



December Meeting

12/12/2018

# AGENDA

1. Announcements
2. Esri Updates
3. Esri GeoNet Overview
4. Open Discussion

\*\*\*\* Please mute phones!! \*\*\*\*

# ANNOUNCEMENTS

- Request for additional responses to implementation survey
  - [https://odot.formstack.com/forms/rhug\\_implementation\\_status\\_survey\\_2018](https://odot.formstack.com/forms/rhug_implementation_status_survey_2018)
- GIS-T RHUG Meeting



# Esri Updates

Nathan Easley

# Esri GeoNet Overview

Chris Catania

# NCDOT Local Road Update Process

Cassie Morris

# Upcoming Meetings / Contacts

Wednesday, January 9, 2019

## Contact Info:

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Patrick Whiteford [pwhiteford@azdot.gov](mailto:pwhiteford@azdot.gov)



# **Product Team Update (RHUG meeting 12/12/18)**



## Capabilities currently under development

- **Multi-field (concatenated) Route ID support in ArcGIS Pro**
  - Edit activities UI
  - GP tools
- **10.7 pre-release**
- **10.6.1 hotfix**

## Support Incidents/Defects

- BUG-000115036 - Line events created on a redline in Event Editor get "Route measures are null" after creating the route and applying updates in ArcMap (developer investigating)
- BUG-000116475 - From Measure when creating linear events with Stationing method doesn't change location after changing station location on second linear event created (fixed for 10.7 pre-release)
- BUG-000116664 - In Roadway Characteristics Editor 10.6.1, selecting events by the route highlights the route, resulting in indistinguishable linear event features (developer investigating)
- BUG-000117296 - Conflicts are introduced on routes when doing calibration point edits while the route edits are being posted in another version (working with geodatabase team to fix)
- BUG-000117260 - For the first edit each day, Event Editor assigns the lock to ::AnonymousWebUser if Portal for ArcGIS is set up with enterprise logins (fixed for 10.7 pre-release, 10.6.1 hotfix being certified)
- BUG-000117802 - In Event Editor, grouped unique value symbology duplicates in layer list (developer investigating)

## Support Incidents/Defects

- BUG-000118024 - Ability to choose 'Null' when creating or reassigning route is not present, for extra attribute fields which are not a part of the route ID, with domains (fixed for 10.7 pre-release)
- BUG-000118489 - Incorrect measure values are assigned on events when a whole part of a gapped route is reassigned and the event behavior is set to Snap in ArcGIS Desktop 10.6.1 (developer fixing)
- BUG-000118639 - Incorrect measure values are assigned to events when a whole part of a gapped route is realigned with the Split Value 'To Measure' set to the end of the gap and the event behavior is set to Cover in ArcGIS Desktop 10.6.1 (developer investigating)
- BUG-000118270 - Extreme latency in snapping until a feature cache is created (working with geodatabase team to fix)

# Documentation Updates/Training Opportunities

## Documentation

- Roads and Highways 10.6.1 online help update is live

## Training

- No opportunities at this time

## Other Announcements

- **Roads and Highways GeoNet site now live**
  - <https://community.esri.com/community/esri-roads-and-highways>
- **ArcGIS Online move to TLS 1.2**
  - <https://support.esri.com/en/technical-article/000019401>



esri

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# 12/12/2018 RHUG MEETING

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NCDOT Non-System Road Updates

Cassie Morris



# Overview

- Introduction
- Data Collection
- Change Detection
- Load Data Reviewer
- Editing Guide & Business Rules
- Status Map





# Introduction

- NCDOT includes state-maintained routes as system and non-state-maintained routes as non-system. Combination of these creates our ARNOLD road network
- Purpose of non-system update is to maintain all-roads in network
- ARNOLD (All Road Network of Linear Referenced Data) from FHWA (Federal Highway Administration)
  - August 7, 2012, FHWA announced that the HPMS is expanding the requirement for State Departments of Transportation (DOTs) to submit their LRS to include all public roads
- Along with system road editors we now have a group allocated to update non-system roads
- We currently have 6 system editors and 3-4 non-system editors
  - System and non-system editors are separated due to the data sources not being the same
- NCDOT is actively re-digitizing non-system roads that do not meet quality standards
- North Carolina has 100 counties

# Mileage Update

- Spring 2017

	Number of Routes	Miles of GIS line work
<b>System Routes</b>	76,282	96,276
<b>Non-system Routes</b>	280,340	61,741
<b>Total</b>	356,622	158,017

- December 2018

	Number of Routes	Miles of GIS line work
<b>System Routes</b>	79,206	98,294
<b>Non-system Routes</b>	284,814	62,214
<b>Total</b>	364,020	160,508

\*These numbers include co-routes (i.e. I-85 and I-40)\*

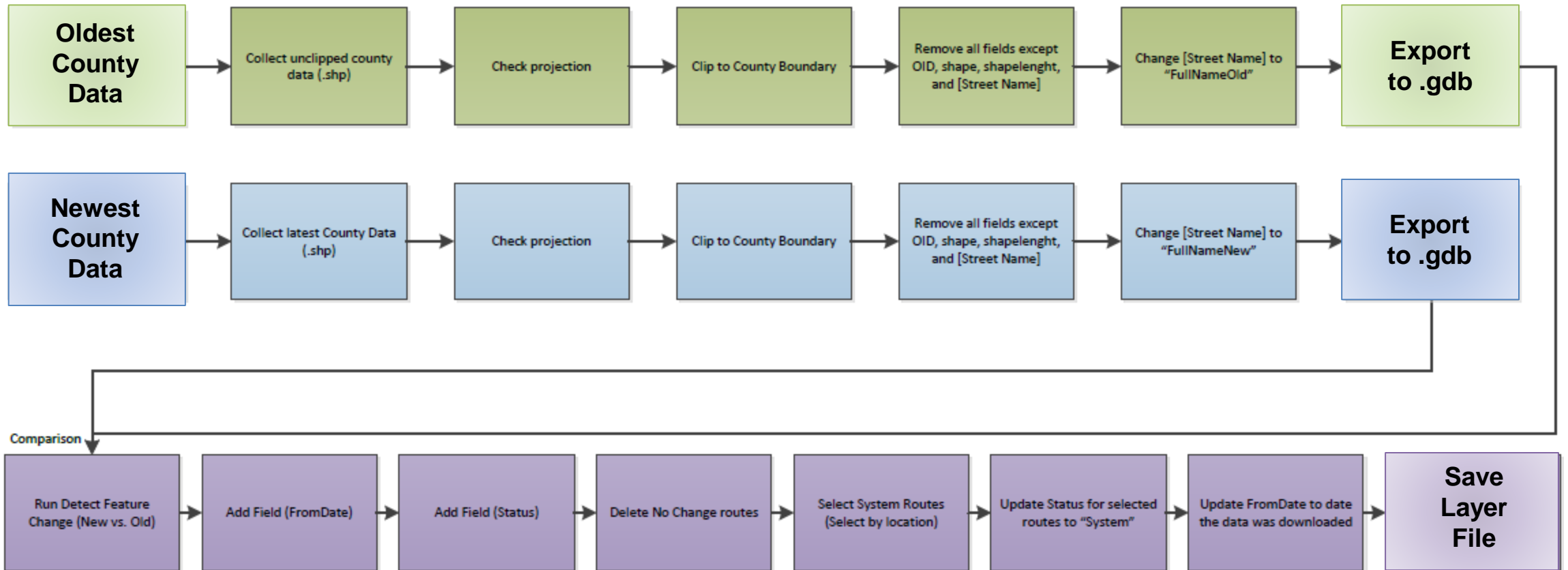
Spring 2017 data is post data migration to RAH. This implementation took all NCDOT legacy routes which included non-system. Prior to 2016, NCDOT did not have non-system. Due to ARNOLD, routes/mileage have roughly doubled.

# Data Collection

- Collection of data from local agencies, mainly county level
- Collection from Indian Reservations (Ex: Eastern Band Cherokee Nation)
- One staff member oversees outreach to collect data and keep running records of how often they are updated, contact information and other helpful notes
- **Goal:** All non-system data to be updated with newest county data quarterly if possible. If not quarterly, as often as the data is updated locally.

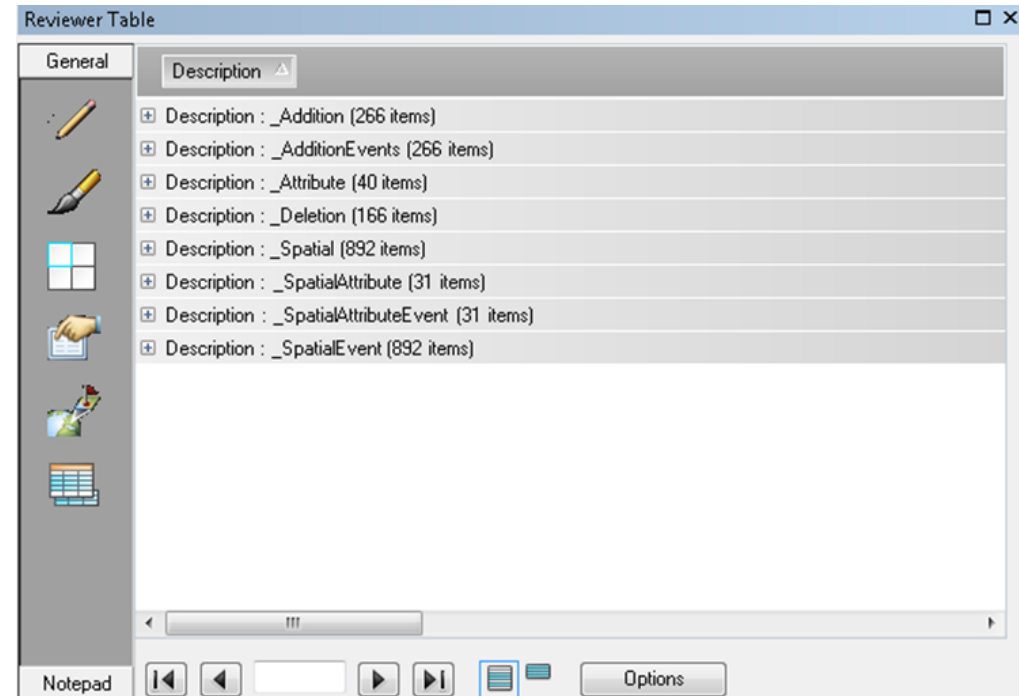
CountyName *	EditorsName	DateCountyLastUpdatedData	DateObtainedFromCounty	DateProcessed	DateAssignedToEditor	DateCompletedByEditor
Camden	Phil Pollard	5/17/2018	5/17/2018	5/18/2018	10/16/2018	10/17/2018
Gates	Phil Pollard	6/29/2017	8/28/2017	8/28/2017	9/1/2017	9/6/2017
Iredell	James Wheaton	11/1/2017	11/13/2017	11/13/2017	11/28/2017	1/25/2018
Wilkes	<Null>	5/30/2018	5/31/2018	7/9/2018		
Union	Cassie Morris	11/3/2017	11/27/2017	11/27/2017	2/5/2018	3/7/2018
Cabarrus	Mike Koenig	7/18/2017	7/19/2017	7/25/2017	7/18/2018	8/14/2018
Wake	Cassie Morris	8/1/2017	8/29/2017	8/29/2017	8/30/2017	11/1/2017
Franklin	James Wheaton	11/15/2017	11/15/2017	11/15/2017	11/20/2017	11/28/2017
Pender	James Wheaton	12/6/2017	12/6/2017	12/14/2017	7/24/2018	7/31/2018
New Hanover	James Wheaton	3/4/2018	3/9/2018	3/9/2018	5/31/2018	7/24/2018
Durham	Mike Koenig	7/13/2017	7/26/2017	7/26/2017	8/31/2017	9/11/2017
Orange	Phil Pollard	8/31/2017	8/31/2017	8/31/2017	9/7/2017	10/4/2017
Chatham	Cassie Morris	9/25/2017	9/25/2017	10/12/2017	11/2/2017	11/9/2017
Alamance	Mike Koenig	8/23/2017	8/31/2017	8/31/2017	9/11/2017	9/28/2017
Harnett	Nik Zisk	7/23/2017	7/27/2017	7/27/2017	8/30/2017	10/10/2017

# Change Detection



# Load Data Reviewer

- Once change detection is processed the data is added to Non-System Editing Job in WMX (Workflow Manager)
  - Previously manual loaded data layer. Now automated load through WMX custom step.
- A specific symbology set is used for visualization of changes to routes
- All spatial edits have an Event edit associated that is processed within RCE (Road Characteristics Editor)
- Types of edits to be made:
  - Addition
  - Addition Events
  - Attribute
  - Deletion
  - Spatial Attribute
  - Spatial Attribute Events
  - Spatial
  - Spatial Events



# Edit According to Users Guide

- User Guide uses images and descriptions to explain the beginning to end process of non-system work
- This is also used during training of new editors
- Explaining:
  - Loading of Data
  - Editing Process
  - Data Reviewer Table
  - Event Editing
  - Running Data Reviewer

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# Edit According to Business Rules

- Guidelines for when to edit and when to leave route as-is
- Non-System editor do not interact with System Roads

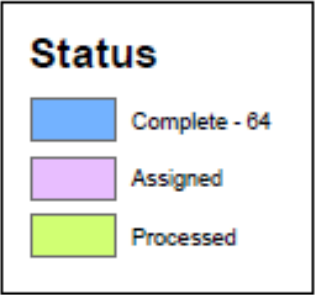
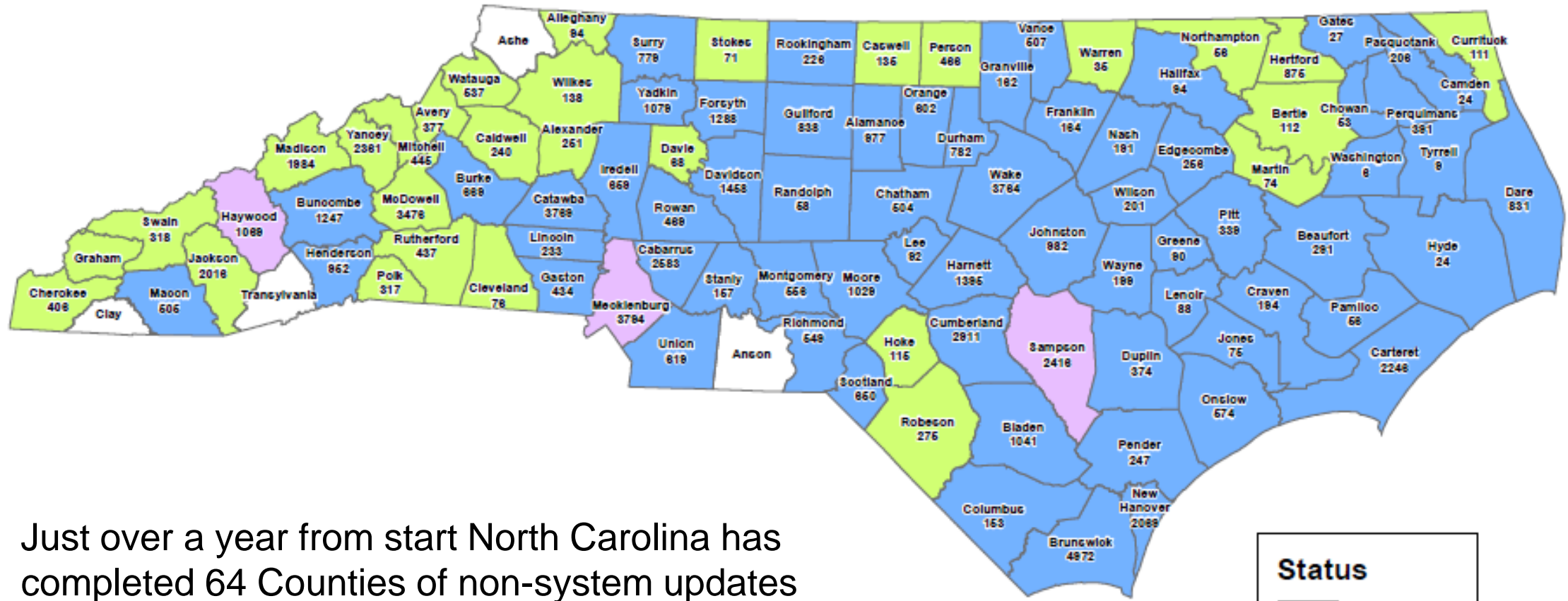
2. If the route is a significant change to a state-maintained route DO NOTHING.



3. If the route is a significant change to the beginning or end of an existing non-system route in MilePoint EXTEND the route.



# Status Map



Date: 11/8/2018



# Questions?

- Contact me at: **camorris3@ncdot.gov**