

Blue Thumb Planting for Clean Water Wyoming



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NO SCOOTERS • NO IN-LINE SKATES •

FIRST AID
AVAILABLE
+
CRY BABIES



Planting for Clean Water:

1. Lawns
2. Native gardens and prairies
3. Raingardens
4. Shorelines and wetlands
5. Assistance and grants
6. Project planning & garden design

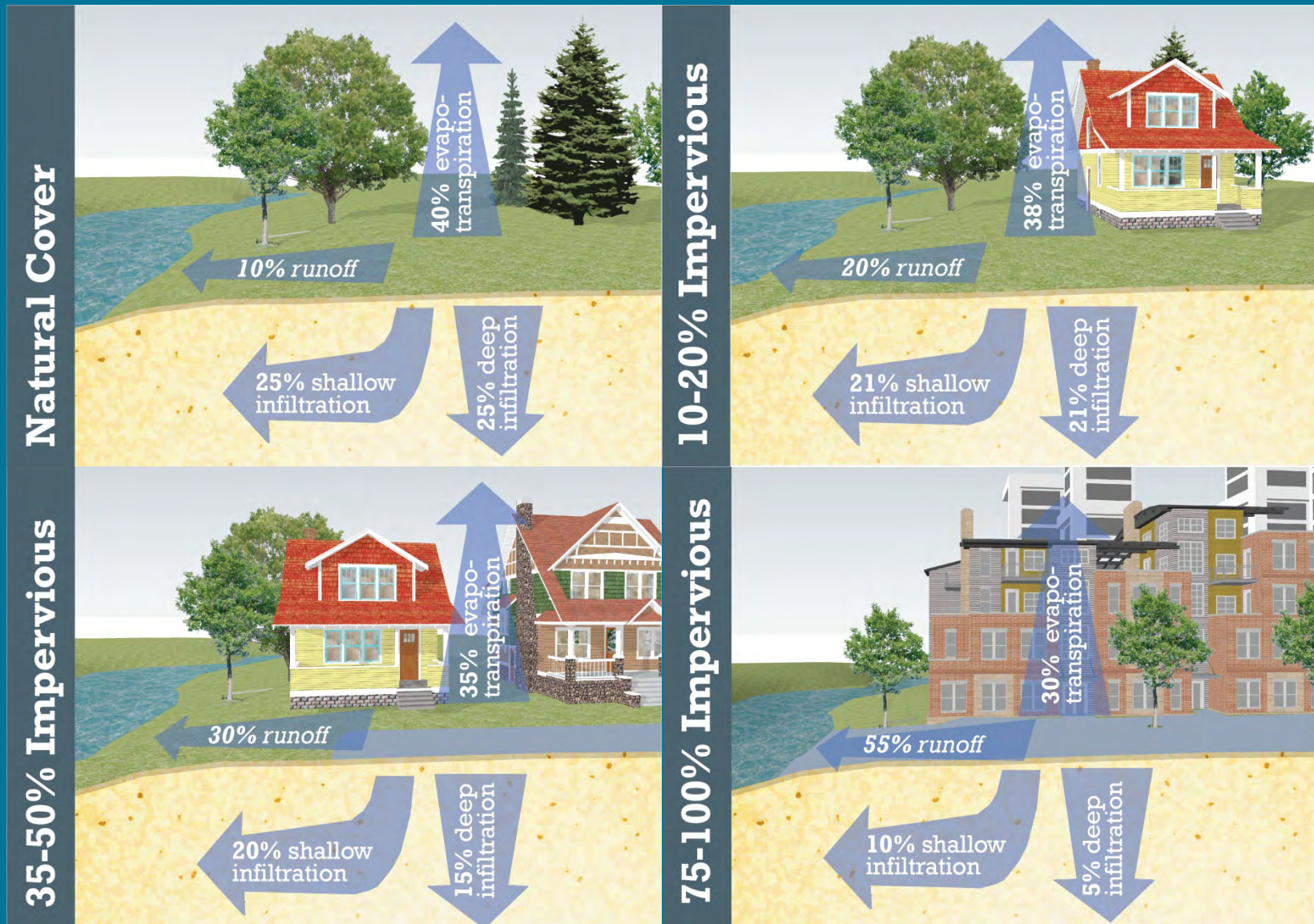
40% of MN lakes, rivers & streams are impaired





One pound of phosphorus =
500 pounds of algae

Impacts of changes in land cover



Calling all **SUPER HEROES!**



40.5 MILLION ACRES OF LAWN IN THE U.S.

32 million acres is irrigated

****More irrigated lawn than irrigated corn**

Lawns use:

- 9 billion gallons of water per day
- 3 million tons of fertilizer per year
- 30,000 tons of pesticides per year
- 800 million gallons of gasoline per year

****17 million gallons of gas spilt each year refilling lawn mowers**

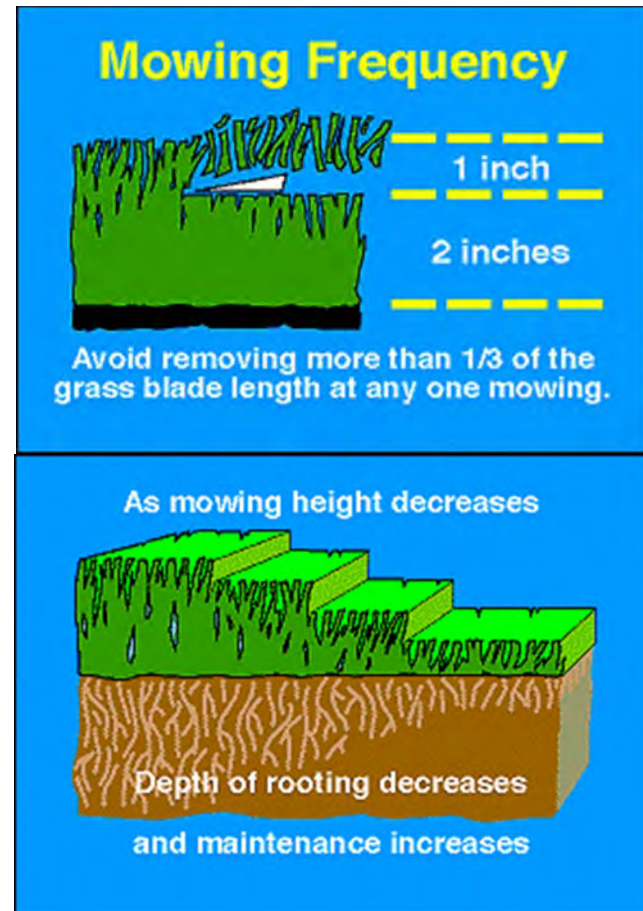




Simple, Free Changes

Mow Better

- Mow high – 3"
 - To promote deep roots
- Leave your clippings on the lawn
 - FREE fertilizer!
- Mow less frequently or not at all during dry spells
 - Grass has a natural dormancy in winter cold & summer heat
 - More time to play!



Simple, Free Changes

Smart Sprinkling

- Turn off your automatic irrigation system & only turn it on when you need it
- Or invest in an irrigation system with a rain and/or soil sensor.
- Inspect your sprinkler heads to see if they are misting or leaking. Replace them with pressure regulated heads!
- Lawns only need 1" of water per week – Including rain
- We use groundwater for irrigation AND drinking water





Next step:
Stop growing grass where it doesn't want to grow

Alternatives to traditional lawn: Low-mow & Bee-friendly



UMN Low Maintenance Turf Examples



Fine Fescue mix planted in 2012. No maintenance or irrigation.



No Mow in high traffic area and dense shade.

UMN Research Drought Research



Hard Fescue (top), Fine Fescue
(bottom). Mowed to approx
3"



Fine Fescue Drought test.

Fescue Mix with No Spring Mowing



Hard Fescue with seedheads.



Fine Fescue with seedheads

Maintenance Comparison



- Left side was the research plot. Mowed to a 1/2 inch. Seeded in 2016.
- Right is fine fescue mix receiving mowing twice a year, no herbicide. Approx 3". Had almost no weeds!

Why go Low-Mow?

- Negative perceptions of turf all stem from management issues.
 - ▣ Uses too much water
 - ▣ Depletes soils of nutrients
 - ▣ Maintenance uses too much fossil fuels
 - ▣ Pollutes Surface/groundwater
- A seed mix that meets your **site conditions** and **proper installation** will yield a low input lawn.
- Low-Input Characteristics
 - ▣ Disease/pest resistance
 - ▣ Drought tolerance
 - ▣ Slow vertical growth
 - ▣ Low fertility needs

Fine Fescue Species for Minnesota

Strong creeping red fescue

- ♦ Often mixed with Kentucky bluegrass for partial shade
- ♦ Rhizomatous growth
- ♦ Disease problems
- ♦ Not as good in heat/drought

Chewings fescue

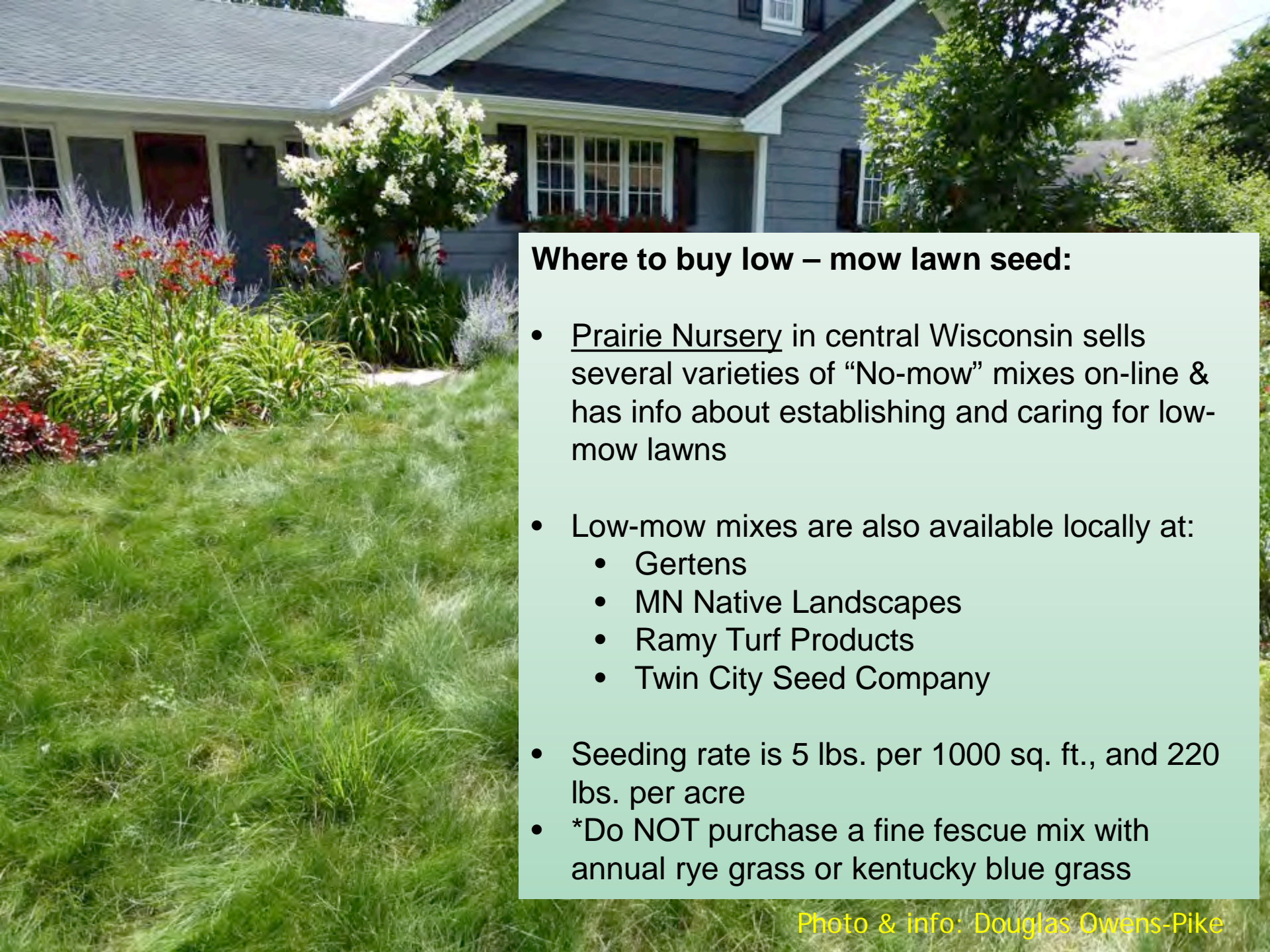
- ♦ Excellent density
- ♦ Very aggressive
- ♦ Summer-stress tolerance
- ♦ Snow-mold susceptibility
- ♦ Bunch-type

Slender creeping red fescue

- ♦ Similar to strong creeping red fescue
- ♦ Salt-tolerance

Sheeps fescue

- ♦ Slow vertical growth rate
- ♦ Lowest input
- ♦ Grayish-green color



Where to buy low – mow lawn seed:

- Prairie Nursery in central Wisconsin sells several varieties of “No-mow” mixes on-line & has info about establishing and caring for low-mow lawns
- Low-mow mixes are also available locally at:
 - Gertens
 - MN Native Landscapes
 - Ramy Turf Products
 - Twin City Seed Company
- Seeding rate is 5 lbs. per 1000 sq. ft., and 220 lbs. per acre
- *Do NOT purchase a fine fescue mix with annual rye grass or kentucky blue grass

Installation Tips




Site Prep & Install

- ▣ Kentucky bluegrass is your biggest competitor. Kill it well!
- ▣ Lightly rake or Aerate the lawn, then broadcast seed. No hydromulch needed.
- ▣ Ideal time is Late September-October
- ▣ Use a germination blanket to keep seeds moist until they sprout

Maintenance

- ▣ Water lightly 4x/day until germination
- ▣ Do not over water, this will encourage weeds
- ▣ Mow 1x in the spring to deter seedheads.
- ▣ Mow 1x in the fall to deter snow mold. Does not tolerate dead material well.





Path rush (*Juncus tenuis*)
on shadier southern end

Non-Traditional Turfgrass Species:

- Buffalograss
- Blue Grama
- Texas Bluegrass
- Tufted Hairgrass
- Prairie Junegrass

Still need to gain public acceptance.

No mow on sunnier northern side



BEE LAWN HOW-TO

Let it happen





BEE LAWN – Components

Fine Fescue



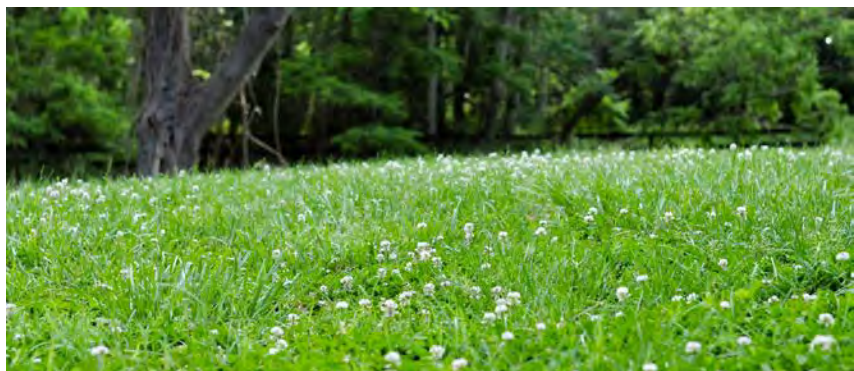
BEE LAWN FLORAL SPECIES



Self Heal
(*Prunella vulgaris* ssp.
lanceolata)



Creeping Thyme
(*Thymus serpyllum*)



Dutch White Clover
(*Trifolium repens*)

BEE LAWN SPECIES: Native Flowers



- Ground Plum (*Astragalus crassicarpus*)
 - In the legume family. Great for soil health!
 - Good for sunny dry lawns
 - Loved by bumble and mason bees
- Lanceleaf coreopsis (*Coreopsis lanceolata*)
 - Late spring bloomer
 - Highly visited by long-horned bees
- Calico Aster (*Symphyotrichum lateriflorum*)
 - Late Fall bloomer
 - Many bees specialize on flowers in the aster family, such as sweat bees!



BEE LAWN

Overseeding existing lawn

- Scalp lawn to within 1"
- Rough-up soil with rake
 - Or aerate
- Seed with 3 flower species OR
- Seed with flowers and fescue



BEE LAWN

Seeding and care

- Mix seed with an organic fertilizer such as Sustane or Milorganite.
- Water daily, if no rain, for 2 weeks
 - After germination, no additional water (unless an unusual dry spell) or fertilizer needed
- Mow at 3" or higher infrequently to encourage flowers.

Beyond the Lawn

- Shady groundcover
 - Moss
 - Strawberry
 - Wineleaf cinquefoil
 - Violets
 - Wild ginger



Photo source: Moss lawn www.ecoterrallandscape.com



Photo source: steppables.com





Incorporate native plants



Cardinal Flower

Yellow coneflower

Purple coneflower

Aster species



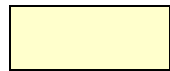
Pre-settlement Native Plant Communities



Big Woods



Oak Openings & Barrens

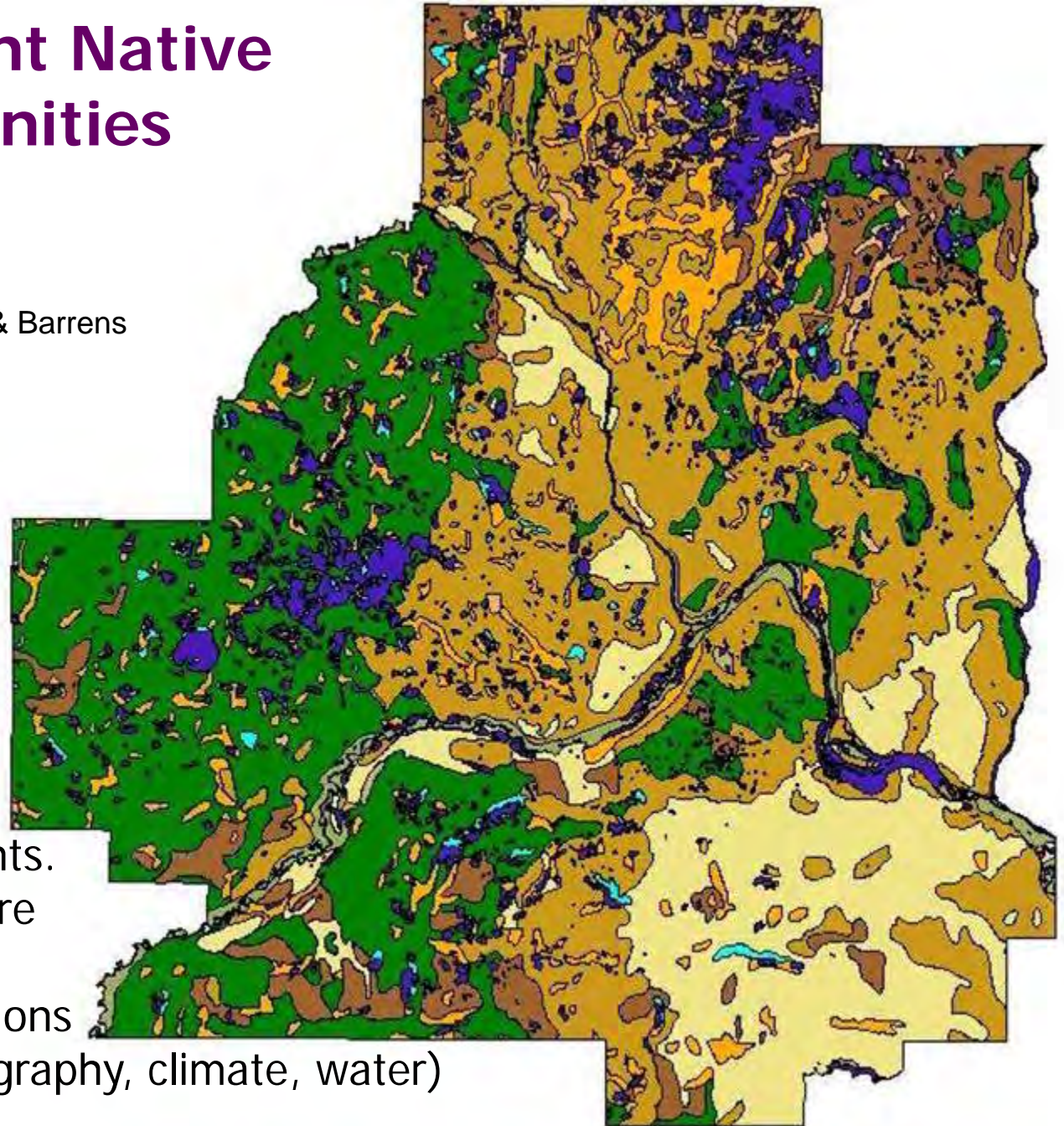


Prairie



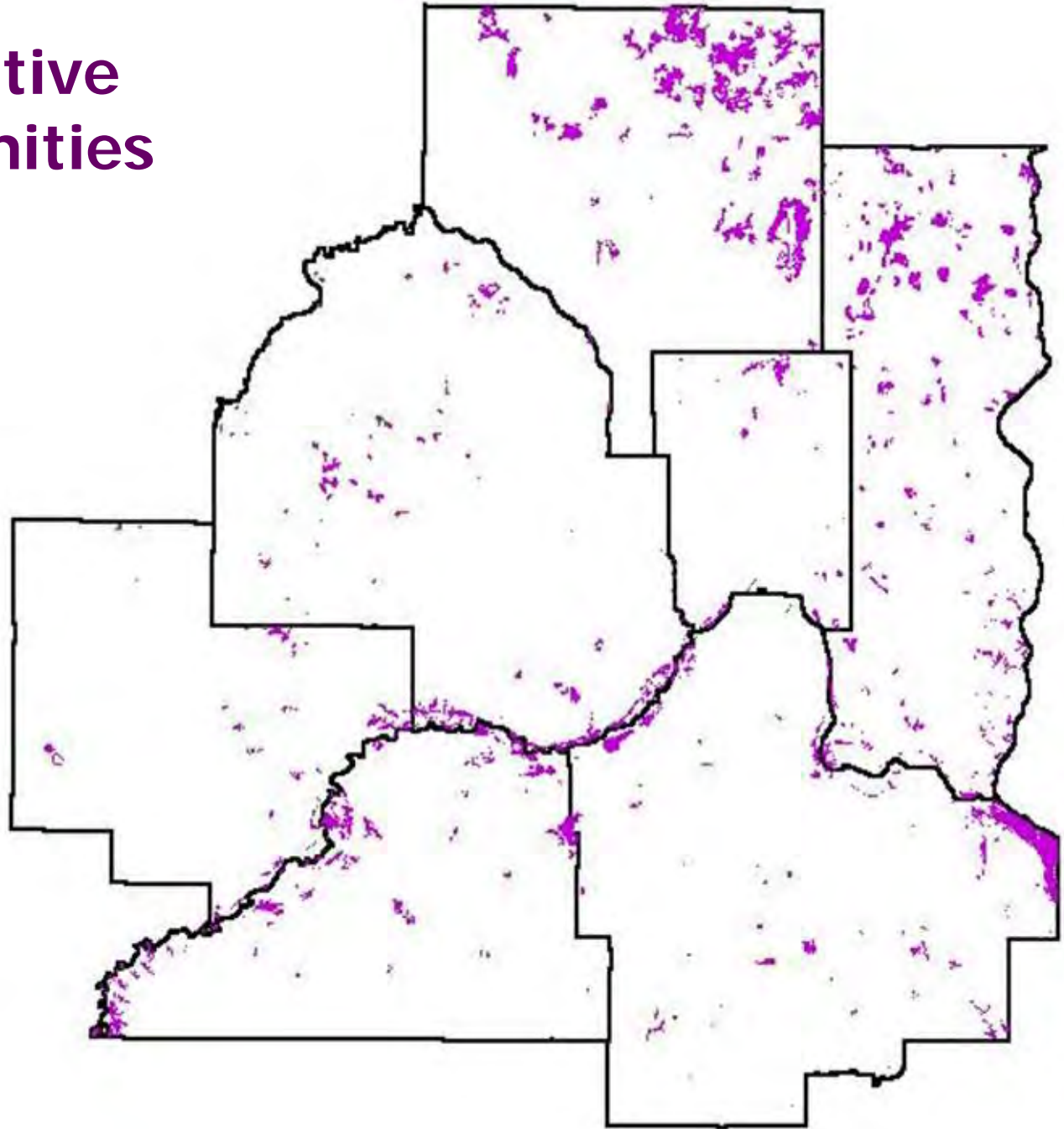
Wet Meadow

In nature, plants commonly grow in association with a particular group of other compatible plants. These communities are found where specific environmental conditions exist (e.g. soils, topography, climate, water)

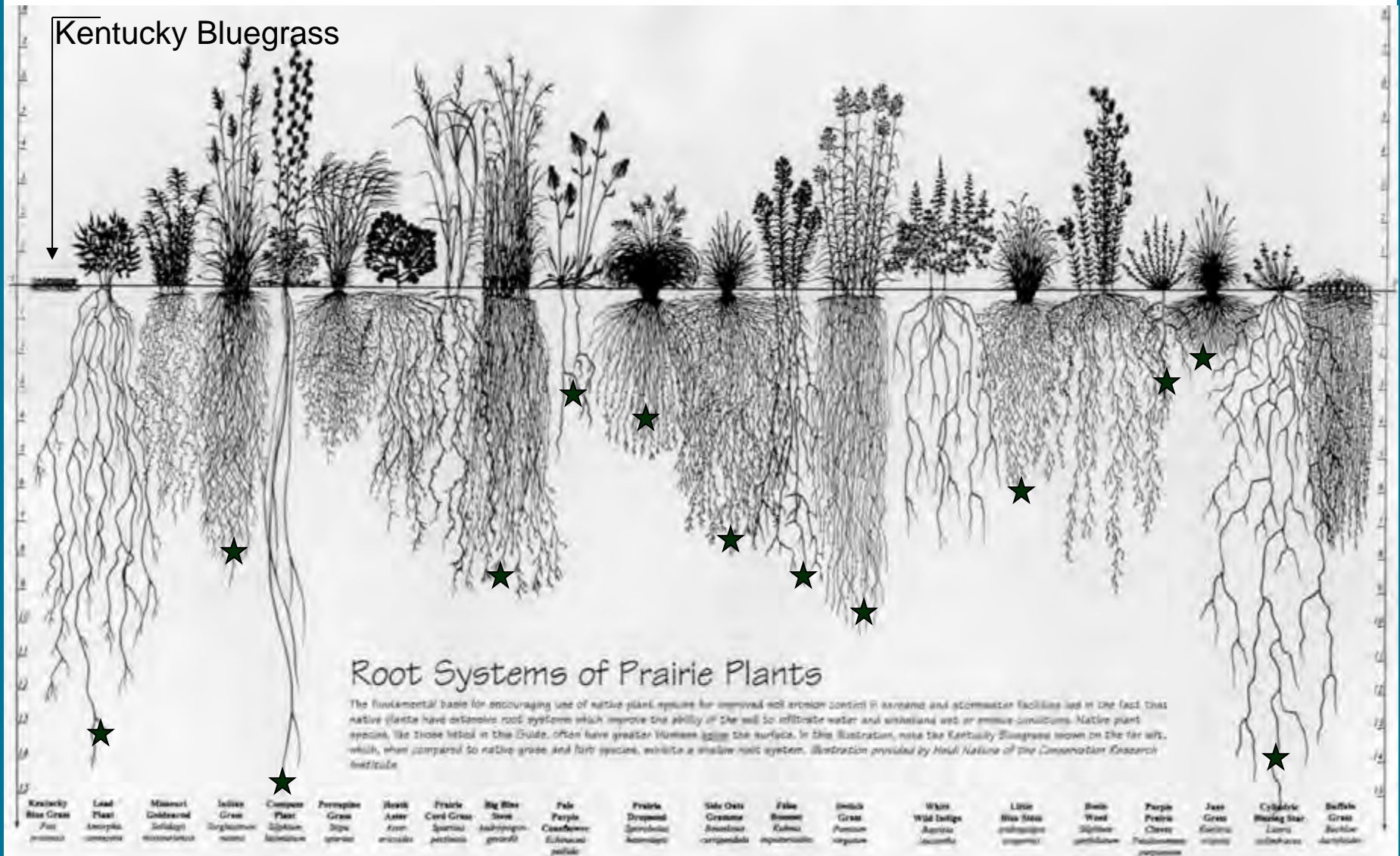


Remaining Native Plant Communities

Vegetation removal and soil disturbance (and soil compaction) reduces the amount of runoff absorbed, increasing sediment-laden runoff into lakes, streams & wetlands.



Roots of Native Prairie Plants





Common Milkweed

Asclepias syriaca



Butterfly Milkweed

Asclepias tuberosa

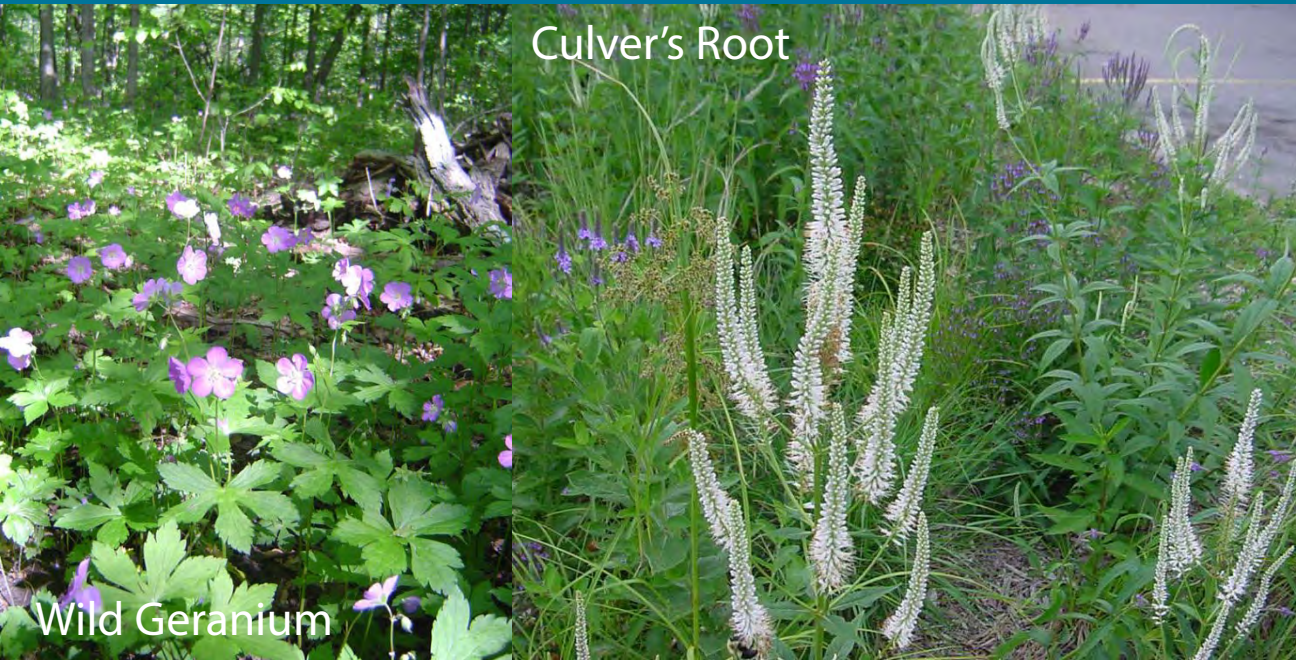


Butterfly weed



Marsh milkweed

Shady to Partial Shade



Culver's Root

Wild Geranium



Columbine



Lady Fern



Fox Sedge

Partial Sun to Partial Shade



Culver's Root



Blue Lobelia



Turtlehead



Sprengel's Sedge



Bottle Gentian

Full Sun



Prairie Dropseed



Coreopsis



Pale Purple Coneflower



Anise Hyssop



Black-eyed Susan



Butterfly Milkweed

Full Sun



Prairie Blazing Star



Azure Aster



'Karl Foerster'
Feather Reed Grass



Meadow Blazing Star



Side Oats Grama



Early Sunflower

Prairies



Prairie Information

- Minnesota DNR www.dnr.state.mn.us/prairierestoration
 - *Going Native: A Prairie Restoration Handbook for Minnesota Landowners* (downloadable in pdf).
- Schedule a site visit with the RCD or WCD
- Local businesses:
 - Prairie Restorations and MN Native Landscapes



Washington Conservation District Tree Sale

- \$35.00 per bundle of 25 trees
- Bird packets are \$55.00 per bundle of 30 trees
 - 5 each of: Bur Oak, White Oak, Black Cherry, White Pine, Chokecherry, Wild plum

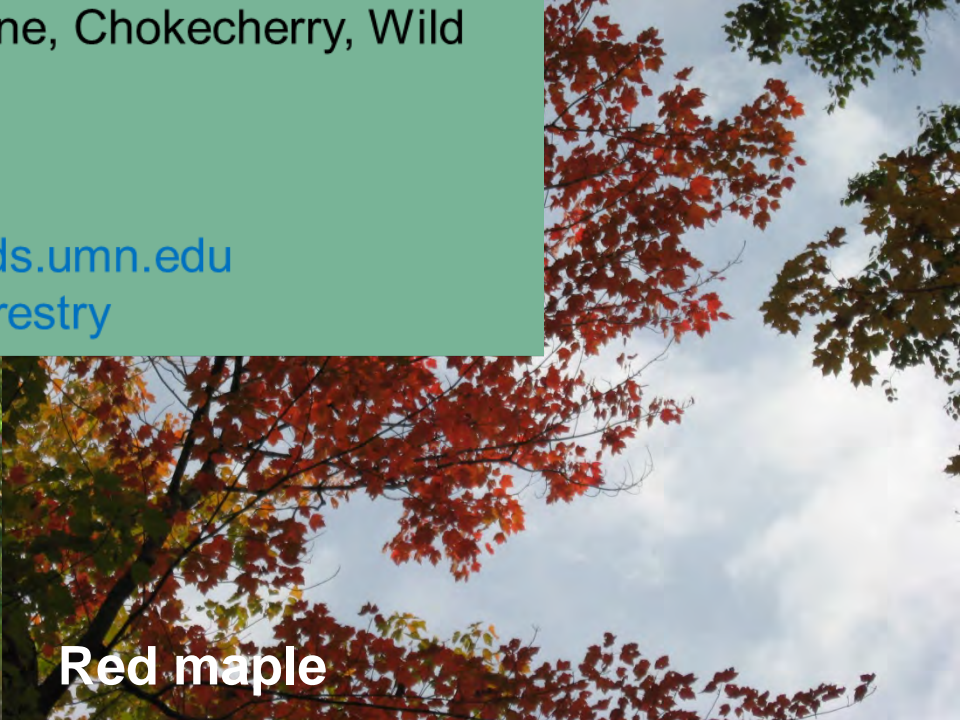
Web resources

www.myminnesotawoods.umn.edu

www.dnr.state.mn.us/forestry



White oak



Red maple



Wood thrush





Need plants?

Master Gardener Plant Sales

- Chisago – order now and pick up on May 10-11
- Washington – May 19 | 11am-3pm:
 - Washington County Fairgrounds

Landscape Revival Native Plant Expo and Market

- June 1 | 9am-1pm – Shoreview
 - Shepherd of the Hills, 3920 Victoria St N
- June 8 | 9am-1pm – Oakdale City Hall

And many local native nurseries! Visit your local Wild Ones chapter website for more information.

MINNESOTA & WESTERN WISCONSIN NATIVE PLANT NURSERIES



SYMBOLS d: Design Services i: Installation Services m: Maintenance Services

1 Blazing Star Gardens

Phone: 507-402-8337
Email: blazingstargardens@gmail.com
Web: www.blazingstargardens.com

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2 Boreal Natives

3943 Munger Shaw Road, Cloquet, MN 55720
Phone: 218-729-7001
Email: borealnatives@prairieresto.com
Web: prairieresto.com/boreal_natives.shtml

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3 Sogn Valley Farm

Phone: 763-614-8853
Email: dana@sognvalleyfarm.com
Web: www.sognvalleyfarm.com

Purchase at events & St. Paul Farmers' Market

4 Ecoscapes Sustainable Landscaping

Phone: 612-965-0848
Email: info@ecoscapes1.com
Web: www.ecoscapes1.com

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5 Glacial Ridge Growers

Phone: 320-634-0136
Email: glacridgegrowers@aol.com
Web: www.glacialridgegrowers.com
 St. Paul Farmers' Market on Saturdays

6 Shoreview Natives

1185 Shoreview Rd, Two Harbors, MN 55616
Phone: 218-341-5286
Email: shoreviewnatives@gmail.com
Web: www.shoreviewnatives.com

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7 Landscape Alternatives

25316 St. Croix Trail, Shafer, MN 55074
Phone: 651-257-4460
Email: landscapealt@frontiernet.net
Web: www.landscapealternatives.com

8 MN Native Landscapes

8740 77th St NE, Otsego, MN 55362
Phone: 763-295-0010
Email: bre@mnlcorp.com
Web: www.mnnativelandscapes.com

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9 Morning Sky Greenery

44804 East Highway 28, Morris, MN 56267
Phone: 320-795-6234
Email: info@morningskygreenery.com
Web: www.morningskygreenery.com

10 Natural Shore Technologies

1480 Cty Rd 90, Maple Plain, MN (new location)
Phone: 612-703-7581
Email: Rob.l@naturalshore.com
Web: www.naturalshore.com

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11 Naturally Wild

Phone: 612-922-9279
Email: info@naturallywildflowers.com
Web: www.naturallywildflowers.com
 Purchase at website-listed events.

12 Out Back Nursery

15280 110th St S, Hastings, MN 55033
Phone: 651-438-2771
Email: sales@outbacknursery.com
Web: www.outbacknursery.com

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13 Bluprairie Native Plant Nursery

12975 32nd St, Watertown, MN 55388
Phone: 612-720-7941
Email: jdanie@bluprairie.com
Web: www.bluprairie.com

14 Prairie Moon Nursery

32115 Prairie Lane, Winona, MN 55987
Phone: 866-417-8156
Email: info@prairiemoon.com
Web: www.prairiemoon.com

Purchase online

15 Prairie Restorations Inc

31646 128th St NW, Princeton, MN 55371
 21120 Ozark Court North, Scandia, MN 55012
Phone: 800-837-5986
Email: info@prairieresto.com
Web: www.prairieresto.com

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16 Native Sun Seeds and Plants

St. Croix Valley, MN
Phone: 651-318-8667
Email: nativesunseedsandplants@gmail.com
Web: www.nativesunseedsandplants.com

Purchase online or at website-listed events.

17 Shooting Star Native Seeds

20740 Cty Rd 33, Spring Grove, MN 55974
Phone: 888-983-3670
Email: info@ssns.co
Web: www.shootingstarnativeseed.com

18 Sunshine Gardens Nursery and Landscaping

1286 Shadywood Shores Dr NW
 Pine River, MN 56474
Phone: 218-947-3154
Email: sgardens@uslink.net
Web: www.sunshinegardens.tripod.com

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19 Dragonfly Gardens

491 State Highway 46 Amery, WI
Phone: 715 268-7660
Email: info@dragonflygardens.net
Web: www.dragonflygardens.net

20 Lupine Gardens

880 155th St, Amery, WI 54001
Phone: 715-222-6669
Email: lupinegardens@yahoo.com
Web: www.lupinegardens.com

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21 Kinnickinnic Natives

235 State Road 65, River Falls, WI 54022
Phone: 715 425 7605 or 715 222 6910
Email: whuhnke@dishup.us
Web: www.kinninnatives.com

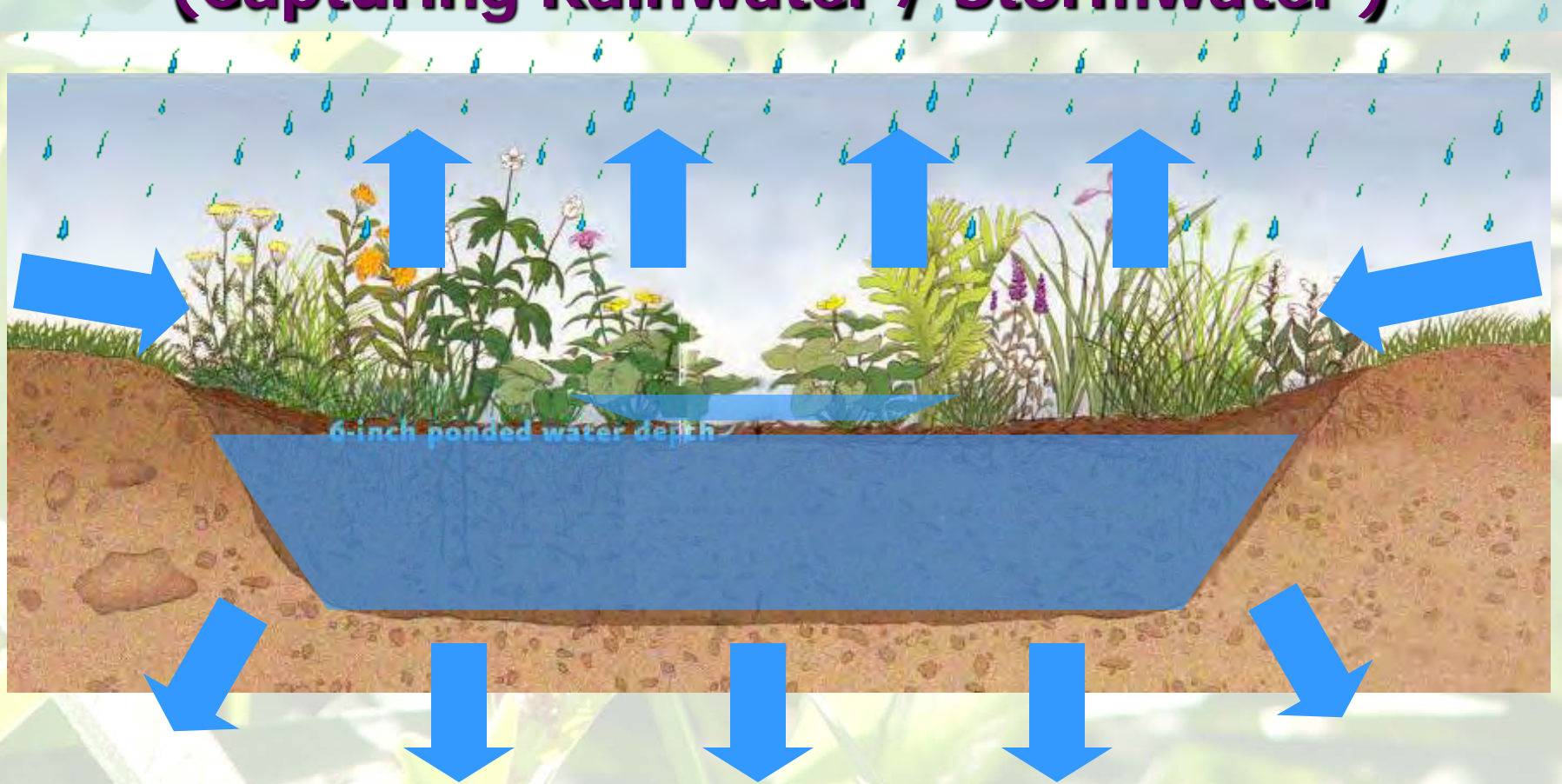
22 Learning Pine Natives

3130 S Camp Amnicon Rd, South Range, WI
Phone: 715-398-5453
Email: phlina@gmail.com

Call for appointment.

Raingardens

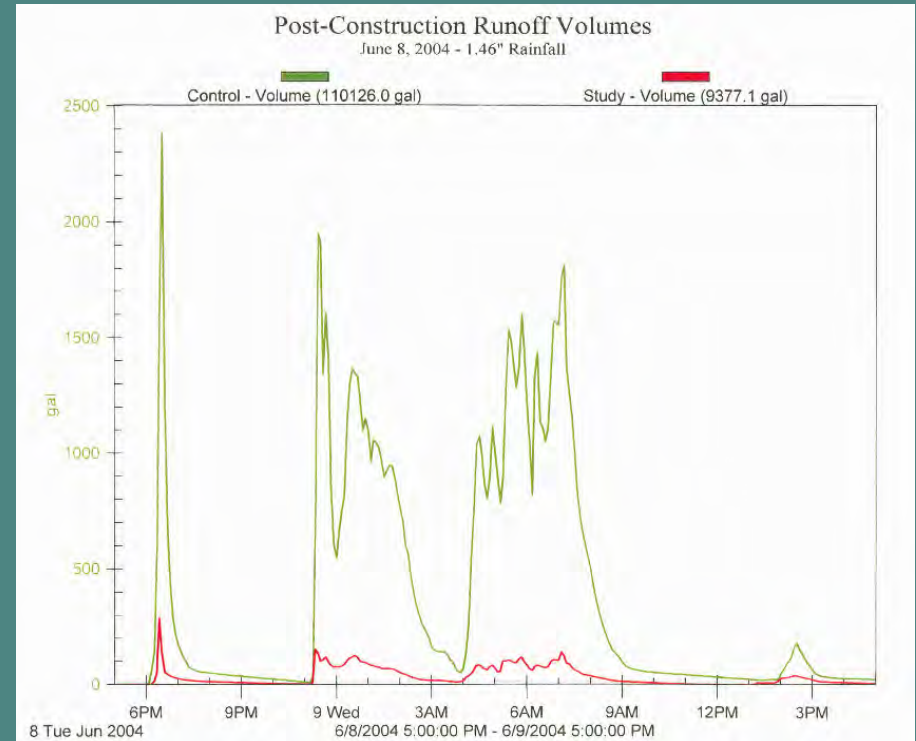
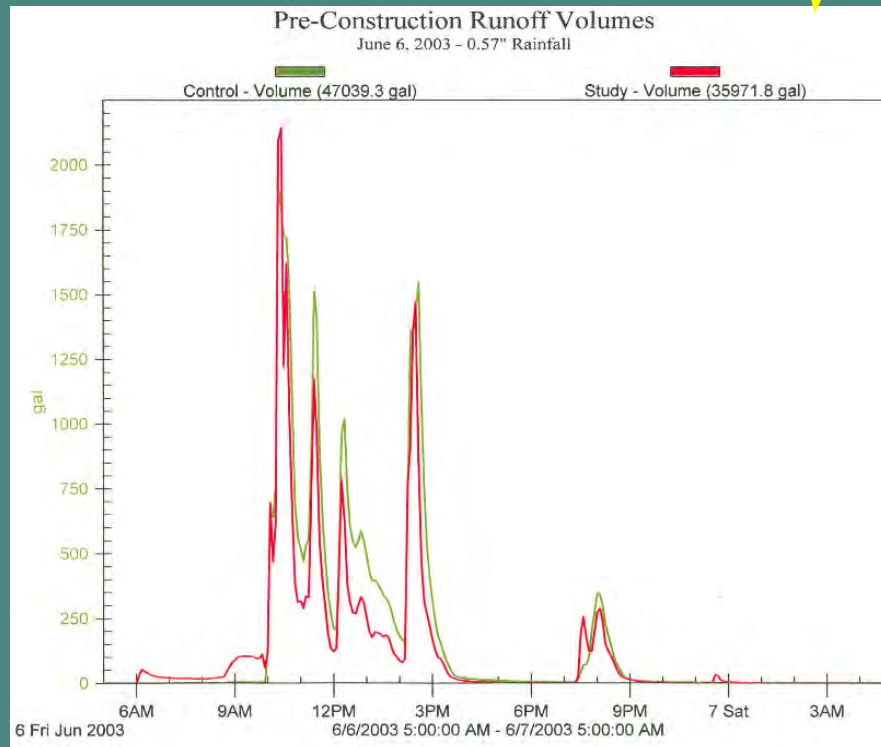
(Capturing Rainwater / Stormwater)

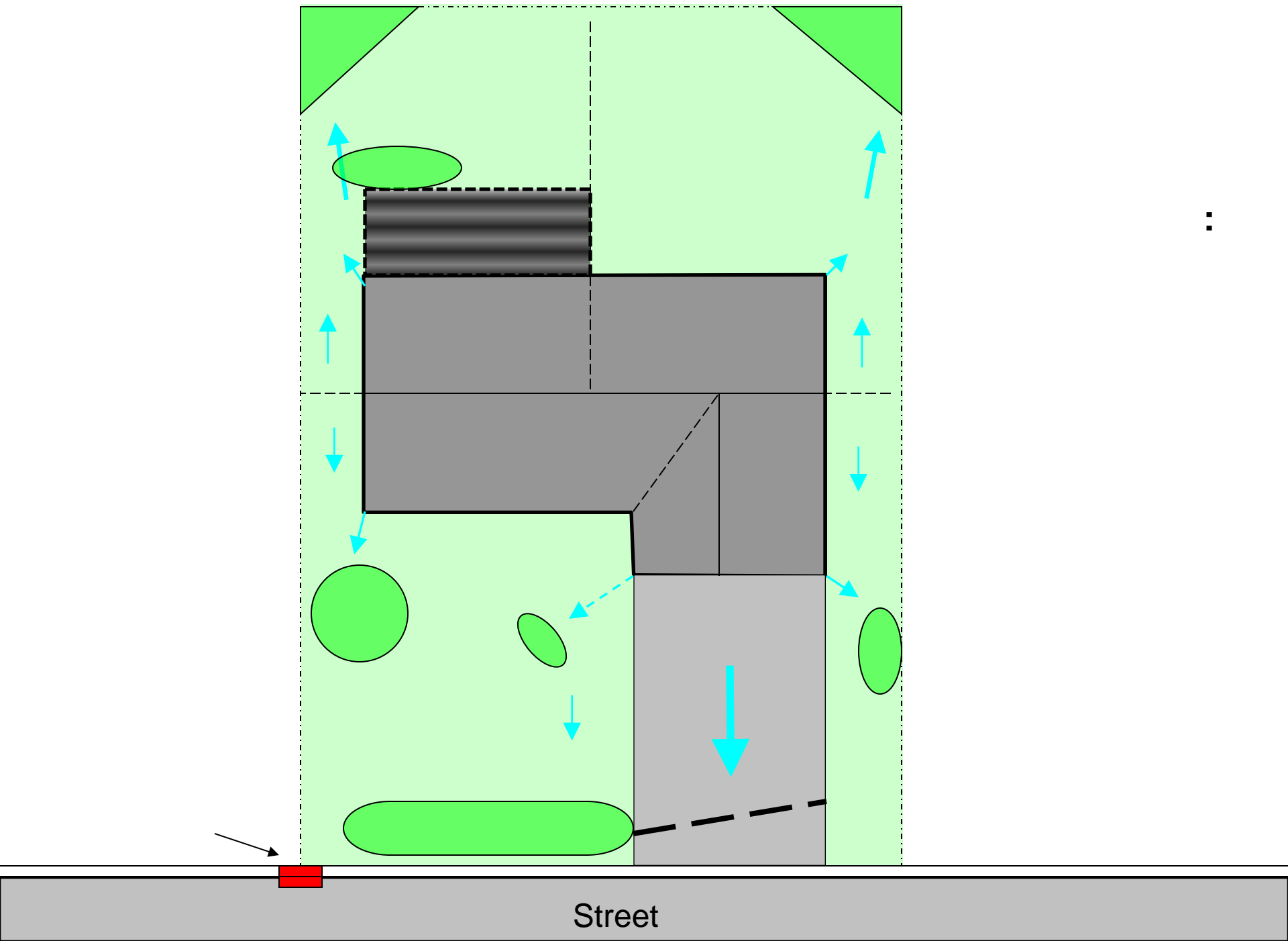


Just like a regular planting, but able to
absorb rainwater and breakdown pollutants

**85% Volume
Reduction!!**

Burnsville Rain Gardens Monitoring Results





Where would you put a raingarden?





Raingarden in Stillwater



Raingarden
Soaks in Runoff
Captures Pollutants
Protects Streams, Wetlands and Lakes
Lake Elmo
City of Elmo

Raingarden in Lake Elmo



Raingarden in Mahtomedi



Raingarden with downspout connection



Dry creek

Brown's Creek Watershed District



Dry creek

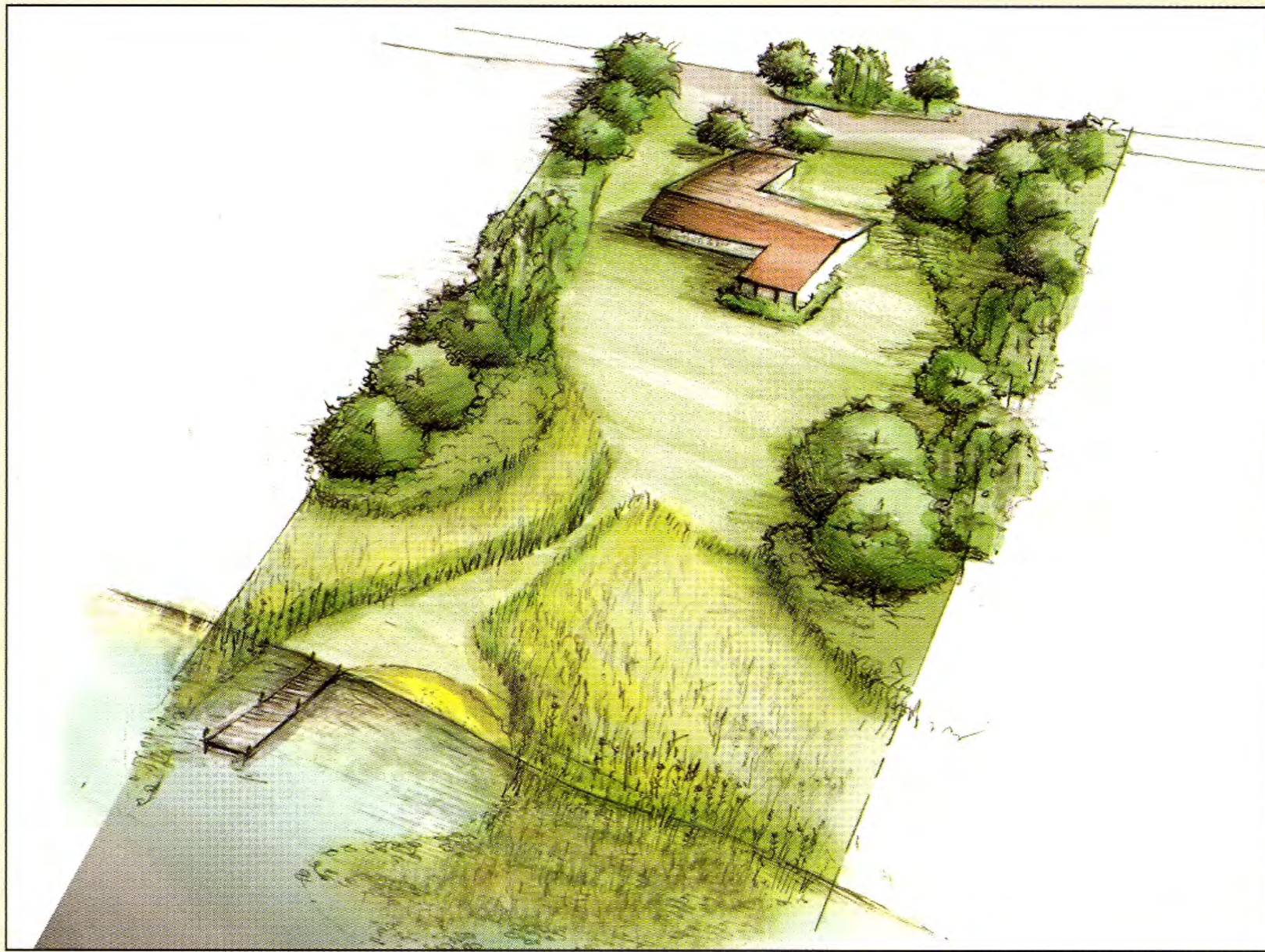
Valley Branch Watershed District



Driveway diversion



Shorelines



Roxanna Esparza

Mowed Vegetation



← Soil loss in 5 years →

Coon Lake



Lake + Lawn = Geese





Natural shorelines are **GOOD**

Shoreland Vegetation

(erosion-control, water quality, wildlife habitat, high plant diversity = high wildlife diversity)

Emergent Vegetation

(water quality, erosion-control & wildlife habitat)

Tree Stumps

(wildlife habitat & water quality)

**Drifted-in Logs
& Snags**

(wildlife habitat, erosion control & water quality)

Wetlands

NO = 1) Draining 2) Filling 3) Altering

- Protected by Minnesota State Law
- Not all wetlands hold water throughout the year. Seasonal wetlands are still protected.
- Some cities & watershed districts require un-mowed buffers around wetlands.
- You are required to get a permit for all projects that impact wetlands, including driveways, culverts, new construction and home additions.
- Contact your SWCD for questions related to wetlands.








Getting started:

1. Anoka, Chisago SWCD or WCD site visits
2. Watershed District cost-share grants

Watershed Management Organizations

Anoka County

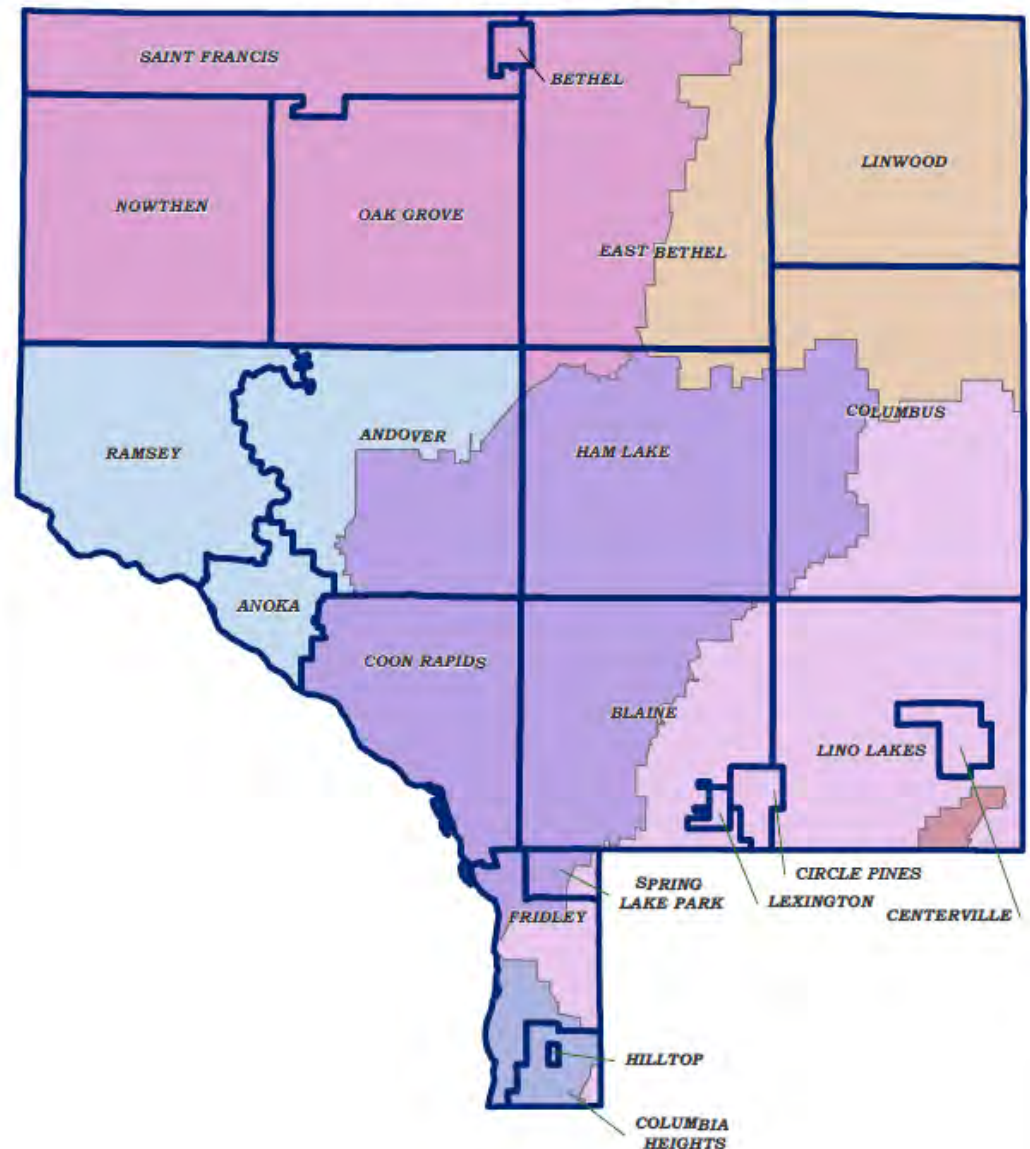
Legend

 City Boundary

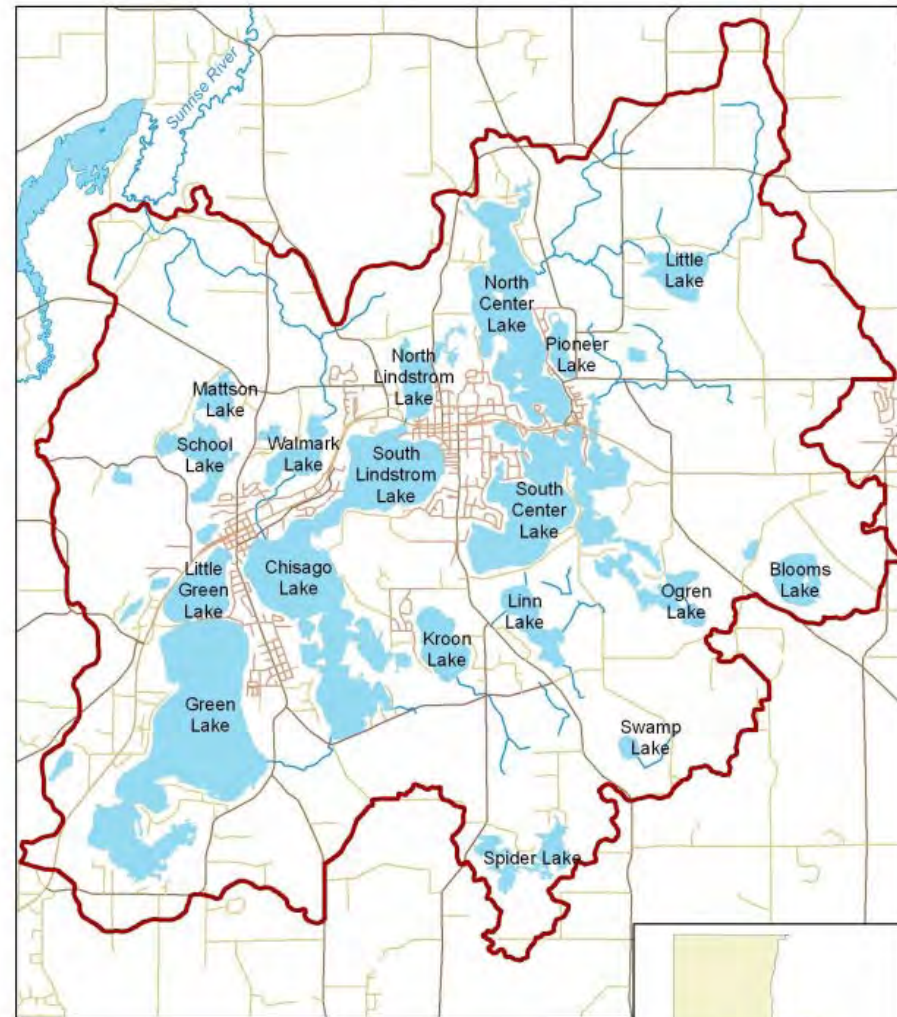
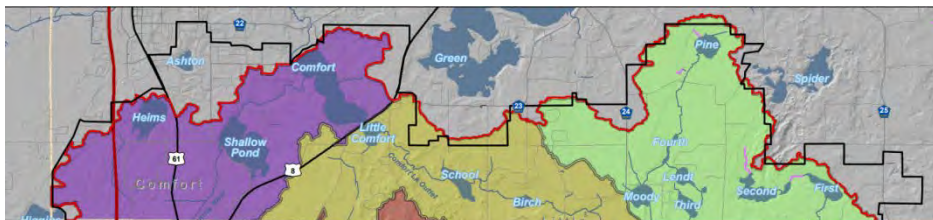
Watershed Districts

-  Sunrise River WMO
Phone: 763-367-7840
-  Coon Creek Watershed District
Phone: 763-755-0975
-  Lower Rum River WMO
Phone: 763-767-5131
-  Vadnais Lake Area WMO
Phone: 651-204-6070
-  Rice Creek Watershed District
Phone: 763-398-3070
-  Mississippi WMO
Phone: 612-463-8780
-  Upper Rum River WMO
Phone: Check Website

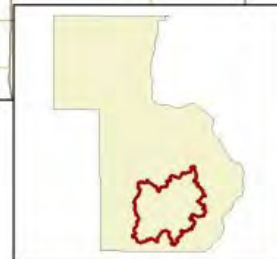
Watershed Districts



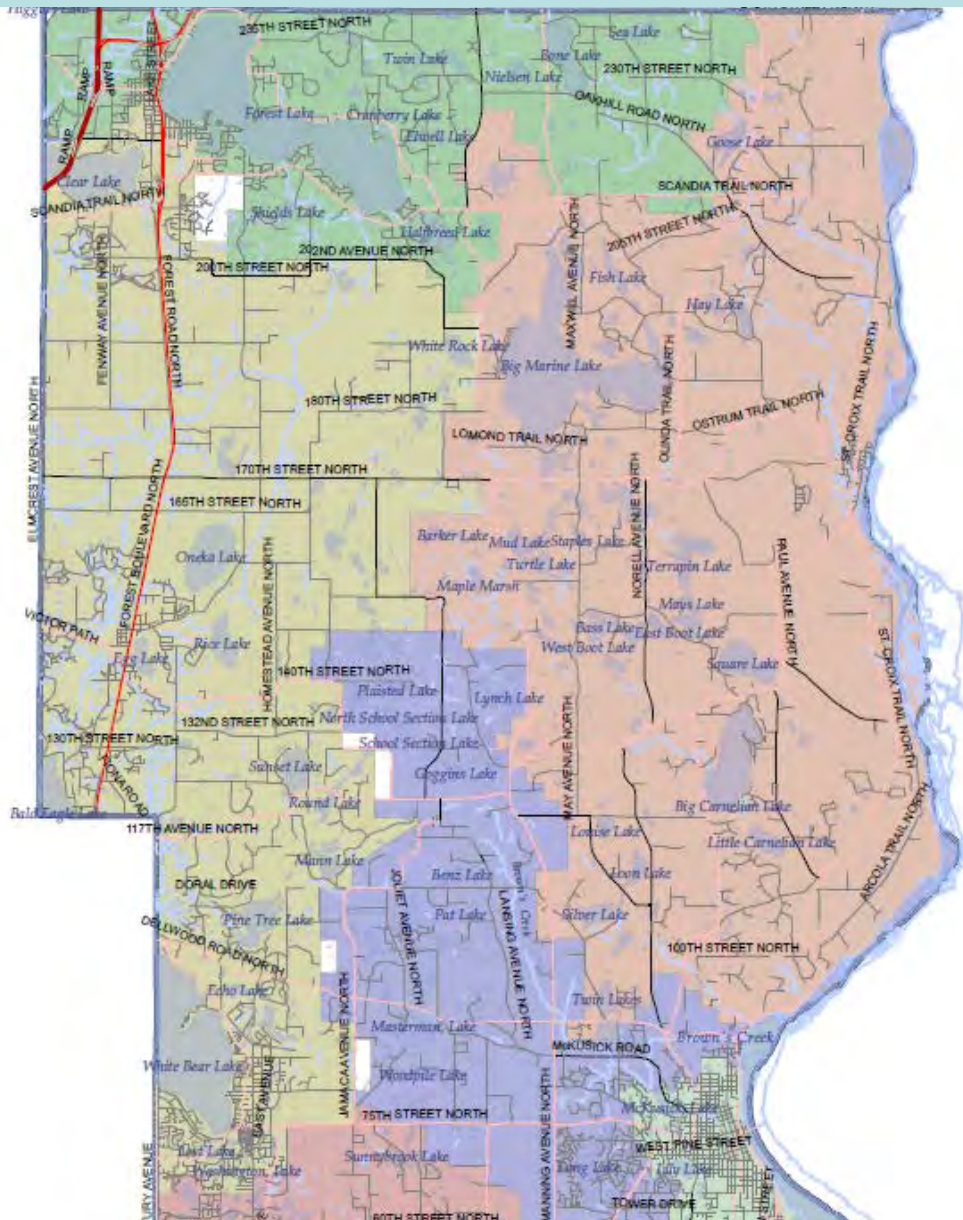
Watershed Management Organizations Chisago County



**Chisago Lakes Chain
of Lakes Watershed**



Watershed Management Organizations Washington County



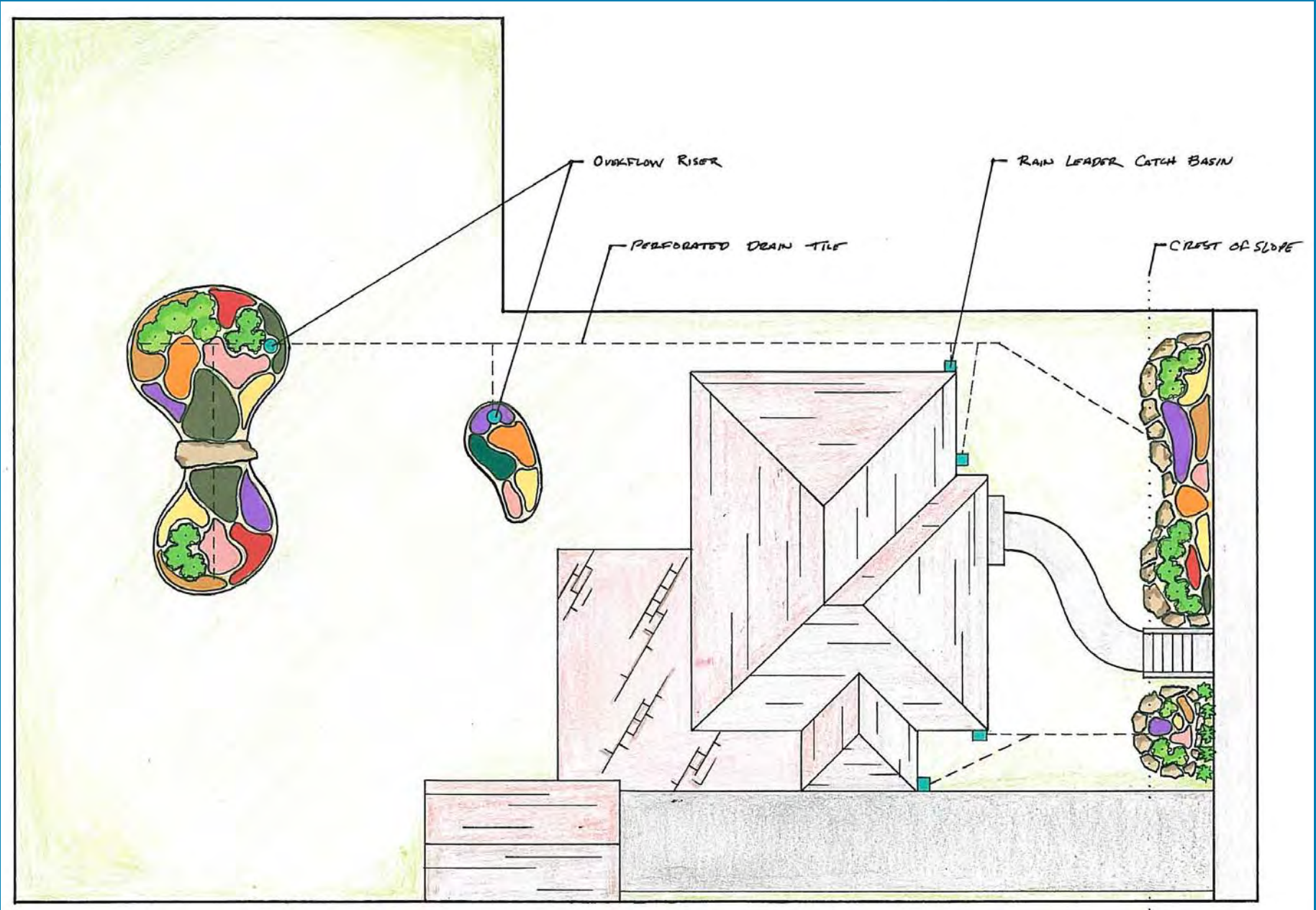
**CARNELIAN - MARINE - ST. CROIX
WATERSHED DISTRICT**



Protecting Your Water Resources



Project planning & Garden design





Questions?

Angie Hong – angie.hong@mnwcd.org, 651-330-8220 x.35

Lauren Haydon – lhaydon@mnwcd.org, 651-330-8220 x.24



Anoka SWCD - www.anokaswcd.org

Carrie Taylor - carrie.taylor@anokaswcd.org, 763-434-2030 ext. 19



Chisago SWCD – www.chisagoswcd.org

Casey Thiel - casey.thiel@mn.nacdnet.net, 651-674-2333



Washington CD – www.mnwcd.org

Comfort Lake – Forest Lake WD – www.clflwd.org

Tara Kline – tkline@mnwcd.org, 651-330-8220 x.28



Carnelian-Marine-St. Croix WD– www.cmscwd.org

Mike Isensee – misensee@mnwcd.org, 651-330-8220 x.22



Rice Creek Watershed District – www.ricecreek.org

Bryan Pynn – bpynn@mnwcd.org, 651-330-8220 x.36