Proposed 2019 Street Reconstruction Projects

City of White Bear Lake

Engineering Department

Informational Meeting

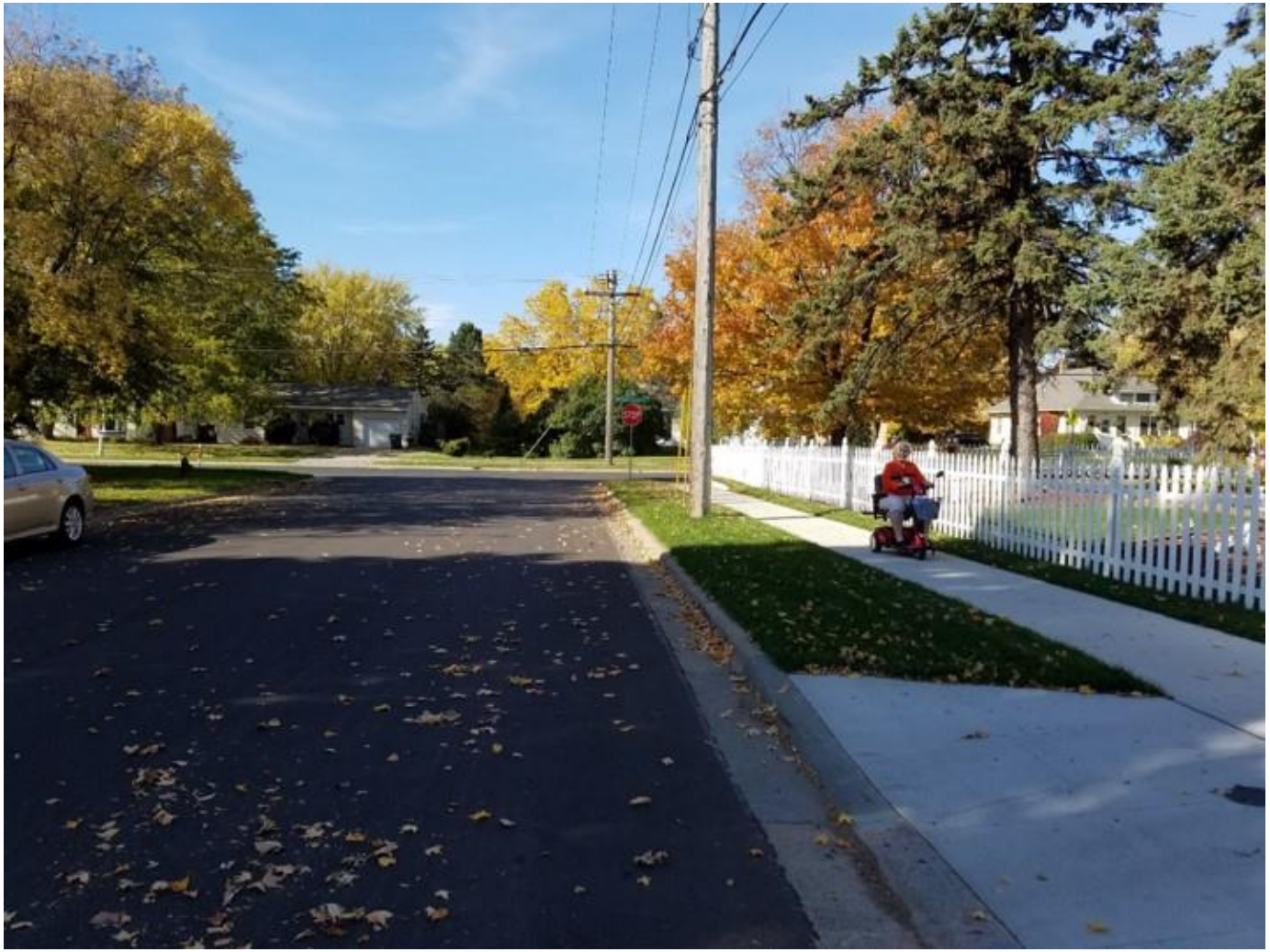
November 7, 2018

Engineering Department Staff

Paul Kauppi, P.E.	City Engineer/Public Works Director
Jesse Farrell, P.E.	Assistant City Engineer
Dan Holzemer	Senior Engineering Technician
Nathan Christensen, P.E.	Civil Engineer
Jayson Stejskal	Engineering Technician III
Carisa Vermeersch	Engineering Secretary
Connie Taillon, P.E.	Water Resources Engineer

2019 Street Reconstruction Project

2019 Street Reconstruction Project



2019 Street Reconstruction Project

2019 Street Reconstruction Project

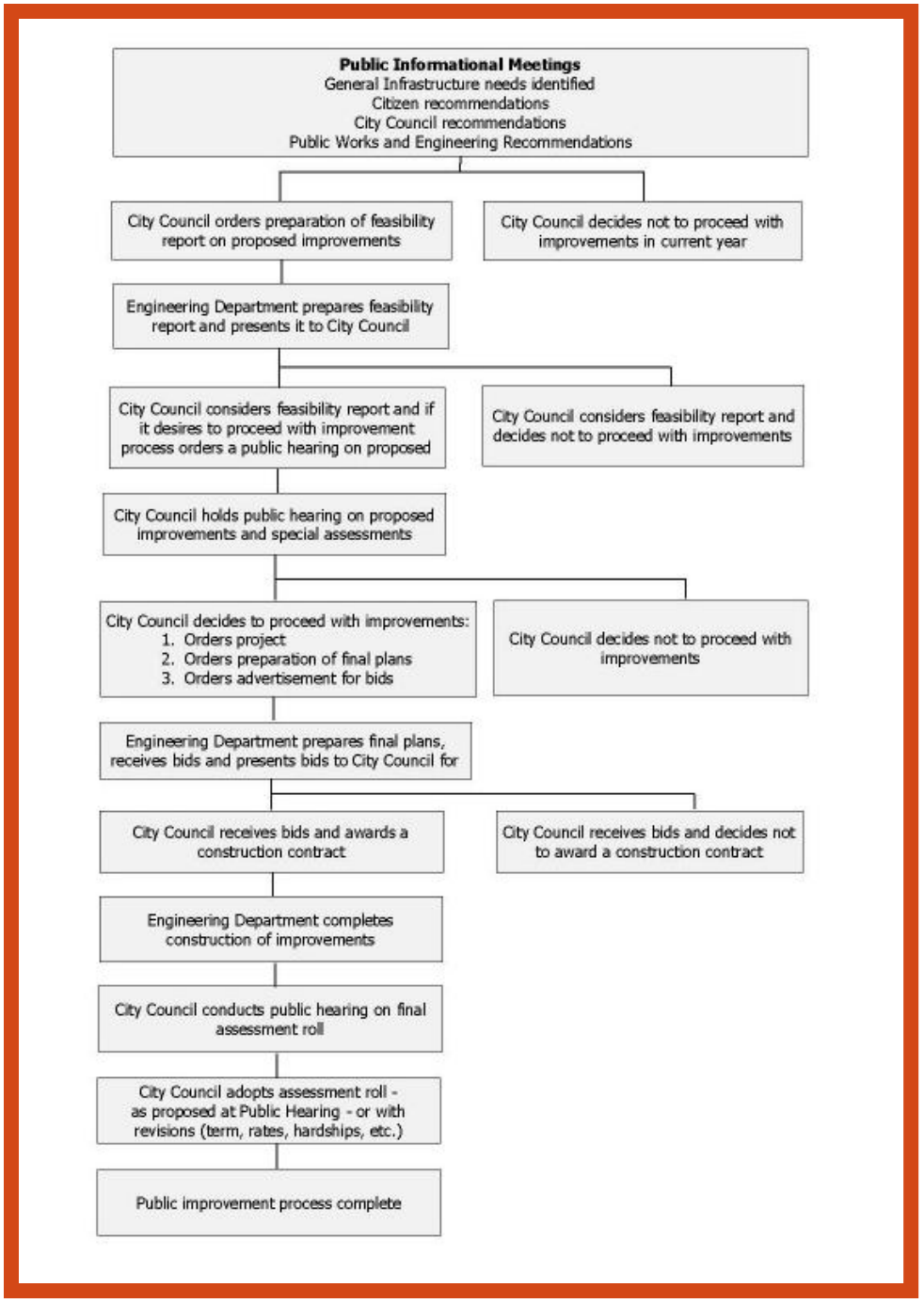
Construction Reality

- Expensive
  - ~$3.0M
  - Roughly 2/3 Bonds, Reserves, MSA, License Bureau
  - Roughly 1/3 Property Assessments
- Disruptive
  - Noise
  - Vibration
  - Dust or Mud
  - Water/ Sanitary Sewer Service
  - Parking
  - Access

Assessments

- Minnesota Statutes, Chapter 429 - Assessment Process
  - Assessment must be fair, uniform and benefit the property
  - Benefit is evaluated by a qualified, licensed professional appraiser
  - Public Notice
  - Public Hearing
  - Appeal Process

- Assessment Breakdown
  - Street ($39.34/FT of assessable frontage)
  - Storm Sewer ($0.12/SF lot area)
  - Alley ($2,300 each)
  - Water Service ($1,200 each)
  - Sanitary Sewer Service* ($1,200+ each)



City of White Bear Lake

Public Improvement Process

Proposed 19-01 Project Location

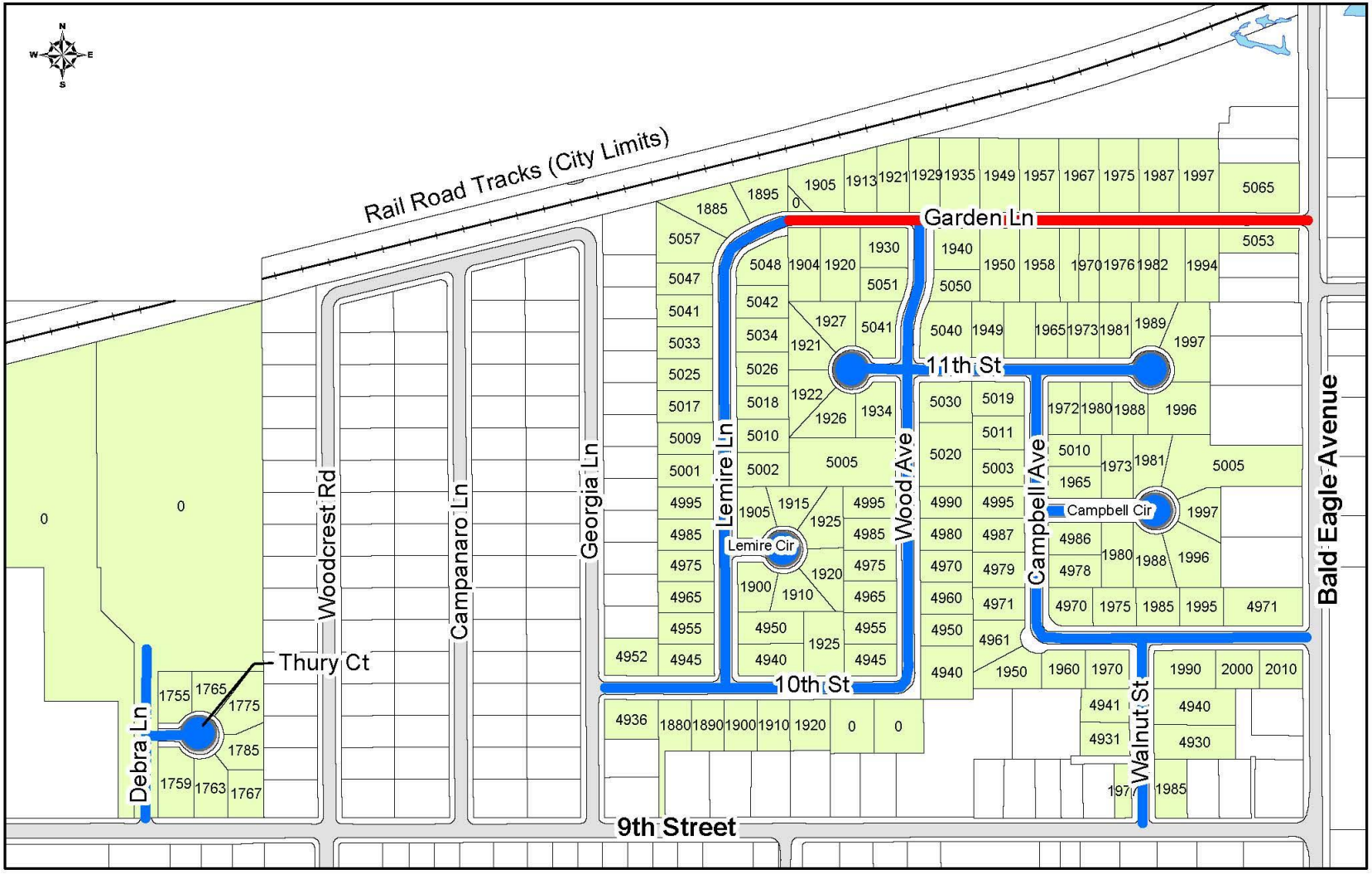
- Morehead Avenue (Lake Ave to Seventh Street)
- Johnson Avenue (Fourth Street to Seventh Street)
- Fourth Street (Stewart Avenue to Lake Avenue)
- Fifth Street (Stewart Avenue to Lake Avenue)
- Sixth Street (Stewart Avenue to Lake Avenue)
- Seventh Street (Stewart Avenue to Lake Avenue)
- Various Alleys

2019 Street Reconstruction Project 19-01

Proposed 19-06 Project Location

- Garden Lane (Lemire Lane to Bald Eagle Avenue)

2019 Mill & Overlay/ Street Reconstruction Project 19-06



Construction Process

- Private Utility Work (Xcel Energy, Comcast and CenturyLink)
- Erosion Control
- Tree Removal (if necessary)
- Pavement Removal
- Underground Utility Work
  - Water Shut Off (to replace hydrants or other watermain repairs)
  - Sanitary Sewer Wye Replacement
  - Storm Sewer
- Subgrade Compaction and Gravel Base Placement
- Install Curb and Gutter
- Install New Concrete Driveways and Aprons
- Pave First Lift of Bituminous
- Install New Bituminous Driveways and Aprons
- Sod Installation/Restoration
- Final Lift of Bituminous

Private Utility Work

Step 1

Private Utility Work

Xcel Energy will install new gas mains in the construction areas. They will contact you directly regarding this work, which will start prior to any work on the street.

Private Utility Work

If you have any questions or concerns about the installation, please contact Xcel Energy at (800) 895-2999.

Erosion Control

Step 2

Erosion Control

Erosion control prevents construction debris from entering the storm sewer.

Erosion Control

Erosion control prevents construction debris from entering the storm sewer.

Tree Removal
(if necessary)

Step 3

Tree Removal (if necessary)

We strive to preserve all healthy trees in our urban forest. However, there may be a limited number of trees on the street construction project whereby removal is unavoidable.

Tree Removal (if necessary)

You will be notified if our tree has been marked for removal. At that time, you will be given information on the City's Tree Replacement Program.

Pavement Removal

Step 4

Pavement Removal

One of the first steps in any reconstruction process is, of course, demolition.

For street projects, this means removing the existing pavement. This process is done in phases rather than the entire project area being done at once.

Pavement Removal

Contractors will remove the pavement with large backhoes and haul it away in dump trucks, or they may grind it up in place.

Underground Utility Work

Step 5

Water Shut Off

Sanitary Sewer Wye Replacement

Water Service Replacement

Storm Sewer Modification

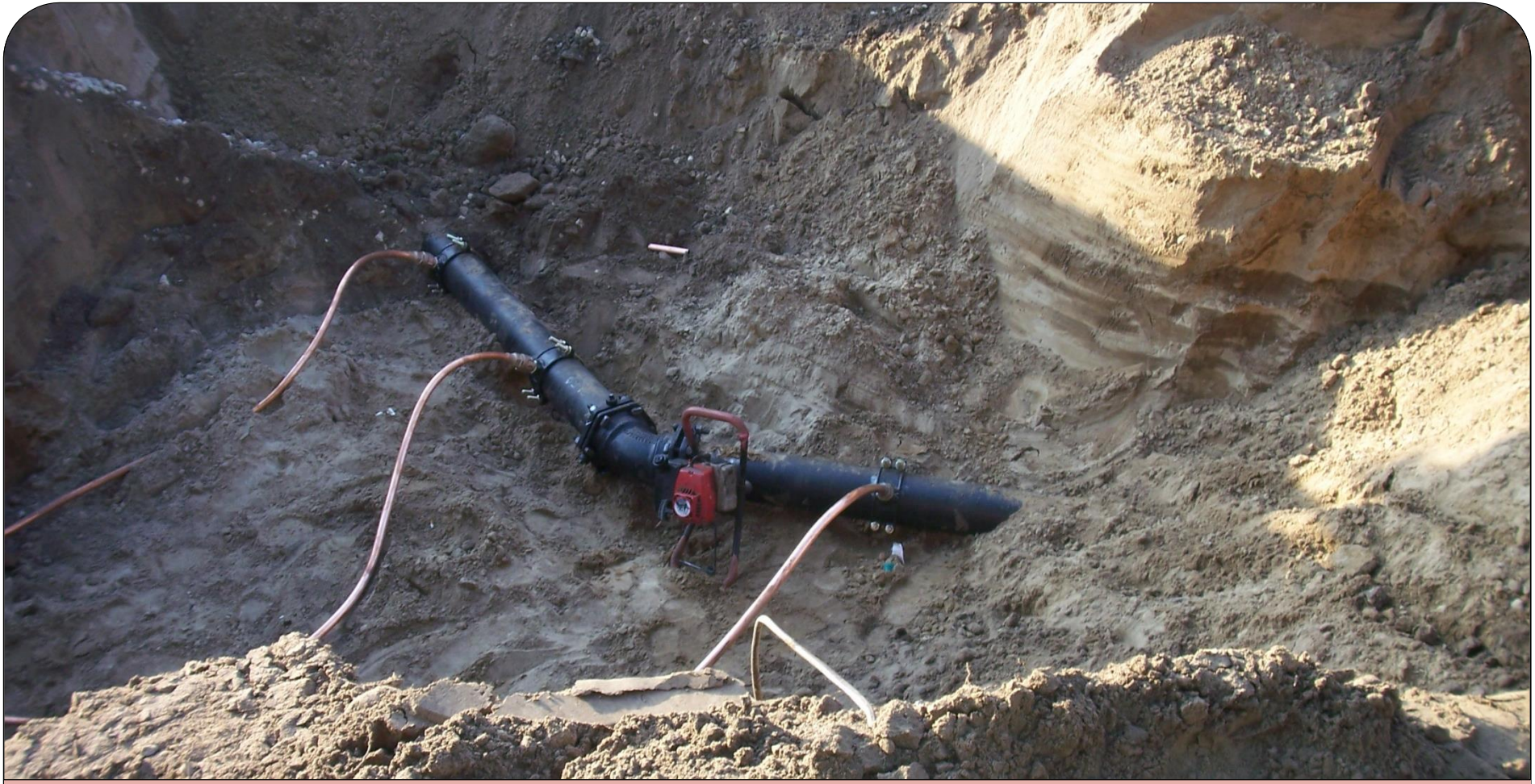
Sanitary Sewer Modification

Water Shut Off

When hydrants are replaced or other watermain repairs are needed, your water may have to be shut down for a period of time. This work is typically scheduled between 9:00 a.m. and 3:00 p.m. The Engineering Department will try to notify you of this work 24 hours in advance.

Sanitary Sewer Wye Replacement

Residents within the street reconstruction project can have their sanitary sewer service connection and a portion of sanitary sewer pipe replaced as part of the City's Residential Sanitary Sewer Wye Replacement Program.



Water Service Replacement

Storm Sewer

Storm sewer work is typically done in only one location or intersection at a time, and usually won't affect access to your driveway.

Storm Sewer

If your driveway will need to be blocked for installation of storm sewer pipe or structures, City staff and crews will notify you beforehand so you can get your vehicles out for the day.

Subgrade Compaction and Gravel Base Placement

Step 6

Subgrade Compaction and Gravel Base Placement

After all underground utility work has been completed, the subgrade soils are compacted and a new gravel base for the street is hauled in.

These processes are vital to ensure a solid foundation for the street.

Subgrade Compaction and Gravel Base Placement

The Contractor will use vibrating compactors which will cause various degrees of vibration which may be felt in your home.

This will translate into shaky walls – make sure hanging items or breakables on open shelving are secured or removed.

Install Curb and Gutter

Step 7

Install Curb and Gutter

Once the gravel base placement is complete, concrete curb and gutter will be poured. Modern slip-form machines allow this work to proceed very quickly with a single crew, often completing over 5,000 feet per day.

Install Curb and Gutter

One or two days prior to pouring the curb, crews will mark your driveway openings with small white stakes. These stakes indicate the proposed extents of the curb opening (lowest "drive-able" portion of the curb.

Three-Foot sloped "wing"

Install Curb and Gutter

All driveways will also include a three-foot wing on each side which slopes up to match the full height of the curb.

Install Curb and Gutter

After the curb and gutter has been placed, you will not be able to access your driveway for 5 days, or until the Contractor has ramped your driveway with gravel. You will be able to parallel park in the street during the evenings, taking extreme care not to hit the newly-placed curb.

Install New Concrete Driveways and Aprons

Step 8

Install New Concrete Driveways and Aprons

Next, concrete aprons are installed for existing concrete driveways that had a portion removed.

Install New Concrete Driveways and Aprons

For residents having full driveway replacement as part of the City's program, this work is also completed.

As a courtesy reminder, the Contractor will knock on your door to let you know that they will be beginning work on your driveway.

Pave First Lift of Bituminous

Step 9

Pave First Lift of Bituminous

Once the curb and gutter are placed, the Contractor will haul in more gravel to place between the curbs and then compact it.

The Contractor will then begin paving the first lift of bituminous.

Pave First Lift of Bituminous

You will not be able to drive on the paved portion of the road for at least two hours or until they have finished rolling the newly paved roads. We ask that you take extreme care not to make sharp turns on the new bituminous pavement.

New asphalt is very hot **(approximately 300°F)** when placed. Parents should keep children and pets a safe distance away from the new pavement until it cools.

Install New Bituminous Driveways and Aprons

Step 10

Install New Bituminous Driveways and Aprons

For those residents having full driveway replacement as part of the City's program, this work is now completed.

As a courtesy reminder, the Contractor will knock on your door to let you know that they will be beginning work on your driveway.

Install New Bituminous Driveways and Aprons

Vehicles can be driven across the new asphalt; however, we recommend that you do not park on the new bituminous for at least 5 days. The longer it cools off and cures, the better it is for the aprons.

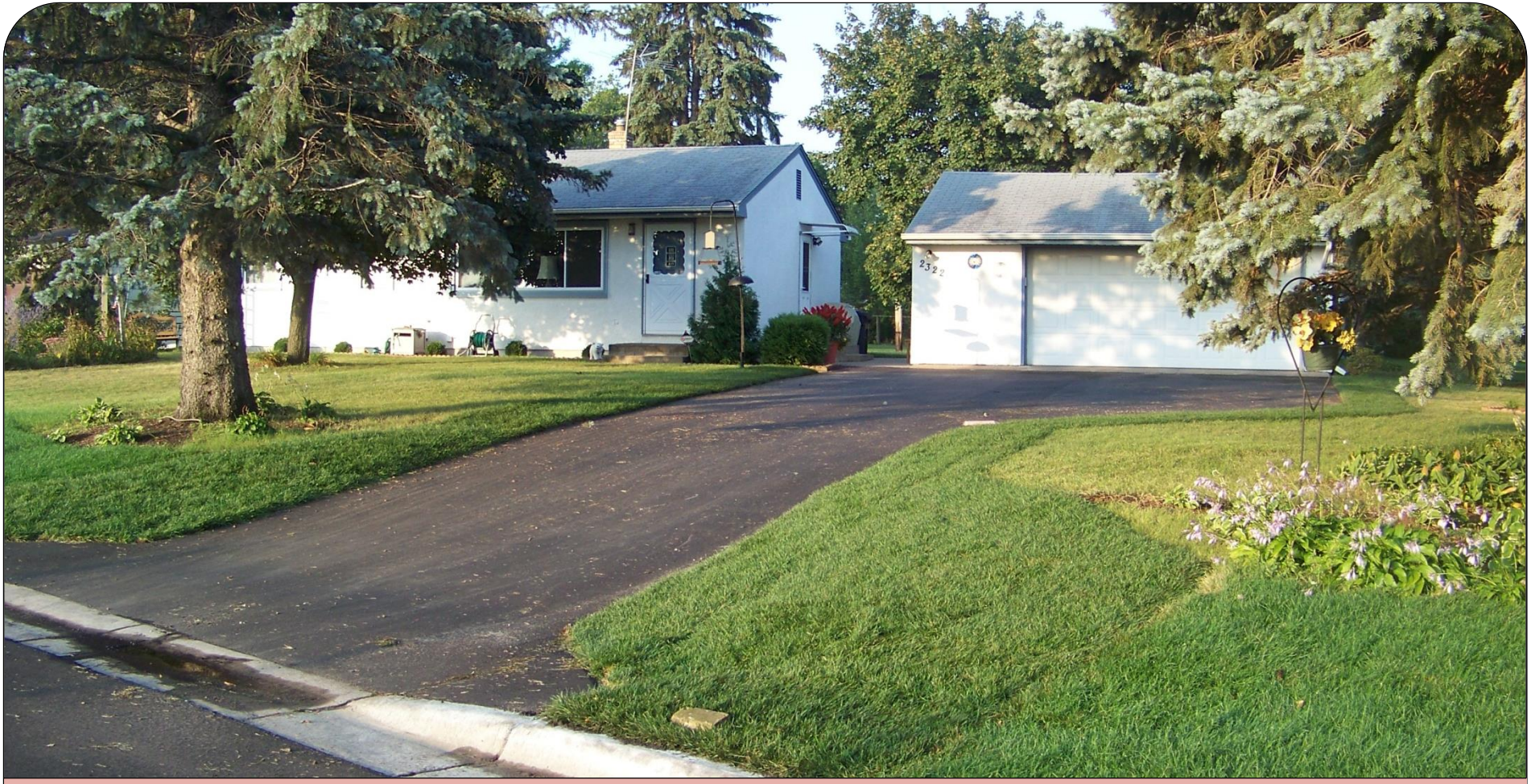
We also ask that you take extreme care not to make sharp turns on the new bituminous.

Sod Installation and Restoration

Step 11

Sod Installation and Restoration

The Landscape Contractor will grade and backfill the boulevards with topsoil and lay the sod.



Sod Installation and Restoration

For residents that had new driveways installed and **paid for sod restoration**, the Contractor will also be completing that work.

Final Lift of Bituminous

Step 12

(The Final Step)

Final Lift of Bituminous

The last step in placement of your new street is laying the final lift of bituminous.

Final Lift of Bituminous

You will not be able to drive on the paved portion of the road for at least two hours or until they have finished rolling the newly paved roads.

We ask that you take extreme care not to make sharp turns on the new bituminous pavement.

Final Lift of Bituminous

New asphalt is very hot **(approximately 300°F)** when placed. Parents should keep children and pets a safe distance away from the new pavement until it cools.

Who to Call

Street Reconstruction Project

Contact Information

Important Phone Numbers

City of White Bear Lake Engineering Department	(651) 429-8531
City of White Bear Lake Police Non-Emergency	(651) 429-8511
City of White Bear Lake Utility Billing Clerk	(651) 429-8565
Xcel Energy	(800) 895-2999
White Bear Lake Post Office	(651) 762-1437

Thank You!

Thank you for taking the time to view this presentation. We hope it helps you to understand the process and what to expect during the entire street reconstruction project.

We look forward to serving you in the 2019 construction season.

~ The White Bear Lake Engineering Department

City of White Bear Lake

RAINGARDENS & Street Reconstruction

RCWD
RICE CREEK WATERSHED DISTRICT

A partnership with the City of White Bear Lake, residents, and Rice Creek Watershed District

Raingardens and Street Reconstruction

- Convenient and cost effective time to install a curb cut raingarden
- Local expertise and financial resources available

Spruce Place

What is a raingarden?

A garden with a small depression that captures rainwater runoff from roofs, driveways, and streets during storms and briefly holds the water until it is absorbed by the soil.

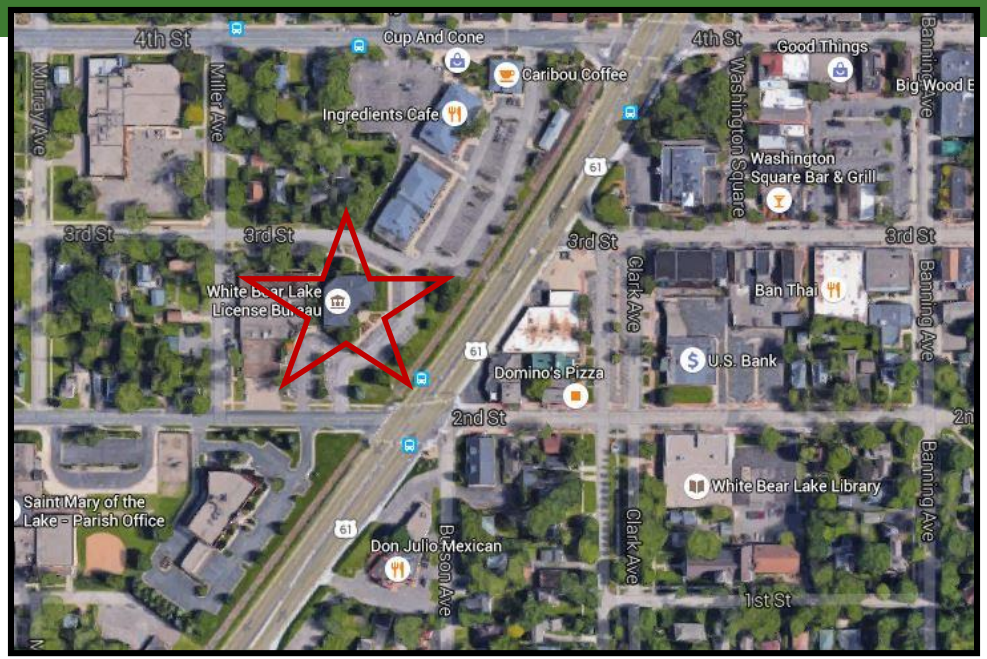
Why are raingardens important?

By helping water soak into the ground, raingardens prevent stormwater from running off your property and into the storm sewer system.

Richard Ave. & Van Dyke St.

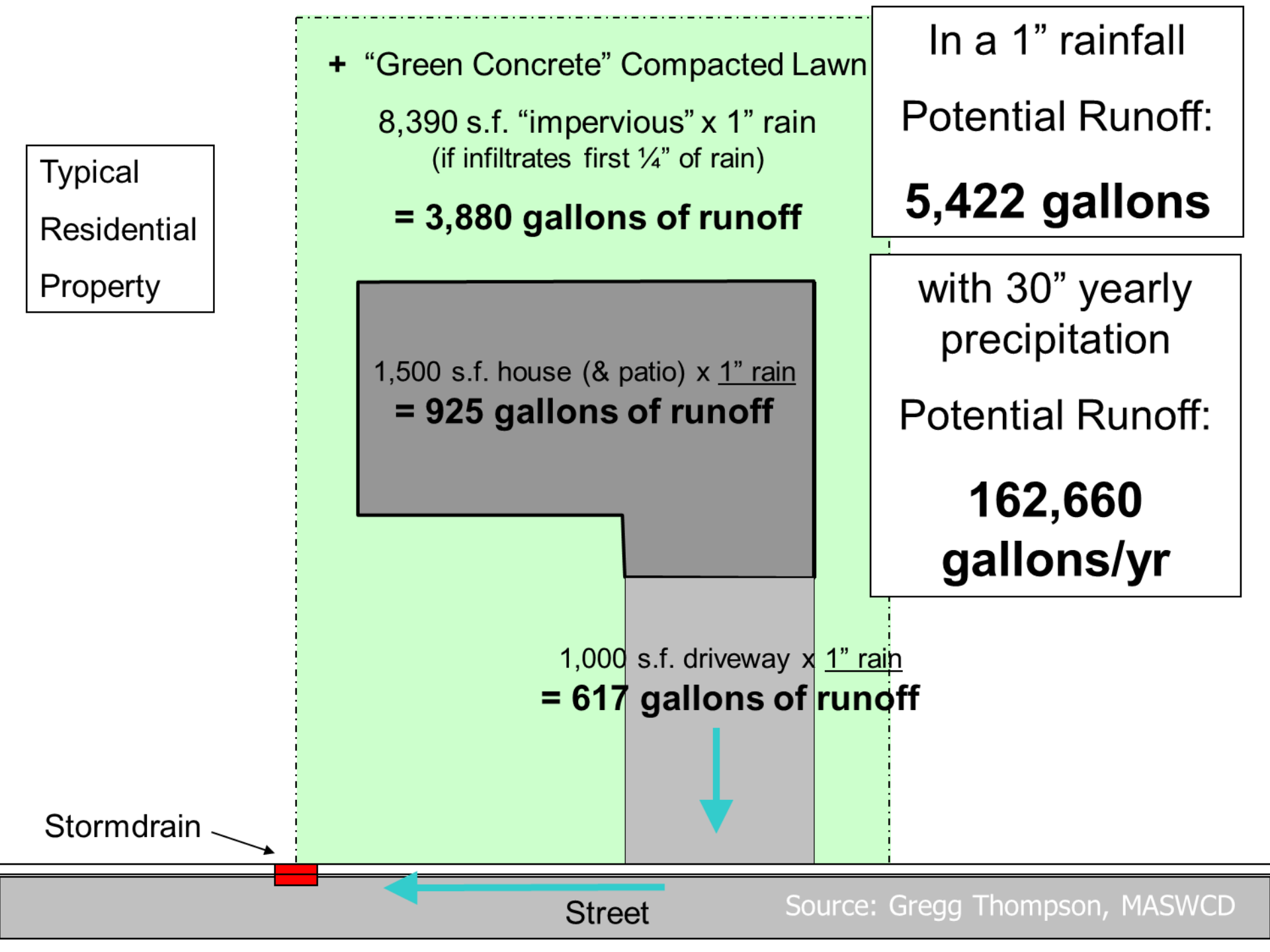
Why is reducing runoff important?

In undeveloped areas such as forests or prairies, soil and plant roots absorb much of the water from rainfall and snowmelt.



In developed areas, wetlands have been drained and filled and natural areas paved over.

Impervious surfaces (rooftops, streets, and parking lots) prevent water from soaking into the ground, causing runoff.

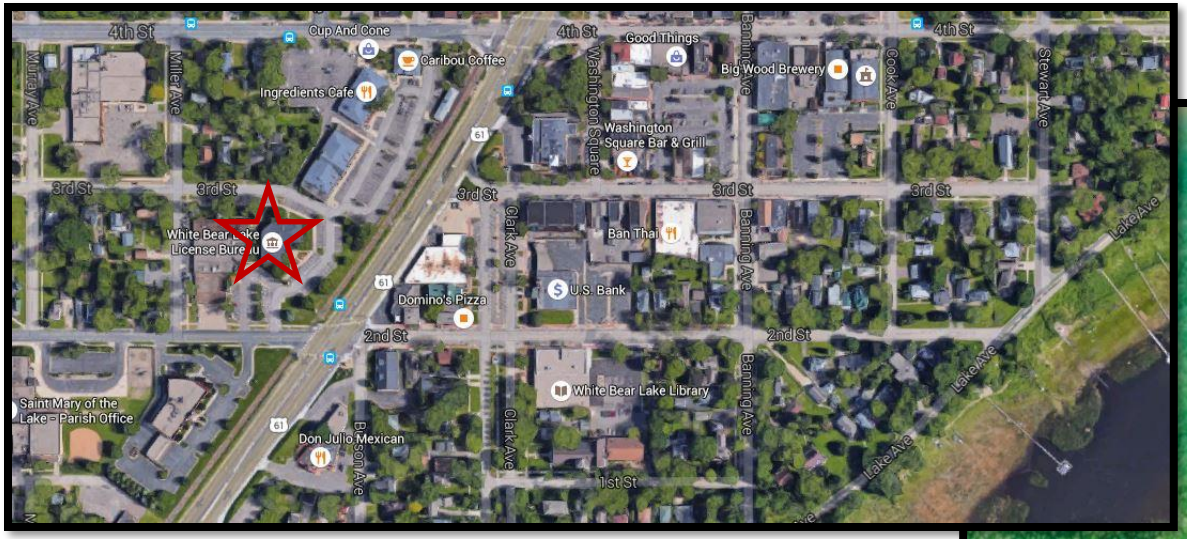

Typical Residential Property
+ "Green Concrete" Compacted Lawn
8,390 s.f. "impervious" x 1" rain
(if infiltrates first ¼" of rain)
= 3,880 gallons of runoff
In a 1" rainfall
Potential Runoff:
5,422 gallons
1,500 s.f. house (& patio) x 1" rain
= 925 gallons of runoff
with 30" yearly precipitation
Potential Runoff:
162,660 gallons/yr
1,000 s.f. driveway x 1" rain
= 617 gallons of runoff
Stormdrain
Street
Source: Gregg Thompson, MASWCD

Why is reducing runoff important?

Stormwater runoff picks up sediment, road salt, oil, gas, leaves, fertilizers, pesticides, and trash from impervious surfaces and lawns and are washed into storm sewers.

What can you do to reduce water pollution?

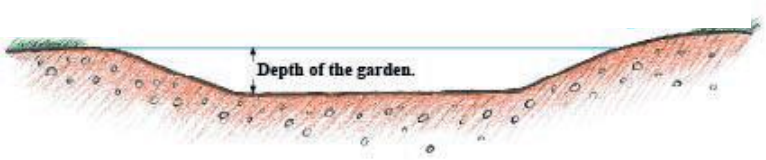
The primary method for reducing pollutants and surges of runoff is to mimic pre-development conditions by capturing and infiltrating water into the ground.



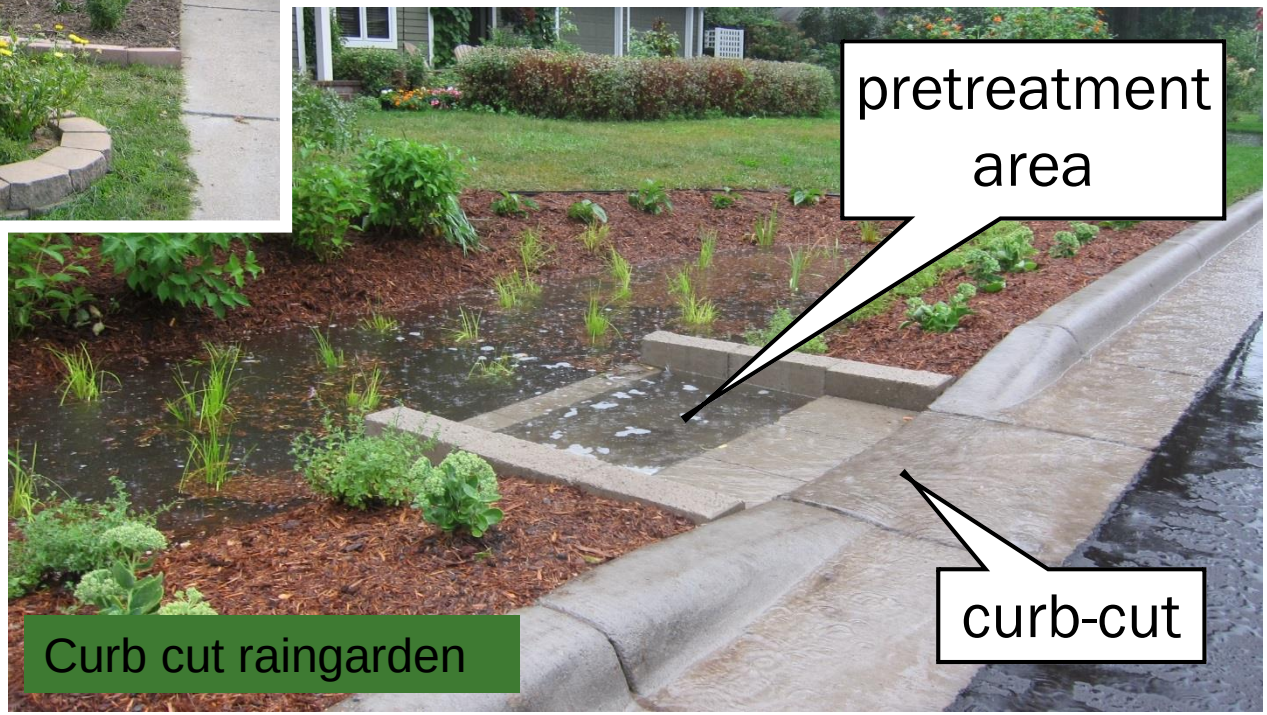
> 30% runoff

< 10% runoff

How do raingardens work?



Typical cross section



Curb cut raingarden

2018 Examples

10th St. & Morehead Ave.

2018 Examples

10th St. & Morehead Ave.

2018 Examples

8th St. & Johnson Ave.

Cost share information

Rice Creek Watershed District will:

- Reimburse 25%-75% of the cost of materials and approved labor, up to $7,500 depending on the project
- Provide guidance & monitoring for 5 years following installation

City will:

- Provide a curb-cut as part of street reconstruction for appropriate locations ($600-$700 value)

Sites are selected based on soil type and street drainage

Homeowner responsibilities:

- Pay for a portion of the construction cost
- Maintain the raingarden for 10 years

Interested in a raingarden?

Add your name and contact information to our interest list at the front table

-or-

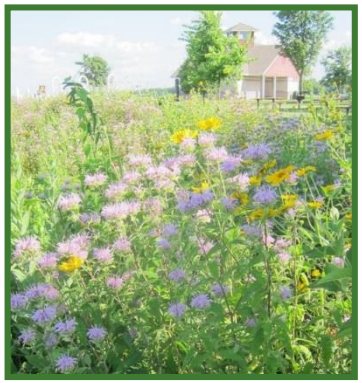
contact:
Connie Taillon
Phone: 651-429-8564
Email:
ctaillon@whitebearlake.org

Other cost share opportunities

RCWD Mini-Grants Program

- Native plants, including pollinator gardens

- Rain barrels



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