GDB_ANR_DDEV.ANR_ADMIN.LandUseLandCover

SDE Feature Class

Thumbnail Not Available

Tags
Lakes, Land Use, Land Cover, LULC

Summary

This lakeshore LULC layer provides detailed land-cover data for selected lakes in Vermont and can be used for a variety of potential analyses, including habitat modeling and lakeshore-prioritization for conservation. It is important, however, that users understand how LULC was mapped as part of this project. For example, the 'Urban' category includes not only structures but the developed land surrounding those structures, such as lawns. As a result, this category should not be considered a precise surrogate for imperviousness. Users are encouraged to refine the classification system by either increasing the minimum mapping unit or adding finer LULC classes.

Description

This layer feature class shows Land Use/Land Cover (LULC) for 96 Vermont lakes, mapped within a 600-meter buffer around each lake. It also includes LULC for 14 lakes mapped within a 100-ft (30.479 m) buffer. The additional 14 lakes (05/2010) are a subset of 51 lakes randomly selected by Water Quality VTDEC in order to statistically draw conclusion about the health of VT's lakes; 21 were mapped during the 2009 Wildife Action Plan. The remaining 16 randomly selected lakes still needing LCLU mapped are included in this dataset. The features in this LULC layer are mapped to an Anderson Level 1 classification scheme (Anderson et al, 1976), with selected classes further refined to Levels 2 and 3, resulting in 14 classes. The 14-class system generally adheres to the Vermont Center for Geographic Information's (VCGI) LULC standards (http://www.vcgi.org/techres/standards/partii_section_c.pdf). The 14 classes are: Urban-General (10), Urban-Transportation (14), Agriculture-General (2), Agriculture-Hay/Crop (21), Agriculture-Orchards (22) Brush (3), Forest-Deciduous (41), Forest-Coniferous (42), Forest-Mixed (43), Water (5), Wetland-Forested (61), Wetland-Emergent (623) Wetland-Scrub/Shrub (624), and Barren (7). For a complete description of the LULC classes please refer to the 'Entity and Attribute Information' section of the metadata.

The minimum mapping unit (MMU) for all features is approximately 0.1 hectares. Features smaller than the MMU were grouped with surrounding features.

All mapping was performed using the Vermont Mapping Program's (VMP) 0.5-meter 1:5000 panchromatic aerial digital orthophotographs as the primary base data. Most lakes were mapped using orthophotographs from the VMP set dating from the 1990s, but 11 lakes in central Vermont (Berlin Pond, Lake Fairlee, Lake Dunmore, Bresee Pond, Spruce Pond, Doughty Pond, Black Pond, Half Moon Pond, Lake Bomoseen, Glen Lake, Billings Marsh) were mapped using the set dating from the 2000s. Because the VMP orthophotographs were outdated in some cases, photointerpretation was supplemented using the USDA's 2003 1-meter color digital orthophotographs gathered as part of the National Agricultural Imagery Program (NAIP). NAIP orthophotographs were not used as the base data because they have a lower spatial accuracy (approximately 1:40,000 scale). Thus, this lakeshore LULC layer should be considered accurate to a scale of 1:5000 and current as of August 2003. Note, however, that existing LULC maps for three lakes (Lower Symes Pond, Neal Pond, Lake Rescue) were modified with new NAIP orthophotographs dating from 2008 and made available shortly before this particular iteration of the lakeshore database was finalized. Land-cover changes were known to have occurred at these lakes, and thus the 2008 photographs were used to update existing LULC boundaries.

LULC class assignment was primarily based on analyst recognition and photointerpretation keys. To aid in interpretation ancillary data layers were used including: E911 road centerlines, driveway centerlines, and housing points (urban features); USDA Common Land Unit (CLU)

polygons (agricultural features, particularly hay/crop fields); NRCS soils inventory hydric soils polygons (possible presence of wetlands); Vermont Significant Wetlands Inventory data (wetland locations); and Mineral Resource Data Systems points (locations of mines, quarries, and gravel pits).

Please refer to the 'Supplementary Information" section of the metadata for more information on the history of the project.

Credits
UVM Spatial Analysis Laboratory

Use limitations
This dataset must not be re-distributed without consent, displayed in any public document or presentation, or used in any way that compromises management or conservation.

Extent
There is no extent for this item.

Scale Range
There is no scale range for this item.

You are currently using the Item Description metadata style. Change your metadata style in the Options dialog box to see additional metadata content.