

Blue Ridge Goldenrod - Potential Habitat, March 2021 - NC Department of Transportation

Geodatabase Feature Class



Tags Blue Ridge goldenrod, *Solidago spithamea*, Soli_spit, Vascular Plant, Terrestrial, threatened, GIS-based model, expert model, Transportation, NRTR, NCDOT, Environment, Location, North Carolina, ATLAS

Summary

This dataset was originally created in March 2020 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. Model output is binary, and includes the USFWS species range, excluding historic counties. The species model range is split between “High” and “Low” potential habitat. “High potential habitat” represents GIS based layer areas deemed suitable habitat, and “Low potential habitat” represents areas deemed low quality or non-habitat. This model identifies all year-round potential suitable habitat for the species.

The Optimal survey window for Blue Ridge goldenrod is July - September.

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 Blue Ridge goldenrod Potential Habitat dataset is a polygon layer depicting high and low potential habitat locations for Blue ridge goldenrod in NC counties that have a USFWS "current" status listing.

Blue Ridge goldenrod (*Solidago spithamea*) endemic to the Appalachian Mountains of North Carolina and Tennessee, occurs in the High Elevation Rocky Summit natural community generally at or above elevations of 4,600 feet above mean sea level along cliffs, ledges, balds, and dry rock crevices of granite outcrops of the higher mountain peaks. This early pioneer herb usually grows in full sun on generally acidic soils of shallow humus or clay loams that are intermittently saturated. The encroachment of woody vegetation such as ericaceous shrubs can eliminate the goldenrod through competition and shading. Roan Mountain bluet, Heller’s blazing star, and spreading avens are a few of its common associate species.

There are 3 recorded populations of the species in North Carolina (21 element occurrences (EOs)). They are considered to be a southern representative of a large group of colder climate alpine goldenrod populations. It occurs on rock outcrops, cliff and balds, and ledges without tree canopy in the Blue Ridge Mountains at elevations higher than 4600’ according to the recovery plan. However, EOs have been documented at elevations slightly lower than 4600’.

Habitat descriptions per literature review and expert elicitation guided the model process in determining the best model layers and attributes in these layers to represent the species habitat requirements.

County Information-

- NHP listed counties: Ashe, Avery, Buncombe, Mitchell, and Watauga
- FWS listed counties: Ashe, Avery, Buncombe, Mitchell, and Watauga

· There are no occurrences in Ashe and Buncombe

For more information please click here <https://xfer.services.ncdot.gov/gisdot/Metadata/Atlas/TechDocs/>

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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

The North Carolina Department of Transportation shall not be held liable for any errors in this data. 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.

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Extent

West -82.930913

East -81.218271

North 36.596692

South 35.405995

Scale Range

Maximum (zoomed in) 1:5,000

Minimum (zoomed out) 1:625,000

Topics and Keywords

Themes or categories of the resource Biota, Geoscientific, Location, Transportation, Environment

Content type Downloadable Data

Export to FGDC CSDGM XML format as Resource Description No

Theme keywords Blue Ridge goldenrod, Solidago spithamaea, Soli_spit, Vascular Plant, Terrestrial, threatened, GIS-based model, expert model, Transportation, NRTR, NCDOT, Environment, Location, North Carolina, ATLAS

Thesaurus

Title User

Creation date 2020-03-02 00:00:00

Publication date 2021-03-15 00:00:00

Place keywords North Carolina

Thesaurus

Title User

Creation date 2020-03-02 00:00:00
Publication date 2021-03-15 00:00:00

Citation

Title Blue Ridge Goldenrod - Potential Habitat, March 2021 - NC Department of Transportation

Creation date 2020-03-02 00:00:00

Publication date 2021-03-15 00:00:00

Presentation formats digital map

FGDC geospatial presentation format vector digital data

Citation Contacts

Responsible party - resource provider

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6136

Address

Type physical

Delivery point 4101 Capital Boulevard

City Raleigh

Administrative area NC

Postal code 27604

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.

Responsible party - point of contact

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Responsible party - originator

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Contact's position Environmental Program Consultant

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Resource Details

Dataset languages English (UNITED STATES)

Dataset character set utf8 - 8 bit UCS Transfer Format

Status completed

Spatial representation type vector

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.

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 2020-03-02 00:00:00

Ending date 2020-03-02 00:00:00

Extent

Geographic extent

Bounding rectangle

Extent type Extent used for searching

West longitude -82.930913

East longitude -81.218271

North latitude 36.596692

South latitude 35.405995

Extent contains the resource Yes

Extent in the item's coordinate system

westBL 845533.123331

eastBL 1339398.878051

southBL 625225.421986

northBL 1043624.415895

exTypeCode Yes

Resource Points of Contact

Point of contact - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit
Contact's position Environmental Program Consultant
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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 - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

Contact information

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Resource Constraints

Legal constraints

Limitations of use

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Security constraints

Classification unclassified

Classification system None

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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

ProjectedCoordinateSystem

WKID 102719

XOrigin -121841900
YOrigin -93659000
XYScale 3048.0060960121918
ZOrigin 0
ZScale 1
MOrigin 0
MScale 1
XYTolerance 0.0032808333333333331
ZTolerance 0.001
MTolerance 0.001
HighPrecision true
LatestWKID 2264
WKT
PROJCS["NAD_1983_StatePlane_North_Carolina_FIPS_3200_Feet",GEOGCS["GCS_North_American_1983",DATUM["79.0"],PARAMETER["Standard_Parallel_1",34.33333333333334],PARAMETER["Standard_Parallel_2",36.16666666666667],

Reference system identifier

Value 2264
Codespace EPSG
Version 6.12(9.0.0)

Spatial Data Properties

Vector

Level of topology for this dataset geometry only
Geometric objects
Feature class name GdbGisuPubC.ATLAS.BlueRidgeGoldenrodPotentialHabitat
Object type composite
Object count 1919

ArcGIS Feature Class Properties

Feature class name GdbGisuPubC.ATLAS.BlueRidgeGoldenrodPotentialHabitat
Feature type Simple
Geometry type Polygon
Has topology FALSE
Feature count 1919
Spatial index TRUE
Linear referencing FALSE

Data Quality

Scope of quality information

Resource level dataset

Data quality report - Completeness omission

Data quality measure reference

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 2019-07-11 00:00:00

Publication date 2020-12-16 00:00:00

Data quality report - Conceptual consistency

Data quality measure reference

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 2020-03-02 00:00:00

Publication date 2021-03-15 00:00:00

Data quality report - Quantitative attribute accuracy

Data quality measure reference

Measure description

· AGOL Review

A model prediction file was shared with select reviewers on ArGIS Online (AGOL). Points were placed within the USFWS potential habitat as well as the model potential habitat in order to solicit feedback. Reviewers could place additional comments for consideration by modeler.

AGOL review was completed in May 2019 on a draft version of this model

· Independent Data Review

Describe data sources – Natural Heritage Program element occurrences

Describe methods – Current aerial imagery was used to determine if EO sites have been developed.

Elevation data was used to confirm the elevations included in EO records.

Conformance test results

Test passed Yes

Result explanation

Pass

Product specification

Title NCDOT Geospatial Data Specifications

Creation date 2020-03-02 00:00:00

Publication date 2021-03-15 00:00:00

Lineage

Lineage statement

ArcGIS Model Builder version 10.4.1 was used to build a model

Input Environmental data layers for model:

1) DEM

NC Floodplain Mapping Program 20-foot DEM acquired August 2018

- Layer selection justification: The data includes a grid of elevation values for the entire state although data is clipped to county boundary plus a buffer. Blue Ridge goldenrod is known to occur in a specific range of elevations.
- “Habitat” versus “Non-habitat” designations: Areas with elevation greater than 4,400 feet above sea level were identified as habitat.

2) County_Boundary

Select Ashe, Avery, Buncombe, Mitchell, and Watauga Counties from County Boundary shapefile

- Layer selection justification: Species listed in Ashe, Avery, Buncombe, Mitchell, and Watauga Counties
- “Habitat” versus “Non-habitat” designation: Potential habitat Ashe, Avery, Buncombe, Mitchell, and Watauga Counties.

Process step

Description

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

Process contact - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6136

Address

Type physical

Delivery point 4101 Capital Boulevard

City Raleigh

Administrative area NC

Postal code 27604

Country US

e-mail address ATLAS@ncdot.gov

Hours of service

9:00am – 5:00pm Monday - Friday

Contact instructions

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Process step

Description

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

Process contact - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

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Process step

Description

Summary of model steps:

- Selected all areas in DEM over 4,400 feet above mean sea level
- Clipped result to select counties.

Process contact - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

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Distribution

Distributor

Contact information - distributor

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6136

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Distribution format

Name SDE Feature Class

Version 10.5

Fields

Details for object GdbGisuPubC.ATLAS.BlueRidgeGoldenrodPotentialHabitat

Type Feature Class

Row count 1919

Definition

Potential Habitat areas for Blue Ridge goldenrod in NC

Definition source

NCDOT

Field OBJECTID

Alias FID

Data type OID

Width 4

Precision 10

Scale 0

Field description

Internal feature number.

Description source

Esri

Description of values

Sequential unique whole numbers that are automatically generated.

Field Shape

Alias Shape

Data type Geometry

Width 4

Precision 0

Scale 0

Field description

Feature geometry.

Description source

Esri

Description of values

Coordinates defining the features.

Field CommonName

Alias CName

Data type String

Width 50

Precision 0

Scale 0

Field description

Common Name of Species

Description source

NCDOT

Field SciName

Alias SName

Data type String

Width 50

Precision 0

Scale 0

Field description

Scientific Name of Species

Description source

NCDOT

Field PotHabitat

Alias PotHab

Data type String

Width 25

Precision 0

Scale 0

Field description

Model Output - Low or High potential habitat

Description source

NCDOT

List of values

Value High

Description High potential

Enumerated domain value definition source NCDOT

Value Low

Description Low potential

Enumerated domain value definition source NCDOT

Field Shape.STArea()

Alias Shape.STArea()

Data type Double

Width 0

Precision 0

Scale 0

Field Shape.STLength()

Alias Shape.STLength()

Data type Double

Width 0

Precision 0

Scale 0

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 2022-07-25

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 2026-08-26 13:48:51

Last modified in ArcGIS for the item 2022-07-25 17:44:26

Automatic updates

Have been performed Yes

Last update 2022-07-25 17:44:13

Metadata Contacts

Metadata contact - point of contact

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6136

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Metadata Maintenance

Maintenance

Update frequency as needed

Other maintenance requirements

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Metadata Constraints

Security constraints

Classification unclassified

Classification system None

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Thumbnail and Enclosures

Thumbnail

Thumbnail type

Image file