



Lake Anna Shoreline

Packet for Shoreline Stabilization/Landscaping

Updated June 19, 2015

This packet is used for:

- The installation of shoreline stabilization or landscaping measures, such as a Beach, Rip Rap and Bulkheads or a non-structural measure (where land disturbance is under 10,000 square feet)

The Packet for Lake Structures has the following items:

- *Lake Anna Shoreline Checklist for Shoreline Stabilization/Landscaping*
- *Requirements for Site Plan Approval*
- *Owners Consent and Responsible Land Disturber Certification*
- Copy of *Lake Anna Shoreline Use and Design Standards*, directly from ordinance

The applicant must submit the following items for County approved:

- Completed *Development Permit: Zoning and Building*
- Signed and completed Lake Anna Shoreline Checklist for Shoreline Stabilization
- Construction and Use Agreement from Dominion Power that shows approval
- Site plan, **a separate copy** from the one submitted to Dominion Power, that follows **all** the requirements listed in this packet

After submission:

- Planning staff will review the site plan, checklist and forms for zoning approval
- Once there is zoning approval, the applicant will be issued a building permit to begin work
- Inspection and Code Enforcement staff will confirm code compliance once work is completed



Lake Anna Shoreline Checklist:
For Shoreline Stabilization/Landscaping
Updated June 19, 2015

I. General Information

Type of Project (*circle all that apply*): Rip Rap Bulkhead Other

Property Address: _____

Tax Map Number: _____

Name and Address of Owner: _____

Name and Address of Contractor (if different): _____

Date Submitted: _____ Subdivision (if applicable): _____

This checklist must be completed, signed and submitted with the application. The information contained in this checklist reflects the contents of the Shoreline Ordinance as of April 2, 2007. The applicant is responsible for insuring that no revisions to the Ordinance have occurred since preparation of this document.

II. Approvals obtained

- Step 1:** ___ Virginia Dominion Power
- Step 2:** ___ Louisa County Zoning Administrator
- Step 3:** ___ Louisa County Building Official

III. Checklist

(✓ = Present & adequate, N/A = Not applicable)

Shoreline Stabilization:

Shoreline that is disturbed shall be permanently stabilized by one of the methods recommended below. (see next page for landscaping)

-Check all that apply-

___ **Non-structural** – Vegetated stabilization methods are strongly encouraged. (Letter required from the Thomas Jefferson Soil Conservation and Water District (TJSCWD))

___ **Rip Rap** – The placement of rock or similar material along the shoreline

Requirement 1: ___ Geotextile fabrics must be installed beneath the Rip Rap material

Requirement 2: ___ Disturbed shoreline must be permanently stabilized

- ___ **Bulkhead** – The installation of a retain wall structure along the shoreline
 - Requirement 1:** ___ Geotextile fabrics must be installed beneath the Bulkhead
 - Requirement 2:** ___ Disturbed shoreline must be permanently stabilized
- ___ **Other structural measure** – Letter required from TJSCWD.

Landscaping:

-Check if applies-

- ___ **Beach** – The installation of a retaining structure along the upper side of the beach to prevent runoff from carrying sand into the lake.

Construction and/or installation details of the proposed structure are required for Shoreline Site Plan approval.

The standards established by Dominion shall govern dredging, excavation, and filling along with other applicable federal, state and local codes, unless otherwise noted

IV. Read and Sign

In representing the above referenced property owner(s), submitting this shoreline development plan for approval, I hereby state that, to the best of my knowledge, the attached plan contains all information required by this checklist.

Signature of person completing checklist

Date

Printed Name

Daytime Phone number

Requirements for Site Plan Approval

For Shoreline Stabilization/Landscaping

The installation of shoreline stabilization/landscaping, such as Rip Rap or Bulkhead, or a Beach.

- ___ The applicant must submit a plan that has the following information and is legibly drawn on a ****single sheet****:
- ___ The plan ***MUST*** be a separate copy than the one approved by Dominion Power
- ___ If applicant is using a non-structural stabilization method or a structural method other than rip rap or bulkheads, a letter of support is required from the Thomas Jefferson Soil and Water Conservation District.

The plan must have the following information to be approved

Format

- ___ Drawn to scale with all structural measures and features depicted proportionately

Land

- ___ Tax map number
- ___ Lot lines and extension lines from the lot to the water. (Extension lines are typically found on a subdivision plat)
- ___ Dominion Power shoreline (shown and labeled)

Structures

- ___ Detail drawing with dimensions (shown and labeled) of all proposed measures, including the width, height and length and structural components
- ___ Location of all proposed structural measures
- ___ Distances (shown and labeled) from the adjacent property extension lines
- ___ Depictions of other structures or features along the shoreline
- ___ Indication that geotextile fabrics will be installed underneath riprap or bulkhead
- ___ Indication that a beach will be retained on all sides to prevent runoff from causing sand to run off into lake

Other comments

- If the site plan lacks the above information, a letter of revision will be mailed to the applicant and staff will require an updated plan that meets the above standards
- Free hand drawings are ***HIGHLY DISCOURAGED***
- The use of straightedges and rulers is **strongly encouraged**
- The use of computer drawing programs is optimal but **not required**



COUNTY OF LOUISA

OWNERS CONSENT TO ENTER PROPERTY

I HEREBY GRANT THE COUNTY OF LOUISA THE RIGHT TO ENTER UPON THE SUBJECT PROPERTY PERIODICALLY TO ENSURE COMPLIANCE.

THE CURRENT PROPERTY OWNER MUST SIGN THIS APPLICATION.

Owner Name (Print): _____

Property Location:

Tax Map Reference: _____ Lot _____ Subdivision _____

Street Address: _____

Signature of Landowner: _____ Date: _____

Mailing Address: _____

RESPONSIBLE LAND DISTURBER

Responsible Land Disturber (Print Name) _____

Signature _____ Date: _____

Certificate Number: _____ ExpirationDate: _____

COMMENTS:

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DIVISION 5. - LAKE ANNA SHORELINE USE AND DESIGN STANDARDS

Sec. 86-455. - Statement of intent; policy guidance.

The intent of this division is to encourage the public's health, safety, and welfare with equitable and enforceable conditions for development along the Lake Anna shoreline, including the w-Waste Heat Treatment facility (WHTF). These use and design standards are intended to protect the shoreland, enhance public safety, and advance the public's general welfare and quality of life. The Lake Anna shoreline use and design standards are adopted under the general provisions of the zoning ordinance.

Unless specifically stated otherwise, the provisions set forth in this division do not apply to structures built, or otherwise approved by the County or Dominion, prior to the adoption of these standards. Non-conforming structures shall be exempt from these standards unless the structure is expanded or if the structure is replaced more than two years after being removed. A structure for the purposes of this division includes, but is not limited to, fixed or floating docks, piers, boardwalks, slips, accessory buildings, or other types of development on, or attached to, Dominion's property.

The standards set forth in this division are mandatory unless a waiver is granted. Applications that meet all of the ordinance standards will be reviewed administratively by staff. Applications should include site plans that meet the criteria included in the "Lake Anna Shoreline Site Plan Requirements Checklist", to include an approval statement by Dominion for proposed development on Dominion's shoreland or shoreline. Where criteria are not clearly illustrated on a site plan, a survey shall be required to demonstrate compliance with the ordinance, or in order to process special exception requests. If a waiver is requested, then the application will be reviewed by staff (per section 86-22 of this ordinance). If a waiver is denied, applicants may resubmit a revised waiver at any time or appeal staff's decision to the board of supervisors.

(Res. of 12-5-05(05.162); Res. of 4-2-07(07.058); Res. of 6-7-10(10.134); Res. of 8-6-12(2012-138))
(Res. of 12-5-05(05.162); Res. of 4-2-07(07.058))

Sec. 86-455.1. - Use and design standards.

- (a) *Shoreland Protection / Erosion and Sediment Control.* This section is intended to mitigate the impacts to the shoreland of residential and commercial development (including common areas) along the Lake Anna shoreland due to construction activities.

These standards address two main types of erosion, upland erosion and shoreline erosion. These measures are intended to mitigate the impacts of land disturbance above and beyond the scope of the Louisa County Erosion and Sediment Control Ordinance (Code of Louisa County, VA, chapter 38, article II). The measures also recommend approved methods of shoreline stabilization.

For the purposes of this ordinance, land disturbance is defined consistent with the definition provided in the Erosion and Sediment Control Ordinance: any land change which may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands in the commonwealth, including, but not limited to, clearing, grading, excavating, transporting and filling of land.

- (1) *Upland erosion.* Land disturbances over 10,000 square feet (SF) along the Lake Anna waterfront shall require a Lake Anna shoreline agreement in lieu of an erosion and sediment control plan or an erosion and sediment control plan that implements one of the recommended methods, or equivalent measures, as approved by the Thomas Jefferson Soil and Water Conservation District (TJSWCD). The agreement in lieu requires the implementation of one of several recommended methods of shoreland protection measures depending on the individual site or owner preference (where it would be more environmentally beneficial).

Any shoreland that is disturbed shall be permanently stabilized. Permanently stabilized vegetation is ground cover that is uniform, mature enough to survive, and will inhibit erosion. Sand beaches shall be permitted if they are properly retained.

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Shoreland protection measures may include a 100-foot wide natural, forested buffer along the shoreline. A natural, forested buffer for the purposes of this section is an indigenous, undisturbed, riparian forest with ground cover, shrub, and tree canopy layers.

Alternative protection measures may also be used. The following slopes shall be calculated within the Dominion property boundary as an average slope between a property's boundary lines. The specifications outlined below are a summary of those outlined in the Lake Anna shoreline agreement in lieu.

3—15 percent = a vegetated diversion (18 inches minimum in height) with compacted soil and a minimum base width of 4.5 feet. This diversion shall consist of a berm and a swale and be contoured with the property. The swale shall be designed to carry flows at a minimal slope to a rock outlet located at a defined low point. Vegetation on the diversion should include native grasses or shrubs, with other non-invasive ornamental plantings as desired;

>15 percent = the above specified diversion with a 25-foot wide undisturbed, vegetated area along the shoreline, measured horizontally from the water's edge (not to include pathway to lake structures).

Alternate control methods not listed above may be used pending review and approval by the Thomas Jefferson Soil and Water Conservation District.

Applications of fertilizers and herbicides are prohibited within the berm, swale, and buffer areas, and within 25 feet of the shoreline. Insecticides are strongly discouraged.

All of the above recommended control methods shall be maintained and repaired as necessary to remain permanently stabilized and in compliance with state and local erosion and sediment control regulations.

- (2) *Shoreline stabilization.* Shoreline erosion is exacerbated by wave action from boats on Lake Anna. Another cause of shoreline erosion, from the sheet flow of water across the land, is adequately addressed in the above section. Shoreline erosion not directly caused by land disturbance is not required to be stabilized, but is encouraged. Shoreline that is disturbed shall be permanently stabilized by one of the below recommended methods.

The use of non-structural, vegetated stabilization methods is strongly encouraged per the Lake Anna shoreline agreement in lieu. Structural methods are limited to rip-rap and bulkhead materials with geotextile fabrics unless otherwise approved by the Thomas Jefferson Soil and Water Conservation District.

Technical guidance for complying with the Lake Anna Shoreline Use and Design Standards is available through the Thomas Jefferson Soil and Water Conservation District.

A violation of this section shall be subject to the penalties set forth in the Code of Louisa County, VA, section 38-37, including, but not limited to, a \$1,000.00 fine per violation (each day of violation).

(b) *Safe navigation.*

- (1) Water access entrances and travel-ways into coves shall be at least 30 feet in width at navigable depth until the cove reaches a width of 90 feet or less. The one-third rule shall be the determining factor in any cove less than 90 feet in width. This standard applies to all choke points leading to, and within, the cove. A choke point is a narrowing of the cove that boats navigate through. Staff may grant a waiver (per section 86-22 of this ordinance) to this standard in extenuating circumstances due to water depth, topography, irregular shoreline, narrowness of cove, existing structures, and other existing conditions.
- (2) The navigable channel shall be clearly identified during site plan review.

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- (3) Structures shall not protrude into the water from the shoreline further than the following maximum lengths unless otherwise approved by a waiver or special exception.
- a. *Agricultural/residential district uses.* Structures shall not protrude more than one-third of the distance across the water from the shoreline, to a maximum of 150 feet. Structures proposed to exceed this limit require approval of a waiver or special exception. The travel-way must be a minimum of 30 feet consistent with the standards of subsection 86-455.2(b)(1) above.
 - b. *Commercial district and common area uses.* Structures shall not protrude more than one third of the distance across the water from the shoreline, to a maximum of 150 feet. Structures proposed to exceed this limit require approval of a waiver or special exception. The travel-way must be a minimum of 50 feet whenever serving common area launch facilities or commercial properties.
 - c. *Resort development and planned unit development uses.* The length of lake structures shall be included as part of the master plan submitted during the rezoning process. The standards set forth in this section should be used in the development of the master plan requirements regulating lake structures.

For the purposes of this section, the term shoreline shall refer to the boundary line, at normal pool, between land and the water.

- (4) In order to identify the protruding outline of all lake structures, existing and new, two-inch minimum diameter reflectors shall be affixed along the sides of the structure at intervals of ten feet. Reflectors shall be within one foot of both sides of each lakeside corner. Reflectors shall be placed no more than two feet above normal pool level (250 feet above mean sea level for the lake, 251 feet above mean sea level for the WHTF).

All lake structures shall be in full compliance with this safety standard by November 1, 2007.

- (5) If lake structures utilize light fixtures the following standards are recommended:
- a. Lights should have initial output less than 2,000 lumens (equivalent to 120 watt incandescent bulbs), or should be fitted with opaque shields to prevent direct visibility of the lamp to persons more than 50 feet beyond the structure.
 - b. Light specifications should meet International Dark-Sky Association (IDA) standards for either landscape or wall-mount style fixtures, or equivalent. Landscape fixtures should be under 2,000 lumens and partially shielded. Wall-mount fixtures should be fully shielded.
 - c. Solar lighting is encouraged.
- (6) The minimum travel-way between groups of dock slips shall be two times the length of the adjacent slip; if two slips are different sizes, the larger length shall be used. A fairway is an unobstructed access channel for entry to or exit from a moorage area.
- (7) Common areas.
- a. Common area ramps shall be constructed of reinforced concrete with a minimum thickness of six inches, and shall be a minimum distance of 75 feet from designated swimming areas.
 - b. Common areas are required to have a dry hydrant in a location to be determined on the site plan.
 - c. Common area boat ramps shall be placed or positioned to minimize wave interference from boats passing nearby through high concentration navigation choke points as determined by the county during site plan review (i.e., cove entrances, narrow channels, sharp bends, bridges, etc.).

(c) *Neighbor policies.*

- (1) A sign shall be posted at common area and commercial pier entrances summarizing alcohol and boating regulations in the state.

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(2) All site plans for new development must show shoreline building zones and extension lines to 150 feet into the water or one third of the cove, whichever is less.

(3) Structures.

a. District uses.

1. *Agricultural/residential*. The following is the maximum square footage (SF) permitted, excluding the area from land to the structure:*

(i) 0—54 linear feet of waterfront = no slip or piers**

(ii) 55—99 linear feet of waterfront = 10 SF per linear foot of waterfront

(iii) 100—300 linear feet of waterfront = 2,000 SF

(iv) Over 300 linear feet of waterfront = 3,000 SF

* Walkways shall not exceed 5 feet in width

** Parcels in existence prior to April 2, 2007 shall be limited to no more than 550 SF.

2. *Commercial and common areas*. The following is the maximum square footage (SF) permitted over water:

(i) 0—99 linear feet of waterfront = 90 SF per linear foot of shoreline

(ii) 100—500 linear feet of waterfront = 75 SF per linear foot of shoreline

(iii) > 500 linear feet of waterfront = 55 SF per linear foot of shoreline

3. *Resort development and planned*. If lake structures are included as part of the proffered conditions during the rezoning process, the maximum square footage shall be included. The standards set forth in this section should be used in the development of the proffered conditions regulating lake structures.

b. The maximum height of structures on land within the Dominion easement in all zoning districts shall be 20 feet for flat roofs and 28 feet for pitched roofs as measured from the lowest finished grade. Weathervanes and telecommunication antennas do not count against the structure's height.

The maximum height of structures *over the water* within the Dominion easement in all zoning districts shall be 20 feet for flat roofs and 28 feet for pitched roofs as measured from normal lake level (250 feet above mean sea level for the lake, 251 feet above mean sea level for the WHTF). Weathervanes and telecommunication antennas do not count against the structure's height.

c. Waterfront construction may have a second story but it may not be enclosed. Screened areas are not considered to be enclosed. Maximum height limits shall apply.

Structures that will exceed these standards shall require a waiver from staff. (per section 86-22 of this ordinance).

(4) Common areas.

a. Restroom facilities are required in areas with structures for persons or watercraft for common areas with 25 or more lots. Restrooms are not allowed within the Dominion easement without their approval.

b. All structures in a common area shall maintain a 100-foot side setback from residential and agricultural zoning districts (not part of the subdivision), and a 50-foot side setback from resort development, commercial, and industrial zoning districts.

c. A 25-foot vegetative buffer between the common area and adjoining property owners (not part of the subdivision) shall be required. Buffers shall consist of evergreen vegetation, but may also

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include deciduous species. County staff may grant a special exception to this requirement on a case-by-case basis.

- (5) Commercial areas.
 - a. A pump out station shall be required for commercial waterside operations if they introduce traffic to the lake.
 - b. Commercial slips are allowed one enclosed storage structure per slip that is a maximum of 50 square feet.
 - c. Any business engaged in fuel sales shall use United States Coast Guard (USCG) approved spill recovery systems.
- (d) *Dredging, excavation, and filling.* The standards established by Dominion shall govern these activities along with other applicable federal, state, and local codes, unless otherwise noted in this section.

(Res. of 12-5-05(05.162); Res. of 4-2-07(07.058); Res. of 3-7-11(2011-69); Res. of 8-6-12(2012-138))