

Bunched Arrowhead - Potential Habitat, December 2020 - NC Department of Transportation

File Geodatabase Feature Class



Tags

North Carolina, Bunched arrowhead, *Sagittaria fasciculata*, Sagi_fasc, Bunched, arrowhead, Vascular Plant, Terrestrial, 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 Bunched Arrowhead is Mid May-July. Field surveys are valid for 2 years.

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 Bunched Arrowhead Potential Habitat dataset is a polygon layer depicting high and low potential habitat locations for Bunched Arrowhead in NC counties that have a USFWS "current" status listing. This model identifies all year-round potential suitable habitat for the species.

Bunched arrowhead (BA) (*Sagittaria fasciculata*), endemic to the southern Appalachian Mountains of North Carolina and upper Piedmont of South Carolina, is rooted in shallow water seepage areas of bogs, wooded swamps, and deciduous woodlands. This early-successional perennial herb occurs in Swamp Forest-Bog Complex (Typic Subtype) and Southern Appalachian Bog (Southern Subtype) natural communities. A known occurrence also occurs in a maintained power line right-of-way along the headwaters of a river. The plant requires a slight but continuous and steady flow of cool, clean water that saturates or floods but does not stagnate. The species typically occurs in sandy loam soils found underneath a 10-24 inch layer of muck, sand, and silt. Undisturbed occurrences are usually located just below the origin of the seep on gently sloping terrain at the bluff-floodplain ecotone. While shaded areas contain the most vigorous plants, it will also grow in either full sun or partial shade beneath red maple, black gum, and alder at the base of steep slopes.

Occupied habitat consists of muck-filled seep areas on alluvial floodplains with a few exceptions on small sand bars in streams. Many North Carolina populations typically occur in highly degraded habitats representing ditched and channelized remnants of former wetland/stream systems.

Eight element occurrences (EO's) (7 current and 1 historic) are listed in North Carolina per Natural Heritage (July 2018). Landcover communities associated with these populations include forested/shrub bogs and field/pastures.

County Information-

FWS current listed counties: Henderson (Buncombe is historic)

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 pre-decisional.

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.

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.

Extent

West -82.748145 **East** -82.251582

North 35.502049 **South** 35.139370

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 2020-03-02 00:00:00

PUBLICATION DATE 2020-12-16 00:00:00

Hide Thesaurus ▲

THEME KEYWORDS Bunched arrowhead, Sagittaria fasciculata, Sagi_fasc, Bunched, arrowhead, Vascular Plant, Terrestrial, Transportation, NRTR, NCDOT, Environment, Location, North Carolina, ATLAS

THESAURUS ▶

TITLE User

CREATION DATE 2020-03-02 00:00:00

PUBLICATION DATE 2020-12-16 00:00:00

[Hide Thesaurus ▲](#)

[Hide Topics and Keywords ▲](#)

Citation ▶

TITLE Bunched Arrowhead - Potential Habitat, December 2020 - NC Department of Transportation

CREATION DATE 2020-03-02 00:00:00

PUBLICATION DATE 2020-12-16 00:00:00

PRESENTATION FORMATS digital map

FGDC GEOSPATIAL PRESENTATION FORMAT vector digital data

[Hide Citation ▲](#)

Citation Contacts ▶

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

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.

[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 point of contact

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.

[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 originator

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.

[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 -82.531225

EAST LONGITUDE -81.225791

SOUTH LATITUDE 35.692165

NORTH LATITUDE 36.596696

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 -82.748145

* EAST LONGITUDE -82.251582

* NORTH LATITUDE 35.502049

* SOUTH LATITUDE 35.139370

* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

* WEST LONGITUDE 884530.414430

* EAST LONGITUDE 1028262.461611

* SOUTH LATITUDE 526621.595572

* NORTH LATITUDE 653632.888793

* 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

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.

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 ►

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.

[Hide Contact information ▲](#)

[Hide Resource Maintenance ▲](#)

Resource Constraints ►

LEGAL CONSTRAINTS

LIMITATIONS OF USE

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.

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 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.

CONSTRAINTS

LIMITATIONS OF USE

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.

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.

[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 0.0032808333333333331
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",-79.0],PARAMETER["Standard_Parallel_1",34.33333333333334],PARAMETER["Standard_Parallel_2",36.16666666666666],PARAMETER["Latitude_Of_Origin",33.75],UNIT["Foot_US",0.3048006096012192],AUTHORITY["EPSG",2264]]

REFERENCE SYSTEM IDENTIFIER

VALUE 2264
* CODESPACE EPSG
* VERSION 6.12(9.0.0)

[Hide Spatial Reference ▲](#)

Spatial Data Properties ►

VECTOR ►

* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

FEATURE CLASS NAME BunchedArrowheadPotentialHabitat___
* OBJECT TYPE composite
* OBJECT COUNT 12725

[Hide Vector ▲](#)

ARCGIS FEATURE CLASS PROPERTIES ►

FEATURE CLASS NAME BunchedArrowheadPotentialHabitat___
* FEATURE TYPE Simple
* GEOMETRY TYPE Polygon
* HAS TOPOLOGY FALSE
* FEATURE COUNT 12725
* SPATIAL INDEX TRUE
* LINEAR REFERENCING FALSE

[Hide ArcGIS Feature Class Properties ▲](#)

[Hide Spatial Data Properties ▲](#)

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 2020-03-02 00:00:00

PUBLICATION DATE 2020-12-16 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 2020-03-02 00:00:00

PUBLICATION DATE 2020-12-16 00:00:00

[Hide Product specification ▲](#)

[Hide Data quality report - Conceptual consistency ▲](#)

DATA QUALITY REPORT - QUANTITATIVE ATTRIBUTE ACCURACY ▶

MEASURE DESCRIPTION

- AGOL Review

A model prediction file was shared with select reviewers on ArcGIS 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 November 2018 on the DRAFT version of this model

- Independent Data Review

Describe data sources – NHP element occurrences

Describe methods – NHP element occurrences were compared to Model output to determine if predicted habitat intersected known habitat.

Provide summary results – NHP element occurrences intersected predicted habitat.

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 2020-12-16 00:00:00

[Hide Product specification ▲](#)

[Hide Data quality report - Quantitative attribute accuracy ▲](#)

[Hide Data Quality ▲](#)

Lineage ►

LINEAGE STATEMENT

ArcGIS Model Builder version 10.3.1 was used to build a model

Input Environmental data layers for model:

1) County_Boundary

Select Henderson County from County Boundary shapefile

- Layer selection justification: Species only listed in Henderson
- "Habitat" versus "Nonhabitat" designations: Potential habitat Henderson County.

2) NC_Wetlands

NWI Wetlands Polygon

- Clip polygon to Henderson County extent
- Exclude Freshwater Pond, Lakes, and Riverine, wetland types.

• Layer selection justification: Bunched arrowhead is associated with the Southern Appalachian Bog and Swamp Forest-Bog Complex Communities. NWI data showed overlap between the Southern Appalachian Bog and Swamp Forest-Bog Complex Communities with Freshwater Forested/Shrub Wetlands, Freshwater Emergent Wetlands, Riverine, Unconsolidated Bottom Wetlands, and Riverine, Intermittent Wetlands.

- "Habitat" versus "Nonhabitat" designations: Potential habitat may be associated with certain types of NWI mapped wetlands described above.

3)NRCS_Soils_NC

SSURGO Map Unit Polygon feature class of soil type and hydric percentage.

- Clip polygon to Henderson County extent
- Select soils with hydric percentage equal to or greater than 33%.
- Layer selection justification: Bunched arrowhead is associated with saturated to flooded soils. Hydric soils layers were used to capture saturated to flooded soils that may serve as bunched arrowhead habitat.
- "Habitat" versus "Nonhabitat" designations: Potential habitat is designated as hydric soils or soils having hydric inclusions equal to or greater than 33%.

4) hend_flat, hend_depres

Layer description:

- Create terrain form and associated geometry layer from USGS elevation data using GRASS GIS Geomorphon add-on
- Clip raster to Henderson County extent
- Select flat and depression areas
- Union with NWI Wetlands and Hydric Soils data to encompass all potential habitat areas.
- Layer selection justification: Bunched arrowhead is associated with water seepage areas of bogs, wooded swamps, and deciduous woodlands. Flats and depressions identified using Geomorphon add-on are landforms that may contain seepage areas.
- "Habitat" versus "Nonhabitat" designations: Potential habitat is designated as flats or depressions.

5) Gap_lc

USGS GAP Land Cover raster

- Extract Ecological System Classes Evergreen Plantation or Managed Pine, Central and Southern Appalachian Montane Oak Forest, Central and Southern Appalachian Northern Hardwood Forest, Southern and Central Appalachian Oak Forest, Appalachian Hemlock-Hardwood Forest, Southern and Central Appalachian Cove Forest, South-Central Interior Large Floodplain - Forest Modifier, South-Central Interior Small Stream and Riparian, Southern and Central Appalachian Bog and Fen, South-Central Interior Large Floodplain - Herbaceous Modifier, Cultivated Cropland, and Pasture/Hay.
- Convert Raster to Polygon
- Union with NCNHP Swamp Forest Bog community layer data.
- Intersect with Geomorphon/Wetland/Soils union layer data.
- Layer selection justification:
Bunched arrowhead is associated with water seepage areas of bogs, wooded swamps, and deciduous woodlands. Specific natural communities include the Swamp Forest-Bog Complex (Typic Subtype) and Southern Appalachian Bog (Southern Subtype). Gap communities associated with the eight known North Carolina EO's included the communities listed above. These included GAP landcover communities that overlapped documented North Carolina Southern Bog and Swamp Forest-Bog Complex communities (Extrapolated from NHP Tier II Data).
- "Habitat" versus "Nonhabitat" designations:
Potential habitat includes specific GAP landcover communities as listed above.

6) ATLAS Hydrography Dataset v1.0

ATLAS Hydro line features.

- Select all intersected Geomorphon/Wetland/Soil/GAP layers located within 150 feet of ATLAS Hydrography Dataset v1.0
- Layer selection justification: Bunched arrowhead is associated with water seepage areas of bogs, wooded swamps, and deciduous woodlands. Small seeps areas are often found in the drainage/floodplain of small streams. These areas may not be mapped as hydric soils and small wetland features may not be captured by NWI mapping.
- "Habitat" versus "Nonhabitat" designations: Potential habitat may occur near small stream and drainage features.

7) NCNHP Swamp_Forest-Bog_Complex_Natural Community

NCNHP Swamp Forest-Bog Complex Natural Community data.

- Union Swamp Forest-Bog Complex Natural Community layer with extracted GAP landcover raster.
- Layer selection justification: Bunched arrowhead is associated with water seepage areas of bogs, wooded swamps, and deciduous woodlands.
- "Habitat" versus "Nonhabitat" designations: Potential habitat may occur in Swamp Forest Bogs.

8) NHD_Waterbody & NHD Area

National Hydrography Dataset polygon features representing open water.

- Select only NHD Area and Waterbody features.
- Erase BA areas with NHD Area and Waterbody features to remove habitat in open water.
- Layer selection justification: Bunched arrowhead does not occur in open water or rivers but is associated with water seepage areas of bogs, wooded swamps, and deciduous woodlands. Small seeps areas are often found in the drainage/floodplain of small streams.
- "Habitat" versus "Nonhabitat" designations: BA habitat does not occur in open water or river habitats.

Known Issues with Model Data Layers

- GAP Landcover: Gap Landcover data (2011) included buildings, roads, and other structures within landcover classes which subsequently overly predicted potential GPP habitat.

PROCESS STEP

DESCRIPTION

Summary of model steps:

- ♣ Selected North Carolina counties where plant is known to occur
- ♣ Union GAP landcover and NHP Swamp Bog Forest Community data
- ♣ Union NWI wetlands, NRCS hydric soils, and Henderson county flats and depressions data to encompass all potential habitat areas.
- ♣ Intersect result file with GAP landcover/Swamp Bog Forest Community data
- ♣ Select areas from resulting file located within 150 feet of Atlas Hydrography water lines.
- ♣ Union NHD Area and Waterbody layers and erase BA habitat occurring in open water areas.

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 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.

[Hide Contact information ▲](#)

[Hide Process step ▲](#)

PROCESS STEP ►
DESCRIPTION

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

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 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.

[Hide Contact information ▲](#)

[Hide Process step ▲](#)

PROCESS STEP ►
DESCRIPTION

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 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.

[Hide Contact information ▲](#)

[Hide Process step ▲](#)

[Hide Lineage ▲](#)

Distribution ►

DISTRIBUTOR ►

CONTACT INFORMATION

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

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.

[Hide Contact information ▲](#)

[Hide Distributor ▲](#)

DISTRIBUTION FORMAT

* NAME File Geodatabase Feature Class
VERSION 10.5

[Hide Distribution ▲](#)

Fields ►

DETAILS FOR OBJECT BunchedArrowheadPotentialHabitat__ ►

* TYPE Feature Class

* ROW COUNT 12725

DEFINITION

Potential Habitat areas for Bunched Arrowhead 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 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

Hide Field PotHabitat ▲

FIELD **Shape_Length** ▶

* ALIAS Shape_Length

* 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 BunchedArrowheadPotentialHabitat__ ▲](#)

[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 2023-12-01

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 14:09:40

LAST MODIFIED IN ARCGIS FOR THE ITEM 2023-12-01 12:27:18

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes

LAST UPDATE 2023-12-01 12:27:18

[Hide Metadata Details ▲](#)

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 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.

[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). 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 ►

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.

[Hide Contact information ▲](#)

[Hide Metadata Maintenance ▲](#)

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

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.

[Hide Metadata Constraints ▲](#)