



NORTH CAROLINA
Department of Transportation

Project ATLAS Updates

Advancing Transportation through Linkages, Automation, and Screening

Katie Talavera

Environmental Analysis Unit, NCDOT

May 14, 2025

Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina



OUR VISION

A global leader in providing
innovative transportation solutions



Agenda

ATLAS Background - Objectives

ATLAS Resources & Tools

Derived In-House Layers

Layer Maintenance/Metadata

Planned New Datasets

Trainings

Return on Investment (ROI)

Project ATLAS Background

Project ATLAS began in 2018 with the goal of streamlining project development using GIS tools, applications, and data.

Project ATLAS Background

Objectives

- Early screening
- Inform scope, schedule, and budget
- Automated reporting
- One-stop shop for project data



ATLAS Resources & Tools



ATLAS Resources

<https://connect.ncdot.gov/resources/Environmental/EAU/Project-Atlas/Pages/default.aspx>

Connect NCDOT
BUSINESS PARTNER RESOURCES

Doing Business

Bidding & Letting

Projects

Resources

Local Governments

Asset Management

Environmental

Geotechnical

GIS

Hydraulics

Materials & Tests

Contract Sta

ATLAS Tools

ATLAS Data Search Tool

ATLAS Data Screening Tool

ATLAS Training Resources

ATLAS Training Guide DRAFT

ATLAS Training Site

ATLAS Deliverables and GIS Resources

ATLAS Search and Screening GIS Layers

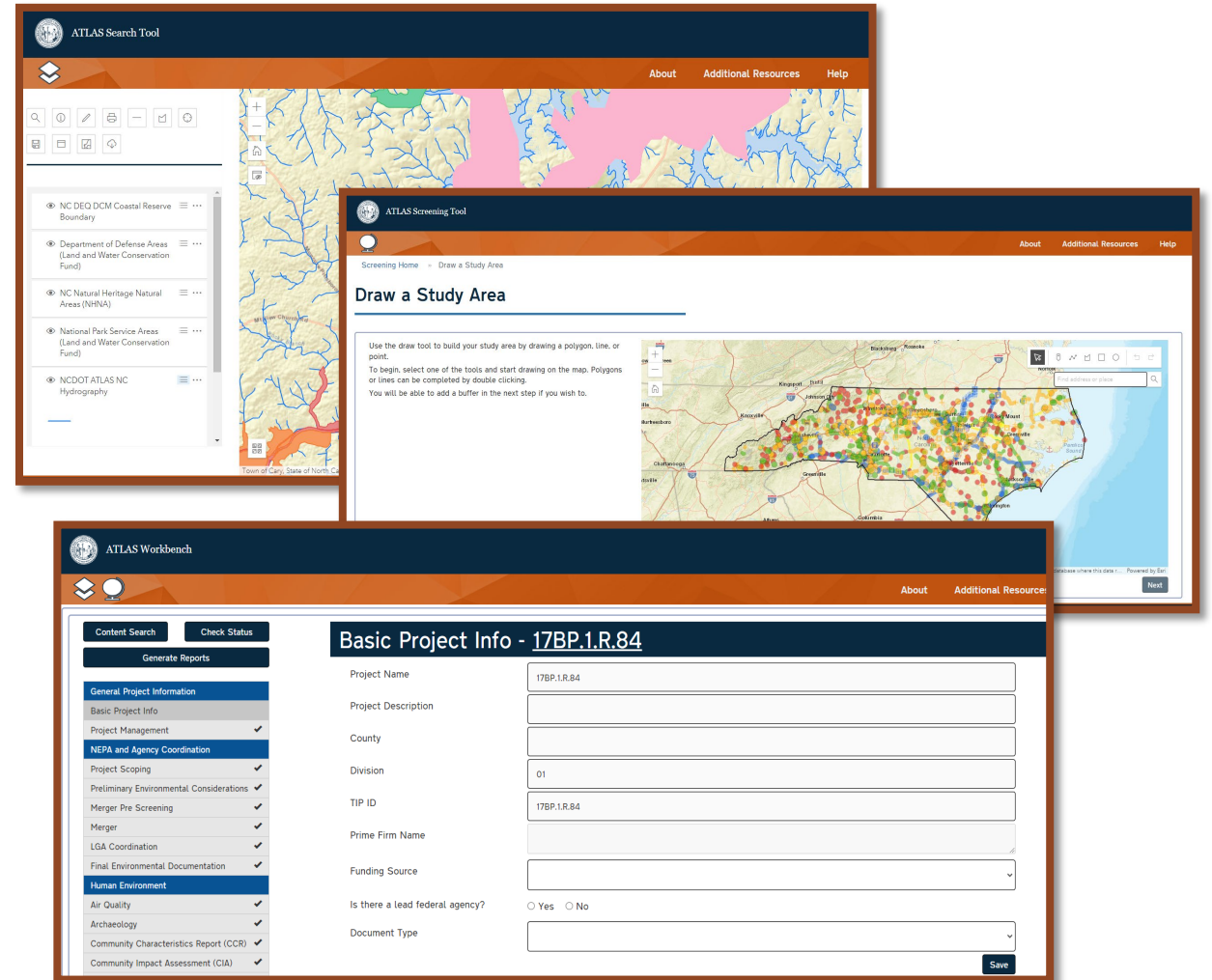
ATLAS Workbench Standards

ATLAS Resources

	A	D	E	F	I	J	K
1	Layer Name	Parent Category	1st Category	2nd Category	Aviation Template	Basemap Template	CAMA Resource
09	NCDOT ATLAS NC PAWS Survey Points	Natural Environment	Conservation Area	Aquatic Habitat			
10	NCDOT ATLAS NC Places Of Worship	Human Environment	Community	Worship	X		
11	NC Schools 2019 - Geocoded Locations	Human Environment	Community	Schools	X		
12	NCDOT ATLAS NC Utility Power Providers	Human Environment	Utilities	Electric			
13	NCDOT ATLAS NC Utilities University Points	Human Environment	Utilities	Electric			
14	NCDOT ATLAS NC NRCS Index Maps Riparian Buffer Watersheds	Natural Environment	Water Quality	Watershed			
15	NCDOT ATLAS NC Western Watersheds Draining to Critical Habitat	Natural Environment	Water Quality	Watershed			
16	NCDOT ATLAS NC Hydrography Abridged	Natural Environment	Hydrography	Water Resources			
17	NCDOT ATLAS NC Hydrography Artificial Paths	Natural Environment	Hydrography	Water Resources			
18	NCDOT ATLAS NC Hydrography	Natural Environment	Hydrography	Water Resources	X		X
19	Sewer Pump Station - City of Raleigh	Human Environment	Utilities	Sewer			
20	Sewer Manhole - City of Raleigh	Human Environment	Utilities	Sewer			
21	Force Main - City of Raleigh	Human Environment	Utilities	Sewer			
22	Gravity Sewer - City of Raleigh	Human Environment	Utilities	Sewer			
23	Lateral - City of Raleigh	Human Environment	Utilities	Sewer			
24	Federal Lands	Human Environment	Public Property	Federal	X		
25	USA Parks (Esri)	Human Environment	Public Property	Parks	X		
26	Energy Information Administration Power Plants	Human Environment	Utilities	Electric			
27	US DHS HIFLD Veterans Health Administration Medical Facilities	Human Environment	Community	Medical			
28	NC Conservation Reserve Enhancement Program Easements	Natural Environment	Conservation Area	Conservation Easements	X		
29	US DHS HIFLD Local Emergency Operations Centers	Human Environment	Community	Emergency Response			
30	US DHS HIFLD Nursing Homes	Human Environment	Community	Care Facility			
31	National Park Service Park Boundaries	Human Environment	Public Property	Federal			
32	NC DEQ NC-CREWS	Natural Environment	Wetlands	Wetlands			

Project ATLAS Tools

- Currently composed of 3 tools:
 - Search Tool
 - Screening Tool
 - Workbench



ATLAS Search Tool


ATLAS Search Tool



Search for Layers

Search by ⓘ Category ▼

Keyword ⓘ Reset

Layers Meeting Search Criteria: 19 Layers Selected: 1

- ☐ Project ATLAS Lenoir County Wetlands
- ☐ Project ATLAS Rowan County Wetlands v1
- ☐ Project ATLAS US-70 Wetlands Predictive Model
- ☐ Project ATLAS US-70 Wetlands WET WEX
- ☐ U-6187 Wetland Model
- ☒ USFWS National Wetland Inventory*

Layers without a checkbox are secured and cannot be added to the map.

* indicates that a layer is available for selection in the ATLAS Screening Tool.

Layer Name
US EPA NPDES Wastewater Outfalls
US EPA NPDES Wastewater Facilities
USDA National Forests
North Carolina State Owned Lands
North Carolina Public Schools
NC Hospitals
US DHS HIFLD Coast Guard Regulated Navigational Areas
NC DEQ Dry Cleaning Solvent Cleanup Act Sites
NC DEQ DRAFT 2016 DWR 303(d) Water Quality Assessment
NCDOT Airport Locations
NCDOT Municipal Boundaries
NCDOT State Transportation Improvement Program (STIP) Points
NCDOT P5 0 Statewide Funded Highway Linear Projects
NC Colleges and Universities
NC Public Libraries
NC Public Beach and Waterfront Access
NC Paddle Trails Lines
NC Mountains to Sea Trail
NC Public Health Departments
NC DEQ DWR Animal Operation Permits
NC MPO RPO Boundary
NC Public Sewer Service Areas Future (2004)
NC Ridgelines
NC Geology
US EPA Level III Ecoregions
National Agriculture Imagery Program Imagery (NAIP)
NC Natural Heritage Natural Areas (NHNA)



Layer Name	NC Statewide Voluntary Agricultural Districts VAD Parcels
Alias Name	Voluntary Agricultural District, VADParcels
Description	Statewide Voluntary Agricultural District Parcels layer from NC Department of Agriculture and Consumer Services, North Carolina Department of Transportation, and ATLAS Team. This layer is updated yearly based on a voluntary survey and may be incomplete. Learn more about the VAD program here: https://www.ncagr.gov/divisions/farmland-preservation/vad The Statewide VAD layer consists of 91 counties with VAD ordinances, but 9 counties have not implemented VAD programs, so the complete statewide VAD layer contains 81 counties. We have data for 77 counties included in this layer and there are 4 counties that have unknown status. The following counties are not included in the Statewide VAD layer due to not having a VAD ordinance: Carteret, Cherokee, Dare, Graham, Hyde, Martin, Mecklenburg, New Hanover, Tyrell, Vance The following counties that are not included in the Statewide VAD layer due to not having an established VAD program are: Avery*, Bertie, Cabarrus, Camden, Hoke, Pasquotank, Polk*, Robeson, Scotland*, and Yancey. The following counties that are not included in the Statewide VAD layer due to having an unknown status: Anson*, Gates, Perquimans*, Warren* Counties listed above with a "*" indicate that the data was duplicated from the previous Statewide VAD parcel layer. These may not be displaying the most up-to-date data and should be verified with the provided VAD point of contact. This statewide layer does include the following counties: Alamance, Alexander, Alleghany, Ashe, Beaufort, Bladen, Brunswick, Buncombe, Burke, Caldwell, Caswell, Catawba, Chatham, Chowan, Clay, Cleveland, Columbus, Craven, Cumberland, Davidson, Davie, Duplin, Durham, Edgecombe, Forsyth, Franklin, Gaston, Granville, Greene, Guilford, Halifax, Harnett, Haywood, Henderson, Hertford, Iredell, Jackson, Johnston, Jones, Lee, Lenoir, Lincoln, Macon, Madison, McDowell, Mitchell, Montgomery, Moore, Nash, Northampton, Onslow, Orange, Pamlico, Pender, Person, Pitt, Randolph, Richmond, Rockingham, Rowan, Rutherford, Sampson, Stanly, Stokes, Surry, Swain, Transylvania, Union, Wake, Washington, Watauga, Wayne, Wilkes, Wilson, and Yadkin Point of Contact: Christian Vose Christian.Vose@ncagr.gov GIS Director for North Carolina Department of Agriculture https://services.arcgis.com/NuWFvHYDMVmmxMeM/ArcGIS/rest/services/NC_Statewide_Voluntary_Agricultural_Districts_VAD_Parcels/FeatureServer/info/metadata
Owner	NC Department of Transportation (NCDOT), NC Department of Agriculture and Consumer Services (NCDA&CS)
Web Service	https://services.arcgis.com/NuWFvHYDMVmmxMeM/arcgis/rest/services/NC_Statewide_Voluntary_Agricultural_Districts_VAD_Parcels/FeatureServer/0
Metadata Link	https://ncdot.maps.arcgis.com/home/item.html?id=e84aa52f8a824a2799d75a95ba148172
Disclaimer	This application does not replace project screening and reviews conducted by licensed professionals.

ATLAS Screening Tool

- Generate a report to provide a quick and informative potential impact assessment.
- Discover the potential need for community outreach or consultation with various regulatory agencies, early in the process.

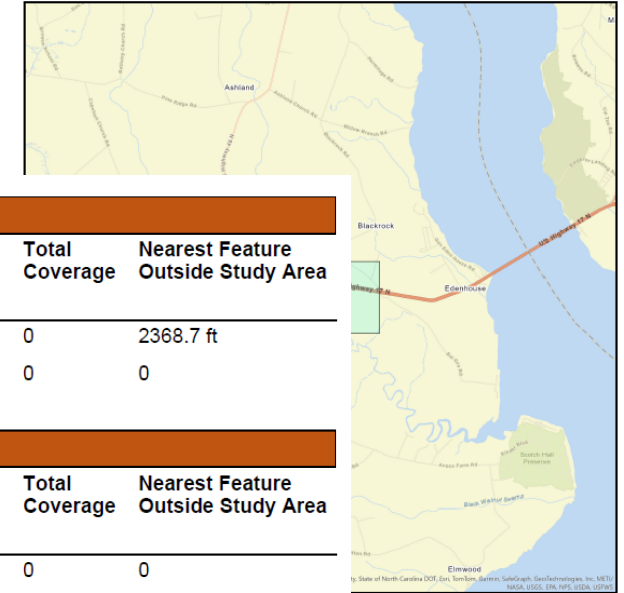
Project Development Screening Report



This report is for high-level screening purposes only. Staff and consultants must continue to adhere to NCDOT standard operating procedures including, but not limited to, ETRACS requests and field validations.

Report Date: 05/20/2024

MerryHill



Human Environment			
	Feature Count	Total Coverage	Nearest Feature Outside Study Area
Transportation			
NCDOT State Transportation Improvement Program (STIP) Lines	0	0	2368.7 ft
NCDOT State Transportation Improvement Program (STIP) Points	0	0	0
Natural Environment			
	Feature Count	Total Coverage	Nearest Feature Outside Study Area
Coastal			
Estuarine Waters AEC	0	0	0
Hydrography			
NC ATLAS Hydrography	0	0	0
Physiography			
USGS Watershed Boundaries Line	1	2833.8 ft	1372.4 ft
Threatened and Endangered			
IPaC Test AGOL	N/A	N/A	N/A
Wetlands			
NCDEQ NC-CREWS	N/A	N/A	N/A

ATLAS Screening Templates

- After a user has loaded or created a defined study area in screening, a template can be quickly added.
- A template is a list of layers already identified to complete a task or to help with completing a particular form.

DRAFT Helene Site Asses ▾

Description

DRAFT Helene Site Assessment

Owner: EPU

Date Created: 10/24/2024

Last Edited: 1/27/2025

Date Updated: 11/4/2024

This template is designed to do a rapid general environmental assessment of sites damaged by Hurricane Helene. The template includes layers specific to the western part of NC and should not be used for other storm responses. For questions or comments, contact the Environmental Policy Unit at EPU@ncdot.gov

 ATLAS Screening Tool

 Screening Home » Draw a Study Area » Screening Settings

Screening Settings

Select if you want to use a screening template designed to support a specific DOT business process. For more information about DOT templates, click on the ATLAS Resources page under 'Additional Resources' above.

☐ Create New Template
☒ Use DOT Template
☐ Use My Saved Template

Back

Merger Pre-Screening

Recreation 4(F)

CAMA Resources

IMD Complete Streets

Hydraulics SCM

Hydraulics SMP Template

Hydraulics PDR Template

Voluntary Agricultural District Template

Conservation and Section 6(f) Template

Hydraulics - FEMA Floodplain and Inundation

SMU Detours Template

SMU Environmental Prescreening Template

FSU - Project Scoping Report Phase

FSU - Express Design Initiation Phase

Community Studies Template

Initial Issues Identification Template

Aviation Template

Federal Lands

DRAFT Helene Site Assessment

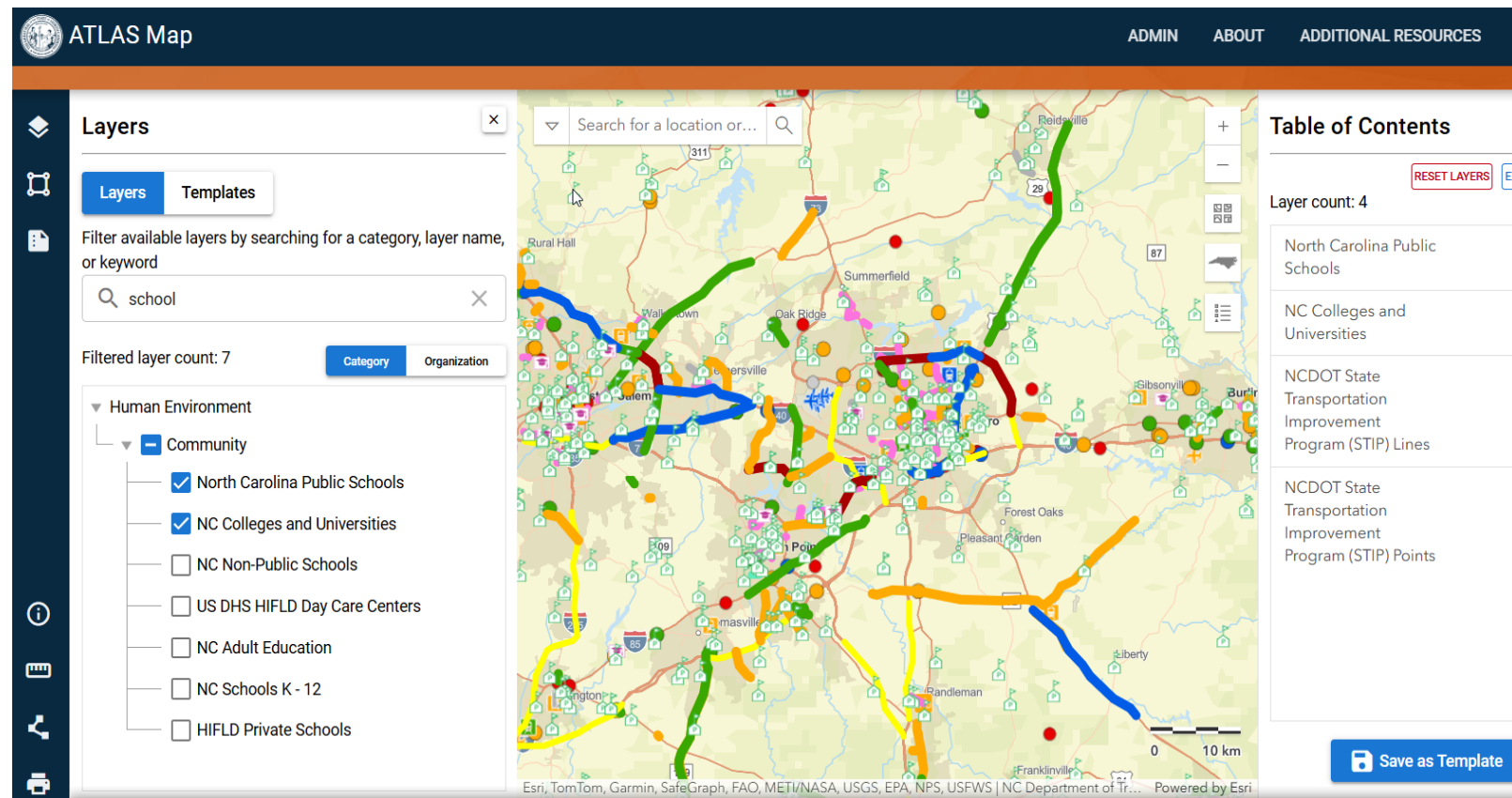
ATLAS MAP is coming!

- ATLAS MAP:
 - Search Tool
 - Screening Tool
 - Workbench



Benefits to the user

- Faster layer load times
- Larger study areas
- Screen more layers



ATLAS Workbench Tool

Keeps data consistent and easily accessible

Helps keep project documents, files, and data in order and accessible to all working on the project. Allows for quick status reporting and dashboard creation.

Data Governance

- Ties to SharePoint on the backend (one file location)
- Provides consistent naming conventions
- Metadata readily available
- Correlates to Project Delivery Network (PDN) codes

ATLAS Workbench

Workbench provides data governance.

ATLAS Workbench

H-1050

Content Search

Check Status

Generate Reports

General Project Information

Basic Project Info

Project Management ✓ ⓘ

DO NOT USE -- Precon Milestones ✓ ⓘ

NEPA and Agency Coordination

Project Scoping ✓ ⓘ

Preliminary Environmental Considerations ✓ ⓘ

Merger Pre Screening ✓ ⓘ

Merger ✓ ⓘ

LGA Coordination ✓ ⓘ

Merger - U-1050

Is this section required? ☒ Yes ☐ No

1. Merger Screening

2. Merger Plan

Note: The Merger Plan is a living document and should generally be updated on the project Co. distributed.

1EP1. Upload the latest Merger Plan (last saved:ext-jmbarta 4/1/2025 12:33:25 PM)

[U-1050_MergerPlan.pdf](#)

3. Concurrence Points

Note: If a combined meeting was held, upload the documents under both concurrence points. In PDF and upload.

If you combined Concurrence Points, please list which were combined

750 character limit

Concurrence Point 1

1EP1. Upload Concurrence Point 1 Packet (last saved:mlhobgood 11/7/2021 11:57:37 PM)

[U-1050_CP1MergerMeetingPacket.pdf .pdf](#)

File Rename

You are attempting to upload a undefined.

The file you have selected does not match the standard file naming convention.

Correct file name:

U-1050_CP1MergerMeetingPacket.pdf .pdf

Would you like ATLAS to rename and upload the file for you?



Derived In-House Layers



Derived In-House Layers

Layers derived by the ATLAS Business Team were created when no other cumulative spatial resource was available. Details on how they were created are available in the layer's metadata.

Examples:

- VAD (Voluntary Agricultural District) Parcels Layer
- Mines Layer
- Weigh Stations Layers
- Wetland Prediction Models, Threatened & Endangered Potential Habitat Models

Layer Maintenance/Metadata

Layer Maintenance/Metadata

All layers are on a maintenance schedule with our Maintenance Tracker App. This schedule sets forth a time to revisit each layer. Some are quarterly while others are a few years out.

- If a feature service is provided externally, we *verify* the service contains the most current data available.
- If it is an ATLAS Business Team layer, we *update* as needed.

All ATLAS Business Team layers hosted on AGOL have metadata standards that are followed to ensure consistency and transparency. Detailed update plans are also created for each of these layers.

Planned New Datasets



Planned New Datasets/Updates

- Currently working with utilities unit to integrate their 400+ layer dataset.
- Express Design Traffic Evaluation Layer (working with Feasibilities Studies to compile current and future projects)
- Upgraded Hydrography (with coordination from DEQ)
- Integration of Raster Images

Trainings

Trainings

- Training videos available on our ATLAS Resource page.
- Live monthly trainings on specific topics.
- Additional trainings as needed for the various units across the divisions as the Business Team reaches out for input on their workbench uploads.

Return on Investment (ROI)



Return on Investment (ROI)

- Time savings - not searching for and downloading individual layers for specific tasks.
- Accessible & Reliable Information- having the most current data available in one location.
- Avoidance of Conflicts - quickly run a screening report to identify 'red flags' early, for possible avoidance.
- Inform scope, schedule, and budget quickly and early.
- Track & Analyze project information.

Power BI

DOT - ATLAS/ASI Business Team

ATLAS Usage Dashboard | Data updated 5/13/25

File

Export

Share

Get insights

Subscribe to report

Edit

Home

Create

Browse

Data hub

Apps

Metrics

Deployment pipelines

Learn

Workspaces

DOT - ATLAS/AS...

Pages

Quick Reference Guide

ATLAS Screening Summ...

Screening Layer Summary

Screening Error Summary

Screening Template Su...

Workbench Summary

Workbench Metrics

ATLAS Workbench Summary

Date

6/20/20195/9/2025

Division

All

Discipline

Air Quality

Select all

Air Quality

Archaeology & Historic ...

Bicycle, Pedestrian, & Tr...

Community Characteristi...

Community Impact Asse...

Congestion Management

DO NOT USE -- Final Pla...

DO NOT USE -- Key Dec...

35

Uploads

281

Answers

38

Unique Users

270

Projects

Users by Date

Responses and Unique Users

202020222024

UploadsAnswersUnique Users

Responses by Discipline

Category

Air Quality

35281316

UploadsAnswers

Responses by Division

Responses

Division

UploadsAnswers

Project Name	Discipline	Control Name	Answer	Upload	Date
U-5810	Air Quality	Are all Air Quality related activities considered complete for this project?	Yes		3/19/2025
		If MSAT analysis is needed, is a qualitative or quantitative MSAT analysis required?	MSAT Not Needed		3/19/2025
HL-0121	Air Quality	Are all Air Quality related activities considered complete for this project?	Yes		3/4/2025
		If MSAT analysis is needed, is a qualitative or quantitative MSAT analysis required?	MSAT Not Needed		3/4/2025
		Is this section required?	No; Project is anticipated to be a CE so an Air Quality Report is not required.		
U-6216	Air Quality	Are all Air Quality related activities considered complete for this project?	Yes		2/26/2025
		If MSAT analysis is needed, is a qualitative or quantitative MSAT analysis required?	MSAT Not Needed		2/26/2025
U-5875	Air Quality	Are all Air Quality related activities considered complete for this project?	Yes		1/24/2025
		2EN2.3 Air Quality Report Addendum (as needed) (Document Set)			1/24/2025
BP14.R043	Air Quality	Are all Air Quality related activities considered complete for this project?	Yes		12/16/2024
R-5830 DEERFIELD ROAD	Air Quality	Are all Air Quality related activities considered complete for this project?	Yes		11/8/2024
		Is this section required?	No; State funded		
HL-0007	Air Quality	Are all Air Quality related activities considered complete for this project?	Yes		8/25/2024
HE-0002	Air Quality	Are all Air Quality related activities considered complete for this project?	Yes		7/26/2024
		If MSAT analysis is needed, is a qualitative or quantitative MSAT analysis required?	MSAT Not Needed		7/26/2024
HS-2005N	Air Quality	If MSAT analysis is needed, is a qualitative or quantitative MSAT analysis required?	MSAT Not Needed		7/26/2024

Filters

Search

There aren't any filters to display.

PS&E Checklist Projects Metrics — ATLAS Workbench

Date: 3/30/2022 to 3/11/2025

Division: All

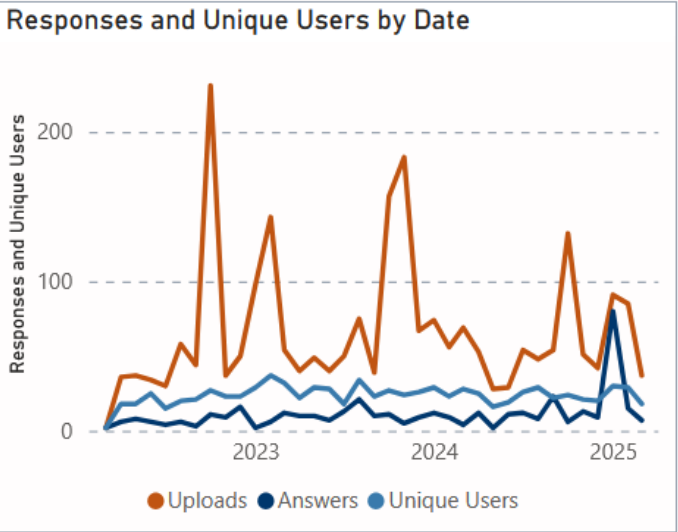
Project: All

2,457 Uploads

823 Answers

222 Unique Users

1,234 Projects



Question	Uploads	Answers
Are Utility Agreements required?	6	2
Are Rail Agreements required?	9	2
Are Municipality Agreements required?	4	2
Are Other Agreements required?		2
Are Utility Certifications required?	42	2
Are Rail Certifications required?	1	2
Are ROW Certifications required?	1	2
Are Other Certifications required?	1	2
Are Permits/Regulatory Approvals required?	577	2
Permit Application Package		125
Permit Received Package		603
Are Section 7 End. Species Consultation Regulatory Approvals required?		2
Are Section 7 End. Species Consultation Regulatory Approvals documents complete?		2

Project	Uploads	Answers
U-1050	87	68
B-5845	17	2
17BP.5.R.104 Granville 241	12	3
17BP.5.R.86	11	3
BP13.R024	11	2
17BP.5.R.112 Warren 126	10	3
BP11.R022	10	2
HB-0001	10	33
17BP.14.R.206 Henderson 15	9	2
17BP.5.R.100 Granville 12	9	3
17BP.5.R.108 Wake 180	9	3
BP13.R023	9	2
U-5899	9	3
U-6036 SR 1109 Pinewood Rd	9	
17BP.5.R.85 Wake 405	8	
B-5323	8	2
BP13.R020	8	2
R-2588B	8	3
U-5312 US 421	8	2
17BP.11.R.155	7	2
A-0009C	7	3
B-5898 B-3186	7	3
BP11.R034	7	
I-2513	7	3
W-5710AI	7	2
17BP.14.R.149 Jackson 185	6	2
B-5318	6	
B-5610	6	3
B-5766	6	
B-5855	6	
BP10.R013	6	2
BP5.R131	6	
HB-0039	6	

Questions?

Thank you!

Contact Us

ATLAS@ncdot.gov

<https://connect.ncdot.gov/resources/Environmental/EAU/Project-Atlas/>