

Problem Statement 2 – Submerged Aquatic Vegetation

SAV is a normal component of healthy freshwater ecosystems. They provide a number of important ecological functions such as oxygen production as well as nutrients and food for all aquatic organisms. In addition, SAV function as habitat and nursery areas for many fish and other aquatic animals. Healthy SAV communities are also important in maintenance of desirable water quality. However, excessive growth of SAV are viewed as a nuisance by recreational users such as boaters and swimmers. SAV in several parts of DCL have become a problem, In addition, recently found non-native invasive species, Eurasian Water milfoil (*Myriophyllum spicatum*) and Hydrilla (*Hydrilla verticillata*), have impacted recreational use of the lake and do not provide the same ecological benefits as native SAV species.

GOAL: Manage SAV in Deep Creek Lake to maintain and improve the ecological stability of the lake, as well as reduce and minimize the interference of SAV with recreational uses of the lake.

- I. Objective:** Continue the existing Deep Creek Lake Watershed Monitoring Plan (DCLWMP) monitoring plan and develop a long term monitoring plan to track changes in SAV species composition, abundance and distribution to inform native and non-native SAV management plans.
 - a. Strategy 1:** Establish an ongoing Water Quality Work Group (WQWG) charged with the responsibility for directing and coordinating the DCLWMP.
 - b. Strategy 2:** The WQWG will identify and recommend additional monitoring objectives to be incorporated into the long term monitoring plan.
 - c. Strategy 3:** The WQWG will prepare publicly available annual reports on DCL watershed water quality monitoring results, implementation actions, and management recommendations.
 - d. Strategy 4:** Identify research needs to complement monitoring and management objectives in partnership with academic institutions and funding programs. For example, a holistic integrated study of the lake to determine ecological thresholds for various attributes of the lake to ensure healthy ecosystems and meet recreational/economic uses should be conducted.

- II. Objective:** Manage the SAV communities in the lake that affect recreational uses such as boating and swimming to minimize interference with public recreation.
 - a. Strategy 1:** Identify areas where SAV populations are considered to be a public use concern through a user-based evaluation, such as participatory GIS recreational use workshop or other venue.

- b. **Strategy 2:** Identify all possible SAV management options, including control strategies and dock permitting policies, and the appropriate means of implementing them
- c. **Strategy 3:** Develop an education program to provide all watershed and lake users with appropriate management solutions and options for support and maintenance of native SAV communities and healthy fish populations.

III. Objective: Control existing populations of established invasive SAV species communities using best management practices and prevent future introductions of harmful non-native species of SAV.

- a. **Strategy 1:** Determine if existing non-native SAV species are detrimental to maintaining a healthy lake ecosystem and active recreational usage.
- b. **Strategy 2:** Identify control strategies to reduce the negative impacts of targeted non-native harmful species, such as Hydrilla and others.
- c. **Strategy 3:** Identify management plans to prevent future introductions of Hydrilla, Eurasian Water milfoil and other harmful non-native species of SAV.