Summer 2019 Internship with WSP USA ▪ Eva James, Planning & Environmental Intern

OVERVIEW
This summer I was granted the opportunity to work in Atlanta with WSP USA, an international engineering consulting firm that does contracts with everyone from the National Parks Service to the MTA of New York.

I set several goals coming into this internship, and then 3 days in had a formal goal setting lunch with my supervisors and Developing Professionals Network (DPN) mentor to write these goals down and talk about them. They included:

✓ Improving my technical skill set
✓ Building a strong network
✓ Working on a variety of projects
✓ Learn what I do and don’t like about consulting
✓ Work on my professional development

I worked on a lot of projects over the past 4 months, broken down into 3 categories: Technical, Writing/Graphics/Research, and Public Outreach.

This experience taught me a lot about consulting, planning, and myself in general. I highly recommend the WSP internship program to any planning, geography, or engineering majors interested in a possible career in the private or public sector.

TECHNICAL
My GIS and excel skills were put to the test with a variety of mapping and data analysis tasks throughout the summer.

I had to make several Project Location/Limit maps and noise buffer maps, using many of the lessons I learned in GEOG 343 in the spring.

PUBLIC OUTREACH
One of my favorite parts of this internship was getting out into the public for feedback and outreach purposes. On several occasions, I traveled to different counties/cities near the City of Atlanta for these purposes. I went across DeKalb County for Transit Master Plan scenario public and stakeholder meetings (pictured above), and up to Alpharetta for a City Council meeting where my boss was presenting on GA 400 BRT projections.

CAREER DEVELOPMENT & OUTSIDE OF THE OFFICE
WSP had countless mentoring, professional development, networking, and learning opportunities while I was here.
✓ Mentorship Program
✓ Project Manager Trainings
✓ WTS Lunch & Learn
✓ Career Path & Leadership Lecture

They also provided plenty of interaction opportunities outside of the office that helped me form lifelong connections and friends:
✓ DPN Happy Hours
✓ Pancake Breakfast
✓ Beltline Cleanup
✓ PATH400 Walking Tour
✓ Employee Club Activities
✓ Atlanta United Game

WRITING/GRAPHICS/RESEARCH
Four major projects fell into this subset of tasks: the GDOT STIP EJ Report (a project that also required lots of mapping), a set of project fact sheets for I-20ETOD and the SWTP/SSTP, a GCO Equity Analysis, and a GCO Commuter Feasibility Shuttle Guide (pictured to the right).
GEOG 595: SC State Climatology Office Internship

By: Leah Moore

OVERVIEW & SCOPE

- Started at the SCO in May 2018
- Able to do the internship credit so that I could work more hours during the school semester.
- Staff consists of Dr. Hope Mizell, State Climatologist, Melissa Griffin, Assistant State Climatologist, and Mark Malick, Severe Weather Liaison.
- Small staff enables a lot of independent, project-based work environment.
- Research projects have consisted of a range of topics, such as: hurricanes and tropical climatology, drought, precipitation extremes, heavy precipitation trends, county climatology, and more!
- The bulk of the poster details my hurricane work, which has been my favorite.

HURRICANES

SC Hurricanes Website

HURRICANE FLORENCE 2018

Tropical Storm Florence Fact Sheet

Tropical Storm Florence Story Journal

Tropical Storm Florence Interactive Story Journal was completed in early May. This website shows rainfall

OUTREACH

2018 SC State Climatology Office Internship Poster

The three images above show pages from the South Carolina Annual Weather Review, which can be found online. The website reviews summaries of data for each region of SC, and highlights any big weather events that may have occurred. The main data comes from each region of SC was averaged and compared to climatological normal.

OUTCOME

- Doing an internship with a state government office has helped me gain incredible insight into my career aspirations and future path.
- I have learned an incredible amount about my field, the state of South Carolina, and workplace relations.
- I now have several research ideas for the future, because I am more familiar with my field.

PUBLICATIONS

All of the pictures below show deliverables that I have produced during my time with the SC State Climatology Office. Most of the images show the cover of a report that I made:

Our South Carolina drought portal http://scweather.discoverynet.org was awarded from the American Geophysical Union for the best of historical drought impacts. I maintained content for the timeline during the internships.
Prothonotary Warbler Nest Box Study
Saluda Shoals Park

Background Information:
Prothonotary Warblers (Protonotaria citrea) are a bright, yellow and olive warbler that calls South Carolina home for the summer. Most of these species’ breeding ranges is in the Carolinas. Though it is unsure their Prothonotary Warbler nests at Saluda Shoals Park, this species is a regular summer visitor and the park does have suitable breeding habitat. This species breeds in shaly, wooded swamps, flooded out marshland forest, and woods near streams and lakes. They are secondary cavity nesters, using old woodpecker nesting cavities. Between 1946 to 2015, Prothonotary Warbler populations have declined over 1% each year, adding up to a total population decline of 42%. A statewide initiative to provide artificial nesting boxes for Prothonotary Warblers has been in the last year, and Saluda Shoals Park was given six nesting boxes to install and monitor.

Painting of Prothonotary Warblers—John James Audubon

Actions Taken:
1. First, we received the six boxes from South Carolina Wildlife Federation.
2. Then the boxes were painted green, brown, and black to camouflage the boxes, so they blend in with their natural surroundings.
3. These warblers have the specific nesting grounds so six spots were scouted and cleared out so installation can occur.
4. To install the boxes, the host poles were brought to mount the boxes to. Cage shaped baffles were then attached to the poles to act as predator guards.
5. Once the boxes were mounted installation occurred. While installing the boxes notes were made on location specifics and what numbered boxes were located where in the park.
6. The boxes have been monitored for three weeks and we still have not had any nesting attempts. Prothonotary Warblers were shot in the park April 20th, 2019, so hopefully breeding will begin soon. Box monitoring will continue until their breeding season ends in mid-summer.

Conclusion
Due to the boxes being new in the park, it is likely that nesting activity from Prothonotary Warblers will not occur this year. These boxes will continue to stay up, and in the 2020 breeding season hopefully these birds will become familiar with these boxes and call them home.

*The park has been observing Eastern Bluebird nest boxes as well. The sites circled in yellow are the Prothonotary Warbler sites located in the park.

Karl M. Sinclair
B.A. in Environmental Studies
GIST 395 Internship
South Carolina’s Department of Natural Resources: LWCD — Megan James

Geographic Information System Intern
South Carolina’s Department of Natural Resources – LWCD
Megan James

Story Maps
South Carolina Scenic Rivers
- Used ArcGIS to create points of interest maps
- Used ArcMap to create overview maps
- Used Esri Story Maps to create webpage

- Tells the history and current use of all ten scenic rivers
- Highlights parks, boat launches, historic sites, and other points of interest along the rivers

South Carolina Earthquakes
- Used ArcGIS to create all maps
- Used Esri Story Maps to create webpage

- Explains why and how earthquakes happen generally and in South Carolina
- Gives a brief history of the 1836 Charleston earthquake
- Details hazardous areas in South Carolina
- Describes ways one can prepare for an earthquake

Stream Flow Analysis
- Compiled and filtered stream flow data from active and inactive gauges to find streams with the highest flow during the dry season, indicating a stronger influence from groundwater aquifers
- Used ArcMap to plot locations where streams are influenced heavily by groundwater
- Outlined points are considered to be urban and therefore data may be skewed

Precipitation Analysis
- ArcMap was used to find watersheds that received the most rainfall during the 2015, 2016, and 2018 storms

SC Saltwater Paddling Trail
- ArcMap was used to input new access points and points of interest along coastal waterways
- The Paddle SC website was updated to include a new saltwater paddling trail

Floodplain Elevation
- ArcMap was used to evaluate sites for lowest elevation using LiDAR returns
- Determined if sites were in FEMA 100-year floodplain

Other Projects
- Organization of information relating to geological quadrangle maps
- Compilation of land irrigated in South Carolina

Website Makeover
Before
- Updated the hydrology & geology department websites using my training in HTML, CSS, and JavaScript
- Corrected broken links, changed older pictures, and organized content

After

Acknowledgments
I would like to thank my supervisor, Tanner Arrington, for imparting a fraction of his vast knowledge to me. With his guidance, I have been able to shape skills learned in the classroom and during my internship into ones I will be able to use in my professional career. Thank you, Tanner!