# SSURGO soils, Onondaga County NY

This is a human-readable view of the FGDC XML metadata

- Identification\_Information
- **Data Quality Information**
- Spatial Data Organization Information
- Spatial\_Reference\_Information
- Entity and Attribute Information
- Distribution Information
- Distribution\_Information Metadata\_Reference\_Information

#### Identification\_Information

#### Citation:

Citation Information:

Originator: U.S. Department of Agriculture, Natural Resources Conservation Service

Publication\_Date: 20160924

Title: SSURGO soils, Onondaga County NY Geospatial\_Data\_Presentation\_Form: vector digital data

Series\_Information:
Series\_Name: Soil Survey Geographic (SSURGO) database
Issue\_Identification: Onondaga County NY

Publication\_Information:

Publication\_Place: Fort Worth, Texas

Publisher: U.S. Department of Agriculture, Natural Resources Conservation Service Online\_Linkage: https://cugir.library.cornell.edu/catalog/cugir-007760

Online\_Linkage: https://websoilsurvey-dev.dev.sc.egov.usda.gov/

#### Description:

Abstract:

This data set is a digital soil survey and generally is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey. The information was prepared by digitizing maps, by compiling information onto a planimetric correct base and digitizing, or by revising digitized maps using remotely sensed and other information.

This data set consists of georeferenced digital map data and computerized attribute data. The map data are in a soil survey area extent format and include a detailed, field verified inventory of soils and miscellaneous areas that normally occur in a repeatable pattern on the landscape and that can be cartographically shown at the scale mapped. A special soil features layer (point and line features) is optional. This layer displays the location of features too small to delineate at the mapping scale, but they are large enough and contrasting enough to significantly influence use and management. The soil map units are linked to attributes in the National Soil Information System relational database, which gives the proportionate extent of the component soils and their properties



Information Repository

Purpose: SSURGO depicts information about the kinds and distribution of soils on the landscape. The soil map and data used in the SSURGO product were prepared by soil scientists as part of the National Cooperative Soil Survey.

Supplemental\_Information: Digital versions of hydrography, cultural features, and other associated layers that are not part of the SSURGO data set may be available from the primary organization listed in the Point of Contact.

Time\_Period\_of\_Content:
Time\_Period\_Information:

Range\_of\_Dates/Times:

Beginning\_Date: 20040120 Ending\_Date: 20160924 Currentness\_Reference: publication date

Progress: Complete

Maintenance\_and\_Update\_Frequency: As needed

Spatial\_Domain:

Bounding\_Coordinates:

West\_Bounding\_Coordinate: -76.499499 East\_Bounding\_Coordinate: -75.896105 North\_Bounding\_Coordinate: 43.271606 South\_Bounding\_Coordinate: 42.771239

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: None

Theme\_Keyword: soil survey

Theme Keyword: soils

Theme\_Keyword\_Thesaurus: CUGIR Category

Theme Keyword: geology

Place\_Keyword\_Thesaurus: USGS Geographic Names Information System (GNIS)

Place\_Keyword: Onondaga County
Access Constraints: None

The U.S. Department of Agriculture, Natural Resources Conservation Service, should be acknowledged as the data source in products derived from these data.

This data set is not designed for use as a primary regulatory tool in permitting or citing decisions, but may be used as a reference source. This is public information and may be interpreted by organizations, agencies, units of government, or others based on needs; however, they are responsible for the appropriate application. Federal, State, or local regulatory bodies are not to reassign to the Natural Resources Conservation Service any authority for the decisions that they make. The Natural Resources Conservation Service will not perform any evaluations of these maps for purposes related solely to State or local regulatory programs.

Photographic or digital enlargement of these maps to scales greater



than at which they were originally mapped can cause misinterpretation of the data. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale. The depicted soil boundaries, interpretations, and analysis derived from them do not eliminate the need for onsite sampling, testing, and detailed study of specific sites for intensive uses. Thus, these data and their interpretations are intended for planning purposes only. Digital data files are periodically updated. Files are dated, and users are responsible for obtaining the latest version of the data.

#### Point\_of Contact:

Contact\_Information:

Contact Position: State Soil Scientist

Contact\_Address:

Address\_Type: mailing address
Address: USDA Natural Resources Conservation Service
Address: 441 South Salina Street

Address: Fifth Floor Suite 354 City: Syracuse State\_or\_Province: NY Postal\_Code: 13202

Contact\_Tolor. 13202

Contact\_Tolor/TT\_Telephone: 315-477-6526

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Browse\_Graphic\_File\_Name: https://cugir-data.s3.amazonaws.com/00/77/60/preview.png Browse\_Graphic\_File\_Description: preview of the dataset

Browse\_Graphic\_File\_Type: PNG

# Data\_Quality\_Information

# Attribute\_Accuracy:

Attribute\_Accuracy\_Report: The attribute accuracy is tested by manual comparison of the source with hard copy plots and/or symbolized display of the map data on an interactive computer graphic system. Selected attributes that cannot be visually verified on plots or on screen are interactively queried and verified on screen. In addition, the attributes are tested against a master set of valid attributes. All attribute data conform to the attribute codes in the signed classification and correlation document and amendment(s).

Logical\_Consistency\_Report:

Certain node/geometry and topology GT- polygon/chain relationships are collected or generated to satisfy topological requirements (the GT-polygon corresponds to the soil delineation). Some of these requirements include: chains must begin and end at nodes, chains must connect to each other at nodes, chains do not extend through nodes, left and right GT-polygons are defined for each chain element and are consistent throughout, and the chains representing the limits of the file are free of gaps. The tests of logical consistency are performed using vendor software. All internal polygons are tested for closure with vendor software and are checked on hard copy plots. All data are checked for common soil lines (i.e., adjacent polygons with the same label). Edge locations generally do not deviate from centerline to centerline by more than 0.01 inch.

The Soil Survey of (NY067) Onondaga County, New York is edge matched to the adjacent SSURGO certified soil surveys: NY011 Cayuga County, New York NY023 Cortland County, New York

NY053 Madison County, New York NY075 Oswego County, New York

Feature edges and labels do not match.

The soil survey area boundaries match.

# Completeness\_Report:

A map unit is a collection of areas defined and named in terms of their soil components or miscellaneous areas or both. Each map unit differs in some respect from all others in a survey area and each map unit has a symbol that uniquely identifies the map unit on a soil map. Each individual area, point, or line so identified on the map is a delineation.

Soil Scientists identify small areas of soils or miscellaneous areas that have properties and behavior significantly different than the named soils in the surrounding map unit. These minor components may be indicated as special features. If they have a minimal effect on use and management, or could not be precisely located, they may not be indicated on the map.

A map unit has specified kinds of soils or miscellaneous areas (map unit components), each with a designated range in proportionate extent. Map units include one or more kinds of soil or miscellaneous area. Miscellaneous areas are areas that have little or no recognizable soil

Specific National Cooperative Soil Survey standards and procedures were used in the classification of soils, design and name of map units, and location of special soil features. These standards are outlined in Agricultural Handbook 18, Soil Survey Manual, 1993, USDA, NRCS; Agricultural Handbook 436, Soil Taxonomy, 1995, USDA, NRCS; and all Amendments; Keys to Soil Taxonomy, (current issue) USDA, NRCS; National Soil Survey Handbook, title 430-VI,(current issue) USDA, NRCS

The actual composition and interpretive purity of the map unit delineations were based on data collected by scientists during the course of preparing the soil maps. Adherence to National Cooperative Soil Survey standards and procedures is based on peer review, quality control, and quality assurance. Quality control is outlined in the memorandum of understanding for the

soil survey area and in documents that reside with the Natural Resources Conservation Service state soil scientist. Four kinds of map units are used in soil surveys: consociations, complexes, associations, and undifferentiated groups

Consociations - Consociations are named for the dominant soil. In a consociation, delineated areas use a single name from the dominant component in the map unit. Dissimilar components are minor in extent. The soil component in a consociation may be identified at any taxonomic level. Soil series is the lowest taxonomic level. A consociation that is named as a miscellaneous area is dominantly that kind of area and minor components do not significantly affect the use of the map unit. The total amount of dissimilar inclusions of other components in a map unit generally does not exceed about 15 percent if limiting and 25 percent if nonlimiting. A single component of a dissimilar limiting inclusion generally does not exceed 10 percent if very contrasting.

Complexes and associations - Complexes and associations consist of two or more dissimilar components that occur in a regularly repeating pattern. The total amount of other dissimilar components is minor extent. The following arbitrary rule determines whether complex or association is used in the name. The major components of an association can be separated at the scale of mapping. In either case, because the major components are sufficiently different in morphology or behavior, the map unit cannot be called a consociation. In each delineation of a complex or an association, each major component is normally present though their proportions may vary appreciably from one delineation to another. The total amount of inclusions in a map unit that are dissimilar to any of the major components does not exceed 15 percent if limiting and 25 percent if nonlimiting. A single kind of dissimilar limiting inclusion usually does not exceed 10 percent.

Undifferentiated groups - Undifferentiated groups consist of two or more components that are not consistently associated geographically and, therefore, do not always occur together in the same map delineation. These components are included in the same named map unit because their use and management are the same or very similar for common uses. Generally they are grouped together because some common feature, such as steepness, stoniness, or flooding, determines their use and management. If two or more additional map units would serve no useful purpose, they may be included in the same unit. Each delineation has at least one of the major components, and some may have all of them. The same principles regarding the proportion of minor components that apply to consociations also apply to undifferentiated groups. The same principles regarding proportion of inclusion apply to undifferentiated groups as to consociations.

This soil survey is a subset of Major Land Resource Area (MLRA) 101. Profile Descriptions and transects from the entire MLRA, supplement documentation from Within the subset

Minimum documentation consists of three complete soil profile descriptions that are collected for each soil added to the legend, one additional per 3,000 acres mapped; three 10 observation transects for each map unit, one additional 10 point transect per 3.000 acres.

A defined standard or level of confidence in the interpretive purity of the map unit delineations is attained by adjusting the kind and intensity of field investigations. Field investigations and data collection are carried out in sufficient detail to name map units and to identify accurately and consistently areas of about 3 acres

# Positional\_Accuracy:

Horizontal\_Positional\_Accuracy:
Horizontal\_Positional\_Accuracy\_Report:
The accuracy of these digital data is based upon their

compilation to base maps that meet National Map Accuracy Standards at a scale of 1 inch equals 1,000 feet. The difference in positional accuracy between the soil boundaries and special soil features locations in the field and their digitized map locations is unknown. The locational accuracy of soil delineations on the ground varies with the transition between map units.

For example, on long gently sloping landscapes the transition occurs gradually over many feet. Where landscapes change abruptly from steep to level, the transition will be very narrow. Soil delineation boundaries and special soil features generally were digitized within 0.01 inch of their locations on the digitizing source. The digital map elements are edge matched between data sets. The data along each quadrangle edge are matched against the data for the adjacent quadrangle. Edge locations generally do not deviate from centerline to centerline by more than 0.01 inch.

# Lineage:

# Source Information:

Citation Information:

Originator: U.S. Department of Agriculture, Soil Conservation Service Publication\_Date: 1977 Title: Soil Survey of Onondaga County, New York

Geospatial\_Data\_Presentation\_Form: atlas Publication Information:

Publication\_Place: Washington, D.C. Publisher: U.S. Government Printing Office

Source\_Scale\_Denominator: 20000

```
Type_of_Source_Media: paper
      Source_Time_Period_of_Content:
           Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1973
           Source_Currentness_Reference: final correlation date
     Source_Citation_Abbreviation: SCS1
Source_Contribution: soil attributes and special soil feature locations
Source_Information:
     Source_Citation:
           Citation Information:
                Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                Publication_Date: unpublished material
     Title: publication annotation overlays
Geospatial_Data_Presentation_Form: map
Source_Scale_Denominator: 20000
     Type_of_Source_Media: stable-base material
Source_Time_Period_of_Content:
    Time_Period_Information:
                Single_Date/Time:
                      Calendar_Date: 1973
     Source_Currentness_Reference: final correlation date 
Source_Citation_Abbreviation: NRCS1
     Source_Contribution: final publication negatives used to develop film positives
Source Information:
     Source_Citation:
Citation_Information:
                Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                Publication_Date: unpublished material
Title: ratioed film positives of publication annotated overlays
                Geospatial_Data_Presentation_Form: remote-sensing image
     Source_Scale_Denominator: 12000
Type_of_Source_Media: stable-base material
Source_Time_Period_of_Content:
    Time_Period_Information:
                Single_Date/Time:
Calendar_Date: 1973
           Source_Currentness_Reference: final correlation date
     Source_Citation_Abbreviation: NRCS2
Source_Contribution: source material for special soil features, soil polygons and soil attributes Source_Information:
     Source_Citation:
          Citation_Information:
Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                Publication Date: 1998
                Title: multiple 3.75 minute orthophotographic quadrangles
     Geospatial_Data_Presentation_Form: remote-sensing image Source_Scale_Denominator: 12000
     Type_of_Source_Media: stable-base material
     Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
                      Beginning_Date: 1994
          Ending_Date: 1996
Source_Currentness_Reference: date aerial photography was flown
     Source_Citation_Abbreviation: NRCS3
     Source_Contribution: base material for compilation and a reference for compilation of cultural features
Source_Information:
     Source Citation:
           Citation_Information:
                Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                Publication_Date: 2002
Title: Digital Raster Graphic County Mosaic of Onondaga County, New York
                Geospatial_Data_Presentation_Form: remote-sensing image
                Publication_Information:
Publication_Place: Fort Worth, Texas
                      Publisher: U.S. Department of Agriculture, Natural Resources Conservation Service, National Cartography and Geospatial Center
     Source_Scale_Denominator: 24000
     Type_of_Source_Media: online
Source_Time_Period_of_Content:
    Time_Period_Information:
                Range_of_Dates/Times:
                     Beginning_Date: 1943
Ending_Date: 1978
           Source_Currentness_Reference: source material publication date
     Source_Citation_Abbreviation: NRCS4
Source_Contribution: source for county boundary
Source_Information:
     Source_Citation:
           Citation Information:
                Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                Publication_Date: unpublished material
     Title: annotated soil delineation overlays
Geospatial_Data_Presentation_Form: map
Source_Scale_Denominator: 12000
     Source_Scale_Denominator: 12000
Type_of_Source_Media: stable-base material
Source_Time_Period_of_Content:
    Time_Period_Information:
    Range_of_Dates/Times:
          Beginning_Date: 1994
Ending_Date: 1996
Source_Currentness_Reference: date aerial photography was flown
     Source_Citation_Abbreviation: NRCS5
     Source_Contribution: scanning and digitizing source
Source Information:
     Source_Citation:
           Citation_Information:
                Originator: U.S. Department of Agriculture, Natural Resources Conservation Service Publication Date: 2003
                Title: National Soil Information System (NASIS) database for Onondaga County, New York
                Geospatial_Data_Presentation_Form: tabular digital data
                Publication Information:
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Publication Place: Fort Collins, Colorado
                      Publisher: U.S. Department of Agriculture, Natural Resources Conservation Service, Information Technology Center
     Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
                 Single_Date/Time:
          Calendar_Date: 2003
Source_Currentness_Reference: export certification date
     Source_Citation_Abbreviation: NRCS6
     Source_Contribution: tabular data linked to spatial soil data
Source_Information:
     Source_Citation:
           Citation_Information:
Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                 Publication_Date: 2002
                 Title: Soil Survey Geographic (SSURGO) database for Cayuga County, New York
                 Geospatial_Data_Presentation_Form: map
                Publication_Information:
Publication_Place: Fort Worth, Texas
                      Publisher: U.S. Department of Agriculture, Natural Resources Conservation Service, National Cartography and Geospatial Center
     Source_Scale_Denominator: 12000
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
           Single_Date/Time:
Calendar_Date: 2002
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: NRCS7
Source_Contribution: certified SSURGO data used for survey boundary edge matching
Source_Information:
     Source_Citation:
           Citation_Information:
Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                 Publication_Date: 2003
                 Title: Soil Survey Geographic (SSURGO) database for Madison County, New York
                Geospatial_Data_Presentation_Form: map Publication_Information:
                      Publication_Place: Fort Worth, Texas
     Publisher: U.S. Department of Agriculture, Natural Resources Conservation Service, National Cartography and Geospatial Center Source_Scale_Denominator: 24000
Type_of_Source_Media: online
     Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
                      Calendar Date: 2003
           Source_Currentness_Reference: publication date
     Source_Citation_Abbreviation: NRCS8
Source_Contribution: certified SSURGO data used for survey boundary edge matching
Source_Information:
     Source_Citation:
           Citation_Information:
Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                 Publication_Date: 2004
                Title: National Soil Information System (NASIS) data base 
Geospatial Data Presentation Form: unknown
                 Publication_Information:
                      Publication_Place: Fort Collins, Colorado
                      Publisher: U.S. Department of Agriculture, Natural Resources Conservation Service
     Type_of_Source_Media: database
Source_Time_Period_of_Content:
           Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 2004
     Ending_Date: 2004
Ending_Date: 2004
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: NASIS
Source_Contribution: attribute (tabular) information
Source_Information:
     Source_Citation:
Citation_Information:
                 Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                 Publication_Date: 2004
                 Title: Soil Survey Geographic (SSURGO) database for Onondaga County, New York 
Geospatial_Data_Presentation_Form: vector digital data
                 Publication_Information:
                      Publication_Place: Fort Worth, Texas
Publisher: U.S. Department of Agriculture, Natural Resources Conservation Service, National Cartography and Geospatial Center
      Type_of_Source_Media: online
     Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
                      Calendar_Date: 2004
     Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: NRCS9
Source_Contribution: re-archiving source
Source_Information:
     Source_Citation:
           Citation Information:
                 Originator: U.S Department of Agriculture, Farm Service Agency
                 Publication_Date: 2008
Title: NAIP imagery for Onondaga County, New York
Geospatial_Data_Presentation_Form: remote sensing image
                 Publication_Information:
                      Publication_Place: Salt Lake City, Utah
Publisher: U.S. Department of Agriculture, Farm Service Agency APFO
     Type_of_Source_Media: online
     Source_Time_Period_of_Content:
           Time_Period_Information:
Single_Date/Time:
                      Calendar_Date: 2008
           Source_Currentness_Reference: date aerial photography was flown
     Source_Citation_Abbreviation: FSA1
```

```
Source Contribution: editing selected water and soil polygon boundaries to current imagery
Source_Information:
      Source_Citation:
            Citation_Information:
Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                  Publication_Date: unpublished material
                  Title: ARCGIS geodatabase for Onondaga County, New York Geospatial_Data_Presentation_Form: vector digital data
      Source_Scale_Denominator: 12000
      Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
                         Calendar_Date: 2009
      Source_Currentness_Reference: date of soil survey update
Source_Citation_Abbreviation: NRCS10
      Source_Contribution: source for digital revision
Source_Information:
Source_Citation:
            Citation_Information:
                  Originator: U.S. Department of Agriculture, Natural Resources Conservation Service 
Publication_Date: 2004-2007
                  Title: Soil Survey Geographic (SSURGO) databases for adjacent surveys
                  Geospatial_Data_Presentation_Form: vector digital data
                  Publication_Information:
Publication_Place: Fort Collins, Colorado
Publisher: U.S. Department of Agriculture, Natural Resources Conservation Service, Information Technology Center
                  Other_Citation_Details: These SSURGO certified soil surveys are adjacent to the Soil Survey of (NY067) Onondaga County, New York: NY011 Cayuga County, New York
      NY023 Cortland County, New York NY053 Madison County, New York NY075 Oswego County, New York Online_Linkage: <a href="http://soildatamart.nrcs.usda.gov/">http://soildatamart.nrcs.usda.gov/</a>
Source_Scale_Denominator: 12000, 24000
      Type_of_Source_Media: online
Source_Time_Period_of_Content:
    Time_Period_Information:
    Range_of_Dates/Times:
            Beginning_Date: 2004
Ending_Date: 2007
Source_Currentness_Reference: dates of publication
      Source_Citation_Abbreviation: NRCS11
Source_Contribution: used to check joins to the adjacent soil surveys Source_Information:
      Source_Citation:
            Citation_Information:
Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
Publication_Date: unpublished material
                   Title: region 12 soils geodatabase
      Geospatial_Data_Presentation_Form: file geodatabase
Type_of_Source_Media: vector digital data
Source_Time_Period_of_Content:
            Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 2006
                         Ending_Date: 2012
      Source_Currentness_Reference: SSURGO publication date
Source_Citation_Abbreviation: NRCS12
Source_Contribution: Source of digital revision
Source_Information:
      Source_Citation:
Citation Information:
                  Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                  Publication_Date: unpublished material
Title: region 12 soils geodatabase
Geospatial_Data_Presentation_Form: file geodatabase
      Type_of_Source_Media: vector digital data
Source_Time_Period_of_Content:
    Time_Period_Information:
                  Single_Date/Time:
                         Calendar_Date: 2014
      Source_Currentness_Reference: SSURGO publication date Source_Citation_Abbreviation: NRCS13
Source_Contribution: Source of digital revision
Source_Information:
      Source_Citation:
Citation_Information:
                  Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                  Publication_Date: unpublished material Title: region 12 soils geodatabase
                  Geospatial_Data_Presentation_Form: file geodatabase
      Type_of_Source_Media: vector digital data
Source_Time_Period_of_Content:
Time_Period_Information:
                  Single_Date/Time:
            Calendar_Date: 2015
Source_Currentness_Reference: SSURGO publication date
      Source_Citation_Abbreviation: NRCS14
      Source_Contribution: Source of digital revision
Source_Information:
Source_Citation:
            Citation_Information:
                  Originator: U.S. Department of Agriculture, Natural Resources Conservation Service
                  Publication_Date: unpublished material Title: region 12 soils geodatabase
                  Geospatial_Data_Presentation_Form: file geodatabase
      Type_of_Source_Media: vector digital data
Source_Time_Period_of_Content:
    Time_Period_Information:
                  Single_Date/Time:
            Calendar_Date: 2016
Source Currentness Reference: SSURGO publication date
      Source_Citation_Abbreviation: NRCS15
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Source\_Contribution: Source of digital revision

Process\_Step:

Process Description: Onondaga County had a previously published soil survey in 1977, at 1:20,000 scale. An evaluation was made of the soil survey in 2001. It was determined that the soil map unit delineations and map unit components were accurate.

Source\_Used\_Citation\_Abbreviation: SCS1 Process\_Date: 2001

Process\_Step:

Process\_Description: Film positives, at 1:12,000 scale, were made from the publication annotation overlays. Soil map unit delineations, soil symbols and special soil features were manually compiled from the film positives to stable-base material registered to 3.75 minute orthophotographic quadrangles. Errors from the published soil survey were corrected and map unit boundaries were refined, as needed, to the orthophotographic quadrangles.

Source\_Used\_Citation\_Abbreviation: NRCS1, NRCS2, NRCS3

Process\_Date: 2002

Process\_Step:

Process\_Description: The National Soil Information System data base was developed by Natural Resources Conservation Service soil scientists according to national standards. Source\_Used\_Citation\_Abbreviation: SCS1, NRCS6

Process\_Date: 2003

Process Step:

Process Description: The data were sent to the U.S. Department of Agriculture, Natural Resources Conservation Service, Kansas Digitizing Unit, Salina, Kansas (KSDU). The annotated soil delineation overlays were sent to Midwest Graphics, Kenosha, Wisconsin for raster scanning at 300 dpi on an Intergraph Anatach scanner in ric format. The raster scanned data were imported into ARC/INFO version 8.1. Once all the scanned soil lines were added to the maps, a county border was added. Portions of the survey border were digitized on screen using DRGs in ARC/INFO version 8.0. The SSURGO certified surveys of Cayuga County and Madison County, New York were used for edge matching of the survey boundary. The special soil features were manually digitized from the annotated soil delineation overlays in ARC/INFO version 8.1 at a resolution of 0.01 inch. The raster editing, labeling, edge matching, and vector conversion were done in ARC/INFO version 8.1. Check plots of the soils and special soil features were reviewed by a soil scientist and the cartographic staff at the KSDU. A ten percent quality assurance review was done of the soils and special features by the Major Land Resource Area office in Amherst, MA. The soils and special soil features data were run through a series of AMLs for correctness and completeness. The soils and special soil features data were then exported as seamless county-wide coverages in ARC/INFO. The coverages were evaluated with the modified Nov. 2003 SSURGO Evaluation AMLs provided by U.S. Department of Agriculture, Natural Resources Conservation Service, National Cartography and Geospatial Center, Fort Worth, Texas (NCGC). Upon successful completion of the SSURGO Evaluation, the coverages were rewritten from ARC/INFO version 8.3. The certified data were ftped to the USDA-NRCS Soil Data Warehouse for archival and distribution

Source\_Used\_Citation\_Abbreviation: NRCS4, NRCS5, NRCS6, NRCS7, NRCS8

Process\_Date: 2004 Process\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate, upon completion of data quality verification, determined that the tabular data should be released for official use. A selected set of map units and components in the soil survey legend was copied to a staging database, and rating values for selected interpretations were generated. The list of selected interpretations is stored in the database table named sainterp.

Source\_Used\_Citation\_Abbreviation: NASIS

Process\_Date: 20040206

Process\_Step:
Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate verified that the labels on the digitized soil map units link to map units in the tabular database, and certified the joined data sets for release to the Soil Data Warehouse. A system assigned version number and date stamp were added and the data were copied to the data warehouse. The tabular data for the map units and components were extracted from the data warehouse and reformatted into the soil data delivery data model, then stored in the Soil Data Mart. The spatial data were copied to the Soil Data Mart without change.

Source\_Used\_Citation\_Abbreviation: NASIS

Process\_Date: 20040206

Process\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate, upon completion of data quality verification, determined that the tabular data should be released for official use. A selected set of map units and components in the soil survey legend was copied to a staging database, and rating values for selected interpretations were generated. The list of selected interpretations is stored in the database table named sainterp.

Source\_Used\_Citation\_Abbreviation: NASIS

Process Date: 20051212

Process\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate verified that the labels on the digitized soil map units link to map units in the tabular database, and certified the joined data sets for release to the Soil Data Warehouse. A system assigned version number and date stamp were added and the data were copied to the data warehouse. The tabular data for the map units and components were extracted from the data warehouse and reformatted into the soil data delivery data model, then stored in the Soil Data Mart. The spatial data were copied to the Soil Data Mart without change.

Source\_Used\_Citation\_Abbreviation: NASIS Process\_Date: 20051214

Process\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate, upon completion of data quality verification, determined that the tabular data should be released for official use. A selected set of map units and components in the soil survey legend was copied to a staging database, and rating values for selected interpretations were generated. The list of selected interpretations is stored in the database table named sainterp.

Source\_Used\_Citation\_Abbreviation: NASIS Process\_Date: 20060710

Process\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate verified that the labels on the digitized soil map units link to map units in the tabular database, and certified the joined data sets for release to the Soil Data Warehouse. A system assigned version number and date stamp were added and the data were copied to the data warehouse. The tabular data for the map units and components were extracted from the data warehouse and reformatted into the soil data delivery data model, then stored in the Soil Data Mart. The spatial data were copied to the Soil Data Mart without change.

Source\_Used\_Citation\_Abbreviation: NASIS

Process\_Date: 20060711

Process Step:

Process Description: The Natural Resources Conservation Service State Soil Scientist or delegate, upon completion of data quality verification, determined that the tabular data should be released for official use. A selected set of map units and components in the soil survey legend was copied to a staging database, and rating values for selected interpretations were generated. The list of selected interpretations is stored in the database table named sainterp.

Source\_Used\_Citation\_Abbreviation: NASIS Process\_Date: 20061210

Process\_Description: Soil scientists entered/edited data in NASIS for geomorphic description and selected chemical and physical properties. The Natural Resources Conservation Service State Soil Scientist or delegate verified that the labels on the digitized soil map units link to map units in the tabular database, and certified the joined data sets for release to the Soil Data Warehouse. A system assigned version number and date stamp were added and the data were copied to the data warehouse. The tabular data for the map units and components were extracted from the data warehouse and reformatted into the soil data delivery data model, then stored in the Soil Data Mart. The spatial data were copied to the Soil Data Mart without change.

Source Used Citation Abbreviation: NASIS

Process\_Date: 20061211

pcess\_Step:
Process\_Description: The soils staff in New York downloaded the SSURGO data for Onondaga County from the Soil Data Warehouse (SDW). Water polygons and adjacent soil polygons in the existing SSURGO spatial data were reviewed against the 1977 hardcopy soil survey atlas sheets and the 2008 NAIP imagery. The digital mapping was revised where water polygons were determined to be ponded soil, so that the spatial data corresponds more closely with the original hard copy atlas sheets. Some edits to other polygons were made based on the imagery and atlas sheets. The revised geodatabase was sent to the Michigan Digitizing Unit (MIDÚ) in East Lansing, Michigan for review and certification.

Source\_Used\_Citation\_Abbreviation: SCS1, FSA1, NRCS9, NRCS10

Process\_Date: 2009

Process Step:

Process Description: The MIDU staff checked the spatial data with the ARCGIS Version 9.2 software. The boundaries of this soil survey were adjusted to match the adjacent soil surveys. To remove excess vertices, the soil boundaries were generalized at a 0.75 meter tolerance. After the soil survey was edited, the area, line and point feature classes were converted to ARC/INFO coverages and exported as e00 files. The digital maps of the mapping units and the special soil features were imported into the ARC/INFO Version 7.2.1 software for review and certification. The MIDU staff checked the data with a set of ARC Macro Language (AML) programs developed by the NCGC. The seamless coverages were checked using the January 2006 SSURGO Evaluation AML programs. Upon successful completion of the SSURGO Evaluation, the county coverages, feature file and the metadata were electronically transferred to the NRCS Stagling Server to be joined with the tabular data.

Source\_Used\_Citation\_Abbreviation: NRCS9, NRCS10 Process Date: 20100212

Process\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate, upon completion of data quality verification, determined that the tabular data should be released for official use. A selected set of map units and components in the soil survey legend was copied to a staging database, and rating values for selected

interpretations were generated. The list of selected interpretations is stored in the database table named sainterp.

Source\_Used\_Citation\_Abbreviation: NASIS

Process\_Date: 20100203

Process\_Step:

Process\_Description: Soil scientists reviewed and edited data for hydric rating and hydric criteria. Interpretations for storm water management were added to the set of interpretations. The Natural Resources Conservation Service State Soil Scientist or delegate verified that the labels on the digitized soil map units link to map units in the tabular database, and certified the joined data sets for release to the Soil Data Warehouse. A system assigned version number and date stamp were added and the data were copied to the data warehouse. The tabular data for the map units and components were extracted from the data warehouse and reformatted into the soil data delivery data model, then stored in the Soil Data Mart. The spatial data were copied to the Soil Data Mart without change.

Source\_Used\_Citation\_Abbreviation: NASIS

Process Date: 20100218

Process Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate, upon completion of data quality verification, determined that the tabular data should be released for official use. A selected set of map units and components in the soil survey legend was copied to a staging database, and rating values for selected interpretations were generated. The list of selected interpretations is stored in the database table named sainterp.

Source Used Citation Abbreviation: NASIS

Process\_Step:
Process\_Description: Hydric ratings for minor soil components were included in the data set. Hydrologic Soil Group data was updated to current criteria. The Natural Resources Conservation Service State Soil Scientist or delegate verified that the labels on the digitized soil map units link to map units in the tabular database, and certified the joined data sets for release to the Soil Data Warehouse. A system assigned version number and date stamp were added and the data were copied to the data warehouse. The tabular data for the map units and components were extracted from the data warehouse and reformatted into the soil data delivery data model, then stored in the Soil Data Mart. The spatial data were copied to the Soil Data Mart without change.

Source\_Used\_Citation\_Abbreviation: NASIS

Process Date: 20111207

Process Step:

Process\_Description: The spatial data for Onondaga County, New York soil survey area was downloaded from the Soil Data Mart on October 15, 2012. The individual shapefiles were appended into a geodatabase for region 12. The data were processed in ARCGIS 10.1 using a topology object with a 0.1 meter cluster tolerance for the purpose of eliminating gaps and overlaps within the region 12 soils geodatabase. Individual soil survey area data were exported as shapefiles from the regional geodatabase. A datum transformation from NAD83 to WGS84 using the NAD\_1983\_To\_WGS\_1984\_1 datum transformation method was applied to the data. The data were checked with the SSURGO Evaluation scripts provided by U.S. Department of Agriculture, Natural Resources Conservation Service. The shapefiles were then uploaded to the soil data warehouse for archival and distribution.

Source\_Used\_Citation\_Abbreviation: NRCS12

Process\_Date: 2013

Process\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate, upon completion of data quality verification, determined that the tabular data should be released for official use. A selected set of map units and components in the soil survey legend was copied to a staging database, and rating values for selected interpretations were generated. The list of selected interpretations is stored in the database table named sainterp.

Source\_Used\_Citation\_Abbreviation: NASIS

Process Date: 20131124

Process\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate verified that the labels on the digitized soil map units link to map units in the tabular database, and certified the joined data sets for release to the Soil Data Warehouse. A system assigned version number and date stamp were added and the data were copied to the data warehouse. The tabular data for the map units and components were extracted from the data warehouse and reformatted into the soil data delivery data model, then stored in the Soil Data Mart. The spatial data were copied to the Soil Data Mart without change.

Source\_Used\_Citation\_Abbreviation: NASIS

Process\_Date: 20131124

Process\_Step:

Process\_Description: The SSURGO spatial data for Soil Survey Region 12(SSR12) area was downloaded from Web Soil Survey on February 12, 2014. The individual shapefiles were appended into a file geodatabase for Region 12 using ARCGIS 10.1 Source\_Used\_Citation\_Abbreviation: NRCS13

Process\_Date: 201402112

Process\_Step:

Process\_Description: The current SSURGO spatial data for Onondaga County, NY was extracted from the Soil Survey Region 12 geodatabase and edited along the boundary with Cortland County to achieve an acceptable join with the revised spatial data for Cortland County. The soils dataset was sent to the NRCS Digitizing Unit. The data was incorporated into the Region 12 Transactional Geodatabase and evaluated for completeness. The data were then exported as a shapefiles and uploaded to Web Soil Survey for archival and distribution

**Source\_Used\_Citation\_Abbreviation:** NRCS13 **Process\_Date:** 20140425

Process\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate, upon completion of data quality verification, determined that the tabular data should be released for official use. A selected set of map units and components in the soil survey legend was copied to a staging database, and rating values for selected interpretations were generated. The list of selected interpretations is stored in the database table named sainterp.

Source\_Used\_Citation\_Abbreviation: NASIS

Process\_Date: 20140915

Process Step:

Process\_Description: Soil interpretation factors K, T, WEG, WEI, concrete corrosion potential, and steel corrosion potential were calculated based on national standard parameters. The Natural Resources Conservation Service State Soil Scientist or delegate verified that the labels on the digitized soil map units link to map units in the tabular database, and certified the joined data sets for release to the Soil Data Warehouse. A system assigned version number and date stamp were added and the data were copied to the data warehouse. The tabular data for the map units and components were extracted from the data warehouse and reformatted into the soil data delivery data model, then stored in the Soil Data Mart. The spatial data were copied to the Soil Data Mart without change.

Source\_Used\_Citation\_Abbreviation: NASIS Process\_Date: 20140915

Process\_Step:

Process\_Description: The current SSURGO spatial data for Onondaga County, New York was edited within the Soil Survey Region 12 geodatabase. As part of the SDJR MLRA 101 Lansing gravelly silt loam, 8 to 15 percent slopes project. The map unit LsCK was changed to LsC. The data was incorporated into the Region 12 Transactional Geodatabase and evaluated for completeness. The data were then exported as a shapefile and uploaded to Web Soil Survey for archival and distribution.

Source\_Used\_Citation\_Abbreviation: NRCS14

Process\_Date: 20150911

Process\_Step:
Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate, upon completion of data quality verification, determined that the tabular data should be released for official use. A selected set of map units and components in the soil survey legend was copied to a staging database, and rating values for selected interpretations were generated. The list of selected interpretations is stored in the database table named sainterpretations

Source\_Used\_Citation\_Abbreviation: NASIS Process\_Date: 20150924

Process\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate verified that the labels on the digitized soil map units link to map units in the tabular database, and certified the joined data sets for release to the Soil Data Warehouse. A system assigned version number and date stamp were added and the data were copied to the data warehouse. The tabular data for the map units and components were extracted from the data warehouse and reformatted into the soil data delivery data model, then stored in the Soil Data Mart. The spatial data were copied to the Soil Data Mart without change. Source\_Used\_Citation\_Abbreviation: NASIS
Process\_Date: 20150924

Process\_Step:

Process\_Description: The spatial data for Onondaga County, New York soil survey area was updated for the SDJR MLRA 101 Honeoye silt loam, 8 to 15 percent slopes project. For this project the following mapunit change was made. HnCK was changed to HnC. The data were checked with the SSURGO Evaluation scripts provided by U.S. Department of Agriculture, Natural Resources Conservation Service. The shapefiles were then uploaded to the soil data warehouse for archival and distribution.

Source\_Used\_Citation\_Abbreviation: NRCS15

Process Date: 20160913

Process Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate, upon completion of data quality verification, determined that the tabular data should be released for official use. A selected set of map units and components in the soil survey legend was copied to a staging database, and rating values for selected interpretations were generated. The list of selected interpretations is stored in the database table named sainterp.

Source Used Citation Abbreviation: NASIS

Process\_Date: 20160924

cess\_Step:

Process\_Description: The Natural Resources Conservation Service State Soil Scientist or delegate verified that the labels on the digitized soil map units link to map units in the tabular database, and certified the joined data sets for release to the Soil Data Warehouse. A system assigned version number and date stamp were added and the data were copied to the data warehouse. The tabular data for the map units and components were extracted from the data warehouse and reformatted into the soil data delivery data model, then stored in the Soil Data Mart. The spatial data were copied to the Soil Data Mart without change. Source Used Citation Abbreviation: NASIS

Process\_Date: 20160924

#### Spatial\_Data\_Organization\_Information

Direct\_Spatial\_Reference\_Method: Vector Point\_and\_Vector\_Object\_Information: SDTS Terms Description:

SDTS\_Point\_and\_Vector\_Object\_Type: G-polygon Point\_and\_Vector\_Object\_Count: 27437

#### Spatial\_Reference\_Information

Horizontal\_Coordinate\_System\_Definition:

Geographic:

Latitude Resolution: 0.000001 Longitude\_Resolution: 0.0000001

Geographic\_Coordinate\_Units: decimal degrees

Geodetic Model:

Horizontal\_Datum\_Name: World Geodetic System 1984

Ellipsoid\_Name: World Geodetic System 1984 Semi-major\_Axis: 6378137.00000

Denominator\_of\_Flattening\_Ratio: 298.257222

# Entity\_and\_Attribute\_Information

Entity Type:

Entity\_Type\_Label: Special Soil Features

Entity\_Type\_Definition: Special Soil Features represent soil, miscellaneous area, or landform features that are too small to be digitized as soil delineations (area features).

Entity\_Type\_Definition\_Source: Agricultural Handbook 18, Soil Survey Manual, 1993, USDA, SCS.

#### Attributes:

Name	Description	Values
Special Soil Features Codes	Special Soil Features labels represent specific Special Soil Features. These features are identified with a descriptive label. The label is assigned to the point or line assigned to represent the feature on maps.	Classification and Correlation of the Soils of Onondaga County, New York U.S. Department of Agriculture, Natural Resources Conservation Service

Overview\_Description: Entity\_and\_Attribute\_Overview:

Map Unit Delineations are closed polygons that may be dominated by a single soil or miscellaneous area component plus allowable similar or dissimilar soils, or they can be geographic mixtures of groups of soils or soils and miscellaneous areas.

The map unit symbol uniquely identifies each closed map unit delineation. Each symbol corresponds to a map unit name. The map unit key is used to link to information in the National Soil Information System tables.

Map Unit Delineations are described by the National Soil Information System database. This attribute database gives the proportionate extent of the component soils and the properties for each soil. The database contains both estimated and measured data on the physical and chemical soil properties and soil interpretations for engineering, water management, recreation, agronomic, woodland, range, and wildlife uses of the soil.

The National Soil Information System database contains static metadata. It documents the data structure and includes such information as what tables, columns, indexes, and relationships are defined as well as a variety of attributes of each of these database objects. Attributes include table and column descriptions and detailed domain information.

The National Soil Information System database also contains a distribution metadata. It records the criteria used for selecting map units and components for inclusion in the set of distributed

Special features are described in the feature table. It includes an area symbol, feature label, feature name, and feature description for each special and ad hoc feature in the survey area.

# Entity\_and\_Attribute\_Detail\_Citation:

Soil Taxonomy: A basic system of soil classification for making and interpreting soil surveys. Agricultural Handbook 436, 1999, USDA, SCS.

Keys to Soil Taxonomy (current issue), USDA, SCS.

National Soil Survey Handbook, Title 430-VI, part 647 (current issue), USDA, NRCS.

Agricultural Handbook 18, Soil Survey Manual, 1993, USDA, SCS.

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Standard_Order_Process:
     Digital Form:
          Digital_Transfer_Information:
               Format_Name: Shapefile
Format_Information_Content: zipped shapefile
                File_Decompression_Technique: zip
                Transfer_Size: 30.24
          Digital_Transfer_Option:
                Online Option:
                     Computer_Contact_Information:
                         Network_Address:
Network_Resource_Name: https://cugir-data.s3.amazonaws.com/00/77/60/cugir-007760.zip
     Digital_Form:
          Digital_Transfer_Information:
               Format_Name: metadata
Format Information Content: FGDC XML metadata
          Digital_Transfer_Option:
                Online_Option:
Computer_Contact_Information:
                          Network_Address:
                               Network_Resource_Name: https://cugir-data.s3.amazonaws.com/00/77/60/fgdc.xml
     Digital Form:
          Digital Transfer Information:
                Format_Name: HTML metadata
                Format_Information_Content: FGDC HTML metadata
          Digital_Transfer_Option:
Online_Option:
                     Computer_Contact_Information:
                          .
Network_Address:
                               Network_Resource_Name: https://cugir-data.s3.amazonaws.com/00/77/60/fgdc.html
     Digital Form:
          Digital_Transfer_Information:
               Format_Name: KML
Format_Information_Content: generated KML, via WFS
          Digital_Transfer_Option:
                Online_Option:
                     Computer_Contact_Information:
Network_Address:
                               Network_Resource_Name: https://cugir.library.cornell.edu/geoserver/cugir/wfs?
                                    version=1.0.0&request=GetFeature&typeName=cugir007760&outputFormat=application%2Fvnd.google-earth.kml%2Bxml
     Digital Form:
          Digital_Transfer_Information:
                Format_Name: GeoJSON
                Format_Information_Content: generated GeoJSON, via WFS
          Digital Transfer Option:
                Online_Option:
                     Computer_Contact_Information:
                          Network_Address:
Network_Resource_Name: https://cugir.library.cornell.edu/geoserver/cugir/wfs?
                                    version=1.0.0&request=GetFeature&typeName=cugir007760&outputFormat=application%2Fjson
     Digital Form:
          Digital_Transfer_Information:
Format_Name: OGC:WMS
                Format_Information_Content: WMS, from GeoServer
          Digital_Transfer_Option:
Online_Option:
                     Computer_Contact_Information:
                          .
Network_Address:
                               Network_Resource_Name: https://cugir.library.cornell.edu/geoserver/cugir/wms?
version=1.1.0&request=GetMap&layers=cugir007760&bbox=-76.51760082,42.75622799,-75.87800318000001,43.28661701&width=256&height=212&sr:
     Fees: None
      Contact Information:
          Contact_Organization_Primary:
Contact_Organization: U.S. Department of Agriculture, Natural Resources Conservation Service, National Geospatial Center of Excellence
           Contact_Address:
```

```
Distribution_Information
         Distributor:
                                   Address_Type: mailing and physical address Address: 501 West Felix Street, Building 23
                                   City: Fort Worth
                                   State_or_Province: Texas
Postal Code: 76115
        Contact_Voice_Telephone: 800 672 5559
Contact_TDD/TTY_Telephone: 202 720 2600
Contact_Facsimile_Telephone: 817 509 3469
Resource_Description: Onondaga County, New York SSURGO
         Distribution_Liability:
                 Although these data have been processed successfully on a computer system at the U.S. Department of Agriculture, no warranty expressed or implied is made by the Agency regarding the utility of the data
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Standard\_Order\_Process: Digital\_Form: Digital\_Transfer\_Information: Format\_Name: ESRI shapefile
Format\_Information\_Content: spatial Transfer\_Size: 29.0 Digital\_Transfer\_Option: Online\_Option: Computer Contact Information: Network\_Address:

Network\_Resource\_Name: URL:http://DataGateway.nrcs.usda.gov/
Access\_Instructions: Select desired survey area at above Internet Web site. An email address is required for receipt of instructions on retrieval via anonymous FTP.
Anticipate a delay between submission of request at Web site and receipt of email message.

Fees: There is currently no direct charge for requesting data or for retrieval via FTP.

Ordering\_Instructions: Visit the above mentioned Internet Web Site, select state or territory, then select individual soil survey area of interest. Spatial line data and locations of special feature symbols are in ESRI ArcGIS shapefile, format. The National Soil Information System attribute soil data are available in variable length, pipe delimited, ASCII file format. Turnaround: Typically within four hours

# Metadata\_Reference\_Information

Metadata\_Date: 20190524 Metadata\_Contact: Contact Information: Contact\_Organization\_Primary: Contact\_Organization: Albert R. Mann Library Contact\_Address: Address\_Type: mailing and physical Address: Albert R. Mann Library City: Ithaca State\_or\_Province: New York Postal\_Code: 14853 Country: USA Contact\_Voice\_Telephone: 607-255-5406
Contact\_Electronic\_Mail\_Address: mann-ref@cornell.edu
Metadata\_Standard\_Name: FGDC Content Standard for Digital Geospatial Metadata Metadata\_Standard\_Version: FGDC-STD-001-1998 Metadata\_Time\_Convention: local time