2023-27 Sand Lake Aquatic Plant Management Plan – Goals, Objectives, and Actions

Goal 1 - EWM and other AIS Management

An integrated approach to management including physical removal, diver removal, DASH, and the use of herbicides will be implemented between 2023 and 2027 to keep the amount of EWM growth as low as possible with minimal impacts to native aquatic vegetation. Management of EWM will be scenario-based; meaning any amount of EWM can be managed at any time provided chemical application is not used. Criteria are set for the use of aquatic herbicides generally with herbicide use being considered if dense beds of EWM ≥0.40 acres are mapped, with preferences to treat larger areas for more effective herbicide results. ProcellaCOR should be used for all herbicide applications <5.0 acres. In treatment areas ≥5.0 acres, ProcellaCOR or liquid 2,4D-based herbicides could be used. The same treatment area will not be chemically treated in two or more consecutive years with the same herbicide. All herbicide applications will take place in the early season generally expected to be before June 30 annually.

Purple loosestrife has been identified in several locations along the shoreline of Sand Lake. Monitoring for purple loosestrife will be completed by District volunteers every year and removal of flower heads will be completed where accessible. The SLMD will also rear and release Galerucella beetles for control of purple loosestrife. Chinese mystery snails and Rusty crayfish are also present, but no management is planned.

Objective 1 - Determine how much EWM is present in the lake each year.

Action Item: EWM bedmapping will be completed annually in the late summer by a hired contractor or trained SLMD volunteer to identify potential areas for management consideration.

Objective 2 - Implement EWM management actions to keep EWM as low as possible each year.

Action Item: Using a scenario-based approach to management, any amount of EWM can be managed at any time. Depending on criteria like bed size, density, and depth of water, an integrated approach to management that includes physical removal by property owners, rake removal, snorkel, scuba diver, DASH, and application of aquatic herbicides will be implemented. See the Aquatic Plant Management Discussion beginning on p.53 of this APM Plan.

Objective 3 - Measure the effectiveness and impacts of herbicide treatments on target and non-target plants within the treated areas on an annual basis.

Action Item: If aquatic plant herbicides are used for management, consider implementing a pre-treatment sub-PI survey within a proposed treatment area in the year prior to treatment, and a post-treatment sub-PI survey either in the year of treatment or the year following treatment. This action must be done if the expected treatment area(s) reaches or exceeds 9 acres (10%) of the littoral zone of the lake.

Action Item: Complete a pre-chemical treatment readiness survey in the year of proposed management to assess the readiness of the proposed treatment area and make modifications to the proposed treatment area if necessary.

Action Item: If aquatic plant herbicides are used for management, consider implementing an herbicide concentration testing program in the year of management. This action must be done if the expected treatment area(s) reaches or exceeds 9 acres (10%) of the littoral zone of the lake.

Objective 4 - Track the distribution and density of purple loosestrife along the shores of Sand Lake and implement management actions annually.

Action Item: Complete a visual inspection of the entire shoreland in late July or early August and record the location of any purple loosestrife found on a map. Remove flower heads from any purple loosestrife that is accessible.

Action Item: Rear and release Galerucella beetles on Sand Lake in an effort to establish active biocontrol of purple loosestrife on the lake.

Goal 2 - Education and Awareness

Sand Lake is already a source lake for EWM being carried out attached to boats and/or trailers and taken to other lakes. Appropriate AIS signage will be maintained at the public access on Horseshoe Lake to improve the AIS awareness of many lake users. The SLMD will continue to implement a watercraft inspection program according to WDNR/UW-Extension Lakes protocol. This program will either be paid for by the SLMD or through a CBCW grant. Watercraft inspection data will be entered into the WDNR SWIMS database annually.

AIS monitoring to track the AIS already present in Sand Lake and to monitor for possible new AIS will be completed following WDNR/UW-Extension Lakes protocol through the CLMN AIS Monitoring Program. Zebra mussels, spiny waterflea, hydrilla, banded mystery snails, and other species will be watched for and survey data entered into the WDNR SWIMS database annually.

The SLMD will continue efforts to educate and inform property owners and lake users about AIS already in Sand Lake and AIS not already in Sand Lake. Efforts will include annual education events; distribution of AIS publications, placement of EWM marker buoys in the lake, and discussion forums of various types related to management actions and alternatives.

Objective 1 - Maintain current and complete AIS Signage at the public access on Sand Lake annually.

Action Item: Inspect the public access for appropriate AIS signage annually.

Action Item: Repair, replace, and/or install current WDNR AIS signs at the public access.

Objective 2 - Implement a Clean Boats Clean Waters water craft inspection program annually.

Action Item: Attempt to get 200 hours of paid watercraft inspection at the public access.

Action Item: Apply for CBCW grants annually to support watercraft inspection efforts.

Objective 3 - Reduce the likelihood that new AIS go undetected in Sand Lake and track existing AIS for additional spread.

Action Item: Participate in CLMN AIS Monitoring at least monthly between May and October each year.

Objective 4 - Plan, coordinate, and implement an annual AIS education event(s) alone or in cooperation with other Stakeholders.

Action Item: Seek out other stakeholders including but not limited to the other lake associations and Districts, Barron and Washburn Counties, and Tribal Resources (specifically Maple Plain Tribal entities) to explore cooperative education and information events.

Objective 5 - Distribute information and education materials to property owners and lake users.

Action Item: Research AIS and lake stewardship materials with little or no cost to attain and make available at events including but not limited to Annual Meetings, Lake Fairs, Summer Picnic, etc.

Objective 6 - Solicit public input and review of annual AIS management planning efforts.

Action Item: Complete preliminary AIS management planning by January 31 each year and post on the SLMD webpage for public comment.

Action Item: Provide a summary of coming year AIS management plans in a spring newsletter to be published and distributed prior to April 30 each year.

Action Item: Present current year AIS management actions at the Annual Meeting held in August each year.

Goal 3 - Research and Monitoring

Long-term data can be used to identify the factors leading to changes to water quality, such as aquatic plant management activities, changes in the watershed land use, and the response of the lakes to environmental changes. Changes in lake level also impacts EWM management and water quality. To monitor any changes in the plant community, it is recommended that whole-lake point intercept aquatic plant surveys be completed at least every five years. This will allow managers to adjust the APM Plan as needed in response to how the plant community changes as a result of management and natural factors like water level.

Objective 1 - Collect long-term trend water quality data in Sand Lake.

Action Item: Collect CLMN water quality data (water clarity, total phosphorus, chlorophyll a, and dissolved oxygen and temperature) in the Deep Hole.

Objective 2 - Collect regular lake-level data in Sand Lake.

Action Item: SLMD volunteers will monitor lake level at the outlet of SL using a staff gauge installed by Barron Co. and according to guidelines provided by the CLMN program.

Objective 3 - Measure the five year impact of AIS management actions on the native aquatic plant community in Sand Lake.

Action Item: Repeat a whole lake, point-intercept, aquatic plant survey in 2026.

Action Item: Compare 2026 plant survey results to previous survey results to determine success or failure of management actions over a five year period.

Goal 4 - Adaptive Management

This APM Plan is a working document guiding management actions on Sand Lake for the next five years. This plan follows a scenario-based, adaptive management approach by adjusting actions as the results of management and data obtained deem fit following IPM strategy. This plan is therefore a living document, progressively evolving and improving to meet environmental, social, and economic goals, to increase scientific knowledge, and to foster good relations among stakeholders.

Management actions implemented in each year of this plan will be evaluated for how well they helped meet the goals and objectives included in this APM Plan. Small changes will be made automatically if it

is determined they will improve outcomes. Larger management changes will be presented to the SLMD and other Stakeholders for approval before implementation.

Objective 1 - Prepare annual summary reports for aquatic plant surveys, management planning and implementation, and management evaluation.

Action Item: Annual aquatic plant survey summary reports will be completed by the aquatic plant surveyor contracted by the SLMD.

Action Item: End-of -year management summary reports will be completed by the Primary Consultant contracted by the SLMD.

Action Item: All report documents will be posted on the SLMD webpage for public review.

Objective 2: At the end of this five-year project, all management efforts (including successes and failures) and related activities will be summarized in a report to be used for revising the APM Plan.

Action Item: Review the goals, objectives, and actions from the 2023-27 APM Plan for successful implementation.

Action Item: Revise/update the 2023-27 APM Plan.