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JD2 AND MILLER BAY PROJECT TEAM MEETING NOTES

August 17, 2026 | 9:00 a.m. to noon

Sauk River Watershed District Office, 642 Lincoln Road, Sauk Centre, MN 56378

Attendees

In person: Steve Zeece III (SRWD Water Resource Manager), Noah Jensen (SRWD Seasonal Technician), Jon Roeschlein (SRWD District Administrator), Abi Borgerding (SRWD Environmental Monitoring Manager), Allison Schugel (SRWD Environmental Technician), Bruce Magnus (Osakis Lake Association President), Ken Rutten (Douglas SWCD Supervisor), Randy Neumann (Todd County Commissioner), Janice (Osakis Lake Association), Jerry Rapp (Douglas County Commissioner), Bill Becker (SRWD Board Manager), and Tim Green (Osakis Lake Association).

Online: Bret Zimmerman (Houston Engineering) and Garrett Monson (Moore Engineering).

Call to Order and Agenda

Steve Zeece III called the meeting to order shortly after 9:00 a.m., welcomed attendees, and summarized the primary meeting topics: the JD2 Sediment Pond Efficacy Review, preliminary direction for advancing the U.S. Army Corps of Engineers (USACE) Lake Osakis Comprehensive Plan, and project status updates. No additions were made to the agenda.

Approval of Previous Meeting Notes

Decision: The July 20, 2026 Project Team meeting notes were approved with correction of the meeting date shown in the draft.

SRWD JD2 Sediment Pond Efficacy Analysis

Garrett Monson (Moore Engineering) presented the final Judicial Ditch 2 Sediment Ponds Efficacy Review. The review evaluated the ponds' history, the 2019 cleanout, current sediment accumulation, phosphorus retention, cost effectiveness, and the relationship between the ponds and sediment delivery to Lake Osakis.

Report Findings

- The primary and secondary ponds serve approximately 26,000 acres and have operated for about 20 years. The system was originally constructed in 2002-2003 and reconstructed in 2004-2005 following an embankment failure.
- The 2019 cleanout removed approximately 17,600 cubic yards of sediment and an estimated 13,736 pounds of phosphorus. The construction and engineering cost totaled approximately $574,481.
- The estimated average annual phosphorus removal is 1,057 pounds, equal to roughly 32% of the 3,330-pound annual phosphorus reduction identified in the Lake Osakis TMDL.

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- Spring 2026 sonar data identified approximately 7,235 cubic yards of accumulated sediment, compared with an expected volume of approximately 8,123 cubic yards based on the historic accumulation rate.
- The report calculated unit costs of approximately $32.64 per cubic yard of sediment and $41.82 per pound of phosphorus removed. Annualized costs were approximately $2.51 per cubic yard and $3.22 per pound of phosphorus.
- Sediment-core analysis indicates potential phosphorus release under low-oxygen conditions; however, available evidence does not indicate that the ponds are currently a net phosphorus source.
- Sediment accumulation in Miller Bay continued after pond construction, but the rate of increase declined by approximately 30%, consistent with the estimated pond load reduction.
- Moore Engineering recommended maintaining the ponds, continuing monitoring and periodic cleanout under the operations and maintenance plan, and evaluating additional upstream storage and wetland restoration practices.

Discussion

Members discussed the cost analysis and requested that future comparisons account for the original construction, reconstruction, and maintenance costs. Moore Engineering stated that including broader life-cycle costs increases the annualized unit cost, but the ponds remain comparatively cost effective relative to many other phosphorus and sediment best management practices.

Members also raised concerns regarding the 2019 cleanout, including the potential for excavated material or disturbed sediment to be remobilized during spring runoff, flooding, or through adjacent field drainage. The group emphasized that any future cleanout must include a more robust spoil-management plan, stabilization measures, and evaluation of alternative methods such as hydraulic dredging and geotextile dewatering bags.

Potential phosphorus-management options included dissolved oxygen monitoring, aeration, maintaining the fish barrier, and possible alum treatment. The group generally supported continuing dissolved oxygen monitoring before selecting a treatment. Alum was considered premature without evidence of recurring anoxic conditions or measurable phosphorus release.

Funding options for future cleanout and related improvements were discussed, including competitive state or federal grants, a watershed-wide project levy, and watershed management units. SRWD staff noted that the Board and Water Quality and Projects Committee are evaluating funding approaches and how costs could be distributed in proportion to benefit.

Direction: Continue monitoring the sediment ponds and dissolved oxygen conditions. Future maintenance planning should evaluate hydraulic dredging, dewatering, spoil placement, rapid stabilization, fish-barrier integrity, and outside funding sources.

USACE Lake Osakis Comprehensive Plan - Preliminary Feasibility Discussion

The Project Team reviewed the comprehensive-plan measures and discussed which items should advance into feasibility analysis or coordinated implementation. Garrett Monson emphasized that technical rankings must be paired with landowner willingness, long-term operations and maintenance needs, community support, and opportunities to establish successful early projects.

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Staff noted a labeling inconsistency between the alternatives table and narrative in the report that should be clarified. Discussion focused on the measures identified in the report's recommended comprehensive approach.

Preliminary Priority Direction

- **Shoreline stabilization:** Target nature-based or hybrid stabilization work in shoreline areas identified by the fetch analysis as most susceptible to wave erosion. Coordinate landowner outreach and cost-share opportunities with Douglas and Todd SWCDs and the Sauk River Watershed Collaborative.
- **Outlet modification:** Continue advancing the outlet modification as a key measure for reducing lake-level bounce, shoreline erosion, and habitat impacts.
- **Wetland restoration and storage:** Advance analysis of upstream wetland restoration and water storage within the JD2/Crooked Lake drainage area. The USACE report identified 21 potential locations with approximately 469 acre-feet of combined storage. Landowner interest and cost will be major implementation factors.
- **Focused dredging:** Retain focused dredging as a potential measure, particularly in the four priority areas mapped in the report. The group recognized that permitting would be strengthened by demonstrating upstream source-reduction work and that dredging should be evaluated together with hydraulic dredging and dewatering practices.
- **Aeration:** Explore aeration as a possible small-scale or pilot approach for consolidating organic sediment and addressing low-oxygen conditions. Staff and engineering consultants will review applicable research, comparable projects, solar-powered systems, and potential grant sources.
- **Septic compliance, monitoring, and education:** Continue OLA's planned fall 2026 electrical-conductivity screening and expand public education regarding septic-system maintenance and loading. Larger infrastructure, cluster-system, or ordinance decisions should be informed by the study results and additional feasibility work.
- **Channel stabilization:** Keep two-stage or other channel-stabilization concepts available for future evaluation, but address concerns about construction-related sediment mobilization, land requirements, drainage function, erosion controls, and rapid stabilization. The group did not identify channel reconstruction as an immediate stand-alone priority.
- **Other in-lake treatment:** Retain hypolimnetic withdrawal or circulation as a lower-priority in-lake option for additional research. Limited local precedent, monitoring needs, cost, and expected benefits must be better understood.

Technical and Coordination Follow-up

- Houston Engineering reported that the USACE study produced an existing-conditions HEC-HMS model for the Lake Osakis drainage area. A future feasibility scope can build on that model to test specific BMPs and identify priority storage or stabilization locations.
- Members requested review of the 2001 engineering work associated with the sediment ponds and consideration of an updated JD2 hydraulic/capacity assessment.
- The group discussed monitoring limitations near the JD2 outlet. Lake backwater and tailwater conditions prevent reliable separation of ditch flow and lake water at downstream sites. Existing

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upstream monitoring and pond surveys remain the best available information, while the feasibility of improved monitoring should continue to be evaluated.

- Public engagement, agricultural incentives, voluntary landowner participation, and clear long-term maintenance responsibilities should be incorporated into project prioritization.

Outcome: No final ranked project list or feasibility scope was adopted. The discussion provided preliminary direction for SRWD and its engineering consultants to organize the measures into a practical, phased feasibility approach for future Project Team and Board review.

Project Status Updates

1. Osakis Outlet Rock Arch Rapids Modification

Bret Zimmerman (Houston Engineering) presented a revised outlet design based on spring survey work and coordination with the Minnesota DNR River Ecology Unit. The revised multi-stage structure retains an 8-foot low-flow section and expands at higher water levels to reduce both low-water drawdown and high-water bounce.

- A downstream rock riffle was added below the county road box culverts to increase low-flow tailwater, improve fish passage, reduce culvert velocities, and limit continued scour.
- The revised design is expected to provide hydraulic performance similar to the prior concept while using less rock and a smaller footprint.
- The work is expected to remain within the existing 16.5-foot drainage authority right-of-way, county right-of-way, and DNR public waters, likely avoiding additional landowner easements.
- Houston Engineering will complete another DNR River Ecology review, then prepare permit applications, an updated cost estimate, and approximately 90% plans. The target is the end of August 2026, subject to DNR scheduling.
- The JD2 Drainage Authority will need to conduct a public hearing under Minnesota Statutes, chapter 103E. Todd County will also consider a resolution recognizing that it is no longer the dam owner. Osakis Community Center was recommended as the hearing location.

2. Crooked Lake Wetland Restoration

The petition for partial abandonment remains in the drainage-authority process. The drainage inspector must complete the statutory review, notice affected drainage-system landowners, schedule a public hearing, and prepare an order following the hearing. SRWD staff will continue follow-up with the drainage inspector.

3. Osakis Wastewater Scoping Study

No updates were reported. OLA's planned fall 2026 electrical-conductivity screening and related septic-system education will provide additional information for future discussion.

Next Meetings and Adjournment

The next JD2 and Miller Bay Project Team meetings are scheduled for:

- September 21, 2026, from 9:00 a.m. to noon
- October 19, 2026, from 9:00 a.m. to noon

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The meeting adjourned at approximately 11:55 a.m.

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