

Noise levels generated by most turbines under normal operations at the NWTC are within recommended levels, but older and smaller models operating in an unusual manner (together over extended periods of time) could approach certain standards within site boundaries. No standards are reached or exceeded at any off-site sensitive receptors under any reasonable scenarios.

### **3.5 VISUAL QUALITY/AESTHETICS**

#### **3.5.1 Visual Characteristics of the Project Site and Vicinity**

Figure 3-2 presents 21 photographs to characterize existing visual and aesthetic conditions of the site and vicinity from key vantage points. These photographs are presented at the end of Chapter 3 and are referenced throughout Chapter 3, as appropriate.

The visual characteristics of the site are created by permanent facilities, temporary or transient facilities, and natural conditions (see Figure 3-2, photographs 1-9). The permanent facilities are primarily composed of buildings, roads, parking areas and test sites. The temporary or transient facilities include wind turbines, meteorological towers and construction/maintenance equipment. Many of these facilities and pieces of equipment either move from place to place within the test site area or are not always on the site. However, turbines and towers would be considered permanent visual features on the site. Much of the test site area retains natural vegetation. A portion of the site is undeveloped and retains a natural appearance.

The tallest meteorological towers are located on test sites M-2 and M-3 (see Figure 1-3). They are 264 feet (80 meters) high. There are many others of lesser height. These shorter tower heights are in the 66 to 132 foot (20 to 40 meter) range. Turbine heights from ground to the blade hub vary. The highest current hub height is 120 feet (36.4 meters).

A mix of industrial facilities, grazing lands, and natural open space defines the visual character of the project vicinity, (see Figure 3-2, photographs 1, 2, 5, 6, and 9-21). Open lands and mountains, including the Flatirons within the Boulder Mountain Parks area, dominate the visual character of the area. Views of the continental divide through Eldorado Canyon, a State Park, are visible from vantage points on and near the NWTC (see Figure 3-2, photographs 1, 6, 9 and 10).

Local community planning efforts protect views of the Flatirons and the mountains to the south that form a striking feature in the landscape. This feature is referred to as the Mountain Backdrop by a cooperating group of local agencies (see Figure 3-2, photographs 1,6,9,10,15 and16). The vast majority of the resources protected by this effort are west of Highway 93. The protected resources in the project vicinity are west of Highway 93. The NWTC site and adjacent lands south and east of Highway 128 and 93, respectively, are not protected resources.

#### **3.5.2 Public Vantage Points and Site Visibility**

There are several primary off-site vantage points in the project vicinity where the general public can see the site and/or site facilities. Key vantage points along Highway 93 exist for southbound motorists north of the Highway 93/128 intersection and for northbound motorists south of the project site (see Figure 3-2, photographs 13 and 14). However, in many instances

existing development and overhead transmission lines obscure views from the south looking northeast.

Numerous vantage points for motorists also exist along Highway 128 between Broomfield County line and the site access road. New office buildings along Highway 128 in the vicinity of Jefferson County Airport have or will have views of site facilities. Building 251, turbines, and other site features are visible from Highway 128 west of the site access intersection (see Figure 3-2, photographs 15 and 16).

Boulder County and the City of Boulder jointly own and manage open space north of the project site. Two trailheads are located near the intersection of 93 and 128. The Greenbelt Plateau trailhead is located just east of the intersection along 128. This trailhead provides parking for trails to the north (see Figure 3-2, photographs 17 and 18). The Flatirons Vista trailhead provides parking for hikers headed west (see Figure 3-2, photographs 19 and 20). No trailheads or trails have been provided southeast of the Highway 93/128 intersection. The Colton trailhead is accessible on the north side of Highway 128 about one mile (1.6 kilometers) east of the NWTC entrance off of Highway 128. These trailheads and vantage points along the trails offer users views of the project site and much of the surrounding area.

One residence is located west of Highway 93 across from the aggregate operations. No other residences are located within four miles (6.5 meters) of the site. The view of the NWTC from this residence is dominated by the aggregate facilities located just east of Highway 93.

Highways 93 and 128 are not formally designated scenic roadways by the State of Colorado or local governments.

## **3.6 WATER RESOURCES**

### **3.6.1 Surface Water**

There are no floodplains or substantial permanent surface water resources at the NWTC, and no perennial creeks or streams cross the property. There are a few seeps on the site. Two of these seeps form small perennial ponds. Two ephemeral streams drain the area surrounding the NWTC. Rock Creek flows easterly and is located southeast of the NWTC. Rock Creek flows into Lindsey Pond approximately 1,000 feet (303 meters) east of NWTC. Coal Creek flows to the northeast approximately 400 feet (121 meters) northwest of the NWTC.

Intermittent storms and other seasonal precipitation events may cause water to temporarily collect in topographic drainages. Surface water, when present, is not used for any purpose on or off the site. Off-site ditches convey water throughout the area to various reservoirs and lakes. The closest of these is Church Ditch, approximately 12,000 feet (3,636 meters) southeast of Rock Creek.

Wetlands and related issues are discussed in Sections 3.8 and 4.8 of this document.

### **3.6.2 Stormwater**

The NREL implements a program at the NWTC that identifies procedures to prevent impacts to surface waters resulting from stormwater, as required under its general permit for stormwater