GAP/LANDFIRE National Terrestrial Ecosystems 2011 Summary Report: Michigan

NVCS Hierarchy Key

Class
Formation
Macrogroup
Ecological System

Land Cover Name	Hectares	Sq. Miles	% Area
Forest & Woodland			
Cool Temperate Forest & Woodland			
Central Midwest Oak Forest, Woodland & Savanna			
North-Central Interior Oak Savanna	21	< 0.1	< 0.01 %
North-Central Interior Dry Oak Forest and Woodland	681,383	1,064.7	1.10 %
North-Central Interior Dry-Mesic Oak Forest and Woodland	143,460	224.2	0.23 %
North-Central Oak Barrens	2,486	3.9	< 0.01 %
Eastern North American Ruderal Forest			
Ruderal forest	12,317	19.2	0.02 %
Managed Tree Plantation	858,587	1,341.5	1.39 %
Laurentian-Acadian Hardwood - Conifer Mesic Forest			
Laurentian-Acadian Northern Hardwoods Forest	7,765,196	12,133.1	12.56 %
Boreal Aspen-Birch Forest	718,551	1,122.7	1.16 %
Laurentian-Acadian Pine-Hemlock-Hardwood Forest	215,432	336.6	0.35 %
Southern & South-Central Oak - Hickory - Pine Forest & Woodland			
Southern Piedmont Dry Oak-(Pine) Forest	13,759	21.5	0.02 %
Laurentian & Acadian Pine - Hardwood Forest & Woodland			
Laurentian Pine-Oak Barrens	805,363	1,258.4	1.30 %
Laurentian-Acadian Northern Pine-(Oak) Forest	477,602	746.3	0.77 %
Central Midwest Mesic Forest			
North-Central Interior Beech-Maple Forest	35,981	56.2	0.06 %
North-Central Interior Maple-Basswood Forest	1,217,291	1,902.0	1.97 %
Temperate Flooded & Swamp Forest			
Central Hardwoods Floodplain Forest			
North-Central Interior and Appalachian Rich Swamp	550,303	859.8	0.89 %
Central Interior and Appalachian Floodplain Systems	983,467	1,536.7	1.59 %
Central Interior and Appalachian Riparian Systems	116	0.2	< 0.01 %
Southern Great Plains Floodplain Forest & Woodland			
Southeastern Great Plains Floodplain Forest	8	< 0.1	< 0.01 %

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Land Cover Name	Hectares	Sq. Miles	% Area
Central Hardwoods Swamp Forest			
North-Central Interior Wet Flatwoods	5,177	8.1	< 0.01 %
Laurentian-Acadian-Northeast Flooded & Swamp Forest			
Laurentian-Acadian Floodplain Systems	680,091	1,062.6	1.10 %
Laurentian-Acadian Swamp Systems	3,364,598	5,257.2	5.44 %
Boreal Forest & Woodland			
West-Central North American Boreal Forest			
Boreal Jack Pine-Black Spruce Forest	206,679	322.9	0.33 %
Boreal White Spruce-Fir-Hardwood Forest	1,225,072	1,914.2	1.98 %
Boreal Flooded & Swamp Forest			
North American Boreal Conifer Poor Swamp			
Boreal-Laurentian Conifer Acidic Swamp and Treed Poor Fen	929,616	1,452.5	1.50 %
North American Boreal Flooded & Rich Swamp			
Eastern Boreal Floodplain	96,892	151.4	0.16 %
Shrub & Herb Vegetation			
Temperate Grassland & Shrubland			
Central Lowlands Tallgrass Prairie			
North-Central Interior Sand and Gravel Tallgrass Prairie	94	0.1	< 0.01 %
Central Tallgrass Prairie	485	0.8	< 0.01 %
Laurentian-Acadian Calcareous Scrub & Grassland			
Great Lakes Alvar	2,890	4.5	< 0.01 %
Central Interior Calcareous Scrub & Grassland			
Central Interior Highlands Calcareous Glade and Barrens	23	< 0.1	< 0.01 %
Central-Piedmont Acidic Scrub & Grassland			
Central Interior Highlands Dry Acidic Glade and Barrens	8	< 0.1	< 0.01 %
Temperate to Polar Scrub & Herb Coastal Vegetation			
Eastern North American Dune & Coastal Grassland			
Great Lakes Dune	5,954	9.3	< 0.01 %
Temperate to Polar Freshwater Marsh, Wet Meadow & Shrubland			
Eastern North American Marsh, Wet Meadow & Shrubland			
Great Lakes Wet-Mesic Lakeplain Prairie	1,438	2.2	< 0.01 %
Great Lakes Coastal Marsh Systems	16,973	26.5	0.03 %
Central Interior and Appalachian Shrub-Herbaceous Wetland Systems	70,757	110.6	0.11 %
Great Plains Marsh, Wet Meadow, Shrubland & Playa			
Great Plains Prairie Pothole	802	1.3	< 0.01 %
Agricultural & Developed Vegetation			
Woody Horticultural Crop			
Woody Horticultural Crop			
Orchards Vineyards and Other High Structure Agriculture	137,561	214.9	0.22 %
Row & Close Grain Crop Cultural Formation			
Herbaceous Agricultural Vegetation			
Cultivated Cropland	7,686,003	12,009.4	12.43 %
Pasture & Hay Field Crop			

Land Cover Name	Hectares	Sq. Miles	% Area
Pasture & Hay Field Crop			
Pasture/Hay	2,454,424	3,835.0	3.97 %
## Developed & Other Human Use			
Developed & Urban			
Developed & Urban			
Developed, Low Intensity	794,275	1,241.1	1.28 %
Developed, High Intensity	1,593,351	2,489.6	2.58 %
Developed, Medium Intensity	301,587	471.2	0.49 %
Developed, Open Space	1,292,353	2,019.3	2.09 %
Current and Historic Mining Activity			
Quarries, Mines, Gravel Pits and Oil Wells			
Quarries, Mines, Gravel Pits and Oil Wells	40,093	62.6	0.06 %
## Introduced & Semi Natural Vegetation			
Introduced & Semi Natural Vegetation			
Introduced & Semi Natural Vegetation			
Introduced Upland Vegetation - Perennial Grassland and Forbland	12	< 0.1	< 0.01 %
Modified/Managed Southern Tall Grassland	233	0.4	< 0.01 %
Introduced Upland Vegetation - Treed	< 1	< 0.1	< 0.01 %
## Recently Disturbed or Modified			
Recently Disturbed or Modified			
Recently Disturbed or Modified			
Harvested Forest - Grass/Forb Regeneration	705,463	1,102.3	1.14 %
Disturbed, Non-specific	181,130	283.0	0.29 %
Recently burned grassland	33,245	51.9	0.05 %
## Open Water			
Open Water			
Open Water			
Open Water (Fresh)	25,534,164	39,897.1	41.29 %

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GAP/LANDFIRE National Terrestrial Ecosystems 2011 - Ecological Systems

Summary
The GAP/LANDFIRE National Terrestrial Ecosystems represents a highly thematically detailed land cover map of the U.S. The GAP/LANDFIRE National Terrestrial Ecosystems dataset is produced by the U.S. Geological Survey in collaboration with the LANDFIRE Program. The GAP produces data and tools that help meet critical national challenges such as biodiversity conservation, renewable energy development, climate change adaptation, and infrastructure investment. Learn more about GAP and other GAP data (including protected areas and species habitat maps) at https://gapanalysis.usgs.gov. https://gapanalysis.usgs.gov/gaplandcover/data.

Abstract
This layer represents the finest level of thematic detail for the GAP/LANDFIRE National Terrestrial Ecosystems 2011 land cover. This data layer is the 2011 update of the National Gap Analysis Program Land Cover Data - Version 2.2 for the conterminous U.S. The map legend includes types described by NatureServe's Ecological Systems Classification (Comer et al. 2003) as well as land use classes described in the National Land Cover Dataset 2011 (Homer et al. 2015). These data cover the entire continental U.S. and are a continuous data layer. These raster data have a 30 m x 30 m cell resolution.

Comer, P., D. Faber-Langendoen, R. Evans, S. Gawler, C. Josse, G. Kittel, S. Menard, M. Pyne, M. Reid, K. Schulz, K. Snow, and J. Teague. 2003. Ecological Systems of the United States: A Working Classification of U.S. Terrestrial Systems. NatureServe, Arlington, Virginia.

Homer, C.G., Dewitz, J.A., Yang, L., Jin, S., Danielson, P., Xian, G., Coulston, J., Herold, N.D., Wickham, J.D., and Megown, K., 2015, Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354.

USGS National Boundary Dataset

Summary
The USGS Governmental Unit Boundaries dataset from The National Map (TNM) represents major civil areas for the Nation, including States or Territories, counties (or equivalents), Federal and Native American areas, congressional districts, minor civil divisions, incorporated places (such as cities and towns), and unincorporated places. Boundaries data are useful for understanding the extent of jurisdictional or administrative areas for a wide range of applications, including mapping or managing resources, and responding to natural disasters. Boundaries data also include extents of forest, grassland, park, wilderness, wildlife, and other reserve areas useful for recreational activities, such as hiking and backpacking. Boundaries data are acquired from a variety of government sources. The data represents the source data with minimal editing or review by USGS. Please refer to the feature-level metadata for information on the data source. The National Map boundaries data is commonly combined with other data themes, such as elevation, hydrography, structures, and transportation, to produce general reference base maps. The National Map viewer allows free downloads of public domain boundaries data in either Esri File Geodatabase or Shapefile formats. For additional information on the boundaries data model, go to https://nationalmap.gov/boundaries.html.

Compiled: 01/18/2017

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