

# Testimony lasts hours, experts called

BY ANNE ADAMS and WILL O'CONNOR • STAFF WRITERS

MONTEREY — Eight experts, four landowners, and county administrator Roberta Lambert constituted the arguments on both sides during last week's trial on a proposed wind energy facility here.

Tuesday, the citizens' attorney, David Bailey, had called up experts on noise, birds, bats and the northern flying squirrel (see last week's Recorder for details). Each said the proposed 39-megawatt industrial wind utility would have a negative impact on Highland County's residents, wildlife and local economy.

Highland New Wind Development attorney Brian Brake called four experts to the stand Wednesday afternoon to rebut those testifying the previous day. Each had been hired by the company to conduct impact studies in their field of expertise — noise, birds, bats, and the endangered northern flying squirrel.

They explained the methodology behind their studies, and why they had concluded the project would have little or no significant impact.

Before the defending witnesses testified, Bailey called more area residents to the stand to further explain their quality of life on Allegheny Mountain near where the turbines could be installed.

## Neighbors

First before the court was Patti Reum, owner of Bear Mountain Farm and Retreat, along with her husband, Tom Brody, who had testified the previous day.

Reum was asked to explain the environmental attributes of the couple's property. "We have a very unique environment," she said, "with an extreme variety of habitat. And red spruce is the key factor."

Bear Mountain has three hiking trails, the most recent addition geared toward birders hoping to catch a glimpse of the rare golden winged warbler. "We are one of seven sites along the Virginia Birding Trail mountain states," Reum said. "And Virginia is well-known for birding tourism."

Reum, former Highland school teacher and professional zoologist, said the retreat businesses draws visitors from all over the U.S. and other countries. She pointed out astronomers are especially frequent visitors due to the area's dark night skies. The Royal Astronomy Society, she said, has designated the area from Allegheny Mountain north to Spruce Knob as the darkest area on the East Coast. Reum said one group recently spent time in one of their upper meadows. "They

said they saw 33 galaxies that evening," she said. "It's absolutely mind-boggling."

She told Bailey she knew the proposed turbines would be required to have some lighting according to the Federal Aviation Administration in order to make them visible to aircraft overhead.

On cross examination, defending attorneys had Reum establish Bear Mountain Retreat's proximity to the project site, and her knowledge there were no red spruce on the two areas proposed for development. Reum also testified she could not see the 69 kv transmission line crossing McBride's property, though she can see the anemometer on the property.

Next up was Dr. Ralph Swecker, whose family property adjoins the McBride tract. He was questioned by plaintiffs' attorney Chris Singleton of Warm Springs, who asked him about his life in Highland.

Swecker noted he was born in Blue Grass in 1920 and other than military service, had lived in the county all his life. He's been retired as a dentist for about seven years.

Swecker owns around 800 acres of property his parents bought in 1934, and it shares about 1.5-2 miles of common boundary with the McBride land. While none of the Swecker family resides on the land, he said they use it quite frequently, 4-5 times a week, for recreation — hiking trails, riding 4-wheelers, hunting, fishing, cutting some timber and leasing land for grazing — "just the pleasure of the great outdoors, enjoying the environment," he said. "We like the outdoors here like some like the beaches."

Swecker said before HNWD received its permit, a wind energy developer had also approached him about erecting towers on his land. He and his two sons decided against the proposition, and even visited wind utilities in West Virginia to see for themselves what they were like. "I know my neighbors in the Blue Grass Valley, in Hightown — these are my friends and relatives and I didn't think they'd enjoy seeing those towers up there," Swecker said.

Brake cross examined Swecker, asking whether he'd spoken at any of the public hearings on this project. "I did not attend," Swecker said. "I listened to them on the radio."

Swecker was the last witness to testify for the plaintiffs, and the defense began its presentation Wednesday afternoon, calling the four experts for rebuttal.

## Noise

A sound and vibrations expert from Massachusetts, Dr. Eric J. Kalapinski, said even under worst case scenarios the project

was likely not to exceed the Environmental Protection Agency's outdoor noise level standard of 55 decibels.

Using a computer program, Kalapinski plugged in assumptions to reach his conclusion. He assumed there would be a maximum of 19 turbines on the two sites, that each would stand 396 feet tall, that there would be no foliage on the trees to absorb any of the noise (winter time conditions), that the turbines would have "down-wind" reception which he said is unlikely and significantly louder than the "up-wind" turbines the project is likely to install, and using the manufacturer's specifications on turbine noise level, he assumed the turbines would run consistently at their loudest level.

The program also took into account the area's terrain — Kalapinski relied on topographic maps from the U.S. Geological Survey to determine how the sound would travel through the mountains.

Based on those assumptions, the program predicted noise levels that would occur near the project, and Kalapinski was rendered an aerial photo displaying its results. The photo showed a series of color coded concentric circles surrounding Red Oak Knob and Tamarack Ridge. The maximum noise level would occur directly around the two clusters of turbines, Kalapinski said, and under the worst case scenarios would likely emit around 55 decibels. The further away from the sites, the quieter the turbines would become, Kalapinski predicted.

Four buildings are located within the circles. The closest would likely hear a maximum increase of 35-40 decibels, which Kalapinski said was comparable to the average ambient noise of a rural location at night. The next closest building was in the 35-36 decibel range, while the next two would likely see increases of 25-30 decibels.

On cross examination, Bailey argued Kalapinski's study could have a large margin of error because it was based on so many assumptions. Kalapinski didn't know the exact make of the turbine the project would use — though Kalapinski felt certain Highland New Wind would choose from one of the three major U.S. manufacturers of which he had chosen the loudest one — he didn't know the exact location of the turbines, how tall they would be, or the types of blades they would use.

Bailey asked about ambient noise already in the area; Kalapinski said he hadn't measured it. EPA standards apply only to man-made sound, Kalapinski said. It wasn't part of the procedure to gauge ambient noise and add that level to new noise.

Bailey asked Kalapinski if he knew where

the property lines were. The nuisance of additional noise doesn't start at a person's home, Bailey said, but at their property line.

Bailey questioned whether the turbines would make other noises, such as impulsive noise, but Kalapinski said turbines Highland New Wind would likely use would not. Bailey also questioned the accuracy of the manufacturers' specifications. Bailey implied it was in the manufacturers' interest to low-ball the true noise level because it was trying to sell as many turbines as possible.

In redirect, however, Kalapinski explained that manufacturers' specifications were accurate because a manufacturer was required to hire an independent firm after turbines are first installed to ensure the numbers are right. "It's reliable," Kalapinski said.

Bailey objected to submitting Kalapinski's map as evidence because it was "woefully inadequate," he said. It didn't explain what the "structures" in the circles were and it didn't have property lines. Judge Paul Sheridan agreed to accept the map only if one of Brake's subsequent witnesses outlined those details.

Thursday, Brake called H.T. "Mac" McBride, one of HNWD's owners, to testify as to the property lines and structures on the map.

## ***Birds***

Dr. Paul Kerlinger, an expert on birds and partner in a consulting firm for companies wanting to build cell towers and wind turbines, said he didn't believe the project would have an adverse impact on any bird populations.

Kerlinger had completed a phase one avian risk assessment on the McBride property, which consisted of walking the site twice to identify different bird species, inspecting the habitat of the land, consulting the birding literature of Virginia and West Virginia to identify the types of birds likely on the property, reviewing studies on bird mortality at other wind turbine locations, and conducting a radar study at the site.

Kerlinger said his definition of "no significant impact" was that the project would not kill enough birds to cause a significant decline in the species' population. Birds would be killed, he said, but he didn't believe they would die in significant numbers.

On cross, Bailey pointed out the Virginia Department of Game and Inland Fisheries had criticized Kerlinger's study. Kerlinger visited the site just twice, and based much of his report on mortality studies conducted at sites that weren't very similar to Highland County.

Bailey said most wind site bird studies weren't peer-reviewed, and questioned whether they applied good science when creating them. There was no extensive pre- and post-construction bird study of a wind project at a similar site, Bailey said.

Kerlinger said more than 75 percent of his consulting business comes from the wind industry, and Bailey argued Kerlinger had

carved out a niche by rubber stamping wind projects. Kerlinger applied "uniform analysis" to all his studies of potential wind sites, Bailey said, and had produced just one report stating a site could affect the population of an endangered species.

By Kerlinger's definition of "significant impact," no single wind project could be deemed as a risk to bird populations, Bailey argued, asking how many turbines would have to be built before Kerlinger thought there would be an impact.

Kerlinger declined to answer.

Bailey asked how local bird populations in Highland would be affected.

Kerlinger said he did not know a lot about the local populations in Highland, but argued no bird population was totally isolated or local. Birds migrate and move, Kerlinger said.

Asked about significant findings from the radar study, Kerlinger said they had learned the targets monitored had flown mostly over the ridges, rather than along them, and the area had a high number. The independent contractor which conducted the study had said in its report it was the highest number of targets ever recorded using that method of detection, but Kerlinger disputed the claim. Three or four other studies had found larger numbers, he said.

Asked by Bailey if there was a correlation between the number of birds in an area and the amount killed — meaning a wind project in an area with a large bird population would kill more birds than one in an area with a sparse population — Kerlinger said a correlation had not been established.

Kerlinger estimated each turbine would kill between three to seven birds per year, and said he based the number on studies done at other similar wind sites.

## ***Bats***

Dr. D. Scott Reynolds, hired by HNWD for a bat study, said there were just three endangered species of bats found in Virginia — the Indiana bat, the Virginia big eared bat, and the gray bat.

To see how the project could potentially impact these species, Reynolds' company walked the site to check out habitat, talked to the McBrides about caves on or around the property, gathered information from the game department about caves in the area, and collected acoustic data at the property to document bat activity there.

Reynolds said he didn't think any of the species would be significantly impacted. The Indiana bat stays mainly along rivers and in the lowlands and is low flying, Reynolds said. Even if they were to fly through the site, it's likely they would fly under the turbine blades. Big-eared bats roost in caves, Reynolds added, and there weren't any caves known to contain big-eared bats within 22 kilometers. The bats' normal range is 10 kilometers, said Reynolds. As for the gray bat, the closest known colony

was located about 180 miles away in southwestern Virginia.

Bailey asked if acoustic monitoring was an accepted method in the scientific community, and noted the game department had criticized the bat study in its report. Reynolds said it was an accepted method.

Bailey asked if HNWD had followed Reynolds' recommendations for the study, and Reynolds said it had not. His company had recommended a couple more methods for estimating the population, but HNWD declined to use them.

Bailey questioned what the mortality rate would be for other species of bats, but Reynolds said he couldn't give one because he didn't have enough information. He agreed with Bailey's statement that wind projects on ridgetops in the eastern U.S. have generally had high bat mortality rates.

## ***Northern flying squirrel***

Dr. Edwin D. Michael said he's been trapping the northern flying squirrel and studying its habitat since it became an endangered species in 1985.

In 2005, he set up 100 traps near where the project is to be located — 50 on Red Oak Knob and 50 on Tamarack Ridge — for 10 days, trying to catch a northern flying squirrel. Michael said he chose trap locations by determining the spots that he thought would give him the best opportunity to catch the squirrel, but none were caught.

With more than 20 years of trapping experience, Michael concluded there wasn't a population of the squirrels on the property. "In my opinion if there was a population of northern flying squirrels, I would've caught them," he said.

Michael said the McBride property wasn't good habitat for the species, which needed mature red spruce trees or similar conifers to survive. In conducting the study he said he performed the established methodology, and the 100 traps for 10 days had been an excessive attempt to try to find one.

Michael also said the squirrel had recovered quickly since being put on the endangered species list, and there is an ongoing discussion to take them off the list completely. In his opinion, the squirrel would not be affected, he said.

Under cross examination, Michael disputed Bailey's claim that Highland was "prime" habitat for the squirrel. Michael said it had sections of suitable habitat, but nothing that could sustain a large population.

Bailey asked how deep into the woods Michael had set the traps, and Michael explained he had set them 100 to 200 yards beyond the fence separating the grazed wood lot from the ungrazed wood.

## ***Mac McBride***

At 10 a.m. Thursday morning, HNWD owner Mac McBride was called to the stand

by Brake mainly to rebut Bailey's assertion that Brake's noise expert had used an unmarked map.

McBride explained he'd retired from 50 years in the poultry industry in 1991. Verifying the map showed his property, McBride said he'd taken possession of the 2,200 acres of Red Oak Ranch in 1958 and was the property's manager. McBride's wife Lola and her sister had inherited the adjoining Tamarack Ridge property constituting 1,700 acres.

McBride said he was familiar with his neighbors' properties, had visited the homes of Pen Goodall and Tom Brody, and had walked his own property lines. Brake had McBride identify all structures on the map and testify as to whether they were permanent residents. Sheridan ruled the map was admissible following the explanation.

Brake also asked McBride about how he used his property. McBride explained he'd leased the land for grazing as long as he's owned it, in addition to timbering and operating a commercial hunting business.

Asked about what influenced his decision to pursue an industrial wind utility, McBride said he was looking for ways the property could generate income for his family.

McBride reiterated the site had good wind resources, the right power line, and access to U.S. 250. He had visited other wind facilities and said, "I could hear them, but it was not that offensive a noise." He could hear a clicking noise as they rotated but said he could not hear their noises inside his vehicle.

"Why have you continued to pursue this project?" Brake asked.

"I have an extreme fondness for this property," McBride replied. "But we've got to have revenue to keep it in the family." He said if it's given to his children, they won't be able to pay the taxes on it. "Grazing will not do it, and I don't want to cut all the timber. You need cash flow to maintain it."

On cross examination, Bailey asked McBride what he pays in annual property taxes for the land, and McBride said close to \$10,000 a year on Red Oak and a little less than that on Tamarack. He agreed \$20,000 covers the entire tax burden.

Asked what the property earns from leasing for grazing, McBride said he didn't think he should have to answer and wondered how it was relevant. The judge told McBride since he'd raised the issue of income from the land, it was relevant.

McBride said the property earned about \$15,000 a year from grazing leases.

Bailey asked whether McBride believed he couldn't cover the \$5,000 difference between what the land earned and what the tax burden was.

"It's not a case of not being able to afford it," McBride said. "I expect (the land) to support itself."

## *The county's review*

Roberta Lambert, Highland's county administrator, spent about three hours on the stand throughout Thursday to testify for the defense about what kind of research the county had done before approving a permit for HNWD.

Attorney Greg Haley, defending the county, had her explain her duties and experience, which she described as all aspects of county administration. She has worked for the county for 28 years, the last two as administrator.

Lambert testified Highland's population has been steadily decreasing, and getting older. The bulk of its revenue comes from real estate taxes, she said, and in fact Highland is ranked highest in the state for its dependence on those taxes, which generate 76 percent of the county's income.

She explained the issue of wind energy had first been raised by supervisor Robin Sullenberger in June 2002, who in a regular board meeting mentioned he'd been approached by developers.

Bailey raised objections to admitting board minutes created by Lambert, saying they were full of hearsay and were summaries based on her own opinion. After much back and forth with the judge, Sheridan agreed to admit the minutes solely to show what supervisors had heard, but not as evidence of truth in their text. Sheridan said since he had the author of the minutes before him he would move them into evidence to show what supervisors had heard on that basis alone.

Lambert told the judge she'd been taking minutes for the county since 1988 and considered herself to be pretty good at doing so.

She then explained the county held a public informational meeting in August 2002, hearing information provided by the Central Shenandoah Planning District Commission, a representative of wind developer Community Energy (previously involved with HNWD), the Department of Mines, Minerals and Energy, an engineer in the field, and county attorney Melissa Dowd.

Lambert then explained the board of supervisors had directed her to research wind energy. "I looked at every issue I could think of — tourism, noise, avian, property values ..." she said. "I contacted various agencies and organizations and whatever reports were available and filed them in binders for the board of supervisors and the public."

There were 28 notebooks lining the courtroom floor, all containing the information Lambert had collected. "I maintained them in my office," she said, adding some citizens had come in to review them and that, to the best of her knowledge, all three supervisors had reviewed them in detail.

Haley then walked Lambert step by step through documentation, research, and meetings to show the extent of the county's investigation on the matter. On nearly every

piece of evidence, Bailey restated his objection as to their truth, and the judge clarified for the record they were admitted only as evidence as to what supervisors had heard or read. On one document the county reviewed — a study showing property values near wind facilities actually increased — the judge found it highly questionable but still admitted it into evidence as to what the county knew. "As a trier of fact, that (study's conclusions) would stun me, I'm telling you right now. I'd like know where that would happen," he said. "It might well be an industry sales pitch, and I'm not seeing a detached observer here." He nevertheless let it come in as part of the record of the county's investigation.

Haley's question after explaining each item of evidence was, did you (Lambert) provide the item provided to supervisors? And each time, Lambert replied, "Yes, I did."

Near the end, Haley asked her, "In your experience, has Highland ever had any land use issue with remotely this amount of scrutiny?"

"No, sir," Lambert replied.

After reiterating his concerns about the conditions under which the documents were admitted, Bailey said he had no questions for Lambert.