



2026 Season Closer

Slopeside Tavern
September 12, 2026



Photo Courtesy of NC Living

Welcome!



David Feist

President (2026-29)

Agenda

- Board Introduction
- Treasurer Update
- Water Quality Update
- Electric Shock Drowning
- Closing comments
- Social Time



‘26-27 the Year Ahead

Points of Action

- 1 **(FERC):** Federal Energy Regulatory Commission – Licensing for Duke
- 2 **SMP:** Shoreline Management Plan – Renews in 2028
- 3 **Safety:** In all Lake Activities – Boating, Fishing, Kayaking, Swimming, etc
- 4 **Density:** High-risk areas and activities, No Wake Zones, Shoreline erosion, Dock / Boat damage

Departing Board Members



Lesley Howard



Tom Albert



Chris Warren

Board of Directors



2024-2027 Term



George Sistrunk
Watershed



Patrick Achey
Treasurer



Karen O'Dell
Secretary

2025-2028 Term



Gary Metal
Special Events



Marianne Smith
Membership

2026-2029 Term



David Feist
President

2026-2029 Term



Kelly Feist
Social



Byron Finley
Water Quality



Stephen Julka
At Large

Social Activity - Find that Board Member



- Brewery Owner
- Director of Medical Education
- Certified Wine Judge
- Rotary Club President
- Soccer Coach - Jackson County Soccer Assn
- Floodplain Manager
- Lake Glenville Enthusiast since 6 Years Old

Treasurer Update



Patrick Achey
Treasurer

Agenda – Financial Update

- Treasurer update – Year in Review
- Priorities for 2027 Season – Finance and Scholarships
- Time for Questions



'25-26 Year in Review

- 1** Dues and membership remained paramount to our core mission (~70% of revenue in 2026)
- 2** Transition to new membership platform enabled the next step in member CRM, rolling renewal, and auto-renewal
- 3** Grant revenue remained strong, with room for improvement
- 4** Self-funded (initiative-specific funding) continues to be important for programs outside of water quality/preservation

Treasurer Report: 2027 Priorities

- Balance sheet / cash on hand – Continue to keep 1.3-1.5x annual operating expense runway
- Self funded / social events – Bolstered membership donations to cover these (increasing) costs
- Grant revenue – Exploration of additional avenues to increase grants as a source of income
- Scholarship program – Expanded reach to our membership through broader fundraising window and periodic updates on our scholarship classes



Thank You!

Water Quality Update



Byron Finley

Director of Water Quality

Our Primary Partners in Water Quality



Water Quality



- **We test four times a year for:**
- **Turbidity** – Visual Clarity, depth of site
- **Phosphorous** – Nutrient, too much causes algae, etc...
- **Ammonia-Nitrogen** – (plant decomposition) elevated levels are toxic to fish
- **Dissolved Oxygen** – Critical to marine life.
- **Conductivity** – Ability to conduct current due to dissolved solids and salts.

Water Quality



- **We test four times a year for:**
- **Blue Green Algae Phycocyanin and Chlorophyll-a** – Annual comparison to see if Algae levels are increasing / decreasing.
- **Fecal Coliform** – Bacteria in Water, NC Standard
- **E. Coli** – more precise than Fecal Coliform, not legislated or recognized by the NC Legislature, supplemented by DNA which can type human or other sources

This Year's Quarterly Testing Comparison



Friends of Lake Glenville

Preserve. Protect. Educate.

**Regional VWIN mean - used to compare results against typical regional values

*Reporting limit

December 2025

		NH3 mg/L	NO2/NO3 mg/L	Phosphorous mg/L (as PO4)	Dissolved Oxygen mg/L	Specific Conductivity µS/cm	pH	Turbidity NTU	Fecal coliform CFU	E.Coli MPN	Temperature °F	Alkalinity mg/L CaCO ₃
		0.09**	0.5**	n/a	NC Trout Water	60**	7.1**	6.2**				
		0.02*	0.1*	0.02*	designation standard ≥6 mg/L							
Pine Creek	12/10/2025	0.03	0.1	0.04	10.7	31	7.7	<1	81	199	41	7
Mill Creek	12/10/2025	0.03	0.1	0.03	11.1	21	7.2	<1	26	39	39	6
Norton Creek	12/10/2025	0.04	0.1	0.03	11.2	23	7.2	<1	40	61	39	4
Hurricane Creek	12/10/2025	0.06	0.1	0.02	11.4	25	7.4	<1	3	4	38	4
Cedar Creek	12/10/2025	0.05	0.2	0.04	11.5	14	7.2	<1	9	2	38	4
Glenville Creek	12/10/2025	0.03	0.1	0.01	10.2	34	6.9	6	13	26	44	5

March 2026

		0.09**	0.5**	n/a								
		0.02*	0.1*	0.02*		NC Trout Water	60**	7.1**	6.2**			
						designation standard ≥6 mg/L						
Pine Creek cove	3/18/2026	0.08	0.1	0.03	2	0.6	10.2	23	7.6	14	435	45
Lake Thalweg (center)	3/18/2026	0.06	0.0	0.01	9	2.7	11.2	20	7.1	<1	5	45
Mill Creek cove	3/18/2026	0.05	0.0	0	8	2.4	11.1	21	6.9	<1	7	46
Norton Creek cove	3/18/2026	0.05	0.1	0.01	8	2.4	11.1	20	6.7	<1	94	47
Hurricane Creek cove	3/18/2026	0.04	0.0	0.01	10	3.0	12.0	21	7.4	<1	1	44
Cedar Creek cove	3/18/2026	0.04	0.0	0.01	10	3.0	11.9	20	7.4	<1	<1	45
Glenville Creek cove	3/18/2026	0.04	0.0	0.01	10	3.0	11.1	20	7.0	<1	2	47

June 2026

		mg/L	mg/L	mg/L	mg/L	µS/cm	pH	NTU	CFU	MPN	°F	mg/L
		0.09**	0.5**	n/a	NC Trout Water	60**	7.1**	6.2**				CaCO ₃
		0.02*	0.1*	0.02*	designation standard ≥6 mg/L							
Pine Creek	6/2/2026	0.08	0.2	0.03	8.5	26	7.5	5	>3580	>2420	60	10
Mill Creek	6/2/2026	0.06	0.2	0.01	8.8	19	7.3	4	30	30	58	6
Norton Creek	6/2/2026	0.09	0.2	0.01	8.8	21	6.9	1	45	50	60	7
Hurricane Creek	6/2/2026	0.12	0.2	0.01	8.8	27	7.2	<1	16	25	61	5
Cedar Creek	6/2/2026	0.15	0.2	0.03	8.9	13	7.2	<1	44	66	61	5
Glenville Creek	6/2/2026	0.16	0.2	0.01	7.8	24	6.9	<1	74	131	65	8

Recent Preliminary Results



Friends of Lake Glenville

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	06/02/26	07/29/26
Sample Location	<i>E. coli</i> (MPN/100mL)	<i>E. coli</i> (MPN/100mL)
Pine Creek	2420	4.1
Mill Creek	96	1
Norton Creek	50	11
Hurricane Creek	25	9.7
Cedar Creek	66	5.2
Glenville Creek	131	4.1

Aug 20, 2026

<https://protectourwaters-wnc.org/swim-guide/>



WATR
WATERSHED ASSOCIATION
OF THE TUCKASEGEE RIVER

Swim Guide App



[Swim Guide - Tuckasegee](#) – an app that reports on water quality at 17 sites in the Tuckasegee River watershed.

The Swim Guide monitors E. coli levels at recreational areas, and lets you know if it's ok to swim there. Unhealthy levels of E. coli come from sources like animal waste, agricultural runoff, or sewage. Rain events create runoff and may cause unhealthy test results, but if the river is generally healthy bacterial levels revert to acceptable levels after the runoff subsides. If the water tests unhealthy to swim in- make different plans for that day.

Red: the beach's most recent test results failed to meet water quality standards, or the beach failed water quality tests 40+% of the time.

Yellow: the beach passed water quality tests 60-95% of the time.

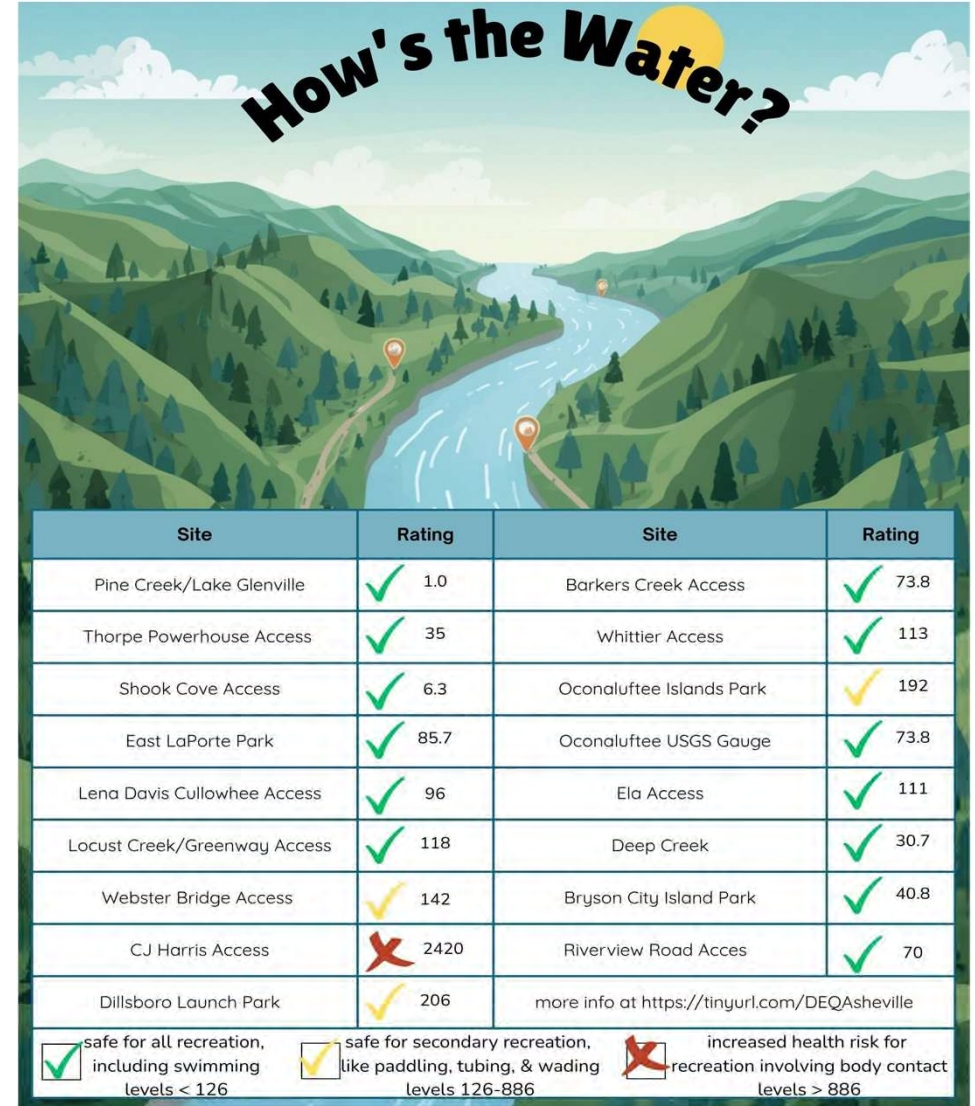
Green: the beach's most recent test results met water quality standards, or the beach passed water quality tests 95+% of the time.

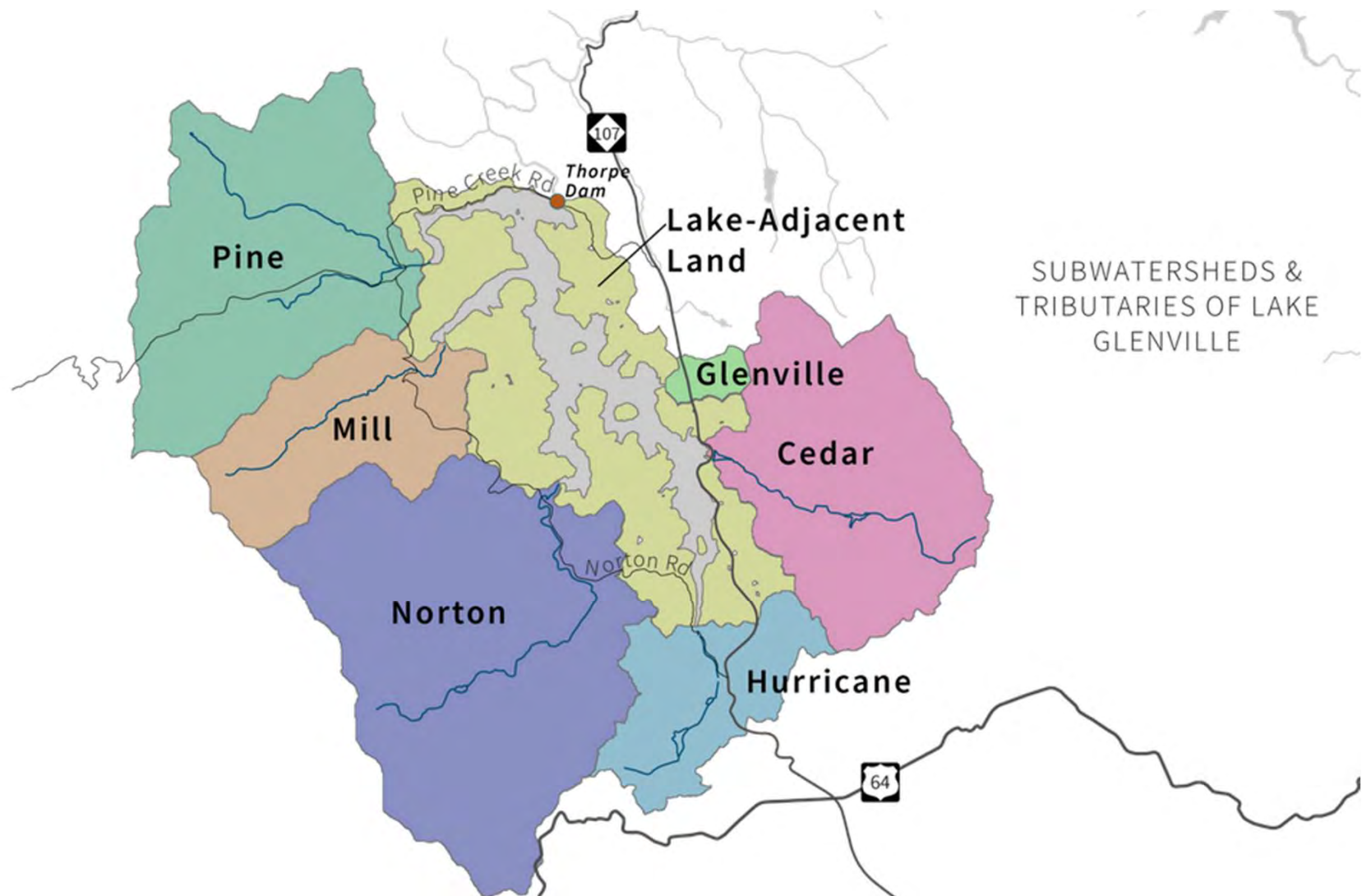


Aug 13, 2026



Aug 28, 2026





Water Quality Initiative – Stream Stewards



- Friends of Lake Glenville would like a **Stream Steward** for each **Primary Stream** flowing into the Lake:
- **Glenville, Hurricane, Norton, Pine, Mill & Cedar**
- Educate neighbors, landowners, lake users, and the public
- Walking the creek to identify sources of contamination, trash, etc...
- Working with the Director of Water Quality and Director of Watershed

Stream Stewards



Friends of Lake Glenville

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Stream	Steward
Pine Creek	tbd
Mill Creek	Brett Irwin
Norton Creek	Alissa Culbreth
Hurricane Creek	Gary Metal
Cedar Creek	tbd
Glenville Creek	tbd

Speaker Introduction – Charlie Brunt



- **Scouting & Service** — Began his Scouting journey as a first-grade Cub Scout and has remained actively involved with BSA Troop 2024 in Atlanta. Through Scouting, Charlie has participated in numerous community service projects and plays an active role in mentoring and tutoring younger Scouts
- **Eagle Scout Project** — Currently pursuing his Eagle Scout rank through a project focused on raising awareness and helping prevent Electric Shock Drowning (ESD) at lakes
- **Leadership & Character** — Inducted into the Order of the Arrow, Scouting America's national honor society, in recognition of his leadership, character, and service
- **Education & Co-Curricular Involvements** — Junior at Pace Academy in Atlanta, with a particular passion for American History and strong interests in mathematics, science, and Latin; recipient of multiple national Latin awards
- **Lake Experience** — For the past four summers, Charlie has worked at LaPrade's Marina on Lake Burton, gaining hands-on experience and developing a strong appreciation for the lake lifestyle, teamwork, and responsible lake practices
- **Today's Presentation** — Charlie will provide an overview of the history, hazards, and mitigation strategies surrounding Electric Shock Drowning (ESD) and share practical information to help promote awareness and prevention



ELECTRIC SHOCK DROWNING

September 12th, 2026

Presented to:

Friends of Lake Glenville

Presented by:

CHARLIE BRUNT

1999

2025



Michael Cunningham - 15yo



Alexandra Anderson - 13 yo



Lucas Ritz - 8yo



Hart Law Allen - 13 yo



Zachary Crays - 13 yo



Braydon Anderson - 8 yo

Kenneth Lutrick - 16 yo



Jessie Fortner Eison - 14 yo



Samantha Chipley - 19 yo

Agenda



- 1** What is Electric Shock Drowning (ESD)?
- 2** How does it happen?
- 3** Why does it happen?
- 4** How can I protect my loved ones?
- 5** Who/what else can help protect us?
- 6** Q&A

What is ESD?



Electric Shock Drowning (ESD) is the result of the passage of a typically low level AC current through the body with sufficient force to cause skeletal muscular paralysis, rendering the victim unable to help him/herself, while immersed in fresh water, with drowning the eventual result.

Higher levels of AC current can result in electrocution.

ESD has become the catch-all phrase that encompasses all in-water shock casualties and fatalities.

Effects of Current on the Human Body

Milliamps (mA)	PHYSICAL RESULT	
1 - 3	Perception	Tingling Sensation
10 -20	Cannot Let Go	Loss of Voluntary Muscle Control
18 -22	Can't Breathe	Paralysis of Diaphragm and Chest Muscles
50- 65	Heart Fibrillation	Could Become Fatal - Time is a Critical Factor
100 +	Deadly	Death Can Occur Within a Very Few Seconds
200 +	Cardiac Immobilization	The Heart Muscle is Instantly Immobilized

Mechanism of Incapacitation



THE THRESHOLD : 10 mA

It takes only 10 milliamps of AC current to cause loss of muscle control.
A 60-watt light bulb draws roughly 500 milliamps.

THE SILENT SEQUENCE

Current enters the body.
Muscles contract & cramp uncontrollably.
Victim cannot swim, wave or shout.
Silent drowning occurs.

Low Conductivity Water



- ❖ Due to low water conductivity, voltage gradients develop reaching out from the source. The human body salinity level is the same as ancient oceans. That means we are considerably more conductive than the fresh or brackish water. We become a conductor bridging the voltage gradients.
- ❖ Potentially lethal voltage gradient—two volts AC per foot.
- ❖ This voltage (2VAC/Ft.) would push approximately 12 milliamps of AC current through the body, potentially inducing muscular paralysis.

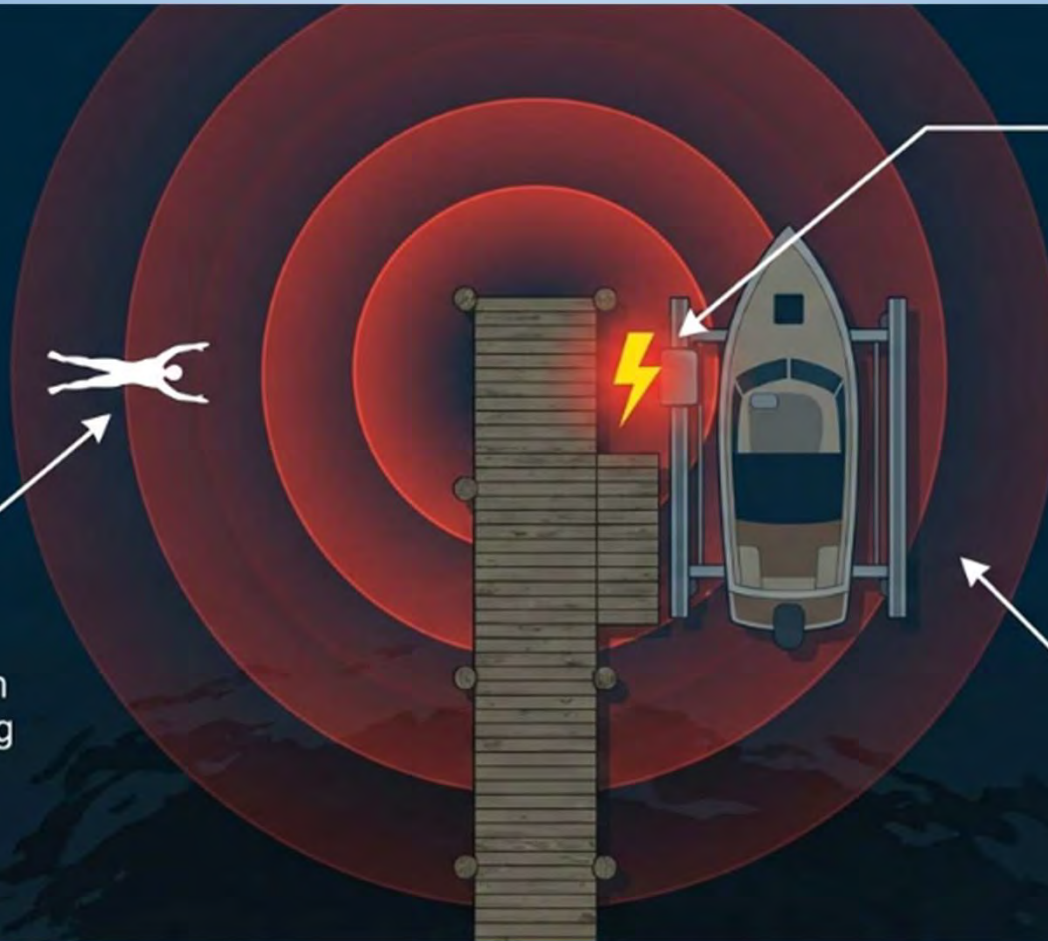
Physics of a Hot Dock



The Bridge:
The human body is more conductive than fresh water, becoming the path of least resistance.

The Fault:
Current leaks from equipment.

The Gradient:
Invisible rings of voltage potential in fresh water.



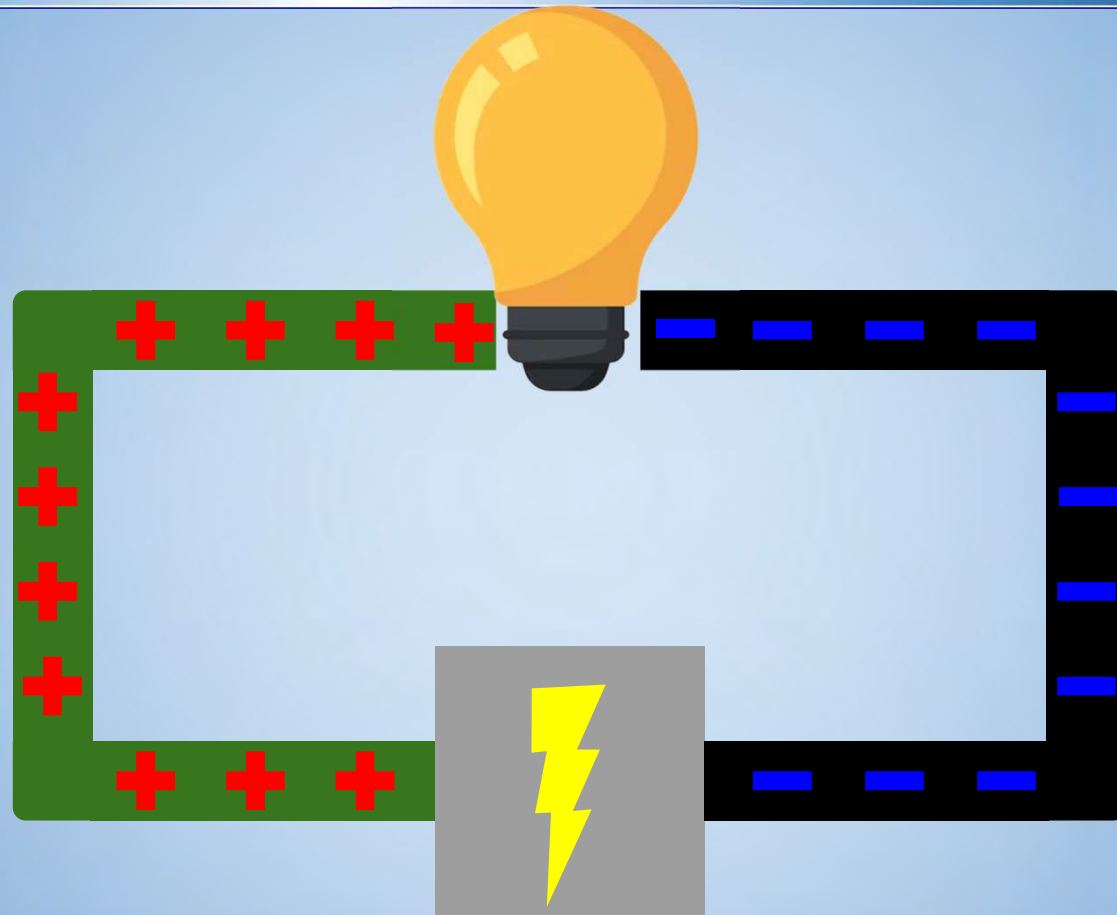
The Cause



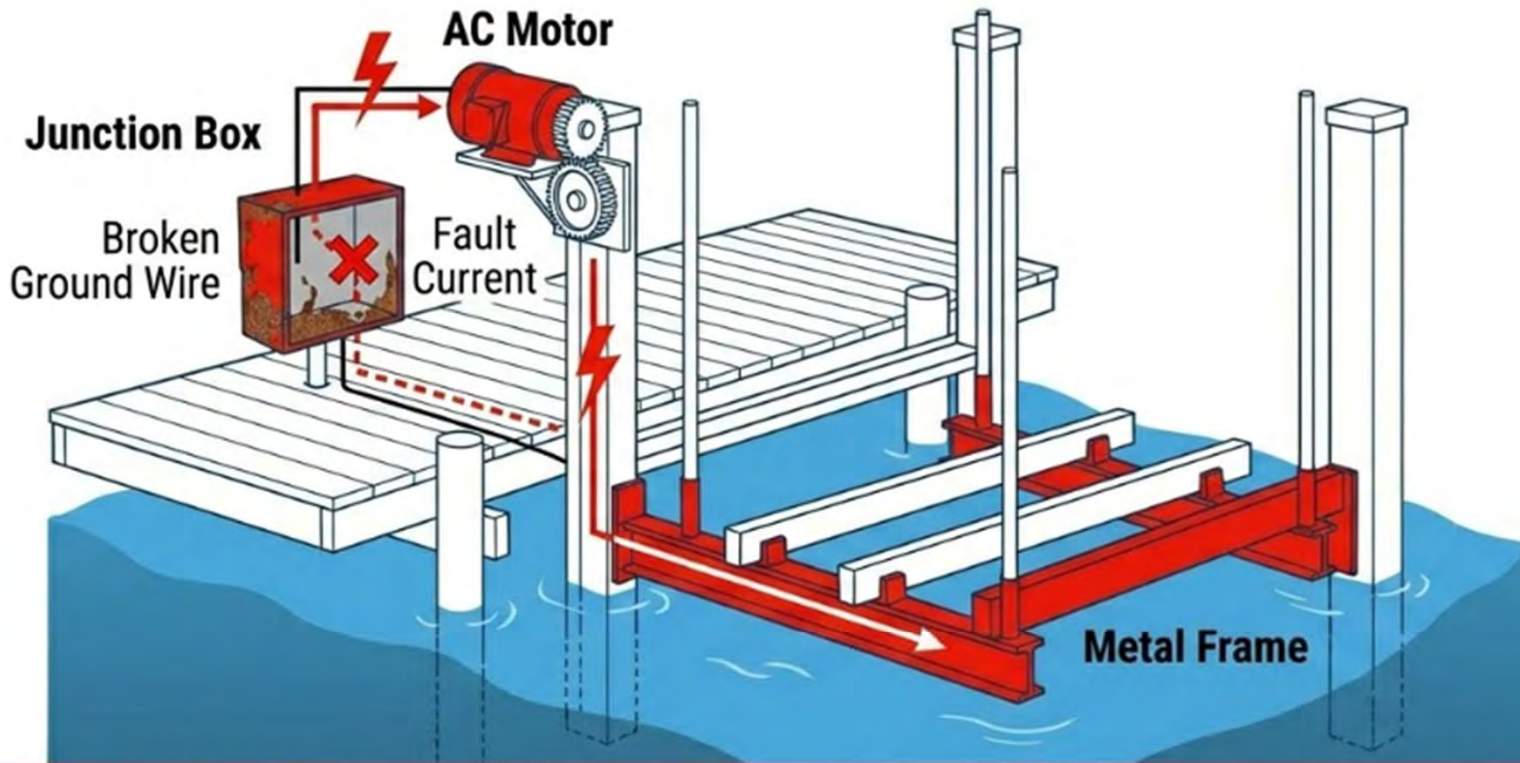
- ❖ The conditions necessary to create an in-the- water shock hazard apply to docks, boats, irrigation pumps, fountains, and any place where you have AC and freshwater.

- ❖ Two general electrical failures need to be present:
 1. an electrical fault (*i.e., a short circuit*)
 2. a lack of, or a failure in, the AC safety ground

light bulb diagram



AI - generated diagram



CASE STUDY: ESD-2017-007 (Toms River). 11-year-old victim touched an unused, energized boat lift.

CASE FILE



Location: Lake of the Ozarks, MO
Date: July 4, 2012
Victim: 13 yo Female, 8 yo Male



THE INCIDENT:

Sister and Brother were wearing life jackets and swimming between two private docks, a fault occurred on one dock and the electricity went to the grounding wires on the adjacent dock, killing both children.

THE CAUSE:

No GFCI protection on the dock where the fault occurred.

THE LESSON:

You can do everything you can to prevent ESD on your dock, but if your neighbors don't, danger remains. Electrical current can travel up to 150 feet in water.

CASE FILE



Location: Lake Lanier,
GA
Date: July 27,
2023
Victim: 24 yo Male

ESD

THE INCIDENT:

Victim was swimming at his dock when he started screaming. Another adult on the dock couldn't reach him. Neighbors passing by in a small boat jumped in to save him, but were being electrified so had to turn off the power source before they could recover the body.

THE CAUSE:

Unknown

THE LESSON:

Well-meaning Samaritans need to be careful of errant electricity in water. Make sure the electrical shut-off is clearly labelled and accessible!

CASE FILE



Location: Lake Vermillion, MN
Date: July 17, 2026
Victim: 39 yo Male

ESD

THE INCIDENT:

Man was swimming near a docked boat and when he attempted to exit the water, he was shocked when he made contact with the boat, which was plugged in to a nearby boathouse.

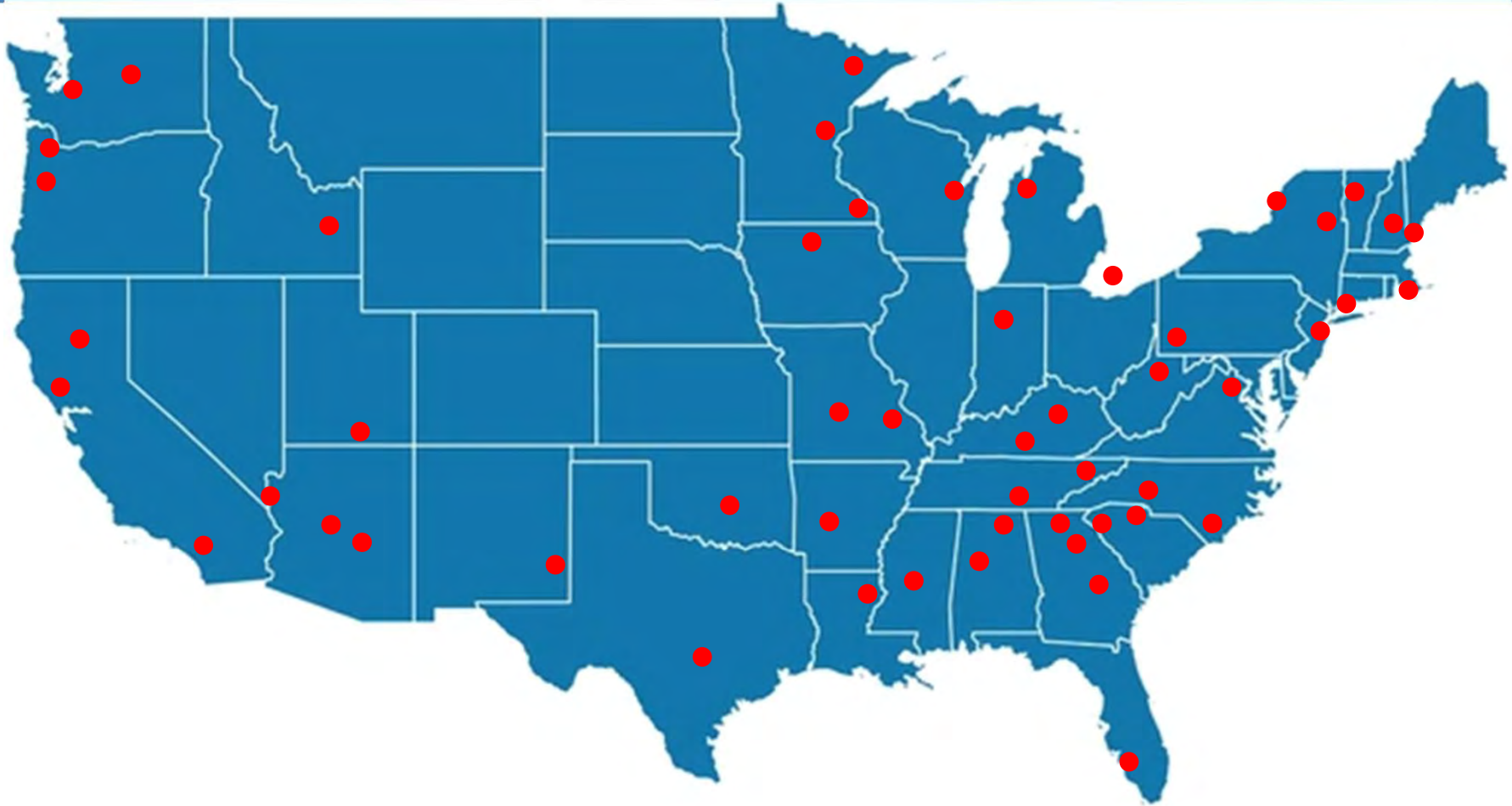
THE CAUSE:

Unknown

THE LESSON:

Never swim around a docking facility

Map of ESD Incidents

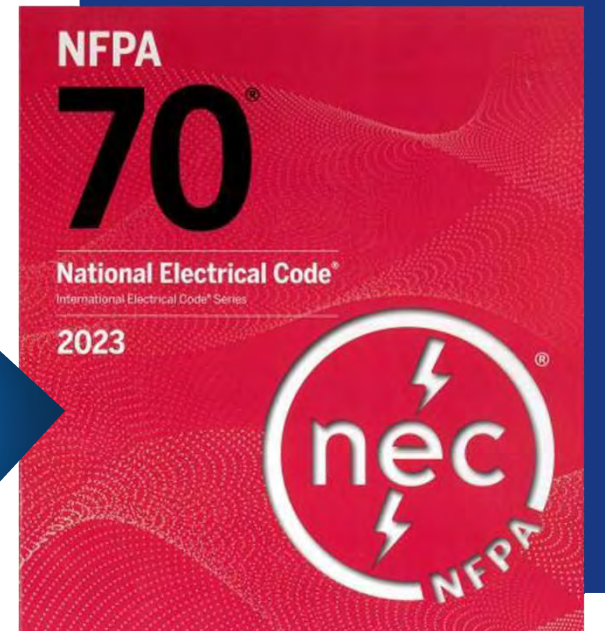


How do I know what to do?



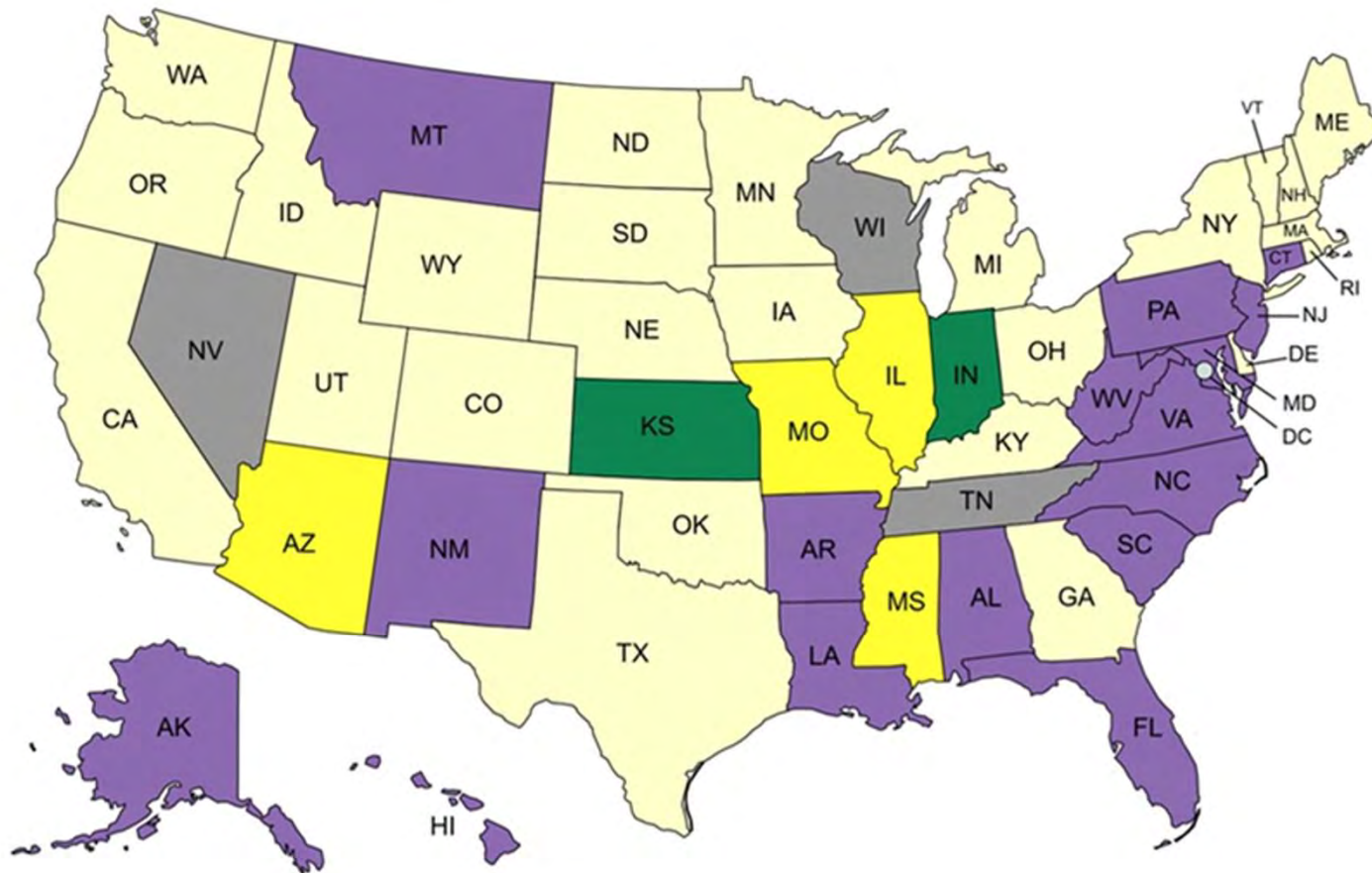
National Electric Code (NEC) !

-Adopted by most states*
-Adopted by most local counties*
-Adopted by most power companies*



Most importantly, adopted by North Carolina and signed into LAW!

Map of NEC Adoption



2023 NEC® - 25

2020 NEC® - 15

2017 NEC® - 3

2008 NEC® - 2

County/
Municipality
level use – 4

NEC Highlights



Article	Topic	Key Point(s)
555.10	Signage	Permanent safety signs shall be installed to give notice of electrical shock hazard risks to persons using or swimming near a docking facility, boatyard or marina and shall comply with all the following: ❖ be of sufficient durability to withstand the elements ❖ shall be clearly visible from all approaches to a marina, docking facility or boatyard facility ❖ shall state "WARNING - POTENTIAL SHOCK HAZARD - ELECTRICAL CURRENTS MAY BE IN THE WATER"
555.13	Bonding	includes....Bonding of non-current carrying metal parts
555.35 (B) 555.35 (C) 555.54 (A-D)	Grounding	includes....Listed GFPE, rated not more than 100 milliamperes, shall be provided for feeders installed on docking facilities and listed GFPE, rated not more than 30 milliamperes, shall be provided for receptacles.
555.36(C)	Emergency Service Disconnect	Clearly Marked and Readily Accessible A Circuit Breaker Handle Shall Not be Used for This Purpose

Dock Safety Components: Cost Exploration

Article	Cost Estimate (Materials & Labor)	Time Estimate
Dock Electrical Review and Evaluation	Hourly fee of Electrician	1 hour ?
100 mA GFCI breaker on Feeder	\$400-\$800	1- 2 hours
30mA GFCI breaker on Dock Subpanel	\$100-\$250	1-2 hours
Replace/Upgrade Conduit or Cable to Wet-Location Rated (assuming machine use and reasonable terrain)	\$1,500 per 100 Feet	1 full day ? <i>(depends on terrain, access, distance)</i>
Grounding Electrode System at Dock Sub Panel	\$300	1- 2 hours
Replace/Upgrade Receptacles and In-Use Covers (Wet Location)	\$50 per Outlet	
Permit, Inspection, Miscellaneous	\$200-\$600	

Community Cooperation



❖ Communication

- Do neighbors want to consider turning off electricity when not in use?
- Discuss agreeing to bring electrical up to current NEC code within a certain timeframe to protect everyone?

❖ Share education with people not here today

❖ Stickers for Emergency Shut Off (*free today or purchase online*)

❖ Signs (*available for free today, or available to purchase via ESDPA website*)

Electric Shock Drowning Prevention Association (ESDPA)

ESDPA Mission:

The Electric Shock Drowning Prevention Association works diligently to prevent further loss of life and injury due to electric shock drowning and other water related electrocutions.

Prevention	Technical Support
☐ Public & Industry Awareness ☐ Legislation ☐ Standards ★ NFPA ★ NEC ★ ABYC	☐ Working with ★ Law enforcement ★ First Responders ★ Investigators ★ Boating public ★ Waterfront owners ★ Marina Operators ★ Insurance Companies
Education	Grief Support
☐ Presentations ☐ Hands-On training ☐ Articles ☐ Studies	☐ Join us on Facebook ☐ Get into contact with other families who have lost loved ones to ESD





Electric Shock Drowning Prevention Association

Certificate of Appreciation

awarded to

Friends of lake Glenville

Thank you for partnering with us to learn about Electric Shock Drowning.

We are grateful for your support of our mission.

August 18, 2026

KEVIN RITZ

Kevin Ritz • Co-Founder, ESDPA

Kevin Cunningham

Kevin Cunningham • Board President,
ESDPA

Elise Lutrick

Elise Lutrick • Co-Founder,
ESDPA



Thank you for coming!

Charlie Brunt

charliegbrunt@icloud.com · (678) 818-8817



Q & A

Acknowledgements



A sincere thank you to the following individuals and organizations who have generously and tirelessly shared their expertise and knowledge:

- ❖ **Kevin Ritz, ESDPA Founder & Board Member, Father of Lucas Ritz**
- ❖ **Electric Shock Drowning Prevention Association**

Disclaimer:

Some of the graphics included are AI-generated images
Some graphics are web-sourced stock images

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FEDERAL ENERGY REGULATORY COMMISSION
Office of Energy Projects
Division of Dam Safety and Inspections – Atlanta Regional Office

September 11, 2026

In reply refer to:
P-2686-01 Tuckasegee
P-2686-02 Thorpe

Mr. Brad Keaton, P.E., Chief Dam Safety Engineer
Duke Energy – Hydroelectric Fleet
Brad.Keaton@duke-energy.com

Subject: 2026 Annual Dam Safety Inspection Follow-up Tuckasegee and Thorpe

Dear Mr. Keaton:

On September 8-9, 2026, Mr. Jeremy Varner inspected Tuckasegee Dam and Thorpe Dam of the West Fork Project No. 2686. We appreciate the courtesy extended by your staff during the inspection. Mr. Varner found no problems that would present an immediate concern for dam safety or continued operation, and there are no follow-up items. Please note that if we identify any additional items requiring follow-up action during preparation of our Dam Safety Inspection Report, we will contact you by phone and/or email and subsequently issue another letter.

We appreciate your continued cooperation in ensuring the safety of your project. If you have any questions, please contact Mr. Jeremy Varner of this office at (678) 245-3062 or by email at jeremy.varner@ferc.gov.

Sincerely,
WILLIAM BROWN
Digitally signed by
WILLIAM BROWN
Date: 2026.09.11
12:39:30 -04'00'
William J. Brown, P.E.
Regional Engineer



Friends of Lake Glenville

Preserve. Protect. Educate.

- Dam Inspection – Sept. 8-9th
- FERC Approval – Sept. 11th
- No Drawdown required



WATER STRATEGY, HYDRO LICENSING
AND LAKE SERVICES

Duke Energy Corporation
Regulated and Renewable Energy
525 South Tryon Street / DEP-35B
Charlotte, NC 28202



Friends of Lake Glenville

Preserve. Protect. Educate.

September 9, 2026

The Honorable Debbie-Anne Reese, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

RE: Duke Energy Carolinas, LLC
East Fork Hydroelectric Project No. P-2698
West Fork Hydroelectric Project No. P-2686
Regional Drought Conditions – Low Inflow Protocol – Declaration of Stage 3

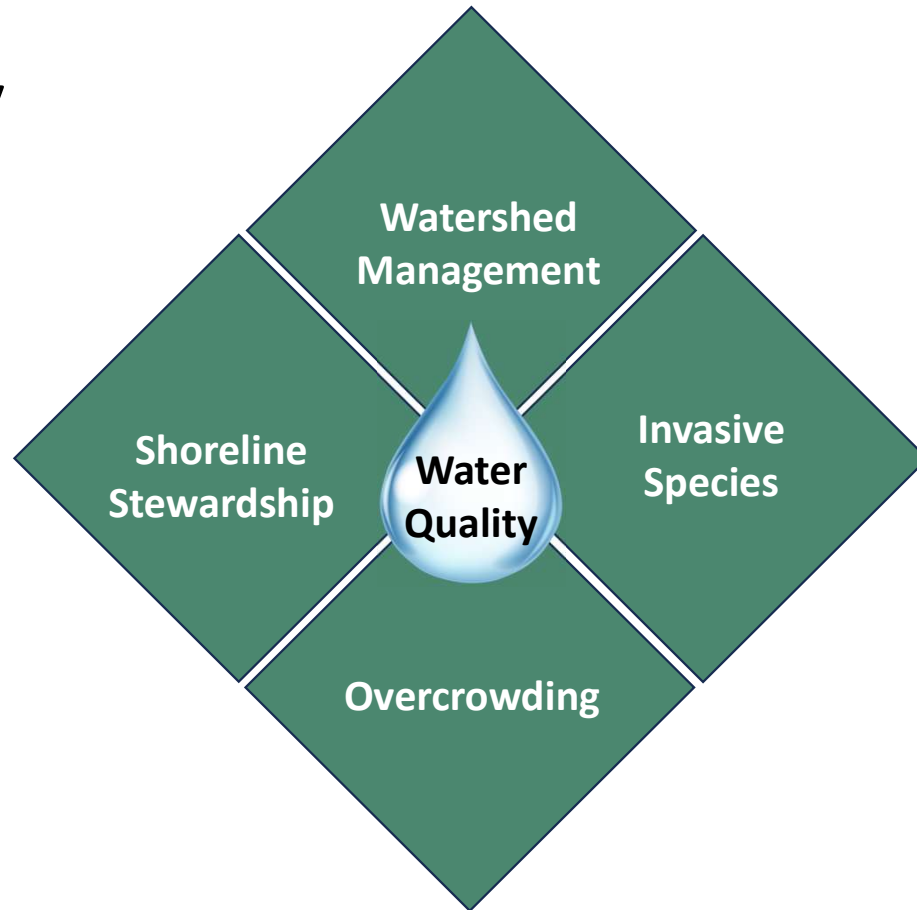
Dear Secretary Reese:

Duke Energy Carolinas, LLC (Duke Energy) is providing the Federal Energy Regulatory Commission (FERC or Commission), and other governmental agencies of the declaration of the Low Inflow Protocol (LIP) Stage 3 Conditions on September 9, 2026, for the East Fork Hydroelectric Project FERC No. P-2698 and West Fork Hydroelectric Project No. P-2686 (Project). LIP Stage 1 and 2 were previously declared on July 16 and 27, 2026, respectively.

Drought conditions in the Tuckasegee River Basin have resulted in reservoir levels declining to levels that support implementation of LIP Stage 3. Per the LIP Stage 3 procedures, Duke Energy will follow the protocol set forth below for the East Fork and West Fork Projects regarding adjustments to generation amounts, minimum flow releases, releases for recreation and minimum reservoir elevations and will make the adjustments set forth below on a weekly basis so as to equitably allocate the impacts of reduced water availability. These adjustments are outlined in Table 1 included below.

- LIP (Low Inflow Protocol) Stg 3
- Stg 1&2 – July 16 & 26
- 35% Reduction in Outflow
- 50% Reduction in Recreational Releases

Our Mission: Water Quality



An aerial photograph of a large, winding lake surrounded by dense green forests and mountains in the background. The lake has several small islands and peninsulas. In the foreground, a boat is visible on the water, leaving a white wake. The text "Thank You!" is overlaid in the center of the image.

Thank You!

Social Activity - Find that Board Member



- Brewery Owner
- Director of Medical Education
- Certified Wine Judge
- Rotary Club President
- Soccer Coach - Jackson County Soccer Assn
- Floodplain Manager
- Lake Glenville Enthusiast since 6 Years Old