

Lake Redstone Protection District-Year in Review

The most important LRPD project since the last Annual Meeting in August of 2021 is completion of the Lake Management Plan, also known as a 9-key element plan. After several years of work on this plan, the LRPD received final approval from the Wisconsin Department of Natural Resources (WDNR) and the US Environmental Protection Agency in February of 2022. The management plan will be used to guide the implementation of management activities over the next 10 years, with the long-range goal of improving water quality in Lake Redstone. The plan is a massive document with more than 100 pages of text, figures, and tables plus another 100 pages of appendices. The complete plan, including all 9 appendices, is available on the LRPD website at <https://www.lakeredstonepd.org/>. While we don't expect people to read the entire plan, we recommend that people read the executive summary (included behind the last page of this report).

Summary of the Lake Management Plan

Management activities planned over the next 10 years will take place in three geographical regions. **1. The portion of the watershed that is far removed from Lake Redstone.** **2. The region near the lake including some of the areas drained by gullies where intermittent streams enter Lake Redstone as well as lakeshore properties where runoff enters the lake directly.** **3. The lake itself.** Activities planned for each area will be briefly described below. Details of some major activities will be presented in the oral reports at the 2022 Annual Meeting.

1. The portion of the watershed that is far removed from Lake Redstone.

Nutrients and sediment originating from these areas enter the lake via the two inlet streams. These nutrients are being measured via a stream monitoring program described elsewhere in this newsletter. Efforts to reduce the sediment and nutrients coming from the watershed requires cooperation with producers who operate farms in the watershed. Farmers in the watershed have formed a cooperative to pursue various conservation practices on their farms (see their Facebook page at *Producers of the Lake Redstone Watershed*). The cooperative has secured grant funds from the Wisconsin Department of Agriculture, Trade and Consumer Protection to provide support for their efforts. This is a win-win situation that benefits both the producers in the watershed in that they retain their soil and keep the nutrients on their fields and the efforts of the LRPD to keep sediment and nutrients out of Lake Redstone. The lake management plan will seek to expand the acreage covered by the practices already utilized by producers in the watershed as well as by recruiting additional producers to join the program.

As part of efforts to monitor progress, LRPD has been measuring the quantities of phosphorus and sediment that enter the lake via the two major inlet streams at the north end of the lake. The stream monitoring program is being conducted in cooperation with the US Geological Service with financial support from both Sauk and Juneau counties. Toward the end of the 10-year lake management plan, the levels of

phosphorus and sediment entering the lake will be compared with the current levels as one way to evaluate progress in the watershed.

2. The region near the lake including some of the areas drained by gullies where intermittent streams enter Lake Redstone as well as lakeshore properties where runoff enters the lake directly. Reducing the entry of nutrients and sediment from lakeshore properties is the goal of the Shoreline Improvement Workshops that were held during the summer of 2021 and 2022. Efforts to reduce sediment and nutrient entry from shoreline properties will continue in the coming years. The newly formed sediment control committee is focused on reducing sediment and nutrient entry from the gullies and intermittent streams that empty into Lake Redstone. Most of these gullies do not sustain water flow except during rain events when they can bring substantial amounts of sediment and nutrients into the lake. Finding solutions for these issues will require sustained efforts over the coming years.

3. The lake itself. Improving water quality in Lake Redstone is the primary goal of the lake management plan. Excess phosphorus is the main culprit, leading to the growth of aquatic plants and to algal growth that reduces water clarity. Currently phosphorus levels are too high; the goal is to cut phosphorus levels in half over the next 10 years. Reducing sediment entry into the lake is also important, so that another dredging project is not needed for many decades. A team of volunteers measures phosphorus levels, chlorophyll levels (to estimate algae levels), and water clarity multiple times per year. All this information is available in a DNR-maintained database (see link to SWIMS database on the LRPD website).

Another lake activity is an effort to control the levels of nuisance aquatic plants. An Aquatic Plant Management Plan for Lake Redstone was approved in 2015 (a copy is available on our website at <https://www.lakeredstonepd.org/>) and it continues to provide guidance for control and education activities related to management of the plants in Lake Redstone. This plan was intended to be revised after 5 years and the time has now come to update it. This is one of the goals spelled out in the whole lake management plan and the LRPD is currently in the process of producing an updated Aquatic Plant Management Plan. More details will be presented at the Annual Meeting.

Why is it important to have a lake management plan?

Because watersheds are determined by the landscape and not political borders, watersheds often cross municipal and county and boundaries. By using a watershed perspective, all potential sources of pollution entering the lake can be better identified and evaluated. Moreover, it allows identification of the partners need to address the issues needing attention, including individual riparian owners, agricultural practitioners throughout the watershed, officials in Sauk and Juneau counties and the Town of La Valle. Finally, an approved plan is a prerequisite for many grant programs, including: the Wisconsin Department of Natural Resources, the Wisconsin Department of Agriculture,

Trade and Consumer Protection, the U.S. Department of Agriculture Natural Resources Conservation Service, and the U.S. Environmental Protection Agency.

The importance of partnerships in preparing and implementing the plan

A key step in the watershed planning process is to build partnerships. The very nature of working at a watershed level means working with local stakeholders and other partners. New ideas and input provided by partners not only provide solid commitments to solutions but also help to pool resources and skill sets. The stakeholders that were involved in the watershed plan development process will help us identify critical issues, set preliminary goals based on areas of mutual concern, and develop an initial set of indicators that will be crucial in monitoring progress. This step will also help develop an effective information/education component. Stakeholder involvement also increases the probability of long-term success through trust, commitment, and personal investment. The key stakeholders identified in the plan are: the Lake Redstone Protection District, Sauk County Department of Land Resources and Environment, Juneau County Department of Land and Water Resources, Producers of the Lake Redstone Watershed (a Producer Led Cooperative), Discovery Farms (a program of UW-Madison Division of Extension), the Lake Redstone Property Owners' Association, the Wisconsin Department of Natural Resources, the United States Geological Survey (USGS), the Town of LaValle, property owners on Lake Redstone, and general lake users.

Volunteers

Successful implementation of this plan will also require many volunteers. Volunteers have already provided significant help by serving on the **Sediment Control Committee** and on the **Water Quality Committee**, including helping with lake and stream sampling. The LRPD has formed two ad hoc committees charged with implementing parts of the Lake Management Plan. These include:

Ad hoc **Plan Integration Committee:** The Plan Integration Committee shall be responsible for planning, coordination and monitoring tasks in the lake management plan that involve multiple committees.

Ad hoc **Education & Outreach Committee:** The Education & Outreach Committee shall be responsible for planning and implementing education and outreach activities identified in the lake management plan.

Whether your skills and interests lie in lake biology, shoreline protection, electronic or written communications, or organizing paper or electronic files, we welcome additional volunteers who can help with District activities. If you are interested in joining one of the standing committees, either of the new *ad hoc* committees or participating in other efforts, please contact any board member or email us at lrrpd.board@gmail.com.

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