

1 Introduction to the Sectors

2 Every sector of the U.S. economy is affected in some way, either directly or indirectly, by
3 climate changes, including changes in temperature, rising sea levels, and more extreme
4 precipitation events and droughts. But none of these sectors exist in isolation, and each sector
5 connects directly and indirectly to other sectors. Forestry activities affect, and are affected by,
6 water supply, changing ecosystems, impacts to biological diversity, and energy availability.
7 Water supply and energy use are completely intertwined, since water is used to generate energy
8 and energy is used to pump, treat, and deliver water. Human health is affected by water supply,
9 agricultural practices, transportation systems, energy availability, and land use – among other
10 factors. Human social systems and communities are also directly affected by extreme weather
11 events and changes in natural resources like water; they are also affected both directly and
12 indirectly by ecosystem health.

13 The 2013 National Climate Assessment addresses some of these topics individually, and others
14 using a cross-sectoral approach that focuses on the climate-related risks and opportunities that
15 occur across sectors – as well as within them. For example, there are specific chapters focusing
16 on water, energy production and use, agriculture, human health, and ecosystems and biological
17 diversity. Six cross-cutting chapters address how climate change can interact with multiple
18 sectors. These cover the following topics:

- 19 • Water, energy, and land use
- 20 • Tribal culture, lands, and resources
- 21 • Land use and land cover
- 22 • Biogeochemical cycles and implications for ecosystems
- 23 • Rural communities
- 24 • Urban infrastructure and vulnerability

25 A common thread across these chapters is the connections across the sectors and the way that
26 changes in one sector are amplified or attenuated through connections with other sectors.
27 Another theme considers how decisions that people make daily can influence a cascade of events
28 that affect individual and national vulnerability and/or resiliency to climate changes across
29 multiple sectors. This “systems approach” tries to connect, for example, how adaptation and
30 mitigation strategies are themselves dynamic and interrelated systems that intersect with the
31 sectors described here, like the way adaptation plans for future coastal infrastructure are
32 correlated to the kinds of mitigation strategies that are put into place today. These chapters also
33 address the importance of underlying vulnerabilities and the ways they may influence the risks
34 associated with climate change.

35 The chapters in the following section start with an assessment of what is at risk within the
36 selected sectors, and include both observations of existing impacts associated with climate
37 change and impacts that are expected to result from climatic changes projected by climate
38 models.