



SOUTH WASHINGTON WATERSHED DISTRICT

SOUTH WASHINGTON WATERSHED DISTRICT COMMUNITY ADVISORY COMMITTEE

TUESDAY, MARCH 24, 2026, 6:00 PM
CITY OF WOODBURY PUBLIC WORKS BUILDING
2301 TOWER DRIVE

AGENDA

1. Call to Order and Setting of Agenda
2. Approval of Minutes – December 16, 2025
3. Public Open Forum
4. Biological Control of Purple Loosestrife DISCUSSION
5. CCIP DISCUSSION
6. Upcoming Meetings & Events
 - a. March 31, 2026, 6:00 pm, CAC Tentative Accessory Meeting
 - b. June 23, 2026, 6:00 pm, CAC Regular Meeting
 - c. September 22, 2026. 6:00 pm, CAC Regular Meeting
 - d. December 15, 2026, 6:00 pm, CAC Regular Meeting
7. Adjourn



SOUTH WASHINGTON WATERSHED DISTRICT

SOUTH WASHINGTON WATERSHED DISTRICT COMMUNITY ADVISORY COMMITTEE

TUESDAY, DECEMBER 16, 2026, 6:00 PM
CITY OF WOODBURY PUBLIC WORKS BUILDING
2301 TOWER DRIVE

CAC Members Present:

- Sam Behrends
- Laura Duffey
- Patty Goertz
- Dan Henely
- Sarah Lilja
- Howard Markus
- Jay Sockness
- Bill Sumner
- Jeff Mohr
- David Nuccio

SWWD Staff & Board:

- Kyle Axtell, Watershed Project Manager
- Abby Tekiela, Water Resources Program Coordinator
- Kevin ChapdeLaine, Board Treasurer

CAC Members Not Present:

- None

Others:

- None

1. Call to Order & Setting of Agenda

Watershed Project Manager Kyle Axtell called the meeting to order at 6:00 pm. Motion by Bill Sumner to accept the agenda as presented. Second by Sarah Lilja. Motion carried unanimously.

2. Approval of Minutes

Motion by David Nuccio to approve the minutes from June 24, 2025, and September 23, 2025, as presented. Second by Patty Goertz. Laura Duffey abstained. Motion carried unanimously.

3. Public Open Forum – None.

4. New Committee Member Introduction: Laura Duffey

New member Laura Duffey of Newport introduced herself to the committee. Members introduced themselves to Duffey.

5. Watershed Management Plan Draft Review



Members of the committee discussed the contents of the draft Watershed Management Plan.

Member Howard Markus discussed the effectiveness of non-point source and agricultural BMPs highlighted in the draft plan. Member Laura Duffey noted that it may be valuable to compare watershed health given existing BMPs, to the health of the watershed had no BMP interventions been established.

6. Mississippi River Clean-up

Staff member Abby Tekiela presented the idea of a volunteer clean-up along the Mississippi River as previously suggested by a community member. Members discussed feasibility given slope of Mississippi shoreline, equipment needed, and existing efforts by other groups. Committee concluded that efforts would be best served through promotion of other groups conducting clean-ups, or partnering with a Mississippi River boat club or marina for a future clean up.

7. 2026 SWWD Coordinated Capital Improvement Program Primer

Staff member Kyle Axtell presented the upcoming CCIP Request for Proposals document and application form to be published in early 2026.

Member Pattey Goertz discussed directly contacting eligible groups that have not participated in the past.

Member Dan Henley suggested that applicants may find it beneficial to see examples of past applications that were done well or approved.

A backup meeting was scheduled for March 31st in the case that not all CCIP applications can be reviewed and decided upon during the regular March 2026 meeting.

8. Other Business – None.

9. Adjourn

The next CAC Meeting will be held on June 23, 2026, at 6:00pm. Bill Sumner moved to adjourn the meeting at 7:20 pm. Second by Patty Goertz. Motion carried unanimously.



SOUTH WASHINGTON
WATERSHED DISTRICT

Respectfully submitted,

Abby Tekiela

Abby Tekiela, Water Resources Program Coordinator

3/24/26

Date

Approved By:

David Nuccio

David Nuccio, SWWD CAC Secretary

3/24/26

Date

BEETLE PARENTS WANTED!

PURPLE LOOSESTRIFE BIOCONTROL PROJECT

What is Purple Loosestrife?



Purple loosestrife is a wetland plant native to Europe and Asia that is listed as an MDA Prohibited Noxious Weed and is considered a prohibited invasive species in Minnesota.

Why Do We Care?



Purple loosestrife drastically outcompetes Minnesota's native wetland plants and causes decreases in biodiversity, threatening the future of Minnesota's natural wetlands, streams, rivers, lakes, and shorelines.



Meet the Galerucella Beetle!



Galerucella is a genus of beetle native to Eurasia that is known to consume only purple loosestrife by feeding on the leaves and shoots of the invasive species. These beetles are used as a biocontrol to decrease the density and seed output of purple loosestrife.

Where Do You Come In?



We are looking for volunteers to raise Galerucella beetles to use as biocontrol for purple loosestrife!

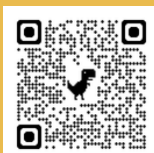


What Will Raising Galerucella Beetles Look Like?

Volunteers will be provided purple loosestrife biocontrol kits, consisting of:

- Purple loosestrife plants in pots
- Galerucella beetles
- pots
- plastic kiddie pool
- clothesline
- bungee cords
- netting
- instruction manual

Volunteers will be expected to maintain and observe the plants and beetles. By midsummer, the beetles will have increased to up to 1,000 beetles per plant and will be ready to be released!



Learn More

For more information and to apply, check out the project webpage: wildriversconservancy.org/get-involved/biocontrolproject/



Memo

To: SWWD Community Advisory Committee
From: Kyle Axtell, Watershed Project Manager
Date: March 13, 2026
Re: Coordinated Capital Improvement Program (CCIP) Applications

Background

Staff seeks CAC review and recommendations on the seventeen (17) eligible grant applications received through SWWD's 2026 Coordinated Capital Improvement Program (CCIP). They are organized by application type. A scoring rubric has also been included that you may use to guide your reviews.

	Funding	Mgmt.
	Request	Unit
<u>Stormwater Management & Resiliency Projects</u>		
Cottage Grove – Ideal Avenue Manhole Repairs	\$34,600	SW
Cottage Grove – L-P3 Flood Storage	\$475,000	SW
Washington County – River Trail Ravine Stabilization Plans	\$25,000	LSC
Woodbury – Interlachen Pkwy Parking Lot Removal	\$59,000	SW
Woodbury – Interlachen/Tamarack Parking Lot Removal	\$200,000	SW
Woodbury – Restoration of 6895 Bailey Road	\$37,500	SW

Equipment Purchases & Upgrades

Newport – Forestry Mower	\$2,825	E. Miss.
Newport – Street Sweeper	\$168,000	E. Miss.
SoWashCo Schools – Flail Mower & Blower	\$12,108	SW
Washington County – Chloride Reduction System	\$231,004	SW
Woodbury – Hydromulcher	\$15,000	SW
Woodbury – Roadway Pre-Treatment Upgrade	\$30,000	SW
Woodbury – Street Sweeper	\$205,000	SW

Planning Efforts & Programmatic Expenses

Woodbury – Chloride Reduction Plan	\$25,000	SW
Woodbury – GREAT Study	\$20,000	SW
Woodbury – Stormwater Maintenance	\$100,000	SW
Woodbury – Turf Conversion	\$15,000	SW

TOTAL	\$1,655,037	
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Discussion

The CAC is expected to review the CCIP applications prior to the meeting to generate some familiarity in advance of discussion during the meeting. There will be ample time to discuss the submitted applications during the March 24 CAC meeting. Staff will be available to provide guidance and answer questions. If additional time is required to complete our discussion, a second meeting has tentatively been scheduled for March 31.

Decision

Staff expect the CAC to adopt a motion recommending a slate of CCIP applications to be forwarded to the SWWD Board of Managers for consideration and approval. Staff will provide additional budgeting context during the meeting. CAC members should not be concerned about available SWWD budgets at this time.

2025 CCIP Scoring Rubric	Points
Description: The project description succinctly describes what results the applicant is trying to achieve and how the results are to be achieved.	5
Targeting: The proposed project addresses identified critical water pollution sources or risks impacting water resource(s).	10
Measurable Outcomes: The proposed project has a quantifiable reduction in surface water or groundwater pollution, flood risk, and/or groundwater usage and directly addresses the water quality, flooding or groundwater use concern identified in the application. Alternatively, the proposal directly improves the applicant's ability to address or improve climate, natural resources, or stormwater infrastructure resiliency.	20
Cost-Effectiveness: The application identifies a cost-effective and feasible solution to address the identified concerns.	10
Project Readiness: The application has a set of specific activities that can be implemented soon after grant award.	5
Total Points Available	50

2026 CCIP Reviews

Reviewer Name: _____ Date: _____

Application	Funds Requested	Description (5 Points)	Targeting (10 Points)	Measurable Outcomes (20 Points)	Cost-effectiveness (10 Points)	Project Readiness (5 Points)	Total Score (50 Points Max)
Cottage Grove – Ideal Avenue Manhole Repairs	\$34,600						0
Cottage Grove – L-P3 Flood Storage	\$475,000						0
Washington County – River Trail Ravine Stabilization Plans	\$25,000						0
Woodbury – Interlachen Pkwy Parking Lot Removal	\$59,000						0
Woodbury – Interlachen/Tamarack Parking Lot Removal	\$200,000						0
Woodbury – Restoration of 6895 Bailey Road	\$37,500						0
Newport – Forestry Mower	\$2,825						0
Newport – Street Sweeper	\$168,000						0
SoWashCo Schools – Flail Mower & Blower	\$12,108						0
Washington County – Chloride Reduction System	\$231,004						0
Woodbury – Hydromulcher	\$15,000						0
Woodbury – Roadway Pre-Treatment Upgrade	\$30,000						0
Woodbury – Street Sweeper	\$205,000						0
Woodbury – Chloride Reduction Plan	\$25,000						0
Woodbury – GREAT Study	\$20,000						0
Woodbury – Stormwater Maintenance	\$100,000						0
Woodbury – Turf Conversion	\$15,000						0

2026 CCIP Reviews

Reviewer Name: _____ Date: _____

Comments:

The following descriptions are designed to help you ask and answer questions about each proposal.

We ask that you score each proposal based on these criteria, or any other measure as you see fit. It is not critical that each reviewer apply scoring the same way as another; rather, it is important that each individual reviewer apply their own scoring mechanism to each applicant as similarly as possible. Use as much of the scoring scale (0 to MAX) as you are comfortable with, there are no wrong answers!

Description (5 points): The project description succinctly describes what results the applicant is trying to achieve and how the results are to be achieved.

Targeting (10 points): The proposed project addresses identified critical water pollution sources or risks impacting water resource(s).

Measurable Outcomes (20 points): The proposed project has a quantifiable reduction in surface water or groundwater pollution, flood risk, and/or groundwater usage and directly addresses the water quality, flooding or groundwater use concern identified in the application. Alternatively, the proposal directly improves the applicant's ability to address or improve climate, natural resources, or stormwater infrastructure resiliency.

Cost-Effectiveness (10 points): The application identifies a cost-effective and feasible solution to address the identified concerns.

Project Readiness (5 points): The application has a set of specific activities that can be implemented soon after grant award.



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Cottage Grove
Name: Ryan Burfeind Title: Public Works Director
Address: 12800 Ravine Parkway
City: Cottage Grove State: MN Zip: 55016
Phone: (651) 458-2899 Email: rburfeind@cottagegrovemn.gov

PROJECT LOCATION

Description: Grout and line three large manholes
Address: Ideal Avenue north of 95th Street
City: Cottage Grove State: MN Zip: 55016
SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix
Primary Waterbody Affected: Wet pond & infiltration basin (TG-P14)

PROJECT BUDGET

Total Project Cost: \$ 69,200
CCIP Funding Requested: \$ 34,600
Other Funding Secured: \$ 34,600
Other Funding Sources: Cottage Grove Stormwater Utility Fund

PROJECT CONCEPT PLAN *[check box when complete]*

- ☒ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The primary goal of this project is the refurbishment of three large 40-year-old manholes on Ideal Avenue just north of 95th Street in Cottage Grove. The manholes are part of stormwater conveyance system that drains 144 acres of industrial properties. The drainage area is 85% impervious.

The three large manholes are 10-feet in diameter and are connected by a 72-inch RCP that carries 311 cfs in the 100-year event. Built with brick, the mortar in the manholes is crumbling. The plan is to re-mortar the joints and apply a water-tight sealant.

The three manholes are labeled on the attached map.

- B. Describe the water resource problems addressed by the project:

The water resource issue addressed by this project is aging stormwater infrastructure. The large manholes are part of a system that carries drainage to a pond and infiltration basin that provide rate control, volume control, and water quality treatment to the industrial area.

If one of these manholes failed, sediment and debris could be washed into the recently constructed TG-P14. The SWWD provided CCIP funds to help construct the infiltration basin at TG-P14 in 2022.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

The downstream pond and infiltration are known as TG-P14. The allowable P load from the 159.7 acre industrial park that drains to TG-P14 is 35.1 lbs TP/year @ 0.22 lbs/acre/year. According to the P8 model simulation, the TG-P14 BMPs will discharge 3.8 lbs TP/year. Thus the TG-P14 BMPs are expected to remove 31.3 lbs/year more than required by watershed rules. Maintaining the three upstream manholes is critical to making sure this BMP continues to work as designed.

D. Explain how long-term operation and maintenance of the project will be accomplished:
The need for maintenance of these manholes was identified by Cottage Grove's Public Works staff who inspect manholes on a 5-year rotation. They will continue to inspect the manholes on the 5-year basis.

E. How does the proposed work increase the resiliency of affected resources and/or systems?

In the 2018 Climate Resiliency Study that Barr completed for the SWWD, the Consequences of Failure Map codes as yellow the section of storm sewer that includes the three manholes. Yellow means the manholes' failure would have sever consequences. On the Combined Risk Map from the Resiliency Study the storm sewer just south of Manhole 1 is coded as orange.

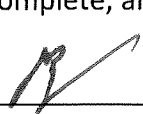
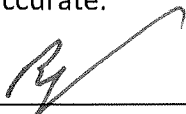
Ideal Avenue is the only access for two large businesses and the main access for a third. Failure of such large manholes would cause major disruptions for all three businesses.

F. Describe the anticipated project implementation schedule:

The repair and maintenance on these manholes will be included in the Mill & Overlay project scheduled for 95th Street during the 2026 construction season.

APPLICANT SIGNATURE

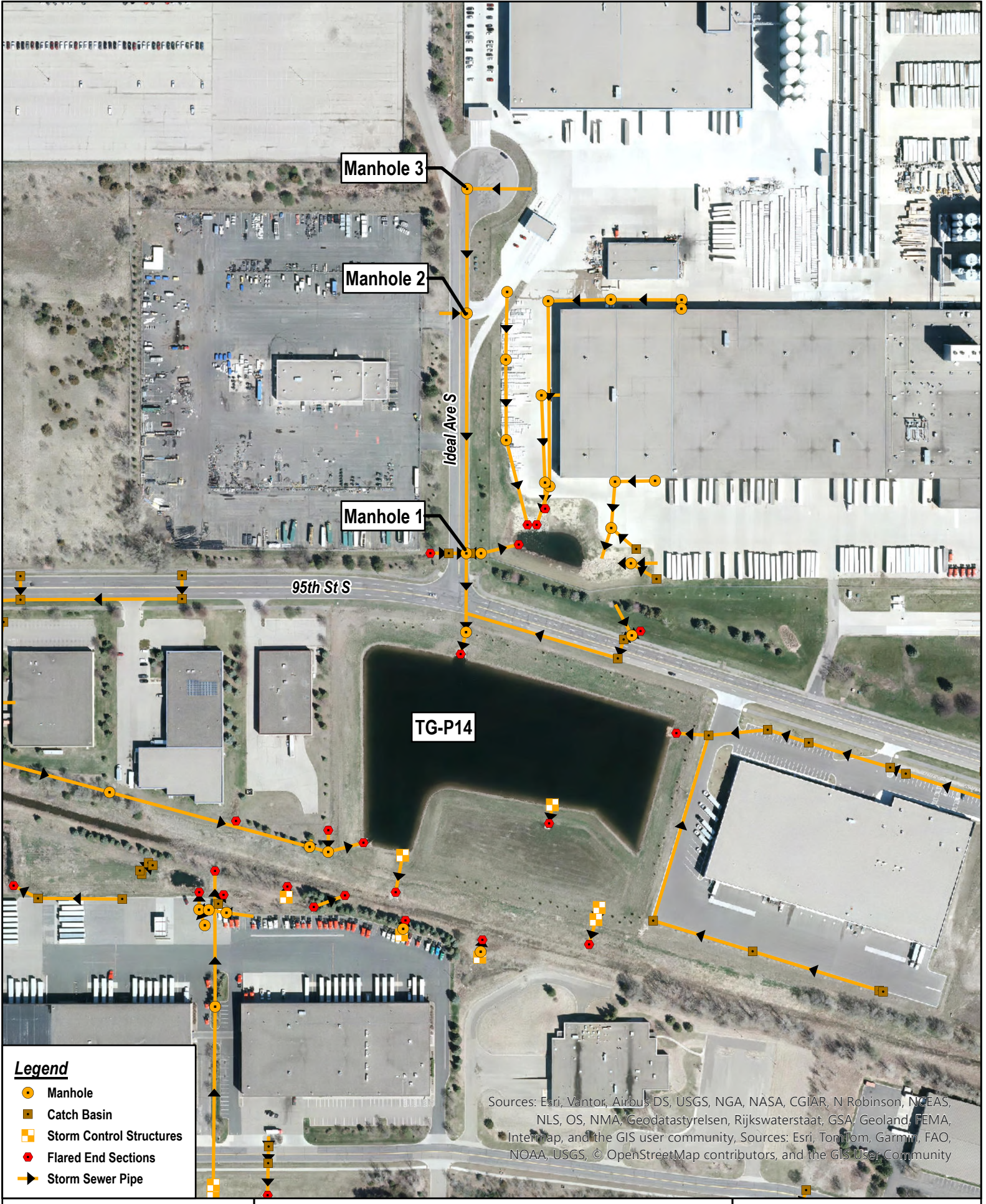
I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Signature

3-6-26

Date



Legend

- Manhole
- Catch Basin
- Storm Control Structures
- Flared End Sections
- ➔ Storm Sewer Pipe

Sources: Esri, Vantor, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Manhole Exhibit

Cottage Grove, MN

Date: 3/6/2026



0 200 14 400 Feet



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Cottage Grove
Name: Ryan Burfeind Title: Public Works Director
Address: 12800 Ravine Parkway S
City: Cottage Grove State: MN Zip: 55016
Phone: (651) 458-2899 Email: rburfeind@cottagegrovemn.gov

PROJECT LOCATION

Description: Pond L-P3: north side of 100th Street, east of Jamaica Avenue.
Address: SE ¼ of Section 21, T27N, R21W
City: Cottage Grove State: MN Zip: 55016
SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix
Primary Waterbody Affected: Mississippi River

PROJECT BUDGET

Total Project Cost: \$ 1,463,000
CCIP Funding Requested: \$ 475,000
Other Funding Secured: \$ 988,000
Other Funding Sources: City of Cottage Grove, Washington County

PROJECT CONCEPT PLAN *[check box when complete]*

- ☒ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

Project Goals: Construct 138 acre-feet (223,000 cubic yards) of additional flood storage volume within the Regional Pond L-P3 to provide the planned regional pond volume of 368 acre-feet. The existing basin has 230 acre-feet of flood storage. Excavation of 138 acre-feet will increase the total flood storage to 368 acre-feet.

- B. Describe the water resource problems addressed by the project:

The City of Cottage Grove has been analyzing and planning for stormwater collection, conveyance and treatment within the city for many years. Initial work focused on collection and conveyance—with designs for large pipes and channels to convey runoff through the city to outlets in the Mississippi River. Later studies recognized the importance of stormwater ponds with flood storage to reduce downstream flow and to reduce downstream loads of sediment, nutrients and other pollutants. Reducing flows with pond storage also allowed reducing the pipes and channel sizes necessary to carry the runoff and helped in reducing impacts to the natural stream channels downstream.

Continued on the attached sheet (page 4).

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

Rate Control:

Table 1 provides hydraulic model results for L-P3 with the assumed future conditions of available flood storage of 368 acre-feet.

Table 1. L-P3 Hydraulic Results

Water Quality Treatment:

The SWWD has operated a regional assessment monitoring site at the L-P3 outlet on 100th Street for over 15 years. Flow and physical and chemical water quality parameters have been collected at the site.

Continued on the attached sheet (page 5).

D. Explain how long-term operation and maintenance of the project will be accomplished:
L-P3 is a city-owned/operated/maintained facility. The pond will be annually inspected, and maintenance will be performed as necessary.

E. How does the proposed work increase the resiliency of affected resources and/or systems?
Flood resilience involves planning and preparing for floods and taking action to reduce the impacts of floods on people, infrastructure and the environment. Expanding the storage volume within L-P3 will increase flood storage, reduce downstream peak flows, and improve resiliency. Reducing peak flows and extending the flood detention time within L-P3 will reduce the likelihood of road and railroad overtopping downstream. The DNR public waters wetlands and stream channel downstream from L-P3 are naturally resilient to floods, but natural systems also benefit from reduced peak flows and velocities.

F. Describe the anticipated project implementation schedule:
Excavation for the project will take place in late summer or fall of 2027. The project will be timed to take place during the reconstruction of 100th Street.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.



Signature

3-9-26

Date

ADDITIONAL PROJECT DESCRIPTION

B. Describe the water resources problems addressed by this project:

Regional Pond L-P3 was first described in the City Storm Drainage Report of 1968. The 1968 Design report envisioned L-P3 with a high-water level of 765, a peak outflow of 560 cfs, 69 acre-feet of flood storage, and a concrete lined outlet channel to the Mississippi River.

<u>APPENDIX C</u>				
<u>RETENTION POND DATA</u>				
<u>Pond Designation</u>	<u>Estimated Surface Area (Acres)</u>	<u>Estimated High Water Level (Ft. above S.L.)</u>	<u>Design Value for Controlled Outflow(cfs)</u>	<u>Required Storage Volume (Cu.ft.)</u>
I	18.5	765	560	3,000,000

Approximately 8000 acres (12.5 sq. miles) drains through L-P3 to the Mississippi River. Regional Pond L-P3 provides rate control, water quality treatment, and wetland functions and habitat. Part of the L-P3 basin is classified as DNR Public Waters Wetland 82-86W. Proposed excavation will be done in accordance with water and wetland rules to avoid impacts to wetland 82-86W. L-P3 also provides regional stormwater management benefits for rate control and water quality treatment as runoff is temporarily stored in the pool. Plans for L-P3 call for a future live storage volume of 368 acre-feet between the normal water level (NWL) of 760.6 and elevation 772.

In 2008 the City and 3M entered into an agreement regarding L-P3: "...City will control all outflow of water from the Pond Area, including, without limitation, preventing any water from flowing onto or over the Road and maintaining and outlet from the Pond Area under the Road (the "Outlet") that: (a) does not permit water through the Outlet at a rate that is more than 370 cubic feet per second; (b) only permits water through the Outlet that meets the requirements of all Laws; (c) is constructed in a manner to assure that the Outlet will not be breached; and (d) includes a monitoring device that monitors and records the water rate and quality passing through the Outlet to assure that such water complies with the Laws..." The agreement requires that 100th Street is not overtopped and the peak outflow rate from L-P3 is limited to 370 cfs. The agreed outflow rate was based on stormwater modeling and a 100-year design 6" rainfall depth (as per the U.S. Weather Bureau Technical Paper No. 40 (TP-40)) with an SCS Type II rainfall distribution. Stormwater design models today use the NOAA Atlas-14 100-year 24-hour rainfall depth of 7.40 inches paired with the more intense MSE 3 rainfall distribution, meaning more rain is simulated to fall within a shorter period.

C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other ware resource benefits associated with the project:

Table 1

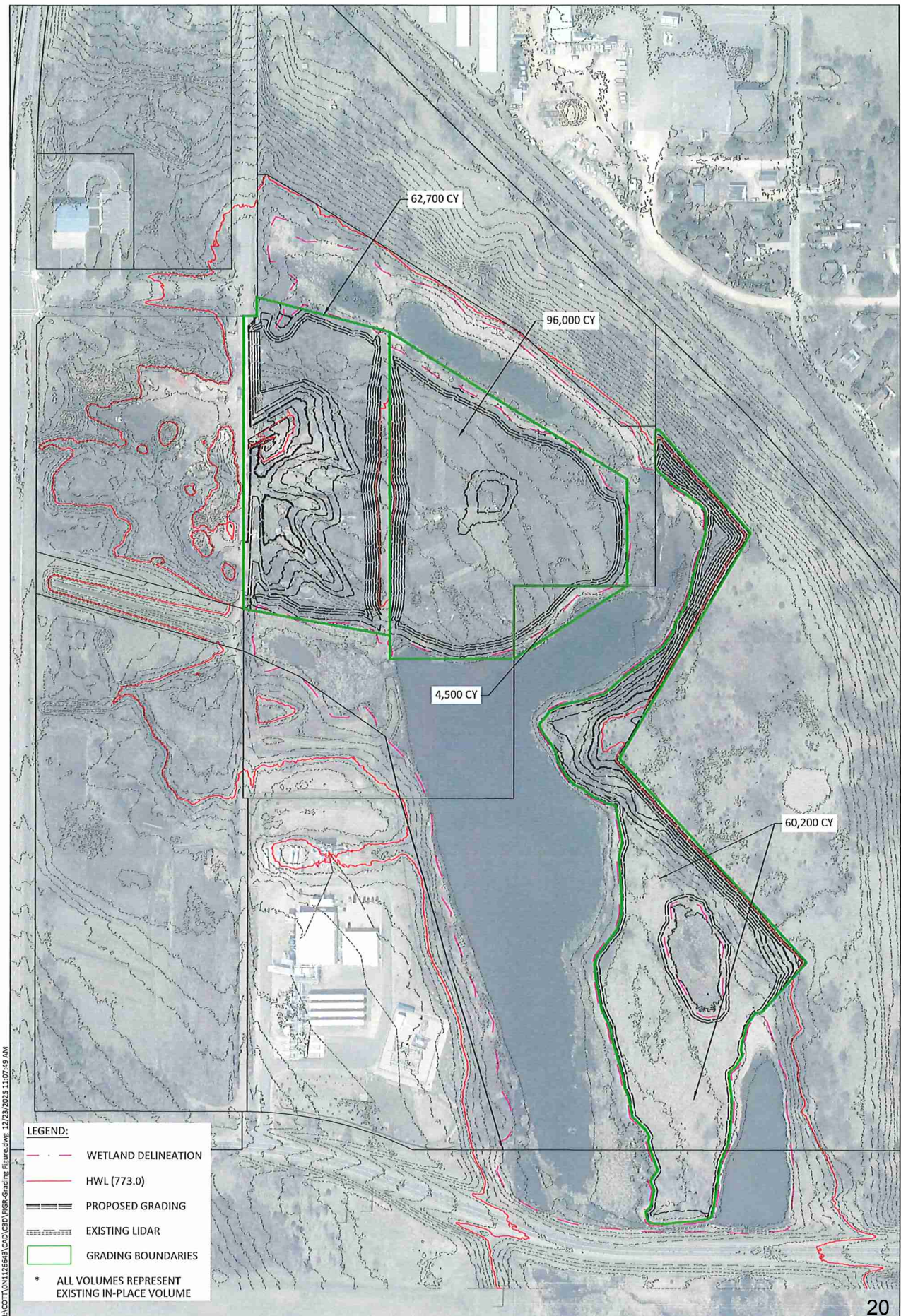
Design Precip.	Inflow (cfs)	Outflow (cfs)	Peak Stage (feet)	Notes
6" 100yr TP-40	607	347	768.38	Meets 3M agreement, 100 th St. not overtopped, BNSF RR not overtopped, outflow lower than 1968 design.
7.4" 100yr Atlas 14	817	443	772.11	Future 100 th St. not overtopped, BNSF RR not overtopped, outflow lower than 1968 design.

Water Quality Treatment:

Estimating the water quality treatment of L-P3 is complicated by the large upstream drainage area as well as the dozens of existing stormwater ponds that are constructed within the contributing drainage area. Certainly L-P3 will retain sediment, nutrients and other pollutants. Runoff will be temporarily stored, and sediments will settle out of the water. The expected detention time of the basin is about 5 hours in a two-year storm. This detention will likely allow all sand and silt size particles to settle, but a portion of the clay size particles will likely remain in suspension. The 2-year peak outflow rate is 156 cfs. This value is very similar (although 4% higher than) to the recommended NURP¹ pond outflow rate of 150 cfs (i.e. 5.66 cfs/acre * 26.5-acre pool area)—therefore L-P3 will likely have similar sediment settling function as other NURP ponds however the permanent pool volume is not large enough for the upstream watershed, so sediment may be resuspended during floods.

Good Housekeeping: As part of this project the City compost site will be moved from its current location near L-P3 and wetland 82-86W. Moving the compost center to another location away from the wetland/stream channel effectively moves nutrients away and reduces the likelihood of transport to the river, streams and wetlands. Proposed excavation work areas will be separated by a vegetated buffer from Wetland 82-86W to reduce the risk of sediment transport from the work site to the wetland.

¹ U.S. EPA Nationwide Urban Runoff Program (NURP)



Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount
L-P3					
1	MOBILIZATION	1	LS	\$10,000.00	\$10,000.00
2	CLEARING AND GRUBBING	1	ACRE	\$10,000.00	\$10,000.00
3	COMMON EXCAVATION (EV)	223,000	CY	\$6.00	\$1,338,000.00
4	BOX CULVERT OUTLET MODIFICATION	1	LS	\$50,000.00	\$50,000.00
5	EROSION CONTROL	1	LS	\$5,000.00	\$5,000.00
6	RESTORATION	5	AC	\$10,000.00	\$50,000.00
					\$1,463,000.00



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: Washington County Public Works - Parks Division
Name: Connor Schaefer Title: Senior Planner
Address: 11660 Myeron Road North
City: Stillwater State: MN Zip: 55082
Phone: (651) 430-4303 Email: connor.schaefer@washingtoncountymn.gov

PROJECT LOCATION

Description: River Trail Ravine Stabilization Phase 3 Design
Address: 10191 St. Croix Trail South
City: Hastings State: MN Zip: 55033
SWWD Watershed Management Unit: ☐ East Mississippi ☐ South Washington ☒ Lower St. Croix
Primary Waterbody Affected: St Croix River

PROJECT BUDGET

Total Project Cost: \$ 50,000
CCIP Funding Requested: \$ 25,000
Other Funding Secured: \$ 25,000
Other Funding Sources: Washington County Parks Division

PROJECT CONCEPT PLAN *[check box when complete]*

- ☒ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

Washington County seeks funding for a design study to evaluate stabilization alternatives for an actively eroding embankment along the River Trail in St. Croix Bluffs Regional Park. This work builds off of Phase 1 collaboration between Washington County and SWWD (through the Lower St. Croix Watershed Partnership), which implemented shoreline embankment stabilization and drop structure improvements along the same corridor. The study will document existing conditions, quantify erosion extent, and develop two to three improvement alternatives for consideration — with fortified vegetated riprap anticipated as one option. Outcomes include identifying the most effective and feasible solution to reduce sediment and phosphorus loading to St. Croix River and restore safe public trail access.

- B. Describe the water resource problems addressed by the project:

Active erosion along the River Trail embankment is delivering sediment and phosphorus directly to the St. Croix River a nationally designated Wild and Scenic River. A survey documented approximately 885 cubic feet of voided volume at the site, roughly 295 square feet in area and 3 feet deep, indicating substantial and ongoing material loss. The site's steep topography and location on the St. Croix River shoreline make it particularly vulnerable to continued failure. Washington County and SWWD identified this location through coordinated field assessment of erosion concerns along the River Trail corridor, prioritizing it for stabilization due to the connection to the larger hydrology of the park and the magnitude of existing damage.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

Using the BWSR Water Erosion Pollution Reduction Estimator, project implementation is anticipated to achieve annual reductions of 4.87 tons of TSS, 4.87 tons of soil loss, and 4.14 lbs of phosphorus entering the St. Croix River. These estimates are significant given the site's direct drainage to Lake St. Croix and reflect the benefit of arresting an 885-cubic-foot void that continues to expand with each storm event. Stabilization will provide long-term, sustained pollutant load reductions to a water body of national significance.

- D. Explain how long-term operation and maintenance of the project will be accomplished:

Washington County Parks will be responsible for long-term operation and maintenance of stabilization improvements, consistent with its existing stewardship of St. Croix Bluffs Regional Park. A maintenance plan will be developed as part of the design study and submitted for SWWD review during the development review process, consistent with CCIP requirements.

- E. How does the proposed work increase the resiliency of affected resources and/or systems?

This project strengthens the long-term resiliency of both park infrastructure and the St. Croix River corridor. The River Trail, one of the park's defining features, was previously closed in due to safety concerns from erosion, temporarily eliminating public access to 3,800 feet of Wild and Scenic River shoreline. While the trail has since reopened, the proposed site remains a safety concern. Stabilizing the embankment protects the trail as a long-term public asset while reducing the site's vulnerability to progressive failure during high-intensity storm events. Broader ecological benefits include preserving the natural hydrology of the park's bluff system and reducing chronic sediment and nutrient delivery to the St. Croix River.

- F. Describe the anticipated project implementation schedule:

Design study begins January 2027, following grant award and consultant contract execution.

Phase 1 — Discovery & Concept (Month 1)

Existing conditions evaluation, HydroCAD model, technical memorandum, and improvement alternatives.

Phase 2 — Preliminary Design (Month 2)

DNR permit application (MPARS), 60% plan set, and updated cost estimate.

Phase 3 — Final Design (Month 3)

90% plans, SWPPP sheets, signed final plans, and final cost opinion.

Phase 4 — Bidding & Site Assistance (Months 4–8)

Bid addenda, submittal reviews, and construction observation.

APPLICANT SIGNATURE

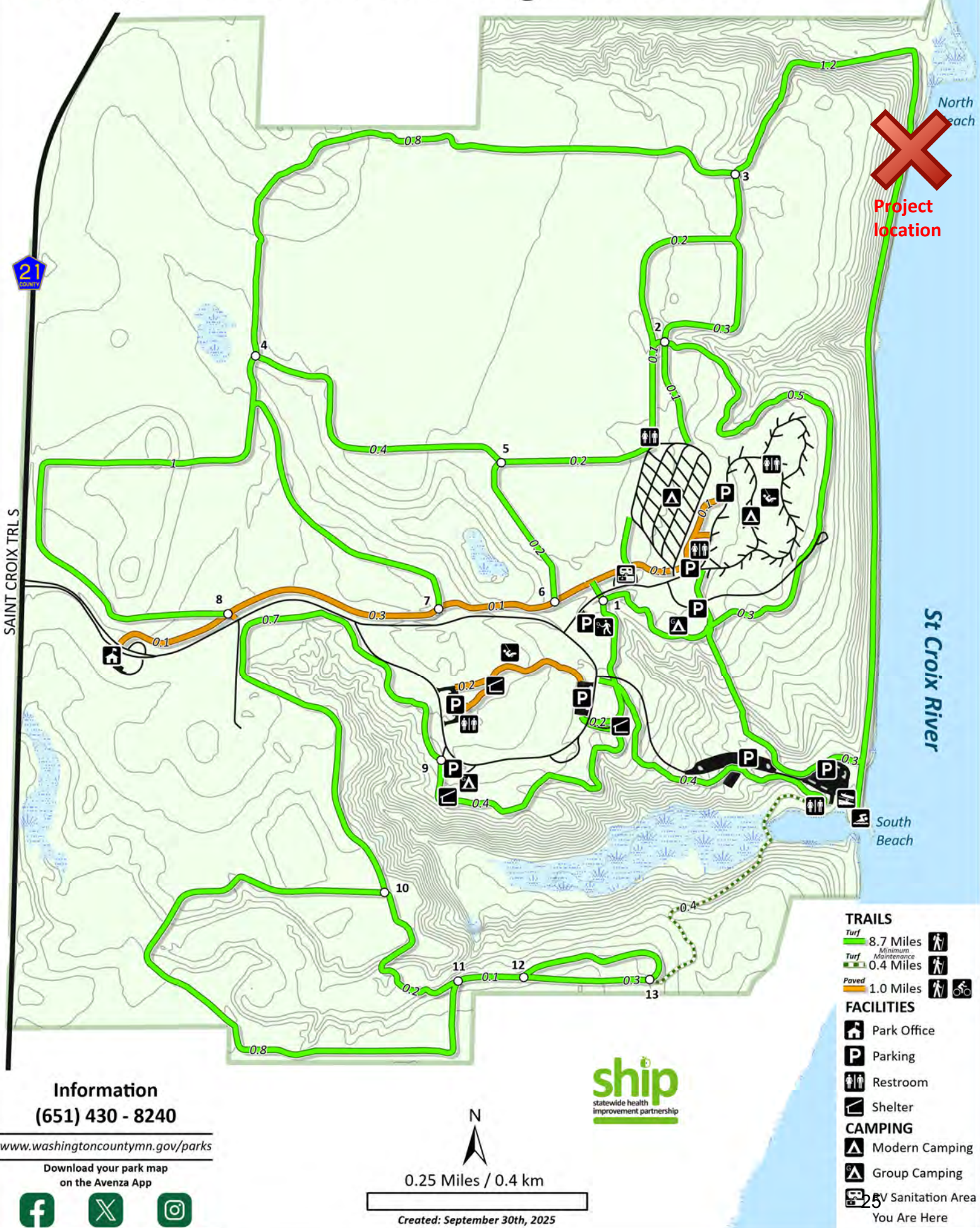
I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Connor Schaefer

Signature

03/10/26

Date



**Project
location**

St Croix River

TRAILS

- 8.7 Miles
- 1.0 Miles

FACILITIES

- Park Office
- Parking
- Restroom
- Shelter

CAMPING

- Modern Camping
- Group Camping
- RV Sanitation Area

You Are Here

Information

(651) 430 - 8240

www.washingtoncountymn.gov/parks

Download your park map
on the Avenza App



0.25 Miles / 0.4 km

Created: September 30th, 2025



Images of Existing Site Conditions





Two Carlson Parkway
Suite 110
Plymouth, MN 55447
P: 612.699.0401



Note:

Scope is from 2025. The county would receive an updated scope if funding is secured.

The county would expect the budget and timeline to match what is shown in the application (an increase to the estimate shown in this document). The updated application estimate was vetted by potential consultants.

June 3, 2025

Erin Clarkowski, PE
Washington County Public Works Department
11660 Myeron Road Rd North
Stillwater, MN 55802

Re: 2025 Slope Stabilization at St. Croix Bluffs Regional Park

Dear Ms. Clarkowski,

We have prepared a scope and cost estimate to analyze an eroding slope located in St. Croix Bluffs Regional Park. The failing slope is approximately three quarters of a mile north of the boat launch. Photos do not accurately convey the concerns with the slope; approximately one fourth to one third of the trail has formed a depression, indicating ongoing erosion, and the potential for the trail washing out over the long term, if left unaddressed.

Moore understands the County completed a similar project on a ravine within the park, with a larger watershed and more concentrated flow path. This project constructed an outlet structure, rehabilitated an existing culvert, and stabilized the downstream slope with vegetated riprap. This project was constructed in 2024. For this year's project, the County would like to address the previously described eroding trail to address safety concerns, and thought vegetated riprap may also be applicable to rebuild the eroded slope, and permanently stabilize. This following scope of work includes initial tasks to evaluate the existing conditions, and provide several improvement alternatives. Based on initial discussion, vegetated riprap is anticipated to be one of the options, but Moore will provide two or three other alternatives for consideration. The scope also outlines optional plan development, permitting, and limited bidding/construction assistance.

Scope of Work

Specific deliverables are shown in **bold, blue text**.

Task 1: Site Visit, Meetings, and Project Management

Moore Staff visited the site to inspect the trail in advance of developing this scope of work. This was to better understand the project area and specific nuances of the issues. Also included as part of this task is overall project management and meetings, to keep the County updated on project status, discuss submittals, and keep the project on schedule. We have included meeting time to review with the County after the Concept Design submittal. Note additional meeting time and project management efforts for the optional tasks are included in the cost estimate for the optional tasks. Meeting/PM time for Tasks 3, 4, and 5 is not part of Task 1.

Task 2: Concept Design

Moore will develop a HydroCAD model to understand flow rates and velocities that pass over the trail.

Though difficult to see in LiDAR, the location of the erosion is at a relatively low point of the trail. To the north of the erosion, the trail is flanked by the bluff to the west, and relatively high ground to the east. At this location, the trail's cross slope flows to the west. This has the effect of concentrating flow in the western "ditch" of the trail, which ultimately drains towards the river at the location of erosion. We will also develop an estimate of the annual mass of sediment and phosphorus that are at risk of discharge to the St. Croix River. We will provide a brief two- or three-page [technical memorandum](#) summarizing our onsite observations, modeling methodology, and potential stabilization alternatives. We will include typical details of potential alternatives for the County's consideration and estimate costs. With estimated sediment and phosphorus removal rates, the County can use this memorandum to apply for water quality improvement grants. Moore can provide input on grant sources; Moore could also provide a separate scope to pursue and apply for grant applications, if requested.

Task 3: Permitting

Moore understands that a public waters permit from the DNR will be required before construction can proceed. Moore will develop the [MPARS permit application](#), share a draft with the County for review, and submit the permit application on behalf of the County. Under this scope we have assumed a limited time (up to 16 hrs) to prepare figures and exhibits to accompany the permit application, as well as the time to submit the application and consult with the DNR. We have assumed the County will provide the design plans and the majority of the calculations needed to accompany the permit application. If Moore is authorized for Tasks 4-6, we will complete the design calculations and plan sheets needed in support of the permit application, as part of our design.

Optional Tasks

We understand that the County initially was considering developing slope stabilization plans "in house". Therefore, depending on the exact findings and recommendations developed under Tasks 1, 2, and 3, Moore understands the County may prefer to develop plans independently, rather than Moore developing the plans. However, we wanted to include these tasks, along with estimated costs, for the County's information and consideration.

Task 4: 60% Design

Moore will address County comments on the Concept Design and proceed with the agreed upon alternative. Moore will develop a [Plan Set](#) and an updated [Cost Estimate](#) as part of this task. The Plan Set will include the following sheets: Cover, Existing Conditions/Temporary Erosion Control/Removals, Proposed Conditions/Permanent Erosion Control, and Details. It should be noted that while Moore was onsite, we observed that the erosion control blanket, installed as part of the 2024 project, is mostly degraded with little to no vegetation being established. If directed to do so, Moore will include an additional plan sheet to reseed, and restabilize the bare soil on the slope of the 2024 project (see image below for current condition of blanket and vegetation).



Task 5: Final Design

Moore will address County comments regarding the 60% Design Submittal. We will add relevant construction notes and SWPPP sheets. Moore will submit **90% Plans and Cost Estimate**, will address County comments, and will provide **Signed Plans and a Final Opinion of Probable Cost**.

Task 6: Bidding and Construction Assistance

Moore will provide limited assistance as requested to the County for bidding and construction as part of this scope. Moore will be available to answer questions about the drainage feature design during bidding. We will also be able to review up to two (2) material/shop drawing submittals by the selected contractor. We will be available during project construction for three to four brief phone calls (up to 30 minutes) with the County or Contractor during project construction to answer questions regarding the drainage feature design. Moore will issue up to one addendum or field order if necessary. In total, Moore assumes no more than 20 hours of staff time will be needed during bidding and construction.

As this project is more of a “park” type of project, rather than a “transportation” type of project, if desired, Moore staff can be available to assist the County with day-to-day construction observation to monitor installation of the stabilization practices. We can complete these efforts on an hourly as needed basis or provide the County with a separate cost estimate for onsite construction observation if requested.

Assumptions

The following items form the basis of this Proposal:

- Additional site visits are not included in this scope of work.
- Plans will follow Moore CAD standards rather than State or Federal standards.
- County will administer the bidding process.

Schedule

Moore proposes the following schedule:

- County authorization: June 11, 2025
- Concept Design Submittal: July 18, 2025
- Meet to Review Concept Design: Week of July 28, 2025
- Plans, Grant Applications, Final Design: To be discussed at kickoff/review meetings

Fee

Moore will perform the tasks specified in the Scope of Work above on a Category Billing Rate basis using the actual hours worked times the appropriate Category Billing Rate plus the actual direct expenses incurred. Based on our current understanding of the project, we estimate the total cost for the scope described above in Tasks 1-3 to be **Fourteen Thousand Three Hundred Dollars (\$14,300)**. The fee shall not exceed the total contract compensation amount unless approved by the County. Costs for optional tasks are also included in the table below.

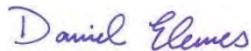
Task	Cost
Task 1 – Site Visit, Meetings, and Project Management	\$4,400
Task 2 – Concept Design	\$6,500
Task 3 – Permitting	\$3,400
Task 4 – 60% Design	\$10,900
Task 5 – Final Design	\$3,400
Task 6 – Bidding and Construction Assistance	\$3,300
Total Cost	\$14,300 (No Optional Tasks) \$31,900 (All Optional Tasks)

The fee breakdown listed above is for information only. Moore may alter the distribution of compensation between individual tasks listed above to be consistent with services rendered.

Closing

Should you find this Proposal acceptable, please have the authorized representative(s) of Washington County approve this via email. Receipt of authorization of this Proposal will serve as our Agreement and our Notice to Proceed. We appreciate the opportunity to submit this Proposal to Washington Co., and we look forward to working with you on this Project. Should you have any questions or need additional information, contact me at 651-338-7986 or at dan.elemes@mooreengineeringinc.com

Sincerely,



Daniel Elemes, PE
Water Resources Engineer



Jeff Madejczyk
Senior Project Manager



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Woodbury

Name: Kristin Seaman Title: Sr Environmental Resources Coordinator

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

Phone: (651) 414-3494 Email: kristin.seaman@woodburymn.gov

PROJECT LOCATION

Description: Decrease parking lot footprint -Interlachen Pkwy

Address: 44.93057, -92.92028

City: Woodbury State: MN Zip: 55125

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Wilmes Lake

PROJECT BUDGET

Total Project Cost: \$ 118,000

CCIP Funding Requested: \$ 59,000

Other Funding Secured: \$ 59,000

Other Funding Sources: Parks and Trails Replacement Fund

PROJECT CONCEPT PLAN *[check box when complete]*

- ☒ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The goal of this project is to remove the existing parking lot (11 stalls) footprint and driveway and create parallel parking (5-8 stalls) adjacent to the roadway, Interlachen Parkway. By re-working the parking to more closely meet the needs of the area, we are able to decrease impervious surface area and improve pedestrian movement. In place of the current parking surface, the city will be installing and maintaining a bee lawn, removing additional mowed turf and creating a public demonstration of habitat

- B. Describe the water resource problems addressed by the project:

Decreasing impervious surface and replacing mowed turf with habitat is an improvement to the Wilmes Lake Sub-Watershed.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

The project is proposed to decrease impervious surface by 2,342.94 to 4,131.94 square feet, depending on whether the bid alternate is included or not.

- D. Explain how long-term operation and maintenance of the project will be accomplished:

The current parking lot is at the end of its useful life and instead of replacing it as-is, the city evaluated options and received community feedback that parallel parking would be sufficient. The new parking stalls will be maintained with Interlachen Parkway moving forward. Converting the turf to bee lawn will be done with the Seasons Park Corridor project, supported by a 2025 CCIP grant, and will be incorporated in the City Long-Term Vegetation Maintenance Program once established. The City is interested in engaging with partners like SWWD in the future to communicate the bee lawn approach and encourage more properties implement as a turf alternative.

- E. How does the proposed work increase the resiliency of affected resources and/or systems?

As stated above, the decrease of impervious surface is an impactful strategy to decrease phosphorus leaving the park and discharging to Wilmes Lake. Converting turf is a goal of the City's Environmental Stewardship Plan: Increase diverse native plant community cover and pollinator and wildlife habitat by replacing an average of 5 acres of turf with native vegetation annually on private and publicly-owned land by 2035. By constructing the parking lot in the redesigned approach, we are increasing the amount of pollinator habitat we can add to this site.

- F. Describe the anticipated project implementation schedule:

Summer 2026 - remove existing impervious and reconstruct parking stalls adjacent to the roadway. Decompaction will occur at this time
Summer/Fall 2026 - seed the bee lawn
Fall 2026-2029 - conduct establishment maintenance of the bee lawn

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Kristin Seaman

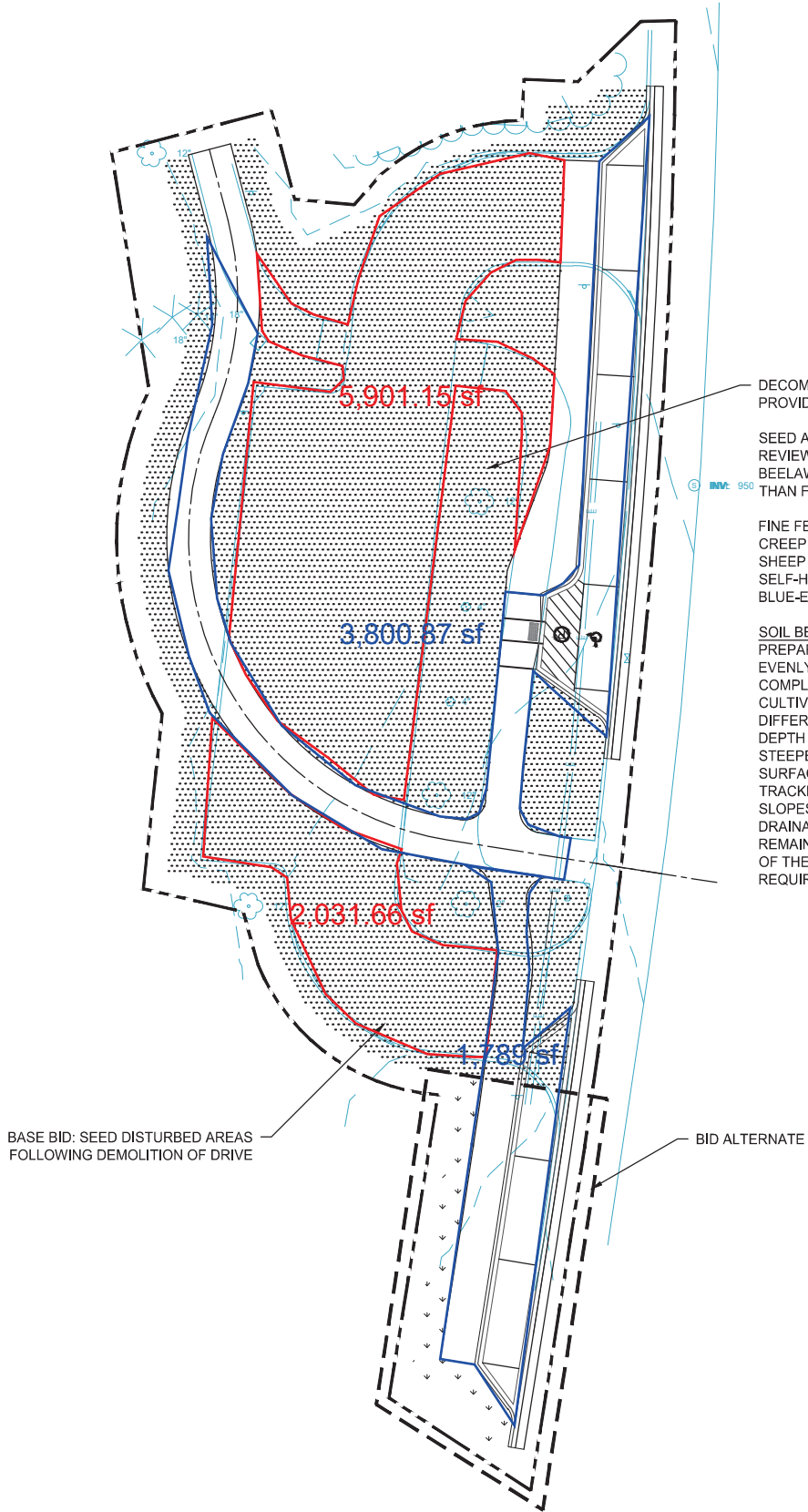
Digitally signed by Kristin Seaman
DN: C=US, E=kristin.seaman@woodburymn.gov,
O=City of Woodbury, CN=Kristin Seaman
Date: 2026.03.06 13:52:34-06'00'

03/06/26

Signature

Date

c:\ACC\ACCDocs\WSB\028280-000\project files\05_discipline\landscape\03_Sheets\028280-000-L-PLNT-PLAN.dwg 12/15/2025 2:22:23 PM



DECOMPACT SOILS 18" DEEP AT ALL EXISTING PAVEMENT AREAS. PROVIDE MIN 6" TOPSOIL AT ALL EXISTING PAVEMENT AREAS.

SEED ALL AREAS WITH "DELUXE BEE LAWN MIX." MIX TO BE REVIEWED BY STAFF PRIOR TO PURCHASE TO ALIGN WITH REST OF BEELAWN PLANTING. GOAL HERE IS MORE FLOWERING SPECIES THAN FESCUES CONSISTING OF:

FINE FESCUES (STRONG CREEPING RED FESCUE, SLENDER CREEPING RED FESCUE, CHEWINGS FESCUE, HARD FESCUE, SHEEP FESCUE) AND FLOWERING SPECIES: DUTCH WHITE CLOVER, SELF-HEAL, GROUND PLUM, CREEPING THYME, NARROW-LEAVED BLUE-EYED GRASS.

SOIL BED PREPARATION:
PREPARE THE SOIL SURFACE TO PROVIDE A SMOOTH, MOIST, AND EVENLY TEXTURED FOUNDATION BEFORE SOWING SEED OR COMPLETE THE TILLING AFTER APPLYING TOPSOIL. USE CULTIVATING EQUIPMENT SUCH AS DISCS, HARROWS, FIELD DIFFERS, OR TILLERS CAPABLE OF LOOSENING THE SOIL TO A DEPTH OF AT LEAST 3" ON ALL AREAS EXCEPT FOR SLOPES STEEPER THAN 1:2 (VERTICAL:HORIZONTAL). TILL THE SOIL SURFACE TO REMOVE TRACK IMPRINTS FROM WHEELED OR TRACKED EQUIPMENT. OPERATE CULTIVATING EQUIPMENT ON SLOPES AT RIGHT ANGLES TO THE DIRECTION OF SURFACE DRAINAGE. SOIL CLOUDS, LUMPS, AND TILLAGE RIDGES 1.5" HIGH MY REMAIN IN PLACE FOR SEEDING OPERATIONS. MULTIPLE PASSES OF THE EQUIPMENT MAY BE NEEDED TO MEET THESE REQUIREMENTS.

LEGEND

CONSTRUCTION LIMITS

EXISTING CONTOUR

EXISTING DECIDUOUS TREE

EXISTING CONIFER TREE

PROPOSED CONTOUR

TYPE I SEED MIX

TYPE I SEED MIX - BID ALTERNATE



SCALE: AS SHOWN
PLAN BY: HW
DESIGN BY: RS
CHECK BY: RS

REVISIONS

NO.	DATE	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Robert Slioka, PLA

DATE: 1-05-2026
L.I.C. NO: 44337

RESTORATION PLAN

INTERLACHEN PARKWAY TRAILHEAD
CITY OF WOODBURY, MN

CLIENT PROJECT NO.
522-25-03

WSB PROJECT NO.
028280-000

SHEET
34
L5.0



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Woodbury

Name: Kristin Seaman Title: Sr Environmental Resources Coordinator

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

Phone: (651) 414-3494 Email: kristin.seaman@woodburymn.gov

PROJECT LOCATION

Description: Decrease parking lot footprint - Interlachen Pkwy/Tamarack Rd

Address: 44°56'13.5"N 92°55'09.5"W

City: Woodbury State: MN Zip: 55125

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Wilmes Lake

PROJECT BUDGET

Total Project Cost: \$ 400,000

CCIP Funding Requested: \$ 200,000

Other Funding Secured: \$ 200,000

Other Funding Sources: Parks and Trails Replacement Fund

PROJECT CONCEPT PLAN *[check box when complete]*

- ☒ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The goal of this project is to remove the existing parking lot (4 stalls) and the driveway and maintain a few stalls closest to Interlachen Parkway, where there is currently the trash enclosure/turnaround. The long driveway and stalls are not necessary to meet the community's needs, removes a public safety concern and replaces impervious surface with vegetated surface.

- B. Describe the water resource problems addressed by the project:

Decreasing impervious surface and replacing mowed turf with habitat is an improvement to the Wilmes Lake Sub-Watershed. The city considered if another stormwater basin could be incorporated with this project and concluded that it was not an efficient location or priority to add a BMP.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

The existing parking lot and driveway is 9,284 square feet. The proposed project will remove approximately 6,391 square feet.

- D. Explain how long-term operation and maintenance of the project will be accomplished:

The current parking lot is at the end of its useful life and instead of replacing it as-is, the city evaluated options and concluded the parking close to the parkway would be sufficient. The re-worked parking will be maintained by the city.

- E. How does the proposed work increase the resiliency of affected resources and/or systems?

As stated above, the decrease of impervious surface is an impactful strategy to decrease phosphorus leaving the park and discharging to Wilmes Lake. Converting turf is a goal of the City's Environmental Stewardship Plan: Increase diverse native plant community cover and pollinator and wildlife habitat by replacing an average of 5 acres of turf with native vegetation annually on private and publicly-owned land by 2035. While the design of the open space is not final, removing the driveway and parking stalls creates an opportunity to install native plants and/or trees.

- F. Describe the anticipated project implementation schedule:

Fall 2026 - final design

Spring 2027 - parking lot removal and restoration

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Kristin Seaman

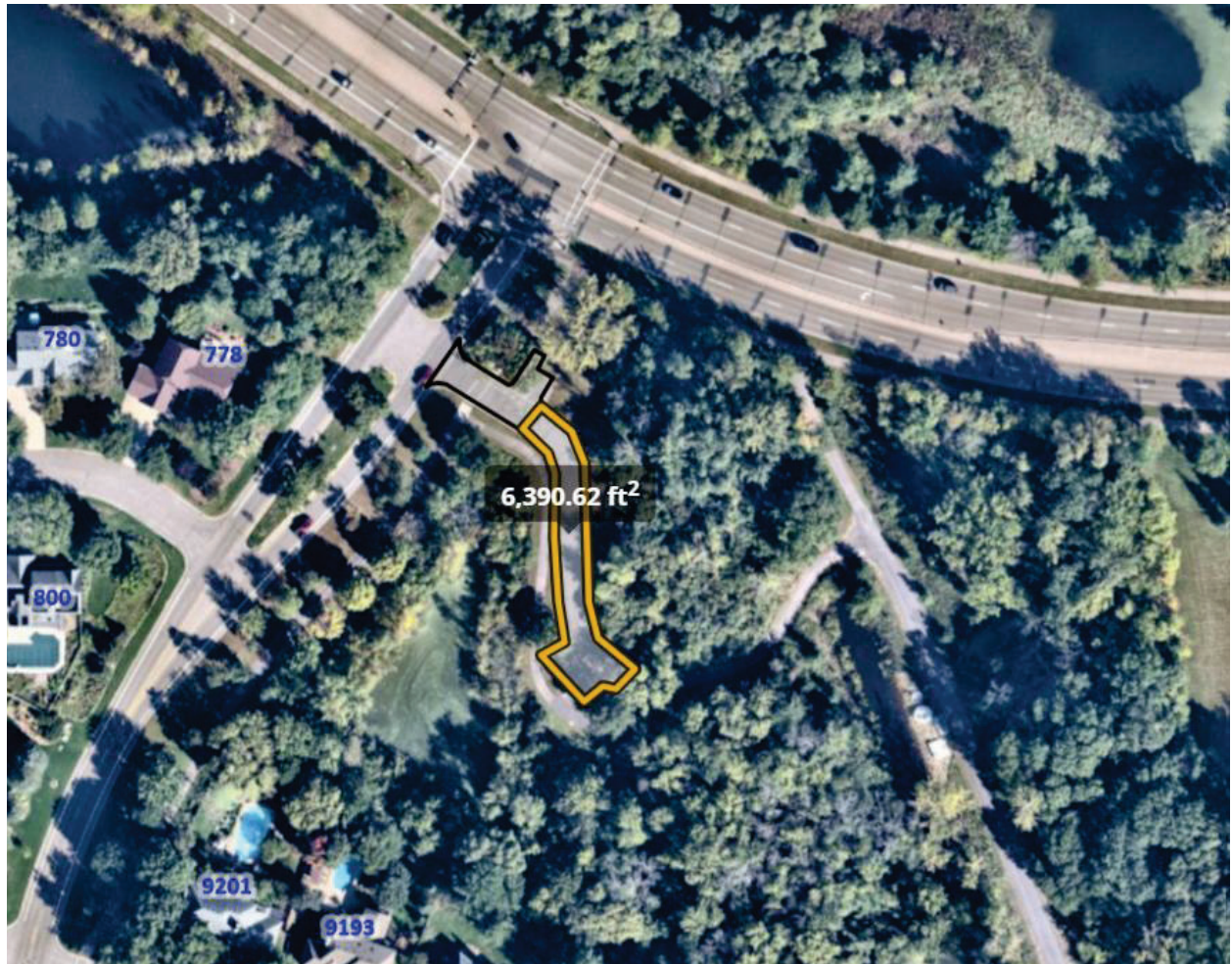
Digitally signed by Kristin Seaman
DN: C=US, E=kristin.seaman@woodburymn.gov,
O=City of Woodbury, CN=Kristin Seaman
Date: 2026.03.06 15:56:46-06'00'

Signature

03/06/26

Date

North Interlachen Parking Lot Removal





SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Woodbury

Name: Kristin Seaman Title: Sr Environmental Resources Coordinator

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

Phone: (651) 414-3494 Email: kristin.seaman@woodburymn.gov

PROJECT LOCATION

Description: Restoration of acquisition parcel

Address: 6895 Bailey Road

City: Woodbury State: MN Zip: 55125

SWWD Watershed Management Unit: ☒ East Mississippi ☐ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: La Lake

PROJECT BUDGET

Total Project Cost: \$ 75,000

CCIP Funding Requested: \$ 37,500

Other Funding Secured: \$ 37,500

Other Funding Sources: Park Dedication Fund

PROJECT CONCEPT PLAN *[check box when complete]*

- ☒ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The city acquired the property at 6895 Bailey Road in 2024, to gain access to shoreline acres and create a path for better public lake access in the future. With that, the City wrote a Natural Resources Stewardship Plan for the property to guide restoration activities (attached).

- B. Describe the water resource problems addressed by the project:

The current state of the property is 25-50% impervious cover with perennial grasses and sparse trees. Once the previous owner vacates the property, the city will evaluate outbuildings and infrastructure on site and the grant will support restoration activities.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

Removing existing vegetation in favor of native vegetation will restore the riparian zone adjacent to La Lake and benefit water quality (Phosphorus and TSS). Additionally, while creating a designated lake access route on this property, where grades are more gradual, we aim to decrease the areas of erosion within La Lake Park where visitors are traveling on steep slopes to access the lake with personal water craft and fishing equipment.

- D. Explain how long-term operation and maintenance of the project will be accomplished:
The parcel will become part of the La Lake Park and be maintained accordingly through the City Vegetation Maintenance Programs.

- E. How does the proposed work increase the resiliency of affected resources and/or systems?

The proposed work increases the resiliency of the shoreline and surrounding natural systems by restoring and stewarding the ecological functions of the lakefront property. The City acquired this property in 2024 to protect shoreline acreage and provide an opportunity for improved public lake access while prioritizing natural resource protection. Prior to the acquisition, the City developed a Natural Resources Stewardship Plan to guide restoration and long-term management of the site. Implementation of this plan will focus on restoring native vegetation, stabilizing the shoreline, and managing invasive species. These actions will improve the ecological integrity of the site and strengthen the shoreline's ability to withstand erosion, fluctuating water levels, and increased storm intensity.

- F. Describe the anticipated project implementation schedule:

Based on funding availabilities this work could commence immediately.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

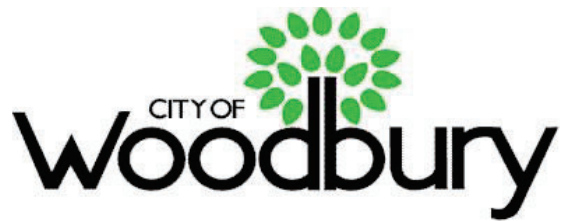
Kristin Seaman

Digitally signed by Kristin Seaman
DN: C=US, E=kristin.seaman@woodburymn.gov,
O=City of Woodbury, CN=Kristin Seaman
Date: 2026.03.06 15:50:41-06'00'

Signature

03/06/26

Date



NATURAL RESOURCES STEWARDSHIP PLAN

LA LAKE

PIDS 3002821110005,
3002821110006

February 29, 2024

Prepared for:

City of Woodbury
8301 Valley Creek Rd
Woodbury, MN 55125

WSB PROJECT NO. 024207-000

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Appendix A: Figures

Figure 1 – Project Location

Figure 2 – Site Location

Figure 3 – Existing Conditions

Figure 4 – Proposed Plant Communities

Appendix B: Historic Photographs

Introduction & Purpose

The La Lake III project involves the acquisition of PID 3002821110006 for parkland, public access and recreation at La Lake, as well as restoring or enhancing the native plant communities on site. Washington County has awarded the City of Woodbury with Land and Water Legacy Program funding to aid in these efforts. As a requirement of this program, the City must develop a Natural Resources Stewardship Plan that outlines the proposed Vegetative Plant Community Management Units within the parcel, the goals for each unit, the planned methods for developing and maintaining these plant communities into the future, and performance standards that will guide adaptive management of each unit.

The City of Woodbury owns the neighboring property to the east (PID 3002821110005), which contains natural plant communities similar to those that will be established with the La Lake III project. This parcel was incorporated in the 2013 La Lake Open Space Plan, which outline recommendations for how to manage native plant communities on site. The plant communities are consistent with those outlined in this plan. This Natural Resources Stewardship Plan includes both PIDs to allow for alignment of natural resource management goals between the two city-owned parcels.

The City of Woodbury is developing a system-wide Natural Resources Management Plan for approximately 30 areas in Woodbury, including the La Lake area. This plan will result in the creation of a comprehensive planning document for the city to use for future natural resources restoration and maintenance projects that remove invasive species and restore open spaces with native landscapes.

Project Description

The City of Woodbury will use the site as public open space and parkland that provides access to La Lake's shoreline and natural features. Future amenities at this site will include year-round public access, walking paths, connections to other park land along the lake, non-motorized lake access, and nature and wildlife viewing. To accomplish this vision, the existing buildings on the property will be removed and the driveway will temporarily remain for public access. The vegetation on site will be restored and enhanced to native plant communities and a permanent conservation easement will be developed to protect the resources into the future.

Two parcels are evaluated in this plan. The term "site" refers to both parcels together. When referencing the parcels individually, PID 3002821110005 is referred to as PID 0005, and PID 3002821110006 is referred to as PID 0006 (**Figure 2, Appendix A**).

Project Purpose

The City of Woodbury intends to restore and enhance the vegetation of the site and make it publically available for use as open space and parkland.

Existing Conditions

The site is approximately 10 acres located in the southwest quadrant of the intersection of Bailey Road and Woodlane Drive (**Figure 1, Appendix A**). It consists

of two parcels, PID 0006 (3.23 acres) along the northwest side of the site, and PID 0005 (6.77 acres) along the east and south parts of the site. The surrounding land use to the north across Bailey Rd is primarily residential. East across Woodlane Dr is institutional (Bailey Elementary School), and south of the site are private residences with woodland and wetland cover. Along the northwest and southern sides of La Lake, the City of Woodbury owns the shoreline properties which are utilized by the City as open space. Additional residential development is located to the west of the lake.

Historic Site Conditions

Presettlement vegetation at this site was mapped as oak openings and barrens. This ecotone type occurred between prairie and deciduous forests and fire was a significant factor influencing the extent. These areas ranged from small groves of trees intermixed with open prairie to a shrub-scrub plant community, and the structure usually depended on fire regime frequency. More frequent fires would lead to a more open prairie system. Bur oaks, red oaks, and pin oaks were generally dominant trees.

The DNR ecological classification system identifies this part of the state as the St. Paul-Baldwin Plains and Moraines Subsection. It is likely that the site resembled a Southern Dry-Mesic Oak Forest or Woodland (MHs37 or FDs37) plant community in the upland areas prior to agriculture and adjacent development.

Historic aerial photographs from 1936, 1947, 1953, 1964, 1981, and 1997 were reviewed to assess the historic conditions of the site (**Appendix B**). In the earliest available aerial photograph from 1936, the site was an active farmstead on PID 0006 with at least two buildings present on site. The majority of PID 0005 was an active agricultural field. La Lake was smaller than in existing conditions and the property was located north of a seasonally flooded wetland area that would become inundated under high water conditions, but was not inundated consistently. The surrounding land was predominantly used for agriculture. By 1947 the landowner constructed a u-shaped drive way at the farmstead and several additional accessory buildings while the remaining land was still used for farming. In 1964, the lake had receded to about one third the size of its existing condition and there was no water adjacent to the site. The surrounding land was used for agriculture. By 1981 the lake expanded to approximately the size of the lake under existing conditions. Portions of PID 0005 along the lake were converted to wetlands, and the south portion of PID 0005 was left fallow. By 1997, PID 0005 was completely fallow land and wetland, with trees beginning to develop along the lake shore. The farmstead on PID 0006 maintained a generally clear shoreline with only significant trees along the east and west parcel boundaries as wind rows.

Soils and Landscape

The Washington County Soil Survey identified three dominant soil types on site, as shown in **Table 1**.

Table 1. Washington County Soil Survey

Map Unit Symbol	Map Unit Name	Landform Setting	Parent Material	Drainage Class
49	Antigo silt loam, 0 to 2 percent slopes	Terraces, flats	Loess and/or silty glaciofluvial deposits over loamy glaciofluvial deposits over stratified sandy and gravelly outwash	Well drained
49C	Antigo silt loam, 6 to 15 percent slopes	Terraces, hillslopes	Loess and/or silty glaciofluvial deposits over loamy glaciofluvial deposits over stratified sandy and gravelly outwash	Well drained
507	Poskin silt loam	Drainageways on outwash plains	Alluvium over outwash	Somewhat poorly drained

Species

Endangered, Threatened, and Special Concern Species

The following federally-listed species are listed in Washington County and may occur on the site based on habitat availability:

- Northern long-eared bat (*Myotis septentrionalis*) – an endangered bat species which occurs throughout Minnesota. This species roosts in woodland habitats during their active season (April – October). Given the presence of trees within the site and nearby La Lake, there is potential suitable habitat for this species.
- Tricolored bat (*Perimyotis subflavus*) – a proposed endangered bat species. Similar to the northern long-eared bat, this species may be found roosting in woodland habitat. Given the presence of trees within the site and nearby La Lake, there is potential suitable habitat for this species.
- Monarch butterfly (*Danaus plexippus*) – a candidate butterfly species. Preferred habitat includes fields and open spaces with flowering forbs and milkweed. There is limited existing habitat available to this species.
- Rusty patched bumble bee (*Bombus affinis*) – an endangered bee species. This species feeds in locations with diverse flowering plant species, nests in well-drained sandy/loam soil free from ground-disturbance, and overwinters in uncompacted and undisturbed ground. There is limited existing habitat available to this species.

State-Listed Species

According to the DNR Natural Heritage Database System (NHIS), there are no state listed rare features within one mile of the site.

Cover Types

The Minnesota Land Cover Classification System (MLCCS) maps the site into five cover types as listed in **Table 2** and shown on **Figure 3**.

Table 2. MLCCS Cover Types

Cover type	Percent of PID 0006	Percent of PID 0005
26% to 50% impervious cover with perennial grasses and sparse trees	2.78 ac	0.10 ac
Upland soils with planted or maintained grasses and sparse tree cover	0 ac	2.62 ac
Semipermanently flooded altered/non-native dominated vegetation	0.04 ac	1.35 ac
Limnetic open water	0.38 ac	2.28 ac

There are no mapped Minnesota County Biological Survey areas of significance or regionally significant ecological areas within a mile of the site.

Existing Site Conditions

A site visit was conducted on January 24, 2024 to evaluate the existing site conditions. A home with three outbuildings are present on the PID 0006. Much of the site is landscaped or yardspace with ornamental trees and flowers. The shoreline adjacent to the home is vegetated with grass for approximately 160 feet from the western parcel boundary to the east, with no trees or shrubs present. The remainder of the shoreline on this parcel is vegetated with a thin row of small trees. The width of trees along the shoreline is only 1-2 trees. In the north central part of this property, there is a large red oak (*Quercus rubra*) and cottonwood (*Populus deltoides*). The east side of PID 0006 is sparsely wooded (approximately 50 ft wide). The dominant canopy species include American elm (*Ulmus americana*), red oak (*Quercus rubra*), river birch (*Betula nigra*), and cottonwood (*Populus deltoides*), however, given the small acreage of wooded area some of these dominants are single trees. The understory contains a variety of species including white cedar (*Thuja occidentalis*), ironwood (*Ostrya virginiana*), green ash (*Fraxinus pennsylvanica*), common buckthorn (*Rhamnus cathartica*), and red cedar (*Juniperus virginiana*). The shrub and ground layers appear to be limited.

The majority of PID 0005 along the lake is wetland consisting of mostly reed canary grass (*Phalaris arundinacea*) with a few scattered willow (*Salix spp.*) shrubs. Along the wetland edge are several river birch (*Betula nigra*), small sugar maples (*Acer saccharum*), and dying green ash (*Fraxinus pennsylvanica*) trees. At the southern end of this parcel is the start of a woodland area that extends off site. The woodland

canopy consists of mainly planted white pine (*Pinus strobus*) trees and one red oak (*Quercus rubra*). The smaller trees in this area are common buckthorn (*Rhamnus cathartica*), green ash (*Fraxinus pennsylvanica*), red cedar (*Juniperus virginiana*), and sugar maple (*Acer saccharum*). The shrub and ground layers are sparse. The eastern third of this parcel was converted into a stormwater pond and filtration basin in 2021.

The existing conditions of the site are mapped in **Figure 3, Appendix A.**

Natural Resources Management

Upon purchase and restoration of this site, Washington County will hold a permanent conservation easement over PID 0006. To maintain the site and the adjacent city-owned property (PID 0005) as native plant communities, the site has been mapped into three planned vegetative plant community management units (**Figure 4**). Management goals and strategies have been developed to ensure that the City's management of this site is consistent with the larger vision for the La Lake area's natural resources and planned uses, as well as the La Lake Open Space Plan.

Vegetative Plant Community Management Units

Dry-Mesic Oak Woodland

Portions of the landscape surrounding La Lake exhibit remnants of a dry-mesic oak woodland, with the largest areas located to the southwest of the lake. Within the site, several oak trees are present in areas where the land was not cleared for agricultural uses. There are approximately 0.60 acres of degraded woodland within the site that consists of American elm (*Ulmus americana*), red oak (*Quercus rubra*), river birch (*Betula nigra*), and cottonwood (*Populus deltoides*) as dominant species in the canopy.

A dry-mesic oak woodland plant community has an interrupted to continuous canopy cover dominated by oak species, red maple (*Acer rubrum*), and occasionally quaking aspen (*Populus tremuloides*) or black cherry (*Prunus serotina*). Due to the presence of silty loam soils on site, this area likely lacked the open-grown canopy that would be present in a more fire-dependent area. The plant community typically has a patchy to interrupted subcanopy and a patchy to continuous shrub layer. Ground cover varies from patchy to continuous with important species of pointed-leaved tick trefoils (*Desmodium glutinosum*), Clayton's sweet cicely (*Osmorhiza claytonii*), wild geranium (*Geranium maculatum*), hog peanut (*Amphicarpaea bracteata*), and Canada mayflower (*Maianthemum canadense*).

Compositional succession of these woodlands was young stands dominated by early succession species, and over time, dominance shifted to more long-lived species in mature woodlands. Initial species early in succession were mainly big-toothed aspen (*Populus grandidentata*), white oak (*Q. alba*), bur oak (*Q. macrocarpa*), and some northern pin oak (*Q. ellipsoidalis*). Longevity of bur oak (*Q. macrocarpa*) and white oak lessened the amount of northern pin oak (*Q. ellipsoidalis*) and bigtoothed aspen (*Populus grandidentata*). When stand diameter is around 9-17 inches, the initial cohort decreased. As the stand matures (about 17-inch diameter), the canopy stabilizes with a dominant canopy of bur oak (*Q. macrocarpa*) and white oak (*Q. alba*), some second cohort quaking aspen (*Populus tremuloides*), and a minor

component of tolerant trees such as red maple (*Acer rubrum*), basswood (*Tilia americana*), and green ash (*Fraxinus pennsylvanica*).

According to the DNR Ecological Classification System Native Plant Communities (DNR 2005), the species composition and frequency within a Southern Dry-Mesic Oak Woodland (FDs37) plant community are as listed in **Image 1**.

FDs37 Southern Dry-Mesic Oak (Maple) Woodland — Species Frequency and Cover		freq%	cover
Forbs, Ferns & Fern Allies			
Clayton's sweet cicely (<i>Osmorhiza claytonii</i>)	78	••	
Pointed-leaved tick trefoil (<i>Desmodium glutinosum</i>)	78	••	
Hog peanut (<i>Amphicarpaea bracteata</i>)	76	••	
Canada mayflower (<i>Maianthemum canadense</i>)	73	•	
Wild geranium (<i>Geranium maculatum</i>)	69	••	
Common enchanter's nightshade (<i>Circaea lutetiana</i>)	60	•	
Wild sarsaparilla (<i>Aralia nudicaulis</i>)	60	•	
Lopseed (<i>Phryma leptostachya</i>)	60	•	
Common false Solomon's seal (<i>Smilacina racemosa</i>)	60	•	
Pale bellwort (<i>Uvularia sessilifolia</i>)	60	••	
Lady fern (<i>Athyrium filix-femina</i>)	51	•	
Bracken (<i>Pteridium aquilinum</i>)	51	••	
Sweet-scented bedstraw (<i>Galium triflorum</i>)	51	•	
Large-leaved aster (<i>Aster macrophyllus</i>)	49	••	
Columbine (<i>Aquilegia canadensis</i>)	40	•	
Northern bedstraw (<i>Galium boreale</i>)	40	•	
Wood anemone (<i>Anemone quinquefolia</i>)	40	•	
Spreading dogbane (<i>Apocynum androsaemifolium</i>)	38	•	
Maryland black snakeroot (<i>Sanicula marilandica</i>)	36	•	
Early meadow-rue (<i>Thalictrum dioicum</i>)	31	•	
Giant Solomon's seal (<i>Polygonatum biflorum</i>)	27	•	
Starry false Solomon's seal (<i>Smilacina stellata</i>)	22	•	
Starflower (<i>Trientalis borealis</i>)	20	•	
Interrupted fern (<i>Osmunda claytoniana</i>)	20	••	
Large-flowered bellwort (<i>Uvularia grandiflora</i>)	20	••	
Elliptic shinleaf (<i>Pyrola elliptica</i>)	20	•	
Tail-leaved aster (<i>Aster sagittifolius</i>)	18	•	
Grasses & Sedges			
Pennsylvania sedge (<i>Carex pensylvanica</i>)	84	•••	
Mountain rice grass (<i>Oryzopsis asperifolia</i>)	40	•	
Nodding fescue (<i>Festuca subverticillata</i>)	11	•	
Bottlebrush grass (<i>Elymus hystrix</i>)	11	•	
Woody Vines			
Virginia creeper (<i>Parthenocissus</i> spp.)	91	•	
Wild grape (<i>Vitis riparia</i>)	62	•	
Low Shrubs			
Red raspberry (<i>Rubus idaeus</i>)	64	•	
Tall blackberries (<i>Rubus allegheniensis</i> and similar <i>Rubus</i> spp.)	47	•	
Tall Shrubs			
Chokecherry (<i>Prunus virginiana</i>)	82	••	
American hazelnut (<i>Corylus americana</i>)	80	•••	
Gray dogwood (<i>Cornus racemosa</i>)	67	•••	
Prickly ash (<i>Zanthoxylum americanum</i>)	67	••	
Poison ivy (<i>Toxicodendron rydbergii</i>)	64	•	
Prickly gooseberry (<i>Ribes cynosbati</i>)	49	•	
Downy arrowwood (<i>Viburnum rafinesquianum</i>)	49	••	
Juneberries (<i>Amelanchier</i> spp.)	47	•	
Nannyberry (<i>Viburnum lentago</i>)	42	•	
Bush honeysuckle (<i>Diervilla lonicera</i>)	33	•	
Missouri gooseberry (<i>Ribes missouriense</i>)	24	•	
Beaked hazelnut (<i>Corylus cornuta</i>)	22	•••	
Snowberry or Wolfberry (<i>Symphoricarpos albus</i> or <i>S. occidentalis</i>)	20	•	
Red-berried elder (<i>Sambucus racemosa</i>)	20	•	
Round-leaved dogwood (<i>Cornus rugosa</i>)	16	•	
Trees			
	Canopy	Subcanopy	Shrub Layer
	freq% cover	freq% cover	freq% cover
Bur oak	67 •••	58 ••	33 ••
Northern pin oak	60 ••••	33 •••	38 ••
Northern red oak	33 ••••	13 •••	22 ••
White oak	29 •••	9 ••	18 ••
Black cherry	29 •	58 ••	69 ••
Quaking aspen	27 ••	18 ••	18 ••
Red maple	27 ••	56 •••	53 ••
Paper birch	20 ••	-	-
Big-toothed aspen	11 •••	-	-
Green ash	9 •••	31 ••	36 ••
American elm	-	31 ••	33 ••
Ironwood	-	29 •••	18 ••

Image 1. Species Frequency and Cover in a Southern Dry-Mesic Oak Forest.

Mesic Prairie

Portions of the site are used as yard space, gardens, impervious surfaces, and physical structures. Upon restoration of the site, these open spaces will best be suited for reestablishment of a mesic prairie plant community.

A mesic prairie is a grass and forb dominated plant community often present on level to rolling landscape with moderate to well drained soils. Recurrent fire is essential in this plant community, suppressing the growth of shrubs and trees which would take over the landscape if not controlled. Fire also recycles nutrients found in plant litter, and promotes flowering and seed production amongst common prairie species. Fire cycles necessary for vegetative maintenance of this plant community is 3-5 year

rotations. Prairie restoration can be used as a method of supporting local pollinators in a heavily developed or farmed area.

Tallgrass species are typically dominant, but midheight grasses are important as well. Species composition tends to be uniform in this plant community with big bluestem (*Andropogon gerardii*) and indian grass (*Sorghastrum nutans*) as dominant tallgrass species, and prairie dropseed (*Sporobolus heterolepis*) as a subcomponent. Forb cover can be sparse to patch and is highly dependent on the soil's moisture content. The shrub layer is sparse if well controlled, and trees are absent.

According to the DNR Ecological Classification System Native Plant Communities (DNR 2005), the species composition and frequency within a Southern Mesic Prairie (UPs23) plant community is as listed in **Image 2**.

UPs23 Southern Mesic Prairie — Species Frequency & Cover

	freq%	cover		freq%	cover
Forbs, Ferns & Fern Allies					
Heart-leaved alexanders (<i>Zizia aptera</i>)	78	•	White camas (<i>Zigadenus elegans</i>)	27	•
Heath aster (<i>Aster ericoides</i>)	77	••	Common strawberry (<i>Fragaria virginiana</i>)	26	•
Stiff goldenrod (<i>Solidago rigida</i>)	74	•	Bastard toadflax (<i>Comandra umbellata</i>)	25	•
Canada goldenrod (<i>Solidago canadensis</i>)	69	••	Virginia mountain mint (<i>Pycnanthemum virginianum</i>)	25	•
Purple prairie clover (<i>Dalea purpurea</i>)	68	•	Pale-spiked lobelia (<i>Lobelia spicata</i>)	25	•
Yarrow (<i>Achillea millefolium</i>)	65	•	American vetch (<i>Vicia americana</i>)	23	•
Rough blazing star (<i>Liatris aspera</i>)	59	•	Ground plum (<i>Astragalus crassicaupus</i>)	23	•
Prairie phlox (<i>Phlox pilosa</i>)	55	•	Canada anemone (<i>Anemone canadensis</i>)	22	•
White prairie clover (<i>Dalea candida</i>)	55	•	Clasping dogbane (<i>Apocynum sibiricum</i>)	22	•
Hoary puccoon (<i>Lithospermum canescens</i>)	53	•	Virginia ground cherry (<i>Physalis virginiana</i>)	22	•
Stiff sunflower (<i>Helianthus pauciflorus</i>)	50	•	Toothed evening primrose (<i>Calylophus serrulatus</i>)	21	•
Prairie wild onion (<i>Allium stellatum</i>)	49	•	Wood betony (<i>Pedicularis canadensis</i>)	20	•
Missouri goldenrod (<i>Solidago missouriensis</i>)	47	••	Northern plains blazing star (<i>Liatris ligulistylis</i>)	20	•
Long-headed thimbleweed (<i>Anemone cylindrica</i>)	46	•	Wild bergamot (<i>Monarda fistulosa</i>)	19	•
Bearded birdfoot violet (<i>Viola palmata</i>)	45	•	Skyblue aster (<i>Aster oolentangiensis</i>)	18	••
Floodman's thistle (<i>Cirsium floodmanii</i>)	45	•	Canada tick trefoil (<i>Desmodium canadense</i>)	17	•
Tall meadow-rue (<i>Thalictrum dasycarpum</i>)	44	•	Smooth rattlesnakeroot (<i>Prenanthes racemosa</i>)	15	•
Daisy fleabane (<i>Erigeron strigosus</i>)	44	•	Wood lily (<i>Lilium philadelphicum</i>)	13	•
Silverleaf scurfspea (<i>Pedimelum argophyllum</i>)	43	•	Rattlesnake master (<i>Eryngium yuccifolium</i>)	12	•
White sage (<i>Artemisia ludoviciana</i>)	43	•	Grasses & Sedges		
Northern bedstraw (<i>Galium boreale</i>)	39	••	Big bluestem (<i>Andropogon gerardii</i>)	94	••••
Smooth blue aster (<i>Aster laevis</i>)	37	•	Indian grass (<i>Sorghastrum nutans</i>)	80	••••
Gray-headed coneflower (<i>Ratibida pinnata</i>)	36	••	Little bluestem (<i>Schizachyrium scoparium</i>)	67	•••
Silky aster (<i>Aster sericeus</i>)	34	•	Prairie dropseed (<i>Sporobolus heterolepis</i>)	66	•••
Maximilian's sunflower (<i>Helianthus maximiliani</i>)	31	••	Porcupine grass (<i>Stipa spartea</i>)	58	•••
Gray goldenrod (<i>Solidago nemoralis</i>)	31	••	Side-oats grama (<i>Bouteloua curtipendula</i>)	46	•••
Ox-eye (<i>Heliopsis helianthoides</i>)	31	•	Switchgrass (<i>Panicum virgatum</i>)	44	••
Tall cinquefoil (<i>Potentilla arguta</i>)	31	•	Leiberg's panic grass (<i>Panicum leibergii</i>)	43	••
Common milkweed (<i>Asclepias syriaca</i>)	31	•	Slender wheatgrass (<i>Elymus trachycaulus</i>)	32	•
Bird's foot coreopsis (<i>Coreopsis palmata</i>)	30	••	Prairie cordgrass (<i>Spartina pectinata</i>)	30	••
Narrow-leaved purple coneflower (<i>Echinacea pallida</i>)	30	•	Semi-Shrubs		
Prairie turnip (<i>Pedimelum esculentum</i>)	30	•	Leadplant (<i>Amorpha canescens</i>)	74	••
Alumroot (<i>Heuchera richardsonii</i>)	28	•	Prairie rose (<i>Rosa arkansana</i>)	70	•
Great blazing star (<i>Liatris pycnostachya</i>)	27	••	Shrubs		
			Wolfberry (<i>Symphoricarpos occidentalis</i>)	17	••

UPs23
continued -
UPLAND PRAIRIE SYSTEM
Southern Floristic Region

Image 2. Species Frequency and Cover in Southern Mesic Prairie (UPs23).

Fresh Wet Meadow

There is an existing fresh wet meadow wetland on PID 0005 present as fringe to La Lake. The wetland is degraded and dominated by a monotypic mat of reed canary grass (*Phalaris arundinacea*) which is an invasive and persist species due to a dense rhizome structure that inhibits the growth of other species. The wetland will be restored through control of invasive species and establishment of native vegetation consistent with a fresh wet meadow plant community type.

The lake appears shallow adjacent to this fringe wetland and the landscape slowly transitions from the lake into the wetland basin. A fresh wet meadow is a wetland dominated with broad-leaved, herbaceous plants on saturated soils. They are common along the shores of shallow lakes and they differ from marshes in that they grow in wet soil but not standing water. Based on the site conditions, it appears that this area would only have standing water during high-precipitation years as the lake floods.

The fresh wet meadow plant community is most consistent with the DNR Northern Wet Meadow/Carr (WMn82). These types of wetlands can be dominated by broad-leaved graminoids, and sometimes shrubs. On this site, shrubs are sparse. The desirable vegetation structure within the plant community consists of graminoids such as bluejoint (*Calamagrostis canadensis*), lake sedge (*Carex lacustris*), tussock sedge (*Carex stricta*), and beaked sedge (*Carex utriculata*). Forb cover can be variable, but may consist of species such as tufted loosestrife (*Lysimachia thyrsiflora*), marsh bellflower (*Campanula aparinoides*), marsh skullcap (*Scutellaria galericulata*), and great water dock (*Rumex orbiculatus*) among others.

According to the DNR Ecological Classification System Native Plant Communities (DNR 2005), species frequency and cover within a northern wet meadow (WMn82) is as listed in **Image 3**.

WMn82 Northern Wet Meadow/Carr – Species Frequency & Cover

	freq%	cover		freq%	cover
Grasses & Sedges					
Bluejoint (<i>Calamagrostis canadensis</i>)	80	●●●●	Sensitive fern (<i>Onoclea sensibilis</i>)	20	●
Lake sedge (<i>Carex lacustris</i>)	72	●●●●	Common mint (<i>Mentha arvensis</i>)	19	●
Tussock sedge (<i>Carex stricta</i>)	41	●●●●	Red-stemmed aster (<i>Aster puniceus</i>)	19	●
Beaked sedge (<i>Carex utriculata</i>)	33	●●●	Marsh vetchling (<i>Lathyrus palustris</i>)	17	●
Fen wiregrass sedge (<i>Carex lasiocarpa</i>)	29	●●●	Common marsh marigold (<i>Caltha palustris</i>)	17	●
Woolgrass (<i>Scirpus cyperinus</i>)	22	●●	Cut-leaved bugleweed (<i>Lycopus americanus</i>)	17	●
Aquatic sedge (<i>Carex aquatilis</i>)	11	●●●	Long-leaved chickweed (<i>Stellaria longifolia</i>)	13	●
Forbs, Ferns & Fern Allies					
Tufted loosestrife (<i>Lysimachia thyrsiflora</i>)	59	●	Bog aster (<i>Aster borealis</i>)	12	●
Marsh bellflower (<i>Campanula aparinoides</i>)	58	●	Mad dog skullcap (<i>Scutellaria lateriflora</i>)	12	●
Marsh skullcap (<i>Scutellaria galericulata</i>)	53	●	Giant goldenrod (<i>Solidago gigantea</i>)	12	●
Great water dock (<i>Rumex orbiculatus</i>)	52	●	Big-leaf white violet or Northern white violet**	12	●
Three-cleft or small bedstraw (<i>Galium trifidum</i> or <i>G. tinctorium</i>)	46	●	Lesser-duckweed (<i>Lemna minor</i>)	12	●
Bulb-bearing water hemlock (<i>Cicuta bulbifera</i>)	46	●	Dwarf raspberry (<i>Rubus pubescens</i>)	11	●
Northern bugleweed (<i>Lycopus uniflorus</i>)	45	●	Sweet flag (<i>Acorus calamus</i>)	11	●●
Linear-leaved, Marsh, or Downy willow-herb*	44	●	Rough cinquefoil (<i>Potentilla norvegica</i>)	11	●
Water smartweed (<i>Polygonum amphibium</i>)	42	●	Common boneset (<i>Eupatorium perfoliatum</i>)	11	●
Northern marsh fern (<i>Thelypteris palustris</i>)	40	●●	Water horsetail (<i>Equisetum fluviatile</i>)	10	●
Touch-me-not (<i>Impatiens</i> spp.)	39	●●	Low Shrubs		
Marsh cinquefoil (<i>Potentilla palustris</i>)	38	●	Red raspberry (<i>Rubus idaeus</i>)	13	●
Spotted Joe pye weed (<i>Eupatorium maculatum</i>)	34	●	Tall Shrubs		
Broad-leaved cattail (<i>Typha latifolia</i>)	32	●●	Slender willow (<i>Salix petiolaris</i>)	42	●●●
Arrow-leaved tearthumb (<i>Polygonum sagittatum</i>)	28	●	Pussy willow (<i>Salix discolor</i>)	29	●●
Crested fern (<i>Dryopteris cristata</i>)	24	●	Red-osier dogwood (<i>Cornus sericea</i>)	24	●●
Marsh St. John's wort (<i>Triadenum fraseri</i>)	23	●	Speckled alder (<i>Alnus incana</i>)	24	●●●
Swamp milkweed (<i>Asclepias incarnata</i>)	22	●	Meadowsweet (<i>Spiraea alba</i>)	23	●
Northern blue flag (<i>Iris versicolor</i>)	22	●	Bebb's willow (<i>Salix bebbiana</i>)	20	●●
Broad-leaved arrowhead (<i>Sagittaria latifolia</i>)	22	●●	Bog birch (<i>Betula pumila</i>)	14	●●
Labrador bedstraw (<i>Galium labradoricum</i>)	21	●	Tree Seedlings & Saplings (< 16ft)		
Bur marigold and Beggarticks (<i>Bidens</i> spp.)	21	●●	Paper birch	8	●
			Black ash	7	●
			Red maple	5	●

*Linear-leaved, Marsh, or Downy willow-herb (*Epilobium leptophyllum*, *E. palustre*, or *E. strictum*) **Big-leaf white violet or Northern white violet (*Viola blanda* or *V. macloskeyi*)

Image 3. Species Frequency and Cover in a Northern Wet Meadow (WMn82).

Resource Management Goals

The following are the City's resource management goals for the site:

1. Ecological Restoration and Enhancement

Goal: Restore the site to its natural state by implementing ecologically sound practices to recreate and enhance the Dry-Mesic Oak Woodland, Mesic Prairie, and Fresh Wet Meadow plant communities. Prioritize native plant species to promote biodiversity, soil health, and overall ecological balance.

2. Habitat Preservation and Enhancement

Goal: Improve habitat quality for wildlife by creating diverse and interconnected plant communities.

3. Invasive Species Control

Goal: Develop and implement effective strategies to control and manage invasive species that may threaten the integrity of the proposed plant communities. Regular monitoring and prompt intervention will be essential to prevent the dominance of non-native species.

Management Strategies

This plan for restoration and enhancement of the natural resources within the site is outlined in a five-year initial establishment plan, followed by long-term maintenance. Management strategies that will be used in each plant community type are listed below. The schedule of maintenance is listed under the Management Schedule section below.

Dry-Mesic Oak Woodland

The woodland areas of the site are limited under existing conditions and have a high prevalence of undesirable species. Restoration of the existing oak woodland will require removal and control of aggressive invasive common buckthorn as well as thinning of undesirable canopy species to allow for more natural regeneration of the woodland. The existing woodland has been limited to narrow swaths along the lakeshore and property boundaries. Planting of desirable trees adjacent to these areas will allow for reestablishment of an oak woodland plant community. The following practices will be used to enhance existing oak woodland and restore open areas to woodland.

1. Control Invasive Shrubs and Trees

Clearing or selective thinning of invasive trees and shrubs will occur through manual removal with chainsaws or other manually operated equipment. Target species to remove include common buckthorn (*Rhamnus cathartica*), glossy buckthorn (*Rhamnus frangula*), Tatarian honeysuckle (*Lonicera tatarica*), green ash (*Fraxinus pennsylvanica*), and box elder (*Acer negundo*). Dead trees and dead fall will be removed in locations that do not provide wildlife habitat or a benefit to the restoration efforts. If needed, forestry mowing will occur to remove any undesirable understory biomass.

Stump treatment after cutting invasive species is necessary to control regrowth. If hand cutting, treatment of the stump (half inch diameter or greater) will be completed immediately (within 2 hours) with an herbicide containing triclopyr or glyphosate to prevent resprouting. Special considerations for herbicide application need to be taken when treating in the winter or cold temperatures to prevent freezing. Herbicide label instructions must always be followed for treatment application. Treatment of stumps adjacent to water require an herbicide without surfactants such as aquatic glyphosate to avoid detrimental impacts to aquatic life. If forestry or brush mowing is used, foliar treatment can be completed later than 2 hours after cutting, however, oil-based herbicides will need to be used for better absorption into the tree.

Followup cutting is usually necessary after the initial treatment, often later in the season or the following year depending on when the initial treatment occurred. The followup cutting and treatment is generally localized to areas of more intensive regrowth.

Long-term management of invasive shrub and tree regrowth may include the use of goat grazers throughout the growing season. A fenced area around the woodland will allow for goats to browse on new growth of buckthorn or other common aggressive species. This method will be used only prior to planting supplemental saplings or shrubs.

2. Selective Harvest of Trees

The composition of species on the site is not consistent with a high-quality dry-mesic oak woodland, likely due to years of disturbance from agricultural land practices and clearing and narrowing of woodland areas. Restoration of the existing woodland areas will include selective harvesting of trees to both create desirable canopy spacing as well as eliminate species which are not typical of this plant community canopy such as river birch (*Betula nigra*), white cedar (*Thuja occidentalis*), green ash (*Fraxinus pennsylvanica*), and common buckthorn (*Rhamnus cathartica*). Most of the green ash (*Fraxinus pennsylvanica*) on the site show evidence of emerald ash borer and should be removed in the wooded areas. Dead or dying ash may be left in place along the lake shore for wildlife habitat so long as they do not pose a threat to park visitors. This effort allows for better growth habits and regeneration of oaks and other fire mid-tolerant and tolerant species that are typically dominant. Tree species typical in a mid- to late- succession woodland include northern red oak (*Q. rubra*), white oak (*Q. alba*), bur oak (*Q. macrocarpa*), northern pin oak (*Q. ellipsoidalis*), red maple (*A. rubrum*), black cherry (*Prunus serotina*), and quaking aspen (*Populus tremuloides*).

3. Supplemental Seeding and Planting of Understory

The forest area at the site appears to be frequented by ground disturbance, either from storage of equipment, use of space to place brush piles, or other agricultural practices. The understory shrub and ground layers are mostly non-existent in the wooded areas on the site. After controlling invasive species, clearing undesirable trees, and removing woody debris, the ground

will be supplementally planted with a custom native woodland seed mix that includes common forbs such as pointed-leaved tick trefoil (*Desmodium glutinosum*), Clayton's sweet cicely (*Osmorhiza claytonii*), common enchanter's nightshade (*Circaea lutetiana*), and wild geranium (*Geranium maculatum*), as well as others commonly found in the Southern Dry-Mesic Oak Woodland plant community. Supplemental planting of understory shrubs may assist in progressing woodland regeneration and increase wildlife forage. Shrub species to be incorporated may include chokecherry (*Prunus virginiana*), American hazelnut (*Corylus americana*), Missouri gooseberry (*Ribes missouriense*), gray dogwood (*Cornus racemosa*), and nannyberry (*Viburnum lentago*).

4. Supplemental Planting of Trees

The existing tree species present on site do not represent a healthy oak woodland plant community, and may have been planted or have grown voluntarily due to adjacent ground disturbance. The woodland areas are narrow and not robust on this site. Portions of the homestead lawn and sparse areas in the existing woodland can be returned to woodland through supplemental planting of desirable tree species. A mature dry-mesic oak woodland would have an approximate tree spacing of approximately 68 feet for trees. Based on the proposed plant community management units for this site, approximately 0.50 acres of open space can be returned to woodland. That equates to planting between 10-20 new trees, namely northern red oak (*Q. rubra*), white oak (*Q. alba*), bur oak (*Q. macrocarpa*), northern pin oak (*Q. ellipsoidalis*) or red maple (*A. rubrum*).

Supplemental trees can also be planted within the existing woodland area to fill gaps within the canopy after initial cleanup. The existing wooded area is approximately 0.60 acres, but is limited on dominant canopy species as well as understory species. An additional 10-20 trees could be planted within the wooded areas and can include both dominant and understory species. Common understory species that can be easily sourced from a nursery may include ironwood (*Ostrya virginiana*), bur oak (*Q. macrocarpa*), northern pin oak (*Q. ellipsoidalis*), black cherry (*Prunus serotina*), and red maple (*Acer rubrum*). As desirable canopy species age and get larger, interplanting amongst these trees will be completed over time with care taken to not outcompete slower growing species like oaks.

Climate resiliency is an important consideration when selecting species for woodland restoration. Minnesota is projected to experience changes in the frequency and severity of climate extremes and natural disturbances. According to the Northern Institute of Applied Climate Science, temperatures in the Midwest are projected to increase by 5.6 to 9.5 degrees Fahrenheit by the end of the century (2071-2100). Additionally, drought risk is expected to increase across the Midwest by the end of the century (NIACS). With warming climate trends, species tolerance is related to water availability for trees and understory plants. Data drawn from a consortium called The Climate Change Response Framework suggests a more nuanced model illustrated in the Tree Atlas (USDA). The consortium is a collaborative, cross-boundary approach among

scientists, managers, and landowners to incorporate climate change considerations into natural resource management (NIACS).

Species listed in the Atlas as having good capability to withstand climate change in the Minnesota and Iowa Morainal (Section 222M) include bitternut hickory (*C. cordiformis*), black oak (*Q. velutina*), black walnut (*J. nigra*), hackberry (*C. occidentalis*), honeylocust (*G. tricanthos*), red maple (*A. rubrum*), silver maple (*A. saccharinum*), and white oak (*Q. alba*). Species with mixed results include bur oak (*Q. macrocarpa*), ironwood (*O. virginiana*), northern pin oak (*Q. ellipsoidalis*), paper birch (*B. papyrifera*) and shagbark hickory (*C. ovata*). Minnesota's changing climate may create new habitat for the following species to migrate into Minnesota: black hickory (*C. texana*), chinkapin oak (*Q. muehlenbergii*), mockernut hickory (*C. tomentosa*), pin oak (*Q. palustris*), post oak (*Q. stellata*), sassafras (*S. albidum*), shingle oak (*Q. imbricaria*), swamp white oak (*Q. bicolor*), and sycamore (*P. occidentalis*). These are all tree species native to regions south of Minnesota. The DNR and the Climate Change Response Framework both agree to boosting tree species diversity in woodlands as a means to prepare for future climate uncertainty. According to the Framework, "studies have consistently shown that diverse systems have exhibited greater resilience to extreme environmental conditions and greater potential to recover from disturbance than less diverse communities." There is a plethora of Minnesota-based research on planting trees and assisted species migration in preparation for the changing climate. It is crucial to revisit planting lists as the climate changes based on the woodland health and tree species diversity. Site conditions will vary and creating a resilient forest will be based on numerous factors, so managers must have the ability to adapt to changing conditions.

Mesic Prairie

Open and unvegetated areas of the site are used as lawn space, ornamental and garden plantings, impervious surfaces, and buildings. Upon restoration of PID 0006, buildings will be removed and the gravel driveway will remain in place for temporary public access. No mesic prairie exists within the site under existing conditions. The following management strategies will be used to establish and maintain a mesic prairie at this site.

1. Site Preparation

Ornamental plantings (i.e. gardens, trees, etc.) will be removed from the site through manual cutting or herbicide treatment. All existing plant material must be removed to reduce competition with the native prairie grasses and forbs. A non-selective herbicide containing glyphosate will be applied to the existing vegetation. Multiple applications of herbicide may be necessary. One to two weeks after initial treatment, the dead vegetation will be burned to remove it from the site. The site will be raked to level out clumps or uneven ground surfaces. Seeding should occur soon after raking.

2. Initial Seeding

A native mesic prairie seed mix with a cover crop will be sowed into the prepped site in the spring (May 15 – June 20) or in the fall (October 15 – freezing). Use of a drill seeder is useful for even spacing and good seed to soil contact. Seeding may also be completed by hand broadcast method. If using this method, seeds will be mixed with slightly damp sawdust or peat moss to allow for more even distribution. Soils will be rolled after broadcast seeding in dry conditions to improve seed to soil contact and best germination results.

Stabilizing the site with a thin layer of clean, weed-free straw mulch will help prevent soil and wind erosion, but also helps the soil retain moisture. Some native species may take up to 3 years to germinate, develop root mass, and begin growing above ground.

3. Mowing and Spot Herbicide Treatment

Weed control is essential during the establishment phase of a prairie plant community. In the first year of management, the site will be mowed in the spring, mid-summer, and fall to a height of 4 to 6 inches. If weeds are prevalent during the second year, it may be necessary to mow down to this height during the second year as well. This helps to reduce competition without harming new native growth. Weeds should not be allowed to go to flower or seed.

Dense areas of notable invasive species growth will be spot treated with herbicide. Species that may need control at this site could include Canada thistle (*Cirsium arvense*), bird-foot trefoil (*Lotus corniculatus*), leafy spurge (*Euphorbia esula*), smooth brome (*Bromus inermis*), crabgrass (*Digitaria spp.*). Spot treatments should occur in the spring and fall of each growing season, but should be based on the area cover and the type of species that is trying to be eradicated.

4. Controlled Burn

After the prairie has established for at least three years, it can be maintained by controlled burns and occasional spot herbicide treatments. A controlled burn should be completed in April or early May. Mowing can be an alternative to a controlled burn. Mow in the spring and remove the biomass from the site to expose the plants. A rotational cycle of 3-5 years between burns helps to maintain biomass and native plantings.

5. Supplemental Seeding

Areas where bare ground is present and native seed has not established will be supplementally seeded by hand with a native mesic prairie mix, as necessary.

Fresh Wet Meadow

The wetland on site is dominated by invasive reed canary grass, which can be a challenging species to control. Efforts to reduce the rhizome density and biomass of

this species will allow for other native more desirable species to grow. The following management strategies will be used to establish and maintain the fresh wet meadow plant community.

1. Mechanical Dethatching or Grading

Mechanical dethatching will include heavy equipment such as tractors or skid-steers that are capable running a power rake or dethatcher across the vegetation to gather and pile accumulated biomass from the reed canary grass. This work will be completed in the winter under frozen ground conditions. The thatch will be gathered into piles and burned or removed from the site. Enough biomass and rhizome litter needs to be removed to allow for exposure of soils and the native seed bank.

Additional methods of mechanical disturbance such as winter scarification or minor grading and removal of vegetation may be necessary to achieve the desired outcome. Minor grading to remove vegetative biomass can be used in place of mechanical dethatching.

A second followup mechanical dethatching or scrape should occur the following winter to remove any additional biomass if desired results were not achieved during the first winter.

2. Broadcast and Spot Herbicide Treatment

The spring following the initial removal of the dense vegetation, a broadcast herbicide treatment will occur, focusing on the regrowth areas of reed canary grass. A second broadcast treatment will be applied in the late summer and/or early fall of that same year.

After these initial broadcast herbicide treatments, followup spot treatments should occur in the spring and late summer for areas of invasive species regrowth, with focus on reed canary grass, common reed grass, and narrow-leaved cattail.

3. Seeding and Plugs

In the spring after dethatching/biomass removal is completed (this may be after two winters of biomass removal and two growing seasons of herbicide application), the site will be broadcast seeded by hand with a native wet meadow seed mix. This will supplement any native seed bank that exists within the wetland soils.

Wetland plugs may be used to accelerate native plant growth within the wetland and should be planted in the spring to allow for root development over the growing season. Species such as giant burreed (*Sparganium eurycarpum*) and arrowhead (*Sagittaria latifolia*) can be planted at the lakeshore side of the wetland where open water transitions to wetland. Readily available species that are adapted to moist conditions can be used to supplement the remainder of the wetland such as hop sedge (*Carex lupulina*), lake sedge (*Carex lacustris*), arrowhead (*Sagittaria latifolia*), swamp milkweed (*Asclepias incarnata*), cup plant (*Silphium perfoliatum*), spotted joe pye weed

(*Eupatorium maculatum*), common boneset (*Eupatorium perfoliatum*), and woolgrass (*Scirpus cyperinus*).

4. Winter Mowing/Burning/Spraying Cycles

Fresh wet meadow plant communities can benefit from controlled burning or mowing on a rotational cycle of every 3-5 years. This helps to control any biomass buildup as well. Mowing can occur in winter months followed by raking to gather up clippings for removal or burning. Controlled burns can also be accomplished in the late fall or winter if snow conditions allow, or in the early spring similar to the mesic prairie.

Annual spot herbicide treatments will be necessary to control regrowth of invasive species, in particular reed canary grass (*Phalaris arundinacea*). Depending on how aggressive the regrowth, spraying may need to occur in the spring and late summer or fall each season.

Management Schedule

The schedule of implementation for each management strategy is outlined in **Table 3** and **Table 4**. This schedule is for the first five years of management. Long-term management will be longer than five years. Timing of each management strategy may vary depending on site conditions. When evaluating the site each year, areas of focus will include locations and amount of regrowth of invasive species, the establishment of native seed, and the success of plantings. An adaptive management approach will be used after annual site assessment and evaluation of conditions. Changes to the management schedule may be necessary based on site conditions.



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Newport

Name: Matt Yokiell Title: Superintendent

Address: 2060 1st Ave

City: Newport State: MN Zip: 55055

Phone: (651) 459-2475 Email: myokiell@newportmn.gov

PROJECT LOCATION

Description: Brush Mower Purchase

Address: 2060 1st Avenue

City: Newport State: MN Zip: 55055

SWWD Watershed Management Unit: ☒ East Mississippi ☐ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Mississippi River

PROJECT BUDGET

Total Project Cost: \$ 5,650

CCIP Funding Requested: \$ 2,825

Other Funding Secured: \$ 0

Other Funding Sources: 0

PROJECT CONCEPT PLAN *[check box when complete]*

- ☒ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The goal of Newport would be to purchase a Jenkins brush mower to use our existing skidloader and this mower to manage invasive species, particularly buckthorn, in city parks, utility corridors, and school forests.

- B. Describe the water resource problems addressed by the project:

Reduction of invasive and/or undesirable species like buckthorn, burdock, and woody growth in warm season native grasses which will allow desirable species to thrive and reduce the sediment load to the Mississippi River. Native plants provide habitat for multiple species.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

Reducing buckthorn will allow healthy native plants to establish themselves which will reduce soil erosion to the Mississippi River which is impaired for sediment.

D. Explain how long-term operation and maintenance of the project will be accomplished:

Newport public works staff will go out in the fall after most other plants have lost their leaves and buckthorn is still green so they are easily able to identify the target plants to mow down while trying to avoid desirable species. Maintenance of the equipment would be the responsibility of Public Works.

E. How does the proposed work increase the resiliency of affected resources and/or systems?

Removal of invasive species allows desirable tree seedlings and native plants to establish themselves in order to replace mature trees that die off. The native species provide habitat for many species in the area.

F. Describe the anticipated project implementation schedule:

Purchase a new Jenkins skidloader mower the summer of 2026 so the mower is available for fall mowing of buckthorn. The mower has a useful life of 20 years.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Matt Yokiell

 Digitally signed by Matt Yokiell
Date: 2026.02.27 09:20:37 -06'00'

02/27/26

Signature

Date



Sizes

6'

▼

Quantity

1

63

Our commercial-grade Brush Mower was designed with versatility in mind. Utilizing high end hydraulic motors into a large gearbox this mower simply cuts better, faster and quieter than others on the market!

The dual swing away blades are capable of hacking down up to 6” diameter material while doing a very nice job on thick weeds and grasses as well. These blades are also easily replaceable and they are affordable.

The deck is constructed of heavy-duty ¼” steel and is completely free floating. This means the mounting plate moves independently of the mower deck making cutting on uneven ground or ditches a breeze.

The back of our mower is designed to be rolled across the ground on a heavy-duty 6” roller standard and the front is picked up with the tilt on the skid steer using two 13,000 lb heavy-duty non-weather rated straps, which takes the shock out of your machine and body. This makes our mowers smoother and quieter than our competitors.

V slots are cut into the deck to help funnel material into the blades as well as allowing the mower to mow up to a fence post or tree without cutting it off. Mower manifolds are designed to bypass fluid should your blades become lodged and the mower comes to an abrupt halt ensuring that you will not damage the mower! This standard flow mower requires 14-25 gallons per minute of flow to run highly effectively!

Optional wheels or push bars are available.

FEATURES

- Commercial Grade!
- ¼” HD Deck
- Free Floating Deck
- Lift straps for operator comfort, ease on the machine and quiet!
- Eaton Char-Lynn Hydraulics and Omni Gear Boxes
- Easy To Replace Blades
- Standard Flow Rate 14-25 GPM
- 6” Material Rated

SPECIFICATIONS

OVERALL WIDTH		66"	76"	88"
Cut Width	60"		72"	84"
Cut Height	2.5"		2.5"	2.5"
Deck Material	1/4" HD		1/4" HD	1/4" HD
Number of blades	Two 24" blades		Two 30" blades	Two 30" blades

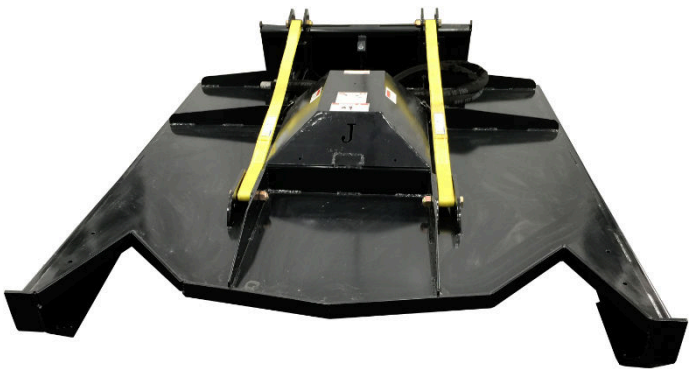
Push bar weight	88 lbs	88 lbs	88lbs
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WHAT OUR CUSTOMERS SAY

I have purchased 4 attachments last month and was very impressed with the way they treat you before and after you buy from brush grapple when you call them and ask them questions about their equipment and how things work they are very knowledgeable explain how everything works I called several other companies and they're just rude and basically could care less if you buy from about there attachments and all they do is talk bad about other companies!! These guys were great Curt Jenkins took care of me get my brush mower and my brush grapple now days seems like Customer service is gone but not with this company. I will recommend skid steer attachments if they give you such great service before you spend your hard earned money with them imagine how attachments so glad I found this company thanks guys for treating me right

MICHAEL KASTIS

MEDIA





SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Newport

Name: Matt Yokiell Title: Superintendent

Address: 2060 1st Ave

City: Newport State: MN Zip: 55055

Phone: (651) 459-2475 Email: myokiell@newportmn.gov

PROJECT LOCATION

Description: Street Sweeper Purchase

Address: 2060 1st Avenue

City: Newport State: MN Zip: 55055

SWWD Watershed Management Unit: ☒ East Mississippi ☐ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Mississippi River

PROJECT BUDGET

Total Project Cost: \$ 336,000

CCIP Funding Requested: \$ 168,000

Other Funding Secured: \$ 0

Other Funding Sources: 0

PROJECT CONCEPT PLAN *[check box when complete]*

- ☒ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

Newport proposes to purchase a new Pelican sweeper to implement a city-wide enhanced street sweeping plan that will be developed in partnership with the SWWD. The goal of the project is to reduce the amount of sediment, organic debris, and litter that reaches the Mississippi River from the City of Newport. The plan is expected to focus on city streets with curb and storm sewer.

- B. Describe the water resource problems addressed by the project:

The Mississippi River is impaired by excess nutrient and sediment loading. While Newport's contribution is small in comparison to all other sources, it is important for the city to do its part to reduce river pollution which is particularly important due to the proximity to the river.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

Newport expects to begin this program by focusing on its 27 lane miles of curbed city streets. These are typically swept by the city each spring and fall as a requirement of its MS4 permit. A forthcoming enhanced street sweeping plan will provide final details, but we expect to complete additional full sweeps at least twice per year in addition to addressing hot spots across the city as needed. Based on data collected in the neighboring City of Woodbury, we expect to collect between 1.5 and 6.5 tons of sediment and between 1.0 and 5.5 pounds of phosphorus with each enhanced sweeping event.

- D. Explain how long-term operation and maintenance of the project will be accomplished:

Maintenance and operation of sweeper will be responsibility of Newport Public Works. The anticipated life of the sweeper is 20 years. Sweeping will follow the schedule/guidance established in the enhanced sweeping program that will be agreed upon by Newport and the SWWD.

- E. How does the proposed work increase the resiliency of affected resources and/or systems?

Removal of sediment and organics before it enters the storm sewer or restricts catch basin inlets reduces surface flooding and allows storm sewer to perform at optimal rates.

- F. Describe the anticipated project implementation schedule:

Purchase a new street sweeper winter of 26/27 to use beginning spring of 2027. Continue enhanced sweeping program for the life of sweeper which is anticipated to last 20 years. I would like to attempt to purchase sweeper the end of December of 2026 to avoid inflation costs for 2027. 4% inflation was added to the attached quote from 2025.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Matt Yokiell

Digitally signed by Matt Yokiell
Date: 2026.02.27 09:20:37 -06'00'

02/27/26

Signature

Date

Pelican[®]



ELGIN[®]
Subsidiary of Federal Signal Corporation



GREATER MANEUVERABILITY, RELIABILITY AND VISIBILITY—IT IS EASY TO SEE THE **ADVANTAGES OF A PELICAN**

Continually improved since 1914, the Pelican mechanical sweeper offers a unique combination of performance advantages. It delivers superior cleaning action with easier operation and servicing. It is designed to sweep up everything from dust particles to the heaviest, most compact dirt and bulky debris. All while delivering greater efficiency and economy.

Operators will discover a rugged, reliable machine that is cleaner, quieter, easier to operate, more maneuverable and more comfortable. From the brooms to the chassis and inside the cab, the Pelican is engineered with innovative features that deliver years of dependable service.

As you explore all it has to offer, you will understand why the Elgin Pelican sets the standard of excellence in cleaning performance and why we can offer an industry-leading one-year, unlimited hours warranty.



EASY OPERATION AND SERVICING MAKE PELICAN AN EASY CHOICE



Even the best equipment is only as good as an operator's ability to master it. That is why the Pelican is engineered with ease of operation in mind.

It begins with a comfortable, quiet cab matched with outstanding maneuverability that includes a tight turning radius for precise sweeping performance and variable dump height for optimal material handling. To minimize downtime, the Pelican offers easy access to all key service points. Its many advantages include:

- Large windows and see-through doors allow 360° visibility and make navigating streets simpler and safer
- Roomy cab offers superior ergonomics with filtered fresh air conditioning and a standard heater/defroster
- The cab includes dual steering, a rear view camera and in-cab monitor
- Single-engine, three-wheel design creates a compact frame for maximum maneuverability and stability
- All controls are logically laid out so operators can focus on the road and their work
- Updated swing-arm rear suspension, designed with shock absorbing coils, enhances ride quality and comfort
- Low-maintenance drive system has a unique wheel motor design for superior performance with minimal maintenance
- Most service points are positioned at ground level



EXCLUSIVE MEMORY SWEEP® DRIVES PRODUCTIVITY EVEN HIGHER

To enhance operator performance this unique feature allows the operator to resume all previous sweeper settings with one touch control.

It incorporates a multi-screen display highlighting engine hours and water tank level, as well as system diagnostics and optional broom features.

CLEANER STREETS START WITH A SUPERIOR CLEANING SYSTEM

Cleaner streets have never been more important, and the Pelican is designed with a unique sweep system that easily handles the heaviest, most compacted dirt and debris. Beyond its powerful cleaning action, the Pelican incorporates advanced technology, including a large hopper with optimal capacity that allows sweep time maximization, superior maneuverability, and safe operations.



- 120 in (3048 mm) sweeping path for maximum cleaning efficiency (two side brooms)
- Hydraulically-driven, free-floating main and side brooms work as a system to efficiently sweep material from the curb and street into the hopper
- Main broom measures a generous 35 in x 66 in (889 mm x 1676 mm) and features standard variable speeds and down pressure for optimal sweeping in changing conditions
- Main broom and side brooms are protected by a system that automatically raises them when the sweeper is in reverse
- Each rugged side broom measures 36 in (914 mm) in diameter and protrudes up to 9 in (229 mm) beyond the outside of the tire while sweeping to capture more gutter debris
- Standard no-jam, belt-type conveyor with angled, molded-in, full-width cleats to carry large and small debris more efficiently into the center of the hopper preventing jamming while maximizing hopper capacity
- High steering angle and tight turning radius allow operators to sweep close to obstacles and precisely follow curb lines

VARIABLE HEIGHT FRONT DUMP HOPPER IMPROVES PERFORMANCE

This system is ideal for single-lane dumping, ensuring minimal traffic interruption. The hopper can be dumped from ground level up to 9 ft 6 in (2895 mm) high. Loads are easily observed from the cab and the hopper's 3.5 cu yd (2.7 m³) and 9,000 lb (4082 kg) capacity assures maximum sweep time.

* 3.5 cu yd (2.7m³) volumetric capacity of hopper



DESIGNED TO DELIVER YEARS OF **RUGGED RELIABILITY**

Quality that endures. That is what the Pelican delivers. It is designed to provide you with superior performance day in and day out, year after year, in the most punishing of environments. From the broom to the engine to the chassis to the cab, you will find innovative engineering matched to heavy-duty construction:

- Durable, purpose-built chassis includes a compact frame for a tight turning radius and years of low maintenance operation
- Controlled by engine RPM and operated independently of direction and ground speed, the Pelican's broom speed provides effectiveness at slow or zero ground speeds
- Balanced design provides stable sweeping and dumping while the hopper load is positioned low for added stability and safety
- Corrosion-resistant water system supplies the dust control system with 220 gal (833 L) of water
- Reliable, single engine power from a proven John Deere 4045T 4.5 L, 4-cylinder turbocharged diesel capable of operating on bio-diesel up to B20
- Exclusive Elgin water pump can run dry without damaging the machine's water system
- Integrated sensors in the drive system precisely measure road speed and adjust power requirements based on the load
- Heavy-duty brake system features twin-caliper, power disc brakes with a dynamic braking design that significantly reduces wear





OUR COMMITMENT TO QUALITY ONLY BEGINS WITH OUR EQUIPMENT

The Elgin Pelican is manufactured in a 208,000 sq ft (19,350 m²) ISO:9001 certified, state-of-the-art industrial plant that employs the latest technology. To build the most reliable equipment, Elgin utilizes advanced CNC equipment, high-precision laser cutters, and a sophisticated powder coating system.

Because we build a better product, we back it up with a full one-year, unlimited hours warranty. Elgin also backs up your investment with superior, 24/7 local service and support. Our goal is to keep your machine—and your entire operation—up and running.

Through our international dealer network, we maintain a vast inventory of spare and maintenance parts and offer fast shipment to all corners of the world.

Altogether, the rugged, reliable Elgin Pelican is easy to operate, easy to maintain, and an easy choice when you are looking for quality equipment that is built to last.



Pelican® - 3-Wheel, Mechanical Sweeper Specifications

Drive System	Electrical System	Dust Control System	Hopper	Conveyor
Make John Deere 4045 Tier 4 Final Type 4 cylinder Displacement 276 cu in (4.5 L) Horsepower 74 hp (55kW) @ 2,400 RPM Torque 274 ft-lbs (372 Nm) @ 1,400 RPM Aspiration Turbo charged	Wires Hot stamped and color coded wiring, alternator/regulator-unitized, 95 A Battery 12 volt, group 31, 925 CCA, 180 min. reserve. Lights Halogen sealed multiple beam headlights, combination stop and tail lights, adjustable side broom lights, directional signals with hazard switch. Safety horn, electronic back up alarm, sweep flashers.	Tank Construction Polyethylene Tank Capacity 220 gal (832 L) Fill Hose 16 ft 8 in (5080 mm) with hydrant coupling Pump Diagram with run dry capability Spray Nozzles Atomizing, adjacent to each broom	Sweep System Pump Variable displacement Capacity 13.6 GPM Fittings O-ring face seal type Reservoir Capacity 33 gal (106 L) Inlet Strainer 100 mesh Return Filter 10 micron absolute, full flow	Type Chevron cleat reinforced rubber belt Speed Variable with engine RPM Flexibility 9 in (229 mm) oscillation for large object passage Drive Hydraulic motor, chain and sprocket drive Bearings Sealed self-aligning, re-lube

PELICAN®

DURABLE.
MANEUVERABLE.
RELIABLE.
UNBEATABLE.

The Elgin® Pelican® broom sweeper is a three-wheel mechanical sweeper based on one of the original street sweeper designs, which has been continuously improved since 1914, meeting the highest sweeper standards. Maneuverability, visibility, economy, serviceability, and single-lane dumping with a sweep system that easily handles heavily compacted dirt and bulky debris are all features of the Elgin Pelican. An isolation-mounted cab provides a cleaner, quieter operation, and the improved 360-degree visibility and easier access for service and maintenance make the Elgin Pelican an industry leader in street sweepers.

- Incredible ease of operation with 360° visibility
- Simplified maintenance with access to service points
- Isolation-mounted cab for cleaner, quieter, more comfortable operation
- An industry leading warranty
- Strong, local service and support



Elgin Sweeper • 1300 West Bartlett Road, Illinois 60120 USA
Phone 847-741-5370 | Parts & Service 877-800-1111

Specifications subject to change without notice. Some products shown with optional equipment. Elgin® is a registered trademarks of Elgin Sweeper.
Products may be covered by one or more United States Patents and/or pending patent applications.
Elgin Sweeper is a subsidiary of Federal Signal Corp. | Federal Signal Corp. is listed in the NYSE by the symbol FSS.



MACQUEEN™

Ship To: SAME AS BELOW

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4600 N. Victoria St.
Shoreview MN 55126

MacQueen
1125 7th Street E
St Paul, MN 55106
651-645-5726 • 800-832-6417

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Date 12/19/2025	Time 15:53:56 (O)	Page 1
Account No SHORE006	Phone No 6124904600	Est No 00 Q04083
Ship Via		Purchase Order JM
Tax ID No		
JUDD GENEREAUX		Salesperson 126

EQUIPMENT ESTIMATE - NOT AN INVOICE

Description ** Q U O T E ** EXPIRY DATE: 01/18/2026 Amount

2026 ELGIN PELICAN NP MECHANICAL 323041.00

PRICING BASED OFF MINNESOTA STATE CONTRACT #265382

RELEASE S-843(5)

PRICING INCLUDES THE FOLLOWING:

ALL STANDARDS FEATURES AS LISTED BY MANUFACTURER AND STATE

CONTRACT

BASE UNIT

SINGLE LED STROBE

LED LIGHTS IN BATTERY COVER

RIGHT LIMB GUARD

HIGH BACK AIR RIDE CLOTH SEAT-RIGHT

IN CAB GUTTER BROOM TILT-RIGHT

DUAL GUTTER BROOM PACKAGE

HD MAIN BROOM UPGRADE

AUTO LUBE FOR DUAL

CARBIDE GREASABLE DIRT SHOES

-

FREIGHT, PDI, DELIVERY, TRAINING AND BREAK-IN FILTER KIT
INCLUDED.

FACTORY TRAINING FOR MECHANIC INCLUDED.

Sale # 01 Subtotal: 323041.00

Total: 323041.00

Subtotal: 323041.00

Authorization: _____

Quote Total: 323041.00

QUOTED PRICES ARE BASED ON CURRENT COSTS AND THEREFORE SUBJECT TO CHANGE
WITH WRITTEN NOTICE TO ACCOUNT FOR PRICING CHANGES BEYOND SELLER'S CONTROL



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: South Washington County Schools

Name: Kyle Uecker Title: Director of Facilities

Address: 7362 East Point Douglas Road South

City: Cottage Grove State: MN Zip: 55016

Phone: (651) 425-6299 Email: kuecker@sowashco.org

PROJECT LOCATION

Description: Campus Greening Maintenance Equipment

Address: District-Wide

City: _____ State: MN Zip: _____

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Multiple

PROJECT BUDGET

Total Project Cost: \$ 24,216

CCIP Funding Requested: \$ 12,108

Other Funding Secured: \$ _____

Other Funding Sources: Capital Funds

PROJECT CONCEPT PLAN *[check box when complete]*

- ☒ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

SoWashCo Schools seeks SWWD funding for the purchase of a skid-loader flail mower attachment and a tow-behind "Buffalo Blower" to allow our maintenance crew to better care for the Campus Greening natural areas on many district properties. As the restoration areas mature, we are looking to perform more maintenance tasks with out in-house crew (2 people) and, after consultation with SWWD staff, we believe these two pieces of equipment will be of great benefit to our small crew.

- B. Describe the water resource problems addressed by the project:

This equipment will allow the school district to better maintain the ecological integrity and diversity of the native restoration areas on school grounds. These natural areas not only provide for reduced runoff volumes, rates, and nutrients from school property to area water resources, they also provide living classrooms and add to the science curriculum for our students.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

While a pollutant load reduction is not readily available for this effort, we believe that continuing to adequately maintain these natural areas contributes extensively to improved climate resiliency and positions the school district to serve as a community conservation leader.

D. Explain how long-term operation and maintenance of the project will be accomplished:

Maintenance of the district's many natural areas with this equipment will be completed by our own employees who have the skill sets necessary to perform the work. This will also limit our current need to outsource some of our maintenance tasks.

E. How does the proposed work increase the resiliency of affected resources and/or systems?

By ensuring that the district's natural areas are maintained over time, they will become more resilient to extreme climate events and invasive species. This protects the school district's and SWWD's investments in development of the restoration areas.

F. Describe the anticipated project implementation schedule:

Maintenance schedules and scopes of work will be developed in consultation with SWWD staff following acquisition of the equipment. Work will be annual and ongoing.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Kyle Uecker

Digitally signed by Kyle Uecker
DN: C=US, E=kuecker@sowashco.org, O=SoWashCo
Schools, CN=Kyle Uecker
Reason: I have reviewed this document

Signature

03/09/26

Date



Tap to zoom



Flail Cutter Attachment

- Clears brush and small trees while distributing cut materials evenly
- Cutting width of 79 inches
- Delivers excellent cutting, mulching, and mowing action of materials up to 3 inches in diameter
- Thick steel deck design protects the attachment and provides maximum strength for tough clearing jobs
- Excels in applications that include agriculture, landscaping, utility, and rental

[Contact Local Dealer](#)

[Request a Demo](#)

[Find a Dealer](#)

[Search for Parts](#)

Flail Cutter - FC200

Length	57.4 in
Flow Rate	17 gpm
Hammers	21
Cutting Capacity	Brush Material up to 3" in Diameter
Blade Tip Speed @ 2000 rpm	8200 ft/min
Cutting Width	78 in
Blade Tip Speed @ 2200 rpm	9000 ft/min
Maximum Blade Tip Speed	9000 ft/min
Operating Weight	1640 lbs
Width	90.8 in
Height	29.7 in



CYCLONE **KB6**

DEBRIS BLOWER



CYCLONE **KB6**

- POWERFUL KOHLER FUEL INJECTED ENGINE
- AUTO NOZZLE POSITIONING
- WIRELESS START/STOP - NO CHOKE REQUIRED



BUFFALO TURBINE



TALK WITH OUR EXPERTS

8AM-4:30PM (Mon-Fri) EST

(716) 592-2700

BuffaloTurbine.com

CYCLONE **KB6** DEBRIS BLOWER

TOP BENEFITS

- Powerful and versatile
- 10 year manufacturer warranty
- Easy to operate and maintain
- Fuel Savings

TOP FEATURES

- Quick and easy adjustable hitch
- Bolt on trailer package with multi position tongue
- Wireless remote for start/stop function (no choke required)
- Wireless throttle and 360° nozzle control
- Auto Nozzle Positioning
- Heavy duty air cleaner

ENGINE SPECS

- 3 year engine warranty
- ECH749 Kohler Gasoline Engine (EFI does not have a choke)
- 26.5 HP Fuel Injected Engine
- Adjustable throttle up to 3900 RPM
(more fuel economy when ran at 3600 RPM)

PHYSICAL SPECS

- Overall Length: 112"
- Frame Length (skid mount): 48"
- Overall Height: 39"
- Overall Width: 48"
- Frame Width (skid mount): 29"
- Weight: 470 lbs.
- Tire size: 18.5 x 8.50-8 turf tires
- Fuel capacity: 6 gallons

GENERAL INFO

- Powder coated
- Comes with polymer nozzle standard
- Optional aluminum nozzles available:
Rectangular nozzles (10" or 19" long)
Round nozzles (10" or 12" outlet)

Applications

Golf Courses • Rental Companies • Sports Facilities
Paving Contractors • Highway Construction Companies
Municipalities • Parks • Cemeteries • Racetracks
Sealing • Test Tracks • Landscapers • Snow Removal



Quick & Easy Adjustable Hitch



Nozzles



WARNING: Cancer & Reproductive Harm - www.P65Warnings.ca.gov



Official Track Blower



Official Track Blower



Made in the USA



Sales • Service • Rentals • Parts

www.tristatebobcat.com

Ship To: IN STORE PICKUP

Invoice To: INDEP SCHOOL DIST 833
SO WASHINGTON CTY SCHOOLS
7362 E POINT DOUGLAS RD S
COTTAGE GROVE MN 55016-3025

BURNSVILLE
1200 Highway 13 E
Burnsville, MN 55337
(952) 894-0894
Fax (952) 894-5759

LITTLE CANADA
71 Minnesota Avenue
Little Canada, MN 55117
(651) 407-3727
Fax (651) 683-2476

HUDSON
588 Outpost Circle
Hudson, WI 54016
(715) 531-0801
Fax (715) 531-0805

ST. CROIX FALLS
2018 US Highway 8
St. Croix, Falls WI 54024
(715) 557-6010
Fax (715) 483-7095

Branch		
02 - Little Canada		
Date	Time	Page
03/06/2026	11:26:59 (O)	1
Account No.	Phone No.	Invoice No.
38342	6514586300	011117
Ship Via	Purchase Order	
		Salesperson
		GKP

EQUIPMENT QUOTE • NOT AN INVOICE

Description ** Q U O T E ** EXPIRY DATE: 05/31/2026 Amount

Stock #: ? Serial #: 13966.00

NEW BOBCAT FC200 FLAIL CUTTER - 710894

SOURCEWELL PRICING PER CONTRACT #20223-CEC

Stock #: B074208 Serial #: 36442 10250.00

NEW BUFFALO TURBINE BT-CKB6 CYCLONE KB6 EFI DEBRIS BLOW

****INCLUDING THE FOLLOWING OPTIONS****

BT-CKB6 CYCLONE KB6 EFI DEBRIS BLOWER

2419 LINE DRIVER MOUNT

IN-STOCK UNIT

Authorization: _____ Subtotal: 24216.00
BRANDON GAUSTER 651-775-6462 Quote Total: 24216.00



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: Washington County

Name: Oluwatoni Ajala Title: Engineer I - Water Resources

Address: 11660 Myeron Road North

City: Stillwater State: MN Zip: 55082

Phone: (651) 430-4315 Email: Oluwatoni.Ajala@washingtoncountymn.gov

PROJECT LOCATION

Description: Chloride Reduction System

Address: 4037 Cottage Grove Drive

City: Woodbury State: MN Zip: 55129

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: All waterbodies within the watershed

PROJECT BUDGET

Total Project Cost: \$ 462,007

CCIP Funding Requested: \$ 231,004

Other Funding Secured: \$ 231,003

Other Funding Sources: County contribution programmed in Washington County Capital Improvement Plan

PROJECT CONCEPT PLAN *[check box when complete]*

- ☒ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):
See attachment
- B. Describe the water resource problems addressed by the project:
See attachment
- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:
See attachment

D. Explain how long-term operation and maintenance of the project will be accomplished:
See attachment

E. How does the proposed work increase the resiliency of affected resources and/or systems?
See attachment

F. Describe the anticipated project implementation schedule:
See attachment

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Oluwatoni Ajala Digitally signed by Oluwatoni Ajala
Date: 2026.03.10 14:53:30 -05'00'

Signature

03/09/26

Date

South Washington Watershed District 2026 CCIP Application

Washington County Public Works – Transportation Division

Chloride Reduction System

Application Section A

Washington County is taking proactive steps to make the use of chlorides for snow and ice control more sustainable while maintaining level-of-service standards and protecting the environment and infrastructure. To advance this initiative, the County plans to construct a chloride reduction system at its new South Shop. The system will include an 807-square-foot brine bay equipped with a state-of-the-art brine maker with a capacity of 4.67 cubic yards, a 6,500-gallon double-wall storage tank, a 750-pound professional-grade truck filling station, and anti-icing equipment. The filling station facilitates the effective mixing of solutions.

Adjacent states, local municipalities, and the Minnesota Department of Transportation are already using similar equipment to reduce chloride impacts on the environment. Quotes and detailed equipment descriptions are attached.

The County's current space and equipment are undersized, and it does not own a brine storage tank. Investing in a properly sized facility and equipment is essential for building capacity, increasing operational efficiency, reducing salt usage, and supporting the County's long-term sustainability and level-of-service goals.

Application Section B

Salt application for snow and ice control is the primary source of chloride entering waterbodies in the state. At elevated concentrations, chloride disrupts water chemistry, harms aquatic ecosystems, and contaminates groundwater. Because chloride cannot be practically removed once it enters water, preventing contamination is essential. Although no waterbodies in the South Washington Watershed District are currently listed as impaired for chloride, protecting surface water is essential for maintaining water quality that supports recreation, public health, and biodiversity.

Application Section C

Implementing a chloride reduction system can significantly decrease chloride pollution and enhance water resource protection. Based on equipment specifications, brine application can reduce salt usage by approximately 25%, preventing several tons of chloride from entering local waterbodies, soils, and groundwater each year. These improvements to the County's infrastructure and equipment will help maintain aquatic ecosystem health by keeping chloride concentrations below chronic toxicity thresholds, protecting groundwater quality, and minimizing soil degradation.

Application Section D

Beyond the environmental improvements, the County views this project as a smart long-term financial investment, as it will reduce the amount of salt that needs to be applied annually based on weather conditions. These savings not only offset the initial cost but also free up resources for other essential services. Additionally, the anti-icing tank can be used to support sweeping operations throughout the District. When filled with water, it wets the roadway and gutters in front of the sweeper, minimizing dust and keeping dirt and sediment in place. This approach is similar to pre-wetting salt to ensure it remains on the roadway rather than scattering into ditches, gutters, and catch basins. The tank functions effectively in conjunction with the County's sweeper and enhances overall sweeping performance.

Ongoing maintenance of the equipment will be fully supported through the County's fleet maintenance budget. This investment positions the County to operate more efficiently and sustainably, delivering lasting benefits to District residents for decades to come.

Application Section E

The chloride reduction system has the potential to significantly decrease salt use on county roads and highways within the District while still meeting established level-of-service goals. It will also help minimize salt runoff, protecting local waterbodies, soils, and groundwater from chloride contamination. By optimizing application rates and improving operational efficiency, the system supports more sustainable winter maintenance practices and reinforces Washington County's commitment to long-term environmental stewardship. This commitment is reflected in the County Board's 2024–2029 Strategic Plan, which outlines climate strategies and policies aimed at strengthening community resiliency and safeguarding natural resources.

Application Section F

The new Washington County Public Works South Shop project has recently entered the design phase. The design is anticipated to be completed between November and December 2026. The project will be issued for construction bidding in January 2027, with construction commencing in spring 2027 and concluding in summer 2028. Installation and startup of the chloride reduction system will be coordinated with the overall South Shop construction schedule to ensure seamless integration.

Appendices A-F

Appendix	Description	Page Number(s)
A	Knutson Construction: 807-square-foot Brine Bay	A2
B	Henderson: Brine Maker with a capacity of 4.67 cubic yards and 6500-gallon double-wall Storage Tank	A3 - A6
C	Henderson: 750-pound professional-grade Truck Filling Station	A7 - A9
D	Townmaster: Anti-Icing Equipment	A10 - A15
E	Henderson: Salt Savings Estimate	A16 - A17
F	Clear Roads: Clear Roads Research Report on Salt Brine vs. Granular Salt	A18 - End

Appendix F omitted from package by SWWD staff (80 pages)

Appendix A – Brine Bay Description and Quote from Knutson Construction

- Cost per Square Foot for Brine Bay estimated by Knutson Construction, Construction Manager and Cost Estimator
- The concept design package defined a Brine Bay that is 807 square feet (approx. 30'x27' inside clear dimensions)
- This brine bay is defined by the following building assemblies:
 - o 12" thick insulated precast concrete wall panels
 - o Steel bar joists and steel deck roof structure, fully insulated, with 90 mil EPDM roofing per Washington County standards
 - o 6" concrete slab on grade floor structure with full epoxy floor coating for chemical resistance
 - o Insulated overhead "garage" door with motorized operation for staff access and brine system operations
 - o All utility infrastructure (water, floor drains, power) to operate the brine system
 - o All HVAC equipment (supply/return/exhaust duct work) to operate the brine system
- \$280 / SF
- Therefore, projected cost for the Brine Bay = \$225,960

Appendix B – Henderson Quote for Brine Maker and 6500-Gallon Double-Wall Storage Tank



HENDERSON

PRODUCTS, INC.

1085 SOUTH THIRD STREET
PO BOX 40, MANCHESTER, IA 52057-0040
PHONE: 563-927-2828

SALES QUOTATION

DATE	PAGE
12/23/2025	1

CUSTOMER: Washington County Public Works Department
CONTACT: Chris Dahlby
ADDRESS: 4037 Cottage Grove Dr.
Woodbury, Minnesota 55129

QUOTE ID: 194454-11
QUOTE DATE: 12/23/2025
VALID UNTIL: 3/23/2026

SALESPERSON: Glenn Beck
PHONE: 563-927-2828
CELL:
FAX: 563-927-2521
EMAIL: gbeck@hendersonproducts.com

PHONE: 715-492-0393

FAX:

EMAIL: Christopher.Dahlby

QUANTITY	DESCRIPTION	LIST PRICE EACH	EXT. LIST PRICE
1	QUOTE 194454-11: Washington County MN Advantage Brinemaker / 6000 gallon double wall storage tank / Sourcewell Contract CONFIGURATION 1-5: Brine Xtreme DESCRIPTION: BRINEX Advantage Brine Maker, Fixed Indoor Installation, Advantage Manual Flip Cover/Extension, BRINE MAKING SYSTEM Salt Brine Maker Style: Advantage Brine Maker Installation Type: Fixed Indoor Installation Hopper Cover: Advantage Manual Flip Cover/Extension SALINITY CONTROL Salinity Control Type: Pro controls, No truck fill Salinity Control Mounting: Integral mounted controls to Brine Maker Salinity Control Pump Flow Rate: 100 GPM System output direction: Right hand output Controls Voltage: 208/220 Volt, 1 Phase SALINITY CONTROL OPTIONS Low Salt Warning Light: No low salt warning light Storage Tank Level Monitor: No Storage Tank Level Monitor Waterline Air Purge: No waterline air purge Cellular Gateway: Cellular Gateway (1 year free access included) Custom Options Custom Option Fields: Note Custom Details Below Custom Options Option 1: Pro Flex Control Option 2: 6500 gallon double storage tank (includes freight) Option 3: Installation Estimate End Customer: Washington County	\$6,100.00 \$48,950.00 \$7,000.00	\$6,100.00 \$48,950.00 \$7,000.00



HENDERSON

PRODUCTS, INC.

1085 SOUTH THIRD STREET
PO BOX 40, MANCHESTER, IA 52057-0040
PHONE: 563-927-2828

SALES QUOTATION

Page 2

Quote #194454

Rev #11	
DATE	PAGE

CUSTOMER:
CONTACT:
ADDRESS:

QUOTE ID:
QUOTE DATE:
VALID UNTIL:

PHONE:
FAX:
EMAIL:

SALESPERSON:
PHONE:
CELL:
FAX:
EMAIL:

QUANTITY	DESCRIPTION	LIST PRICE EACH	EXT. LIST PRICE
	Due to the volatility in material costs and chassis delays, pricing is subject to change at time of manufacturing and / or upfit. Signed: _____ Date: _____ All Terms and Conditions Apply. Terms of Sale Document available at: http://www.hendersonproducts.com/assets/Terms_of_Sale.pdf <u>Double Wall Storage Tank Specs:</u> SNY 6500 CAPTOR 1.5 HDPE - 120"DIA x 199"H WITH: QTY 1 - 2" SS BOLTED INLETS QTY 1 - 2" SS BOLTED OUTLETS WITH SIPHON & TRANSITION UFO - EPDM GASKET QTY 1 - 2" FILL PIPE ASSEMBLY QTY 1 - 3/4" SIGHT GAUGE ASSEMBLY		

Quote Total: \$136,200.00
10% Discount: (\$13,620.00)
Dealer Cost: \$122,580.00
0% Sales Tax: \$0.00
Total Dealer Cost: \$122,580.00



BrineXtreme[®] ADVANTAGE[™]

US Patent 13/656,412. Other patents pending.

Professional Grade Salt Brine Starts Here

The BrineXtreme Advantage delivers consistent, reliable brine production with easy maintenance! Connect to power, connect to water, fill the hopper with rock salt, start the system and you're making professional grade salt brine. It really is that simple.

The BrineXtreme Advantage is available with either Pro or Ultimate controls as an easy-to-operate brine making powerhouse that features a 4.67 cu. yd. salt hopper, production rates up to 6,000 or 7,500 GPH, salt concentration

accuracy to 0.01 SG, 100% automation and repeatability, protected mechanicals, splash free brine transfer, intuitive LCD touch screen display, data logging, storage tank level monitoring, UL Listed salinity control and more.

When you need basic professional grade salt brine fast, look no further than BrineXtreme Advantage by Henderson!



TWO CONTROLS SYSTEMS AVAILABLE

PRO CONTROLS

- Up to 6,000 GPH
- Makes basic brine (no additives)
- 6" LCD touch screen
- Add **Truck Fill Station** to blend up to 3 products



ULTIMATE CONTROLS

A complete brine mixing/blending/truck & tank filling system

- Up to 7,500 GPH
- Makes basic brine with up to 3 additives and up to 3 micro ingredients
- Variable fill rates (20-400 GPM)
- Fill up to 3 trucks simultaneously
- 10.4" LCD touch screen



Produce Professional Grade Salt Brine and Clean Out Easily with Large, Unobstructed Openings!

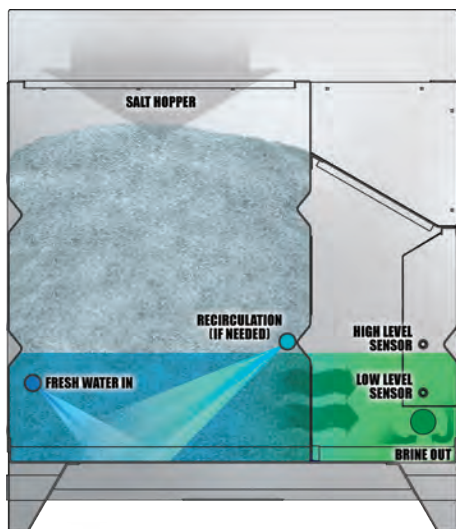
The Dependable Ones[™]



Brine transfer screens and high & low floats shown



Large solids clean-out and inside ladder shown



100% Fully Automated Salinity Control

PRO CONTROLS

ULTIMATE CONTROLS

Brine Output	Up to 6,000 GPH Continuous*	Up to 7,500 GPH Continuous*
Flow Rate	Up to 100 GPM	Up to 200 GPM
Blending Capacity	None Truck Fill Pro (Optional) can blend up to 3 products	Makes basic brine with up to 3 additives and up to 3 micro ingredients
Variable Fill Rates	No	Variable Fill Rates (20-400 GPM)
Truck Filling	No	Fill up to 3 trucks simultaneously
Handles All Salt (Treated/Untreated)	Yes	Yes
Brine Density Accuracy	+/- 0.01 SG	+/- 0.01 SG
Salinity Control	100% Automated	100% Automated
LED Touch Screen	6"	10.4"
Data Logging	Yes	Yes
Storage Tank Level Monitoring	Yes	Yes
Built-in Self Diagnostics	Yes	Yes
Remote Access	Included First Year Optional After 1 Year	Included First Year Optional After 1 Year
Remote Truck Fill	Optional	Optional
Controls Cabinet	NEMA 4X	NEMA 4X
UL Listed	Yes	Yes
Pump Design	Pedestal Pump	Pedestal Pump
Data Logging	Yes	Yes
Storage Tank Level Monitoring	Yes	Yes
Salinity Control	100% Automated	100% Automated
Valves on Controls	Electric (24v DC)	Pneumatic
Pump Motor	3 HP / 230v Single Phase	5 HP / 230v Single Phase
Pump Design	Pedestal	Pedestal
Pump Construction	Cast Stainless Steel	Cast Stainless Steel

*Until cleanout is required

BRINEXTREME ADVANTAGE

BRINE MAKER TANK SPECS - USED WITH EITHER SET OF CONTROLS (ABOVE)

Clean Out	Manual Large Solids: 15" x 9" Door Opening Fines: 3" Butterfly Valve
Sloped Floor	Yes
Hopper Construction	Stainless Steel with V-Crimps Boosting Structural Strength
Hopper Design	Side Flow
Hopper Capacity	4.67 cu. yd.
Lid	Optional
Valves on Brine maker	Pneumatic
Protected Mechanicals	Yes
Built-in Forklift Pockets	Yes
Brine Tank Dimensions	36"D x 132"W x 47"H
Warranty	1 Year
Approximate Weight w/o Integral Pro Controls	2400 Lbs.
Approximate Weight w/ Integral Pro Controls	2800 Lbs.

Appendix C – Henderson Quote for Truck Filling Station



HENDERSON

PRODUCTS, INC.

1085 SOUTH THIRD STREET
PO BOX 40, MANCHESTER, IA 52057-0040
PHONE: 563-927-2828

SALES QUOTATION

DATE	PAGE
12/29/2025	1

CUSTOMER: Washington County Public Works
CONTACT: Chris Dahlby
ADDRESS: 4037 Cottage Grove Dr
Woodbury, Minnesota usa 55129

QUOTE ID: 194476-4
QUOTE DATE: 12/29/2025
VALID UNTIL: 3/29/2026

PHONE: 715-492-0393

FAX:

EMAIL: Christopher.Dahlby@washingtoncountymn.gov

SALESPERSON: Tim Miller

PHONE: 563-927-2828

CELL: 9207403250

FAX: 563-927-2521

EMAIL: trmiller@hendersonproducts.co

QUANTITY	DESCRIPTION	LIST PRICE EACH	EXT. LIST PRICE
1	QUOTE 194476-4: Flex Fill CONFIGURATION 1-1: BrineXtreme Truck Fill Flex 2023 DESCRIPTION: BXTF Pro Controls, Variable Flowrate 20-200 GPM, 208/220 Volt - 1 Phase, SYSTEM CONTROL Control Type: Pro Controls SYSTEM FEATURES Truck Fill Pump Flow Rates: Variable Flowrate 20-200 GPM Voltage: 208/220 Volt - 1 Phase CONTROL OPTIONS Storage Tank Level Monitor: No Storage Tank Level Monitor Cellular Gateway: No Cellular Gateway Powered Truck Offload/Agitation: No Pwr Trk Offload/Agitation TRUCK FILLING Number Of Truck Fills: Fill 1 Truck At A Time Number Of Products (Including Brine) To Blend: 2 Products (Brine + 1) End Customer: Washington County Mn Due to the volatility in material costs and chassis delays, pricing is subject to change at time of manufacturing and / or upfit. Signed: _____ Date: _____ All Terms and Conditions Apply. Terms of Sale Document available at: http://www.hendersonproducts.com/assets/Terms_of_Sale.pdf	\$39,558.00	\$39,558.00

Quote Total: \$39,558.00

10% Discount: (\$3,955.80)

Dealer Cost: \$35,602.20

0% Sales Tax: \$0.00

Total Dealer Cost: \$35,602.20



BrineXtreme FLEX

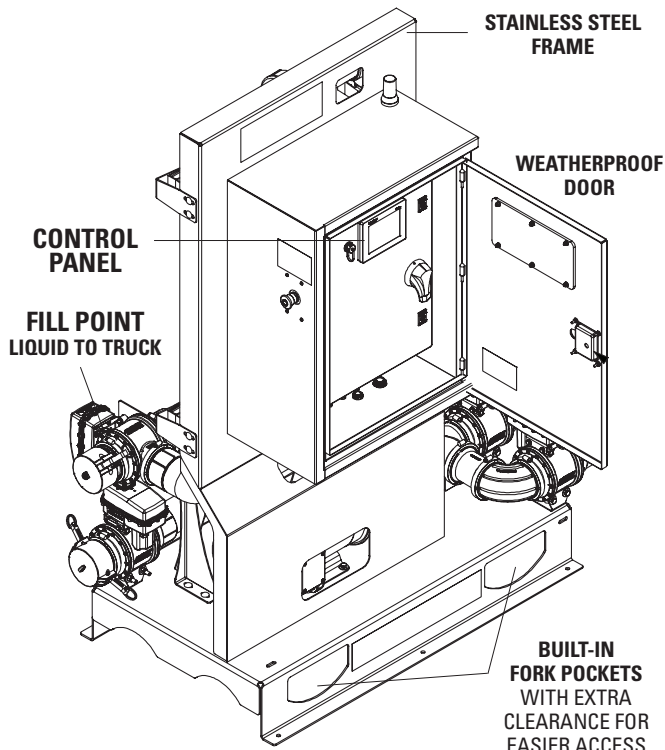
PROFESSIONAL GRADE SALT BRINE TRUCK FILLING STATION

The next generation of the industry leading BrineXtreme truck fill system has arrived. Building upon the foundation of the original BrineXtreme Truck Fill, the **BrineXtreme Flex** Truck Fill Station is a stand-alone or companion liquid transfer system for any brine production or storage facilities. As with the original BrineXtreme Truck Fill system, the **BrineXtreme Flex** Truck Fill still provides standard features such as modular design, plug-n-play installation, data logging, remote access, and password protection.

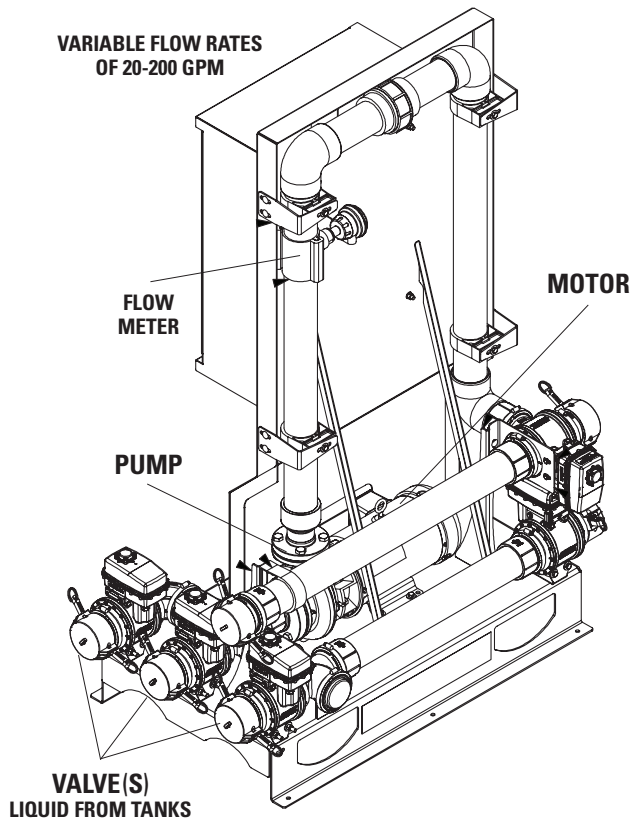
NEW EXPANDED FEATURES

- Variable flow rates from 20-200 GPM which allows liquid transfer rates to match your trucks onboard dispensing system regardless of the trucks tank(s) or plumbing sizes
- Powered off-load to transfer liquids from the truck back to storage
- Ability to stack blend to the facility storage tanks at 200 GPM
- Agitation
- Standard 2-product stack capability with an expandable option for 4 products
- New stainless steel closed coupled washdown motor to enhance longevity and removes the need for motor shimmying
- An expanded user ID logging to allow for more truck users





VARIABLE FLOW RATES OF 20-200 GPM



MODULAR DESIGN

A free standing truck fill station. Installs outdoors, near your liquid tanks and offers 24/7 accessibility.

PLUG-N-PLAY INSTALLATION

Fast and easy installation. Control panel setup is accomplished within minutes.

VARIABLE FLOW

20 - 200 GPM

BLEND/STACKING

Combines up to 2 or 4 products. This feature brings automated stacking capabilities to the BrineXtreme Pro controls.

MULTIPLE USERS

Through the use of unique PIN numbers, you can have up to as many as 100 different users or accounts.

DATA LOGGING

Records output: volume and mixture details into an easy to read .CSV file format. Data can be collected via LAN or USB.

REMOTE ACCESS

Provides system manager with access to data and controls via LAN, WiFi or the optional cellular gateway.

SECURE DATA

Password protection keeps your data safe and secure.

SPECIFICATIONS

DIMENSIONS: 55"W x 71"H x 35"D

SHIPPING WEIGHT: 750 lb.

FRAME CONSTRUCTION: stainless steel

MOTOR: 5 hp, SS washdown motor

PUMP: stainless steel, closed coupled

VALVES: electric, IP68

FILL RATE: Variable 20 - 200 gpm

FLOW METER: solid state magmeter

CABINET: IP66 control panel cabinet inside stainless steel cabinet with window

INPUT: LCD touch screen

CONNECTIONS: 3" cam lock

UL LISTED: yes

TRUCK OFFLOAD/AGITATION: Optional powered truck offload/agitation

COMPLETE MUNICIPAL SNOW & ICE CONTROL SOLUTIONS

PLOWS • WINGS • UNDERBODY SCRAPERS • SAND & SALT SPREADERS • STANDARD & PRECISION SPINNERS • DUMP BODIES • COMBINATION (MUNICIPAL) BODIES
BRINE PRODUCTION & MANAGEMENT SYSTEMS • ANTI-ICE SYSTEMS • PRE-WET SYSTEMS • SLURRY SYSTEMS • COMPLETE TURNKEY PACKAGES



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As a **custom manufacturer** of truck bodies, truck equipment and brine systems, additional product options may be available that are not shown here.



1085 S. Third Street, Manchester, IA 52057
Toll Free: (800) 359-4970
www.HendersonProducts.com

A9



CONTRACT: PS22170



CONTRACT: 031423-HPI



HP-199 03/24



TOWMASTER, 61381 US HWY 12, LITCHFIELD, MN 55355
 PH: 320-693-7900 FX: 320-693-7921 TF: 800-462-4517
 TOWMASTERTRUCK.COM

Appendix D – Towmaster Quote for Anti-Icing Equipment

Reference No.
QT 100483

** QUOTATION **

Ship To:	Cust: 2965	Phone:	Bill To:	Phone:
WASHINGTON COUNTY PUBLIC WORKS			WASHINGTON COUNTY PUBLIC WORKS	
11660 MYERON RD N			11660 MYERON RD N	
STILLWATER	MN 55082	USA	STILLWATER	MN 55082

ATTN:

PO#	Salesman	Terms	Created	Last Revised	Appx Comp
	JOSH PAULSON	NET 30 DAYS	1/29/26	1/29/26	0/00/00

Serial No.	Qty	Part No.	Description	Price Ea.	Net Amt.
	1		SERVICE JOB - T - Misc parts and labor for: ;ABOR TO REMOVE EXSISTING PARTS AND BOX UP FOR CUSTOMER PUMP,PTO,HYD VALVE, CONTROLLERS ON INSIDE OF CAB	\$1,750.00	\$1,750.00
	1	9900847	Valve System, Force Add-A-Fold MCV-ISO Valve 5 Functions, INSTALLED HOIST, JIB, HOOK HEIGHT, pRESSURE REDUCING, DIRECT APP	\$12,659.00	\$12,659.00
	1	9902496	Control System Force ULTRA-3-6100 Commander control, Installed	\$15,393.00	\$15,393.00
	1	9903288	Control Add-on Force 6100 for Direct Application Valve Module, & Feedback, for 3 Lane only.	\$2,187.00	\$2,187.00
	1	9904959	Reservoir Force 30 Gal Stainless Steel Slim-Line (space saver), w/intank filter for systems, installed FRAME MOUNTED	\$5,709.00	\$5,709.00
	1	9900891	Pump Force TXV92 (5.6 ci) Pump, 280 HOT SHIFT PTO for Allison Trans, w/Elec shut down installed	\$8,811.00	\$8,811.00
	1	9900871	Switch TMTE BODY UP Installed (electric controls only)	\$288.00	\$288.00
	1	9900884	Sensor Force Low oil indicator system, SLIM-LINE AND CABSHIELD MOUNTED w/light mounted in cab, installed	\$334.00	\$334.00
	1	9901745	VariTech Ind. LDS AI1035-DAS HYD POWERED Anti-Ice System	\$16,205.00	\$16,205.00
	1	9901741	VariTech Ind. Spring Rewind Hose Reel (100' of ½" dia hose) (ADD)	\$1,935.00	\$1,935.00
	1	9901756	VariTech Ind. Tank Tamer® Ball Baffle System AI1035	\$2,088.00	\$2,088.00
--- Continued ---					

Accepted by

Date

Price:

Total Discounts:

Net Cost:

Freight

Total:

99



TOWMASTER, 61381 US HWY 12, LITCHFIELD, MN 55355
PH: 320-693-7900 FX: 320-693-7921 TF: 800-462-4517
TOWMASTERTRUCK.COM

Reference No.
QT 100483

**** QUOTATION ****

Ship To:	Cust: 2965	Phone:	Bill To:	Phone:
WASHINGTON COUNTY PUBLIC WORKS			WASHINGTON COUNTY PUBLIC WORKS	
11660 MYERON RD N			11660 MYERON RD N	
STILLWATER	MN 55082	USA	STILLWATER	MN 55082

ATTN:

PO#	Salesman	Terms	Created	Last Revised	Appx Comp
	JOSH PAULSON	NET 30 DAYS	1/29/26	1/29/26	0/00/00
Serial No.					

1 9901750 - VariTech Ind. 3 Lane Switch pkg/ for use with existing controller	\$592.00	\$592.00
1 9902490 - VariTech Ind. Installation of direct module and switch package for use with existing control (MUST ADD/USE 9903288 ALSO)	\$1,253.00	\$1,253.00
1 9906372 - TMTE CS A-FRAME skid for Hooklift, painted Gloss Black, AI1035-DAS **NOTE: BODY LOCKS TO WORK WITH AMPLIROLL 100 AL HOOK LIFT UNIT	\$8,276.00	\$8,276.00
1 9906363 - VariTech DEDUCT, Delete std galv skid framework, AI1035-DAS	\$2,040.00-	\$2,040.00-
1 9901748 - Anti-Icing Installation of anti-icing system (A-FRAM HOOKLIFT TYPE)	\$2,425.00	\$2,425.00
1 WARRANTY - TOWMASTER EXCLUSIVE WARRANTY: 5 yr Steel/Stainless Steel Body Structure; 5 yr Whelen LED Light Systems; 4 yr SwapLoader Hoists; 1 year Swenson Spreaders, 2 yr Hyd, FALLS Snow Equip, Tele/Scissor Hoists, and all other items.		

Accepted by

Date

Price: \$77,865.00

Total Discounts:

Net Cost: \$77,865.00

Freight

Total: \$77,865.00

A11

Snow And Ice Management

Based on industry standards

Brine Standards

- Brine should be at 23.3% by weight for winter use
- 23.3% brine has a specific gravity of 1.179 at 60 deg.
- 23.3% brine has a salometer reading of 85% using a 0-100 scale
- A gallon of brine weighs about 10.5 lbs.
- The Eutectic temp, refers to the lowest possible melting temp.
- Brine at 23.3% has a Eutectic temp of -6 deg. F
- 23.3% brine contains about 2.43 Lbs salt in one gallon of water
- When blending additives to brine, keep brine amounts above 70% to ensure complete mixing
- Avoid more than 20% calcium, it may not stay suspended, causing plugged nozzles and could get slippery on some surfaces
- Calcium chloride for winter use needs to be 32% solution compared to summer use of 38%
- Temperature reading Must be measured at the pavement, not air temp
- Anti icing before an event can be helpful even if you get light rain. The salt will settle out in the concrete voids and can stay in place
- Tanks for holding brine must have a specific gravity of 1.7 or higher
- On average you can make 800 gallons of brine with a yard of salt
- A yard of salt is close to a Ton depending on moisture content
- Most hydrometers for salinity are calibrated at 60 deg. If your water is colder, you must use a correction table for a true reading

Industry Standard Application Rates

52,800 sq feet in a lane mile VS 44,000 sq feet in an acre

Liquid

Anti ice / pretreat	35 to 60 gallons a lane mile	(40 to 50 per acre)
Post treatment	65 to 120 gallons per land mile	(60 to 120 per acre)

Granular

APWA = 300 – 400 lbs per lane mile

Salt Institute = 400 lbs per lane mile

Minnesota PCA = 200 lbs per acre

WI Salt Wise = 4 lbs per 1,000 sq ft / 175 lbs per acre (sidewalks and parking lots)

Dilution

- Eutectic temp of Sodium Chloride is -6 deg F, diluted by 50% it freezes at 18 deg
- Eutectic temp of Calcium Chloride is -60 deg F, diluted by 50% it freezes at 9 deg
- Eutectic temp of Magnesium Chloride is -28 deg F, diluted by 50% it freezes at 10 deg

Snow And Ice Management

Based on industry standards

- Calcium chloride will pull moisture from the air as well as snow and ice melting, causing it to become diluted more quickly than straight brine

Savings on a one acre lot

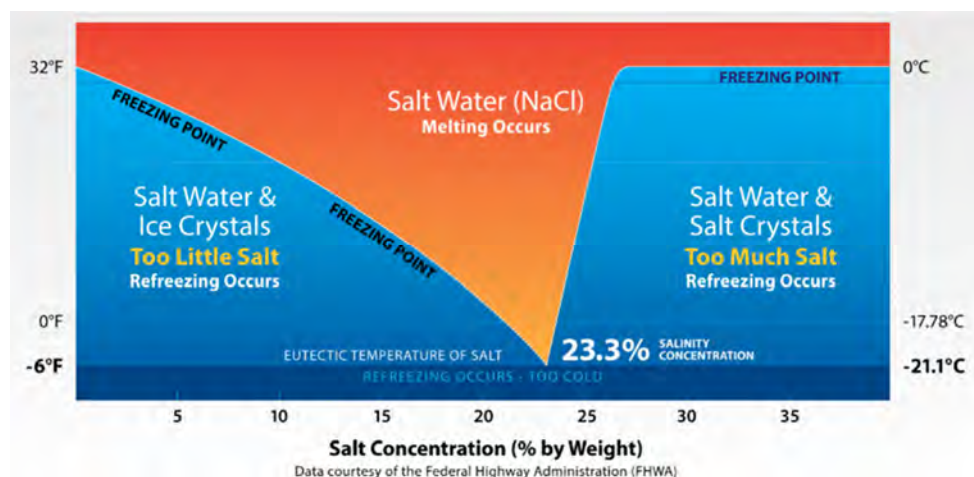
Anti icing with brine	Application rate 35 gal	(80 lbs salt)	\$2.80
Post treatment with brine	Application rate 60 gallons	(138 lbs salt)	\$4.80
Brine cost of .08 per gallon		(total 218 lbs salt)	Total \$7.60
Deicing with granular salt	Application rate .5 ton	(1,000 lbs)	Total \$35.00
Salt cost of \$70.00 ton	This shows a 78% reduction in salt used as well as the cost savings		

What can you do with 1 Ton of Salt VS 870 gallons of Brine

Deicing with the granular	1-2 Acres
Anti icing / Pretreat @ 25 gal per acre	35 Acres
Post treatment @ 60 gallons per acre	14.5 Acres

Effects on Environment and Infrastructure

- It takes just one teaspoon of salt, typically road salt or de-icing salt, to permanently pollute five gallons of water
- Chloride levels in rivers and urban areas have doubled in the past 20 years
- Damage to infrastructure, including bridges and roads, can be substantial, with one source estimating this cost could be as high as \$615 per ton
- Ecosystem damage, including harm to trees, vegetation, and aquatic life, is estimated between \$75 and \$227 per ton



Additional information: wisaltwise.com, sima.org, clearroads.org, pnsassociation.org,

Henderson Products T.R. (Tim) Miller 920-740-3250 trmiller@hendersonproducts.com



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Woodbury

Name: Kristin Seaman Title: Sr Environmental Resources Coordinator

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

Phone: (651) 414-3494 Email: kristin.seaman@woodburymn.gov

PROJECT LOCATION

Description: Hydro-mulcher

Address: _____

City: _____ State: MN Zip: _____

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Multiple

PROJECT BUDGET

Total Project Cost: \$ 30,000

CCIP Funding Requested: \$ 15,000

Other Funding Secured: \$ 15,000

Other Funding Sources: _____

PROJECT CONCEPT PLAN *[check box when complete]*

- ☐ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The primary goal of this project is to improve soil stabilization, reduce erosion, and protect downstream water resources through the acquisition and use of a hydro-mulcher for maintenance, and stormwater projects. The equipment will allow the City to rapidly establish vegetation on disturbed soils, pond side slopes, and utility repair areas.

- B. Describe the water resource problems addressed by the project:

Disturbed soils along roadways, utility trenches, ditch regrading projects, and stormwater pond maintenance areas are highly susceptible to erosion. Without rapid stabilization, rainfall and snowmelt can transport sediment into storm drains, wetlands, lakes, and streams. Sediment is one of the leading pollutants in urban runoff and contributes to elevated total suspended solids (TSS) in receiving waters. Sediment often carries attached pollutants such as phosphorus, heavy metals, and hydrocarbons. When eroded soils enter water bodies, they contribute to nutrient loading, algae growth, and reduced water clarity. Stabilizing soil quickly reduces the transport pathway for these pollutants.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

For disturbed areas treated with hydro-mulch, sediment loss can be reduced by 70–90% compared to untreated bare soil.

D. Explain how long-term operation and maintenance of the project will be accomplished:
The City Fleet Division maintains all equipment.

E. How does the proposed work increase the resiliency of affected resources and/or systems?
The proposed hydro-mulcher project increases the resiliency of both natural and built systems by enabling rapid and effective soil stabilization in areas disturbed by maintenance, and stormwater projects.

F. Describe the anticipated project implementation schedule:
Purchase of new hydro-mulcher equipment in 2027.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Kristin Seaman

Digitally signed by Kristin Seaman
DN: C=US, E=kristin.seaman@woodburymn.gov,
O=City of Woodbury, CN=Kristin Seaman
Date: 2026.03.06 13:49:45-06'00'

Signature

03/06/26

Date

FINN HydroSeeder®

Model T30



The FINN T30 HydroSeeder has been modified and redesigned to provide the ideal entry-level machine loaded with features that come standard with every unit. The T30 is the perfect FINN HydroSeeder for tackling smaller hydroseeding projects or an affordable way of adding to an existing fleet.

FINN developed HydroSeeder technology in 1953 and we've been the industry leader in quality and innovation ever since. With the FINN T30, you don't have to settle for less than proven and reliable FINN quality for a wide array of the most common hydroseeding applications.

Versatile & Economical.

The T30 is FINN's most economical HydroSeeder ever. You can easily manage professional quality seeding, fiber mulching, straw tacking, and much more - all with legendary FINN efficiency and cost effectiveness.

Feature-Packed Machine.

The FINN T30 HydroSeeder features a durable, 335 gallon liquid capacity steel tank; a hydraulically-driven and

reversible mechanical agitator for fast and thorough mixing; simple controls for economical one-man operation; a FINN-designed centrifugal pump that handles the thickest of slurries with ease; and forklift channels and lift ring for easy handling.

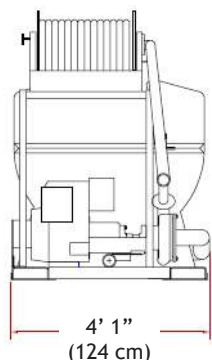
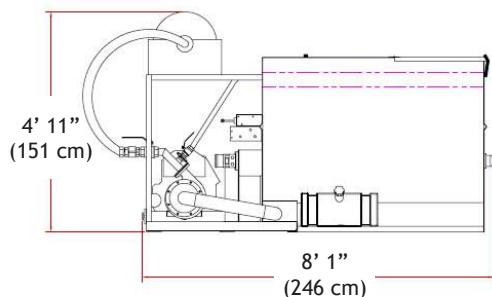
All T30 machines come standard with a powerful electric hose reel equipped with 100 feet of hose.

All Around Performance.

The T30 goes everywhere you need it to go: residences, cemeteries, golf courses, sports fields, office and apartment complexes, parks, and more.

As the world leader for over 80 years in the design and manufacture of innovative, quality equipment for the green industry, and as the inventor of the HydroSeeder, FINN Corporation is committed to your complete satisfaction.

T30 HYDROSEEDER®



FINN MODEL T30 TECHNICAL SPECIFICATIONS

POWER.....	Kohler CH620 19 hp (14.2 kw), electric start, air cooled gas, oil guard protection
TANK SIZE.....	335 gallon (1,268 liter) liquid capacity, 281 gallon (1,063 liter) working capacity
LOADS PER ACRE*	10.68
FUEL TANK CAPACITY	4 gallon (15.1 liter)
PUMP.....	Centrifugal 3" x 1 1/2" (7.5 cm x 3.75 cm), 65 GPM @ 60 psi (227 lpm @ 414 kPa), 3/4" (1.9 cm) solid clearance
PUMP DRIVE.....	Direct drive through electric clutch, pump drive is independent of agitator operation
AGITATION.....	Mechanical paddle agitation and liquid recirculation
AGITATOR DRIVE.....	Reversible, variable speed hydraulic motor (0-130 rpm)
DISCHARGE DISTANCE	Up to 70 ft. (23 m) from end of hose
MATERIAL CAPACITY	500 lbs. (227 kg) granular solids, 100 lbs. (45 kg) fiber mulch
NOZZLES.....	(1) narrow fan, (1) wide fan, (1) long distance
HOSE REEL	Standard electric hose reel with a 12V electric motor, 100' x 1 1/4" semi-rigid polybraid hose and hose holder
EMPTY WEIGHT	1,480 lbs. (671 kg)
WORKING WEIGHT*.....	4,560 lbs. (2,068 kg)

*Loads per acre based on an application rate of 1500 lbs. mulch/acre.

*Working weights are approximate and do not include stored materials.

FINN Corporation has a policy of continuous product improvement, and reserves the right to change design and specifications without notice.

HydroSeeder® and the FINN Design® Logo are registered trademarks of FINN Corporation.



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Woodbury

Name: Kristin Seaman Title: Sr Environmental Resources Coordinator

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

Phone: (651) 414-3494 Email: kristin.seaman@woodburymn.gov

PROJECT LOCATION

Description: Snow and Ice Pretreatment Upgrade

Address: _____

City: _____ State: MN Zip: _____

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Mutiple

PROJECT BUDGET

Total Project Cost: \$ 60,000

CCIP Funding Requested: \$ 30,000

Other Funding Secured: \$ 30,000

Other Funding Sources: City Capital Investment fund

PROJECT CONCEPT PLAN *[check box when complete]*

- ☐ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The primary goal of this project is to improve winter roadway safety while significantly reducing chloride use and environmental impacts through proactive roadway pretreatment. The project will implement liquid anti-icing strategies to prevent snow and ice from bonding to pavement, resulting in more efficient snow and ice removal operations.

- B. Describe the water resource problems addressed by the project:

This project supports long-term chloride reduction goals while maintaining high levels of public safety and service.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

Based on regional anti-icing performance data and comparable municipal programs, implementation of a proactive liquid pretreatment program is expected to reduce overall salt application rates by 20–30% per lane mile annually.

D. Explain how long-term operation and maintenance of the project will be accomplished:
The City Fleet Division maintains all equipment.

E. How does the proposed work increase the resiliency of affected resources and/or systems?
By applying liquid brine prior to storm events, snow and ice are prevented from bonding to pavement surfaces. This reduces the need for repeated salt applications and aggressive mechanical removal, which can accelerate pavement deterioration. Protecting roadway surfaces extends infrastructure lifespan and reduces long-term maintenance costs.

F. Describe the anticipated project implementation schedule:
Purchase of new pretreatment equipment in 2027.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Kristin Seaman

Digitally signed by Kristin Seaman
DN: C=US, E=kristin.seaman@woodburymn.gov,
O=City of Woodbury, CN=Kristin Seaman
Date: 2026.03.06 15:51:32-06'00'

Signature

03/06/26

Date



The Anti-icing application system is designed to slide in-to medium and heavy duty dump trucks with an inside box width of 83" or greater. This system is available with tank capacities ranging from 735 gallons up to 3400 gallons, and come standard with a galvanized steel frame and glass filled polypropylene fittings for years of dependable use. The self-loading leg kit, Tank Tamer® system, and automatic rate controllers can all be added to make this a truly turn-key package.

Anti-Icing System

FEATURES

- **Extra Heavy Duty UV Stabilized Tank**
Able to accurately apply high specific gravity liquids
- **Optional Tank Baffling**
Improved vehicle stability with less material movement
- **Flanged Tank Fittings**
Fast and easy maintenance of worn or damaged fittings
- **Available 1, 2, or 3 Lane Stainless Spray Booms**
Perfect solution for mounting in compact areas
- **Hydraulic or Gas Driven Centrifugal Pump**
Pre-engineered mounting system fits the most popular truck boxes
- **Galvanized Steel Frame**
Ensures long service life with high use applications
- **Optional Electronic Flow Meter**
Accurately measures dispersed material with the use of a closed loop spreader control
- **Optional Self-Loading Legs**
Easier loading and unloading, providing an excellent means of off-season storage
- **Optional Automatic Rate Controllers**



3-lane Anti-Icing Unit with optional self-loading legs (shown)





With tank capacities up to 4035 gallons, the Trailer Mounted Anti-Icing System allows for longer route runs without the need to return for refilling, saving time and money. In addition, once anti-icing operations are completed the trailer can simply be unhooked allowing the truck to continue with salting and plowing operations as needed. The trailers can be built with many different options to accommodate equipment hauling during the offseason making this a year round piece of equipment.

Trailer Mounted Anti-Icing System

FEATURES

- **Rugged, Heavy-Duty Steel Trailer with 2" Decking**
Provides years of durable use no matter what the season
- **Customizable Hitches, Brakes, Axles, and Tilting Options**
Allows you to design the best trailer for your fleet
- **Tank Sizes Up to 4,035 Gallons**
Saves money by eliminating return trips to refill
- **Proven Hydraulic or Gas Engine Driven Closed Loop Power Units**
Built to withstand the harsh winter elements
- **Factory Installed Tank Tamer Upgrade**
Eliminates nearly all liquid surge when starting, stopping and cornering
- **Automatic Closed Loop Spreader Control**
Ensures precision application of your anti-icing liquid
- **Available with a 3-Lane Spray Bar Package**
Maximizes coverage during long anti-icing runs
- **UV Stabilized Polyethylene Tank**
Capable of hauling liquids with a specific gravity of up to 1.9





MT403V-11

The MT403V-II Electronic Control System is an electronic control system that can help you operate more cost-effectively by providing the information you need to maintain optimal application rates of liquid de-icer and anti-icing chemicals.

FEATURES

- **Four Operating Modes**
English or metric units provide ease of use for various applications including; highway maintenance, roadside spraying, dust control, airport maintenance and turf maintenance
- **Selectable Servo Drive Options**
Standard +/- DC servo or Pulse Width Modulation (PWM)
- **Extensive Downloadable Data List**
Three data sets include volume, area, distance, average/highest velocity, and start time/date stamps
- **Blast Switch**
Allows pre-settable, high-rate, timed application of product on bridge decks, intersections, etc. The blast can also be initiated by optional external switch or optional wireless remote
- **Keylock Switch**
Supervisor lockout switch prevents unauthorized changes to calibration settings or data counters
- **Built-In Alarm Messages**
Automatic notification if speed or flow signal is lost or the tank level is low
- **Built-In Audible Alarm**
Alerts operator to rate errors +/- 10%, low tank level or empty tank (if using optional tank switch)
- **Emergency Stop**
Automatically shuts down operation if flow signal is lost
- **Push Button Controls**
- **Out-of-Range Warning Light**
- **High Contrast Liquid Display**
- **Heavy-Duty Rotary Switch**
- **Closed and Open Loop Operation**
- **Precise Rate Control**
- **Ability To Compensate for Ground Speed Changes**
- **Vehicle ID Settings**





Our 20 amp Driver is a single channel Pulse Width Modulation (PWM) controller that provides a very cost effective solution for controlling a 12 volt circuit. The 20 amp driver provides a turnkey, plug-and-play controller for use with any VariTech open loop electric or auger exhaust hydraulic driven pre-wet system power unit. Output is indicated on a visual scale of 0 to 10 with 1/2 segment increments on the front of the controller. There are four LED indicators on the front panel for visual feedback on system operation.

20 Amp Driver

FEATURES

- **Rugged Silicone Keypad**
Generates a comfortable use interface
- **Standalone 20 Amp PWM Driver**
Perfect for low volume liquid pumps
- **Automatic Pump Shutdown**
Offers system protection from run dry situations
- **LED Bar Graph**
Allows for a wide range of adjustability
- **Step by Step Calibration**
Makes system calibration very simple
- **Backlit Display**
Provides fast and accurate navigation in low light conditions
- **Sealed Weatherpack Connectors with Dust Covers**
Gives adequate protection from outside elements
- **Compact, Space Saving Design with Aluminum Mounting Brackets**
Quick and easy installation with a variety of mounting locations



General Specifications

Operating Temperatures.....-40° to 85° C
 Operating Voltage.....10.0 to 18.0 VDC
 Operation Current Total Consumption.....23.0 Amps
 Output Current Maximums PWM Output.....20.0 Apms

Ignition Current Consumption.....0.5 Amps
 Output Frequencies (PWM).....50, 62, 100, 120, 250, 400 Hz
 Number of Outputs:
 Pump or Valve PWM.....1
 Digital Switch.....1
 Number of Inputs.....3
 Number of Buttons.....5

Fuse Ratings:
 Battery Input.....30.0 Amps
 Ignition Input.....1.0 Amps
 Dimensions with Bracket.....4.81" x 1.25" x 4" (L x W x H)



Tank Tamers®

Tank Tamers are used in large mobile liquid tanks increasing the stability of the vehicle by reducing sloshing associated with vehicle movement.

Tank Tamers are easy to assemble and can be added to any liquid tank with a 16" or larger man-way.

FEATURES

- **Complete Tank Baffling**
Eliminates fluid sloshing for increased driver safety
- **Injection Molded**
Debris associated with drilled holes is eliminated
- **Increased Vehicle Life Expectancy**
Reduced payload movement reduces wear and tear on vehicle
- **Extra-Heavy Duty Construction**
Withstands the movement of high specific gravity liquids
- **Self-Locking Snap Assemblies**
Easily assembled without additional parts that can rust and break
- **Field Removable**
Tank Tamers can be removed for tank cleaning or maintenance
- **Reduced Driver Fatigue**
Stabilizes liquid material improving driver comfort
- **UV Stabilized Plastic**
Prevents brittleness and adds to the life expectancy

Tank Gallonage/14 = Approximate # of
Tank Tamers Needed



15 inch Tank Tamer



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Woodbury

Name: Kristin Seaman Title: Sr Environmental Resources Coordinator

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

Phone: (651) 414-3494 Email: kristin.seaman@woodburymn.gov

PROJECT LOCATION

Description: Replace Street Sweeper for Enhanced Street Sweeping Program

Address: _____

City: _____ State: MN Zip: _____

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Multiple

PROJECT BUDGET

Total Project Cost: \$ 410,000

CCIP Funding Requested: \$ 205,000

Other Funding Secured: \$ 205,000

Other Funding Sources: City Capital Investment Fund

PROJECT CONCEPT PLAN *[check box when complete]*

- ☐ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The City has been operating the Enhanced Street Sweeping Program for the last five years, with leadership and support from SWWD. We actively operate two regenerative air sweepers and our mechanical broom is at the end of its useful life. The City is positioned to replace the mechanical broom with a third regenerative sweeper in 2026 and are requesting support to make this upgrade. Once complete, the city will be able to manage the sweepers to successfully to meet the goals and direction of the Enhanced Street Sweeping Plan given increased maintenance needed for the equipment with increased use.

- B. Describe the water resource problems addressed by the project:

Public streets can be a key path for Phosphorus to enter the stormwater and surface water systems through organic debris and sedimentation that is deposited on the roads.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

Across the city in 2024, we swept 2,973 miles and collected 736.8 tons of material. This material is estimated to have removed 543.2 pounds of Phosphorus.

D. Explain how long-term operation and maintenance of the project will be accomplished:
The City Fleet Division maintains all equipment.

E. How does the proposed work increase the resiliency of affected resources and/or systems?
Removing debris from roads effectively prevents Phosphorus from entering into our surface water system. Replacing the mechanical broom with another regenerative sweeper will improve efficiency and effectiveness of the Enhanced Street Sweeping Program.

F. Describe the anticipated project implementation schedule:
Purchase of the new sweeper in 2026.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Kristin Seaman

Digitally signed by Kristin Seaman
DN: C=US, E=kristin.seaman@woodburymn.gov,
O=City of Woodbury, CN=Kristin Seaman
Date: 2026.03.06 13:51:16-06'00'

Signature

03/06/26

Date

RegenX[®]



ELGIN[®]
Subsidiary of Federal Signal Corporation



EASY TO USE, EASY TO MAINTAIN, **THE EASY CHOICE FOR YOUR OPERATION**

Rugged construction for years of dependable service. Innovative features to simplify operation and maintenance. Superior performance to get the job done right—the first time, with less effort and expense. These are the qualities Elgin has been building in its equipment since it introduced the world's first self-propelled, motorized street sweeper in 1914.

Today, you will find all of these advantages in the Elgin RegenX regenerative air street sweeper. The product of years of development with input from municipal and contract customers, sweeper operators, service technicians and project supervisors, the RegenX delivers superior performance day in and day out.

As you explore its features, you will understand why we offer the RegenX with an industry leading one-year, unlimited hours warranty.





A SMARTER DESIGN TAKES PRODUCTIVITY TO NEW HEIGHTS

The RegenX features a roll-off dump height of 56 in (142.24 cm) with a 50° dump angle and 7.3 cu yd (6.11 m³) hopper. This level of performance can help you avoid double-handling and driving back to a facility to dump. You can increase efficiency even more by placing roll-off containers along your route. All of this saves you time, effort, expense, and fuel costs.

EASY-TO-CLEAN HOPPER

To make cleaning faster and easier the RegenX hopper features:

- Rounded corners for easy cleaning and better load evacuation
- Self-deploying dust separator evacuates dust when hopper is dumped
- Easy access dust separator washout doors
- Simple inlet design with deflector loads debris evenly simplifying washout





A SIMPLER DESIGN MEANS GREAT SAVINGS FOR YOU

Throughout the design of the RegenX you will find performance advantages that improve productivity, reduce downtime, simplify maintenance, and enhance operator performance—all to help you create a cleaner environment for your community. RegenX performance advantages include:

- Overall simpler design with fewer moving parts
- Bolt-on parts in key areas (like the dust separator and hopper inlet) for easier servicing
- Easy access to all service and maintenance components
- Convenient switches for faster operation
- Water level indicator visible from side mirror while operating
- Dual quick disconnect on suction tube for easy maintenance and access to obstructions
- Extended steel suction tube for improved material flow
- Adjustable rear bumper for efficient offloading into containers
- Adjustable hopper door locks for proper seal



SUPERIOR SIDE BROOM FOR ENHANCED CLEANING

To provide superior cleaning action, the RegenX broom features:

- Innovative in-cab pneumatic float for adjustable side broom pressure
- Elgin's unique trailing arm design provides inward motion to avoid obstacles
- Standard parallelogram linkage allows side brooms to closely follow road contours and maintain a consistent broom tilt angle with the road surface



DESIGNED TO HELP OPERATORS DO MORE WITH LESS EFFORT

The best technology makes our lives and our work easier. That is why the RegenX has been designed for operators of all levels.

It has easy-to-master controls with no control modules, simple operation, and simplified maintenance. The result is higher productivity with less downtime, and a short learning curve for operators. With the RegenX, operators can focus on their work, not the controls, bringing added safety to every job. Advantages include:

- Simplified controls with preset throttle adjustments that can be made on the fly
- The ability to change from sweep to transport mode with the flip of a switch
- Simple dump controls
- Expedited, easier washout and cleanup
- Fast, easy access to maintenance and service points



RegenX[®]

INNOVATION AT WORK

A closer look at the Elgin RegenX reveals innovative design features, systems, and components that not only simplify operation and improve performance but also make maintenance and servicing faster and easier. The result is the optimal efficiency of your operations, as you reduce maintenance requirements and downtime. The RegenX brings you an array of innovative systems including:



Pickup Head

Our exclusive pickup head features a convenient port that allows you to totally clean out the head while the unit stays clean and dry.



Dust Separator

The high-efficiency dust separator features a centrifugal design that spins air at a high speed, isolating dust into a self-emptying collection chamber that evacuates as the hopper is dumped.



Fan Drive

Our high-performance, low-maintenance fan drive system allows for belt changes in less than five minutes.



OUR COMMITMENT TO QUALITY ONLY BEGINS WITH OUR EQUIPMENT

The Elgin RegenX is manufactured in an ISO 9001 certified, advanced industrial plant with over 208,000 sq. ft. (19,350 sq. m.) of space. We employ the latest technology to build the most reliable equipment, including high-precision laser cutters, efficient, accurate computer numerical controls, and a sophisticated powder coating system.

When you build a quality product you can back it up with a full one-year, unlimited hours warranty. Elgin also backs up your investment with superior local service and support. Our goal is to keep your machine—and your entire operation—up and running.

The RegenX can be customized to your unique requirements to meet local standards and regulations by means of a broad selection of configurations, options and accessories.

Through our international dealer network, we maintain a vast inventory of spare parts and offer fast shipment to any region of the world.

Altogether, the rugged, reliable Elgin RegenX is easy to operate, easy to maintain, and an easy choice when you are looking for quality equipment that is built to last.



RegenX Truck Mounted Regenerative Air Sweeper Specifications

Auxiliary Engine	Fan Drive System	Electrical System	Dust Control System	Sweep System	Pick-up Head
John Deere 4045T Tier 4 Horsepower: 74 hp (55 kw) @ 2400 RPM Torque: 224 ft.-lb. (304 Nm) @ 1600 RPM 4-cylinder, turbocharged diesel High temperature and oil pressure automatic shutdown	Hardox Steel Fan Sealed-for-life bearings Fluid coupler Spring-loaded belt tensioner Keyed and tapered fan shaft	Heavy-duty, waterproof electrical connectors and color-coded wires with functional identification Wire harnesses include protective braiding	250 gal (946 L) polyethylene water tank Heavy duty nozzles 1 water pump with run dry capability High and low selectable pump speed In-cab low water visual and audible alarm	High performance regenerative air Sweeping path: 12 ft. (365.8 cm) Side brooms diameter: 42 in. (106.7 cm)	Length: 90 in. (2,286 mm) Area: Approx. 2,700 in. ² (17,420 cm ²) Hose Pressure: 14 in. (355 mm) Hose Suction: 13 in. (330 mm)

Sold in skids for local mounting on a large selection of chassis brands

RegenX[®]

POWERFUL VERSATILE SIMPLY BETTER

The RegenX regenerative air street sweeper is brought to you by Elgin, the company that introduced the first motorized street sweeper more than a century ago. Today, Elgin is part of Federal Signal, an international company with fifteen manufacturing facilities. Its broad range of quality equipment is sold all around the world.

The RegenX is a product of the vast resources of Elgin and Federal Signal. Innovative in design, rugged in construction, RegenX offers you advanced technology that delivers:

- Easy controls for operators at all levels
- Simplified maintenance to maximize uptime
- Greater efficiency in even the most demanding applications
- An industry leading warranty
- Strong, local service and support



Elginsweeper.com

Elgin Sweeper • 1300 W. Bartlett Road • Elgin, IL 60120 USA
Phone 847-741-5370

Specifications subject to change without notice. Some products shown with optional equipment. RegenX[®] is a registered trademarks of Elgin Sweeper.

Products may be covered by one or more United States Patents and/or pending patent applications.

Elgin Sweeper is a subsidiary of Federal Signal Corp. | Federal Signal Corp. is listed in the NYSE by the symbol FSS.

Effective Date 04/24

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SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Woodbury

Name: Benjamin Guell Title: Environmental Resources Specialist

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

Phone: (651) 414-3497 Email: benjamin.guell@woodburymn.gov

PROJECT LOCATION

Description: Chloride Reduction Plan: City-wide

Address: 2301 Tower Drive

City: Woodbury State: MN Zip: 55125

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Various

PROJECT BUDGET

Total Project Cost: \$ 50,000

CCIP Funding Requested: \$ 25,000

Other Funding Secured: \$ 25,000

Other Funding Sources: City Streets Professional Services

PROJECT CONCEPT PLAN *[check box when complete]*

- ☐ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The primary goal of the chloride reduction project is to minimize the environmental impacts of chloride use on paved surfaces by city, county, and private operators while maintaining public safety. The plan seeks to reduce chloride loading to local surface waters and groundwater, protect drinking water resources, infrastructure and aquatic life. The plan will focus on reviewing and enhancing existing municipal winter maintenance practices. Additional actions may include evaluating parking lot size and design requirements, evaluating designation as a low-salt city, support training of private applicators, and exploring limited liability protections to encourage reduced salt use. Expected outcomes include reduced chloride concentrations, improved water quality, and increased low-salt application practices in public and private sectors.

- B. Describe the water resource problems addressed by the project:

The project addresses chloride in local surface waters and groundwater resulting from winter maintenance and deicing practices on roads, parking lots, and other paved areas. Excess chloride can degrade water quality, harm aquatic life, contaminate drinking water supplies, and increase corrosion of infrastructure.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

The project is anticipated to result in reductions in chloride loading to local surface waters and groundwater through enhanced low-salt practices. Lower chloride levels support higher dissolved oxygen (DO) concentrations and as a result help limit internal phosphorus loading of surface waters. Collectively, these improvements can reduce algal blooms, enhance habitat quality for fish and macroinvertebrates, and protect drinking water sources.

- D. Explain how long-term operation and maintenance of the project will be accomplished:

Long-term operation and maintenance of the project will be accomplished by integrating chloride reduction practices into existing municipal policies, procedures, and winter maintenance programs. The city will continue to review and refine salt application rates, equipment calibration, staff training, and weather-based decision making as part of routine operations.

The city will also support long-term success by maintaining partnerships with county agencies and private operators through continued outreach, training opportunities, and promotion of low-salt best practices.

- E. How does the proposed work increase the resiliency of affected resources and/or systems?

The project increases resiliency by reducing chronic chloride inputs, which helps protect water quality and reduces stress on aquatic ecosystems and drinking water supplies over time. It also promotes consistent winter maintenance practices across public and private operators, making the community better able to adapt to changing conditions.

- F. Describe the anticipated project implementation schedule:

If awarded grant funds, the City plans to contract with a consultant by June 2026 and complete the plan by the end of 2026. Implementation will begin thereafter.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Kristin Seaman

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Signature

03/06/26

Date



SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Woodbury

Name: Benjamin Guell Title: Environmental Resources Specialist

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

Phone: (651) 414-3497 Email: benjamin.guell@woodburymn.gov

PROJECT LOCATION

Description: City-wide; Geospatial Review of Arbor, Energy, and Turf (GREAT) Study

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Various

PROJECT BUDGET

Total Project Cost: \$ 40,000

CCIP Funding Requested: \$ 20,000

Other Funding Secured: \$ 20,000

Other Funding Sources: City Engineering Professional Services

PROJECT CONCEPT PLAN *[check box when complete]*

- ☐ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The project is an action identified in the City's Environmental Stewardship Plan. The purpose is to evaluate areas for solar installations, tree canopy expansion, and turf conversion to ensure these strategies complement each other and avoid unintended conflicts. This assessment will serve as a critical foundation for guiding future actions and decision-making, including identifying areas suitable for multiple beneficial uses and prioritizing the most cost-effective options. Expected outcomes include improved renewable energy use, enhanced ecological benefits, reduced water consumption, minimized land use conflicts, and improved stormwater runoff and infiltration.

- B. Describe the water resource problems addressed by the project:

The project addresses water resource challenges from irrigation demand and stormwater runoff volume and rate associated with traditional turf. Converting turf to drought-tolerant or native vegetation, along with expanding tree canopy, reduces irrigation needs, improves soil infiltration, and captures stormwater, enhancing ecological benefits. Solar installations also lower water demand by offsetting the need for water-intensive electricity generation compared to traditional generation methods. Overall, the project promotes water conservation, improves water quality, and strengthens long-term watershed resilience.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

The project is expected to improve water resource management by reducing potable water use for irrigation and decreasing stormwater runoff. These practices are anticipated to lower the transport of common pollutants into local waterways, including nitrogen, phosphorus, sediment, and bacteria (i.e., *E. coli*), while supporting overall watershed health. By improving water retention and quality, the project contributes to long-term sustainability and resilience of local water resources.

- D. Explain how long-term operation and maintenance of the project will be accomplished:

While this project only includes the study, one key deliverable is a prioritized site list to guide future environmental stewardship planning. Long-term operation and maintenance will focus on implementing the recommended sites and projects, including ongoing maintenance of projects that result from the study.

- E. How does the proposed work increase the resiliency of affected resources and/or systems?

The proposed study enhances watershed resilience by evaluating land use and environmental conditions to identify where solar, tree canopy, and turf conversion strategies can be most effective. By clarifying opportunities and potential conflicts, it informs future actions that improve water retention, reduce stormwater runoff, enhance soil and vegetation health, and support sustainable energy use. This planning-focused approach strengthens flood management and water quality while helping the watershed adapt to changing climate condition

- F. Describe the anticipated project implementation schedule:

If awarded grant funds, the City plans to contract with a consultant by May 2026 and complete the plan by the end of 2026.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Kristin Seaman

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Signature

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SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Woodbury

Name: Kristin Seaman Title: Sr Environmental Resources Coordinator

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

Phone: (651) 414-3494 Email: kristin.seaman@woodburymn.gov

PROJECT LOCATION

Description: Stormwater BMP Maintenance

Address: Various

City: Woodbury State: MN Zip: 55125

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Various

PROJECT BUDGET

Total Project Cost: \$ 720,000

CCIP Funding Requested: \$ 100,000

Other Funding Secured: \$ 620,000

Other Funding Sources: Stormwater Utility Fund

PROJECT CONCEPT PLAN *[check box when complete]*

- ☐ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

The City has adopted a Stormwater Best Management Practice Maintenance Plan. The maintenance plan incorporates a holistic approach to maintenance projects, beyond pond dredging. This includes channels, infiltration basins, filtration basins and permeable pavements.

- B. Describe the water resource problems addressed by the project:

The City owns and maintains nearly 1,700 water quality BMP's. These are designed and installed to protect water resources around the City and downstream resources beyond the City's borders.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

The goal of the project is to restore water quality volume of aging infrastructure. City staff is consistently assessing and reviewing maintenance needs, while planning out future years' based on priorities.

D. Explain how long-term operation and maintenance of the project will be accomplished:
This is an ongoing, annual effort.

E. How does the proposed work increase the resiliency of affected resources and/or systems?
Restoring water quality capacity increases resilience across the City by maintaining their ability to treat stormwater runoff.

F. Describe the anticipated project implementation schedule:
While major pond dredging and delta removal is best completed in winter months, maintenance activities on permeable pavement and infiltration/filtration basins occur during the growing season. The project schedule will depend on the determined priorities for 2026-2027, which are currently being evaluated.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Kristin Seaman

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SOUTH WASHINGTON WATERSHED DISTRICT

Coordinated Capital Improvements Program (CCIP) 2026 Application Form

APPLICANT INFORMATION

LGU: City of Woodbury

Name: Kristin Seaman Title: Sr Environmental Resources Coordinator

Address: 8301 Valley Creek Road

City: Woodbury State: MN Zip: 55125

Phone: (651) 414-3494 Email: kristin.seaman@woodburymn.gov

PROJECT LOCATION

Description: Various Locations

Address: _____

City: Woodbury State: MN Zip: 55125

SWWD Watershed Management Unit: ☐ East Mississippi ☒ South Washington ☐ Lower St. Croix

Primary Waterbody Affected: Various

PROJECT BUDGET

Total Project Cost: \$ 30,000

CCIP Funding Requested: \$ 15,000

Other Funding Secured: \$ 15,000

Other Funding Sources: City General Fund - Parks Operating

PROJECT CONCEPT PLAN *[check box when complete]*

- ☐ Attach drawings, maps, figures, or other supporting material to graphically illustrate the location and/or conceptual design of the project.

PROJECT DESCRIPTION *[attach additional sheets if necessary]*

- A. Briefly summarize the primary goals and outcomes of the project, including proposed best management practices (BMPs):

It's a goal of the City's Environmental Stewardship Plan to Increase diverse native plant community cover and pollinator and wildlife habitat by replacing an average of 5 acres of turf with native vegetation annually on private and publicly-owned land by 2035.

- B. Describe the water resource problems addressed by the project:

Turf grass grows shallow roots, which leads to increased runoff to surface waters. By converting turf grass to native and prairie plantings, roots are able to reach deeper into the ground resulting in higher infiltration.

- C. Provide a quantitative estimate and description of the anticipated pollutant load reductions or other water resource benefits associated with the project:

Turf conversion projects will improve the quality of stormwater leaving converted sites. Replacing turf with diverse native vegetation will enhance the land's ability to slow, filter, and retain runoff, reducing the transport of sediment, phosphorus, nitrogen, and other pollutants. Decreased use of fertilizers, herbicides, and other turf management inputs will further reduce the potential for excess nutrients to enter surface waters, lowering overall pollutant loading, helping to limit algae growth and turbidity, and supporting the City's and Watershed's long-term water quality goals.

- D. Explain how long-term operation and maintenance of the project will be accomplished:
Removing turf results in decreased need for mowing. Established native areas will become part of the city's long-term vegetation maintenance program and handled through regular mowing and selective application of herbicide.
- E. How does the proposed work increase the resiliency of affected resources and/or systems?
Decreasing mowing of turf decreases the carbon emissions from gas-powered equipment. By removing areas of turf mono-culture and replacing with diverse vegetation, we can increase resilience and create habitat for pollinators and birds.
- F. Describe the anticipated project implementation schedule:
Following the GREAT study, this will support implementation of converting public areas identified within the study. This work will include turf removal, installing native seed and plugs and establishment maintenance activities.

APPLICANT SIGNATURE

I certify to the best of my knowledge that the information included in this application is true, complete, and accurate.

Kristin Seaman

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