

Tideland Topics

Real People. Real Power.

Twinkle, twinkle lots of stars

The night skies within North Carolina's Outer Albemarle Peninsula represent the largest area of public lands — over 485,134 acres, or 758 square miles — with the darkest skies along the entire U.S. Atlantic coastal system between Boston and Miami. Most of that area is serviced by Tideland EMC and we're doing our part to preserve the night sky.

Read more starting on Page B.



Incumbents *deemed elected*

Members of the co-op's nominating committee met on February 12 to consider candidates for director districts 1, 3 and 9. Nominated for re-election in their respective districts were incumbents Rudy Austin of Ocracoke, Dawson Pugh of Engelhard and J. Douglas Brinson of Arapahoe. No additional members sought candidacy through the committee or written petition process.

In accordance with the cooperative's bylaws, unopposed candidates are deemed elected to the board of directors for a three-year term. The three directors will retake their oaths of service at the cooperative's June board meeting.



Rudy Austin
District 1



Dawson Pugh
District 3



J. Douglas Brinson
District 9

Co-op members are encouraged to save the date for Tideland's annual meeting. The event will be held on Thursday, May 9, at Beaufort County Community College in Washington.

Member registration begins at 6:30 pm. The business session gets underway at 7:00 pm. Registered

members are eligible for prize drawings including the grand prize of a \$500 electric bill credit. Both the youngest and oldest members in attendance will be awarded gift cards.

The last day to introduce new business via petition is April 8, 2019.

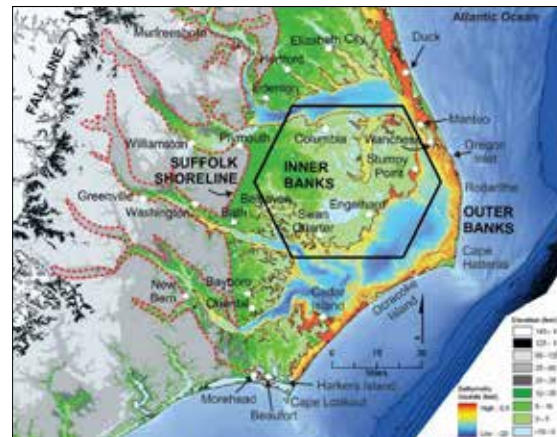


better
light
darker
night

hello darkness, my old friend *Night sky visibility*

By Stanley R. Riggs

The night skies within North Carolina's Outer Albemarle Peninsula represent the largest area of public lands — over 485,134 acres, or 758 square miles — with the darkest skies along the entire U.S. Atlantic coastal system between Boston and Miami. This unique and complex system of nocturnal environments and associated night skies rotate from the brilliant, big sky of the full moons to the inky black skies of the new moons that open the sky to a dazzling universe.



Color topography map shows the North Carolina Land of Water (NC LOW) of northeastern North Carolina's coastal system east of the red dashed line. The Outer Albemarle Peninsula Nightscape study area, outlined in a black hexagon, includes major portions of Washington, all of Tyrrell and mainland Hyde-Dare counties that are surrounded by the vast areas of Albemarle Sound to the north, Croatan Sound to the northeast, Pamlico Sound to the southeast and south, and the Pamlico River Estuary to the southwest. (Image by Stan Riggs)

In 2017, Tideland began work on a systemwide outdoor lighting retrofit project. Co-op crews are replacing high-pressure sodium and mercury vapor lights with new LED bulbs and dark sky approved fixtures. Most notably, the new lights do not include a refracting globe. That helps direct light down below where you need it and not into the sky or onto neighboring properties.

The older bulbs ranged from 100 to 400 watts. The new LEDs are 50 watts. Once the LED retrofit project is complete, the co-op will save nearly 4 million kilowatt hours annually. The co-op changed out 1,766 fixtures in 2017 and another 1,551 in 2018. Another 4,300 remain to be worked.

In addition to energy savings, the co-op will realize reduced maintenance costs due to the longer life and improved durability of LEDs.

A significant seasonal variation is superimposed upon the skies' vastness that ranges between these two extremes. Cold, crisp winter nights are dominated by the overwhelming sounds of flocks of winter waterfowl, including tundra swans and snow geese by the tens of thousands, moving from refuge lakes to farm fields, along with lonesome hoots of owls on evening hunts, howls of roaming coyote packs, and occasionally the rare red wolf.

Summer nights are hot, humid and dominated with a cacophony of insects and frogs, along with massive light and sound displays derived from the outlines of perfect thunderheads that move over the peninsula. And, of course, there is a never-ending parade of morning sunrises and evening sunsets that daily provide new mosaics of sky magic.

The Outer Albemarle Peninsula, known as the OAP, has an incredible nightscape resource for the following reasons:

1. The vast area of public wetlands is surrounded by the expansive estuarine system, all of which have minimal human activity.
2. The "Big Night Sky" presents an ideal astronomical wonderland that is generally becoming an endangered environment in the east due to ever increasing light pollution.
3. The 360-degree horizon vistas provide incredible views of sun and moon rises and sets; thunderheads and dramatic lightning shows; and the glorious zenith and structure of the Milky Way.

In a quest to better understand the nocturnal environment and dark skies of the region, North Carolina Land of Water (NC LOW) and A Time For Science (ATFS) designed a study to map and characterize the landscapes, soundscapes, and viewscapes of the OAP across four

...Continues on Page H

Home Repair Funds

Low-income homeowners may qualify for loan and grant combinations up to \$27,500

The US Department of Agriculture's Program 101: Single Family Housing Repair Loans and Grants

What does this program do?

Also known as the Section 504 Home Repair program, this provides loans to very-low-income homeowners to repair, improve or modernize their homes or grants to elderly very-low-income homeowners to remove health and safety hazards.

Who may apply for this program?

To qualify, you must:

- Be the homeowner and occupy the house
- Be unable to obtain affordable credit elsewhere

- Have a family income below 50 percent of the area median income
- For grants, be age 62 or older and not be able to repay a repair loan

What is an eligible area?

Applicants may check the address of their home to determine eligibility.

How may funds be used?

- Loans may be used to repair, improve or modernize homes or remove health and safety hazards
- Grants must be used to remove health and safety hazards

...Continues on Page F

Right-of-way maintenance schedule

Tideland has hired Lucas Tree Experts to trim trees in our right-of-way. During April they will work along Highway 99 from the Railroad Bed in Pungo to Pantego. Crews will also begin work on Shore Drive at Lake Phelps.

Osmose crews will test poles on the Lowland circuit: Highway 306, Vinegar Hill and Spring Creek. The testing can include minor digging at the base of the pole. Poles are also "sounded" with a hammer to detect any internal decay.

Thank you for your support of these important maintenance activities which improve reliability and promote public safety.



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Early bird deadline
August 15, 2019

Deadline
September 15, 2019

Tideland EMC
Real People. Real Power.

A Tideland Energy Company

April 8 is National Electric Co-op Lineworker Appreciation Day

Today and everyday, we salute the work of our linemen. Not only are they first responders in the communities we serve, they also assist other electric cooperatives during times of disaster.

We appreciate their commitment to safety and service. Please join us in recognizing their contributions to a better, brighter Tideland.

Josh Bain, 7 years
Justin Boor, 10 years
Michael Buckner, 4 years
Bubba Calhoun, 4 years
Kane Cox, 20 years
Matt DeVan, 10 years
Josh Dunbar, 3 years
Joseph Gibbs, 15 years
Fred Hackney, 44 years
Jacob Hardison, 11 years
Steven Harris, 8 years
Timothy Ipock, 6 years
Jason Kitchen, 6 years

Jonathan Lee, 3 years
Michael Marslender, 25 years
Donald McArthur, 10 years
Kevin McCarvill, 8 years
Andy Midyette, 29 years
Greg Morris, 8 years
Matthew Neal, 11 years
Bobby O'Neal, 45 years
Joseph Pugh, 22 years
Chris Rice, 21 years
Phillip Sawyer, 6 years
William Sawyer Jr., 1 year
Robert Shively, 6 years

Lineworker

A look at the evolution

1875-1900

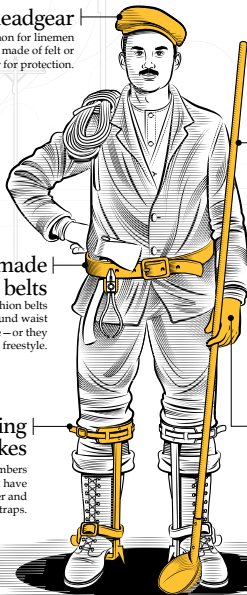
Electrification begins

In the early years, linemen learn basic principles and hazards in real time. Safety standards are non-existent, and most line equipment is handmade.

Early headgear
It's not uncommon for linemen to wear hats made of felt or leather for protection.

Homemade belts
Linemen fashion belts to wrap around waist and pole—or they climb freestyle.

Climbing spikes
Homemade climbers lack pads and have only upper and lower straps.

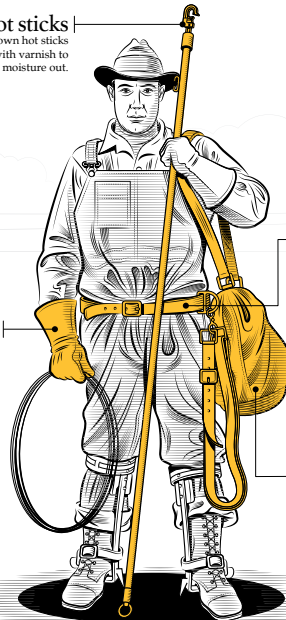


Homemade hot sticks
Linemen make their own hot sticks and slather them with varnish to keep moisture out.

Digging spoon
Workers dig holes by hand with digging bars, spoons, and shovels.

Rubber gloves
Safer rubber gloves are introduced around 1915 along with other rubberized equipment, such as line hoses and blankets.

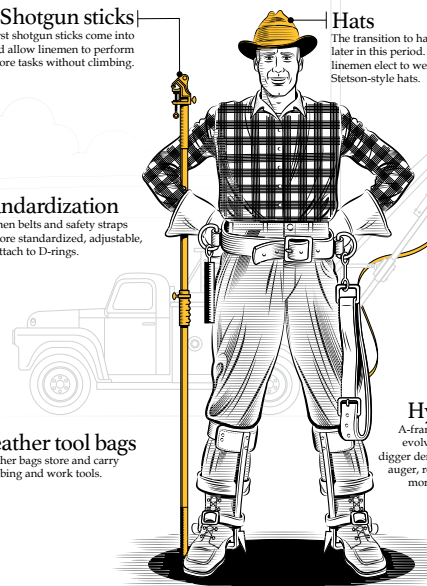
Bare hands
Linemen rarely wear gloves for protection, opting instead to work bare-handed.



Shotgun sticks
The first shotgun sticks come into use and allow linemen to perform more tasks without climbing.

Standardization
Linemen belts and safety straps are more standardized, adjustable, and attach to D-rings.

Leather tool bags
Leather bags store and carry climbing and work tools.



Hats
The transition to hard hats comes later in this period. Until then, most linemen elect to wear soft, Stetson-style hats.

Hydraulics
A-frame digger trucks evolve into hydraulic digger derrick trucks with auger, resulting in safer, more efficient work.

Timeline (1875 - present):
Prominent events in electrical lineworker history

1890s | Companies start making specific tools for line work, such as clamps for splicers and soldering tools.

Early 1900s | Protective grounding of lines and equipment begins.

1914 | National Bureau of Standards publishes the National Electrical Safety Code.

1937 | *Slim*, starring Henry Fonda as an itinerant lineman, opens in movie theaters.

Early 1940s | Concept of digger derrick truck emerges.

How much money is available?

- Maximum loan is \$20,000
- Maximum grant is \$7,500
- Loans and grants can be combined for up to \$27,500 in assistance

What are the terms of the loan or grant?

- Loans can be repaid over 20 years
- Loan interest rate is fixed at 1%
- Full title service is required for loans of \$7,500 or more
- Grants have a lifetime limit of \$7,500
- Grants must be repaid if the property is sold in less than 3 years
- If applicants can repay part, but not all of the costs, applicants may be offered a loan and grant combination

Is there a deadline to apply?

Home loans are available year round as long as

funding is available. Applications are processed in the order they are received.

Who can answer questions and how do I get started?

In Beaufort, Hyde, Washington, and Dare counties contact the Greenville office at 252-752-2035 or 252-752-2880 or toll free at 844-325-6827.

In Craven and Pamlico counties contact the Kinston office at 252-526-9799 or 844-325-6827.

What governs this program?

The Housing Act of 1949 as amended, 7 CFR Part 3550 HB-1-3550 - Direct Single Family Housing Loans and Grants Field Office Handbook

Why does USDA Rural Development do this?

Helping people stay in their own home and keep it in good repair helps families and their communities. Homeownership helps families and individuals build savings over time.

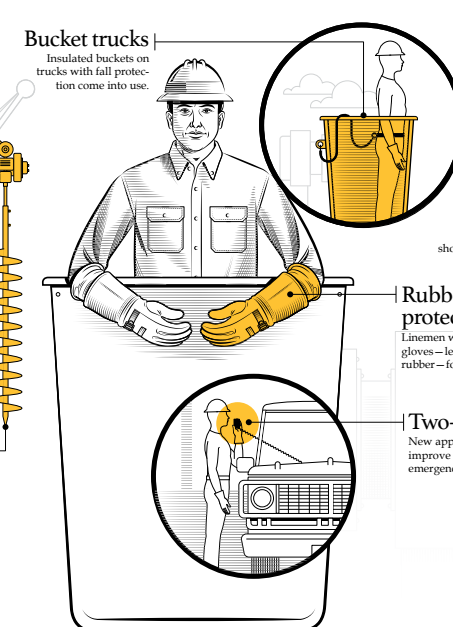
Safety Gear

Evolution of line equipment

1951-1970

New heights and faster communication

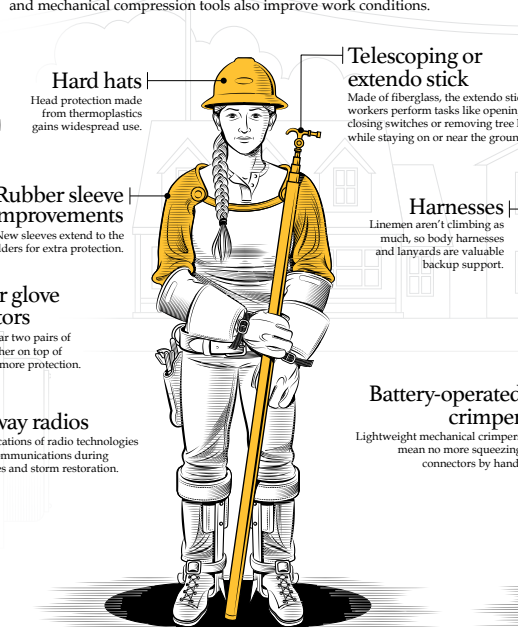
Fiberglass sticks evolve to "rubber gloving," with more formalized rules and training. The advent of the bucket truck, utility undergrounding, and improved communications are major steps.



1971-1990

New law of the land

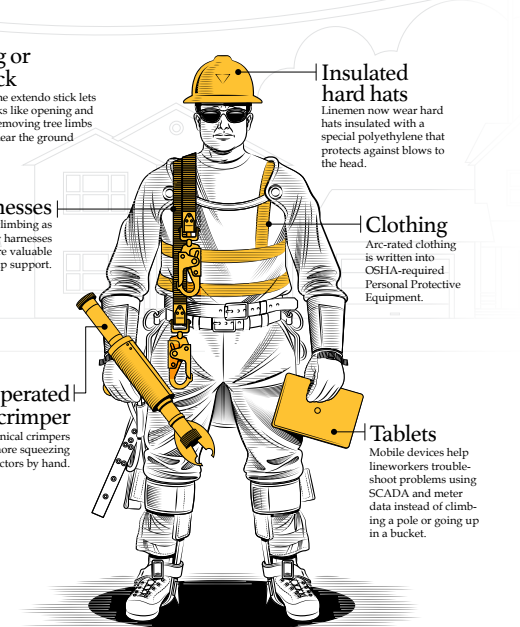
President Nixon signs the Occupational Safety and Health Administration (OSHA) law. Underground line installation gains widespread use. Material-handling bucket trucks and hydraulic and mechanical compression tools also improve work conditions.



1991-present

Watching out for workers

OSHA begins requiring utilities to provide lineworker clothing to protect from arc flashes and "fall protection" devices like body harnesses and fall-arrest lanyards.



1955 | Linemen pay in some regions hits \$2.25 per hour.

1967 | NRECA's Rural Electric Safety Accreditation Program (RESAP) begins.

1970s | Insulated aerial lifts become more popular.

1984 | First International Lineman's Rodeo is held in Kansas.

1996 | First seminar for NRECA's Certified Loss Control Professional Program (CLCP).

2010 | Revamped Rural Electric Safety Achievement Program begins.

2014 | OSHA issues rules requiring the industry to provide arc-rated clothing and fall-protection equipment.



What isn't measured *can't be managed*

Little things can add up. That's why monitoring your home or business plug loads can be a real eye opener.

With that in mind, Tideland EMC has a limited number of Trickle Star Energy Monitors for sale to members. Unlike the Kil-A-Watt monitors we've loaned out over the years, the Trickle Star has a detachable display unit with a 4-foot cord.

The display unit can be placed on a counter or table for easy viewing. This makes monitoring a refrigerator or freezer much easier than before. The monitor also has 360 joules of surge protection.

The Trickle Star displays kilowatt-hour consumption, cost, and CO² by day, month and year.

The units are available for purchase at all Tideland EMC offices. The cost is \$29.99 and will be billed to your electric account.

Message to members

Thank a lineman and their families

by **PAUL SPRUILL**
GENERAL MANAGER &
CHIEF EXECUTIVE OFFICER

National studies consistently rank power line installers and repairers among the most dangerous jobs in the country, and for good reason. Laboring high in the air wearing heavy equipment and working directly with high voltage creates the perfect storm of a dangerous and unforgiving profession. But electric lineworkers are up to the task. These brave employees are committed to safety, as well as the challenges of the job.

Tideland EMC's lineworkers are responsible for keeping power flowing day and night, regardless of national holidays, vacations, birthdays, weddings or other important family milestones. Beyond the years of specialized training and apprenticeships, it takes internal fortitude and a mission-oriented outlook to be a good lineworker. In fact, this service-oriented mentality is a hallmark characteristic of lineworkers. The job often requires they set aside personal priorities to better serve their local community.

Family Support System

To perform their jobs successfully, lineworkers depend on their years of training, experience and each other to get the job done safely. Equally important is their reliance on a strong support system at home.

A lineworker's family understands and supports their loved one's commitment to the greater community during severe storms and power outages. This means in times of prolonged outages, the family and their lineworker may have minimal communication and not see each other for several days. Without strong family support and understanding, this challenging job would be all the more difficult.

In Tideland territory and across the country, electric co-op lineworkers' mission-focused mentality of helping others often extends beyond their commitment to their work at the co-op. Lineworkers are often familiar figures in the community. They can be found coaching youth sports teams, volunteering for local charities and serving on local advisory boards.

Thank You

Monday, April 8, is National Electric Cooperative Lineworker Appreciation Day. Given the dedication of Tideland's lineworkers, both on and off the job, I encourage you to take a moment and acknowledge the many contributions they make to our local community. And if you see their family members in the grocery store or out and about in the town, please offer them a thank you as well.

Avoid the Big Green Box

Please stay away from pad-mounted transformers (the big green box). While safe, they are not meant for touching, climbing or playing. Pad-mounted transformers carry high voltages of electricity that serve many homes in our communities.

Never touch, climb or play on pad-mounted transformers. Never put fingers, sticks or other objects through cracks in the transformer.



Keep areas surrounding the pad-mounted transformer clear so that workers can safely maintain transformers as needed. Keep shrubs and structures at least 10 feet away from the transformer doors and 4 feet away from the sides.



Never dig near a pad-mounted transformer. They are surrounded by underground cables. Hitting the cable could result in electrical shock or disruption of service. Always dial 8-1-1 before you dig.



Report problems. If you notice anything amiss, like an unlocked transformer or one that has been damaged, please contact us immediately.



eastern N.C. counties. As NC LOW's coastal and marine geologist, I am the lead investigator in this Nightscape resource project.

Other partners include: Karen Clough, community outreach coordinator for NC LOW; Emily Jarvis, executive director of ATFS; and Brian Baker, astronomer with ATFS. The project has a working partnership with Reide Corbett, an oceanographer and executive director of the East Carolina University's Coastal Studies Institute (CSI) in Wanchese.

Three groups of local volunteers constitute the field-mapping teams obtaining nighttime observations in Tyrrell, Washington and mainland Hyde-Dare counties. We also have working partnerships with the U.S. Fish and Wildlife Service teams at Alligator River, Pocosin Lakes, Mattamuskeet, and Swanquarter National Wildlife Refuges, along with the N.C. Wildlife Resources Commission and N.C. State Parks.

The Nightscape survey teams are comprised of scientists, educators and students that live and work in the region. From June through December 2018, the teams went to their respective counties on 13 new and full-moon nights. Combined, they tallied 161 visits to 62 sites. Broken down by county, the Nightscape data collections were: Mainland Dare: 54 visits to 14 sites; Mainland Hyde: 37 visits to 18 sites; Tyrrell: 40 visits to 13 sites; and Washington: 30 visits to 17 sites.

In addition to describing the surrounding environment, accessibility and apparent urban noise and light pollution at each site through the four seasons, researchers measure quality of the sky darkness, ambient sound and meteorological parameters.

Data from these surveys will be used to quantify and map the general nightscapes and light pollution. This knowledge will help shape plans to protect the resource while incorporating it into ongoing ecotourism programs, and potentially to enable the peninsula to earn regional designation as an "International Dark Sky Place." The Dark Sky Place title — and accompanying backing of the International Dark Sky Association — would enhance the visibility of the regional dark sky resource and foster ecotourism and sustainable economic activity in the region.

The Nightscape team will host a Star Party on April 13 at Pettigrew State Park in Tyrrell County, as part of the N.C. Science Festival.

Stanley R. Riggs is an internationally recognized coastal geologist at East Carolina University and serves as chair of the N.C. Land of Water program. The Nightscape project is funded by a Community Collaborative Research Grant supported by North Carolina Sea Grant, in partnership with the William R. Kenan Jr. Institute for Engineering, Technology and Science, and North Carolina Space Grant.

Tideland Topics

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Tideland EMC is an equal opportunity provider & employer

Holiday Closing

Our offices will be closed Friday, April 19, for Good Friday. Our 24-hour member service center will remain open and crews are on standby to respond to outages as needed.

Time-of-Use Reminder

The on-peak demand hours change April 16. The summer on-peak hours will be 4 pm to 8 pm, Mon-Fri. Please adjust your schedule accordingly if you are on rates 2 or 4.



To enroll, call Tideland EMC at 800.637.1079. Account must have zero balance to activate.