

AGENDA
Cascade Charter Township
Thornapple River SAD Ad-Hoc Committee
Monday, October 12, 2026
4:30 pm
5920 Tahoe Dr. SE

- | | | |
|----------------|-----------|---|
| ARTICLE | 1. | Call the meeting to order |
| ARTICLE | 2. | Approval of the Agenda |
| ARTICLE | 3. | Acknowledge Visitors & Public Comment
(Limited to five minutes per speaker.) |
| ARTICLE | 4. | Approval of the Minutes of the August 10, 2026 Meeting |
| ARTICLE | 5. | Sedimentation Mitigation Plan Discussion |
| ARTICLE | 6. | Finance Report |
| ARTICLE | 7. | Any Other Business |
| ARTICLE | 8. | Public Comment
(Limited to five minutes per speaker.) |
| ARTICLE | 9. | Adjournment |

MINUTES
Cascade Charter Township
THORNAPPLE RIVER SAD AD-HOC COMMITTEE MEETING
August 12, 2026, at 4:30pm
Cascade Charter Township Office
5920 Tahoe Dr. SE
Grand Rapids, MI 49546

ARTICLE 1. The meeting was called to order at 4:32pm.

Members Present: Scott Rissi, Leann Rowland, John Shipley, Jeff Carpenter, Michael Wiegand

Absent: Thomas Keith, Chuck Whitley

Others Present: Township Engineer Aric Thorne, Administrative Assistant Nick Govan

ARTICLE 2. Approve the current Agenda

Motion was made by Member Rissi to approve the agenda. Supported by Member Shipley. Motion carried unanimously.

ARTICLE 3. Acknowledge Visitors & Public Comment

There were not any visitors that wanted to speak at that time.

ARTICLE 4. Approve the Minutes of the June 8, 2026 Meeting

Member Rissi requested the following edits to Article 5, second paragraph:

1. Replace “Quiggle Lake” with “Quiggle Lake Drain.”
2. Replace the Berger area reference with “Berger Bayou.”

Motion was made by Member Rissi to approve the Minutes of the June 8, 2026 meeting with the edits provided. Supported by Member Carpenter. Motion carried unanimously.

ARTICLE 5. Sedimentation Mitigation Plan

Engineer Thorne reported that staff worked with GVMC and REGIS to add two public maps to the Thornapple River SAD page on the Township website. The field observations map shows points labeled as human cause, natural cause, or general observation, with photos, comments, coordinates, and dates. The drone footage map links river segments and properties to time-coded YouTube video. Member Carpenter asked about the risk if YouTube hosting ended, and Engineer Thorne responded that the Township owns the data and video and could host them elsewhere. Members commended the maps as transparent and professionally done.

ARTICLE 6. Any Other Business

Engineer Thorne reported that Prein & Newhof is preparing recommendations to restore access around the railroad bridge, either by dredging or re-establishing a go-around. Member Rissi noted that debris near Kilmer and Sequoia south of the bridge has not been removed since the access limitations began, and Member Carpenter

added that the work would also protect the bridge supports. Member Rissi stated that the DNR permit application, Township correspondence, and drawings were sent to staff to help facilitate the study. Member Carpenter requested the file be sent to Brendan, and staff agreed to locate it.

Members requested that staff with Prein & Newhof's recommendations identify a top five or top ten list of manageable projects, so the committee can enter budget season with a plan. Member Carpenter suggested marking the selected projects on the new map to show the public progress. Engineer Thorne explained that Prein & Newhof can provide ballpark pricing, but the work would likely be bid as a package.

Member Rissi stated that he did not receive resident calls about weeds in the river following the PLM harvesting, which took a couple of days. Staff stated they did not receive calls either.

ARTICLE 9. Adjournment

**Motion was made by Member Rissi to adjourn the meeting at 5:00pm.
Supported by Shipley. Motion carried unanimously.**

MEMORANDUM

To: Thornapple Rive SAD
From: Jade Smith, Township Manager
Date: October 8, 2026
Re: 2027 Budget and Communication

The attached 2027 Budget Framework is intended to guide our discussion as we develop TRSAD's 2027 annual budget.

The Sedimentation Control and Mitigation Study provides a roadmap for addressing sedimentation, erosion, drainage, navigation, and ongoing river maintenance. The attached document translates the study's recommendations into potential projects that can be evaluated, prioritized, and implemented over time. Our goal is to identify manageable, cost-effective improvements that address sediment at its source, protect riverbanks, improve navigation, and help preserve the long-term health of the Thornapple River.

At our October 12, 2026, meeting, I would like the committee to review the proposed project categories and work toward establishing a priority list for consideration in the 2027 budget. I have assigned a few allowances; however, the remaining allocations will need to be determined and refined as projects are evaluated, engineered, and permitted. To allow the Township to continue its required budget development process, I have included a funding allowance for potential projects in the preliminary budget. This amount is reflected in the financial report in your meeting packet. The allowance will help us maintain flexibility while the committee determines which projects should receive priority and what level of funding is appropriate.

In addition to the budget framework, the packet includes a draft letter to TRSAD members and an erosion control educational flyer. I would like to review both documents with the committee and gather your feedback on their content, tone, and overall approach. The intent is to distribute this information to all TRSAD members to provide an update on the actions the district is taking to improve the quality of the river and to encourage property owners to take steps that can reduce erosion and sediment runoff.

I believe it is important to inform property owners of the work being undertaken by the Township and TRSAD, as well as how individual actions can contribute to the long-term health and sustainability of the river.

For our October 12 meeting, I would like us to focus on three objectives:

1. Review and establish a preliminary priority list of projects for the 2027 budget.
2. Discuss appropriate funding allowances for the selected projects while recognizing that final costs will depend on further investigation, engineering, and permitting.
3. Review the draft member letter and erosion control flyer and provide feedback before distributing them to TRSAD members.

This is an opportunity to move from the study's recommendations toward a practical, phased implementation plan. By establishing clear priorities, allocating resources thoughtfully, and keeping our members informed, we can continue making measurable progress toward protecting and improving the Thornapple River.

Thornapple River Special Assessment District

Priorities: Sedimentation, Navigation & River Improvement Projects

Preliminary 2027 Budget Framework

Purpose

The Sedimentation Control and Mitigation Study provides the Township with a roadmap for addressing sedimentation, erosion, drainage, navigation and river maintenance issues throughout the Thornapple River system.

Rather than relying primarily on large-scale dredging, the recommended approach is to address sediment at its source, stabilize problem areas, improve drainage and capture sediment before it reaches the river.

The following projects are recommended for consideration in the annual budget process. Budget amounts will be estimates for planning allowances and are not contractor estimates. Actual costs will be refined through engineering, permitting and site-specific investigation.

1. Residential Drainage & Erosion Educational Measures

Preliminary Budget: \$5,000 – 10,000

Create educational materials to distribute to river front, tributary and back lot homeowners where drainage, runoff or erosion is contributing sediment to the river. Include general education for entire Township.

Potential assistance could include:

- Drainage corrections
- Roof-drain improvements
- Yard drainage
- Swale stabilization
- Erosion-control projects
- Native vegetation
- Recommended approach
- Township staff
- Establish a standing annual allowance.

2. River & Tributary Obstruction Removal

Preliminary Budget: \$20,000

Establish an annual program for removal of significant obstructions that affect navigation, safety, erosion or river flow.

Potential work includes:

- Downed trees
- Woody debris

- Accumulated vegetation
- Channel obstructions
- Navigation blockages
- Shallow-water investigations
- Sedimentation and shallow water investigations

**This should be treated as an ongoing river-management activity.*

Recommended approach

Township staff

Establish a standing annual allowance.

3. Tributary & Drainage Outfall Stabilization Program

Preliminary Budget: \$

Identify the highest-priority drainage outlets, tributary locations and concentrated-flow areas identified in the study.

Potential improvements include:

- Rock stabilization
- Geotextile
- Energy-dissipation structures
- Erosion-control materials
- Channel stabilization
- Outlet improvements

Recommended approach

Engineering firm -

Problematic as there is limited access through private property for those.

Fund several smaller sites rather than committing the entire amount to one location.

Target: 2–4 priority sites annually.

4. Targeted Riverbank Stabilization

Preliminary Budget: \$

Address the most significant actively eroding riverbank locations identified through the study and subsequent inspections.

Potential improvements include:

- Bank regrading
- Native vegetation
- Bioengineering
- Toe protection
- Stone stabilization where appropriate

Recommended approach

Township staff or Engineering firm

Problematic as there is limited access through private property for those.

Complete approximately 1–2 significant sites per year depending on engineering and permitting requirements.

5. Tributary Sediment Capture / Small Sediment-Trap Projects

Preliminary Budget: \$

Investigate locations where sediment can be captured before entering the Thornapple River.

Potential improvements include:

- Small sediment basins
- Forebays
- Check structures
- Rock check dams
- Stabilized drainage channels

Recommended approach

Engineering firm - could be a more immediate focus, specifically for Tanglewood Creek and Quiggle Lake Creek. Both have public road access near the creek outlets to the river. We will still need property owner cooperation, but access is straightforward.

Use the first year to identify and design the highest-value sites, then construct the best candidates.

6. Targeted Drainage Swale Improvements

Preliminary Budget: \$

Use standardized treatments for drainage swales and concentrated runoff locations.

Potential improvements include:

- Swale reshaping
- Crushed stone
- Nonwoven geotextile
- Check structures
- Vegetative stabilization

Recommended approach

Engineering firm

Problematic as there is limited access through private property for those.

This is one of the more manageable project categories and could allow the Township to complete several small projects within one construction season.

7. Annual Riverbank & Tributary Maintenance Program

Preliminary Budget: \$

Establish a formal annual inspection and maintenance program.

Activities could include:

- Annual inspection
- Post-storm inspections
- Documentation of erosion
- GPS/photo documentation
- Monitoring of known problem areas
- Identification of new sediment sources
- Minor corrective maintenance

Recommended approach

Engineering firm

Create a dedicated \$35,000 annual maintenance allowance.

This helps prevent small problems from becoming major capital projects.

8. Railroad Bridge Channel Restoration

Planning, Engineering & Permitting

Preliminary Budget: \$

Do not budget construction at this time.

The objective is to determine whether the channel east of the easternmost railroad bridge pier can reasonably be restored to approximately:

12 feet of channel width and 3–4 feet of water depth.

The field review indicates that this project may require substantial coordination with CSX and EGLE.

Potential Phase I expenditures include:

- CSX coordination
- Existing-condition survey
- Preliminary channel design
- Engineering analysis
- EGLE pre-application/permit work
- USACE coordination if required
- Mussel survey if required
- Dredged-material disposal evaluation
- Railroad pier scour analysis
- Sediment containment design
- Preliminary construction cost estimate

Recommended approach

Engineering firm

2027: \$100,000 planning/engineering allowance

Do not authorize construction until the Township knows:

1. What CSX will require;
2. What EGLE will require;
3. Whether USACE review is necessary;
4. What environmental studies are necessary;
5. How sediment will be removed and disposed of;
6. How contractors can access the site; and
7. The actual construction cost.

The memo indicates that CSX coordination could take many months and that permitting, environmental review, access and disposal requirements could substantially affect the ultimate project cost.

Preliminary Program Budget

Project	Preliminary Allocation
1. Tributary & Drainage Outfall Stabilization	\$
2. Residential Drainage and Erosion Education	\$5,000 - 10,000
3. Targeted Bank Stabilization	\$
4. Sediment Capture Projects	\$
5. Obstruction Removal	\$20,000
6. Drainage Swale Improvements	\$
7. River/Tributary Maintenance	\$
8. Navigation & Safety	\$
9. Railroad Bridge Planning/Permitting	\$
10. Long-Term Dredging Reserve	\$
TOTAL	\$

Three-Year Concept

2027

Approximately \$ _____

Focus on:

- Source-control projects
- Bank stabilization
- Sediment capture
- Maintenance
- Navigation
- Railroad bridge engineering/permitting

2028

Approximately \$ _____

Focus on:

- Additional source-control projects
- Larger bank stabilization projects
- Additional sediment traps
- Navigation improvements
- Railroad bridge project decision/construction planning

2029

Approximately \$ _____

Potentially include:

- Railroad bridge channel restoration
- Targeted dredging
- Larger sediment-control projects
- Additional capital improvements

Dear Thornapple River Property Owner,

Cascade Charter Township, through the Thornapple River Special Assessment District (TRSAD), is committed to maintaining the long-term health, navigability, and environmental quality of the Thornapple River. Over the past several years, many residents along the river have observed increasing areas of sediment buildup, changing river depths, and erosion concerns along both the main river channel and its contributing tributaries. In response, the SAD initiated a comprehensive Sedimentation Control and Mitigation Study to better understand these issues and identify practical steps to protect the river for years to come.

The Thornapple River is part of the largest subbasin of the Lower Grand River Watershed, spanning nearly 88 miles and flowing through multiple counties before entering the Grand River. The portion of the river within Cascade Township is influenced by several upstream water sources and multiple dams, including the Cascade Dam and the LaBarge Dam just upstream of 84th Street. These features contribute to slower-moving water in certain locations, which naturally leads to the deposition of fine sediment such as silt and clay. Additionally, the river receives sediment from numerous tributaries, some of which show signs of moderate to significant erosion caused by both natural processes and human activities.

To conduct the study, an aerial drone survey was performed during the 2025 seasonal river drawdown. This survey identified visible sediment deposition areas, especially at bends in the river and at the mouths of tributaries. Township environmental staff then walked eleven contributing waterways to examine erosion sites, document conditions, and identify whether sediment sources were natural—such as downed trees, steep banks, or storm impacts—or human-related, such as concentrated stormwater flows, loss of vegetation, or increased impervious surfaces.

The study found two main types of sediment concerns in the river:

- Fine-grained sediment, which settles in slow-moving areas and along inside river bends.
- Coarse-grained sediment, which accumulates at the mouths of tributaries due to upstream erosion

Along many tributaries, erosion has resulted in exposed roots, undercut banks, and small channels that carry sand and soil directly into the river. These issues are visible on private property as well as within County Drain segments. The online GIS map produced as part of the study allows property owners to see documented erosion locations and understand what may be affecting their area of the river.

With this study complete, the Thornapple River SAD now has a clearer picture of where sediment comes from and what opportunities exist to manage it. While sedimentation is a natural part of river systems, especially behind dams, there are many ways to slow or reduce its impacts. The study outlines several corrective actions and Best Management Practices (BMPs) that can be applied both by the Township and by individual property owners. These include:

- Improving stormwater infiltration and reducing runoff volumes.
- Maintaining or restoring natural vegetation along riverbanks and waterways.

- Stabilizing eroding banks using natural materials or bio-engineering practices.
- Clearing debris or constrictions that increase water speed and contribute to erosion.

The TRSAD will continue evaluating options for targeted sediment removal, structural improvements, and partnerships with private landowners. Because many erosion sources occur on private property, resident participation is essential. Small changes, such as managing yard runoff, protecting natural vegetation, and addressing minor erosion early, can make a meaningful difference for the entire river corridor.

We appreciate your engagement and stewardship as we work together to protect one of Cascade Township's most treasured natural resources. To view the full sedimentation report, accompanying maps, interactive GIS footage, and recommended best practices, please visit:

<https://cascadetwp.com/community/thornapple-river-special-assessment-district-sad/thornapple-river-sad-documents/>

If you have questions about the study, erosion concerns on your property, or ways to participate in river stewardship efforts, please contact Cascade Charter Township. The Thornapple River SAD remains committed to ongoing improvements and collaborative efforts with residents.

Thank you for your continued support and care for the Thornapple River.

Sincerely,
Cascade Charter Township
Thornapple River Special Assessment District (SAD)

Human Causes of Erosion

The Problem: Channel Erosion



The Fix:

- **Remove debris:** Clear branches, trash, and other obstructions from the channel.
- **Smooth the channel:** Reduce sharp bends and uneven areas where water can scour the banks.
- **Add channel protection:** Use rocks, vegetation, or other natural materials to stabilize the channel and banks.

Video Examples:

- DIY Creek Bank Reinforcement That ACTUALLY Slows Erosion



How to Repair Eroded Stream Banks:
Natural Techniques That Actually Work

The Problem: Unprotected Outlet



The Fix:

- **Stabilize the outlet:** Protect the area where water enters the river from erosion.
- **Slow the water:** Use rocks or other measures to reduce the water's speed and energy.
- **Protect the riverbank:** Stabilize nearby banks with rock, vegetation, or other natural materials.

The Fix:

- **Spread the flow:** Distribute water over a larger area to reduce its force.
- **Slow the water:** Use rocks, vegetation, or other measures to reduce water speed.
- **Stabilize the outlet:** Protect the outlet and surrounding area from erosion.

The Problem: Concentrated Outlet & Unprotected Channel



Natural Causes of Erosion

The Problem:

Debris in waterway deflects flow against unstable banks



The Fix:

- **Remove debris:** Clear logs, branches, and other obstructions from the waterway.
- **Redirect the flow:** Allow water to follow a more natural path through the channel.
- **Stabilize the bank:** Protect vulnerable banks with rocks, vegetation, or other natural materials.



Resource Tips

8 oz. non-woven geotextile can be found online and at major home improvement stores. **Stone** can be obtained from local landscape providers (look for 1-3 inches in diameter). 1-inch stone should be placed two layers deep.

To find out the amount you need:

$$\text{Length of channel (feet)} * \text{Width of channel (feet)} \\ = \text{square footage of fabric}$$

$$\text{Length of channel (feet)} * \text{Width of channel (Feet)} / 160 \\ = \text{cubic yardage of stone}$$

BUDGET REPORT FOR CASCADE CHARTER TOWNSHIP
Calculations As of 12/31/2027

GL Number	Description	2025 Activity	2026 Projected	2027 Requested
Fund: 230 THORNAPPLE RIVER IMPROVEMENT FUND				
Account Category: Estimated Revenues				
Budget Classification: SPECIAL ASSESSMENT REVENUE				
230-000-452-014	S/A REVENUE- TRD - RIVER	134,409	90,900	90,900
	SPECIAL ASSESSMENT REVENUE	134,409	90,900	90,900
Budget Classification: INTEREST AND RENTS				
230-000-665-000	INTEREST ON INVESTMENTS	10,978	12,000	12,000
	INTEREST AND RENTS	10,978	12,000	12,000
	Estimated Revenues	145,387	102,900	102,900
Account Category: Appropriations				
Budget Classification: OTHER SERVICES AND CHARGES				
230-444-802-000	CONTRACTUAL SERVICES	41,321	40,000	180,000
230-444-816-000	INSECT&WEED CONTROL/DRAIN MAINT	14,712	15,000	40,900
230-444-960-000	COST ALLOCATION PLAN	1,000	500	2,000
	OTHER SERVICES AND CHARGES	57,033	55,500	222,900
	Appropriations	57,033	55,500	222,900
Fund 230 - THORNAPPLE RIVER IMPROVEMENT FUND:				
	TOTAL ESTIMATED REVENUES	145,387	102,900	102,900
	TOTAL APPROPRIATIONS	57,033	55,500	222,900
	NET OF REVENUES & APPROPRIATIONS:	88,354	47,400	(120,000)
	BEG. FUND BALANCE - ALL FUNDS	278,550	366,905	414,305
	END FUND BALANCE - ALL FUNDS	366,904	414,305	294,305