

## **Appendix A**

### **Guidelines for the Use of Shoreline Lands at Lake Tillery and Blewett Falls Lake**

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## **1.0 Purpose**

These guidelines are intended to assist property owners adjacent to Lake Tillery and Blewett Falls Lake in understanding Duke Energy policies related to non-Project uses of Duke Energy shoreline lands and waters. The Tillery and Blewett Falls Hydroelectric Developments (collectively referred to as the Yadkin-Pee Dee Project, or Project) generate electricity under a license granted by the Federal Energy Regulatory Commission (FERC License #2206). FERC allows the license holder to permit non-Project uses of Project lands around the shorelines of their reservoirs.

Duke Energy established a shoreline leasing program to ensure the protection of public recreation opportunities, aesthetic resources, environmental features, and power production capability at the Project. Duke Energy, as Project Licensee (Licensee), reserves the right to determine the type of facilities in any development or commercial entity. In deciding whether to grant permission, Duke Energy will attempt to balance the requests of the lessees and applicants with the environmental and aesthetic values, recreational use, public good and other project purposes while meeting regulatory requirements. Each proposed activity will be evaluated according to these guidelines as interpreted by the Licensee.

Some areas around Lake Tillery and all of the shoreline around Blewett Falls Lake are not available for leasing. Further, private ownership of a lot adjacent to Lake Tillery or Blewett Falls Lake does not guarantee that a lease will be granted for use of Duke Energy's shoreline property. Shoreline leases and permitted activities are a privilege, not a right.

## **2.0 Goal**

The Licensee's goal with these guidelines is to provide a mechanism to assist in the protection and enhancement of the environmental, scenic, cultural, and recreational values provided by Lake Tillery and Blewett Falls and Project lands, while ensuring the continued safe and reliable production of hydroelectric power at the Project and compliance with regulatory requirements.

## **3.0 General Guidelines**

- 3.1 These guidelines are not intended to be all-inclusive.
- 3.2 These guidelines are subject to revision at the Licensee's discretion.
- 3.3 Use of leased property will be evaluated on a case-by-case basis.
- 3.4 The Licensee will not lease or permit activities at Blewett Falls Lake; however, grandfathered structures may be maintained so long as they are managed consistent with these guidelines. Adjoining property owners at Blewett Falls Lake are allowed to install shoreline stabilization in areas deemed necessary for erosion control by Duke Energy and the resource agencies with written approval.

- 3.5 Any property owner who wishes to construct facilities or engage in any land-disturbing activity (including altering or impacting vegetation) on leased property at Lake Tillery and grandfathered structures at Blewett Falls Lake must apply for a permit.
- 3.6 Any improvements on leased property, including the cutting of vegetation, dredging and filling, alteration of shoreline features, or construction of any structure without specific written authorization from the Licensee is prohibited.
- 3.7 All activities must comply with applicable building codes and other regulatory requirements.
- 3.8 Lessees within identified Impact Minimization Zones (IMZ) must comply with the lease guidelines, including the IMZ Guidelines located in Attachment C, which contain additional requirements.
- 3.9 For private facilities, a current, paid-in-full, compliant residential lease must cover the leased property.
- 3.10 Construction of private facilities will be permitted only if the associated area owned by the lessee has been improved by the construction of a single-family or multi-unit dwelling and at least a portion of the lot is within 200 feet of the water's edge at lake elevation 278.2 North American Vertical Datum 1929 (NAVD29) for Lake Tillery. No permits will be issued for vacant lots, undeveloped sites, or lots with less than 100-feet of linear shoreline with the exception of pre-existing situations where leases were granted prior to the "lot improvement" requirement.
- 3.11 For private facilities, the allowable combined square footage of all water-dependent structures is dependent upon the classification of the impacted shoreline and may be limited by the length of leased shoreline but shall not exceed 1,200 square feet. For shoreline within an IMZ, the maximum allowed square footage over water is 800 square feet (Attachment C identifies other restrictions in IMZs).
- 3.12 All land disturbance and construction activities and the placement of water-dependent facilities should be done in such a manner as to avoid, if possible, and minimize impacts to all leased land, including aquatic and terrestrial habitats, especially water willow beds greater than or equal to 100 square feet, forested shorelines, and submerged woody debris.
- 3.13 On some subdivision maps on Lake Tillery, the Project property associated with a lot is indicated by dotted or solid lines (allocation lines) that extend from the lot across Project lands to or into the water of Lake Tillery. On subdivision maps without allocation lines, the lot sidelines should be extended across Project lands into the reservoir. All facilities located on Project property associated with a log should be within the confines of these lines (either on land or over water). Placement of new structures or additions/modifications to existing structures cannot be within 5 feet of the allocation lines. The Licensee reserves the right to determine the location of facilities between the allocation lines. Any deviation from these guidelines should only occur when a recorded

encroachment agreement between the affected parties permits such an occurrence. If two or more parties are unable to agree on the Project land associated with their lot, the Licensee has the sole right to take those actions necessary to resolve the disagreement.

- 3.14 When a new lease is granted or a lease is transferred, a lease application fee is required. There is also a yearly rental fee based on lot frontage on the waterward side of land along the Licensee's property boundary. The minimum lease fee is for frontage of 100 feet or less along the company's Project Boundary. If the frontage is greater than 100 feet, there is an additional fee per 10 feet or portion thereof.
- 3.15 All activities within the Project Boundary are subject to the license and other regulations and orders as dictated by FERC.
- 3.16 The Licensee reserves the right for its representatives to enter any and all leased areas without notice or constraint.
- 3.17 Property owners must receive written approval from the Licensee before beginning any improvements within the leased area. This requirement applies to all facilities on the land or over the water. Written approval must also be obtained from the Licensee prior to beginning activities such as, but not limited to, dredging and filling or vegetation removal and/or treatment in the water or on the Licensee's land. Failure to get such written approval from the Licensee prior to conducting unauthorized activities on leased property could result in a fine, legal action by the Licensee or affected regulatory agencies, and cancellation of the lease.

## **4.0 The Application Process**

The application process begins by visiting the Licensee's website or by contacting a representative (see Attachment A – Contact Information). There are two types of applications.

### **4.1 Lease Application Process**

The lease application process begins by visiting the Licensee's website to print a lease application form or contacting the Licensee to request a lease application form. This application must be completed to obtain a lease for access to Licensee's property between Lake Tillery and the adjoining property. The lease is required prior to any activities taking place on the Licensee's property and over the water. Completed lease application forms and other required information should be submitted to the address listed in Attachment A. Allow a minimum of 30 business days for a reply (Blewett Falls Lake does not have a shoreline leasing program).

### **4.2 Construction Application Process**

The facility permit application process begins by visiting the Duke Energy website to print a facility application form or contacting Duke Energy to request a facility application form. Duke Energy will not accept a facility application without a valid shoreline lease on file.

Completed Construction Application and other required items should be submitted to the address listed on the application. A Duke Energy representative may meet with the applicant to review relevant drawings and discuss requirements and guidelines.

Once the applicant has satisfactorily provided the required items to the Duke Energy representative, the applicant must obtain a completed Permit Letter from Duke Energy. The Permit Letter is required to obtain a building permit from the county (Section 4.2 is only permissible at Blewett Falls Lake for grandfathered structures or shoreline stabilization deemed necessary by the Licensee).

**Note:** The Licensee reserves the right to disapprove, reject, or modify any proposed construction plans if the proposed construction is deemed to be unsafe for the general public, doesn't exhibit sound construction methods, or is determined to adversely impact environmental aquatic or terrestrial habitats. In addition, the Licensee reserves the right to reject the plan if the Licensee determines the planned appearance of the structure would not be compatible with the Licensee's stated goal of protecting aesthetic values of the Tillery or Blewett Falls Project, if the structure could adversely impact the surrounding property value, or if the structure does not comply with applicable regulations.

The Licensee reserves the right to make periodic inspections of permitted activities or facilities during and after construction to ensure compliance with permit conditions. After construction is completed, the permit holder must notify Duke Energy, and Duke Energy will make the final inspection to verify compliance with the Permit Letter terms and conditions.

## **5.0 Guidelines Regarding Soil Disturbance**

No heavy equipment or soil disturbance is allowed within the Project without written permission from Duke Energy. Proper installation of silt fences for erosion control is required to prevent runoff and sedimentation impacts to waterways. Dredging may occur only when the necessary local, state, federal and Duke Energy approvals are secured. Due to fish spawning and peak recreational activity, dredging is prohibited from March 1 through September 15.

## **6.0 Guidelines Regarding Vegetation**

Vegetation is important to the aesthetic qualities and environmental health of Lake Tillery and Blewett Falls Lake. In addition to enhancing the natural beauty of the lake, terrestrial and aquatic vegetation helps prevent water pollution and provides habitat for birds, mammals, and fish. These guidelines are intended to provide lessees and adjoining property owners the opportunity to use the Licensee's property appropriately, while protecting the natural environmental characteristics and vegetated shoreline.

### **6.1 Vegetative Buffer**

In addition to the primary purpose of electric power generation, Lake Tillery and Blewett Falls Lake are also used as a source of public water for regional residents. North Carolina water quality regulations applicable to Lake Tillery and Blewett Falls Lake require a vegetative buffer zone be maintained adjacent to the shoreline to provide protection from erosion and runoff

pollution. State regulations require a buffer zone, which extends a minimum of 30 horizontal feet from the shoreline as measured from the water's edge at Normal Full Pond Elevation. In addition, Lake Tillery and Blewett Falls Lake are classified as Water Supply-IV reservoirs; land extending ½ mile from the edge of the Normal Full Pond Elevation is further classified as Critical Area with more stringent allowable development activities than the rest of the watershed. Therefore, the following guidelines regarding vegetation and land disturbance apply:

6.1-1 No ground-disturbing activities of Project lands are permitted without Duke Energy approval. Unless written permission is secured from Duke Energy, do not remove leaf litter, disturb root mats, or use any equipment other than hand tools in this area.

6.1-2 The Licensee requires at least 75 percent of the leased area remain completely undisturbed. This means the cutting or removal of vegetation (except under special permit from Duke Energy) will not be allowed on 75 percent of the leased area, except for pruning up to a height of 10 feet per accepted arboricultural standards. The intent is to provide lessees the opportunity to use the Licensee's Project property appropriately, while protecting the natural environmental characteristics and vegetated shoreline of Lake Tillery.

6.1-3 Within the 25 percent of the leased area where disturbance is allowed and consistent with state regulations, limited clearing for visual and physical access to the water is permitted, but large trees and shrubs must be retained. No tree larger than 3 inches in diameter as measured at a height of 4.5 feet above the ground shall be removed unless the tree is dead, dying, or poses a safety hazard. Written approval is required prior to the removal of trees.

6.1-4 The Licensee prohibits removal or pruning of vegetation on Project land at Blewett Falls Lake without prior written consent from Duke Energy.

6.1-5 The Licensee reserves the right to plant or require the planting of native vegetative materials within the leased area. The Licensee may require, at the leaseholder's/adjoining property owner's expense, the removal of unauthorized improvements and restoration of Project land to a natural state.

6.1-6 The Licensee prohibits the removal of existing submerged woody debris with a diameter of 10 inches or greater at the base of the trunk from the lake, unless such debris constitutes a navigational or public safety hazard. Duke Energy must approve removal of such woody debris from the lake. Woody debris that falls into the lake as a result of storms or natural occurrence should be left in place, unless such debris constitutes a navigational or public safety hazard. Woody debris that has broken loose from submerged trunks and is floating in such a manner that constitutes a navigational or safety hazard may be removed from the lake. In the placement and construction of new docks, these facilities should be placed to minimize removal of woody debris. Lessees may be required to mitigate at a 2:1 ratio for removal of woody debris from the lake in nearby areas, depending upon the type and age of submerged woody debris. Such mitigation may include, but is not limited to, the design and construction of a fish-friendly pier.

6.1-7 The Licensee requires landscaping with native plants. For more information, see Attachment B – Plant Lists, contact Duke Energy, or contact your local county Extension Agent.

6.1-8 The use of non-native, invasive species for planting is prohibited (See Attachment B – Plant Lists, for prohibited plants).

## 6.2 Pesticides, Herbicides and Fertilizers

The use of pesticides, herbicides, and fertilizers by anyone other than the Licensee’s personnel or authorized applicators is prohibited within the Project Boundary.

## 6.3 Aquatic Vegetation

Aquatic vegetation is beneficial for a healthy lake ecosystem and will be protected. It is important for fish cover, spawning, feeding, rest and rearing areas and provides food for other animals, such as waterfowl and wading birds. However, some noxious and non-native aquatic weeds (for example, hydrilla) in the Licensee’s lakes, reservoirs and impoundments have the potential to negatively impact power production operations, public recreation, water quality, and/or the aquatic populations of these water bodies. Also, they may threaten the water resources used by the public.

Water willow beds and other native, emergent aquatic vegetation are of high aquatic habitat value in Lake Tillery and Blewett Falls Lake and any type of vegetation control method on this vegetation by the general public is expressly prohibited. Any willful non-permitted acts of removal of water willow or vegetation within areas classified as Resource Protection and Management will be penalized and require mitigation. Duke Energy may authorize removal of water willow in areas where there is an expansion or encroachment of a bed into an existing navigational channel or for shoreline stabilization.

Duke Energy will require mitigation by the lessee/adjoining property owner if construction activities significantly impact water willow beds. Such mitigation may include, but is not necessarily limited to, construction of a fish-friendly pier or funding the establishment of a water willow bed in another area of the lake, preferably an adjacent or nearby area. Significant impact is defined as a disturbance within the lot allocation area that impacts more than 25 percent of the surface area of an existing water willow bed that is equal to or greater than 100 square feet. The measure of the impacted area will be determined by the amount of water willow covered by any structure, except walkways constructed under IMZ guidelines.

In order to reduce or eliminate the impact and threat of noxious aquatic weeds in the Licensee’s lakes, reservoirs and impoundments, it is the policy of the Licensee to implement or recommend, when appropriate, the best available technology for weed control when any of the above-mentioned impacts are demonstrated. These measures may include, but are not necessarily limited to, accepted chemical, biological and physical control techniques. Control measures may be implemented only after consideration of known factors and after consultation with appropriate state agencies having jurisdiction. In warranted cases, Duke Energy may provide written permission for noxious and non-noxious aquatic weed control to a lessee, provided the lessee uses an approved, licensed aquatic pesticide applicator and obtains written approval from the appropriate state (i.e., N.C. Wildlife Resource Commission) and federal resource agencies. The lessee and applicator will be responsible for any impacts to the aquatic environment that occurs as a result of negligence, improper application or unexpected consequences.

Lessees/adjoining property owners may not use aquatic herbicides, stock grass carp, or use other biological or mechanical control. Only licensed herbicide applicators will be allowed to apply herbicides to public waters and, under circumstances of written permission from Duke Energy, the lessee/adjoining property owner and applicator must consult with appropriate resource agencies prior to application. Additional restrictions regarding the use of herbicides by licensed applicators may be applicable to drinking water supply reservoirs, such as Lake Tillery and Blewett Falls Lake.

#### 6.4 Bald Eagle and Blue Heron Nesting and Perch Sites

Management of the Project lands for bald eagles and blue heron will be consistent with the requirements of the Bald Eagle Protection Act and the Migratory Bird Treaty Act. To accomplish this, the Licensee follows the recommendations of the U.S. Fish & Wildlife Service's "Habitat Management Guidelines for the Bald Eagle in the Southeast Region" (3rd Revision, January 1987) and the National Bald Eagle Management Guidelines<sup>1</sup>.

Bald eagles and blue herons nest and roost in large trees, primarily pine trees. Leaving these larger trees will benefit populations of both species and ensure sufficient locations for these species to nest, roost and perch around the edge of the lake. Therefore, no trees greater than 3 inches in diameter as measured at the height of 4.5 feet above the ground shall be removed from Project land unless the tree poses a public safety hazard or for completion of shoreline stabilization. Written approval from Duke Energy is required prior to the removal of any trees.

Prior to issuing any permit or authorizing construction activities (e.g., construction, alteration of shorelines or wetlands, installation or expansion of docks and marinas) within the Project Boundary, Duke Energy will complete a site assessment for bald eagle nests in the vicinity of the proposed activity. To ensure the existing nests are protected, Duke Energy will maintain a 200 meter (660ft.) line-of-sight distance and a 100 meter (330 ft.) out-of-sight distance around active bald eagle nests. No new development will be allowed within these buffer zones consistent with the USFWS National Bald Eagle Management Guidelines (2007).

#### 6.5 Danger Tree Removal Process

Prior to the removal of a tree larger than three inches in diameter as measured at the height of 4.5 feet above ground, permission must be granted by Duke Energy. To request permission to remove a tree, applicants must provide the following information to Duke Energy (review section 6.1 for compliance):

- A written request (email is acceptable), stating the reason for removal
- Drawing of lease area showing property lines, allocation lines, permitted structures, shoreline, and location of tree/s to be removed

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<sup>1</sup> National Bald Eagle Management Guidelines, U.S. Fish & Wildlife Service, May 2007.

- Pictures of tree/s to be removed
- A letter signed by a Certified Arborist stating the reason the tree should be removed (not required but will expedite the process)

Upon receipt of this information, a Duke Energy may visit the site to determine the extent of damage to the tree. If it is determined the tree can be removed, a letter will be mailed from Duke Energy granting permission to remove the requested tree(s).

Trees removed from Project lands must be replaced with the same number of trees native to the area (refer to Attachment B – Plant Lists).

## **7.0 Guidelines Regarding Shoreline Stabilization**

Seawalls are sometimes used to prevent shoreline erosion. Duke Energy prefers the use of native shoreline vegetation to control erosion. For appropriate indigenous species, contact your local county extension agent. Riprap is preferred to stabilize eroding shoreline, as compared to seawalls, because the placement of riprap along a severely eroded shoreline can enhance fish habitat. Conversely, seawalls offer very little in terms of aquatic habitat value. The following guidelines apply for the construction of seawalls:

- 7.1 Land-disturbing activities within the Project Boundary, including the shoreline, require prior written approval. Appropriate measures are required to prevent erosion.
- 7.2 Facilities approval forms are required for the repair, maintenance, or construction of seawalls.
- 7.3 Riprap material on the waterward side of seawalls (3 feet at base extending back to seawall on a 2:1 slope) is required for the enhancement of fish habitat, except where the slope of the lake bed is greater than 2:1. The U.S. Army Corps of Engineers and the N.C. Division of Water Resources regulate the placement of stone or other materials into water. Compliance with these agencies' requirements is a prerequisite to receiving approval from Duke Energy.
- 7.4 Riprap without a seawall will be permitted only with a filter cloth barrier.
- 7.5 Seawalls must be constructed of pressure-treated lumber, interlocking stone, or other approved materials. Railroad ties, metal, rubber, or other non-approved materials will not be permitted. The use of creosote-treated wood is expressly prohibited.
- 7.6 The height of seawalls shall conform to the natural contour of land, but in no case shall seawalls be higher than 5 feet. Fill material behind seawalls shall be gravel, quarry stone or soil. Brick or block is not allowed.
- 7.7 Seawalls cannot be used to extend the shoreline into the lake or raise the natural contour of Project land.
- 7.8 No walkways are allowed on the landward side of seawalls.

7.9 Hardwood mulch or vegetative ground cover in previously disturbed areas in combination with the planting of species native to the area is acceptable for the stabilization of the shoreline.

## **8.0 Guidelines Regarding Dredging**

Do not deposit or remove any soil from Project property, including the lake, prior to obtaining Duke Energy written approval. Permission from the State Historic Preservation Office (SHPO), U.S. Army Corps of Engineers, and the N.C. Division of Water Resources is required for dredging or excavation within the lake. General dredging guidelines include, but are not necessarily limited to:

- 8.1 Dredging is not permitted from March 1 through September 15 when fish-spawning activity is the greatest and there is peak recreational activity.
- 8.2 It is the Licensee's intent that only materials that have silted into the lake be removed from the lake.
- 8.3 Written approval must be obtained from Duke Energy prior to any alteration of the shape of the shoreline and said alteration must comply with U.S. Army Corps of Engineers guidelines.
- 8.4 Dredging is not permitted in aquatic emergent/submerged vegetation beds (for example, water willow) equal to or greater than 100 square feet in surface area, except as required to maintain existing boating access.
- 8.5 Dredging is not permitted in IMZs or Resource Protection and Management areas.
- 8.6 All dredged material must be properly disposed and completely removed from Project property. No material (including: trash, yard waste, leaves, grass, garbage, food waste, fish parts, or animal waste) shall be left on Project property or disposed into lake waters.
- 8.7 Dredging is prohibited at Blewett Falls Lake.

## **9.0 Guidelines for Private Facilities**

### **9.1 Water-Dependent Structures**

Private piers, boathouses, and other water-dependent structures are permitted for the convenience of the adjoining landowner and are a privilege, not a right. To enhance public safety and visibility of the shoreline and water, only single-story, open-sided boathouses will be permitted for use by private property owners. Duke Energy will examine the plans for each structure before permitting. The following guidelines apply:

9.1-1 The allowable combined square footage of all water-dependent structures is dependent on the length of leased shoreline and shall not exceed 1,200 square feet, except in IMZs where the

maximum size is 800 square feet (This does not include seawall square footage.). The 1,200 square feet is the footprint of the facilities over the water. An uncovered slip is counted as square footage.

9.1-2 Piers or other docking structures may not extend more than 100 feet from the shore. In cove areas, the dock must not present a hazard to navigation, with the maximum length of the dock to be established in writing by Duke Energy. As a general guide, a structure should not obstruct more than 1/3 the width of the cove to protect public access and safety and protect aesthetic values of the lake shoreline. Duke Energy reserves the right to prohibit structures in coves 45 feet or less wide. Placement of structures or additions/modifications to existing structures cannot be within 5 feet of the allocation lines unless written permission from Duke Energy is received.

9.1-3 All fixed structures over water must be at least 1 foot above Normal Full Pond Elevation in areas designated for development. See IMZ Guidelines (Attachment C) for requirements for structures permitted in areas designated as IMZs. New construction must be 3 feet above Normal Full Pond Elevation if constructed over water willow beds greater than 100 square feet in area.

9.1-4 All structures built over the water must have adequate reflectors at corners and every 10 feet in between for safety purposes. The state of North Carolina recommends white reflectors.

9.1-5 Docks and piers may be stationary or floating, but floatation devices must be of encapsulated Styrofoam or polystyrene, as approved by the U.S. Army Corps of Engineers.

9.1-6 Benches, guardrails and other attachments on docks, piers or decks over water must not significantly obstruct views.

9.1-7 Boathouses may not be shared or co-owned by adjoining lot owners without receiving prior written approval from Duke Energy and recording of appropriate legal documentation of the terms and conditions of said joint ownership.

9.1-8 Boathouses must be constructed of wood or other approved materials. Metal or shingles may be used on the roof of a boathouse while metal siding, vinyl and wood may be used on the sides of storage rooms. The color of materials used should be natural, neutral, or earth tone.

9.1-9 No living, sleeping, cooking, heating, cooling, plumbing facilities, or refrigerators are permitted within, adjacent to or above boathouses or otherwise on leased property, except for existing commercial leases.

9.1-10 The external dimensions of enclosed storage areas associated with water-dependent structures must not exceed 80 square feet and must be located on the landward side of piers, deck areas, and boathouses. The use of boathouse storage areas for items other than those associated with swimming, boating, skiing, and fishing is prohibited. The storage of fuel or any other petroleum supply and yard treatment chemicals and fertilizers is prohibited.

9.1-11 Decks shall be constructed of wood or other environmentally acceptable materials as approved by Duke Energy.

9.1-12 Every effort should be made to minimize incidental disturbance of aquatic vegetation due to approved activities. Placement of water-dependent structures should avoid impacting water willow beds or other significant aquatic vegetation beds that are equal to or greater than 100 square feet by siting the facility outside of such beds or by traversing the water willow bed at the end points rather than the middle of a bed. Walkways must be 3 feet above normal full pool elevation and no more than 5 feet wide to permit sunlight penetration to the water willow bed. Placement of boathouses or docks should also take into account the shading effect of such structures relative to sun exposure. Duke Energy may require mitigation by the lessee if construction activities significantly impact water willow beds. Such mitigation may include, but is not necessarily limited to, construction of a fish-friendly pier or funding the establishment of a water willow bed at an adjacent area. Significant impact is defined as disturbance within the lot allocation area that impacts more than 25 percent of the surface area of an existing water willow bed that is equal to or greater than 100 square feet. The measure of the impacted area will be determined by the amount of water willow covered by any structure, except walkways constructed under IMZ Guidelines. Other restrictions will apply for water willow beds located in IMZs.

9.1-13 Duke Energy may authorize the removal of water willow in areas where there is an expansion or encroachment of a bed into an existing navigational channel or facility.

9.1-14 Deck/roof combinations, widow's watch, or second floors of any type including stairs or ladders to access the roof are prohibited. Roof design may be gable or hip style.

9.1-15 Section 9.1 does not apply to Blewett Falls Lake, except for grandfathered structures.

## 9.2 Walkways

Duke Energy may permit the limited construction of walkways within the leased area. Walkways must either have natural ground cover or be constructed of open-slatted, pressure-treated wooden or composite materials, follow the contour of the land and must lead to a pier or boathouse. Access to the shoreline shall be by pathway no wider than 5 feet. An elevated walkway to the boathouse is permitted where need for handicap accessibility is certified in writing by a medical doctor.

## 9.3 Fences

Fences within the leased area can be constructed with Duke Energy prior written permission, but in no case are fences permitted on leased property within 30 feet of the shoreline. New fence installation, including the placement and selection of construction materials, must take into account aesthetic values.

## 9.4 Items Prohibited on Project Property (not intended to be all-inclusive)

9.4-1 Septic Systems – The Licensee does not allow the placement of any septic system components on its property by residential lessees. Existing septic system components located on the Licensee's property that fail or are in need of repair must be removed.

## 9.4-2 Swimming pools

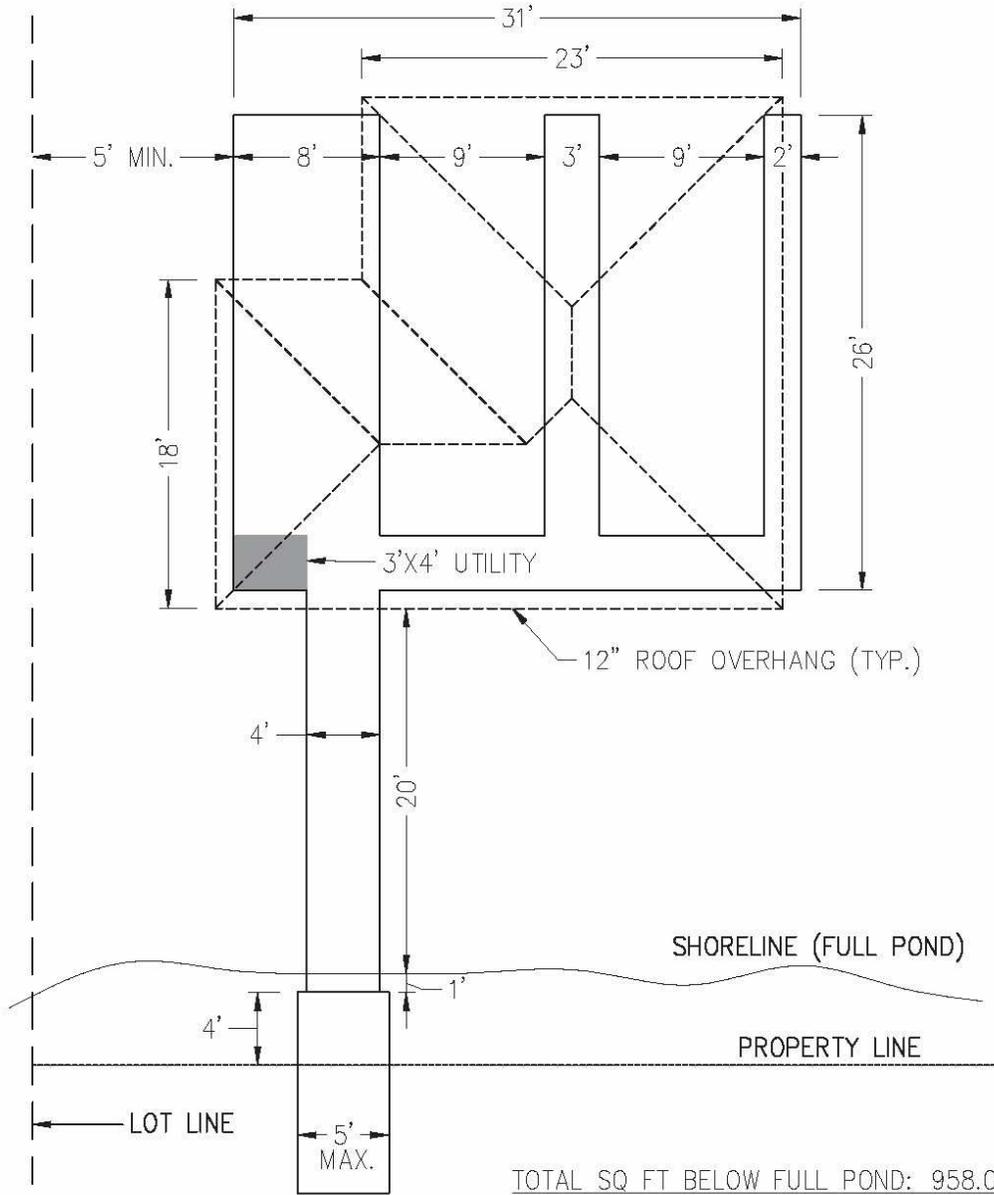
- 9.4-3 Storage buildings or other structures except as permitted in boathouses
- 9.4-4 Houses, including residential roof overhangs
- 9.4-5 Asphalt or concrete driveways or walkways
- 9.4-6 Porches or other attachments to residential structures
- 9.4-7 Decks or patios on land
- 9.4-8 Garages or carports
- 9.4-9 Wells, pumps, or other methods of water withdrawal without prior written permission from Duke Energy
- 9.4-10 Animal lots and houses
- 9.4-11 Television or radio satellite dishes or towers
- 9.4-12 Encroachments on adjoining leased areas unless a specific recorded encroachment agreement exists between the affected parties
- 9.4-13 Electrical service that does not meet National Electric Safety Code requirements
- 9.4-14 Facilities that represent health and safety hazards
- 9.4-15 Commercial activities without Duke Energy written permission
- 9.4-16 Assignment or subletting of leases without prior written approval
- 9.4-17 Storage of vehicles or other material
- 9.4-18 Underwater or partially submerged structures or facilities which could present a safety hazard
- 9.4-19 Burning
- 9.4-20 Storage or disposal of any regulated materials
- 9.4-21 Water gardens, fountains or underground lawn sprinkler systems
- 9.4-22 Private boat ramps
- 9.4-23 The discharge of any concentrated runoff; that is, concentrating storm water runoff into a pipe or improperly constructed ditch, which discharges onto the Licensee's property and accelerates erosion
- 9.4-24 The discharge or disposal of any material

- 9.4-25 The use of heat exchange coils or thermal loops in the lake for HVAC systems
- 9.4-26 Structures that do not meet N.C. Building Code requirements
- 9.4-27 Fuel or other storage tanks or fuel pumps
- 9.4-28 Livestock within 30 feet of the lake unless crossing the stream channel per specifications of Natural Resources Conservation Service
- 9.4-29 Buoys with ropes from existing boathouses/docks to such buoys in the water
- 9.4-30 In-ground boathouses
- 9.4-31 Permanent water fowl blinds or hunting stands

Note: Failure to Abide by These Conditions May Result in the Cancellation of Existing Lease and the Restoration of Damage at the Cost of the Lessee.

# EXAMPLE 1: PLAN DRAWING

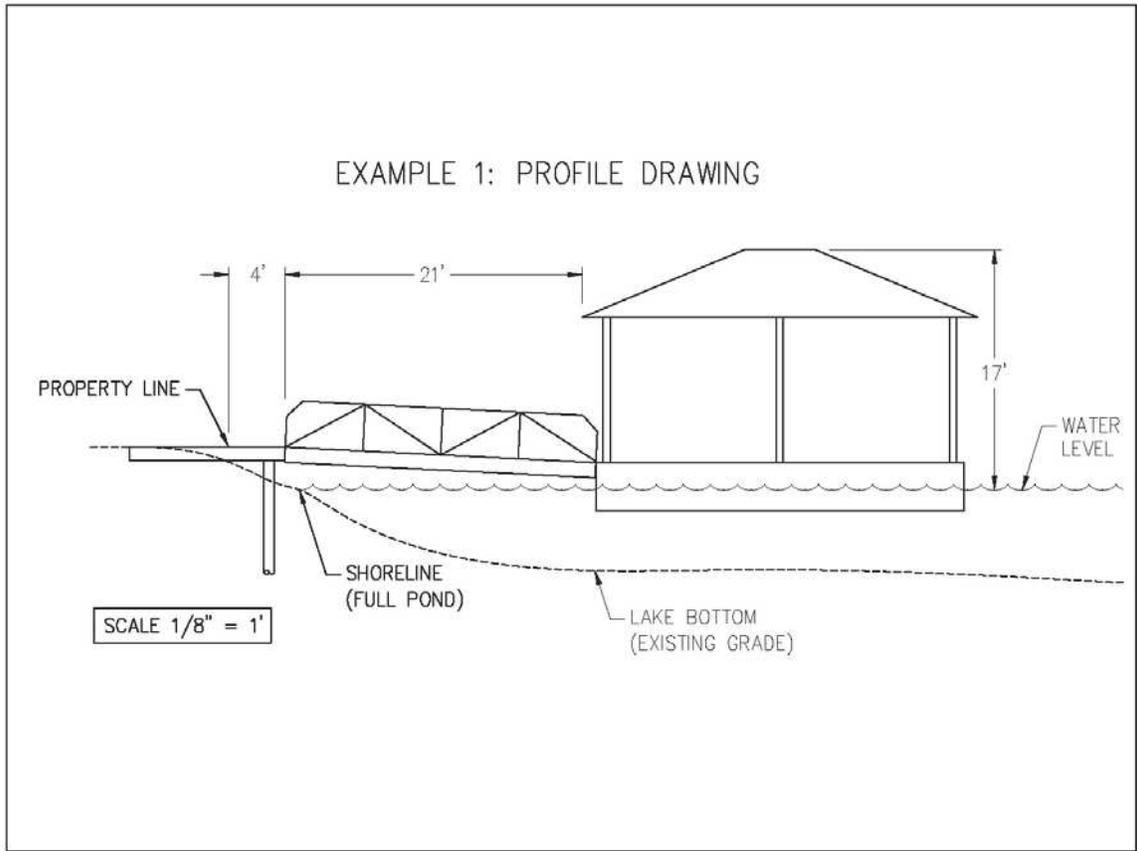
(NOTE: INCLUDES OVERHANG AND UNCOVERED SLIP DIMENSIONS)



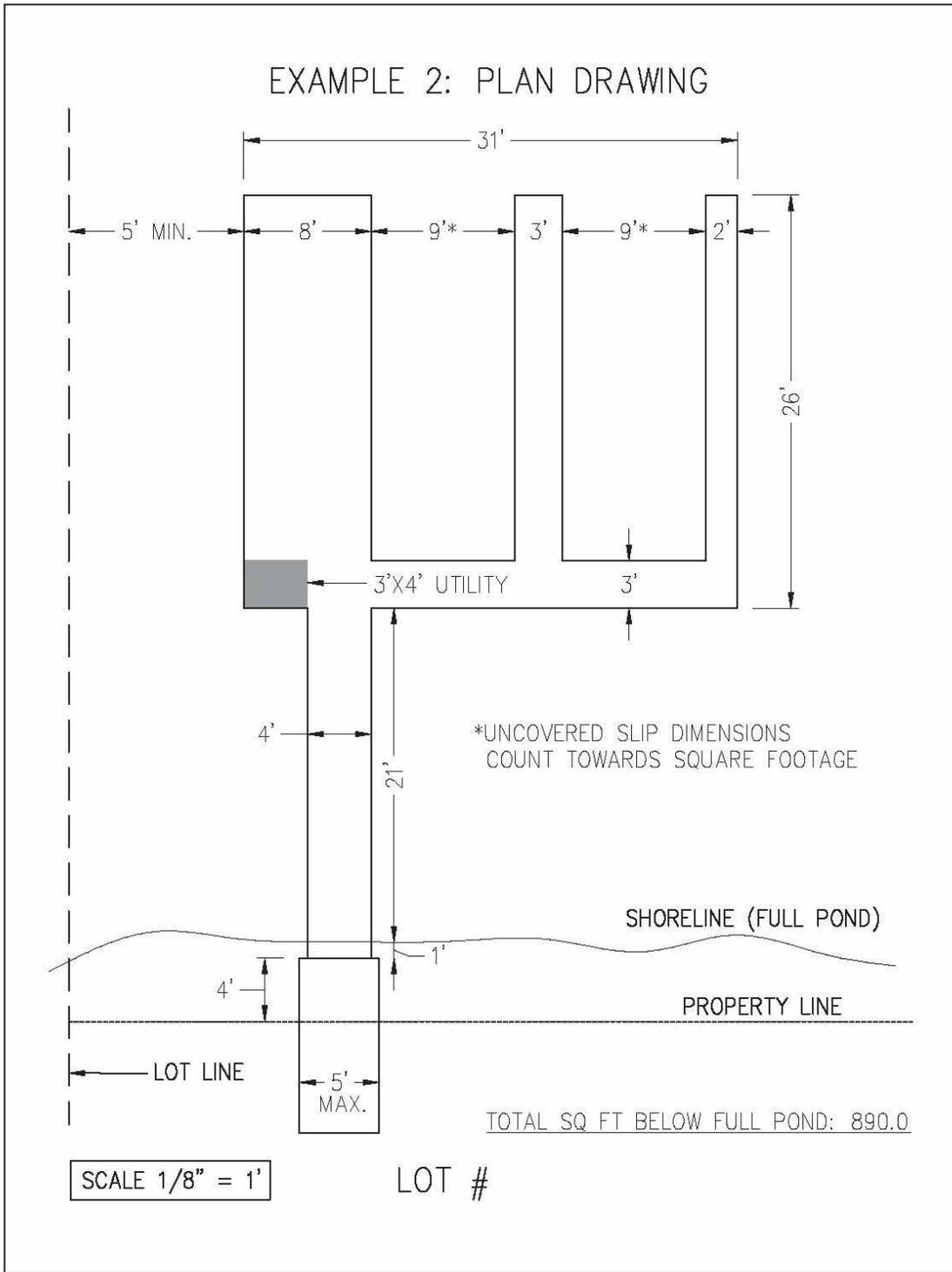
SCALE 1/8" = 1'

LOT #

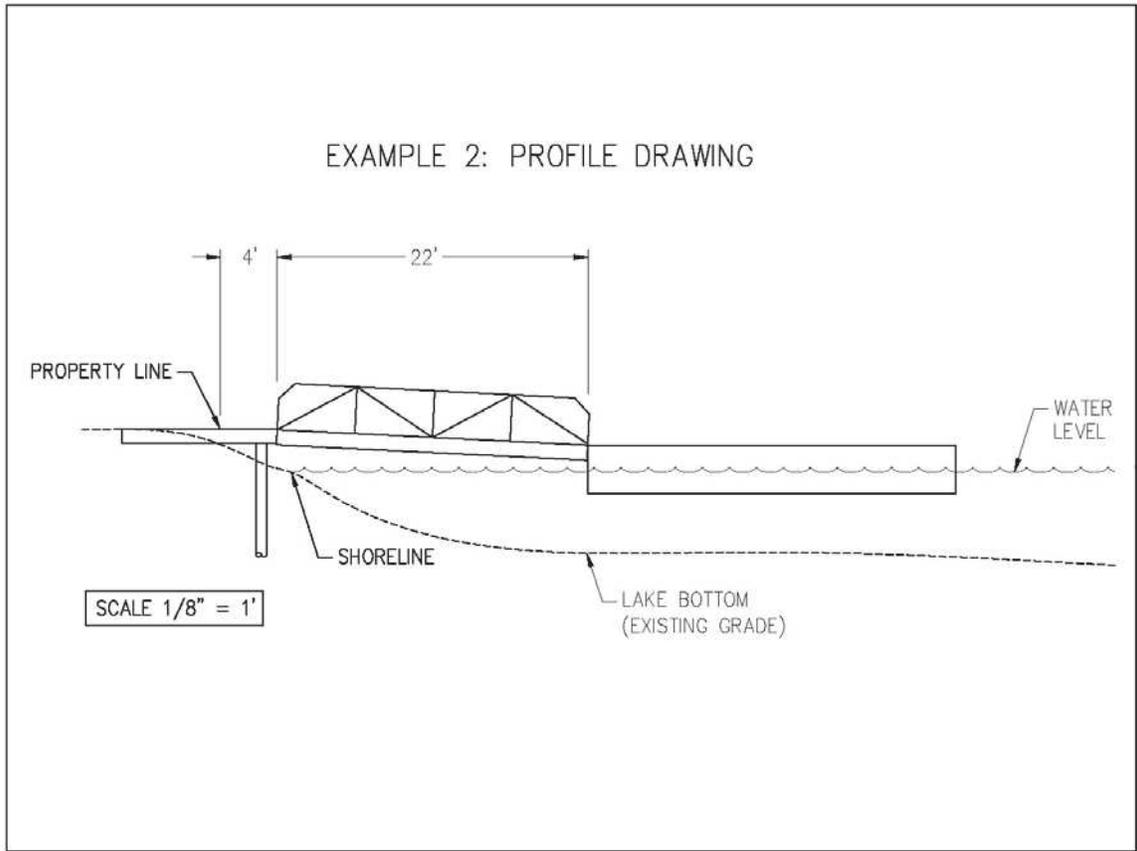
EXAMPLE 1: PROFILE DRAWING



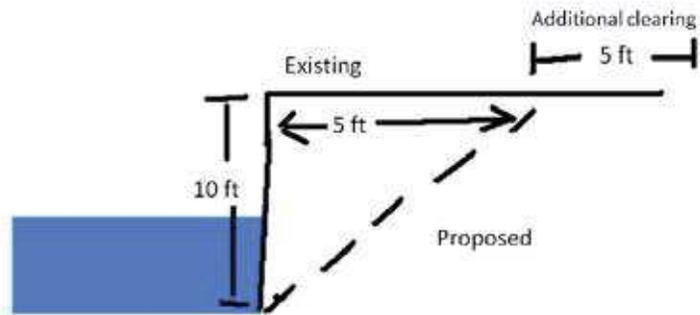
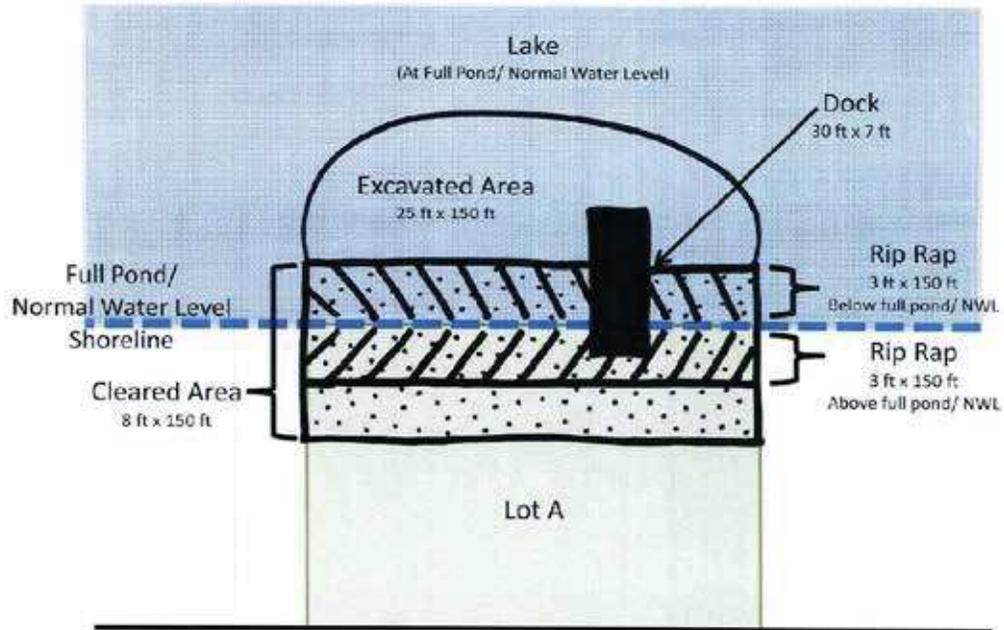
## EXAMPLE 2: PLAN DRAWING



EXAMPLE 2: PROFILE DRAWING



# Shoreline Stabilization Example



## 10.0 Guidelines for Multi-slip Facilities

These facilities may be constructed only with permission from Duke Energy. A multi-slip facility will be limited to accommodate no more than 10 watercraft (in accordance with the FERC standard Land Use Article) for a frontage of 100 linear feet along the Project Boundary. If the frontage is greater than 100 linear feet, one additional watercraft is allowed per 25 linear feet. Detailed plans for construction, additions, or modifications of these facilities must be submitted to Duke Energy for review and approval prior to beginning work. The merits of these plans will be considered on a case-by-case basis and will consider the value of such facilities with regard to environmental impact, aesthetics, and potential navigational and safety issues. As mentioned above, consultation with state and federal agencies is required and will be the responsibility of the applicant (see Attachment D – Multi-slip Facilities for step-by-step approval process). In most instances, Duke Energy cannot approve the construction, modification, or expansion activities of these facilities without prior FERC approval.

Certain activities and items are expressly prohibited at these facilities, including, but not limited to, the following:

- 10.1 Encroachments on adjoining leased areas
- 10.2 Electrical service that does not meet National Electric Safety Code requirements
- 10.3 Facilities that represent health and safety hazards
- 10.4 Assignment or subletting of leases without prior written approval
- 10.5 Improper storage or disposal of regulated materials
- 10.6 Structures that do not meet N.C. Building Code requirements
- 10.7 Docking, mooring, anchoring, storing or otherwise tying up any boat or vessel except to a dock, pier or other water-related structure that is in compliance with this Lease, the Guidelines and applicable Law
- 10.8 Docking, mooring, anchoring, storing or otherwise tying up (permanently or temporarily) any boat or vessel at the Premises, that equals or exceeds 35 feet in length
- 10.9 Constructing, installing or otherwise placing docks, piers, boat slips, or other water-related structures designed to accommodate boats or vessels 35 feet or more in length.
- 10.10 Maintenance and repair operations (including without limitation boat engine or equipment maintenance and repair, replacement or handling of engine oil, oil filters, waste oil, transmission fluid, anti-freeze or similar liquids or products); painting, paint removal, varnishing, sanding or abrasive blasting; boat or boat equipment cleaning with toxic products or solvents and/or high pressure washing.
- 10.11 Engage in or sponsor any type of “party cruise,” “dinner cruise,” or similar event or activity (public or private) at, on, or from the Premises, lessee’s marina, or restaurant.

## **11.0 Exceptions for Existing Facilities**

At the Licensee's discretion and subject to license and other regulatory directives, existing water-dependent and other facilities that do not comply with the general guidelines may remain in the leased area or over the water for their useful lives, as long as they are in compliance with federal, state, and local laws and regulations (termed "grandfather" provisions). When major repairs involving more than 50 percent of the value of the structure as determined by a certified licensed appraiser approved by Duke Energy are made, the structure must be repaired so as to be in compliance with the guidelines included herein. Metal siding is not permitted for repair of any structures. If an existing structure is destroyed by fire or by other means, the replacement structure must be built in compliance with the general guidelines and is not subject to the "grandfather" provisions.

All modifications to existing facilities are subject to these guidelines so pre-existing noncompliance is not increased. For the purpose of measuring the area covered by existing facilities, all structures on leased property, whether over water or on land, are to be counted. Structures include, but are not limited to, boathouses, decks, docks, boat slips, piers, storage buildings, and noncomplying structures. Approved walkways over land or seawalls are not included in the calculation of area covered by structures. No expansion of an existing facility or addition of a new facility is allowed on leased property where the expansion or addition would cause the area covered by all facilities to exceed 1,200 square feet, whether grandfathered or not.

No expansion or addition will be permitted to structures, nor will additional facilities be permitted if the area covered by all facilities in the leased area exceeds 1,200 square feet. Facilities must be well maintained. Failure to properly maintain facilities may result in the cancellation of existing leases and the removal of the facility and restoration of the property at the expense of the lessee.

## **12.0 Guidelines Regarding Miscellaneous Items (not intended to be all-inclusive)**

12.1 Signs are only permitted at marinas and access areas upon approval by Duke Energy.

12.2 Fish attractors are allowed per Duke Energy specifications. Fish attractors under piers are encouraged.

12.3 Navigational aids and No Wake markers are authorized only by N.C. Wildlife Resources Commission.

12.4 Parasails, hang gliders, ultra-light aircraft, and seaplanes are not allowed.

12.5 Vending operations over water are controlled by the county health department. If allowed, they must be in an area approved by Duke Energy.

## **13.0 Project Recreation Site Management and Use**

Duke Energy is required under the FERC license to arrange for the construction, maintenance, and management of Project Recreation Sites. The use of these sites is addressed in the Yadkin-Pee Dee Recreation Management Plan (RMP). As Licensee, one of Duke Energy's primary responsibilities for management of these areas is to ensure that any activity at the Project Recreation Sites does not prohibit or interfere with the public's use of the area for boating, fishing, or other authorized recreational uses. Review the RMP prior to engaging in any private activity at a Project Recreation Site to ensure compliance for use of the site.

#### **14.0 Guidelines Regarding Special Uses**

Duke Energy reserves the right to grant special uses that deviate from these Guidelines when in its judgment the action is advantageous for the benefit of public welfare and does not jeopardize the environmental quality of the lake.

#### **15.0 Guidelines Regarding Penalty Fees and Mitigation**

Duke Energy routinely patrols the lake shoreline for compliance. Suspected violations will be investigated and handled by Duke Energy and/or the appropriate regulatory agencies. Duke Energy will require mitigation by the lessee if construction activities significantly impact water willow beds or other environmentally sensitive habitat. Such mitigation may include, but is not necessarily limited to, construction of a fish-friendly pier or funding the establishment of a water willow bed in another area of the lake, preferably an adjacent or nearby area. Significant impact is defined as disturbance within the lot allocation area that impacts more than 25 percent of the surface area of an existing water willow bed that is equal to or greater than 100 square feet. The measure of the impacted area will be determined by the amount of water willow covered by any structure, except walkways constructed under IMZ Guidelines.

Failure to abide by these guidelines could result in cancellation of the lease. Failure to build, maintain and renovate facilities according to the facilities approval form and these Guidelines could result in lease cancellation. If Duke Energy decides to re-let the property at a later date, a lease re-instatement fee will be levied. In the event the lease is not re-instated, Duke Energy reserves the right to remove all remaining personal property and remaining facilities from the Licensee's property. If this occurs, the Project property associated with the adjoining property will not re-let until cost of removal, which includes all removal expenses including Duke Energy or contractor expenses, landfill fees, and a fixed management fee of \$1,000, are paid in full.

#### **Penalty Fees**

Persons who own property adjacent to, or lease property on Lake Tillery or Blewett Falls Lake could incur a penalty from Duke Energy for the following reasons:

- Failure to obtain a lease and/or Construction Permit prior to construction
- Construction deviates from the original permit and drawing approved by Duke Energy
- Construction not complying with the Guidelines

Individuals found to be in violation of procedures, approved permit, or guidelines will be expected to take corrective action by:

- Acquiring the necessary forms (e.g., lake lease and/or Construction Application) and submitting payment for all fees and penalties incurred
- Bringing their facilities into compliance with the approved drawing submitted with their Construction Application
- Possible additional mitigation to enhance the shoreline

Duke Energy reserves the right to cancel or deny a lease to those individuals who do not submit payment of fees and penalties or refuse to comply with the procedures, policies and guidelines.

## 16.0 Glossary

**aesthetic** – Characteristics that are visually pleasing and usually conform to certain identified background features.

**allocation line** – A line on a subdivision map or the projected lot side lines that determines the location of facilities on leased land or over the water of Lake Tillery

**application process** – Involves contacting Duke Energy, meeting on the site (as requested by Duke Energy), discussing proposed construction of facilities, preparing detailed sketch of facilities and their location, securing agency approvals if necessary, completing Construction Application, payment of fee and obtaining building permit from appropriate county

**aquatic emergent/submerged vegetation beds** – Rooted aquatic plants found totally submerged below or emerging from the lake's surface and usually located in water less than 6 feet deep

**assignment** – A transfer of a claim, property right, etc.

**Best Management Practice (BMP)** – A structural or nonstructural management-based practice used singularly or in combination to reduce nonpoint source inputs to receiving waters in order to achieve water quality protection goals

**boathouse** – A single-story roofed structure with open sides and designed for long-term or temporary watercraft storage (*Note: In the past, boathouses could also have enclosed sides, but this is no longer authorized.*)

**boat slip** – A roofed or unroofed structure confined by three sides used for temporary or permanent storage and/or mooring of a watercraft

**buffer zone** – A natural or vegetated area through which storm water runoff flows in a diffuse manner so the runoff does not become channelized and which provides for infiltration of the runoff and filtering of pollutants. The buffer shall be measured landward from the normal pool elevation of impounded structures and from the bank of each side of streams or rivers.

**building permit** – A written authorization secured from the county where structure(s) will be built, allowing construction according to certain specifications

**cancellation** – Termination of a lease between the Licensee and the lessee

**construction application fee** – A fee to cover expenses associated with the permitting of facilities within the Project Boundary; synonymous with processing fee

**construction permit** – A form that describes the proposed facilities to be located within the Project Boundary

**development** – Any activity within the area leased involving, requiring or consisting of the construction or enlargement of a structure; excavation; dredging; filling; dumping; removal of clay, silt, sand, gravel or minerals; bulk heading or driving of pilings; clearing or alteration of land; alteration of the shore, bank or bottom of Lake Tillery or Blewett Falls Lake or any tributary or wetland; or placement of a floating or attached structure within the Project Boundary

**docking structure** – A structure over or adjacent to water used for mooring watercraft

**dredging** – The term “dredged material” means material excavated or dredged from waters of the United States as defined by the Code of Federal Regulations [33 CFR 323.2(c)] and as permitted by appropriate federal and state agencies.

**earth tone** – Related to color; colors that are usually neutral in shade, blend in with surroundings; and do not conflict with aesthetics of the environment

**easement** – A non-possessing interest held by one party in the land of a second party whereby the first party is accorded partial use of the land for a specific purpose with certain specified restrictions

**encroachment agreement** – A document recorded at the pertinent county register of deeds office that allows one party to place facilities in the allotted area of a second party

**environmental** – The aggregate of all conditions affecting the existence, growth and general welfare of living organisms and includes complex interactions with chemical and physical variables

**environmentally sensitive habitat** – Habitat that is identified to be of high quality for a healthy ecosystem, including both plants and animals, which provide important areas for living, feeding, reproduction, rearing and resting. These habitats also include habitat for rare, threatened or endangered plants and animals. Such habitats have the highest priority for protection from degradation and impact due to human activities to sustain the ecosystem in general or specific identified organisms.

**excavation** – Removal of soil and rock associated with construction or placement of shoreline bulkheads

**facilities** – Structures such as walkways, seawalls, piers, boathouses, boat slips, deck areas, or other structures located on leased property

**FERC** –Federal Energy Regulatory Commission; the federal agency by which the Licensee is authorized to operate the Tillery and Blewett Falls Hydroelectric Plants, Lake Tillery and Blewett Falls Lake and the surrounding Project lands

**filling** – The placement of material in the lake for purposes of land reclamation. This practice is prohibited at the Project.

**filter cloth barriers** – A cloth placed on the bank prior to placement of riprap to prevent soil from washing away from riprap

**floatation devices** – Normally made of encapsulated styrofoam.

**grandfather provisions** – Temporary provisions that allow an existing structure to continue to exist in noncompliance with existing guidelines. When maintenance repairs exceed 50 percent of the value of the structure, the grandfather provisions are void and the structure must come in compliance with existing guidelines.

**Guidelines** – Guidelines for the Use of Duke Energy Properties at Lake Tillery and Blewett Falls Lake

**habitat** – The regions where plants or animals naturally grow or live and include chemical and physical features that comprise the environment and allow plants and animals to thrive

**herbicides** – Chemicals designed to retard or prohibit plant growth

**in-ground boathouse** – A boathouse placed in an excavated area in the shoreline bank of a lake

**Integrated Use** – Shoreline classification that acknowledges and accommodates the presence of existing uses and allows for potential future private, public and commercial uses. These shoreline areas have no known significant environmental/cultural resources or associated resource management goals that would preclude existing or future shoreline uses. These lands are managed to accommodate reasonable demands for public and private uses within the Guidelines.

**land-disturbing activity** – Use of the land that results in a change in the natural cover or topography that may cause or contribute to sedimentation

**landward** – On the side toward the land

**lease** – A written document by which the rights of use and occupancy of land and/or structures are transferred by the owner to another person or entity for a specified period of time in return for a specified rental

**leased properties/leased area** – The location where rights of use or occupancy have been transferred from lessor to lessee

**lessee** – The party who possesses the right to use or occupy a property under lease agreement (tenant)

**lessor** – The party who holds title to and conveys the right to use and occupy a property under lease agreement (landlord)

**License** – A formal, legally binding agreement that allows a certain activity to be performed

**Licensee** –Duke Energy Progress, LLC and its assigns; owns and operates the license granted by the Federal Energy Regulatory Commission (FERC License #2206).

**multi-slip facilities** – Facilities related to the operation of a marina or restaurant, or other multiple-use public or private facility and may have provisions for food services, limited to accommodate no more than 10 watercraft (in accordance with FERC’s standard land use article) for a frontage of 100 linear feet along the Licensee’s Project Boundary pending Duke Energy approval. If the frontage is greater than 100 linear feet, one additional watercraft is allowed per 25 linear feet.

**multi-slip lease** – Land leased in association with a business such as a marina or a restaurant or other multiple-use public or private facility that accommodates watercraft or as determined by the Licensee

**multi-unit dwelling** – A structure that can legally accommodate more than one family unit, such as an apartment or townhouse

**Natural Condition/Natural State/Natural** – The forest floor as found in an undisturbed mature or maturing forest; see definition of Natural Forested Vegetation

**natural forested vegetation** – The plants of an area which grow together in disturbed or undisturbed conditions in various wooded plant communities in any combination of trees, saplings, shrubs, vines and herbaceous plants

**natural ground cover** – Low-growing terrestrial vegetation existing on forest or shoreline lands that is naturally occurring without disturbance from human activity

**NAVD** – North American Vertical Datum 1929

**NCDENR** – North Carolina Department of Environment & Natural Resources; predecessor to NCDEQ

**NCDEQ** – North Carolina Department of Environmental Quality; successor of NCDENR

**NCDWR** –North Carolina Division of Water Resources, a division within the North Carolina Department of Environmental Quality

**NCWRC** –North Carolina Wildlife Resources Commission

**neutral** – Pertaining to color, usually earth tone colors that do not sharply contrast to the existing background colors

**noncompliant structure** – A structure that does not conform to the Guidelines

**Normal Full Pond Elevation** – A measurement of elevation, in feet above mean sea level, to the top of the floodgates at the Tillery (278.2 NAVD) or Blewett Falls (178.1 NAVD) dam.

**open-sided boathouse** – A boathouse whose sides are open from the decking upward to the ceiling joist

**open-slatted** – Refers to boards on walkway, each board having a space between it and the next board

**permit** – Authorization by one party of a certain activity by another party

**premises** – The area of land being leased from Duke Energy Progress, LLC and being described in the Lease. Also referred to as Leased Properties/Leased Area.

**Private Recreation Lease** – Land leased in association with the residence of a single family

**Project** – The Yadkin-Pee Dee Project

**Project Boundary** – The perimeter of the Licensee’s property at Lake Tillery and Blewett Falls Lake as shown in its license with the Federal Energy Regulatory Commission

**Project owner** – Duke Energy Progress, LLC and its assigns; owns and operates the license granted by the Federal Energy Regulatory Commission (FERC License #2206)

**Project Recreation Site** - Lake access providing for the operation and management of recreational opportunities for the general public that directly support the requirements of Duke Energy’s FERC licenses and are not restricted to selected individuals

**Project works** – FERC Required – Project lands associated with hydropower production, including but not limited to the dam, powerhouse and other hydroelectricity property; can also include lands associated with Project lands occupied by developed public recreation (i.e., NCWRC public boat ramps); shoreline areas reserved for uses associated with Project operations or fulfillment of license requirements

**projection lines** – see allocation lines

**re-let** – To lease again

**Residential Lease** – Land leased in association with a private single family dwelling

**Resource Protection & Management** – Shoreline areas designated for species protection and environmental purposes. This classification is to protect habitat, cultural significance, character, and aesthetic value of particular locations. These areas may include wetlands, steep slopes,

sensitive aquatic or terrestrial habitat, and islands. This classification also includes shoreline areas with significant rare, threatened and endangered (RTE) species habitat or known presence of communities of RTE species.

**riprap** – Large crushed stone (8-10 inches or greater in diameter) used for bank stabilization

**runoff** – Water that is not absorbed into the ground and enters into a body of water

**seawalls** – Also called a retaining wall or bulkhead, a seawall is a vertical wall constructed at or near the shoreline for shoreline stabilization. Seawalls commonly consist of treated wood, formed concrete, or sheet piling.

**silt fence** – An upright cloth or synthetic barrier anchored in the ground to prevent erosion

**sublet** – The process by which the existing lessee leases rights to another party

**USACE** – United States Army Corps of Engineers

**USFWS** – United States Fish & Wildlife Service

**USGS** – United States Geological Survey

**vegetated condition** – Plant life, such as natural vegetation consisting of grasses, shrubs and trees in a sufficient amount to minimize or prevent soil erosion and bank slumping

**vegetative buffer** – Plant life, such as natural vegetation, in a sufficient amount to prohibit erosion in the designated buffer zone

**water-dependent structure** – Those structures for which use requires access or proximity to or siting within surface waters to fulfill its basic purpose, such as boat houses, docks and bulkheads. Ancillary facilities such as restaurants, outlets for boat supplies, parking lots and commercial boat storage areas are not water-dependent structures.

**water quality regulations** – Rules established by the NCDEQ to promote and protect water quality

**watercraft** – A craft designed for water transportation

**waterward** – On the side toward the water

**wetlands** – Areas inundated or saturated by an accumulation of surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions; generally includes swamps, marshes, bogs and similar areas. Wetlands classified as waters of the state are restricted to waters of the United States as defined by the Code of Federal Regulations (33 CFR 328.3 and 40 CFR 230.3).

## **Attachment A**

### **Contact Information**

Mailing Address:

Duke Energy Lake Services  
526 South Church Street/EC12Q  
Charlotte, NC 28202

Email

LakeServices@duke-energy.com

Phone:

1-800-443-5193

## Attachment B

### Plant Lists

Below is a list of native plants which may be useful in landscaping for your home and property. Duke Energy restricts planting of vegetation within the Project Boundary to native plants because many non-native plants are invasive and may become difficult to control. Examples of non-native invasives include kudzu, English ivy, wisteria, and Japanese honeysuckle.

#### Deciduous Trees

Red maple	<i>Acer rubrum</i>
Sugar maple	<i>Acer saccharum</i>
Serviceberry	<i>Amelanchier arborea</i>
Shagbark hickory	<i>Carya ovata</i>
Chestnut (hybrid)	<i>Castanea sp.</i>
Hackberry	<i>Celtis occidentalis</i>
Redbud	<i>Cercis canadensis</i>
Fringetree	<i>Chionanthus virginicus</i>
Flowering dogwood	<i>Cornus florida</i>
Pesimmon	<i>Diospyros virginiana</i>
Honey locust	<i>Gleditsia triacanthos</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Yellow poplar	<i>Liriodendron tulipifera</i>
Blackgum	<i>Nyssa sylvatica</i>
Sourwood	<i>Oxydendron arboreum</i>
Sycamore	<i>Platanus occidentalis</i>
Black cherry	<i>Prunus serotina</i>
White oak	<i>Quercus alba</i>
Scarlet oak	<i>Quercus coccinea</i>
So. red oak	<i>Quercus falcata</i>
Cherrybark oak	<i>Quercus falcata var. pagodaefolia</i>
Water oak	<i>Quercus nigra</i>
Willow oak	<i>Quercus phellos</i>
Chestnut oak	<i>Quercus prinus</i>
Red oak	<i>Quercus rubra</i>

#### Evergreen trees

American holly	<i>Ilex opaca</i>
Eastern red cedar	<i>Juniperus virginiana</i>
Loblolly pine	<i>Pinus taeda</i>

#### Evergreen shrubs

Inkberry	<i>Ilex glabra</i>
Mountain laurel	<i>Kalmia latifolia</i>
Wax myrtle	<i>Myrica cerifera</i>
Rhododendron	<i>Rhododendron catawbiense</i>

Strawberry bush

**Deciduous shrubs**

Red chokeberry  
Black chokeberry  
Amer. Beauty-berry  
Sweetshrub  
Chinquapin  
Sweet pepperbrush  
Gray dogwood  
Wahoo  
Witch-alder  
Winterberry  
Wild plum  
Staghorn sumac  
Elderberry  
Blueberries  
Possumhaw  
Black haw  
Yellowroot

*Euonymus americana*

*Aronia arbutifolia*  
*Aronia melanocarpa*  
*Callicarpa americana*  
*Calycanthus floridus*  
*Castanea pumila*  
*Clethra alnifolia*  
*Cornus racemosa*  
*Euonymus atropurpureus*  
*Fothergilla spp.*  
*Ilex verticillata*  
*Prunus angustifolia or P. umbellata*  
*Rhus typhina*  
*Sambucus canadensis*  
*Vaccinium spp.*  
*Viburnum nudum*  
*Viburnum rufidulum*  
*Xanthorhiza simplicissima*

**Ground covers**

Lady fern  
Blazing star  
Wood sorrel  
Bird-foot violet

*Athyrium filix-femina*  
*Liatris graminifolia*  
*Oxalis spp.*  
*Viola pedata*

**Ornamental grasses**

Bluestem/broomstraw  
Virginia wild rye  
Deertongue grass  
Swichgrass  
Indiangrass  
Eastern gamagrass  
River oats

*Andropogon spp.*  
*Elymus virginicus*  
*Dichanthelium clandestinum*  
*Panicum virgatum*  
*Sorghastrum nutans*  
*Tripsacum dasyloides*  
*Uniola paniculata*

**Flowering perennials**

Wild columbine  
Butterfly weed  
Beggarticks  
Partridge pea  
Coreopsis  
Butterfly pea  
Queen Anne's lace  
Tickclover  
Geum  
Sunflowers

*Aquilegia canadensis*  
*Asclepias tuberosa*  
*Bidens spp.*  
*Chamaecrista fasciculata (annual, but reseeds well)*  
*Coreopsis spp.*  
*Centrosema virginianum*  
*Daucus carota*  
*Desmodium spp.*  
*Geum virginianum*  
*Helianthus spp.*

Blazing star	<i>Liatris scariosa</i>
Cardinal flower	<i>Lobelia cardinalis</i>
Virginia bluebells	<i>Mertensia virginica</i>
Wild bergamot	<i>Monarda fistulosa</i>
Wild sweet William	<i>Phlox divaricata</i>
Black-eyed Susan	<i>Rudbeckia hirta</i>
Fire pink	<i>silene vurginica</i>
Virginia spiderwort	<i>Tradescantia virginiana</i>

A listing of commercial sources for wildlife planting materials may be obtained from the NC Wildlife Resources Commission

### Plants that Deer Usually Do Not Like

Deer sometimes cause a problem for the native plants you use for landscaping. Generally deer do not like plants with aromatic or pungent foliage. Plants with fuzzy leaves, prickly needles, spiny branches and thorns usually discourage deer from eating them. Using plants that combine the tangy with the bitter and the spicy with the prickly will aid you in reducing damage by deer to your native plants.

Listed below are some plants deer usually do not like:

#### Annuals, Biennials and Perennials

<b>Botanical Name</b>	<b>Common Name</b>
<i>Achillea spp.</i>	Yarrow
<i>Aconitum spp.</i>	Monkshead
<i>Aquilegia</i>	Columbine
<i>Amsonia</i>	Blue star
<i>Anemone</i>	Anemone
<i>Asclepias tuberosa</i>	Butterfly Weed
<i>Campanula spp.</i>	Bellflower
<i>Coreopsis spp.</i>	Coreopsis
<i>Cosmos</i>	Cosmos
<i>Delphinium</i>	Delphinium
<i>Dicentra</i>	Bleeding Heart
<i>Ilex spp.</i>	American Holly
<i>Lobelia erinus</i>	Lobelia
<i>Lupinus</i>	Lupine
<i>Monarda didyma</i>	Bee Balm
<i>Myosotis</i>	Forget Me Not
<i>Oenothera</i>	Evening Primrose
<i>Rudbeckia</i>	Blackeyed Susan
<i>Salvia</i>	Salvia
<i>Sedum</i>	Sedum
<i>Senecio aureus</i>	Golden Ragwort

*Verbena*  
*Viola*  
*Yucca*

Verbena  
Violet  
Yucca

**Trees**

*Alnus*  
*Betula*  
*Carpinus*  
*Castanea*  
*Catalpa*  
*Cedrus*  
*Cercis*  
*Cladrastis*  
*Cornus*  
*Gleditsia*  
*Liquidamber stynaciflua*  
*Liriodendron*  
*Morus*  
*Quercus*  
*Rhus*  
*Robinia*  
*Tsuga*

Alder  
Birch  
Hornbeam  
Chinkapin  
Catalpa  
Cedar  
Redbud  
Yellow Wood  
Dogwood  
Honey Locust  
Sweet Gum  
Tulip Tree  
Mulberry  
Oak  
Sumac  
Black Locust  
Hemlock

**Herbs**

*Sassafras*

Sassafras

**Vines**

*Campsis spp.*  
*Lonicera spp.*  
*Parthenocissus*  
*Wisteria*  
*Vitis*

Trumpet Creeper  
Honey Suckle  
Virginia Creeper  
Wisteria (American & Kentucky)  
Grape

**Shrubs**

*Vaccinium*

Blueberry

## NC Native Plant Society – Invasive Exotic Plants in NC – 2011

*Compiled by Misty Franklin Buchanan with review and input from biologists in the following agencies: NC Natural Heritage Program, NC Botanical Garden, University of North Carolina Herbarium, NC Exotic Pest Plant Council, NC DEQ Aquatic Weed Control Program, US Fish & Wildlife Service, The Nature Conservancy, the NC Zoo, and volunteers and board members of the NC Native Plant Society.*

The intent of the NC Native Plant Society Invasive Exotic Plant list is to rank exotic (alien, foreign, introduced, and non-indigenous) plants based on their invasive characteristics, to educate the public and resource managers, and to encourage early detection of invasive exotic species so that a rapid response can be implemented when needed. We hope this list will help eliminate the use of invasive exotic plants in landscaping and restoration projects. The 2004 Tennessee Exotic Pest Plant Council Invasive Exotic Plant list was used as a model for organization of this list, but species listed and ranks assigned here are applicable to North Carolina. The NC Native Plant Society Invasive Exotic Plant List is considered a work in progress, and will be evaluated and updated as new information is gathered about these and other species. Please send your comments to:

North Carolina Native Plant Society  
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Totten Center 3375  
Chapel Hill, NC 27599-3375

**Background:** Many introduced plants have become naturalized in North Carolina and some are replacing our native plant species. Not all exotic species are considered harmful. Invasive plants are usually characterized by fast growth rates, high fruit production, rapid vegetative spread and efficient seed dispersal and germination. Not being native to NC, they lack the natural predators and diseases which would naturally control them in their native habitats. The rapid growth and reproduction of invasive plants allows them to overwhelm and displace existing vegetation and, in some cases, form dense one-species stands. Invasive species are especially problematic in areas that have been disturbed by human activities such as road building, residential development, forest clearing, logging, grazing, mining, ditching, mowing, erosion control, and fire control activities.

Invasive exotic plants disrupt the ecology of natural ecosystems, displace native plant and animal species, and degrade our biological resources. Aggressive invaders reduce the amount of light, water, nutrients and space available to native species. Some cause increased erosion along stream banks, shorelines and roadsides. Some exotics hybridize with related native plant species, resulting in changes to a population's genetic makeup; others have been found to harbor plant pathogens, which can affect both native and non-native plants, including ornamentals. Others contain toxins that may be lethal humans and other animals. Some invasive plants compete with and replace rare and endangered species and encroach upon their limited habitat. Other problems include disruption of native plant-pollinator relationships, tree and shrub mortality due to girdling, reduced establishment of native tree and shrub seedlings, reduction in the amount of space, water, sunlight and nutrients that would be available to native species, and altered fire

regimes. Invasive plants also cause economic losses and expenditures each year for agriculture, forestry, and roadside management.

Our native fauna, including insects, birds, mammals, reptiles, fish and other animals, is dependent on native plants for food and shelter. While some animals can feed on a wide number of plant species, others are highly specialized and may be restricted to feeding on several or a single plant species. As exotic plants replace our native flora, fewer host plants are available to provide the necessary nutrition for our native wildlife. In some cases, invasive plants replace nutritious native plant foods with lower quality sources. Each exotic plant is one less native host plant for our native insects, vertebrates and other organisms that are dependent upon them.

It is important to document the spread of invasive exotic plants into natural areas. When invaders are found outside of landscape plantings, they should be recorded and voucher specimens should be collected for donation to a herbarium.

To reduce invasive plant invasions, we must approach the problem in a variety of ways: stop planting them, prevent accidental introductions, manage existing infestations, minimize disturbance to forests, wetlands, and other natural communities, and learn to work with (rather than against) natural systems and cycles.

**Rank 1. Severe Threat: Exotic plant species that have invasive characteristics and spread readily into native plant communities, displacing native vegetation.**

<b>Scientific Name</b>	<b>Common Name</b>
Ailanthus altissima (Mill.) Swingle	Tree of Heaven
Albizia julibrissin Durz.	Mimosa
Alliaria petiolata (Bieb.) Cavara & Grande	Garlic-mustard
Alternanthera philoxeroides (Mart.) Griseb.	Alligatorweed
Celastrus orbiculatus Thunb.	Asian bittersweet
Elaeagnus umbellata var. parvifolia	Spring silverberry, Autumn olive
Hedera helix var. helix	English ivy
Hydrilla verticillata (L.f.) Royle	Hydrilla
Lespedeza bicolor Turczaninow	Bicolor lespedeza
Lespedeza cuneata (Dum.-Cours.) G. Don	Sericea lespedeza
Ligustrum sinense Lour.	Chinese privet
Lonicera fragrantissima Lindl. & Paxton	Fragrant honeysuckle
Lonicera japonica Thunb.	Japanese honeysuckle
Microstegium vimineum (Trin.) A. Camus	Japanese stilt-grass
Murdannia keisak (Hassk.) Hand.-Mazz.	Asian spiderwort
Myriophyllum aquaticum (Vell.) Verdc.	Parrotfeather
Paulownia tomentosa (Thunb.) Sieb.& Zucc. ex Steud.	Princess tree
Persicaria perfoliata (Linnaeus) H. Gross (=Polygonum perfoliatum L.)	Mile-a-minute vine
Phragmites australis (Cav.) Trin. ssp. australis	Common reed
Pueraria montana var. lobata	Kudzu

**Scientific Name**

*Pyrus calleryana* Decne.  
*Reynoutria japonica* Houttuyn (*Polygonum cuspidatum*)  
*Rosa multiflora* Thunb.  
*Salvinia molesta* Mitchell  
*Vitex rotundifolia* L.f.  
*Wisteria sinensis* (Sims) DC

**Common Name**

Bradford pear  
Japanese knotweed  
Multiflora rose  
Aquarium water-moss  
Beach vitex  
Chinese wisteria

**Rank 2 Significant Threat: Exotic plant species that display some invasive characteristics, but do not appear to present as great a threat to native communities in NC as the species listed in Rank 1.**

<b>Scientific Name</b>	<b>Common Name</b>
<i>Ampelopsis brevipedunculata</i> (Maxim.) Trautv.	Porcelain-berry
<i>Arthraxon hispidus</i> var. <i>hispidus</i>	Basket grass, Hairy jointgrass
<i>Bambusa</i> spp.	Exotic bamboo
<i>Berberis thunbergii</i> DC	Japanese barberry
<i>Broussonetia papyrifera</i> (L.) L'Her. ex Vent.	Paper mulberry
<i>Cardiospermum halicacabum</i> L.	Balloonvine
<i>Cayratia japonica</i> (Thunb. ex Murray) Gagnep.	Bushkiller
<i>Centaurea stoebe</i> ssp. <i>micranthos</i> ( <i>Centaurea biebersteinii</i> )	Spotted knapweed
<i>Citrus trifoliata</i> ( <i>Poncirus trifoliata</i> )	Hardy-Orange
<i>Clematis terniflora</i> DC (=C. <i>dioscoreifolia</i> )	Leatherleaf clematis
<i>Conium maculatum</i> L.	Poison hemlock
<i>Dioscorea polystachya</i> ( <i>Dioscorea oppositifolia</i> )	Air-potato, Chinese yam
<i>Eichhornia crassipes</i> (Mart.) Solms	Water-hyacinth
<i>Euonymus alatus</i>	Burning bush, Winged Euonymus
<i>Euonymus fortunei</i> (Turcz.) Hand. – Mazz.	Winter creeper
<i>Ficaria verna</i> ssp. <i>ficariiformis</i> (F.W. Schultz) B. Walln. (=Ranunculus <i>ficaria</i> )	Lesser Celandine
<i>Glechoma hederacea</i> L.	Gill-over-the-ground, ground ivy
<i>Humulus japonicus</i> Siebold & Zuccarini	Japanese Hops
<i>Lamium purpureum</i> L.	Henbit
<i>Ligustrum japonicum</i> Thunb.	Japanese privet
<i>Ligustrum vulgare</i> L.	Common privet
<i>Lonicera</i> × <i>bella</i> [ <i>L. morrowii</i> × <i>tatarica</i> ]	Hybrid Bush Honeysuckle
<i>Lonicera maackii</i> (Rupr.) Maxim.	Amur bush honeysuckle
<i>Lonicera morrowii</i> A. Gray	Morrow's bush honeysuckle
<i>Lonicera standishii</i> Jaques	Standish's Honeysuckle
<i>Lygodium japonicum</i> (Thunb. ex Murr.) Sw.	Japanese climbing fern
<i>Lythrum salicaria</i> L.	Purple loosestrife
<i>Mahonia bealei</i>	Leatherleaf Mahonia, Oregon grape
<i>Miscanthus sinensis</i> Andersson	Chinese silver grass
<i>Morus alba</i> L.	White mulberry
<i>Myriophyllum spicatum</i> Komarov	Eurasian watermilfoil
<i>Nandina domestica</i> Thunb.	Nandina
<i>Persicaria longiseta</i> (de Bruijn) Moldenke (=Polygonum <i>caespitosum</i> Blume)	Oriental ladies-thumb
<i>Persicaria maculosa</i> S.F. Gray (=Polygonum <i>persicaria</i> L.)	Lady's-thumb
<i>Phyllostachys</i> spp.	Exotic bamboo

**Scientific Name**

Pseudosasa japonica (Sieb. & Zucc. ex Steud.)  
Makino ex Nakai  
Rhodotypos scandens (Thunb.)  
Rubus phoenicolasius Maxim.  
Securigera varia (Coronilla varia)  
Solanum viarum Dunal  
Sorghum halepense (L.) Pers.  
Spiraea japonica L.f.  
Stellaria media (L.) Vill.  
Veronica hederifolia L.  
Vinca major L.  
Vinca minor L.  
Wisteria floribunda (Willd.) DC  
Xanthium strumarium L.  
Youngia japonica (L.) DC.

**Common Name**

Arrow bamboo  
Makino jetbead  
Wineberry  
Crown vetch  
Tropical soda apple  
Johnson grass  
Japanese spiraea  
Common chickweed  
Ivyleaf speedwell  
Bigleaf periwinkle  
Common periwinkle  
Japanese Wisteria  
Common cocklebur  
Oriental false hawksbeard

**Rank 3 Lesser Threat: Exotic plant species that spread into or around disturbed areas, and are presently considered a low threat to native plant communities in NC.**

<b>Scientific Name</b>	<b>Common Name</b>
Ajuga reptans L.	Bugleweed
Allium vineale L.	Field garlic
Artemisia vulgaris L.	Mugwort, common wormwood
Arundo donax L.	Giant reed
Baccharis halimifolia L.*	Silverling, groundsel tree
Bromus catharticus var. catharticus	Bromegrass, Rescue grass
Bromus commutatus Schrad.	Meadow brome
Bromus japonicus Thunb. ex Murray	Japanese bromegrass
Bromus secalinus L.	Rye brome
Bromus tectorum L.	Thatch bromegrass, Cheat grass
Buddleja davidii	Butterfly-bush
Cichorium intybus	Chicory
Leucanthemum vulgare (Chrysanthemum leucanthemum)	Ox-eye daisy
Cirsium vulgare (Savi) Ten.	Bull thistle
Daucus carota L.	Wild carrot, Queen Anne's-lace
Dipsacus fullonum L.	Fuller's teasel
Egeria densa Planch.	Brazilian elodea, Brazilian water-weed
Fatoua villosa (Thunb.) Nakai	Hairy crabweed
Schedonorus pratensis (Festuca pratensis)	Meadow fescue
Ipomoea quamoclit L.	Cypressvine morningglory
Kummerowia stipulacea (Maxim.)	Makino Korean clover
Kummerowia striata (Thunb.) Schindl.	Japanese clover
Liriope muscari (Dcne.) Bailey	Liriope, Lilyturf
Lysimachia nummularia L.	Moneywort, creeping Jenny
Melilotus albus Medik.	White sweet clover
Melilotus officinalis (L.) Lam.	Yellow sweet clover
Najas minor All.	Brittle naiad
Pastinaca sativa L.	Wild parsnip
Perilla frutescens (L.) Britt.	Beefsteakplant
Populus alba L.	White poplar
Senecio vulgaris L.	Ragwort
Setaria faberi R.A.W. Herrm.	Nodding foxtail-grass
Triadica sebifera (L.) Small	Chinese tallowtree
Tussilago farfara L.	Coltsfoot
Vicia sativa ssp. sativa and Vicia sativa ssp. nigra	Garden vetch, Narrowleaf vetch

\**Baccharis halimifolia* is native to marshes and marsh borders on the outer Coastal Plain in NC, but has spread along road corridors to invade disturbed areas in the Piedmont, which is not considered its native habitat.

**Watch List A: Exotic plants that naturalize and may become a problem in the future; includes species that are or could become widespread in North Carolina. At this time, more information is needed.**

<b>Scientific Name</b>	<b>Common Name</b>
Arum italicum ssp. italicum	Arum, Italian lords and ladies
Buglossoides arvensis (L.) I.M. Johnston (L.) I.M.	Corn gromwell
Bupleurum rotundifolium L.	Hound's-ear, hare's-ear
Centaurea cyanus L.	Cornflower
Cyperus entrerianus Böckler	Deeprooted sedge
Echium vulgare L.	Viper's bugloss
Elaeagnus pungens Thunb.	Thorny olive
Hibiscus syriacus L.	Rose of Sharon
Hypericum perforatum L.	St. John's-wort
Ornithogalum umbellatum L.	Star of Bethlehem
Solanum dulcamara L.	Climbing nightshade
Verbascum thapsus L.	Common mullein

**Watch List B: Exotic plant species that cause problems in adjacent states but have not yet been reported to cause problems in NC.**

<b>Scientific Name</b>	<b>Common Name</b>
Acer platanoides L.	Norway maple
Akebia quinata (Houtt.) Dcne.	Fiveleaf akebia
Bromus inermis Leyss.	Smooth bromegrass
Carduus nutans L.	Musk thistle
Carex kobomugi Ohwi	Japanese sedge
Cirsium arvense (L.) Scop.	Canada thistle
Commelina benghalensis L.	Bengal dayflower
Elaeagnus pungens Thunb.	Thorny-olive
Hesperis matronalis L.	Dame's rocket
Imperata cylindrica (Linnaeus) Palisot de Beauvois	Cogongrass
Iris pseudacorus	Yellow flag, Water flag
Lonicera tatarica L.	Tartarian honeysuckle
Ludwigia grandiflora ssp. grandiflora (Michx) Greuter & Burdet	Creeping waterprimrose
Melia azedarach L.	Chinaberry
Nymphoides cristata (Roxburgh) Kuntze	Crested floating heart
Pistia stratiotes L.	Water-lettuce
Potamogeton crispus L.	Curly pondweed
Quercus acutissima Carruthers	Sawtooth oak
Rhamnus cathartica L.	European buckthorn
Setaria italica (L.) P. Beauv.	Foxtail-millet
Setaria verticillata (L.) Beauv.	Bur-foxtail

**Scientific Name**

Setaria viridis var. viridis  
Stachys floridana Shuttlw. ex Benth.  
Torilis arvensis (Huds.) Link  
Tragopogon dubius Scop.  
Trapa natans L.  
Tribulus terrestris L.  
Xanthium spinosum L.

**Common Name**

Green bristle-grass, Green millet  
Florida Hedge nettle  
Spreading hedge-parsley  
Yellow goat's-beard  
Water-chestnut  
Puncturevine  
Spiny cocklebur

## Attachment C

### Integrated Use/Impact Minimization Zone (IMZ) Guidelines

*Blewett Falls IMZ exception: the only portion of the IMZ Guidelines that pertains to Belwett Falls Lake is in regards to shoreline stabilization. Structures are not permitted.*

Impact Minimization Zones (IMZs) are shoreline areas with aquatic, terrestrial, or cultural resources or habitat characteristics that need protection to avoid degradation of the area. Duke Energy will carefully review proposed development within the IMZs, and, in some instances, permits may be denied or modified so as to minimize the impact to environmental resources. There may be special considerations in an area that is contained in an IMZ that would preclude disturbance of any type. Approval of disturbance activities and the plan to minimize the impact of the proposed disturbance will be decided on a case-by-case basis.

Any proposed disturbance must include an impact minimization plan that contains measures to avoid, minimize or mitigate impacts to important environmental features within the IMZ.

Activities in the IMZ are subject to the following restrictions:

- Disturbance of an area within an IMZ may be prohibited.
- Construction of boathouses and docks will not be allowed in the shallow upper ends of coves or lake arms where water depths are considered to be not navigable in normal operating ranges of the reservoir.
- Removal of woody debris will not be allowed without the express written permission of Duke Energy. Submerged trunks 10 inches or greater in diameter are considered high-quality fish habitat. Removal of woody debris may require mitigation by lessees, unless the debris constitutes a navigational or safety hazard.
- Construction of new docks will require the design considerations for a fish-friendly pier.
- Construction activities are not allowed except with the express written permission of Duke Energy and must be completed by a specified date.
- Land-disturbing activities are not allowed except with the express written permission of Duke Energy and must be completed by a specified date.
- No dredging is allowed in IMZs.
- Permitted facilities are restricted to no more than 800 square feet of surface area.
- Only shoreline stabilization through the use of natural stone and native plant species is allowed in IMZs.

- Piers may not exceed 75 feet in total length or one-third of the total width of a cove at Normal Full Pond Elevation, whichever is less, and should not extend waterward any further than necessary to access a water depth of 6 feet. Duke Energy may disallow all facilities if the cove is less than 45 feet wide.

Leased properties are subject to the Guidelines. The following practices are encouraged in the IMZs and will be given special consideration by Duke Energy staff:

- If structures are permitted, they should incorporate additional structure complexity under piers to create additional fish habitat and use fish friendly pier design considerations.
- Walkways must be 3 feet above the Normal Full Pond Elevation and no more than 5 feet wide to minimize disturbance to existing vegetation.
- Placement of such structures should also consider orientation of the sun and the potential shading of an existing aquatic vegetation bed.
- The design of all structures should be developed such that they avoid environmentally sensitive habitat within the IMZ. Environmentally sensitive habitat includes the shallow end of coves or lake arms, known spawning areas for bedding fish, areas where tributaries enter the lake, and habitat that has been documented to be utilized by any rare, threatened or endangered species.

## **Attachment D**

### **Multi-slip Facility Application Process**

#### **Application Process for Construction or Additions**

Construction of or additions to multi-slip facilities within the Project Boundary requires Licensee approval, resource agency consultation, and possibly approval by the Federal Energy Regulatory Commission (FERC) before any activities begin. The process is summarized below; contact Duke Energy for the complete application and instructions for completing the application process.

#### **Step 1: Initial Proposal review**

Contact Duke Energy and present proposal. Proposal should include enough detail for Duke Energy to understand the scope of the proposed activity and determine the merits of continuing the approval process.

#### **Step 2: Agency Consultation**

If approved to proceed by Duke Energy, the applicant must consult with the resource agencies about the proposed activity and resolve agency comments and recommendations.

#### **Step 3: Application Submittal**

The applicant submits a complete application reflecting the comments of the resource agencies. Depending upon what is being requested, Duke Energy may submit the application to FERC for approval. If the application is approved, Duke Energy will provide written authorization for the activity to proceed.

#### **Step 4: Facility Development**

Once construction is complete, the applicant provides as-built drawing and Duke Energy inspects the completed facility to ensure it was built as approved.