

4. ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

Chapter 4 addresses primary, direct, induced, secondary and cumulative impacts of the Proposed Action and No Action Alternatives. Beneficial and adverse, on-site and off-site, construction, operation, and maintenance impacts are also described, as appropriate.

The analyses focus on overall site development impacts and differentiate impacts from the short-term vs. long-term scenarios, where appropriate. Specific impacts from individual improvements (buildings, machines, devices, equipment, tools) are provided only where appropriate to clarify a unique environmental situation or consequence of a specific program element. Comparisons between various optional elements of the Proposed Action (short-term only) are provided only if meaningful impact differences would result from implementation of the options and those differences can be clarified at this time.

The impact analyses presented in this chapter consider NREL's broad and extensive environmental commitments as described in Chapter 1, and refer to specific commitments, as appropriate, to characterize potential impacts and substantiate related impact findings.

4.1 LAND USE, PLANNING, PUBLIC POLICY, SOCIOECONOMICS

4.1.1 Land Use Impacts

The proposed short-term and long-term improvements of the Proposed Action would have minor on-site and off-site land use impacts, but each improvement would be subject to review under applicable programs, policies and procedures implemented by NREL at the NWTC intended to avoid and/or minimize impacts at the site. Sensitive areas of the NWTC are protected by various policies and practices and in most cases, the requirements pertaining to Conservation Management Areas. Designated corridors would be used for utility installation and restoration is required for surface disturbances.

Development of vacant land and improvements to existing facilities and buildings would allow for increased site activity. The development would involve research and development uses within the NWTC development area, adding new test sites and associated facilities within the test site area.

The primary short-term improvements would include:

- 5 new buildings,
- 3 large megawatt class turbines,
- 20 new test sites,
- Several large and small solar devices, and
- Utility upgrades including some off-site improvements.

The long-term improvements would add more buildings, building additions and/or taller buildings, along with two additional megawatt class turbines. A total of 50,000 square feet of interior space would be added.