April 6, 2022

Re: Bruce Lake Townhouse Development
PP-2022-049

Dear Planning Commission Members and County Staff,

I am writing on behalf of The Friends of the Reedy River to set out serious concerns with the proposed townhouse development (Development) on property that abuts Bruce Lake. The Friends of the Reedy River ("Friends") is a chartered 501c (3) non-profit organization that relies on the generous financial support of hundreds of area citizens and businesses as well as hundreds of local volunteers who give generously of their time and talents. Friends is dedicated to protecting, improving, and preserving the valuable aesthetic, cultural, and ecological assets of the Reedy River and has a very similar objective to that expressed in Greenville County's Stormwater Ordinance, namely, to "protect, maintain, and advance the environment," and to "minimize damage to public and private property." The major concerns with the proposed townhouse development that Friends sees are as follows:

**Bruce Lake Water Quality and Hydrology Will Be Greatly Impacted.** Bruce Lake is a significant water and visual amenity to the many residents both living along and nearby the Lake, hence, water quality is critical. The Lake discharges to Langston Creek which flows into the Reedy River shortly thereafter. The Reedy River flows through Downtown Greenville and ultimately to Lake Greenwood, a significant source of supply for potable water. Bruce Lake is both waters of the State and waters of the United States. Approximately five (5) acres of land directly contiguous to Bruce Lake will be converted from diverse forestland to a very dense combination of fifty-two (52) condominium units, roads, driveways, etc., of hard, impervious surface which will generate significant stormwater runoff. Unfortunately, Bruce Lake itself is being proposed as the development's stormwater detention basin to remove sediment and to attenuate stormwater flow peaks as opposed to more traditional and widely accepted methods of control such

as detention basins. Allowing this use of the lake would allow pollutants in stormwater discharged from the construction site to be discharged directly into the lake. In addition, a Restrictive Covenant for the neighborhood strictly forbids Bruce Lake for being used for this specific purpose. We expect significantly more sediment flowing through and settling into the Lake with this very dense and harmful impervious development.

**Downstream Receiving Waterbodies, including the Reedy River, are Presently Impaired.** Unfortunately, Langston Creek, the Reedy River and Lake Greenwood are presently categorized by the SC Department of Health and Environmental Control and the US Environmental Protection Agency as "Impaired" in accordance with Section 303(d) of the Clean Water Act. In 1972, Congress passed the Clean Water Act which is the cornerstone statute for controlling pollutant sources in the US. The Act prescribed specific and minimum water quality goals and established an enforcement-oriented permitting program for achieving the same. The Act addressed all forms of water pollution, from sources such as wastewater treatment plants to "diffuse" or "nonpoint sources" such as stormwater runoff.

The Act also established a permitting process in which National Pollutant Discharge Elimination System or NPDES permits would be issued to provide control over all dischargers. For stormwater agencies such as Greenville County and other governmental entities in Greenville County, an NPDES Permit (No. SCS230001) was issued June 4, 2021, in which Greenville County (the "County") was "…. granted permission to discharge storm water from (its) municipal storm sewer sanitation system (MS4) …."

To meet fundamental requirements so as to preclude contravention of water quality classification standards, minimum treatment was required for all runoff in the form of removing 85 percent of total suspended solids (TSS), that is, a sediment removal of 85 percent. When there were other water quality standards in the downstream receiving water bodies, additional requirements were to be imposed. In the case of the Development, downstream water quality in the Reedy River and Lake Greenwood is impaired for total phosphorus (TP), among other pollutants. It should be mentioned that nutrient enrichment as a result of phosphorus and nitrogen compounds is one of the top causes of water resource impairment and can result in excessive algae, cyanobacteria, and other aquatic vegetation that is able to harm ecological and human health. Excessive vegetation through nutrient over-enrichment is able to produce toxic compounds, low dissolved oxygen (DO) and diminished recreational and potable water value.

Research indicates that the increase in nutrient loading due to imperviousness can be dramatic [Novotny and Olem, 1994, *Water Quality Prevention, Identification, and Management of Diffuse Pollution*, Van Nostrand Reinhold, NY].

Based upon the USEPA-approved 303(d) list of impaired water bodies developed by SCDHEC, there appear to be other pollutants that are causing impairment in Lake Greenwood, specifically: turbidity; and pH. There are still other water quality standards not being met in Langston Creek at various points (*E.coli*; impacts to macroinvertebrates) and in the Reedy River at multiple points (*E.coli*; impacts to macroinvertebrates). The 303(d) List is compiled using five years of data, the most recent list being developed for FY 2020. The assessment methodology is developed by SCDHEC and approved by USEPA, Region IV. The most recently-approved list is for FY 2018 [(https://scdhec.gov/bow/south-carolina-303d-list-impaired-waters-tmdls#2), accessed 3/21/2022].

**The Reedy River Water Basin Must Be Treated with Special Conditions.** In Table 9.1 of the County's Stormwater Management Plan (SWMP), there is a special category for the Reedy River and all stream flow within the Reedy River Water Basin. For purposes of the Development, the special category is an antidegradation requirement of total phosphorus (TP) for developments less than 25 acres as well as the same aforementioned requirement for 85 percent removal of TSS. The antidegradation rule for impaired waters ensures that no new activities will further degrade waterbodies that are not presently meeting water quality standards (cf. Section 9.1.3 of the SWMP).

The determination of "impaired" waterbodies made by SCDHEC are those waterbodies listed as impaired on the 5-year 303(d) list and/or which have an established Total Maximum Daily Loading (TMDL or equivalent). The TMDL is, generally speaking, the total mass loading of any pollutant from both point source and nonpoint source loading that can be discharged to a waterbody while still preserving the water classification standards without causing an impairment of the waterbody. In the case of the Reedy River, the mechanism being used is a modification of the TMDL process, known as "5R" (currently in process) that will establish restrictions on TP loading being discharged to the Reedy River.

**The Site Appears to Contain a Wetland and Unnamed Creek on which a Retaining Wall Is to Be Constructed.** The preliminary plat of the development appears to indicate the future construction of a retaining wall to be located in what appears to be a wetland through which flows a small, unnamed headwater creek. This is

problematic for multiple reasons. First, the retaining wall would appear to impact existing wetlands that appears to be part of the Piedmont Seepage Forest Habitat, one of the rarest natural wetlands in the world. Second, the Bunched Arrowhead exists in these rare Piedmont Seepage Forests in only two counties, in Greenville County and in Henderson County, North Carolina. Most of the Bunched Arrowhead populations are in Greenville County's few remaining Piedmont Seepage Forests. In South Carolina, the Bunched Arrowhead exists in the upper reaches of the Reedy River, in one location in the upper reaches of the Tyger River, and in the Enoree River Basin. [Center for Plant Conservation Species Profile; Newberry, G. 1991, Factors Affecting the Survival of the Rare Plant, *Sagittaria fasciculata* E.O. Beal (Alismataceae), Castanea 56, 1: 59-64.] Disturbing this habitat could adversely impact either existing and/or future Bunched Arrowhead, classified as "Endangered" under the Federal Endangered Species Act.

**Conclusion**. We implore the Commission to reject this development as proposed. The developer needs to gather the necessary information about the site and come forward with a proposal that protects Bruce Lake from excessive sediment loading as well as downstream water quality in Langston Creek, the Reedy River, and Lake Greenwood, and the rare habitat and plant species in this unusual area of Greenville County. This will require a plan to address the extensive permitting and consultation requirements that will substantially affect how this development could be designed to ensure that natural resources are protected going forward. As proposed, this development would do extreme harm to some of the most valuable natural resources of Greenville County, both on the site of the proposed development and on property owned and enjoyed by neighboring landowners.

In short, this is a plan that is not ready for consideration and, as proposed, should not be approved under the County's various ordinances, the Federal Clean Water Act, the State Water Pollution Control Act, and potentially the Federal Endangered Species Act.

Thank you for your consideration.

Sincerely,

Scott Butler
President, Board of Directors
Friends of the Reedy River