

Protecting Our Shorelines

Tips for Stewarding Our Water Quality



Duke Energy encourages lake residents, business owners, contractors, landscapers, builders and others to conduct activities around the lake responsibly. This document should be used as a guide to better understand how to protect the shoreline and whom to contact prior to initiating any work around the lake. This information does not replace Duke Energy's Shoreline Management Guidelines (SMG), the Shoreline Management Plan (SMP) or state and local regulations. The SMG and SMP will be used by Duke Energy Lake Services to evaluate any requests for activities within the project boundary.

Duke Energy operates the Catawba-Wateree Hydroelectric Project with a license granted from the Federal Energy Regulatory Commission (FERC). FERC is responsible for issuing licenses for the construction, operation and maintenance of lakes and hydroelectric facilities not owned or operated by a federal agency.

The FERC gives Duke Energy the authority and responsibility to manage "project" and "non-project" uses within the project boundary of the lake. Project uses include hydroelectric facilities operation, public recreation access and certain wildlife enhancements. Non-project uses include activities such as piers, docks, marinas, excavation and shoreline stabilization, and conveyances such as line crossings.

The "project boundary" is a geographic boundary (generally represented on Catawba River lakes by "100 feet" or the "full pond" elevation around the lake), which outlines the hydroelectric project property. To identify the project boundary line on your property, Duke Energy recommends referencing the registered survey of your property. Project boundary questions can also be directed to Duke Energy's Lake Services team by calling 1-800-443-5193.



Through the Shoreline Management Guidelines and Shoreline Management Plan, Duke Energy allows property owners and others to **apply for a permit** for certain activities within the project boundary. These activities include but are not limited to:

- Multi-slip marina facility construction and operation
- Residential facilities – private access from a lot adjacent to the lake boundary
- Private facilities (i.e., piers) construction
- Shoreline stabilization – rip-rap, seawalls, bio-engineering, etc.
- Excavation – removing material from within the lake boundary
- Conveyances – bridge crossings, water intakes, utility line crossings, wastewater outfalls, etc.
- Miscellaneous lake uses – fish attractors, water ski courses, etc.

The following activities within the project boundary require **prior written approval** from Duke Energy:

- Beginning any shoreline stabilization activity
- Clearing or cutting trees, shrubs or other vegetation within the project boundary
- Beginning construction or rebuilding piers or any other structure
- Planting or introducing vegetation
- All excavation

The following activities are **not allowed** within the project boundary of Duke Energy lakes. The list is not all-inclusive but would include any use that violates an applicable federal, state or local law or regulation:

- Planting any plant not native to North Carolina and/or South Carolina
- Septic tanks and associated drain fields, storm water inlet pipes and settling basins
- Littering or dumping of trash and debris (including burnt leaves or brush)
- Washing (except with biodegradable detergents), painting or resurfacing of vehicles or watercraft
- Any part of a permanent dwelling including driveways, decks, etc.
- Swimming pools
- Camping
- Abandonment of personal property including, but not limited to vehicles, watercraft etc.
- Pens, kennels or other facilities for the housing or care of pets
- Fences, except to confine live stock watering to a small area of the shoreline
- Net pens and aquaculture operations
- Structures designed to submerge, except for ski slalom and boating courses and boat hoists
- Wells, rope swings, cables, etc.

Duke Energy Lake Services will issue **stop work** directives for any violations detected within the project boundary. Consequences for those violations include one or more of the following:

- Unwanted construction delays
- Loss of security deposits
- Suspension or cancellation of approved applications
- Increases in fees
- Modifications or removal of non-complying structures and restoration of disturbed area at the owner's expense
- Loss of any consideration for future lake use applications

Violations of state and local rules and regulations could also result in additional consequences from those agencies.

Prior to conducting any activity within the project boundary, you should notify Duke Energy Lake Services at 1-800-443-5193.

Protect the Riparian Zone

The Riparian Zone is the vegetated area adjacent to the lake. The Riparian Zone consists of four zones: submersed (underwater), emergent (usually underwater), shrub (underwater only part of the time) and terrace (rarely underwater). The Riparian Zone provides critical habitat to fish and wildlife, helps reduce erosion of soils into the water and serves as a filter for runoff of fertilizers and other chemicals. Several counties and the state of North Carolina have a buffer ordinance that regulates activities outside the project boundary that may impact activities an individual may desire to conduct on their property. Only through direct written authorization does Duke Energy allow vegetation to be removed from within the project boundary.

Nature has a keen sense of what is needed to stabilize the shoreline and protect buffered areas.

The best and most cost effective ways to protect the buffer and riparian zone along your property are also the most natural, aesthetically pleasing and environmentally sensitive. Here are a few techniques:

Bio-engineering

- Live stakes are live, rooted vegetation planted into the shoreline.
- Live fascines are large bundles of branches bound and used to fill shallow trenches and planted with native vegetation.
- Brushmattresses are a combination of live stakes, live fascines and branch cuttings, which provide immediate protection against erosion.
- Crib walls are box-like interlocking arrangements of untreated logs filled with suitable growing soils and layers of live branch cuttings rooted inside the structure.
- Reed clumps are rooted divisions of reeds wrapped in geo-textile fabric and staked down in trenches at the water's edge.
- Coconut fiber rolls and hay bales are used to break water and reduce the energy and speed of the water hitting the shoreline.

Vegetation

The right vegetation for your property will depend on a number of factors including, but not limited to:

- Lake level fluctuations (Visit www.duke-energy.com or call the Lake Information Line at 1-800-829-LAKE.)
- Slope of the shoreline
- Vulnerability to wave energy
- Soil types

Hard Structures

Rip-rap and seawalls also can be used to protect the shoreline from waves and wind. Hard structures can be a good alternative where there is:

- Wave action, either from boats or wind
- Unsuitable soils for plant growth
- Inadequate sunlight to stimulate plant growth
- A bank height too great to re-grade to an acceptable slope

For More Information

Before beginning any work along the water's edge on your property, contact your local county planning office or appropriate state agencies to better understand buffer regulations. Be sure to also contact Duke Energy Lake Services to determine if written approval is required for activities within the project boundary.

Duke Energy

Lake Use Permitting	800.443.5193
Lake Information Line	800.829.LAKE
Mosquito Management	704.382.0160

NC Division of Water Quality 704.663.1699

NC Division of Land Resources 704.663.1699

SC Department of Health & Environmental Control

Columbia	803.898.4300
Catawba EQC	803.285.7461
Central Midland EQC	803.896.0620
Wateree EQC	803.778.6548

Burke County 828.439.4362

McDowell County 828.652.7121

Caldwell County 828.426.8585

Alexander County 828.632.1000

Catawba County 828.465.8399

Iredell County 704.878.3113

Lincoln County 704.736.8440

Gaston County 704.866.3960

Mecklenburg County

Environmental Protection	704.336.5500
Engineering and Building	704.336.3720

York County 704.909.7200

Lancaster County 803.285.1565

Chester County 803.581.0942

Fairfield County 803.712.6596

Kershaw County 803.425.7233

Lake Norman Marine Commission 704.564.6333

Mountain Island Marine Commission 704.348.2731

Lake Wylie Marine Commission 704.348.2731

