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Teamwork and Integration

By: Matt Clarke, PE, NCDOT Technical Services Assistant Director



View Point

The previous 11 months have been unprecedented. We have experienced things that I never would have anticipated, and the effects of COVID have been far more impactful than I foresaw in March of 2020. In the midst of teleworking and stay-at-home directives I transitioned to the Technical Services Division, and since that time, my viewpoint has been expanded and what I have observed is the beginning of a profound shift in NCDOT.

We all have heard the Integrated Project Delivery (IPD) term used often in the past months, and although I was aware of the purpose and intent before joining the Technical Services team, I now realize that I was missing the foundational principle - INTEGRATE. This word may have struck fear in us during calculus classes, but the basic definition of integrate is to 'form or blend into a unified whole' (Merriam-Webster). Partial decentralization, reductions in staffing, COVID and teleworking are disruptions that have brought new challenges and

opportunities. The decrease in NCDOT's revenue in spring & early summer of 2020 compounded difficulties, but I have observed so many positive and long-term improvements that were underway and spurred by the cash crunch of 2020. Integration is exemplified in diverse workgroups of Technical Services and Highway Divisions 1-14 staff, succession planning, and awareness of the needs of other team members. I would like to highlight specific examples because space does not allow for all to be listed.

The Estimating Workgroup consists of members from several NCDOT divisions and units and has the singular focus of improving the process of developing and updating Right of Way, Utilities, and Construction estimates throughout the life of a project. Led by David Wasserman and Jennifer Evans, the work of

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French Broad River Safety Plan

By: Roger D. Bryan, Division 13 Environmental Officer



The I-26 Project (I-4400/I-4700) in Buncombe and Henderson Counties is the largest interstate widening project constructed during my 21-year tenure as the Environmental Officer in Division 13. This project is the result of years of planning and design by a myriad of NCDOT and consultant personnel. The Environmental Impact Statement Record of Decision was completed in March 2019, and construction began during Summer 2019.

Environmental commitments developed during the planning and permitting phases of the project address a wide range of issues, including federally endangered species (Appalachian elktoe, a freshwater mussel, and gray bat), national landmarks (Biltmore Estate and Blue Ridge Parkway), jurisdictional stream/wetland sites, and sensitive watershed erosion control design.

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Improving NCDOT's Storm Preparedness with FIMAN-T and BridgeWatch

By: Jerry Snead, PE, CFM, NCDOT Hydraulics Statewide Floodplain Supervisor

When Hurricane Florence was approaching in 2018, the Secretary's office asked us at NCDOT to do something we had not done before – to use any available weather data, hydraulic models, and survey data records to try to predict what roads were going to flood and when, to find detours that could be used and assess the risk of potential flooding along these routes. Florence made landfall on Friday, September 14th near Wilmington. Our Hydraulics Unit assembled a team of experts that weekend from both within the Department and our consultant partners to analyze storm data in real-time as it treme events, and we realized our need to begin to develop and leverage these resources to be better prepared for the future.

One online tool that was useful during Florence was the Flood Inundation Mapping and Alert Network (FIMAN) which had been developed by ESP Associates for NC Emergency Management (NCEM). This tool allowed us to analyze stream gage flows and water elevations in real-time, with some gages having limited forecasting capability to tell where



and when certain rivers and streams' flood elevations would crest and recede. FIMAN was designed by NCEM as a tool to help with emergency response and recovery, with features to quickly be able to assess damage costs to buildings for accurate estimates to facilitate application to FEMA for disaster relief more efficiently and effectively.

was progressing through the state. One of the results of our efforts was producing a hand marked NCDOT state travel map on which we identified the roads that were potentially unsafe for travel (see Figure 1). We sent a scanned copy of this paper map to the Emergency Operations Center which, along with other information coming in from the Traffic Information Management System (TIMS) and other sources led the Governor to issue a briefing directing out-of-state travelers to essentially bypass and avoid driving through most of NC until further noFollowing our experience with Florence, we at NCDOT realized it would be great if we could somehow utilize the stream gage monitoring capability in FIMAN to intersect stream flood elevations with road elevations from the statewide LI-DAR topographic data to determine which roads and bridges would be subject to inundation and how severely during an event. NCDOT contracted with ESP in partnership with NCEM to develop a new version of FIMAN specifically designed to provide visualization and metrics for roadway inun-

tice via travel messaging boards as to when roads would be reopened and safe to travel. Large portions of Interstates 40 and 95 in eastern NC were inundated and remained impassible for over a week. This experience awakened NCDOT to the fact that there are some excellent technologies and online tools available to us now (and many more that need to be developed) to provide real-time information during these ex-



(Storm Preparedness continued from page 2)

dation, bridge hydraulic performance and identify potentially impacted NCDOT assets. The application will enhance NCDOT's responsiveness during flooding events by generating data and reports for use in disaster response and planning. We launched a successful pilot version of FIMAN-T which covers streams in just the Neuse River basin in 2019, and we plan to continue development to add the other river basins in the state to ultimately achieve full statewide coverage.

One of the useful features that FIMAN-T provides is the ability (where adequate stream gage coverage is available) to monitor when and where flooding is expected to occur and assess which roads and drainage structures may be vulnerable, indicated by a color coding of road inundation depth. Another useful feature that is still in development is the capability to view a profile of the bridge from the hydraulic model and visualize the flood levels at the structure based on the real-time gage readings of flood elevation (see Figure 2). We have had very good success in



ground-truthing the FIMAN-T system with some actual recent storm events and found that the inundation mapping generated by the system matches very well with aerial photos of the actual inundation that occurred (see Figure 3).

The primary driver of FIMAN and FIMAN-T is a great network of stream gages (see Figure 4). Therefore, NCDOT and NCEM

are partnering and pooling available resources to increase and enhance our stream gage coverage throughout the state. As we do so, we hope to be able to ultimately improve FIMAN and expand FIMAN-T for effective statewide coverage.

An additional feature of FIMAN-T that we are developing is the ability to incorporate coastal storm surge forecasts from a consortium of researchers with LSU and UNC (and others) through an application called Coastal Emergency Response Application (CERA). We had a successful pilot of this tool during the Dorian event in 2019. We are working to incorporate this into FIMAN-T to provide awareness for over 100 coastal bridges that NCDOT has identified through previous studies to be vulnerable to coastal surge and wave action in extreme storm events.

In 2018, NCDOT also learned of another great tool for emergency preparedness, response, and recovery called BridgeWatch, developed by US Engineering Solutions (USES) to provide the ability to monitor infrastructure assets in real time for awareness of potential weather event threats in order to mobilize resources more effectively to protect the public. Hydraulics Unit has contracted with USES to implement a three-year pilot of their Bridge-Watch application, a web-based monitoring software solution that allows DOTs to predict, identify, prepare for, manage, and record potentially destructive environmental events that impact structures. The software will allow

NCDOT to proactively monitor, in real time, bridge and roadway infrastructure to better protect against hazardous, costly, and potentially catastrophic events. With BridgeWatch, we expect to be able to actively monitor approximately 1,500 selected bridges and become aware of potential storm threats well in advance of a storm's impact in order to quickly mobilize to close roads and reroute traffic away from potential danger ahead of its occurrence. Hopefully, this will save many lives and provide better awareness of flood risks and where to prioritize our spending for maintaining and upgrading our transportation infrastructure assets.

With development of these promising tools, we at NCDOT hope to make significant progress in

preparedness, response, and recovery efforts during extreme storm events and to enhance our ability to deliver a more resilient and safe transportation infrastructure for the citizens of NC and others who travel through our great state.



(View Point continued from page 1)

this team is positioning NCDOT to build a better and more reliable STIP that we can confidently deliver.

The rollout and transition to Open Roads Designer is a monumental task that Jeff Garland and the Roadway Design team is championing. The engagement of all NCDOT divisions and units and disciplines represents a model that will always be successful. Additionally, the Roadway Design Unit is developing several training modules that will bring clarity to design and plan preparation practices to internal designers and external engineering partners. These will be excellent resources that will bring clarity to all customers of the Roadway Design Unit.

The Hydraulics Unit continues to interact, assist, and provide great customer service to the maintenance staff in the Highway Divisions 1-14 by responding to emergency events and supporting routine maintenance activities. The regular correspondence has built strong partnerships and lines of communications. Matt Lauffer (Hydraulics Unit) and Colin



Nidhi Sheth is an engineer in the Traffic Noise and Air Quality (TNAQ) group within Environmental Analysis Unit (EAU). She was born & raised in Gujarat, India, and she moved to USA in 2013. She has an undergraduate degree in civil engineering and master's degree in hydraulic structures, both from The Maharaja Sayajirao University of Baroda, Gujarat, India. She worked as an associate

in a structure design firm and as an engineer in the pile foundation testing company after her undergraduate work. While she was doing master's program in India, she worked at



Bhaskaracharya Institute for Space Applications and Geoinformatics (a state level agency of Government of Gujarat this organization provides services and solutions in implementing map-based GeoSpatial Information Systems) as part of her thesis. After coming to the US, she attended North Carolina Agriculture and Technical State University and graduatMellor (Environmental Policy Unit or EPU) are filling vital roles as NCDOT and the State of NC defines and develops a strategy to provide a more resilient infrastructure. The work that this team is doing has huge implications as the occurrence of extreme weather events increase.

Environmental Analysis Unit's Marissa Cox and Carla Dagnino continue to lead the Biological Surveys and Environmental Coordination & Permitting groups in updating threatened and endangered species surveys and ensuring permits are in place prior to letting. They are collaborating with project managers and division environmental staff on the timing and needs of updated surveys.

Communities are being built across NCDOT – EPU is meeting regularly with division environmental staff through the leading of Mike Sanderson. The valuable insight and guidance that the EPU team is providing is so important for consistency and completeness of environmental documentation.

The statewide project manager community is growing under the leadership of Project

ed with her second master's degree in water resources engineering. She worked as a Teaching Assistant at NC A&T State University. Nidhi lives with her family in Apex. She has 2-year-old son. Working from home became a blessing in a sense that she

Nidhi began her career with NCDOT after her graduation from NC A&T State University as an Engineering Associate through TEA (Transportation Engineering Associates) Program in June 2018. Her first stop on the Associates Program was with TNAQ group within EAU, where she developed keen interest in the area of Traffic Noise and the work TNAQ group does. Because of her prior experience with computer models, she found Traffic Noise Modeling interesting, and joined TNAQ group for a permanent position. For TNAQ, she reviews many deliverables, including environmental documents, Traffic Noise Reports, and Design Noise Reports and also traffic noise models for different projects. She assists with the balloting process for noise walls. In addition to her many reviews, last year she prepared her first traffic noise report, which included conducting field measurements, developing and running the noise models, and documenting the analysis in the report. She got her Traffic Noise Model Certificate in July 2020.

Manager (PM) Champions, Project Management Unit and the Technical Services office. The next 12 months will focus on rollout of the PM Guide and training for project managers to bring consistency and clarity to their responsibilities.

The Utilities Unit is strengthening the community of utility personnel with monthly calls for utility engineers and coordinators across the state, and I am confident that this will improve communication, provide training opportunities, and bring improvements to this facet of project delivery.

Goals that I have for 2021 are to see interaction and communication in project delivery teams improved, for units to proactively communicate and identify needs of customers, for units to develop training that will improve the efficiency and quality of NCDOT work, and for collaboration and integration to grow stronger at the program level. I challenge each of you to lead at your level and engage in multi-discipline conversations.

Nidhi lives with her family in Apex. She has 2-year-old son. Working from home became a blessing in a sense that she was able to save the commute time and spend that time with her son. But at the same time, she also misses going to office and seeing her colleagues. She enjoys outdoor activities, specially hiking,

kayaking, canoeing etc. and trving different cuisines with vegetarian options. She likes to travel and see nature at its best, as long as there are no dogs coming close to her. Nidhi says, "I am very fortunate to work



with wonderful colleagues who train me, guide me so that I get the best experience. I have acquired a vast variety of knowledge in such a short time just because of their continuous help and support".

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In addition, a unique commitment to river user safety was included for the project. River user safety plans are new to Division 13; therefore, I thought a summary of river user safety planning would be helpful considering the success of this plan from environmental and safety perspectives as well as the large number of upcoming bridge replacements.

Plans for the 464' x 153', 3-span bridge included phased causeway construction that reduces the French Broad River channel width by approximately 50 percent. This phasing reduces impacts to the river and limits the period that river navigation is affected. Also, the causeways and adjacent abutment construction eliminated a viable boater portage option to avoid the project area. These safety concerns are the foundation of the river user safety plan.

The French Broad River is a popular



recreation destination for residents and visitors. Canoers, kayakers, paddleboarder, tubers, and fishermen use the river section that traverses the construction zone for I-26. During summer months, several hundred people per day float through the construction zone. Since bridge construction over the French Broad River had the potential to modify the navigation routes in the river, NCDOT and the Corps of Engineers addressed the issue during the design phase and steps were taken to develop a plan to address river user safety. After considering these details, NCDOT implemented a river user safety plan that includes five key components: public outreach, signage, navigational aids, emergency access, and catchment devices.

The French Broad River is utilized by



several outdoor recreation companies that provide opportunities ranging from tubing to guided fishing excursions. To ensure public outreach, NCDOT reached out and met with these companies early in the planning process to provide information about the I-26 project and to solicit comments and concerns regarding the potential effects on their operations. A communication plan was developed to inform stakeholders of future project activities. NCDOT also issues "news releases" on the project website as well as local newspaper and television outlets that advise of any activities that may affect river users.

NCDOT installed warning signs at fourteen public access areas on the French Broad River in Buncombe and Henderson Counties. The signs advise river users of the construction zone, as well as the location of the last boater take-out area prior to the project area, and includes a reference to the project website, where useful safety information is available online.

To improve river user safety, navigational aids were installed within the French Broad River. A buoy line was installed on each side of the river that directs boaters away from the causeway areas and through a "safe travel lane" under the bridge. These

buoy lines are attached to trees on each bank and weighted at intervals along the line. Routine maintenance and relocation of the lines is necessary to match changes in the causeway configuration. Flooding also tends to relocate the buoy lines and should be factored into project expenses. In addition to buoy lines, steady-state red lighting was placed on the causeway perimeter to warn river users during fog, nighttime, and other low-light conditions. These lights are solar-powered and controlled by sensors for activation.

In the event of an emergency, first responders need to be able to access the river near the I-26 project. Causeway installation blocked the previously used access for launching a rescue boat. NCDOT consulted with the local fire department to install an emergency access ramp adjacent to the causeway that was designed with recommended width and slope for the rescue vessel used by the first responders. The emergency ramp location will be changed as the project moves through phases, to assure consistent access.

The final component of the plan is the installation of a debris catchment system over the French Broad River. A rigid non-drooping platform will be installed several feet below the bridge to prevent debris and other materials from falling into the river. The catchment will minimize environmental impact to the river and prevent debris or material from reaching boaters and tubers passing under the bridge. The catchment design was completed by the contractor and approved by NCDOT safety and engineering.

The need for river safety plans is likely to become more widespread, with an increase in outdoor recreation and the future bridge replacement schedule. Implementation of this river safety plan has undoubtedly improved the safety of the I-26 project, reduced environmental impacts, and mitigated potential hazards for river users. If you need any additional information on the French Broad River user safety plan, email me at rdbryan@ncdot.gov.



Good News for NCDOT and Northern Long-eared Bats

By: Chris Manley and Cheryl Knepp, NCDOT EAU Biological Surveys Group



The northern long-eared bat *Myotis septentrionalis* (NLEB) is a small (~5-8 g) insectivorous bat that occurs in much of the eastern and north-central United States and southern Canada. During spring and summer months, they roost primarily in cavities, cracks, crevices, and exfoliating bark of trees from a variety of species and sizes. In winter, they hibernate, with caves and mines being the primary hibernacula. At one time, NLEB was one of the more common bats captured during surveying efforts in the western part

of the state and across much of its known range. In North Carolina, NLEB was thought to only occur in the western part of the state largely due to insufficient survey data across the state. Surveying efforts were not very common in eastern North Carolina



primarily due to the lack of federally listed bat species in the Coastal Plain and Piedmont. However, in 2007 an NLEB was captured in the Coastal Plain expanding its known range in North Carolina.

Despite formerly being one of the most abundant bat species across much of its range, NLEB are declining rapidly due to White-nose syndrome (WNS), a disease caused by the fungus Pseudogymnoascus destructans (Pd). The Pd fungus is believed to have originated in Europe and that it made its way to North America on contaminated gear from recreational spelunkers. The first case of WNS was identified in North America in 2008. The fungus thrives in the cool, dark, wet climates of caves and cave-like structures in cooler regions, such as western North Carolina. WNS has drastically reduced the number of hibernating bats found in these areas by up to 90 -100% at some sites. This decline led to the proposal for federal protection for NLEB under the U.S. Endangered Species Act (ESA) on October 2, 2013. In response to the NLEB's proposed federal listing, NCDOT's Biological Surveys Group (BSG) started working together with the U.S. Fish and Wildlife Service (USFWS) Raleigh field office on projects to avoid and minimize impacts to the NLEB. Through discussions with the USFWS, North Carolina Wildlife Resources Commission (NCWRC), Federal

Highway Administration (FHWA), U.S. Army Corps of Engineers (USACE), and NCDOT Divisions, BSG started planning to obtain a Programmatic Biological Opinion (PBO) from USFWS for the NLEB in eastern North Carolina. This PBO would enable NCDOT to addresses multiple actions that may impact the species program wide and/or regional basis, thus achieving efficiencies in the process. It is a useful tool



to accomplish ESA compliance while achieving cost and time savings by streamlining the Section 7 consultation process. Given the NLEB's plastic habitat requirements (any tree greater than 3" with exfoliating bark), virtually any project with a federal nexus that involves tree clearing would be subject to consultation under the ESA. This dramatic increase in written consultations would have overwhelmed current staff workloads in both the transportation and resource agencies.

After several iterations and mitigation negotiations, USFWS issued FHWA/NCDOT and USACE the PBO in April 2015, shortly after the NLEB was officially listed as Threatened. The PBO allowed NCDOT to proceed with projects within Divisions 1-8 with no need to: conduct field surveys, develop avoidance and minimization measures, or a written concurrence for the NLEB on an individual project basis. In other words, it covered all ESA consultation aspects, program wide, for projects with a federal nexus in Division 1-8.

The PBO was set to expire on April 10, 2020. FHWA and USACE requested an extension of the PBO until December 31, 2020 which USFWS approved. Anticipating the expiration of the PBO, negotiations were conducted with USFWS and an updated document was finalized in September 2020. USFWS then issued a new PBO on November 6, 2020. The current PBO is now effective for 10 years with an expiration of December 31, 2030. As a result of the environmental commitments made by FHWA and USACE for these programmatic agreements, a great deal is now known about the NLEB in eastern North Carolina due to the intensive research conducted in both the Coastal Plain and Piedmont by BSG staff with the assistance of USFWS and various consulting firms.

Prior to 2015, when surveying efforts began, not much was known about the distribution, population numbers, and life cycle of the NLEB in eastern North Carolina. Only several individuals had been documented in a few coastal counties in North Carolina. As of today, there are 19 counties with records for NLEB within the Coastal Plain. Despite intense surveying efforts, no records occur for the species in the Piedmont.

> During various times of the year, radio transmitters were fitted to NLEB to track their movement during periods of reproduction and hibernation. We found that the Coastal Plain bats remain active throughout the year, meaning they do not hibernate in the east, but they will go into a state of reduced activity known as torpor during parts of the winter. After analyzing the transmitters' tracking data, there is no evidence that they travel west to the mountainous regions

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to hibernate in caves. Instead, they continue to primarily use trees for roosting in the Coastal Plain during all seasons. This led to the conclusion that eastern NLEB are spatially disjunct from the western NLEB population within our state, and being that WNS is very contagious, that is good news. Since northern longeared bats in coastal North Carolina are active most of the winter and not dependent upon caves or mines for hibernation, they are likely not as susceptible to WNS. With the species in sharp decline elsewhere, this coastal population may serve as a refugium.

Currently NCDOT biologist (Chris Manley) and USFWS biologist (Gary Jordan) are working together to plan future research and monitoring efforts for the NLEB in the Coastal Plain under the requirements of the new PBO. NCDOT has committed to monitoring six known sites, with three being surveyed each year on an alternating pattern for the next 10 years. They are still in the planning stages of the research component but are eager to gather new information.

NCDOT is very fortunate to have a cooperative and collaborative relationship with the USFWS Raleigh field office's biologist and transportation liaison, Gary Jordan. Gary worked very hard to establish a programmatic agreement with USFWS' federal and state partners that assists in meeting the goals of all agencies involved. A special thanks to USACE, FHWA, and NCWRC for their input and assistance with this programmatic agreement as well. Without this agreement in place, a large number of TIP projects in Divisions 1-8 would be on the critical path for project delivery. It has provided guidance and consistency in Divisions 1-8, saving both time and cost on individual project delivery.

Kinston Bypass Update

By: Morgan Weatherford, NCDOT EAU Mitigation & Modelling Group



Just over a decade ago, a group of intrepid folks set out on a voyage to find the extent of using GIS in project development in Lenoir County. This story, like any great tale, is full of suspense, battlefields, triumphs and downfalls. I am greatly exaggerating of course. Most of what transpired would completely bore the daylights out of even the most tedious person. But something of great significance did occur on February 19th, 2020 during a merger meeting for R-2553 US 70 Kinston Bypass. For the first time in NCDOT's history, and as far as we know anywhere in the country, stream and wetland predictive modeling was used to select the Least Environmentally Damaging Practicable Alternative (LEDPA) on a major road project. So your first question may likely be, "what does that even mean and why should I care?"

On the Kinston Bypass project, NCDOT teamed up with our resource agencies and other partners to gather critical spatial data and used it to make a pretty darn big decision. Using the statewide LiDAR dataset along with other spatial data layers, NCDOT, the US Army Corps of Engineers and NC Division of Water Resources was able to create more accurate and up-to-date stream and wetland layers. Instead of relying on time-intensive field surveys, we used predictive models and other data for the comparative analysis on the alternatives. Not only did this save money, but it allowed for much more flexibility for the alignments. Because we had these predictive models for the entire study area, a new alternative could be added during project development interactively with stakeholders and without needing additional field delineations. This alignment was seamlessly added into the merger process and ended up becoming the preferred alternative.

NCDOT and USACE are currently working on guidelines on when and how to use this type of modeling in the future. On one side of the spectrum, it may be used to screen projects at the beginning of project development to estimate impacts based on the STIP line. On the other end of the spectrum is using the model output to choose the LEDPA. In fact, wetland models were used to obtain a USACE permit for the US 74 and I-95 broadband projects due to the nature of the impacts which helped us meet an accelerated schedule. How the model is used depends on several factors such

as project type, size, schedule and geographic location. Ultimately the decision on if and how to use modeling is made by the project manager in conjunction with the agency representatives. The Environmental Analysis Unit should be consulted before proposing to use the model to ensure developing a model is feasible for a particular project.

So you may be wondering what else is on the horizon. Wetland models will be introduced into ATLAS in the coming months to help with project screening. These models are generic county-wide models that will provide a more robust wetland dataset than some of the traditional wetland lavers we currently use. The ATLAS hydrography dataset is based on the NCDWR stream predictive models that provides a more extensive stream dataset than the other traditional stream layers. Ultimately this dataset will provide a unified stream dataset with dozens of environmental attributes such as the NCDEQ stream classification, standardized names of unnamed tributaries, whether the stream is a trout water or essential fish habitat to name a few. The ATLAS Hydrography dataset is currently in ATLAS with 72 attributes already loaded and ready to use. In addition, predictive models for protected species habitat are now being released in ATLAS to help NCDOT and agencies determine the likelihood of protected species habitat being present in project study areas. Predictive models can be a powerful tool to help the Department meet the needs of the public while constantly trying to navigate the endless unforeseen challenges that get thrown our way. "Tool" is the key word. Models can't always give the complete answer but they can become more accurate and more useful over time. This is the purpose of harvesting project specific GIS data via the ATLAS workbench. NCDOT spends a lot of time and money on collecting data on road projects and we need to make it work for us on other projects. If we know where we've been, we'll have a better understanding of where we're going.



EAU Welcomes Don Brown



It is a pleasure to announce Don Brown as a new member of the Environmental Analysis Unit's Community Studies Team. Don comes to us with over 20 years' experience as a consultant doing National Environmental Policy Act. community studies, and public involvement. He has worked on some high profile projects along the way, most recently the U.S. 74 Express Lane Project in Charlotte (TIP Project No. U-2509).

In his new role as a Community Planner III, Don will coordinate and program the delivery of Direct and Indirect Screening Tools, Community Characteristics Reports, Community Impact Assessments, Indirect and Cumulative Effects reports, Land Use Scenario Assessment reports and technical studies and memoranda for the team.

But Don is much more than a planner. At the University of Iowa, Don was a collegiate gymnast and a former member of the US National Team. Staying active in the sport, he has coached and judged gymnastics since the mid-1990s. Finally, Don was a mascot doing mini-tramp slam dunks for the no-longer-existing Houston Comets — but those days are long gone.

Don has two children; his son, DJ, is a freshman at University of North Carolina at Charlotte studying engineering and daughter, Audrey, is a senior at Research Triangle High School.

Please wish Don well as he transitions in to his new role.

EAU Employees become Licensed UAS Pilots

The Environmental Analysis Unit (EAU) has a history of pioneering Unmanned Aircraft System (UAS) technology in our work from monitoring threatened and endangered species to aerial herbicide control of invasive species. Dave Johnson, Monitoring & Stewardship Group, has joined the ranks of EAU's UAS pilots by recently obtaining his Federal Aviation Administration's Part 107 Commercial UAS license. Dave along with Paul Mohler, Damon Jones, Shane Peterson and Brian Overton of the Archaeology Team attended training offered by the NCDOT Division of Aviation. The Monitoring & Stewardship Group plans to employ UAS to enhance their mitigation stewardship inspection efforts. The Archaeology Team intends to use this technology to complete flyovers of selected project areas to help identify potential sites locations and landscape features.









Damon Jones



Shane Peterson