



# SMAPVEX12 Land Cover Classification Map, Version 1

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## USER GUIDE

### How to Cite These Data

As a condition of using these data, you must include a citation:

McNairn, H., J. Powers, and G. Wiseman. 2014. *SMAPVEX12 Land Cover Classification Map, Version 1*. [Indicate subset used]. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center. <https://doi.org/10.5067/4FRNSHRF3TRY>. [Date Accessed].

FOR QUESTIONS ABOUT THESE DATA, CONTACT [NSIDC@NSIDC.ORG](mailto:NSIDC@NSIDC.ORG)

FOR CURRENT INFORMATION, VISIT <https://nsidc.org/data/SV12LC/>



National Snow and Ice Data Center

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# 1 DATA DESCRIPTION

This data set consists of land cover classification data derived from satellite imagery as part of the Soil Moisture Active Passive Validation Experiment 2012 (SMAPVEX12). Images from the RADARSAT-2, Système Pour l'Observation de la Terre (SPOT-4), and DMC International Imaging Ltd (DMCii) of the study area were retrieved for the summer of 2012. The land use classification image provides information about vegetation present in the study area at a resolution of 20 meters.

## 1.1 Parameters

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This data set's parameter, land cover classification, distinguishes between crop types, water, roads, and urban areas. Class values range between 0 and 220. Table 1 lists the existing class values and their names:

Table 1. Land Cover Classification Designations

<b>Class Code</b>	<b>Class Name</b>
0	Unclassified
20	Water
30	Barren
34	Urban
50	Shrubland
80	Wetland
110	Grassland
122	Forage Crops
131	Fallow
133	Barley
136	Oats
137	Rye
139	Triticale
146	Wheat
147	Corn
153	Canola/Rapeseed
154	Flaxseed
157	Sunflowers
158	Soybeans
162	Peas
177	Potatoes
179	Other Vegetables
181	Berries
194	Nursery
220	Broadleaf

## File Information

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### 1.1.1 Format

Data are provided in a single Georeferenced Tagged Image File Format (GeoTIFF) called SV12LC\_SMAPVEX\_2012\_Crop\_Map.tif.

## 1.2 Spatial Information

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### 1.2.1 Coverage

Southernmost Latitude: 49.31°N  
 Northernmost Latitude: 50.21°N  
 Westernmost Longitude: 98.97°W  
 Easternmost Longitude: 98.27°W

### 1.2.2 Resolution

20 m

### 1.2.3 Geolocation

#### Projection

Universal Transverse Mercator (UTM)

#### Grid Description

Data are on a rectangular grid. Table 2 describes the grid properties.

Table 2. Grid Properties

Lower Left Corner	502067 Easting
Lower Left Corner	5461729 Northing
Pixel Size in East-West Direction	20 m
Pixel size in North-South direction	20 m
Number of Pixels	5099 x 6061
Projection	UTM Zone 14U

## 1.3 Temporal Information

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### 1.3.1 Coverage

Satellite images used for this product were collected between 07 June and 19 July 2012.

## 2 DATA ACQUISITION AND PROCESSING

### 2.1 Processing

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The land cover map was produced from a supervised classification of imagery acquired by SPOT-4, DMCii, and RADARSAT-2.

## 3 SOFTWARE AND TOOLS

Various software packages can be used to read the GeoTIFF data file, such as ArcGIS and MATLAB.

## 4 CONTACTS AND ACKNOWLEDGMENTS

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## 5 REFERENCES

McNairn, H., T. Jackson, G. Wiseman, S. Belair, A. Berg, P. Bullock, A. Colliander, M. Cosh, S. Kim, R. Magagi, M. Moghaddam, J. Adams, S. Homayouni, E. Ojo, T. Rowlandson, J. Shang, K. Goita, and M. Hosseini. 2013. The Soil Moisture Active Passive Validation Experiment 2012 (SMAPVEX12): Pre-Launch Calibration and Validation of the SMAP Satellite. *IEEE Trans. Geosci. Rem. Sens.*

## 6 DOCUMENT INFORMATION

### 6.1 Publication Date

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March 2014

### 6.2 Date Last Updated

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