

# nla2007\_landcover

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*16 May 2017*

## Introduction

- This document (nla2007\_landcover.pdf) describes the process of extracting the landuse/landcover (LULC) data for the 2007 National Lake Assessment Sites.
- Landuse/Landcover data were extracted from the 2006 NLCD with the rscript calcNLCD\_ByLakeBuffer.R
- For each lake the area (Km2) and percent of each Land Use/Land Cover classes in four buffers were estimated. The buffer sizes were:
  - 300m
  - 1500m
  - 3000m
  - MaxDist: a variable width buffer corresponding to the maximum open water distance in the lake (see the field MaxDist).
- The LULC data were extracted from an R dataset on Github: LakeTrophicModelling.rda
- These data were used for a paper in Ecosphere and you can use this as a citation for the data.
- The table below shows the LULC codes and definitions.

Code	Label	Definition
0	Zero	Not sure what this means yet. Not in the metadata. Probably means missing value.
11	Water	Open Water - All areas of open water, generally with less than 25% cover or vegetation or soil
12	IceSnow	Perennial Ice/Snow - All areas characterized by a perennial cover of ice and/or snow, generally greater than 25% of total cover.
21	DevOpen	Developed, Open Space - Includes areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20 percent of total cover. These areas most commonly include large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.
22	DevLow	Developed, Low Intensity -Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20-49 percent of total cover. These areas most commonly include single-family housing units.
23	DevMed	Developed, Medium Intensity - Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50-79 percent of the total cover. These areas most commonly include single-family housing units.
24	DevHigh	Developed, High Intensity - Includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses and commercial/industrial. Impervious surfaces account for 80 to 100 percent of the total cover.

Code	Label	Definition
31	Barren	Barren Land (Rock/Sand/Clay) - Barren areas of bedrock, desert pavement, scarps, talus, slides, volcanic material, glacial debris, sand dunes, strip mines, gravel pits and other accumulations of earthen material. Generally, vegetation accounts for less than 15% of total cover.
41	Deciduous	Deciduous Forest - Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75 percent of the tree species shed foliage simultaneously in response to seasonal change.
42	Evergreen	Evergreen Forest - Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75 percent of the tree species maintain their leaves all year. Canopy is never without green foliage.
43	MixedFor	Mixed Forest - Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. Neither deciduous nor evergreen species are greater than 75 percent of total tree cover.
52	Shrub	Shrub/Scrub - Areas dominated by shrubs; less than 5 meters tall with shrub canopy typically greater than 20% of total vegetation. This class includes true shrubs, young trees in an early successional stage or trees stunted from environmental conditions.
71	Grass	Grassland/Herbaceous - Areas dominated by grammanoid or herbaceous vegetation, generally greater than 80% of total vegetation. These areas are not subject to intensive management such as tilling, but can be utilized for grazing.
81	Pasture	Pasture/Hay - Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay vegetation accounts for greater than 20 percent of total vegetation.
82	Crops	Cultivated Crops - Areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20 percent of total vegetation. This class also includes all land being actively tilled.
90	WoodyWet	Woody Wetlands - Areas where forest or shrub land vegetation accounts for greater than 20 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water.
95	HerbWet	Emergent Herbaceous Wetlands - Areas where perennial herbaceous vegetation accounts for greater than 80 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water.
NA	OutsideBuf	These are pixels from the cropped grid that are outside the mask (buffer) area. Ignore.

- Variable names are a combination of the “Label” in the table above, “Per”(percent of buffer represented), “Km2” (area in Km2 of buffer represented) and the buffer width.
- Also included are the variables
  - NLA\_ID: the unique NLA identifier for the lake
  - COMID: the NHDplus comid for the lake
  - MaxDist: the maximum open water distance in the lake (m).
- data were saved in csv format and can be downloaded from github: [nla\\_2007\\_landcover.csv](#)