

Examples of Ecoregion Applications

Air Quality

- Assess nitrogen deposition and terrestrial eutrophication impacts on ecosystem services in conterminous U.S. (Clark et al. 2017).
- Assess critical loads of nitrogen deposition in ecoregions of the conterminous U.S. (Pardo et al. 2011).

Art

- Framework for paintings of the botanical landscapes of Oregon (Stilwell 2014).

Conservation/Natural Communities/Forest and Range Health

- Assess grass reproductive phenology across ecoregions of the western U.S. (Munson and Long 2017).
- Ecoregion framework for state conservation strategy in Oregon (Oregon Dept. Fish and Wildlife 2016).
- Assess species distributions for management of Klamath region natural areas, California and Oregon (Sarr et al. 2015).
- Develop seed zones to improve restoration of native grasses in the western United States (St. Clair and Erickson 2015).
- Framework to assist with defining generalized provisional seed zones for native plants in the conterminous U.S. (Bower et al. 2014).
- Framework for natural communities in Georgia (Edwards et al. 2012).
- Assess ecological conditions and trends, natural and human influences, and opportunities for resource conservation, restoration, and development on land managed by Bureau of Land Management, western U.S. (Strittholt et al. 2012).
- Structure strategies addressing forest-related conditions, trends, threats, and opportunities in Arizona (Arizona State Forestry Division 2010).
- Assess and report on grassland priority conservation areas in North America (CEC and TNC 2005).
- Modified ecoregions as part of global ecoregion framework and conservation efforts of World Wildlife Fund (Olson et al. 2001).
- Ecoregion framework for addressing native plant restoration and native plant seed industry marketing issues (<http://www.nativeseednetwork.org/index>).

Land Cover Change

- Analyze trends, rates, causes, and consequences of land cover change in the conterminous U.S. or parts of the U.S. (Auch et al. 2013, 2011; Drummond et al. 2017, 2015, 2012; Sleeter et al. 2013, 2012).
- Assess carbon sequestration and greenhouse gas fluxes in and out of ecosystems in the conterminous U.S. (Zhu et al. 2014, 2012).
- Assess land cover change on albedo and radiative forcing in the conterminous U.S. (Barnes et al. 2013).

Water Quality

- Set regional water quality standards in Arkansas (Arkansas Pollution Control and Ecology Commission 2017; Rohm et al. 1987).
- Assess regional patterns of stream nitrogen in the conterminous U.S. (Omernik et al. 2016)
- Classifying and reporting stream, river, and lake assessments for the U.S. (US EPA 2016, 2009, 2006; Stoddard 2004).
- Analyze patterns in fish mercury concentrations in reservoirs and lakes in the western United States and Canada (Willacher et al. 2016).
- Develop nationwide benthic macroinvertebrate multimetric indices for conterminous United States (Lau and Lauer 2015).
- Assess variation and current reference for specific conductivity and major ions in streams of the conterminous U.S. (Griffith 2014).

- Assess nonpoint source pollution and lake clarity, set lake management goals and establish nutrient criteria in Minnesota (Olmanson et al. 2014; Heiskary and Lindon 2010; Heiskary and Wilson 2008, 1989).
- To help account for environmental variation and human impact for selecting reference lakes in the U.S. (Herlihey et al. 2013).
- Assess macroinvertebrates in streams in Louisiana (Kaller et al. 2013).
- Assess regional differences in mercury in fishes in South Carolina (Glover et al. 2010)
- Assess factors controlling nitrogen and phosphorus distributions in southeastern U.S. streams (Terziotti et al. 2010; Hoos and McMahon 2009).
- Ecoregions as predictors of aquatic insects in streams in South Carolina (McCreadie and Adler 2006).
- Assess reference nutrient concentrations in Kansas and the U.S. (Dodds and Oakes 2004).
- Stream reference site selection and long-term river monitoring trends of Iowa (Iowa DNR 2001; Griffith et al. 1994).
- Stream reference site selection and water-quality standards in Tennessee (Arnwine and Denton 2001a, 2001b).
- Establish stream biological criteria as part of state water-quality standards in Ohio (Yoder and Rankin 1998,1995).

Wildfire

- Assess patterns in environmental suitability for large forest wildfires in the Pacific Northwest of the U.S. (Davis et al. 2017).
- Analyze changes in wildfire patterns in the Great Plains of the U.S. (Donovan et al. 2017).
- Quantify regional patterns of human influence on fire ignition in the western U.S. (Fusco et al. 2016)
- Assess wildfire trends in western U.S. (Dennison et al. 2014).
- Analyze future climate and fire interactions in the southeastern U.S. (Mitchell et al. 2014).

Wildlife/Bird Conservation

- Framework to quantify regional drivers of wild pig movement in southcentral and southeastern U.S. (Kay et al. 2017).
- Assess patterns of wildlife habitat loss under future land-use scenarios in the southeastern U.S. (Martinuzzi et al. 2015).
- Framework for Georgia's State Wildlife Action Plan; classify breeding bird occurrence in Georgia (Georgia DNR 2015; Schneider et al. 2010).
- Framework for Comprehensive Wildlife Conservation Strategy in Kentucky (Kentucky DFWR 2013).
- Framework for Comprehensive Wildlife Conservation Strategy in Arkansas (Anderson 2006).
- Ecoregional guide to Nebraska birds and birding locations (Farrar 2004).
- Modified ecoregions framework to facilitate regional approach for the North American Bird Conservation Initiative (U.S. North American Bird Conservation Initiative Committee 2000).

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