**2019-21 Red Cedar Lakes Shoreland Habitat Assessment Project**

The goal of Shoreland Habitat Assessment is to assess the health of the 30 miles of shoreline in the Red Cedar Lakes. Through its Lake Shoreland and Shallow Habitat Monitoring Field Protocol, the WDNR establishes guidelines for completing a shoreland habitat assessment (SHA) that involves 3 loops around a lake to 1) take georeferenced photos of the parcels, 2) assess riparian, bank, and littoral habitat by parcel and 3) count and map all pieces of large woody habitat in water <2-ft deep.

This assessment only looks at the area of the shore that extends 35-ft inland from the water’s edge. Data gathered includes: % impervious surface, mowed lawn or plants in the Riparian Buffer Zone; parcels with erosion concerns; density of human structures within the 35-ft area; & general distribution of floating & emergent aquatic plants & woody debris. Over the course of this project a SHA will be completed on each of the 5 lakes included in this project. Results from these assessments will be used to identify lake properties that might benefit from low cost shoreland improvement projects that can be funded by WDNR Healthy Lakes Initiative grants which the property owner can request with RCLA assistance.

Guidelines in the Lake Shoreland and Shallows Habitat Monitoring Field Protocol will be used to complete SHAs on each lake included in this project over the next 3-yrs. Red Cedar Lake will be done in 2019 by the project consultant and RCLA volunteers who will supply the boats used to complete the survey. This first SHA will serve as training for RCLA volunteers so that SHAs on the rest of the lakes can be completed primarily by volunteers. SHAs will be completed on Balsam Lake and Mud Lake in 2020; and on Hemlock Lake and Bass Lake in 2021. For all surveys, the project consultant will provide the necessary equipment and setup materials for the volunteers. Using results common to most parcels, a matrix will be created that ranks each property as a high, moderate, or low priority. Suggestions for improvements will be made for all properties based on priority level and the best management practices identified in the Healthy Lakes Initiative. RCLA volunteers will supply the boat and driver time for the Red Cedar Lake assessment, and all of the labor for the remaining lakes. The SHAs will be conducted during the growing season late enough for plants to have leafed out and landowners to have landscaped their properties and put out piers and other structures.

An evaluation will be completed for each parcel. The project consultant will compile the data collected into a final SHA Report for each lake. Parameters common to a majority of properties will be added to a matrix & given a numerical score of 0, 1, or 2 based on what is considered healthy for the lake. A final score will be generated for each property & each property ranked as having a high, moderate, or low priority. Woody debris will be documented with GPS separate from individual parcels. Specific property reports will be available only to RCLA and upon request by the property owner.

Maps & other documents created as a part of this activity will be deliverables. Data collected will be used to identify a threshold of healthy habitat & individual properties ranked as high, moderate, or low for making improvements. A document will be created that will have all the high & moderate priorities properties listed. This document will be usable by the RCLA now & in future years to guide shoreland improvement planning & implementation through the Healthy Lakes Initiative.

Local & regional resource managers, community stakeholders, & others who are interested in protecting & enhancing Wisconsin's lakes can use the aggregate data to teach & provide outreach, identify areas of protection & restoration, target future critical habitat designations, create lake management plans, evaluate trends in lakeshore habitat over time, & to help understand trends in lake ecology.