

# Beech Mountain Wind Farm Carcass Monitoring Report

**Organization:** WNC Small Wind Initiative  
**Research Location:** SWI Research & Demonstration Site  
Beech Mountain, NC  
**Dates of study:** 9/1/05 – 10/28/05 (Fall migration)

Version	Date	Author	Change Description
1.0	11/14/05	BJS	Created report

## Background

The North Carolina Small Wind Initiative (SWI) operates a Small Wind Turbine Research & Demonstration Site on Beech Mountain, North Carolina. Six turbines are installed at the site for the purpose of public demonstration and education, regional small wind turbine research activities, and to generate green power for the TVA Green Power Switch program. Table 1 describes the turbines and their associated towers.

The SWI team joined Curtis Smalling of the Audubon Society to perform an Avian Impact Study at the site during the spring migration period of 2005.

**Table 1 Beech Mountain Test Turbines – Fall 2005**

Turbine Description	Rated Power (watts)	Tower Height (feet)	Tower Type
African Wind Power AWP 3.6 Grid-tie	1500	105	Tilt-up, guyed
Southwest Windpower Whisper 200 Grid-tie	1000	50	Tilt-up, guyed
Southwest Windpower AirX 24V	400	35	Tilt-up, guyed
Southwest Windpower Whisper 100 48V	900	80	Tilt-up, guyed
Southwest Windpower Whisper 500 Grid-tie	3000	70	Tilt-up, guyed
Jacobs 31-20	20,000	120	Freestanding lattice

## 4/14/05: Training

Curtis Smalling visited the wind site to train the SWI team on Carcass Monitoring research procedures.

The team received:

- Detailed monitoring instructions entitled: "*Beech Mountain Wind Farm Carcass Monitoring*"
- Blank forms entitled: "*Carcass Removal Study*"
- Alpha codes for bird names
- Marker flags

**Table 2 Tower Identification**

Tower	ID
Whisper 200	B
AirX	X
AWP 3.6	A
Whisper 500	1
Whisper 100	H
Jacobs 31-20	J
Communication tower (Nextel)	C

Per Curtis' request, a layout of the wind site was created labeling each tower and tower quadrants. Table 2 describes the tower labeling scheme.

## Fall Migration Carcass Monitoring

The team was instructed to perform carcass searches at least weekly and after significant weather events (low cloud ceiling, fog) during peak fall migration times (August 15-October 20). Searches were conducted as early in the day as possible to reduce the chance of carcass removal by other animals.

A “bird sweep” involves inspecting the ground around each tower in a back-and-forth manner, looking for bird carcasses. The swept area covers the guy wire diameter plus about 10 feet. If the tower has no guy wires, the diameter of the swept area is approximately the tower height. Table 3 lists the documented bird sweeps performed at the site.

**Table 3 Carcass Monitoring Log**

Date	Activity	Findings
9/1/05	Bird sweep after hurricane Katrina	None
9/8/05	Bird sweep	None
9/9/05	Bird sweep	None
9/13/05	Bird sweep	None
9/15/05	Bird sweep	None
9/17/05	Bird sweep	Found C001 (under Nextel tower)
9/22/05	Bird sweep	None; C001 gone
9/30/05	Bird sweep	None
10/6/05	Bird sweep	None
10/10/05	Bird sweep	Found H001 (under Whisper 100 tower)
10/20/05	Bird sweep	None
10/28/05	Bird sweep	None

### Details on Findings

Species	No.	Quad	M tower	M guys	C O D	1 <sup>st</sup> date	C O N	2 <sup>nd</sup> date	C O N	3 <sup>rd</sup> Date	C O N	Comments
?	C001	SE	1'	N/A	?	9/17/05	I D	9/22/05	S C	N/A	--	When found: stinky, no eyes, at base of free standing lattice cell phone tower
?	H001	SE	15'	3'	?	10/10/05	F P	10/13/05	F P	10/20/05	F P	Gathered feathers for Curtis on 10/20/05

QUAD: tower quadrant  
M tower: distance from tower  
M guys: distance from guys  
COD: cause of death  
CON: condition (ID: insect damage; FP: feather pile; SC: scavenged)



H001. Feather pile found 10/10/2005 under Whisper 100.



C001. Carcass found 9/17/2005 under cell tower.