

Section 3-P
Clearing and Fragmentation

The Stetson Wind Project will require clearing a portion of the Stetson Mountain ridgeline for construction of the wind turbine sites and spur roads. Timber harvesting has previously disturbed the entire development area so that clearing activities on Stetson Mountain will not be nearly as extensive as would be required in virgin or otherwise unmanaged forest areas.

Clearing operations will involve a mix of temporary and permanent impacts. Permanent clearing impacts will include construction of the wind turbines, a permanent access road, and associated facilities such as the electrical collection system, substation, and O&M building. In addition, the construction process will require temporary clearing impacts such as clearings for turbine rotor assembly, a wider road to allow for the assembly crane to travel between turbine locations, and clearings for material/equipment laydown and concrete batch plants. These areas of temporary clearing will be revegetated following completion of construction and startup of commercial operations. The following table summarizes the permanent and temporary clearing impacts associated with this project.

Clearing Type	Units	Description
38 Turbine Pads and 2 Crane Assembly Pads Temporary clearing Permanent clearing	76.6 Acres 10.4 Acres	315' diameter circular clearings (1.79 acres) + 0.21 acre to account for cut/fill = 2.0 acres each; add 50' x 240' (0.28 acres) for each crane pad. Permanent clearing =0.28 acres at each turbine site
New Ridgeline Road Segments Temporary clearing Permanent clearing	52.8 Acres 11.3 Acres	30,640 feet, average 75 feet wide 30,640 feet, average 16 feet wide
New Spur Roads Temporary clearing Permanent clearing	23.9 Acres 7.6 Acres	20,800 feet, average 50 feet wide 20,800 feet, average 16 feet wide
Existing Roads, General Widening Temporary clearing	29.3 Acres	21,088 feet, avg. 57 feet add'l cleared 6,262 feet, avg. 12 feet add'l cleared
Stump Dump Temporary clearing	<1 Acre	
Batch plant and laydown areas Temporary clearing	15.5 Acres	2 acres for each batch plant location; 11.5 acres for material/equipment laydown areas
Operations and maintenance building and substation Permanent clearing	3 Acres	50' x 100' O&M building + 175' x 300' substation + 1.6 acres to account for access drive, parking area, subsurface wastewater disposal area and site grading
Transmission line corridor Temporary clearing	10.3 Acres	From substation to edge of D-PD zone (approximately 3,000 feet by 150 feet wide)
Total Project Clearing	241.9 Acres	
Temporary clearing	209.4 Acres	
Permanent clearing	32.5 Acres	

In general, clearing of the development area will follow the same sequence of operations outlined in Section 3-L. Erosion control protection will be installed prior to initiation of clearing operations. Then, commercially viable timber in wooded areas will be removed using commonly accepted harvesting techniques. Existing topsoil in the area to be cleared will be removed and stockpiled for reuse later in revegetating the road shoulders and turbine clearings. Grading and construction of the road and turbine

pad will then commence. In non-wooded areas, erosion control protection will be installed as the first task. Topsoil removal and construction of roads and turbine pads will then be conducted as above.

General descriptions of the clearing required in each portion of the development area are provided below.

Turbine Clearings

There are 38 wind turbine sites proposed for the Stetson Wind Project. The turbine site plans included in Exhibit L show 38 primary turbine sites and 3 alternate sites that will be used should one of the 38 primary sites become unfeasible. The proposed circular clearing for each turbine site has a diameter of 315 feet, giving a proposed clearing area of 1.79 acres. Some additional clearing around each turbine site will also be required to allow for site grading and leveling. The additional clearing area will vary between turbine sites depending on the existing grades in the area; however, average clearing required to account for cut/fill slopes is estimated to be 0.21 acre. This gives a clearing area of approximately 2.0 acres per turbine site, for a total of approximately 77 acres for the turbine sites.

Following completion of construction and startup of commercial operations, approximately 1.72 acres of each wind turbine site will be seeded and mulched and allowed to revegetate. The only portions of each turbine site that will remain permanently cleared include a 0.28-acre area consisting of the following:

- An approximately 50-foot radius circular area around the turbine tower;
- Gravel crane pad; and
- 16-foot wide access drive

A typical plan of a turbine site showing limits of temporary clearing and the area that will be revegetated is included as Exhibit N.

In addition to the 38 turbine sites, two 50-foot by 240-foot crane assembly pad areas will also be cleared and graded for assembly of the turbine erection crane. A 300-ton to 450-ton crane will be used to assemble the turbine rotors, erect the tower sections, and lift the nacelles and rotor assemblies onto the towers. These cranes are too large to be transported to the project site in one piece, and therefore must be delivered in component sections and assembled on-site at the assembly pad area. The cleared crane assembly pad area, including additional area to allow for cut/fill slopes, will be approximately 0.28 acre each. Following completion of construction, the entire area for each crane assembly pad will be seeded and mulched and allowed to revegetate; therefore, the clearing impacts in these areas will only be temporary.

Road Clearings

The Stetson Wind Project will include construction of three types of roads:

- 16-foot wide access roads that provide access to the southernmost turbine site from Tar Ridge Road and the northernmost turbine site from Route 169;
- 36-foot wide ridgeline roads that provide crane travel access to turbine sites along the Stetson ridgeline; and
- 36-foot wide spur roads that provide access to turbine sites from the ridgeline road

The total length of road to be constructed as part of the Stetson Wind Project is approximately 14.92 miles. This will consist of 9.79 miles of 36-foot wide ridgeline road that will interconnect the turbine sites, 3.94 miles of 36-foot wide spur roads that access the turbine sites from the ridgeline road, and 1.19 miles of 16-foot wide access road that will be used to access the southernmost and northernmost turbine sites (see road plans in Exhibit L for road alignment and roadway section detail). The average clearing

width required for construction of the ridgeline roads is 75 feet. This clearing width includes the 36-foot wide road, associated stormwater ditching, grading side slopes, and the electrical collector system overhead lines and pole structures.

Approximately 35 percent (5.18 miles) of the proposed access and ridgeline roads will be constructed over existing logging roads (e.g., Atlas Road and Ridge Road). These logging roads have average cleared widths of 18 feet, thus requiring approximately 57 feet of additional clearing for the ridgeline road and 12 feet of additional clearing for the access roads. The turbine site and road plans included in Exhibit L show where the existing Atlas and Ridge Roads will be improved, as well as the location of the existing treeline. The remaining 9.74 miles of road will consist of new 36-foot wide ridgeline and spur roads that will be constructed through existing forested areas.

Following completion of construction, the shoulders and side ditches of the ridgeline and spur roads will be seeded and mulched to allow revegetation. Only a 16-foot wide portion of the 36-foot wide ridgeline and spur roads will be permanently maintained. In addition, only the 16-foot wide roadway for the northern and southern access roads will be permanently maintained. The shoulders and stormwater ditches for these access roads will be seeded and mulched and allowed to revegetate following completion of construction. A typical plan of ridgeline road sections showing limits of temporary clearing and the area that will be revegetated is included in Exhibit N. The total area of *temporary clearing* required for construction of the 14.92 miles of spur and ridgeline roads is 106 acres. The total estimated *permanent clearing* impacts required to construct the 14.92 miles of access, ridgeline and spur roads is 18.9 acres.

Batch Plant and Laydown Areas

Two concrete batch plant sites are proposed for the Stetson Wind Project. The proposed batch plant locations are shown in the turbine site and road plans in Exhibit L. The cleared area for each batch plant site will be approximately 2 acres. This area is required to accommodate the mobile concrete batch plant as well as provide for materials storage.

Approximately 11.5 acres of equipment/material laydown areas have been designated for use along the Stetson ridgeline (see Exhibit L). These areas will be used frequently during project construction, but will be seeded, mulched, and allowed to completely revegetate following completion of construction activities.

Substation/O&M Building

An approximately 3-acre area adjacent to wind turbine #1 will be cleared for construction of the electrical substation and O&M building. The substation will be approximately 175 feet by 300 feet, and the associated O&M building will be approximately 50 feet by 100 feet. The area around the O&M building and fenced substation site will be graded to provide for an access drive, truck gate access to the substation, and adequate parking. A site plan for the substation/O&M building is included as Exhibit S. All clearing impacts associated with the substation/O&M building will be permanent.

Transmission Line

The length of transmission line is 3,000 linear feet, with a required clearing width of 150 feet. The estimated clearing required for construction of the transmission line segment from the substation to Tar Ridge Road is 10.3 acres, which includes approximately 14,000 square feet of temporary clearing in a forested wetland.