



LOWER MINNESOTA RIVER WATERSHED DISTRICT

Executive Summary for Action

Lower Minnesota River Watershed District Board of Managers Meeting
Wednesday, September 15, 2021

Agenda Item

Item 5. C. – Appletree Condominium Cost Share Application

Prepared By

Linda Loomis, Administrator

Summary

The LMRWD received an application under its Cost Share Program for a project at the Appletree Condominiums. The project is located at 8121 34th Avenue South, Bloomington, MN, and a large portion of the property is within the Steep Slope Overlay Zone. The purpose of the project is to prevent erosion of the steep slope behind the condominium building. The application is attached.

Young Environmental Consulting Group was asked to review the Cost Share Application and their review is attached to this Executive Summary.

Staff is recommending approval of the Cost Share Application and that the Association apply for a permit from the LMRWD.

Attachments

Appletree Condominium Cost Share Application

Technical Memorandum dated September 13, 2021 – Appletree Condominium Association Cost-Share Review

Recommended Action

Motion to approve Cost Application for Appletree Condominium Association



Application type (check one) Homeowner Non-profit - 501(c)(3) School
 Business or corporation Public agency or local government unit

Project type (check all that apply) Raingarden Vegetated Swale Infiltration Basin
 Wetland restoration Lake/creek/wetland buffer Conservation practice
 Shoreline/bank stabilization Pervious hard surface
 Other Steep Slope Overlay District

Applicant Information

Name of Organization or Individual Applying for Grant (to be named as Grantee):

Appletree Condominium Association

Address (street, city and ZIP code): 8121 34th Ave. S., Bloomington MN 55425

Phone: _____ Email address: _____

Primary Contact (if different from above)

Name of Organization or Individual Applying for Grant (to be named as Grantee): Tom Fahey, primary contact.

Address (street, city and ZIP code): 8121 34th Ave. S., Unit 201, Bloomington MN 55425

Phone: Mobile 651-503-8903

Email address: thfahey@comcast.net

Project location

Address (street, city and ZIP code): 8121 34th Ave. S., Bloomington MN 55425

Property Identification Number (PID): There are 45 separate condominium units, each owned separately.

Property Owners: See Exhibit #5

Project Summary

Title: Erosion Control & Maintenance Project

Total Project Cost \$21,673

Grant amount requested \$7500 or more if possible.

Estimated start date: 01Nov2021

Estimated completion date: 01Jun2022

Is project tributary to a water body? No, water remains on site Yes, indirectly Yes, directly adjacent

Project description: [See Attachment file, page 1](#)

Is this work required as part of a permit? Yes **No**

(If yes; describe how the project provides water quality treatment beyond permit requirement on a separate page.)

Project Details

Checklist To be considered complete the following must be included with the application.

- | | |
|--|---|
| <input checked="" type="checkbox"/> location map- Exhibit #1 | <input checked="" type="checkbox"/> project timeline- Exhibit #4 |
| <input checked="" type="checkbox"/> site plan- Exhibit #2 Current Conditions | <input checked="" type="checkbox"/> proof of property ownership- Exhibit #5 |
| <input checked="" type="checkbox"/> & design schematic- Exhibit #3 | <input checked="" type="checkbox"/> plant list & planting plan- Exhibit #4 |
| <input checked="" type="checkbox"/> contractor bid- Exhibit #4 | |

Description

Describe the current site conditions, as well as site history, and past management

[See Attachment file, pages 1-2](#)

What are the project objectives and expected outcomes? Give any additional project details.

[See Attachment file, page 3](#)

List other key participants and their roles (provide contact information for each partner and his/her expected contribution to the project)

[See Attachment file, page 4](#)

Which cost share goals does the project support? (check all that apply)

- | | |
|---|---|
| <input checked="" type="checkbox"/> improve watershed resources | <input checked="" type="checkbox"/> Foster water resource stewardship |
| <input checked="" type="checkbox"/> increase awareness of the vulnerability of watershed resources | |
| <input checked="" type="checkbox"/> increase familiarity with and acceptance of solutions to improve waters | |

How does the project support the goals you checked?

[See Attachment file, page 5](#)

Project Details (continued)

Benefits Estimate the project benefits in terms of restoration and/or **annual** pollution reduction. If you are working with a designer or contractor, they can provide these numbers. If you need help contact the district Administrator.

Benefit	Amount
Water captures [^]	see footnote --> gal/year
Water infiltrated	gal/year
Phosphorus removed	lbs/year
Sediment removed	lbs/year
Land restored	approx 8600* sq. ft. & see footnote below

* Gravel replaced with Mesic Southwest seed mix: (310' X 13') approx 4000 sq. ft.
Invasive species removed: (310' X 10') approx 3100 sq. ft.
Bare dirt seeded with Fescue turf: (30' X 50') approx 1500 sq. ft.

[^] estimate 50% water capture of the rainfall from (300' X 12') approx 3600 sq. ft. of horizontal surface area on the sloping south side of the building & another 5500 sq. ft. that falls on gravel replaced and bare dirt replaced area will be captured. During spring snow melts the sq. ft. capture will be much greater because a significant amount of snow blows off the (64' X 300') approx 19,200 sq. ft. roof & collects on the sloping south side of the building & the ground below.

How will you share the project results with your community?

See Attachment file, page 6

Are there other projects that could be initiated as a result of this one?

See Attachment file, page 6

Evaluation

How will the project be monitored and evaluated? See Attachment file, page 7

Maintenance agreement

I acknowledge that receipt of a grant is contingent upon agreeing to maintain the project for the number of years outlined in the cost share guidelines. Yes

Authorization

Name of landowner or responsible party Maureen Olstad, President & Tom Fahey, Secretary Appletree Condo Assoc.

Signatures Maureen Olstad & Tom Fahey Date 20 August 2021

Type or handwrite your answers on this form. Attached additional pages as needed

(For questions, contact Linda Loomis at Naiad Consulting@gmail.com or call 763-545-4659.)

Mail the completed application to:

or Email to:

Lower Minnesota River Watershed District
c/o Linda Loomis, Administrator
112 E. Fifth St., Suite 102
Chaska, MN 55318

Linda Loomis, Administrator
naiadconsulting@gmail.com

Attachments - LMRWD Grant application
(page 1 of 7)

PROJECT DESCRIPTION:

The Appletree Condominium Association property is located entirely within the boundaries of the Lower MN River Watershed District (LMRWD). In addition, the property on the south side of the building is also within the Steep Slopes Overlay District (See Exhibit #1 "Location Maps").

An existing gravel surface 10-14 feet wide and approximately 300 feet long on the south side of the building will be removed, new topsoil will be brought in as needed. The south side will be planted with a Mesic Prairie Southwest seed mix and the east side with shade tolerant fescue seed. In addition, the first approximate 10-15 feet of the embankment on the south side of the building will be cleared of buckthorn, wild grape, a few dead trees, and some, but not all other growth, to provide additional sunlight for the prairie seed. The trees on the east side will be trimmed to provide more sunlight for the turf.

PROJECT DETAILS

- **Describe the current site conditions, as well as site history, and past management.**

Current site conditions:

An aerial photograph with annotations, as well as a legend are provided to help explain current conditions at the 8121 34th Ave S, Bloomington, MN 55425 project site (See "Current Conditions Diagram" and "Legend"). Existing gravel area, drain tile, top of the embankment, double silt fence, approximate property lines, and trees to be trimmed are highlighted on the photo and in the legend. Gravel, drain tile, and silt fence were installed in spring 2020 as part of a separate building repair project. All proposed erosion control work will be done on the south and east sides of the building. Future work, on the west side of the building, as a separate project, is anticipated after a 146-unit apartment building is completed, located at 8131 34th Ave S., which is immediately to the west of the project site.

Site History:

It appears, based on original 1984 owners' anecdotal information and drill core results from 1997, some fill had been placed at the site, prior to 1984 construction of the building.

In November 1997 a Geotechnical Evaluation Report for Lindberg Pierce Architects, Inc. in response to a proposed Driveway Reconstruction and Groundwater Monitoring Program, was performed by Braun Intertec at the site. Excerpts from the 12 December 1997 summary letter state:

"Four soil borings were completed in the project area. Fill was encountered in two of the borings to depths of 8 1/2 and 12 feet. The fill consisted primarily of silty sand with lesser amounts of clayey sand. ... Groundwater was observed in one of the borings 24 feet below the ground surface and about 35 feet below the sub-basement of the building. Groundwater was not observed in the other borings."

The 12-page Geotechnical Evaluation Report goes into more detail regarding the 2nd goal for performing the soil borings:

"... (2) determine groundwater elevations and provide recommendations for minimizing the potential for groundwater seepage into the building."

**Attachments - LMRWD Grant application
(page 2 of 7)**

Site History: (continued)

"B. Results

...

B.5. Site Hydrogeology

... Seasonal fluctuations in groundwater levels are generally less than 5 feet over a year. As the water table was encountered at 35 feet below the sub-basement floor of the condominiums, the seepage encountered in the building does not appear to be from the groundwater table. Because continued monitoring of the water table would not provide any additional useful information regarding the building seepage, the piezometers were not installed."

"C. Analyses and Recommendations

...

C.4. Seepage Review

Based on the depth of the water table at the site, the seepage problems in the building do not appear to be related to the groundwater table. The basement seepage is probably primarily a result of infiltration of surface drainage from the higher ground and paved surfaces north and west of the building. After the water infiltrates the surface, it probably percolates down alongside the building foundation walls until it encounters a relatively impermeable layer, such as clay or compacted silty sand. The water collects on top of the relatively impermeable layer and then seeps into the building. If infiltration can be reduced by not allowing water to pond adjacent to the building, seepage can likely be reduced.

We understand the condominium association has obtained a proposal to address surface runoff by such measures as resloping the land around the condominium and installing drains. We recommend you proceed with this course of action. Proper installation of rain gutters and downspouts will also reduce potential adverse runoff."

Past Management attempts:

The existing 12-16 feet of relatively flat surface immediately south of the building has undergone several water and erosion control management efforts over the last 24 years since 1997.

Retaining walls have been constructed above existing grade next to the building and soil has been hauled in to backfill around the retaining walls. Retaining walls were removed approximately 10 years ago and seeding with prairie plants was attempted soon after. Seeding was relatively unsuccessful due to no maintenance performed during the initial 1-2 years after seeding.

More recently, in spring 2020, drain tile was installed next to the south side of the building, in coordination with an engineer; general contractor; and City of Bloomington. The entire approx. 300 feet along the building had river rock laid over the drain tile at the time of installation, extending 2-3 feet from the building. The drain continues from the east side of the building another 130 feet, buried without river rock at the surface (see Current Conditions Diagram & Legend). This was the latest effort to control erosion on the south side of the building at a cost of \$25,000. The follow-on planned Erosion Control and Maintenance Project is the next step in this effort, after a southside building repair project is completed Fall 2021.

**Attachments - LMRWD Grant application
(page 3 of 7)**

PROJECT DETAILS (continued)

- **What are the project objectives and expected outcomes? Give any additional project details.**

The primary objective of the Erosion Control and Maintenance Project is to maintain the stability of the steep slope and to reduce bluff erosion by removing the semi-impervious gravel surface and seeding with Mesic Prairie Southwest seed mix. The seeding will extend the 10-14 foot width of the removed gravel surface area as well as another 1-5 feet down the embankment to an existing double silt fence that was installed at the beginning of the building repair project in Spring 2020. After seeding is completed, a double-sided, natural erosion blanket will be installed over this area. It will then be mowed and weeded three times during the first 12 months of growth per Native Landscape Maintenance procedures and once per year thereafter. The 10 additional feet beyond the silt fences, down the embankment will have buckthorn, wild grape, a few dead trees, and some, but not all other growth removed and will be seeded with a cover crop to further protect the hillside from erosion during the first 12 months after project completion. This 10-foot area will also be periodically cut to manage woody and invasive species.

Associated objectives are to protect the water quality of nearby Long Meadow Lake and the Minnesota River by minimizing erosion, nutrients and other contaminant loadings from the steep slope in and near the project area as well as reducing sedimentation down gradient. In addition, the replacement of gravel surface with prairie plants will allow more ground water recharge. Lastly, the native prairie plantings and removal of a relatively small area of invasive species could be the first, small step in a larger effort to encourage Native plantings that enhance natural vegetation on the steep slope and enhance the biological and ecological functions of noninvasive vegetation on steep slopes (see the section describing: “other projects that could be initiated as a result of this one”).

Hantho Outdoor Service will be the contractor responsible for implementing the project (for more details see the spreadsheet containing Contractor (Hantho) Quote/Bid & Planting Plan with Cost Share Worksheet & Project Timeline).

**Attachments - LMRWD Grant application
(page 4 of 7)**

PROJECT DETAILS (continued)

- **List other key participants and their roles (provide contact information for each partner and his/her expected contribution to the project)**

Andy Marchant, Hantho Outdoor Services

Contact Info: Cell 612-990-9357 | Office 763-477-5011, Email: andy@hanthofarms.com
2230 Edgewood Avenue S, Suite 4, St. Louis Park, MN 55426

Role: Project Manager

Appletree Condominium Association, Landscape Committee

Contact Info (Committee Members):

Pam Bott, Email: pamela.bott@comcast.net

Phil Burke, Email: a2zburke@gmail.com

Mary Cole, Email: mary@pscop.com

Tom Fahey, Chair, Cell: 651-503-8903, Email: thfahey@comcast.net

Brad Pedersen, Email: bbappletree@comcast.net

Committee's Mission: Recommend and take cost effective actions to ensure well maintained, safe, useful, inviting and aesthetically pleasing outdoor spaces that preserve or enhance the property values of our homeowners:

- 1) Continue to minimize need for lawn maintenance as deemed appropriate
- 2) Minimize and/or eliminate use of chemicals for weed control, etc.
- 3) Use native plants and/or organic materials where deemed appropriate for ground cover and erosion control
- 4) Minimize and/or eliminate need for watering when & where deemed appropriate.
- 5) Minimize noise from mowing, etc.

Committee's Proposed 2022 Goals:

- 1) Community outreach supporting objectives of the LWRWD Grant program.
- 2) Oversee implementation & help implement long term maintenance of the Erosion Control Project.

Appletree Condominium Association, Board

Contact Info: Maureen Olstad, Board President. Cell: 952-210-3435, Email: maureenolstad@gmail.com

Role: Oversight of the Landscape Committee

City of Bloomington

Contact Info: Bryan Gruidl, Office 952-563-4557, Email: bgruidl@bloomingtonmn.gov

Role: Sr. Water Resources Manager, provided input during the planning stage for our Erosion Control Project.

Contact Info: Barb Wolff, Office 952-563-4706, Email: bwolff@bloomingtonmn.gov

Role: Special Projects & Initiatives Manager & Appletree Condominium Association member helping with grant application & Erosion Control Project & Maintenance Plan implementation.

**Attachments - LMRWD Grant application
(page 5 of 7)**

PROJECT DETAILS (continued)

• **Which cost share goals does the project support? (check all that apply)**

- improve watershed resources
- Foster water resource stewardship
- increase awareness of the vulnerability of watershed resources
- increase familiarity with and acceptance of solutions to improve waters

• **How does the project support the goals you checked?**

- Improve watershed resources

The section that outlines the objectives and expected outcomes for this Erosion Control & Maintenance project describes how we intend to help protect the water quality and allow more ground water infiltration, as well as help support noninvasive vegetation on steep slopes.

This relatively small project has the potential to be the catalyst for several other larger projects in the same area of the Steep Slopes Overlay District within the LMRWD. The outreach we plan to accomplish is further described in the section that identifies other projects that could be initiated as a result of this one and is intended to accomplish the below three goals:

- Foster water resource stewardship
- increase awareness of the vulnerability of watershed resources
- increase familiarity with and acceptance of solutions to improve waters

**Attachments - LMRWD Grant application
(page 6 of 7)**

PROJECT DETAILS (continued)

BENEFITS

- **How will you share the project results with your community?**

In order to apprise the community and continue to build on our Erosion Control and Maintenance Plan, the association plans to reach out to the following organizations to inform them of our restoration and preventative work:

- Minnesota Valley National Wildlife Refuge
- U.S. Fish and Wildlife Service
- The City of Bloomington
- Roers Companies and future developers

- **Are there other projects that could be initiated as a result of this one?**

As a result of the Erosion Control and Maintenance Plan work, the association plans to explore the following potential projects in partnership with the organizations listed above.

- **Minnesota Valley National Wildlife Refuge** – Potential benefits and any adverse effects of exploring a trail access on the south side of the project site through the Minnesota Valley National Wildlife Refuge lands, connecting residents and visitors to the Bloomington Education and Visitor Center and the Bass Ponds Trailhead.
- **U.S. Fish and Wildlife Service** – *Partners for Fish and Wildlife Program* to restore fish and wildlife habitat. The Program primarily restores wetlands, grasslands, forests and stream corridors, of which combinations of these types of habitats are restored on landowner property. The Program focuses on projects that will provide the greatest benefits for complementing National Wildlife Refuge System lands, Federal trust species (migratory birds, threatened and endangered species, and migratory fish), and reducing habitat fragmentation. The Program can assist the association with habitat conservation goals by working one-on-one to improve habitat in order to attract a certain species or restoring the land to its historical ecological state. Restoration may improve populations of many fish and wildlife species and may even result in the recovery of endangered species.

The U.S. Fish and Wildlife Service addresses some of the goals that the association shares: conserve habitat; broaden and strengthen partnerships; improve information sharing and communication; and increase accountability to all landowners.

- **The City of Bloomington** – The association will keep the Water Resources Division apprised of efforts and partnerships in case there are additional funding or educational opportunities that arise in the future.
- **Roers Companies and future developers** – The association has reached out to the developer of the 146-unit senior living apartments proposed on the river bluff immediately to the west of our condominium building. The association has contacted and requested partnering with Roers Companies on future efforts to restore native plant and wildlife habitat. The association plans to continue this outreach and communication with the other two proposed developments on the river bluff northeast of our condominium building.

The association is open and willing to finding additional opportunities for partnerships, public education, and engaging the public in stewardship of the Wildlife Refuge's natural habitat.

**Attachments - LMRWD Grant application
(page 7 of 7)**

EVALUATION

- **How will the project be monitored and evaluated?**

Upon completion of the project, the association will complete and submit a project report to LMRWD within 30 days. Ongoing maintenance of the project site will be undertaken by the association's Landscape Committee. During the first year following the planting of the Mesic Prairie Southwest seed mix, the association will closely monitor the site, performing three mowings and weeding as recommended by the Native Landscape Maintenance procedures. Each year thereafter, mowings and weeding will be performed annually.

The City of Bloomington does not monitor performance of projects that are implemented by private property owners, although the association plans to inform the Water Resources Division of the completed project. Bloomington's Water Resource Specialist Bryan Gruidl was consulted prior to commencing the current south façade project for consultation so the association will reach out to inform Mr. Gruidl of the finished projects in order to conclude our conversations.

Exhibit #1 2021 Cost Share Grant Application

Appletree Condominium Association, 8121 34th Ave South, Bloomington MN 55425

Location Maps – property is within LMRWD & Steep Slope Overlay District

Page 1 of 2

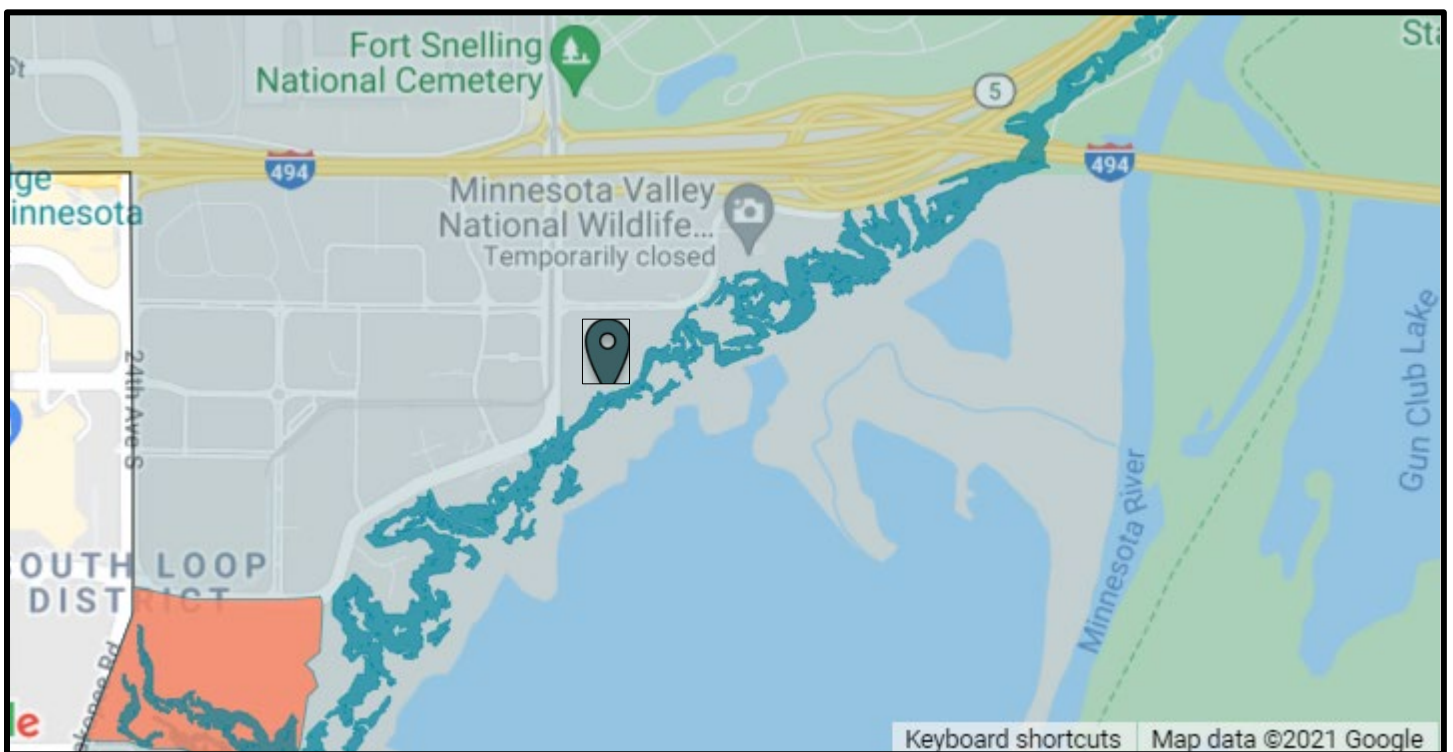
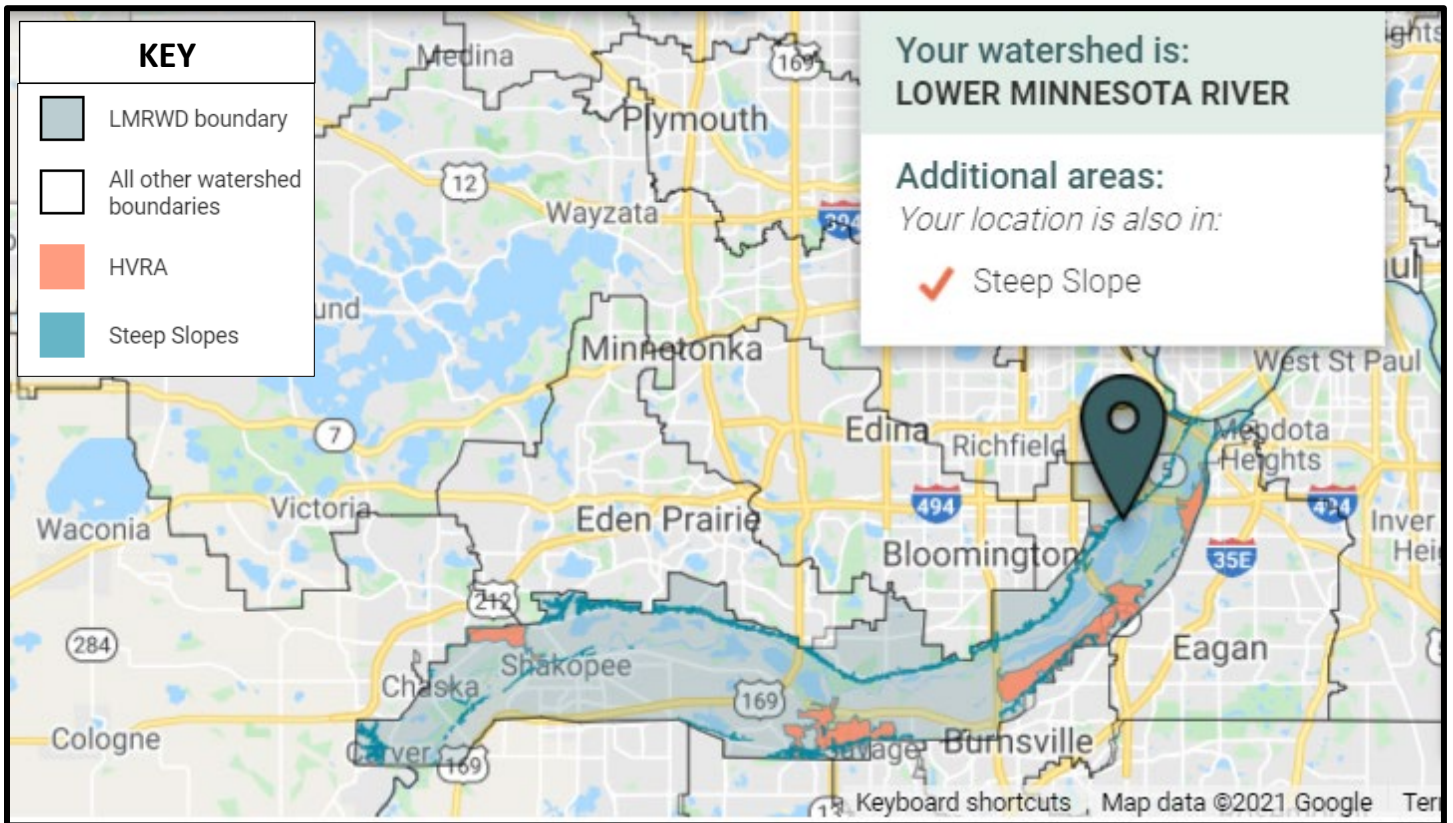


Exhibit #1 2021 Cost Share Grant Application

Appletree Condominium Association, 8121 34th Ave South, Bloomington MN 55425

Location Maps – property is within LMRWD & Step Slope Overlay District

Page 2 of 2

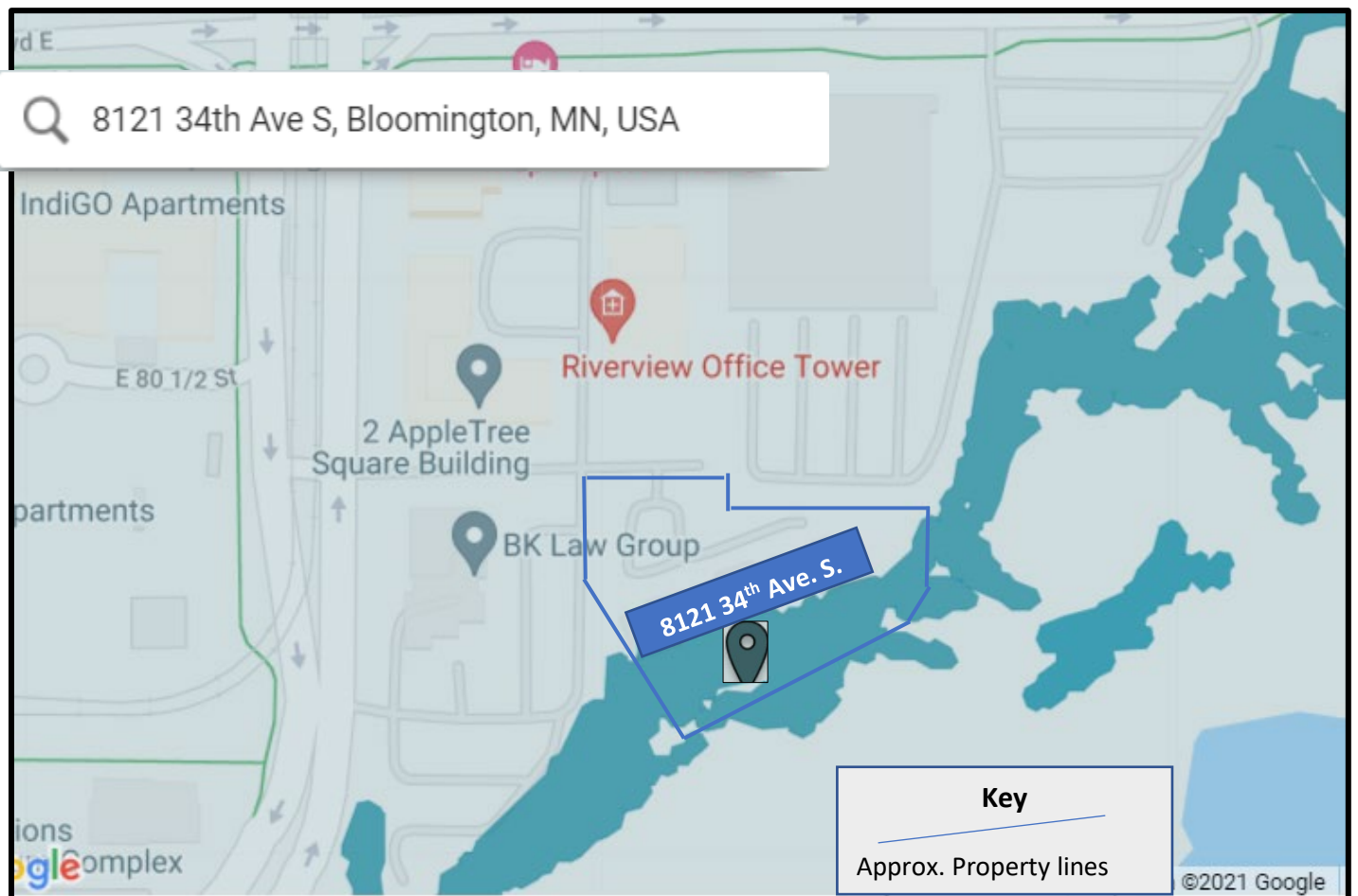
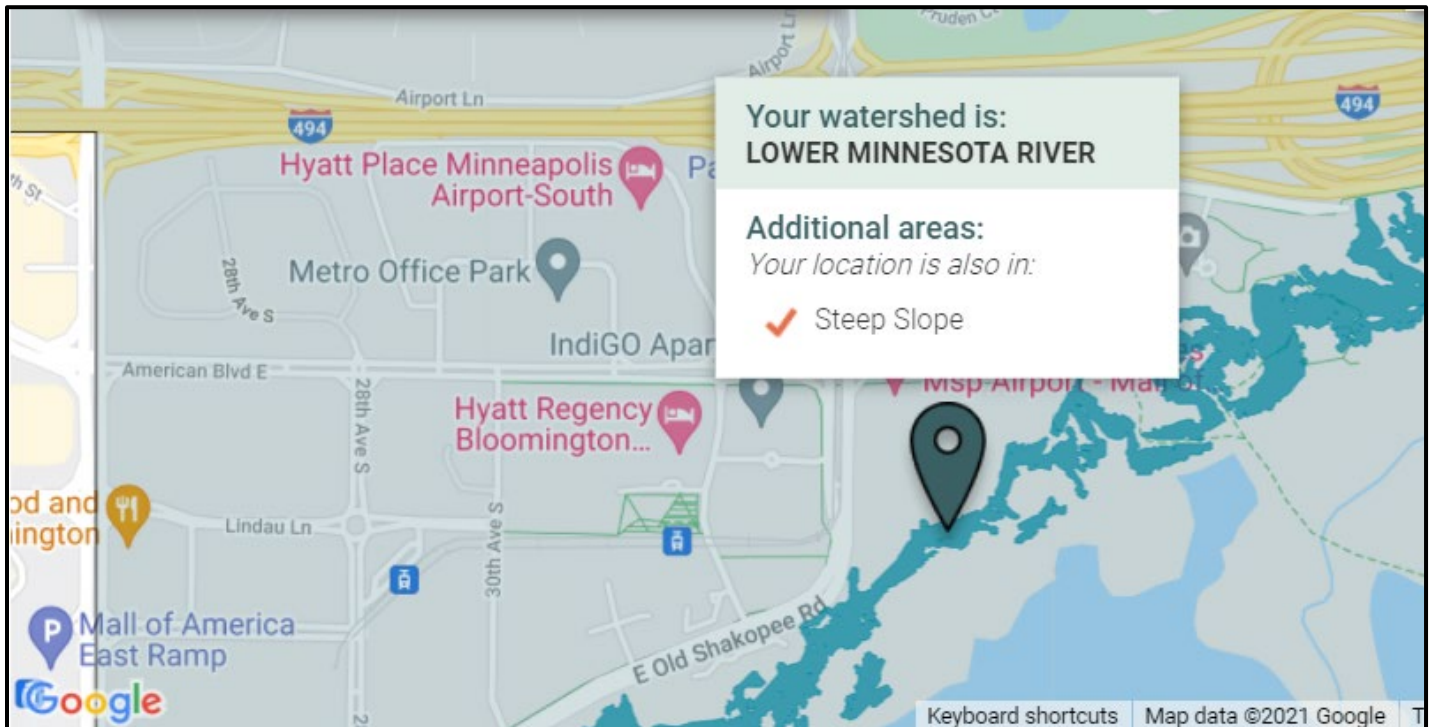


Exhibit #2 2021 Cost Share Grant Application

Appletree Condominium Association, 8121 34th Ave South, Bloomington MN 55425

Current Conditions - Diagram

Prior to Proposed Hantho Outdoor Services Erosion Control Project Work



Source of satellite image: [USA \(satellites.pro\)](https://satellites.pro), https://satellites.pro/USA_map#44.856527,-93.220880,19


Exhibit #2 2021 Cost Share Grant Application


Appletree Condominium Association, 8121 34th Ave South, Bloomington MN 55425


Current Conditions - Legend


Prior to Proposed Hantho Outdoor Services Erosion Control Project Work

Legend

 Draintile buried along entire southside of building with river rock at the surface. Extends 2 feet to 3 feet out from the south side of the building, approx 310 feet along length of the building. **Must not be removed.**

 Drain extends underground from east side of building approx 130' to the edge of bluff. **Must not be damaged.**

 13 inch diameter boxelder tree. (located 11 ft E of west edge of bldg & 12 ft from top of the embankment & 7 ft down from 2nd silt fence). To be trimmed or if determined in coordination with City Forester, removed.


 Approximate property lines. (Bldg is approx. 307 feet long. South property line is approx. 90-110 ft from SW corner of the bldg. & approx. 45-55 ft from SE corner of the bldg.)



Gravel area is in light tan color, it extends 12 ft to 16 ft from building to top of embankment (extending 10 ft to 14 ft from edge of river rock to top of embankment).

The top of the embankment is shown as a white line.

Double silt fence is shown in a double grey line & has been placed anywhere from 1 foot to 5 feet down the embankment from the crest. **(Both silt fences to remain until new Mesic Prairie Native seed is 80% established.)**

 Two Maple trees on East side of building. Require trimming.


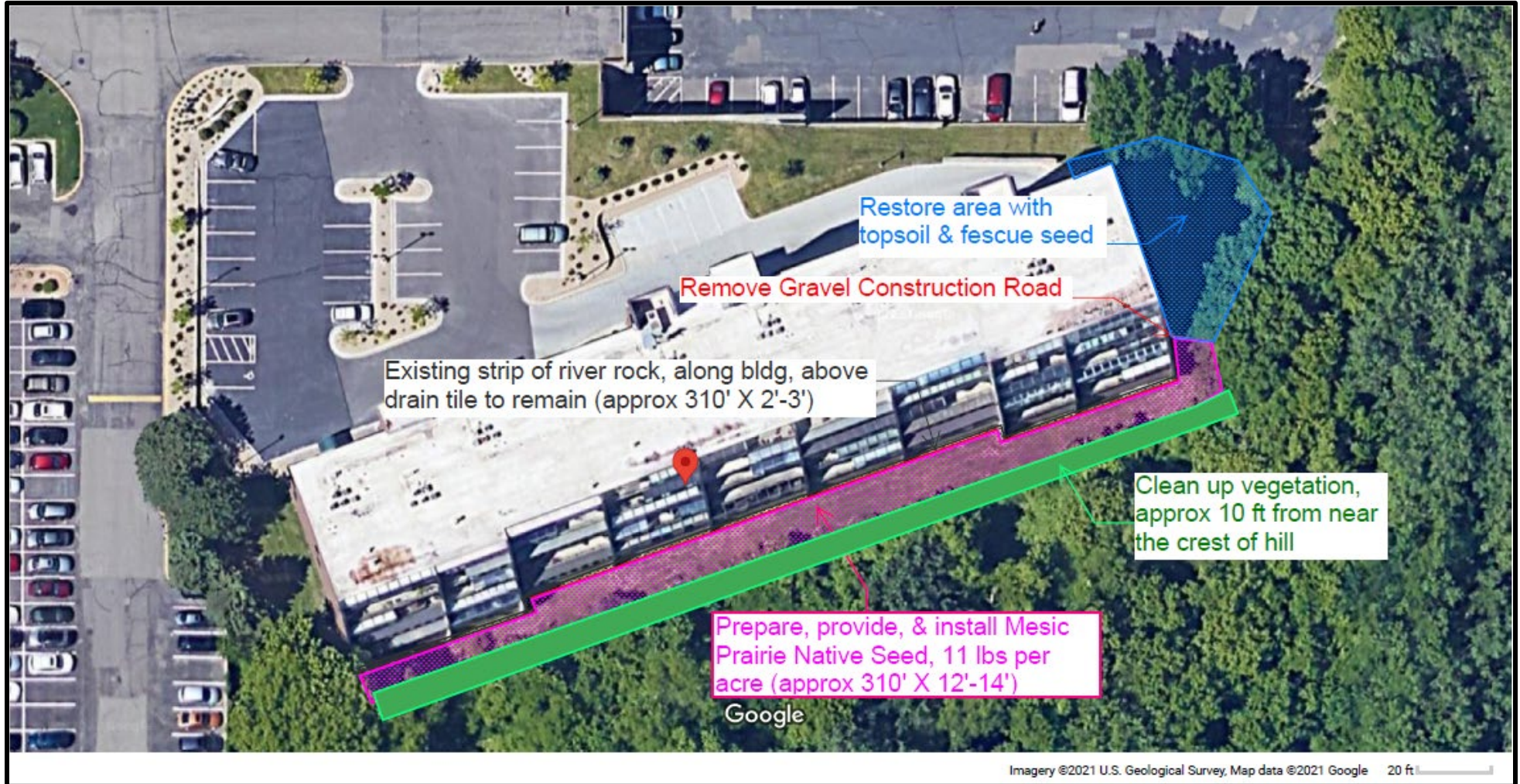
 One Green Ash on East side of building, to be determined if needing trimming or removal.

Exhibit #3 2021 Cost Share Grant Application

Appletree Condominium Association, 8121 34th Ave South, Bloomington MN 55425

Erosion Control & Maintenance Project – Design Schematic

Prepared by Andy Marchant, Hantho Outdoor Services & Appletree Condo Landscape Committee



See spreadsheet with “Contractor Hantho Quote/Bid & Planting Plan with Cost Share Worksheet & Project Timeline” for detailed specifications on the Project. For the list of types & percentages of seed content see the Mesic Prairie Southwest seed chart.

Exhibit #4 2021 Cost Share Grant Application
Appletree Condo Assoc. 8121 34th Ave. S., Bloominton MN 55425

Contractor (Hantho) Quote/Bid & Planting Plan with Cost Share Worksheet & Project Timeline

Tasks Details (including Planting Plan)	Quoted Cost \$	Requested Funds from LMRWD	Matching In-Kind Funds	Total	Approximate Timeline (Tasks timing for each Project Area)
<i>ENTIRE PROJECT AREA</i>					
Apply herbicide to existing vegetation (minimal, just on S periphery & old turf on E.) & remove 30ton of gravel from surface but not river rock over French drain.	\$ 4,253	\$ 1,000	\$ 3,253	\$ 4,253	Fall 2021 or Spring 2022
<i>SOUTHSIDE PROJECT AREA</i>					
Cut all brush & dispose (wild grape vine, small & dead trees, etc) in 1st approx 10ft from silt fence down hill. Trim a 13" dia. tree located on embankment 7' from silt fence (see Current Conditions Exh 1) or cut down if needed after City Forester approval.	\$ 6,832	\$ 3,000	\$ 3,832	\$ 6,832	Late Fall 2021 or Winter 2021-2022, or Spring 2022
Add top soil as necessary, till & rake sfc, plant Mesic Prairie native seed from edge of draintile rock to the silt fence & install double-sided natural net erosion blanket.	\$ 3,638	\$ 3,500	\$ 138	\$ 3,638	Late Fall 2021 or Spring 2022
Silt fence to remain until 80% established.					Hantho to remove 2022 or 2023.
Mow & pull weeds from native area 3 x's per Native Landscape Maint. procedures*	\$ 1,359	\$ -	\$ 1,359	\$ 1,359	Summer 2022; Fall 2022 & Spring 2023
<i>* To be charged approximately \$453 per time when cutting & weeding are performed.</i>					
<i>EASTSIDE PROJECT AREA</i>					
Trim 2 Maple trees & trim or cut down 1 Green Ash if needed after City Forester approval, as shown in Exhibit 1	\$ 1,853	\$ -	\$ 1,853	\$ 1,853	Late Fall 2021 or Winter 2021-2022, or Spring 2022
(fescue). Hydromulch fescue area.					Late Fall 2021 or Spring 2022
<i>IRRIGATION SYSTEM</i>					
Reinstall line, control wires & E side heads.	\$ 3,738	\$ -	\$ 3,738	\$ 3,738	Late Fall 2021 or Spring 2022

TOTAL \$ 21,673 \$ 7,500 \$ 14,173 \$ 21,673

Total Requested Funds from LMRWD	\$ 7,500	A
Total Match/In-Kind Funds by Appletree	\$ 14,173	B
Project Total	\$ 21,673	C

Exhibit #5 (page 1 of 2)

Appletree Condominium Association Owners			
Pins No	Owners Name	Location	Site Unit #
0602723240019	COLE, MARY	8121 34TH AVE S 101	101
0602723240020	ANDERSON, CHAD D	8121 34TH AVE S 102	102
0602723240021	ANDERSON, STEVEN	8121 34TH AVE S 103	103
0602723240022	GONNELLA, JOSEPH C JR	8121 34TH AVE S 104	104
0602723240023	BRINGS, AUDREY L	8121 34TH AVE S 105	105
0602723240024	PEDERSON, GREGG L	8121 34TH AVE S 106	106
0602723240147	HAUGE, ROGER	8121 34TH AVE S 106	107
0602723240026	ROOD, JAMES L	8121 34TH AVE S 108	108
0602723240027	WOLLACK, FORREST L	8121 34TH AVE S 109	109
0602723240028	BOISCLAIR-,FAHEY ANNE L	8121 34TH AVE S 201	201
0602723240029	ANDERSEN, KEITH	8121 34TH AVE S 202	202
0602723240030	ROCKWELL, ROSEMARY T TRUST	8121 34TH AVE S 203	203
0602723240031	MELLING, DUANE B TRUST	8121 34TH AVE S 204	204
0602723240032	OLSON, R. ERIC	8121 34TH AVE S 205	205
0602723240033	WARD, LLOYD C	8121 34TH AVE S 206	206
0602723240034	HARTMANN, STEVEN G	8121 34TH AVE S 207	207
0602723240035	DONDLINGER, ANN K	8121 34TH AVE S 208	208
0602723240036	BURKE, PHILIP ALAN	8121 34TH AVE S 209	209
0602723240037	BOTT, MICHAEL J	8121 34TH AVE S 301	301
0602723240038	WALTERS, KATHRYN A	8121 34TH AVE S 302	302
0602723240039	DELORIA, LAUREL B	8121 34TH AVE S 303	303
0602723240040	CARLSON, DANIEL C	8121 34TH AVE S 304	304
0602723240041	MADY, JOHN S	8121 34TH AVE S 305	305
0602723240042	HAUKOOS, RONALD	8121 34TH AVE S 306	306
0602723240043	WUEST, PAMELA	8121 34TH AVE S 307	307
0602723240044	PEDERSON, BRADLEY F	8121 34TH AVE S 308	308
0602723240045	JOHNSON, KAREN M	8121 34TH AVE S 309	309
0602723240046	HANKE, NANCY H	8121 34TH AVE S 401	401
0602723240047	HUMPHREY, JUDSON B	8121 34TH AVE S 402	402
0602723240048	BARENSCHEER, JAMES	8121 34TH AVE S 403	403
0602723240049	SIMPSON, JAMES R	8121 34TH AVE S 404	404
0602723240050	BEIDLER, JULIE	8121 34TH AVE S 405	405
0602723240051	DOTY, PAMELA	8121 34TH AVE S 406	406
0602723240052	WHITNEY, ROBERT R TRUST	8121 34TH AVE S 407	407
0602723240053	FAHEY, THOMAS H. III	8121 34TH AVE S 408	408
0602723240054	DONDLINGER, PAUL J	8121 34TH AVE S 409	409
0602723240055	HALL, DOUGLAS E.	8121 34TH AVE S 501	501

Exhibit #5 (page 2 of 2)

0602723240056	FORS, LENNART C.	8121 34TH AVE S 502	502
0602723240057	KOPPEN, MARK D TRUST	8121 34TH AVE S 503	503
0602723240058	FJESTAD, STEVEN PETER	8121 34TH AVE S 504	504
0602723240059	GUELICH, JOYCE F	8121 34TH AVE S 505	505
0602723240060	WOLFF, BARBARA L	8121 34TH AVE S 506	506
0602723240061	OLSTAD, KENNETH L	8121 34TH AVE S 507	507
0602723240062	HALER, SCOTT N	8121 34TH AVE S 508	508
0602723240063	SKAAR, OMMUND D	8121 34TH AVE S 509	509

Technical Memorandum

To: Linda Loomis, Administrator
Lower Minnesota River Watershed District

From: Katy Thompson, PE, CFM
Della Schall Young, CPESC

Date: September 13, 2021

Re: Appletree Condominium Association Project Cost-Share Review

The Appletree Condominium Association (Association) is requesting a cost-share grant from the Lower Minnesota River Watershed District (LMRWD) for an erosion control and maintenance project (Project) in the amount of \$7,500. A summary of the Project and Young Environmental Consulting Group's (Young Environmental) recommendation is presented below.

Project Background

The proposed Project is located at 8121 34th Avenue in Bloomington; the condominium building is built on the top of the Minnesota River bluff, and runoff from the Project site enters Long Meadow Lake and ultimately the Minnesota River. The Project area is also located within the LMRWD Steep Slopes Overlay District (SSOD). The \$21,673 Project proposes to remove an existing gravel surface that surrounds the back of the condominium and plant the area with a mesic prairie seed mix on the south side and a shade-tolerant fescue seed on the east side (Figure 1).

The Association has been working to manage surface water runoff and erosion on the south side of the building since 1997. The goals of this project are to maintain the stability of the steep slope behind the building and protect the water quality downstream in Long Meadow Lake and the Minnesota River by reducing erosion and sediment inputs. The Project will improve vegetation and infiltration in an area of approximately 8,600 square feet and is assumed to reduce stormwater runoff by 50 percent. The Association also intends to develop an outreach plan for the project to

- identify similar projects that could be initiated within the SSOD and in partnership with the LMRWD,
- foster water resource stewardship,
- increase awareness of the vulnerability of watershed resources, and
- increase familiarity with and acceptance of solutions to improve water quality.

The Association proposes to reach out to the Minnesota Valley National Wildlife Refuge, the US Fish and Wildlife Service, the City of Bloomington, and Roers Companies to inform them of this Project and preventative work as well as other restoration opportunities the Association has identified.

Discussion

Design Evaluation

In review of the proposed Project, Young Environmental performed a simple analysis to evaluate the applicant's claims in the change in stormwater runoff and developed a HydroCAD model of the Project area to consider the runoff from existing and proposed conditions from the condominium rooftop and surrounding areas shown in Figure 1. The results of this preliminary analysis indicate that for the smaller, more frequent events, such as the two-year design storm, the project will likely exceed the assumed 50 percent reduction in peak runoff rates. In fact, for a one-inch rainfall event, the change in landcover may allow 94 percent of the rainfall to infiltrate. However, for the larger and more infrequent events, such as a 100-year design storm, the peak reduction is reduced to approximately 20 percent. It should be noted that the change in runoff is negligible for spring snowmelt events because the ground is frozen, which prevents infiltration.

The Association expects the Project to help protect the steep slope and prevent erosion within the SSOD. Because the Project will reduce peak stormwater runoff rates, it is reasonable to assume it would also prevent further erosion of the steep slope on the south side of the building.

We also reviewed the change in landcover to quantify the water quality benefits that may result from the project. Replacing the existing gravel surfaces with prairie and turf is estimated to provide approximately 28 percent reduction in both total phosphorus and total suspended solids leaving the Association property and entering Long Meadow Lake and the Minnesota River.

From our analysis, it appears that the Project would provide rate control, volume reduction, water quality, and erosion prevention benefits to the District.

Cost Summary

The Association has requested \$7,500 from the LMRWD to help fund the total Project. In the cost-share grant application, the Association presents quotes obtained from Hantho

Outdoor Services, a landscaping and ground maintenance company located in St. Louis Park, Minnesota. The total cost for the Project is expected to be \$21,673, which includes three years of professional maintenance services. The Project is expected to be constructed in late fall 2021 through spring 2022.

District Permit Requirement

The Project is located within the SSOD and will likely disturb more than 5,000 square feet of surface area and include more than 50 cubic yards of earthwork, triggering LMRWD Rule F—Steep Slopes Rule. A LMRWD permit will be required for the Project before construction activities may commence.

Summary and Recommendations

The Project addresses the following issues and goals outlined in the District's Watershed Management Plan:

- Issue 3: Water Quality
- Issue 5: Erosion and Sediment Control
- Issue 8: Public Education and Outreach
- Goal 2: Surface Water Management—to protect, improve, and restore surface water quality
- Goal 7: Erosion and Sediment Control—to manage erosion and control sediment discharge
- Goal 9: Public Education and Outreach—to increase public participation and awareness of the Minnesota River and its unique natural resources.

The Project embodies the District's strategy to provide educational, technical, and financial assistance to landowners to implement projects that have water quality and water quantity benefits to the District and help the District achieve the goals of its Watershed Management Plan.

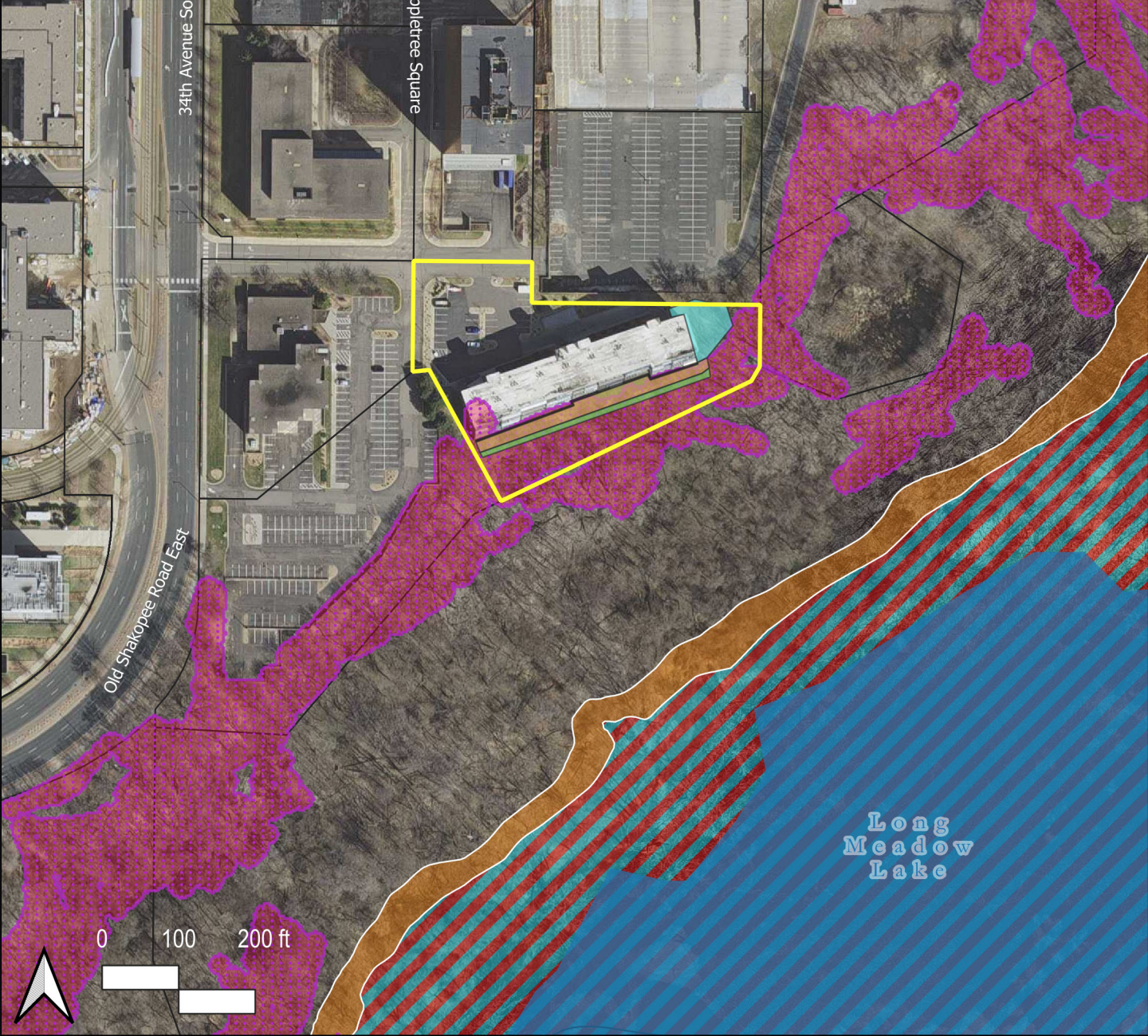
Because the Project goals align with those of the District and the construction will be completed by a qualified contractor, Hantho Outdoor Services, Young Environmental recommends approving the Appletree Condominium Association's request for \$7,500. The project will require a permit from the LMRWD before any construction activities may commence. We recommend the Association apply for the permit as soon as possible to reduce the risk of construction delays.

Attachments











- Figure 1 – Appletree Condominium Association Project Location Map



Figure 1: Appletree Condo Association Project Location



LEGEND

-  Project Location
-  Appletree Condo Association
- Proposed Project Features
 -  Fescue Seeding
 -  Mesic Prairie Seeding
 -  Vegetation Management
-  Steep Slopes Overlay District
- Hennepin Co. Floodplain
 -  Floodway
 -  100-yr Floodplain
 -  500-yr Floodplain
 -  Public Waterbodies

LMRW District Watershed Location Map

