

Proposed Lake Management Plan for Blue Lake

Village of Whispering Pines, NC

Introduction:

In 2000, the Lakes Water Board of Whispering Pines initiated a planning effort for all its lakes. The purpose of this planning is, in part, to fulfill a component of the Whispering Pines Land Development Plan. The purpose of each lake plan is to ascertain current status of each lake, perceptions of Whispering Pines residents on lake uses, and identify and prioritize management needs for each lake. The integration of individual lake plans is anticipated to contribute to a Comprehensive Lakes Management Plan, which should form the basis for prioritization of management by the Village.

Blue Lake is somewhat unique among Village Lakes in that it has only recently been obtained and has no current residents. Consequently, perception of issues associated with the lake will be of direct concern primarily (a) to the developers who own and will be selling the lots adjoining the lake; (b) to those parties interested in its future as a component of the Whispering Pines lake resources; and (c) property owners on Spring Valley Lake who will be directly affected by the quality and quantity of water discharged into Spring Valley Lake through Blue Lake Dam Spillway.

Section 1 - Status:

Blue Lake is a 9 acre lake located adjacent to the east of Spring Valley Lake. Presently there are no residences built around the lake, but that will change with future plans.

The lake was built in the 1952 as a farm irrigation source. In 1964 the dam on the west end was broken and the water raised Spring Valley Lake over a foot. The dam sat idle for a couple of years. When rebuilt they raised the height 1 foot over the original level. There are 6 springs feeding the lake, 4 of which are in the lake but the 2 main springs are located in the wetland area on the south end. The lake was also used to raise ducks for the Whispering Pine Hunt Club. In 2007, 2/3rds of the lake was bought by two developers with 1/3 of the lake remaining in the Blue family. This time the lake was drained and the earthen dam was completely reconstructed with a spillway and the remaining 2/3 of the lake was deeded over to the Village of Whispering Pines. There is no present written agreement with the Blue family with regard to the 1/3 portion of the lake that they still own.

Presently the land surrounding the lake has future home sites laid out but at the date of this report, the Lake shore is in its original natural state. The shore line is presently untouched; however there is a construction work path, 50 to 100 ft inland around the entire lake.

Presently there is a new spillway that meets all governmental requirements and needs. There is limited access to the pond and boat launch.

The lake is fed from a small pond near Route 22 which filters through wetlands on the east end of the lake. Recently, a summer drought, combined with the irrigation of tobacco fields left the lake height 2" below the dam overflow.

Watershed Activities;

Water Quality is excellent.

Aquatic vegetation is primarily located at the south end of the lake on the upper third of the lake. Mostly Bladderwort, floating heart, spatterdock, water lily and water shield.

Boating; presently there is no boating.

Fishing; presently there is no fishing with some stocking provided relocating fish caught in the other lakes.

Parks and swimming, presently none available, although a parcel of land adjoining the dam has been viewed as a prospective park area.

During the reconstruction of the dam in 2007, the existing tree stumps were cut off to provide 3 to 4 feet clearance from the lake surface on the west side.

Section-3, Action Plan

Objectives: Since the lake and surroundings are in an original and pristine condition the lake should remain as close to this as possible, by insuring a 30 foot buffer zone around the shore line of this lake remains.

Description:

A water quality buffer zone (a.k.a. a riparian zone) is a strip of undisturbed native (indigenous) vegetation, either original or re-established, that borders the lake and wetlands. Water quality buffer zones, a.k.a. buffer zones, are most effective when storm water runoff is flowing into and through them as shallow sheet flow, rather than in concentrated form such as in channels, gullies, splays, or wet weather conveyances. Therefore, it is critical that the design of any development include management

practices, to the maximum extent practical, that will result in storm water runoff flowing into and through the buffer zone as shallow sheet flow.

Water quality buffer zones protect the physical and ecological integrity of water bodies from surrounding upland activities in the following ways:

- filtering excess amounts of sediment, organic material, nutrients, and other chemicals;
- reducing storm runoff velocities;
- providing flood protection;
- protecting channel bank areas from scour and erosion;
- providing shade for cooling adjacent water; which allows waters to hold greater level of dissolved oxygen;
- providing leaf litter and large woody debris important to aquatic organisms;
- improving stream bank habitat for aquatic organisms.
- The water's edge provides food and cover for the birds, butterflies, and other wildlife.
- A natural buffer can beautify the natural surroundings by adding a variety or colorful wild flowers that bloom throughout the season.

Intent;

The intent of this policy is to protect and maintain the native vegetation in the water quality buffer zones by implementing specifications for the establishment, protection, and long term maintenance of the buffer zone, along all intermittent and perennial streams, waterways, rivers, ponds, lakes and wetlands in or adjacent to new development and significant redevelopment located within the Village of Whispering Pines jurisdictional authority. This policy serves to clarify the requirements for water quality buffer zones. It applies to all development approved after its enactment, including redevelopment of properties approved prior to its enactment.

Design standards for buffer zone;

1. There will no man made bulkheads allowed.
2. No runoff from residential structures be allowed to run directly into the lake.
3. No removal of trees from the buffer zone over 4 inches in diameter.

4. Only one 12 foot dock allowed per home site; with a small winding path through the buffer zone.

Buffer Zone Management and Maintenance;

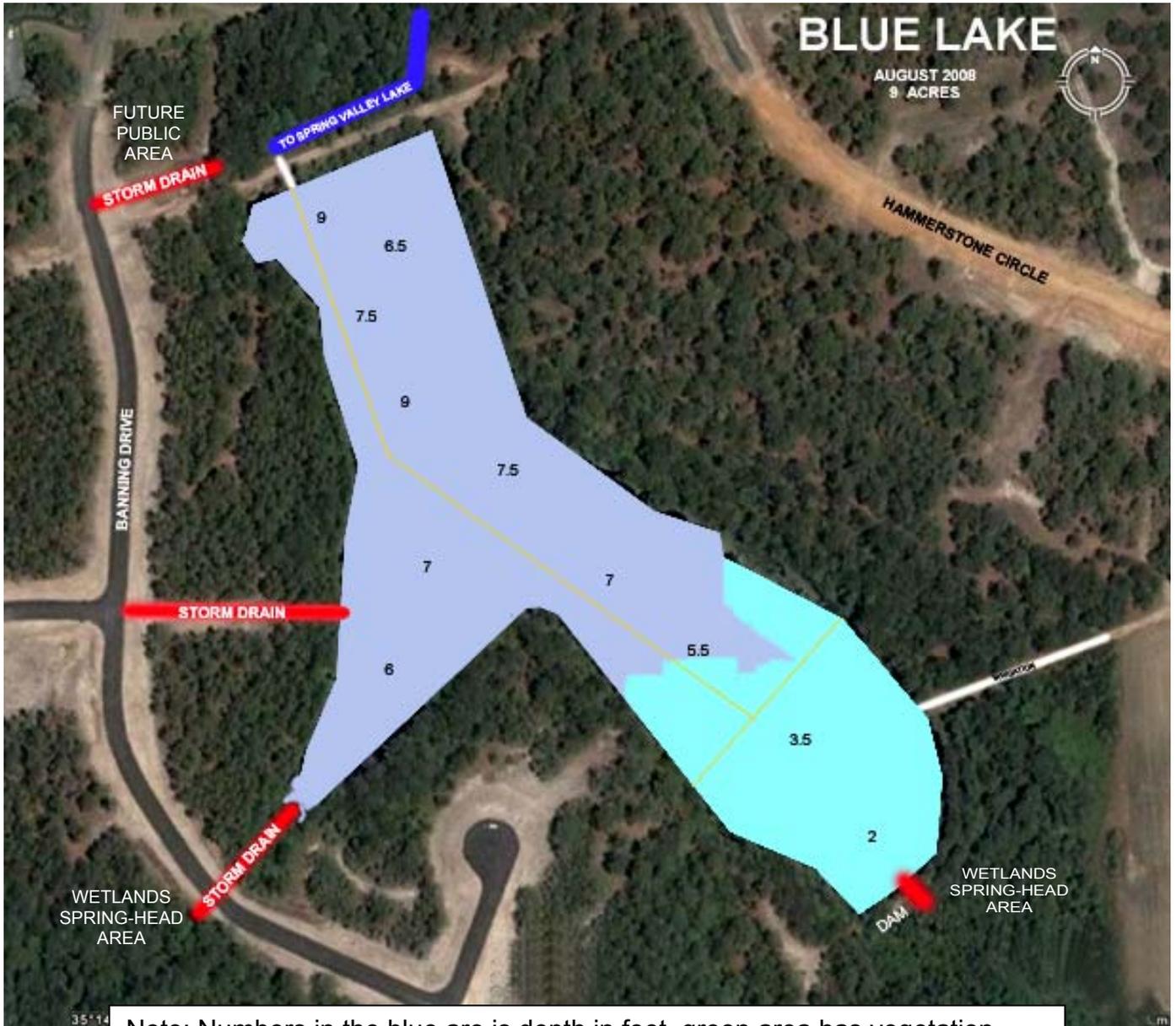
The buffer zone vegetative objective is to protect native vegetation with the ability of the land owner to maintain their property and also plant native vegetation and landscaping. Ordinary maintenance of existing native vegetation can be conducted by the property owner as long as it is not damaging the overall function of the designated buffer zone as designed by the lake rep.

Management of the water quality buffer zone includes specific limitations on alteration of the natural conditions. The following practices and activities are restricted within the buffer zone, except from prior approval of the lake rep.

- Clearing or grubbing of existing vegetation.
- Clear cutting of vegetation or trees;
- Soil disturbance by grading, stripping or other practices;
- Filling or dumping;
- Use, storage or application of pesticides, herbicides and fertilizers;
- Conversion of existing established vegetation from majority native to majority exotic species.

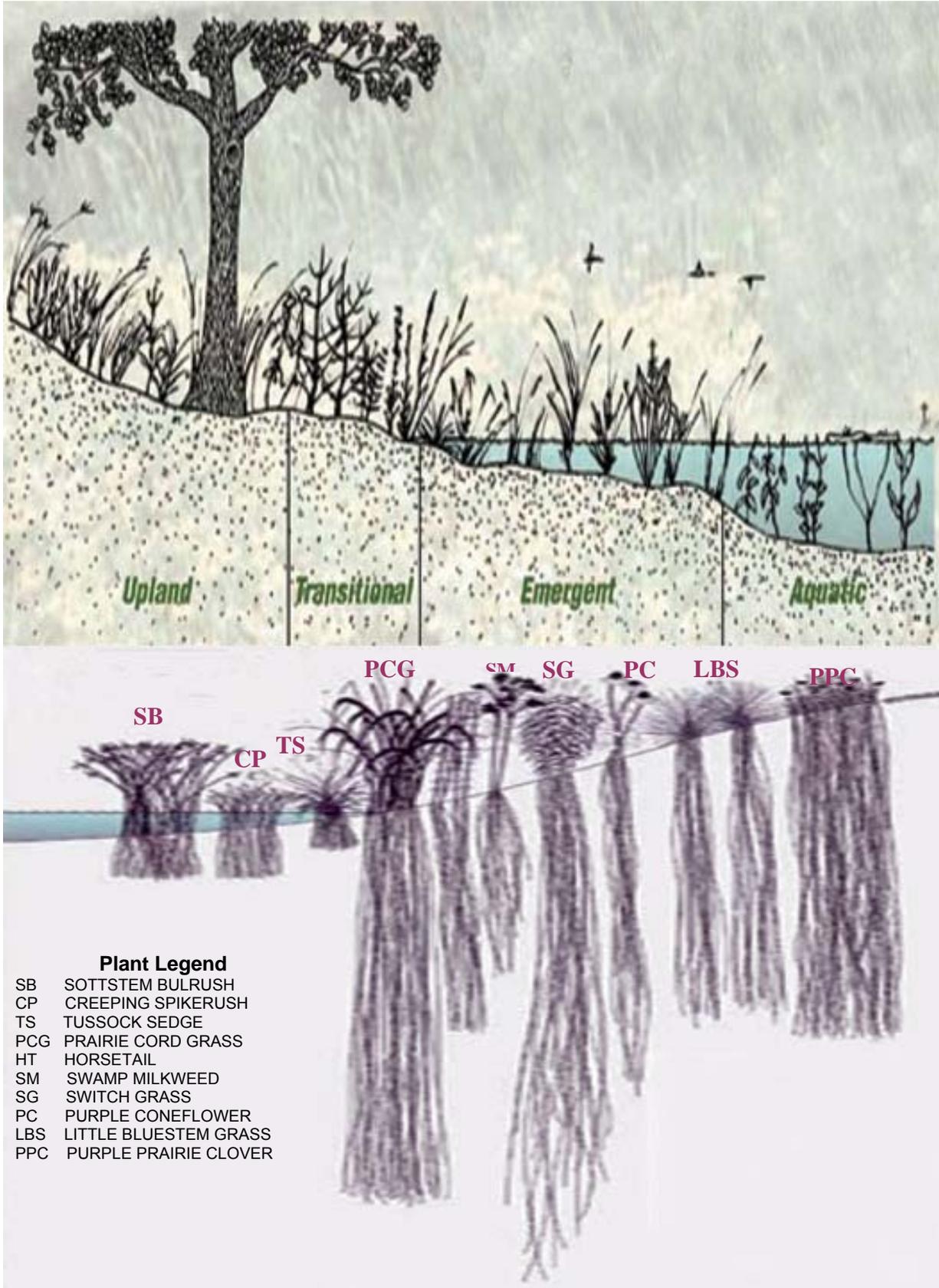
Recreational Uses:

- Boating: Non powered boats only. (exemption; up to a 40 lb thrust electric trolling motors) Canoes, kayaks, paddle and Jon boats only permitted. (Max 12 to 14 ft)
- Fishing: The lake is a natural for large mouth bass population. (temporary moratorium)
- Swimming: Even though the lake is clear, the bottom of the lake consists of stumps and sludge. An area would have to be cleared for this activity.
- Public Access: Parking and public area will be provided off the dam with access from Banning Drive. A local walking access to the dam is available Hammerstone Court but no parking is available at this time.



Note: Numbers in the blue are is depth in feet, green area has vegetation.

Lake Facts: Lake is approximate 9 acres with excellent water quality with a silt bottom. Water quality: Dissolved oxygen content is 97.6 at 85F. Average water visibility is 50 inches. Hardness is average 5 parts per million, classified as soft. Nitrites is between 0 and .05 parts per million which is classified as safe. Alkalinity is between 80 and 120 parts per million. PH is 7.



A TYPICAL EXAMPLE OF A BUFFER ZONE

EXHIBIT B