Comparison of Vegetation Mapping Efforts for the Eastern USA
Project Up-date
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Four vegetation mapping projects that used Ecological Systems as basic mapping targets overlap in the eastern USA: LandFire existing vegetation type (USFS and partners), Northeastern Terrestrial Wildlife Habitat Classification (The Nature Conservancy and partners), Southeast Regional GAP Analysis (SEGAP, USGS and partners), and NatureServe's National Map, which itself is a compilation and modification of the LandFire and SEGAP maps. This project sought to compare and contrast those mapping efforts, and to make recommendations about how users can best apply the maps and how future mapping efforts might best be designed to meet user needs. Although each of these efforts started with Ecological Systems as mapping targets, the final mapped type legend varied widely among efforts, especially in terms of ruderal types and land cover or moisture regime modifiers of types. Basic methods used were conceptually quite similar: a mix of (1) direct classification of units based on plot data using geophysical explanatory variables for classification and (2) direct modeling of types using an overlay of classified pixels and ancillary map data layers such as surface geology, soil map units, and digital elevation model-derived variables. The TNC product used 100-acre hexagons as classification units, whereas other efforts used 30m pixels. TNC then assigned modeled landform patches to types to improve the resolution of the final product to 30m. The LandFire and SEGAP products mapped more anthropogenic-based types. Non-anthropogenic mapped types across all efforts generally represent conceptual vegetation types and do not attempt to define current vegetation composition. Methods for each effort varied across ecoregions or mapping zones, but with the exception of the TNC effort, these varied methods are not well documented. Final results for all maps show difficult to explain seams, and mapped units vary greatly in unpredictable fashion across the landscape. For these reasons, merging map products across broad areas resulted in unpredictable rather than helpful results. Prospects for moving forward depend in part on the planning region of a user (e.g. a state, ecoregion, or larger region). Users can apply existing products as delivered at no cost, can modify existing products, or can create new products. New maps developed within smaller regions (rather than nationally) will come at some cost to users, but if carefully produced, are likely to better meet user's needs. Prospects for up-dates may be more certain for national products versus locally-developed maps.