Dunning's Creek. These streams are classified by DEP as WWF: Warmwater fisheries. Although the water quality is not as high as those streams on the eastern side of Evitt's Mountain, these streams not only provide clean water to a species of concern, the wood turtle, but they are also important sources of water for many farms in Dutch Corner.

In conclusion, an industrial wind project on Evitt's Mountain would drastically change the hydrology and production of clean water that originates from the mountain slopes.

B. Wildlife Impacts:

The Conservation Opportunity Area Tool (COAT) was conducted in the area where the proposed project runs along the top of Dunning/Evitt's Mountain.

This web-based tool is Pennsylvania's proactive, non-regulatory blueprint for addressing the needs of imperiled and declining species, referred to as Species of Greatest Conservation Need. It is available at <https://wildlifeactionmap.pa.gov>. It is the most comprehensive database in Pennsylvania for Species of Greatest Conservation Need.

Below is a summary of the results of COAT for the proposed Dunning/Evitt's Mountain wind project area (See full report in Appendix A):

1. There are eight (8) wildlife species of greatest conservation need, including two (2) species that are so sensitive that they are not identified in the report. Ten other Species of Greatest Conservation Need most likely are found in the area. These species include a number of birds, such as the **Black-and-White Warbler, Wood Thrush, and Scarlet Tanager**.

A wind project along the top of Dunning/Evitt's Mountain causes forest fragmentation by creating long, linear clearings for turbines and roads. These openings allow an influx of predators to access bird nests. Studies show that this "edge effect" extends at least 300 feet into the forest from each edge of the opening. A wind project means that core forest that was once much safer for forest interior birds has been "opened" to raccoons, crows, skunks, and brown-headed cowbirds which kill or parasitize interior-nesting birds.

These open corridors also invite invasive plant species like mile-a-minute, Japanese stilt grass, tree-of-heaven, and many other species that choke out native vegetation, thus removing food and cover for birds.

2. Conservation actions have been identified for Species of Greatest Conservation Need (SGCN) within the proposed area wind project area. A top priority is to avoid new roads, pipelines, and powerlines in large forest blocks. Another top priority is to identify, and conserve unprotected large forest blocks >247 acres.

3. One of the SGCN that is not identified could be the timber rattlesnake. Evitt's Mountain serves as an important habitat for these sensitive species, as well as several species of turtles. Turtles are in great danger as they are a prized commodity in overseas markets.
4. Dunning/Evitt's is also important as a travel corridor that allows genetic dispersal for the state-threatened **Allegheny woodrat**. Allegheny woodrats have historically nested in rock outcroppings on Evitt's Mountain. A survey should be conducted by the wind company before the project is constructed to determine if Allegheny woodrats still live on the top of Evitt's Mountain.
5. Any company proposing to build a wind project on a forested mountain will be asked to conduct a bat study. Wind turbines kill thousands of bats each year. The migratory tree bats are at greatest risk, as they migrate over forested ridges instead of hibernating. The National Wildlife Federation, in conjunction with National Audubon released a report in January 2019 detailing the concerns that wind turbines pose to wildlife. See <https://www.nwf.org/Educational-Resources/Reports/2019/01-28-19-Responsible-Wind-Power-Wildlife>

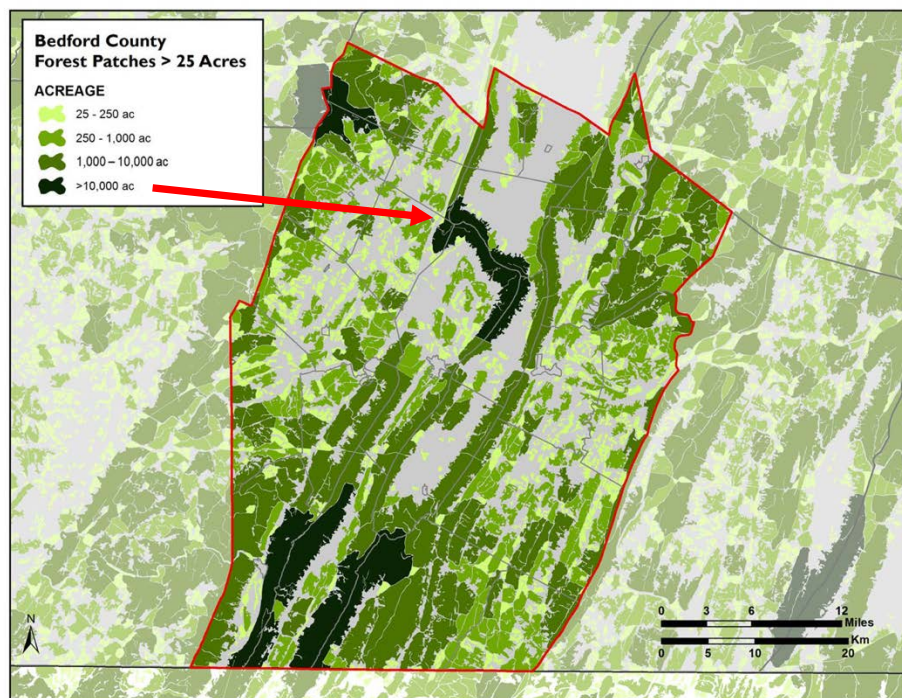
Bats are especially vulnerable to mortality from wind turbine projects. Wind power may pose population-level concerns since so many bats are killed by wind turbines. Although White-Nose Syndrome has greatly reduced bat populations in recent years, research published in Scientific American states that worldwide, industrial wind turbines are the greatest cause of bat mortality. <https://www.scientificamerican.com/article/bat-killings-by-wind-energy-turbines-continue/>

C. Forest Fragmentation and associated habitat loss on Evitt's Mountain

1. Western Pennsylvania Conservancy published the Bedford County Natural Heritage Inventory Update in 2018. <http://www.naturalheritage.state.pa.us/CNHI.aspx>
This project was supported and funded by numerous organizations, including the Bedford County Board of Commissioners. Below are pertinent notes from that report.

page 19:

The top of Dunning/Evitt's Mountain represents one of the largest continuous forests in Bedford County.



page 35:

The Natural Heritage Inventory identified Evitt's Mountain (Dunning Mountain) as a Natural Heritage Area (NHA) of GLOBAL SIGNIFICANCE.

“A Natural Heritage Area (NHA) is an area containing one or more plant or animal species of concern at state or federal levels, exemplary natural communities, or exceptional native biological diversity. NHAs include both the immediate habitat and surrounding lands important in the support of these elements. They are mapped according to their sensitivity to human activities, with designations of Core Habitat and Supporting Landscape areas. The sensitivity of each designation varies significantly according to the particular plant, animal, or natural community habitat that the area represents and is discussed in detail in each NHA Site Description. Core Habitat – areas representing critical habitat that cannot absorb significant levels of activity without substantial negative impacts to elements of concern.”

page 27: A rank of global significance is defined as:

“Sites which have global importance for biological diversity and Pennsylvania has a primary role to maintain (e.g., most of the known occurrences are within Pennsylvania). Sites in this category generally contain one or more occurrences of species of global concern (e.g., G2 and G1) or large concentrations of species of lower significance.”

Page 131:

Dunning Mountain Forest NHA

(Note: The area of Evitt's Mountain identified as “Dunning Mountain Forest Natural Heritage Area” is the same location where the industrial wind project is proposed.)

“Specific threats and stresses to the elements present at this site as well as conservation actions include:

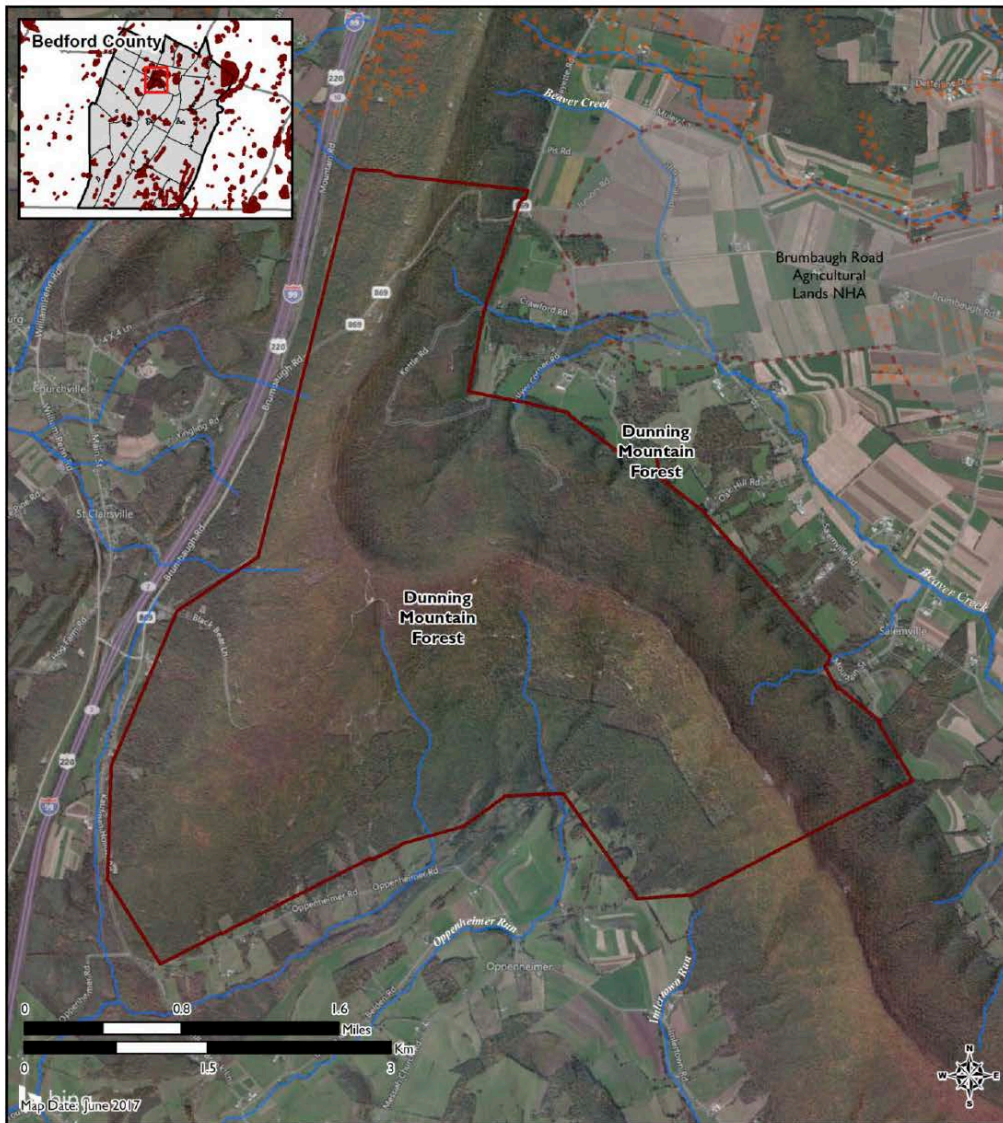
- Degradation of water quality can have indirect negative impacts on the species of concern found within this NHA. The storm water runoff from roadways, developments and agriculture should be considered a potential source of significant contamination. Runoff from these sources has significantly higher levels of sediment, nutrients, pesticides, herbicides and other pollutants than runoff filtered through a natural habitat.

- The removal of live or dead trees with exfoliating bark should be avoided, because it would ruin existing or potential habitat for one of sensitive species of concern. Shagbark hickory (*Caraya ovata*) and shellbark hickory (*Caraya laciniosa*) provide especially good habitat. When tree removal is absolutely necessary, it should be carried out over the winter months.

- Fragmentation of the forest due to development or infrastructure activities should be avoided, because it can result in habitat loss and degradation. **The primary conservation concern for this habitat should be to focus on safeguarding the quality and expanse of the natural landscape.**

While providing the primary habitat for the population of species of concern, the natural landscape also helps to protect water quality of the stream that drains through this NHA.”

Page 132: Map of Dunning Mountain Forest NHA: Only 7 out of 57 NHAs are ranked as having GLOBAL SIGNIFICANCE in Bedford County. Dunning/Evitt's Mountain is one of them.



**Dunning Mountain Forest
Natural Heritage Area**

Forests of Dunning Mountain support populations of a sensitive species of concern.

**Significance Rank:
GLOBAL**



Pennsylvania Natural Heritage Areas	
	Core Habitat
	Other Core Habitat
	Other Supporting Landscape

In conclusion, any type of development along the top of Evitt's/Dunning Mountain will be inappropriate since there are numerous negative environmental impacts to the watersheds, forests, and wildlife.

Although we need renewable energy infrastructure to combat climate change, surely there are more appropriate sites where less environmental damage will occur. Reclaimed strip mines, brown fields, and developed areas should be considered for renewable energy projects, not forested mountains that serve as important habitats for species of concern, migratory corridors, and sources of clean water.

Please contact Laura Jackson for more information or questions about this report.

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Laura Jackson is Vice-President of the Juniata Valley Audubon Society, President of the Save Our Allegheny Ridges, Secretary of the Bedford County Bird and Nature Club, Treasurer of the Woodland Owners of the Southern Alleghenies, and serves on the Council for the Center for Private Forests at Penn State. She is also a Pennsylvania Forest Steward. She and her husband own 114 acres of land in Bedford County on Tussey Mountain, which is enrolled in a conservation easement plan with Western Pennsylvania Conservancy so it can't be subdivided or developed.