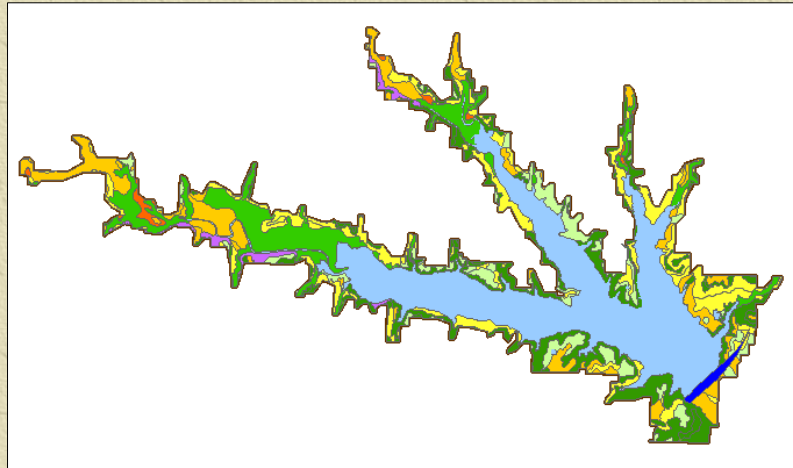
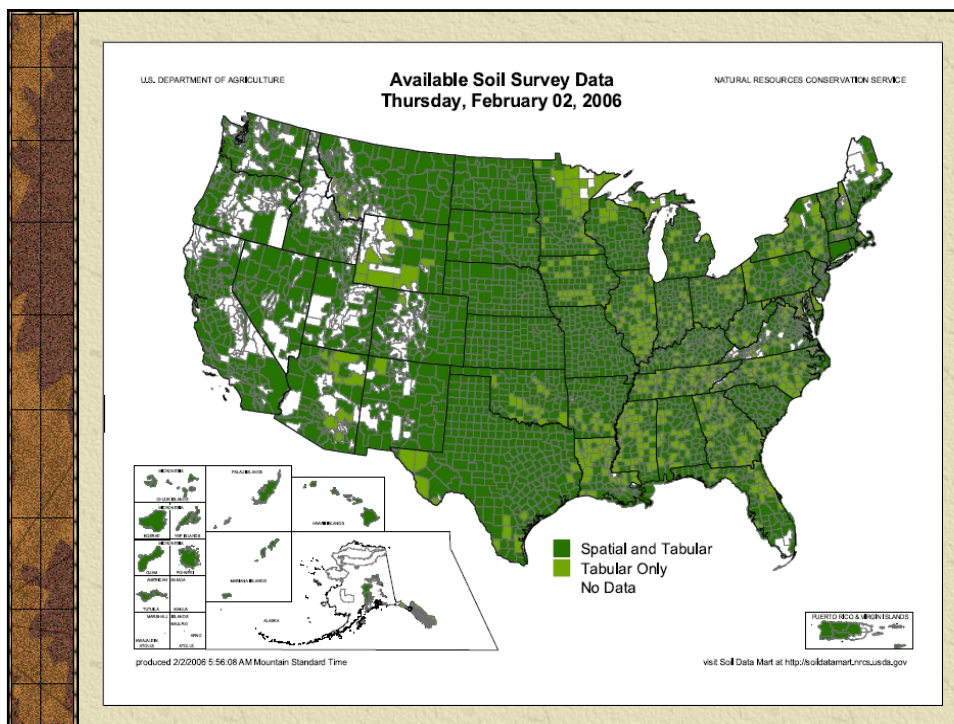


## THE DIRT ON OMBIL SOILS CAPABILITY INVENTORY



### Soils Capability Classes

- 
- ✘ 1- Few limitations that restrict their use.
  - ✘ 2- Some limitations that reduce the choice of plants or require moderate conservation practices.
  - ✘ 3- Severe limitations that reduce the choice of plants or require moderate conservation practices.
  - ✘ 4- Can be used for cultivation but there are severe limitations on the choice of crops.
  - ✘ 5- Not likely to erode but have other limitations that limit their use.
  - ✘ 6- Severe limitations that make them unsuitable for cultivation.
  - ✘ 7- Very severe limitations that make them unsuitable for cultivation.
  - ✘ 8- Should not be used for any kind of commercial plant production.



## Soil Data Mart

<http://soildatamart.nrcs.usda.gov/>

United States Department of Agriculture  
Natural Resources Conservation Service

**Soil Data Mart**

Home | Select State | State Contacts | Template Databases | SSURGO Metadata | Login/Register | Help

Welcome to the Soil Data Mart! The Soil Data Mart allows you to:

- Determine where soil tabular and spatial data is available.
- Download data for one soil survey area at a time. (Download requests for more than one survey area at a time can be submitted through the [Geospatial Data Gateway](#). Going through the Geospatial Data Gateway also provides the option to obtain data on CD or DVD.)
- Download a template Microsoft Access® database for working with downloaded data.
- Generate a variety of reports for one soil survey area at a time.
- Find out who to contact for information about soil data for a particular state.
- "Subscribe" or "unsubscribe" to a soil survey area. A person who is subscribed will automatically be notified whenever data for that survey area is updated. You must register and login before doing this.

An alternative presentation of the soil survey area data contained in the Soil Data Mart, including on screen or printed soil maps and survey area manuscripts, when they exist for the corresponding survey area, is available through [Web Soil Survey](#).

Please either select from the list of options across the top of the page, or to request a download or generate reports, begin by selecting a state or territory.

Select State

Soil Data Availability Map - PDF Format      Soil Data Availability Map - JPG Format

The Soil Data Mart may be unavailable on Tuesdays from 5 to 7 p.m. Mountain time due to maintenance activities.

The Soil Data Mart has been tested under Mozilla Firefox® 1.0 and later, Microsoft Internet Explorer® 5.0 and later, and Netscape Navigator® 4.7 and later for Microsoft Windows®. There are differences in site navigation and mechanics under different versions of these browsers. Some differences are more significant than others. There are some major differences under Netscape Navigator® 4.7 and 4.0. For details on site navigation and mechanics under different versions of these browsers, please see [Navigating and Using the Soil Data Mart on the Soil Data Mart Help page](#).

The Soil Data Mart provides an entry point to allow its pages to be integrated easily into other web sites. [Get detailed information.](#)

▲ Back to Top      FOIA | Information Quality | Accessibility Statement | Privacy Policy | Non-Discrimination Statement  
White House | FirstGov | USDA | NRCS | NRCS Soils | Disclaimer | Contact Us

## Select State

Back Search Favorites Go Links  
 Address http://soildatamart.nrcs.usda.gov/State.aspx

United States Department of Agriculture  
**NRCS** Natural Resources Conservation Service  
 Home Select State State Contacts Template Databases SSURGO Metadata Logon/Register Help

Soil Data Mart

Please select a state or territory with at least one survey area:

State or Territory Code	State or Territory Name	Available Survey Areas
GA	Georgia	35
HI	Hawaii	6
ID	Idaho	42
IL	Illinois	101
IN	Indiana	91
IA	Iowa	99
KS	Kansas	104
KY	Kentucky	83
LA	Louisiana	64
ME	Maine	15
MD	Maryland	25
MA	Massachusetts	19
MI	Michigan	78
MN	Minnesota	86
MS	Mississippi	82
MO	Missouri	114
MT	Montana	58
NE	Nebraska	92
NV	Nevada	39
NH	New Hampshire	10
NJ	New Jersey	20
NM	New Mexico	39

Select County Select Survey Area

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## Select County

Back Search Favorites Go Links  
 Address http://soildatamart.nrcs.usda.gov/County.aspx?State=KS

United States Department of Agriculture  
**NRCS** Natural Resources Conservation Service  
 Home Select State State Contacts Template Databases SSURGO Metadata Logon/Register Help

Soil Data Mart

Please select a county or parish with at least one survey area:

County Code	County Name	Available Survey Areas
KS131	Nemaha	1
KS133	Neosho	1
KS135	Ness	1
KS137	Norton	1
KS139	Osage	1
KS141	Osborne	1
KS143	Ottawa	1
KS145	Pawnee	1
KS147	Phillips	1
KS149	Pottawatomie	1
KS151	Pratt	1
KS153	Ravins	1
KS155	Reno	1
KS157	Republic	1
KS159	Rice	1
KS161	Riley	1
KS163	Rooks	1
KS165	Rush	1
KS167	Russell	1
KS169	Saline	1

Select Survey Area Select State

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## Select Survey Area

United States Department of Agriculture  
**NRCS** Natural Resources Conservation Service  
 Osage County Kansas  
**Soil Data Mart**

Please select a soil survey area:

Survey Area Symbol	Survey Area Name	Available Data
KS139	Osage County, Kansas	Tabular and Spatial

View Metadata Download Data Generate Reports Subscribe  
 Select State Select County

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## Download Data

United States Department of Agriculture  
**NRCS** Natural Resources Conservation Service  
 KS139 - Osage County, Kansas  
 Osage County Kansas  
**Soil Data Mart**

Please select the class of data you wish to download: ( Survey Area Version 2 , Tabular Version 2 , Spatial Version 1 )

Tabular Data Only  Tabular and Spatial Data  Spatial Data Only  Template Database Only

Please select a spatial format: ArcView Shapefile Please select a coordinate system: UTM Zone 16, Northern Hemisphere (NAD 83) Reset Default

Please select a template database (optional): Clear Selection

State	MS Access Version	Template DB Version	Template DB Name	Size
US	Access 2002	32	soildb_US_2002	1.7M
US	Access 2000	32	soildb_US_2000	1.7M
US	Access 97	32	soildb_US_97	1.6M
US	Access 2002	31	soildb_US_2002	1.8M

**Description:** This is the national SSURGO Template Database for Microsoft Access 2002/2003. This database should be used only when no state specific customized SSURGO Template Database is available. This database is compatible with Soil Data Viewer 5.0.

Please enter your e-mail address:

Submit Request See Disclaimer  
 Select Survey Area View Metadata Generate Reports Subscribe

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## Files Downloaded from Soils Data Mart

Name	Size	Type	Date Modified
spatial		File Folder	2/2/2006 7:11 AM
tabular		File Folder	2/2/2006 7:11 AM
readme.txt	6 KB	Text Document	2/2/2006 7:10 AM
soil_metadata_ks139.txt	47 KB	Text Document	2/2/2006 7:11 AM
soil_metadata_ks139.xml	39 KB	XML Document	2/2/2006 7:11 AM
soildb_US_2002.zip	1,685 KB	Compressed (zippe...)	2/2/2006 7:10 AM

## Soil Data Viewer (software to view soils data)

<http://soildataviewer.nrcs.usda.gov/download.aspx>

**USDA** United States Department of Agriculture  
Natural Resources Conservation Service

### Soil Data Viewer

Home Contact Us

#### Download and Install Soil Data Viewer 5.0

This page allows you to download the Soil Data Viewer 5.0 installation package **for non-USDA Common Computing Environment (CCE) platforms**. The non-USDA CCE audience includes, but is not limited to, cooperators, consultants, educational institutions, technical service providers and the general public.

If you need to obtain Soil Data Viewer 5.0 for a USDA CCE platform, you must obtain that download from the USDA Common Computing Environment Team Services website. The installation package available here will refuse to install Soil Data Viewer 5.0 on a USDA CCE platform.

The functionality of the USDA CCE version of Soil Data Viewer 5.0 and the non-USDA CCE version of Soil Data Viewer 5.0 is identical. Only the installation packages differ.

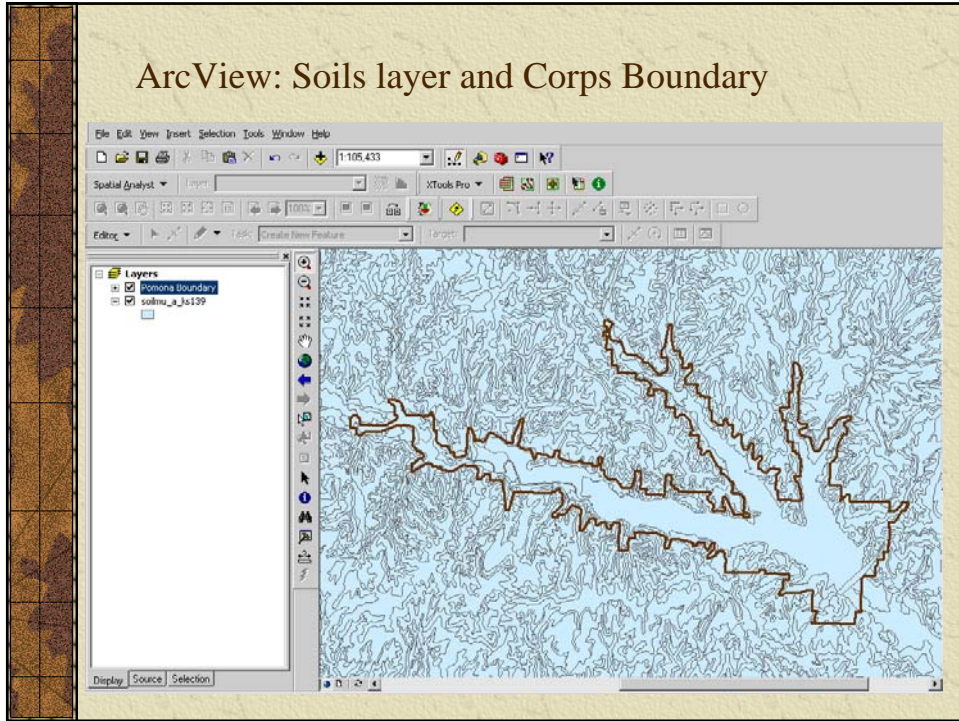
[Soil Data Viewer 5.0 Platform Requirements](#)  
[Installing Soil Data Viewer 5.0 on a non-USDA CCE Platform](#)  
[Obtaining and Preparing Data for use with Soil Data Viewer 5.0](#)

**I Want To...**

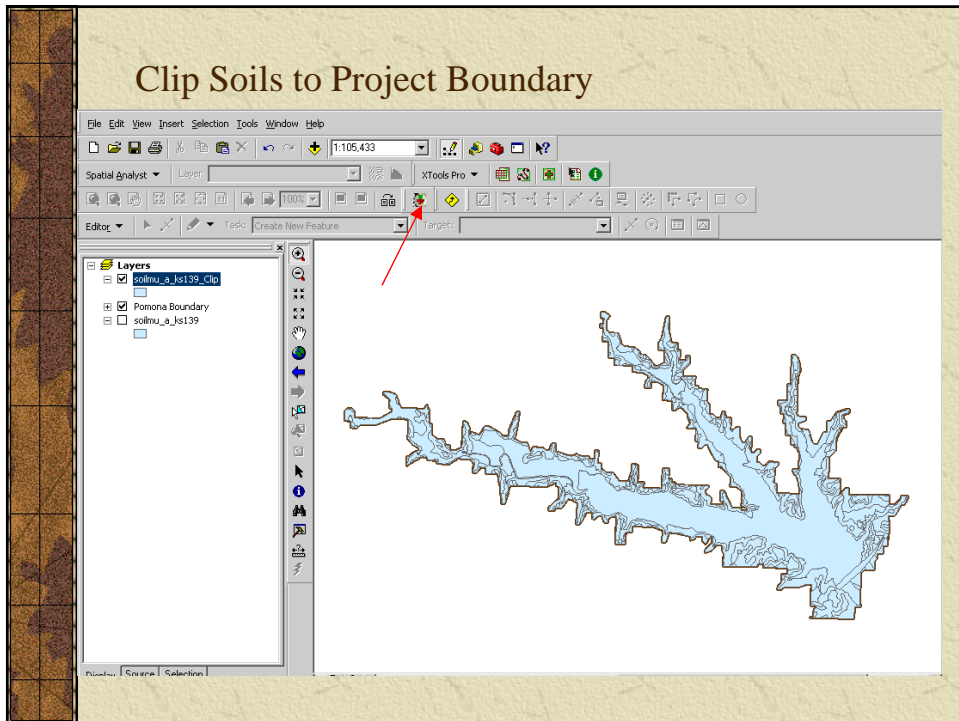
- Subscribe to the Soil Data Viewer News
- Unsubscribe to the Soil Data Viewer News
- Browse the Soil Data Viewer Online User Guide
- Browse the Supplemental Documents Available for Soil Data Viewer

**Soil Data Viewer 5.0 Platform Requirements**

## ArcView: Soils layer and Corps Boundary



## Clip Soils to Project Boundary





## Non-Irrigated Capacity Class

Soil Data Viewer - ArcMap

File View Help

Attribute Folders

- [-] Building Site Development
- [-] Construction Material
- [-] Cropland Management
- [-] Ecological Sites
- [-] Forest Management
- [-] Grazing Land Management
- [-] Interpretative Groups
  - [-] Farmland Classification
  - [-] Irrigated Capacity Class
  - [-] Irrigated Capacity Subclass
  - [-] Map Unit Hydric Rating
  - [-] Nonirrigated Capacity Class
  - [-] Nonirrigated Capacity Subclass
- [-] Recreation
- [-] Sanitary Facilities
- [-] Soil Erosion Factors
- [-] Soil Physical Properties
- [-] Soil Qualities and Features
- [-] Waste Management
- [-] Water Features
- [-] Water Management

Attribute/Folder Description | Rating Options | Report Options

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations that show suitability and limitations of groups of soils for rangeland, for woodland, and for engineering purposes.

In the capability system, soils are generally grouped at three levels - capability class, subclass, and unit. Only class and subclass are included in this dataset.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have few limitations that restrict their use.

Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

## Generate Map

Soil Qualities and Features

- [-] Waste Management
- [-] Water Features
- [-] Water Management

Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Basic Mode  Advanced Mode

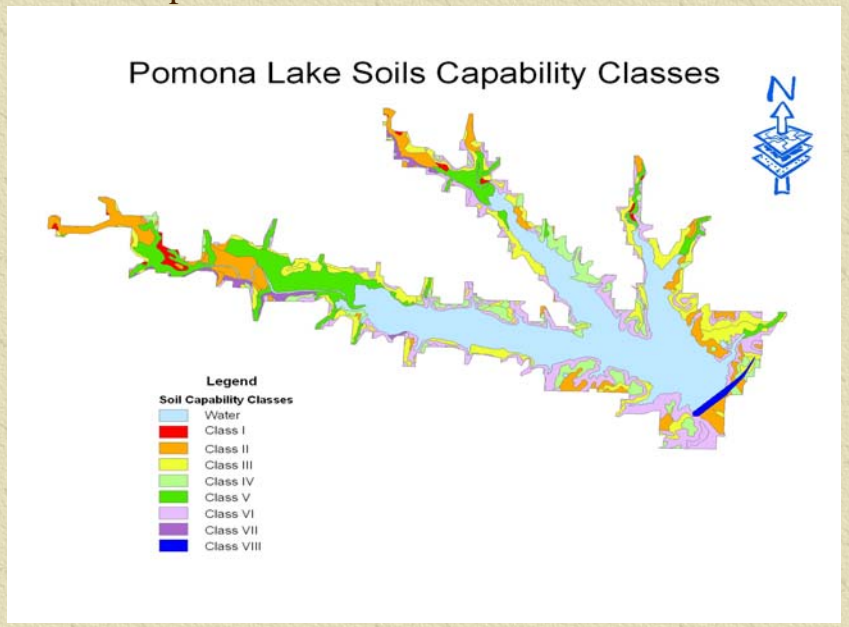
Generate Report  Generate Map  Synchronize  Clear Themes

Synchronization Status: All map units in sync.

Map Layer: K:\projects\pogis\soils\vest\soil\_ks139\soil\_ks139\spatial\soilmu\_a\_ks139\_Clipnoz1.shp  soilmu\_a\_ks139\_Clipnoz1

Database: K:\projects\pogis\soils\vest\soil\_ks139\soil\_ks139\soildb\_US\_2002\soildb\_KS139.mdb

## Final Map



## Calculate Acreages

MUSYM	HPRCLD	CLASS_DEF	Acres
Vb	2	Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.	115.585133
Vb	2	Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.	225.013296
Cn	6	Class VI soils have severe limitations that make them generally unsuitable for cultivation.	25.026826
So	3	Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.	4.659294
Vb	2	Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.	44.412366
Cn	6	Class VI soils have severe limitations that make them generally unsuitable for cultivation.	7.771589
Ls	6	Class VI soils have severe limitations that make them generally unsuitable for cultivation.	17.117859
So	3	Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.	0.754018
So	3	Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.	1.134566
Dn	3	Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.	0.202477
Vb	2	Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.	18.127573
Lu	2	Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.	0.784097
Cn	6	Class VI soils have severe limitations that make them generally unsuitable for cultivation.	194.672922
Vc	5	Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use.	46.197640
Ls	6	Class VI soils have severe limitations that make them generally unsuitable for cultivation.	0.242834
Ls	6	Class VI soils have severe limitations that make them generally unsuitable for cultivation.	4.536151
Mb	1	Class I soils have few limitations that restrict their use.	4.008603
Mb	1	Class I soils have few limitations that restrict their use.	0.741461
Dn	3	Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.	1.059740
Ke	3	Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.	0.025071
Ls	6	Class VI soils have severe limitations that make them generally unsuitable for cultivation.	12.707592
So	3	Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.	66.376813
En	4	Class IV soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.	4.634745
Ln	7	Class VII soils have very severe limitations that make them unsuitable for cultivation.	44.548343
En	4	Class IV soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.	0.956261

Record: 1 | Show: All Selected | Records: (0 out of 273 Selected) | Options



## Input Data for OMBIL

---

Capability	Class Count	Sum of Acres
	4	3882.9397
1	11	94.5273
2	52	1153.1103
3	70	1410.6979
4	51	734.3428
5	23	1296.6879
6	56	1702.5415
7	5	145.7304
8	1	77.7681
	<b>Total</b>	10498.3459

## Requirements

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- ✦ Computer with Windows XP
- ✦ ArcView 8.3 or 9.X
- ✦ Soil Data Viewer v5.0
- ✦ Accurate ArcView file of the Lake's project boundary
- ✦ Basic knowledge of ArcView

## Sources for Help and Information

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- ✦ Soil Data Viewer  
<http://www.itc.nrcs.usda.gov/soildataviewer>
- ✦ Soil Data Mart  
<http://soildatamart.nrcs.usda.gov/>
- ✦ Dorn Egley (NRCS) [Dorn.Egley@ftc.usda.gov](mailto:Dorn.Egley@ftc.usda.gov)
- ✦ Kim Penner [kimberly.g.penner@usace.army.mil](mailto:kimberly.g.penner@usace.army.mil)
- ✦ State Conservation Service  
[http://soils.usda.gov/contact/state\\_offices/](http://soils.usda.gov/contact/state_offices/)