Golden Sedge - Potential Habitat, October 2022 - NC Department of Transportation

File Geodatabase Feature Class



Tags

Golden sedge, Carex lutea, Care_lute, Vascular Plant, Terrestrial, endangered, ecotone species, critical habitat, random forest model, Transportation, NRTR, NCDOT, Environment, Location, North Carolina, ATLAS

Summary

This dataset was originally created in July 2019 and updated in August 2022 as part of the Project ATLAS initiative at NCDOT to support the Environmental Analysis Unit (EAU) Mitigation and Modeling Unit with project delivery in the development phase.

The Golden sedge model is a Random Forest (machine-learning) model. As such, it returns the probability of potential habitat, based on the core assumption that current presence locations are representative of potential habitat within the state of North Carolina. For the purposes of ATLAS applications, this model is reclassified to a 3-level map product distinguishing 30-m raster grid cells with predicted low, moderate, and high probability of potential habitat. This dataset supports the production of the Natural Resources Technical Report (NRTR).

This dataset also contains information that may assist biologists in preparing background information for field surveys, in order to address protected species for Threatened & Endangered Species Survey Reports, and/or Biological Assessments.

Description

The Golden sedge Potential Habitat dataset is a polygon layer depicting high, moderate and low potential habitat locations for Golden sedge in NC counties that have a USFWS "current" status listing.

Golden sedge(*Carex lutes*) a very rare endemic of the Atlantic Coastal Plain, grows in sandy soils overlying calcareous deposits of coquina limestone, where the soil pH, typically between 5.5 and 7.2, is unusually high for this region. The perennial prefers the ecotone between the pine savanna and adjacent wet hardwood or hardwood/conifer forest. Most plants occur in the partially shaded savanna/swamp where occasional to frequent fires favor an herbaceous ground layer and suppress shrub dominance. Soils supporting the species are very wet to periodically shallowly inundated. Other occurrences may occur on disturbed areas such as roadside and drainage ditches or power line rights-of-way, where mowing and/or very wet conditions suppress woody plants. Poorly viable occurrences may occur in significantly disturbed areas where ditching activities that lower the water table and/or some evidence of fire suppression threatens the species. USFWS Critical habitat for golden sedge is found in eight separate units totaling approximately 202 acres in Onslow and Pender Counties.

The three levels are: Low, Moderate, and High Probability of Potential Habitat (based on similarity of environmental conditions to those found at known occurrence locations). These levels represent the fact that given limited knowledge of species biology, continuously changing environments, and potential for gaps and error in both species and environment data, a model prediction dependent on remotely-sensed data can never predict species occurrence or habitat with absolute accuracy and precision. Thus, "Low" probability habitat represents regions and sites where biologists would be very surprised to find this species and its habitat (occurrence here should be extremely rare). In "High" probability habitat, biologists expect to frequently encounter areas that look like potential habitat based on visible environmental and vegetation community characteristics. The thresholds for this species are: Low-Moderate (0.12) and ModerateHigh (0.32).

For more information please click here

https://xfer.services.ncdot.gov/gisdot/Metadata/Atlas/TechDocs/

Datasets developed under Project ATLAS do not replace any NRTR work for future projects and may not be used as a replacement for site visits / field surveys by qualified professionals and hence should be used only as a supporting platform for decision making. Use of this dataset for project scoping or screening is merely predecisional.

Credits

The Environmental Analysis Unit (EAU) Mitigation and Modeling Unit within NCDOT was tasked to create this dataset. This dataset supports the production of the Natural Resources Technical Report (NRTR). Annual maintenance of this dataset is handled by the EAU.

Support and maintenance of the enterprise spatial database where this data resides is handled by NCDIT's Transportation GIS Unit.

Use limitations

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Extent

```
West -78.039802 East -77.460293
North 34.776958 South 34.205818
Scale Range

Maximum (zoomed in) 1:5,000
Minimum (zoomed out) 1:625,000
```

ArcGIS Metadata ►

Topics and Keywords ►

Themes or categories of the resource biota, geoscientificInformation, location, transportation, environment

* CONTENT TYPE Downloadable Data

EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION No

PLACE KEYWORDS North Carolina

```
THESAURUS

TITLE User

CREATION DATE 2022-08-01 00:00:00

PUBLICATION DATE 2022-10-14 00:00:00

Hide Thesaurus
```

THEME KEYWORDS Golden sedge, Carex lutea, Care_lute, Vascular Plant, Terrestrial, endangered, ecotone species, critical habitat, random forest model, Transportation, NRTR, NCDOT, Environment, Location, North Carolina, ATLAS

THESAURUS > TITLE User

> CREATION DATE 2022-08-01 00:00:00 PUBLICATION DATE 2022-10-14 00:00:00

Hide Thesaurus ▲

Hide Topics and Keywords ▲

Citation ▶

TITLE Golden Sedge - Potential Habitat, October 2022 - NC Department of Transportation CREATION DATE 2022-08-01 00:00:00 PUBLICATION DATE 2022-10-14 00:00:00

digital map FGDC GEOSPATIAL PRESENTATION FORMAT vector digital data

Hide Citation ▲

Citation Contacts ▶

PRESENTATION FORMATS

RESPONSIBLE PARTY

ORGANIZATION'S NAME North Carolina Department of Transportation - EAU Mitigation and Modeling Unit CONTACT'S POSITION Environmental Program Consultant CONTACT'S ROLE originator

CONTACT INFORMATION >

PHONE

VOICE 919-707-6136

ADDRESS

DELIVERY POINT Century Center Building B, 1020 Birch Ridge Drive CITY Raleigh ADMINISTRATIVE AREA NC POSTAL CODE 27610 COUNTRY US E-MAIL ADDRESS ATLAS@ncdot.gov

Hours of Service

9:00am - 5:00pm Monday - Friday

CONTACT INSTRUCTIONS

Please send an email with any issues, questions or comments regarding the ATLAS Data Search Tool, ATLAS Screening Tool or ATLAS Workbench. If it is an immediate need, please call the contact number or indicate as such in the subject line in an email.

Hide Contact information ▲

RESPONSIBLE PARTY

ORGANIZATION'S NAME North Carolina Department of Transportation - EAU Mitigation and Modeling Unit CONTACT'S POSITION Environmental Program Consultant CONTACT'S ROLE resource provider

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RESPONSIBLE PARTY

ORGANIZATION'S NAME North Carolina Department of Transportation - EAU Mitigation and Modeling Unit Contact's Position Environmental Program Consultant

Contact's Role point of contact

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Hide Contact information ▲

Hide Citation Contacts ▲

Resource Details >

DATASET LANGUAGES English (UNITED STATES)

DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

STATUS completed

SPATIAL REPRESENTATION TYPE vector

^{*} PROCESSING ENVIRONMENT Version 6.2 (Build 9200); Esri ArcGIS 10.8.1.14362

CREDITS

The Environmental Analysis Unit (EAU) Mitigation and Modeling Unit within NCDOT was tasked to create this dataset. This dataset supports the production of the Natural Resources Technical Report (NRTR). Annual maintenance of this dataset is handled by the EAU.

Support and maintenance of the enterprise spatial database where this data resides is handled by NCDIT's Transportation GIS Unit.

Hide Resource Details ▲

Extents ▶

EXTENT

DESCRIPTION

Data collection is complete.

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

WEST LONGITUDE -84.422111

EAST LONGITUDE -75.416034

SOUTH LATITUDE 33.730557

NORTH LATITUDE 36.617257

EXTENT CONTAINS THE RESOURCE Yes

TEMPORAL EXTENT

BEGINNING DATE 2022-08-01 00:00:00 ENDING DATE 2022-08-01 00:00:00

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching

- * WEST LONGITUDE -78.039802
- * EAST LONGITUDE -77.460293
- * NORTH LATITUDE 34.776958
- * SOUTH LATITUDE 34.205818
- * EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

- * WEST LONGITUDE 2290316.927983
- * EAST LONGITUDE 2462364.157707
- * SOUTH LATITUDE 169460.856811
- * NORTH LATITUDE 375170.778067
- * EXTENT CONTAINS THE RESOURCE Yes

Hide Extents ▲

Resource Points of Contact >

POINT OF CONTACT

ORGANIZATION'S NAME North Carolina Department of Transportation - EAU Mitigation and Modeling Unit Contact's Position Environmental Program Consultant

Contact's Role originator

CONTACT INFORMATION PHONE
VOICE 919-707-6136

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Hide Contact information ▲

Hide Resource Points of Contact ▲

Resource Maintenance ▶

RESOURCE MAINTENANCE

UPDATE FREQUENCY as needed

Scope of the updates dataset

OTHER MAINTENANCE REQUIREMENTS

Maintenance of this dataset is handled by the Environmental Analysis Unit (EAU) Mitigation and Modeling Unit. Currently updating this dataset has not been planned. Support and maintenance of the enterprise spatial database where this data resides is handled by NCDIT's Transportation GIS Unit.

MAINTENANCE CONTACT

ORGANIZATION'S NAME North Carolina Department of Transportation - EAU Mitigation and Modeling Unit Contact's Position Environmental Program Consultant

Contact's Role originator

CONTACT INFORMATION >

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Resource Constraints >

LEGAL CONSTRAINTS LIMITATIONS OF USE

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SECURITY CONSTRAINTS

CLASSIFICATION unclassified CLASSIFICATION SYSTEM None

LIMITATIONS OF USE

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CONSTRAINTS LIMITATIONS OF USE

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Hide Resource Constraints ▲

Spatial Reference ▶

ARCGIS COORDINATE SYSTEM

- * Type Projected
- * GEOGRAPHIC COORDINATE REFERENCE GCS_North_American_1983
- * PROJECTION NAD_1983_StatePlane_North_Carolina_FIPS_3200_Feet
- * COORDINATE REFERENCE DETAILS

PROJECTED COORDINATE SYSTEM

Well-known identifier 102719

X ORIGIN -121841900

Y ORIGIN -93659000 XY SCALE 3048.0060960121918

Z ORIGIN -100000 Z SCALE 10000 M ORIGIN -100000 M SCALE 10000

XY TOLERANCE 0.003280833333333333333

Z TOLERANCE 0.001 M TOLERANCE 0.001

HIGH PRECISION true

LATEST WELL-KNOWN IDENTIFIER 2264

WELL-KNOWN TEXT

PROJCS["NAD_1983_StatePlane_North_Carolina_FIPS_3200_Feet",GEOGCS["GCS_North_American_1983",DATUM["D_North_American_1983",SPHEROID["GRS_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433]],PROJECTION["Lambert_Conformal_Conic"],PARAMETER["False_Easting",2000000.002616666],PARAMETER["False_Northing",0.0],PARAMETER["Central_Meridian",-

REFERENCE SYSTEM IDENTIFIER

VALUE 2264

- * CODESPACE EPSG
- * VERSION 6.12(9.0.0)

Hide Spatial Reference A

Spatial Data Properties ▶

VECTOR >

* Level of topology for this dataset geometry only

GEOMETRIC OBJECTS

FEATURE CLASS NAME GoldenSedgePotentialHabitat

- * OBJECT TYPE composite
- * OBJECT COUNT 10330

Hide Vector ▲

ARCGIS FEATURE CLASS PROPERTIES

FEATURE CLASS NAME GoldenSedgePotentialHabitat

- * FEATURE TYPE Simple
- * GEOMETRY TYPE Polygon
- * HAS TOPOLOGY FALSE
- * FEATURE COUNT 10330
- * SPATIAL INDEX TRUE
- * LINEAR REFERENCING FALSE

Hide ArcGIS Feature Class Properties ▲

Hide Spatial Data Properties A

Data Quality ▶

Scope of quality information
Resource Level dataset

Hide Scope of quality information ▲

DATA QUALITY REPORT - COMPLETENESS OMISSION MEASURE DESCRIPTION

After processing, the dataset is checked for drawing display and number of records and file sizes compared with source materials.

CONFORMANCE TEST RESULTS
TEST PASSED Yes
RESULT EXPLANATION
Pass

PRODUCT SPECIFICATION >

TITLE NCDOT Geospatial Data Specifications

CREATION DATE 2019-07-17 00:00:00
PUBLICATION DATE 2021-06-30 00:00:00

Hide Product specification ▲

Hide Data quality report - Completeness omission ▲

DATA QUALITY REPORT - CONCEPTUAL CONSISTENCY

MEASURE DESCRIPTION

The dataset is converted to file geodatabase (FGDB) format using tools in ArcGIS. The geometry is checked, and if needed repaired

CONFORMANCE TEST RESULTS
TEST PASSED Yes
RESULT EXPLANATION
Pass

PRODUCT SPECIFICATION >

TITLE NCDOT Geospatial Data Specifications
CREATION DATE 2019-07-17 00:00:00
PUBLICATION DATE 2021-06-30 00:00:00

Hide Product specification ▲

Hide Data quality report - Conceptual consistency ▲

DATA QUALITY REPORT - QUANTITATIVE ATTRIBUTE ACCURACY MEASURE DESCRIPTION

Version 1 Model Field Assessment From November 2019 through February 2020, biologists conducted rapid field assessments of a binary classification (Potential Habitat and Non-Habitat) of the Version 1 continuous model predictions. A stratified sample of points were generated on "accessible lands" (generally public lands and right-of-ways) and biologists aimed to survey at least 10 points per county within the range. At each visited point, biologists characterized the site as "Potential Habitat" or "Non-Habitat", based upon their best professional judgment of the visible vegetation community and environmental characteristics. They also mapped the area as a polygon and provided site descriptions and photos to support their conclusion. If a single site, based on the scale of a 30-m grid cell, included both Potential Habitat and NonHabitat (e.g., differing habitat on either side of a road), two polygon entries were logged. • Model overestimates in Onslow, Pender and New Hanover • The model

overpredicts large areas of riverine and nonriverine hardwood swamp forests • The model also picks up intensively managed pine plantations that are not suitable habitat • Many areas have no fire management but are being predicted as habitat (ie, east of US 17 that is mostly developed)

CONFORMANCE TEST RESULTS
TEST PASSED Yes
RESULT EXPLANATION
Pass

PRODUCT SPECIFICATION >

TITLE NCDOT Geospatial Data Specifications CREATION DATE 2019-07-17 00:00:00 PUBLICATION DATE 2021-06-30 00:00:00

Hide Product specification ▲

Hide Data quality report - Quantitative attribute accuracy ▲

Hide Data Quality ▲

Lineage ▶

LINEAGE STATEMENT

Species Data Source:

Presence data was from multiple sources listed below, and rasterized to a 30-m scale to match environmental data. Any grid cell intersecting known occurrence points or polygons was attributed as "presence". No true absence data were available, so the remaining grid cells (areas without known occurrence) were attributed as "pseudoabsence".

- 1. US Fish and Wildlife Service (USFWS) Range Data: The model extent was defined based on USFWS current range data, applied through agreements between NCDOT and USFWS.
- 2. NC Natural Heritage Program (NCNHP) Element Occurrence (EO) Data: Observations evaluated for use in the model included all plant species records where STATUS=Current and ACCURACY=1-Very High, 2-High, and 3-Medium as of the most recent Tier 2 data release. Some, but not all, models included the medium accuracy data.
- 3. NC Department of Transportation (NCDOT) Field Pre-Validation Survey Data: Field surveys conducted to verify current EO status and improve the accuracy of EO records for some species.
- 4. NCDOT Past NRTR Project Data: Data gathered from past project files provided 6 years of presence/absence polygons and up to 2 years of habitat/non-habitat polygons within NRTR study areas.
- 5. Expert Reviewer AGOL Desktop Review Data: Species experts completed a structured, spatially explicit review of a draft version of this model (see below). Experts' potential habitat/non-habitat judgments served as additional input for some models.

Within the USFWS range there are 6,013,708 30-m raster grid cells. From the intersection of these grid cells with the available occurrence data, we obtained:

• Presence: 797 cells attributed as high precision, current observations of Dwarf-leaf Heartflower. All presence locations were used to train the model, because the random forest model process includes randomized out-of-bag testing as part of development.

- Mediums: 0 cells attributed as moderate precision, but current observations. The use of these presence cells to train the model depended on how much noise versus signal they added. Medium cells were included from this version of the model.
- Historic: : 15 cells attributed as historic (extirpated) observations. These observations were not used to train the model but were referenced during model review
- Associates: 0 cells attributed as current, high precision observations of associated species, but without record of the Dwarf-leaf Heartflower. If present, these observations were not used to train the model but were referenced during model review.
- Target Taxa Group: 12,916 cells attributed as current, high precision observations of other plant species where the Dwarf-leaf Heartflower was not documented as present. Target taxa group cells were handled as a special class of pseudoabsence data.
- Pseudoabsence: No true absence data were available for this project, so random draws from the remaining grid cells served as pseudoabsence data. The number of points drawn for each model run was equal to the total number of presence points.

Environmental Data Source:

There was access to 70 environmental data layers across 6 thematic areas: Geology and Soils, Land Cover and Vegetation, Disturbance, Landform, Spectral, Climate. All data are in NAD 1983 State Plane North Carolina FIPS 3200 (US feet), 30-m spatial resolution, with state wide extent.

This model was initiated with a subset of 38 variables based on variable importance in earlier drafts (the reviewed draft initiated with all 52 layers available at that time), previously untested layers (new or updated data layers), reviewer feedback, and interpretation of patterns in earlier versions. The initial subset of variables presented to the model was further refined by testing for multicollinearity and performing model selection.

Update for August 2022: Boundary was updated.



Geodatabase was forwarded on to the GIS Unit for publishing as part of data for project ATLAS.

PROCESS CONTACT

ORGANIZATION'S NAME North Carolina Department of Transportation - EAU Mitigation and Modeling Unit Contact's Position Environmental Program Consultant Contact's Role originator

CONTACT INFORMATION
PHONE
VOICE 919-707-6136

ADDRESS
TYPE
DELIVERY POINT Century Center Building B, 1020 Birch Ridge Drive
CITY Raleigh
ADMINISTRATIVE AREA NC
POSTAL CODE 27610
COUNTRY US
E-MAIL ADDRESS ATLAS@ncdot.gov

HOURS OF SERVICE

9:00am - 5:00pm Monday - Friday

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Hide Contact information ▲

Hide Process step ▲



Data was reviewed in ESRI's Data Reviewer tool to verify geometry.

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ORGANIZATION'S NAME North Carolina Department of Transportation - EAU Mitigation and Modeling Unit CONTACT'S POSITION Environmental Program Consultant CONTACT'S ROLE originator

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Model Approach and Output:

Random forest models generate predictions through repeated construction of decision-tree style models. At multiple points during model construction and assessment, the random forest draws a random subset of presence and pseudoabsence data, as well as random subset of available environmental data. The model procedure tracks

- (1) how frequently sites are predicted to be presence vs absence,
- (2) which variables contribute most to accurate classification of presence vs absence sites, and

(3) overall statistics about model performance. We ran the model in R using the randomForest and rfUtilities packages.

The model predicts the probability of potential habitat for the species, given the assumption that the available presence data are representative of suitable habitat within the state.

The predicted probability of potential habitat (0 to 1) reflects the frequency with which a raster grid cell was classified as potential habitat versus non-habitat through all the permutations of random forests.

3-levels (low, moderate, and high probability of potential habitat) representation of the model prediction by setting probability thresholds at 0.12(low/moderate) and 0.32 (moderate/high) were created. These thresholds were set through discussion with the expert biologists in reference to their observations of model strengths and weaknesses during the field assessments. The selection of a threshold is a judgement based on acceptable risk and desired level of precaution for a given application of the model. As a threshold is dropped, more area with decreasing similarity to known presence locations will be categorized as the higher level class (e.g., lowering the moderate/high threshold labels more habitat as high probability).

PROCESS CONTACT

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Hide Process step ▲

Hide Lineage ▲

Distribution ▶



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Hide Contact information ▲

Hide Distributor ▲

DISTRIBUTION FORMAT

* NAME File Geodatabase Feature Class Version 10.5

Hide Distribution ▲

Fields ▶

Details for object GoldenSedgePotentialHabitat ▶

- * TYPE Feature Class
- * ROW COUNT 10330

DEFINITION

Potential Habitat areas for Golden sedge in NC.

DEFINITION SOURCE

NCDOT

FIELD OBJECTID ▶

- * ALIAS FID
- * DATA TYPE OID
- * WIDTH 4
- * PRECISION 0
- * SCALE 0
- * FIELD DESCRIPTION

Internal feature number.

* DESCRIPTION SOURCE

Esri

* DESCRIPTION OF VALUES

Sequential unique whole numbers that are automatically generated.

Hide Field OBJECTID ▲

FIELD Shape ▶

- * ALIAS Shape
- * DATA TYPE Geometry
- * WIDTH 0
- * PRECISION 0
- * SCALE 0
- * FIELD DESCRIPTION

Feature geometry.

* DESCRIPTION SOURCE

Esri

* DESCRIPTION OF VALUES

Coordinates defining the features.

Hide Field Shape ▲

FIELD CommonName ▶

ALIAS CName

- * DATA TYPE String
- * WIDTH 100
- * PRECISION 0
- * SCALE 0

FIELD DESCRIPTION

Common Name of Species

DESCRIPTION SOURCE

NCDOT

Hide Field CommonName ▲

FIELD SciName ▶

ALIAS SName

- * DATA TYPE String
- * WIDTH 150
- * PRECISION 0
- * SCALE 0

FIELD DESCRIPTION

Scientific Name of Species

DESCRIPTION SOURCE

NCDOT

Hide Field SciName ▲

```
FIELD PotHabitat ▶
 ALIAS PotHab
 * DATA TYPE String
 * WIDTH 25
 * PRECISION 0
 * SCALE 0
 FIELD DESCRIPTION
    Model Output - Low, Moderate or High potential habitat
 DESCRIPTION SOURCE
    NCDOT
 LIST OF VALUES
  VALUE Low
  DESCRIPTION Low Potential
  ENUMERATED DOMAIN VALUE DEFINITION SOURCE NCDOT
  VALUE Moderate
  DESCRIPTION Moderate Potential
  ENUMERATED DOMAIN VALUE DEFINITION SOURCE NCDOT
  VALUE High
  DESCRIPTION High Potential
  ENUMERATED DOMAIN VALUE DEFINITION SOURCE NCDOT
```

FIELD Shape_Length ▶

* ALIAS Shape_Length

Hide Field PotHabitat ▲

- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0
- * FIELD DESCRIPTION

Length of feature in internal units.

* DESCRIPTION SOURCE

Esri

* DESCRIPTION OF VALUES

Positive real numbers that are automatically generated.

Hide Field Shape Length ▲

FIELD Shape_Area ▶

- * ALIAS Shape_Area
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0
- * FIELD DESCRIPTION

Area of feature in internal units squared.

* DESCRIPTION SOURCE

Esri

* DESCRIPTION OF VALUES

Positive real numbers that are automatically generated.

Hide Field Shape_Area ▲

Hide Details for object GoldenSedgePotentialHabitat ▲

Hide Fields ▲

Metadata Details ▶

METADATA LANGUAGE English (UNITED STATES)

METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

Scope of the data described by the metadata dataset scope name *dataset

* LAST UPDATE 2024-01-26

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0

STANDARD OR PROFILE USED TO EDIT METADATA ISO19139

METADATA STYLE ISO 19139 Metadata Implementation Specification

CREATED IN ARCGIS FOR THE ITEM 2024-02-01 14:10:40

LAST MODIFIED IN ARCGIS FOR THE ITEM 2024-01-26 18:58:55

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes

LAST UPDATE 2024-01-26 18:58:55

Hide Metadata Details A

Metadata Contacts ▶

METADATA CONTACT

ORGANIZATION'S NAME North Carolina Department of Transportation - EAU Mitigation and Modeling Unit Contact's Position Environmental Program Consultant

CONTACT'S ROLE point of contact

CONTACT INFORMATION >

PHONE

VOICE 919-707-6136

ADDRESS

TYPE

DELIVERY POINT Century Center Building B, 1020 Birch Ridge Drive

CITY Raleigh

ADMINISTRATIVE AREA NC

POSTAL CODE 27610

COUNTRY US

E-MAIL ADDRESS ATLAS@ncdot.gov

Hours of Service

9:00am - 5:00pm Monday - Friday

CONTACT INSTRUCTIONS

Please send an email with any issues, questions or comments regarding the ATLAS Data Search Tool, ATLAS Screening Tool or ATLAS Workbench. If it is an immediate need, please call the contact number or indicate as such in the subject line in an email.

Hide Contact information ▲

Hide Metadata Contacts ▲

Metadata Maintenance ▶

MAINTENANCE

UPDATE FREQUENCY as needed

OTHER MAINTENANCE REQUIREMENTS

Annual maintenance of this dataset is handled by the Environmental Analysis Unit (EAU) Mitigation and Modeling Unit. Support and maintenance of the enterprise spatial database where this data resides is handled by NCDIT's Transportation GIS Unit.

MAINTENANCE CONTACT

ORGANIZATION'S NAME North Carolina Department of Transportation - EAU Mitigation and Modeling Unit Contact's Position Environmental Program Consultant Contact's Role originator

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Metadata Constraints ▶

SECURITY CONSTRAINTS
CLASSIFICATION unclassified
CLASSIFICATION SYSTEM None

LIMITATIONS OF USE

The North Carolina Department of Transportation shall not be held liable for any errors in this metadata. This includes errors of omission, commission, errors concerning the content of the data, and relative and positional accuracy of the data. This data cannot be construed to be a legal document. Primary sources from which this data was compiled must be consulted for verification of information contained in this data. Datasets developed under Project ATLAS do not replace any NRTR work for future projects and may not be used as a replacement for site visits / field surveys by qualified professionals and hence should be used only as a supporting platform for decision making. Use of this dataset for project scoping or screening is merely pre-decisional.

CONSTRAINTS

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Hide Metadata Constraints A