

## **CLASSIFICATIONS AND LAKE USE RESTRICTIONS FOR THE 2006 LAKE KEOWEE SMP MAPS (Notes 1 and 2)**

**I. Environmental** – Vegetated areas or cove heads with stream confluence- These types of shorelines exist where either of the following two criteria are met:

Stable, wetland-type habitat and emergent vegetation (any portion of which is at least 5 horizontal ft wide) composes > 50% of the area between the minimum lakeward distance and the maximum lakeward distance of the vegetation for a linear distance of at least 100 ft (Figure 1). (Note: Common types of emergent vegetation in environmental areas may include, but are not limited to: black willow (*Salix nigra*), alder (*Alnus serrulata*), buttonbush (*Cephalanthus occidentalis*), cattail (*Typha latifolia*), and rushes (*Juncus effusus*)).

Intermittent or permanent streams enter the upper ends (i.e., heads) of shallow coves (with or lacking vegetation). For cove heads with a stream but lacking emergent vegetation, the environmental classification extends to the edge of the established sedimentation delta plus 50 ft or, in the absence of an established delta, 50 ft on each side of the intersection of the stream centerline and the full pond contour.

While many wildlife species use environmental areas, the primary importance of these areas is to provide spawning, rearing, and nursery habitat for fish, and rearing, nursery and adult habitat for amphibians, reptiles and birds.

**LAKE USE RESTRICTIONS – No removal of vegetation, construction, excavation or shoreline stabilization inside the Project Boundaries.**

**II. Natural** – These areas have characteristics (i.e., shallow water, isolated berms, significant cultural resources or significant terrestrial habitat areas) that make most types of development inside the Project Boundaries undesirable from an overall lake management standpoint. Natural areas exist where any of the following four criteria are met:

Large areas (e.g., > 500 ft of continuous shoreline length) where water depth would be < 3 ft at a distance of 150 ft or more from the natural eroded shoreline with the reservoir level 3 ft below full pond, since extensive dredging would be needed to support private boating access.

Important terrestrial habitat areas that warrant protection from activities that could limit the area's ability to provide significant habitat important for wildlife.

Significant cultural resource areas (i.e., areas within the Project Boundaries known to include culturally significant artifacts) that warrant protection from activities that could alter the archaeological integrity of the site.

Narrow isolated berms within the Project Boundaries. These isolated berms characteristically are higher in elevation than the adjoining areas landward of the reservoir and lack the vegetation along the shoreline necessary to be classified as

Environmental. Typically the landward areas adjoining the isolated berm include significant low-lying areas characteristic of floodplains, Environmental areas or wetlands.

**LAKE USE RESTRICTIONS – No removal of vegetation, construction or excavation inside the Project Boundaries.** (*Notes: Shoreline stabilization is allowed within the Project Boundaries provided the stabilization adheres to the Shoreline Stabilization Technique Selection Process. Isolated berms typically have the same Lake Use Restrictions as other areas classified as Natural. In instances where these berms are not isolated by low-lying areas characteristic of floodplains, Environmental areas or wetlands within the Project Boundaries, the Lake Services Representative may allow Residential Facilities to extend into the reservoir provided there is no other practicable alternative.*)

**III. Impact Minimization Zones (IMZ)** (*Note 2*) – Project lands and waters that have specifically-identified importance on a given lake from a scenic, environmental, or cultural standpoint but protection of those important values does not necessarily preclude private, commercial, business or industrial access to the lake. Applicants must first try to avoid IMZs, but if complete avoidance is not a *practicable alternative*, then for areas identified as having stable sand, gravel or cobble substrates on Lake Keowee the following restrictions apply:

**LAKE USE RESTRICTIONS – No boat ramps except those required for Public Recreation and no excavation. Construction within these areas may have specific mitigation requirements imposed by the federal, state or local resource agencies. Shoreline stabilization within the Project Boundaries must adhere to the Shoreline Stabilization Technique Selection Process.**

**IV. Clay** (*Note 3*)– Project lands and waters where the predominant substrate is composed mostly (> 50%) of clay.

**V. Commercial Marina** (*Note 3*) – Project lands and waters where boats can be launched, retrieved or moored, **and** where provisions for food services, convenience retailing such as petroleum sales, wet and dry storage of watercraft and other activities customarily associated with marinas, private recreation areas and yacht clubs take place.

**LAKE USE RESTRICTIONS – Per the SMG- New Commercial Marina facilities will not be authorized in areas within a half-mile radius of an existing Commercial Marina facility nor areas where more than fifty percent of the shoreline within a half-mile radius is residentially developed.** (*Note: This does not preclude expansion of existing facilities identified as True Public Marinas (TPM). TPMs provide public access similar to Public Recreation Facilities and therefore, expansion of existing TPMs may be exempted from adhering to certain requirements limiting expansion of existing commercial facilities.*)

**VI. Residential Marina** (Note 3) – Project lands and waters where boats can be launched, retrieved or moored for the purpose of providing private access to the lake for specific residential properties including:

Multi-family dwellings (e.g., apartments, townhouses, condominiums).

Long-term campgrounds (typically those that lease campsites for more than 14 consecutive days).

Subdivision access lots that provide boating access for owners of any residential lots that don't have project frontage.

**LAKE USE RESTRICTIONS – No Commercial Marina Facilities.**

**VII. Residential** (Note 3) – Project lands and waters occupied by private facilities for project-front landowners, none of which can have multi-family dwellings. This classification may include, among other things, piers, boathouses, boatshelters, boat docks, floats, and existing boat ramps.

**LAKE USE RESTRICTIONS – No Commercial Marina or new Residential Marina Facilities.**

**VIII. Business/Industrial** – Project lands and waters that are typically used by private businesses but which have little to no effect on boating. Examples include but are not limited to, business staging areas, shoreline associated with manufacturing operations, golf courses, law enforcement facilities, sand mining operations, etc.

**LAKE USE RESTRICTIONS – No facilities that have an appreciable effect on boating (e.g., No marina facilities).**

**IX. Project Operations** (Note 2) – Project lands and waters associated with hydro power production including but not limited to- dams, dikes, powerhouses and other hydro plant properties. **Downstream Clear Zones (DCZ)** are also part of this classification and they include project lands and waters immediately downstream of all operating hydro stations that are potentially subject to rapid and significant variations in flow rates based on plant operations. As a minimum, DCZs will extend 1000 ft downstream from the dam, to the downstream edge of the hydro plant property or to a bridge crossing that is within 2500 ft of the dam, whichever provides for a greater distance. DCZs may extend beyond this minimum downstream length where deemed necessary by Duke Energy. DCZs are identified on the SMP maps by cross-hatches.

**LAKE USE RESTRICTIONS – No new or expanded Residential Marina, Commercial Marina or Residential Facilities.** (Note: Any existing facilities previously approved by DE-LS within a DCZ will be considered for potential rebuild applications, provided that no other practicable alternative exists.)

**X. Public Recreation** (Note 3) – Project lands and waters occupied by facilities supporting various public recreational amenities. Examples of the public recreation

classification include Duke-owned public access areas, and state, district, county and city parks that adjoin the Project Boundaries.

**LAKE USE RESTRICTIONS – No non-project uses, except Public Infrastructure.** *(Note: Any lake use that is necessary to maintain or enhance the public recreation facilities is considered a project use, including public recreation facilities that may be provided by commercial vendors at Duke-owned access areas or state, district, county or city parks.)*

**XI. Public Infrastructure** *(Note 2)* – Project lands and waters occupied by public, non-recreational facilities supporting regional needs. This type of facility may include but is not limited to- overhead electric transmission line corridors; submarine utility line corridors (water, sewer, gasoline, natural gas, oil, phone, electric, etc.); regional power generation facilities; rights-of-way for public bridges, causeways, roads, water intakes, effluent discharges, etc. Public infrastructure applicants/permittees normally have the power of eminent domain for their specific requested lake use.

**LAKE USE RESTRICTIONS – No new or expanded Residential Marina, Commercial Marina or Residential Facilities.** *(Note: Any existing facilities previously approved by DE-LS within the Public Infrastructure right-of-way will be considered for potential rebuild applications, provided that no other practicable alternative exists.)*

### **Notes**

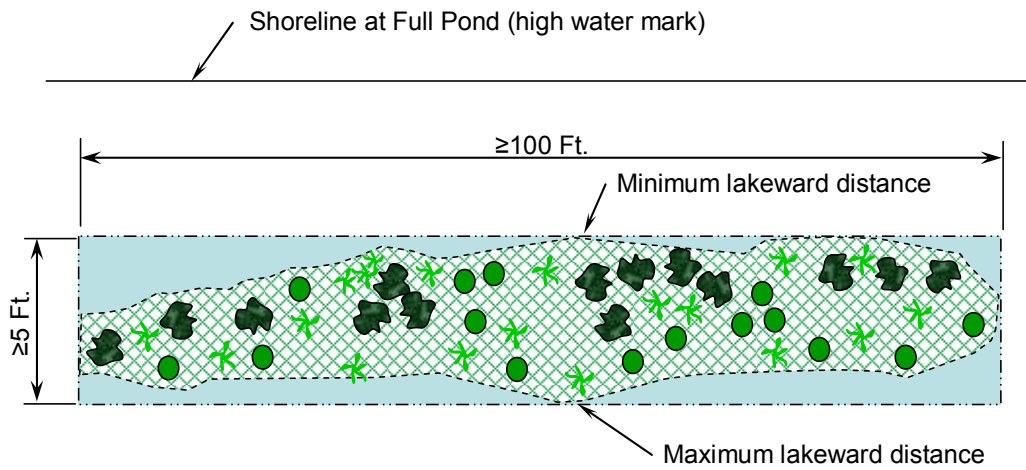
1. Public-need projects where the applicant has the power of eminent domain can be exempted from the listed lake use restrictions provided there is no other acceptable alternative (similar to practicable alternative, except it allows more consideration for economics of alternatives and desires of the applicant). Also note that the shoreline classifications and associated lake use restrictions are considered to generally apply to the Project Boundaries line and the area extending lakeward and perpendicular to the Project Boundaries line including the shoreline for a minimum distance of one-third the cove width. Where restrictive classifications (e.g., Environmental, Natural, Impact Minimization Zones, etc.) wrap around the heads of coves, the lake use restrictions will also apply to the entire cove width in the wrapped area.
2. At times, lake use permit applicants will be required to pursue practicable alternatives to their desired application to avoid impacting important hydro project values. An alternative is not considered practicable if choosing it over the desired option would result in any of the following:
  - a. Violation of any applicable permitting criteria or lake use restriction.
  - b. Requiring the applicant to dredge the lake bed in order to use the requested facility, whereas dredging would not be required if some allowance was made for crossing into the restricted area.
  - c. Modification of the desired facility to the point that the resulting structure would be of very limited usefulness.


- d. Elimination of the desired type of lake access.
- 3. Final SMP maps include an Existing Use and Future Use classification for the Commercial Marina, Residential Marina, Residential and Public Recreation classifications. The appropriate Future Use classification is applied to all undeveloped shoreline or shoreline identified as Clay and not included in one of the Existing Use classifications.
- 4. Cultural resource data may be included in a data layer that is not visible in the SMP maps. This is necessary because of the sensitive nature of the data and the need to protect the integrity of these sites as required by Section 106 of the National Historic Preservation Act. Lake use permitting activities may have additional mitigation requirements or the activity may not be allowed.

Figure 1

### ENVIRONMENTAL CLASSIFICATION EXAMPLE

Application of the Environmental Criteria to a Theoretical Stand of Vegetation Inside the Project Boundaries



The area of the polygon surrounding the vegetation  must be >50% of the area of the rectangle surrounding the maximum extent of the vegetation. 