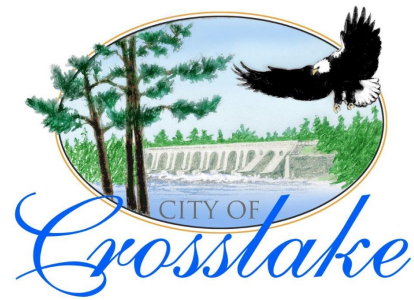




Landscaping for Stormwater

Packet

Included in this packet:

- Frequently Asked Questions (FAQs)
- Impervious Surface Coverage & Landscaping for Stormwater Worksheet
- Blank Stormwater Site Plan
- Permanent Stormwater and Temporary Erosion / Sediment Control BMPs
- Stormwater Plan Examples
- List of Contractors Who Have Attended a Crow Wing County Stormwater Workshop



Steps to Achieving Stormwater Management:

1. Determine size of lot (from tax statement or online GIS)
2. Determine amount of impervious surface coverage using calculation sheet
3. Determine amount of req. stormwater storage area based on amount of impervious
4. Determine location and type of Best Management Practices (BMPs) for permanent treatment of stormwater
5. Draw it up on site plan sheet and submit to P&Z Administrator for review
6. Implement plan as described and notify P&Z Administrator when installation is finished

Don't forget temporary erosion / sediment control - it is required on all riparian projects!

Frequently Asked Questions—Landscaping for Stormwater Management



Land use requirements in Crosslake are governed by the specific provisions of the Crosslake Land Use Ordinance, which is available on our website @ www.cityofcrosslake.org. Article 20 specifies the stormwater management requirements of the Ordinance. Also, please refer to the *Impervious Surface Coverage & Landscaping for Stormwater Worksheet* along with the *Stormwater and Temporary Erosion & Sediment Control BMPs* as part of the *City's Stormwater Packet*. Feel free to contact our office with any questions.

1. **What is stormwater?**

Stormwater is rain water that does not soak into the ground during a precipitation event and typically runs off from hard (or “impervious”) surfaces such as roofs, driveways, sidewalks, patios, and also lawns into nearby receiving water bodies. It is a concern because of the volume of water & sediment washed into downstream water bodies as well as the pollutants (such as gasoline, oils, heavy metals, trash) and nutrients carried by this runoff. Phosphorus is one nutrient often found in stormwater run-off and is especially common on fertilized lawns. In lakes or rivers, 1 pound of phosphorus can produce 300-500 lbs of algae growth.

2. **Why does Crosslake regulate stormwater?**

Stormwater management is one of the most important things that can be done to keep our lakes and rivers clean. The purposes of stormwater management in Crosslake are:

- To protect surface waters and private property from damage resulting from stormwater runoff and erosion
- Ensure the annual stormwater runoff rates and volumes from post-development site conditions mimic the annual runoff rates and volumes from predevelopment site conditions
- Ensure site development minimizes the generation of stormwater and maximizes stormwater treatment and infiltration onsite
- Protect water quality from nutrients, pathogens, toxins, debris, and thermal stress

3. **When is stormwater management required?**

For residential property, the City of Crosslake Land Use Ordinance allows up to 25% of the total lot area, excluding road right-of-way area, to be comprised of hard surfaces (i.e. “impervious”). If the percentage of impervious surface is greater than 15%, a stormwater management plan is required.



over...

This document is intended to assist our customers in answering frequent questions about land use requirements in Crosslake. Please note that this guide is only a summary and not intended as a legal authority on specific land use requirements.

Questions?

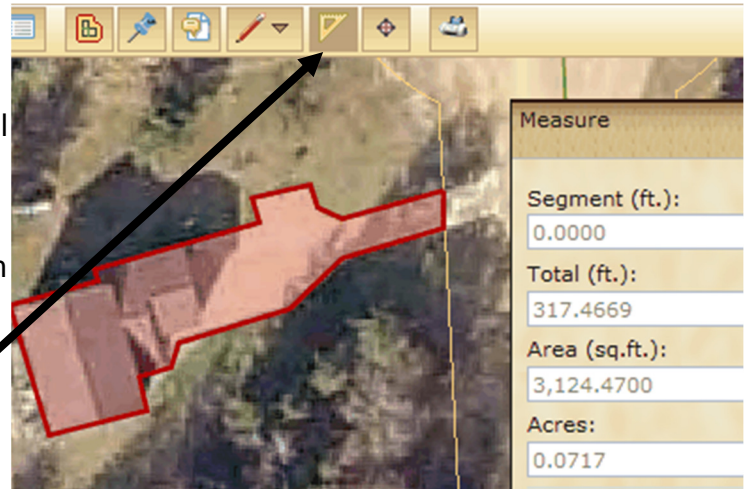
Contact us at (218) 692-2689 or Crosslakepz@cityofcrosslake.org or www.cityofcrosslake.org

Frequently Asked Questions—Landscaping for Stormwater Management

4. **How do I calculate my impervious surface coverage?**

Crosslake has provided an *Impervious Surface Coverage & Landscaping for Storm-water Worksheet* to assist in calculating the amount of impervious surface coverage on an individual lot. In addition, the interactive *Link* GIS mapping application on the Crow Wing County website www.crowwing.us has high-resolution aerial photos along with a measure tool (shown in the graphic to right) that can be used to calculate impervious surface area.

Measure tool



5. **How much stormwater runoff must be treated?**

All Stormwater plans shall be designed for permanent on-site treatment of one inch of stormwater run-off on all impervious surface coverage on the lot. This means that a volume of water equal to one inch multiplied by the area of impervious surface must be treated. For example, 2500 sq. ft of impervious / 12 (in/ft) = 208.3 cubic ft of storage. To store 208 cubic ft means that a 12" deep stormwater BMP would also be 208 square ft in size. A 6" deep BMP would need to be twice as large (416 sq. ft). This information can be computed using the *Impervious Surface Coverage & Landscaping for Storm-water Worksheet* found in the Crosslake *Stormwater Packet* and on the Crosslake website www.cityofcrosslake.org

6. **What methods of treatment are allowed?**

Crosslake prefers that stormwater runoff be managed onsite where feasible. Berms, rain gardens, infiltration basins, and swales are often easier to install, less expensive, look better, and can work as well as ponds, pipes, and larger conveyance systems. In addition, directing runoff to existing natural depressions, drainage ways, and vegetated soil surfaces is a simple way to treat runoff and prevent erosion. A number of different approaches may be necessary given lot constraints and topographic limitations.

7. **What is required on a stormwater plan?**

The Crosslake *Impervious Surface Coverage & Landscaping for Stormwater Worksheet* includes room for the applicant to draw the existing and proposed impervious surfaces along with contours, drainage arrows, and the location of stormwater BMPs (along with sizes and setback distances). Existing natural stormwater treatment areas should also be shown and can be included in your plan. Example plans are also available in the *Stormwater Packet*. All plans are approved by the Crosslake Planning and Zoning Administrator. Follow-up inspections will be conducted to verify that they are effectively implemented.

Protect your investment!!!

BMP's used in conjunction with your building plans often can be incorporated as a landscape feature to enhance the aesthetics of your property.



Questions?

Contact us at (218) 692-2689 or Crosslakepz@cityofcrosslake.org or www.cityofcrosslake.org

Landowner / Parcel #: _____

Date: _____

Lot Impervious Surface Coverage & Landscaping for Stormwater Worksheet

Please use the table below to calculate your impervious surface coverage. Impervious coverage is limited to 25% of the total lot area. Calculate out all that apply to your situation. If a structure has odd dimensions or if using to size stormwater basins, multiple rows / sheets may be needed. If total imp. of irregular structure or driveway is known, just multiply by 1.

<u>Existing Structures</u>	<u>Length (ft)</u>		<u>Width (ft)</u>		<u>Total (in sq. feet)</u>
House, garage, shed Boathouse Greenhouse Other (Dog Kennel, etc.)	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
<i>Driveways* & Landscaping:</i>					
Driveway*, Parking Area, Apron, Boat Ramp, Sidewalk, Patio, Paving Stones, Landscaping (incl. plastic), Other	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
<i>Total Existing Impervious</i>					(sq ft)
<u>Proposed Structures</u>					
House, garage, shed Boathouse Greenhouse Other (Dog Kennel, etc.)	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
<i>Driveways* & Landscaping:</i> <i>*Assumes a 12' wide driveway unless evidence to the contrary</i>					
Driveway*, Parking Area, Apron, Boat Ramp, Sidewalk, Patio, Paving Stones Landscaping (incl. plastic), Other	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
	(ft)	X	(ft)	=	(sq ft)
<i>Total Proposed Impervious</i>					(sq ft)
Total Lot Area (sq. ft.) =		Total existing Impervious		=	(sq ft)
		Total w/new Impervious		=	(sq ft)
		% existing impervious		=	%
		% w/new impervious		=	%

Simple Calculator for Approximating Size of Stormwater Practice & Amount of Phosphorus Reduction:

Total w/ new impervious:			Storage volume:		Bottom size (sq ft) of infiltration area by depth						
			Gal / Cu ft (= gal / 7.48)		3"	6"	9"	12"	15"	18"	
	x	0.623 / 0.083 Gal / Cu ft	=	Gal	Cu ft	cu ft x 4	cu ft x 2	cu ft x 1.33	cu ft x 1	cu ft x 0.8	cu ft x 0.67
Total exst imp	=		x	0.0000366	=	Existing phosphorous loading (lbs/yr)					
Tot w/new imp	=		x	0.0000366	=	Phosphorous reduction w/ stormwater mgmt					
For rain barrels, use this formula to determine size/amount needed:				Roof area (sq ft)		x	0.5625	=	Gallons generated from a 1" rain event		

Landowner / Parcel #: _____

Date: _____

Stormwater Site Plan

Site Plan Checklist:

- ☐ North Arrow ☐ Scale
- ☐ Impervious Areas (Driveways, structures, etc.)
- ☐ Contours or drainage arrows
- ☐ Location of temporary erosion / sediment control
- ☐ Location of permanent stormwater management areas
- ☐ Distances of permanent stormwater areas to nearest structure, septic, and well

Reminders:

Do NOT compact the soils in proposed rain garden
Side slopes should be 3:1 or flatter (4:1 preferred)
Setbacks from wells, septic, & buildings may apply
Gopher One: Call 811 or www.gopherstateonecall.org

Stormwater Best Management Practices (BMPs)



Managing our rain water runoff (i.e. stormwater) is the best way to help keep our surface and groundwater resources clean. Minnesota law requires that cities consider stormwater management when issuing land use permits. In Crosslake. If a stormwater plan is required, it should be designed for permanent on-site treatment of 1 inch of stormwater runoff on all impervious surfaces on the lot. Where feasible, Crosslake recommends techniques that promote infiltration and use of existing natural areas.

Rain Garden



Gutters / Rain Barrels



Stormwater Pond (Wet Sedimentation Basin)

- Sediment / pollutant removal achieved from settling
- For larger sites
- Engineering Required



Infiltration Basin

- Soils typically amended to allow for infiltration of stormwater
- Inlet / outlets should be stabilized



No Mow Vegetated Buffer

- Prevents nutrients from entering surface water
- Provides fish & wildlife habitat
- Can be enhanced with native flowers for aesthetics



Berms / Ice Ridges

- Captures runoff before entering surface water
- 6 to 12 inches in height for a constructed berm
- Historic ice ridges with vegetation should remain



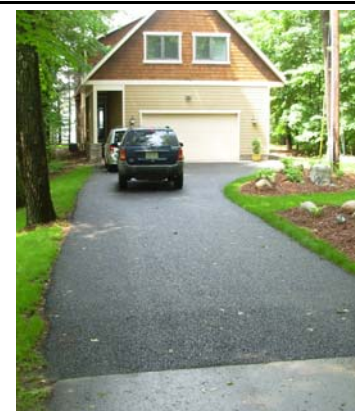
Vegetated Swale

- Used to convey runoff from impervious surfaces to treatment areas such as rain gardens or basins



Pervious Pavement

- Engineering needed
- Maintenance plan required to get credit as pervious



Temporary Erosion & Sediment Control BMPs



Temporary erosion and sediment control measures are designed to help hold onsite soils in place and protect near-by receiving waters during construction. BMPs are required for all riparian projects in Crosslake. They should be removed once vegetation is established and the site is stable. Below are several commonly used BMPs in Crosslake. Contact your supplier for proper installation techniques.

Filter Logs

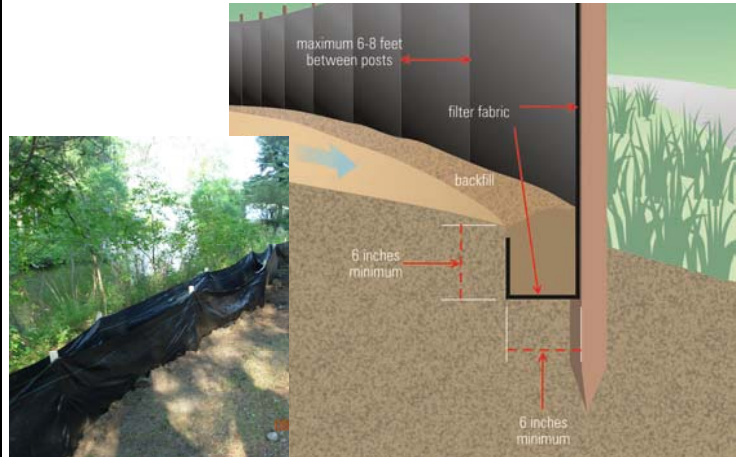


- Captures sediment
- Used in ditches and on slopes to protect downstream receiving waters



Silt Fence

- Must be installed below grade (see diagram below)
- Clean out when sediment reaches 1/3 height of fence



Straw Mulch

- Disked / anchored to soil
- Can be mixed with tackifier and used in hydro-mulch application



Erosion Control Blanket

- Great for aiding in vegetation establishment on slopes or in drainage areas with low velocity.



Rock

- Entrance / exit pads
- Ditch checks
- Culvert stabilization



Cat Tracking (horizontal slope grading)

- Prevents gully erosion
- Keeps seed / mulch in place



Vegetation (Sod, Seed, Hydro Seeding, etc.)



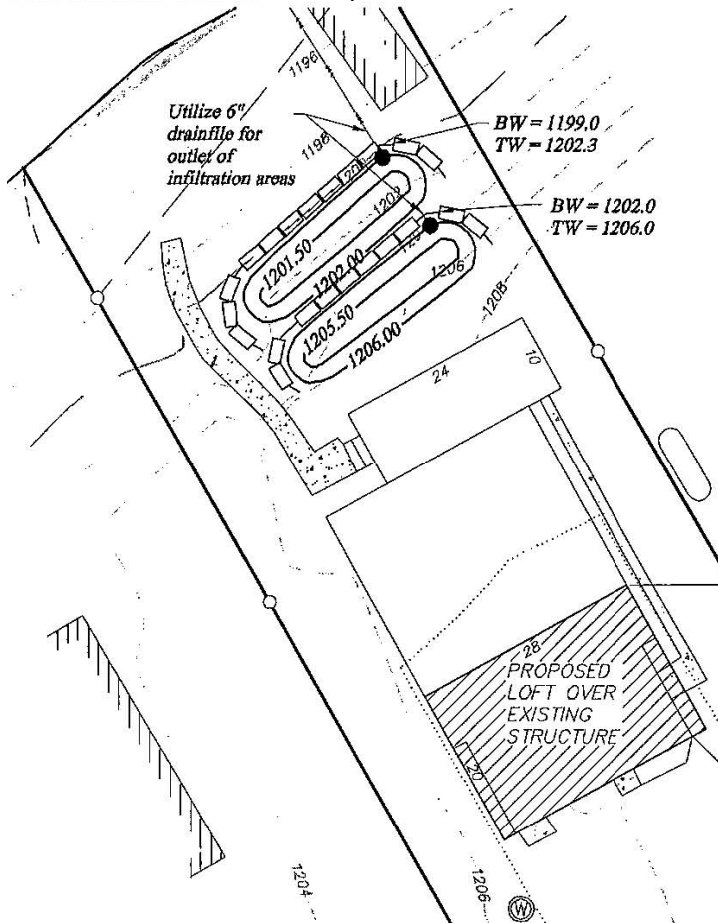
Stormwater Plan Examples



Project Details:

BMP: Rain Garden

Impervious surface = 1488 sq. ft
 Required stormwater storage volume = 124 cu. ft
 Required storage area = 248 sq. ft (for a 6" depth)
 Actual storage area = 448 sq. ft (to top of side slope)
 BW = Bottom of wall, TW = top of wall



Profile View



Project Details:

BMP: Infiltration Basin

Impervious surface = 5689 sq. ft
 Required stormwater storage volume = 474 cu. ft
 Required storage area = 569 (for a 10" depth)
 Actual storage area = 1000+ sq. ft (to top of side slope)

Existing Impervious
 Buildings 1376
 Driveways 2667
 Walkways 180

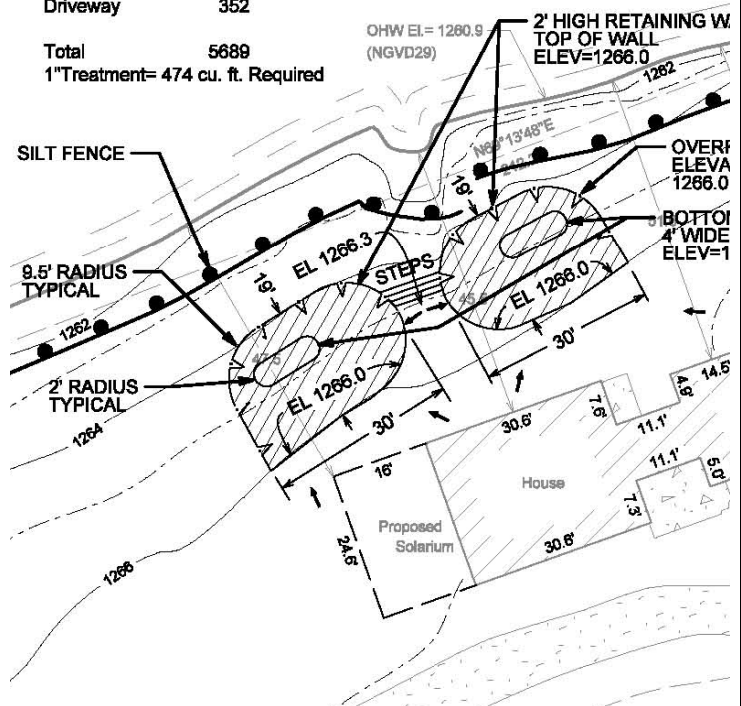
INFILTRATION BMP
 VOLUME = 478 CU FT
 10" DEEP BMP
 SIDESLOPE = 3:1 MAX

New Impervious
 Garage 720
 House Addn 394
 Driveway 352

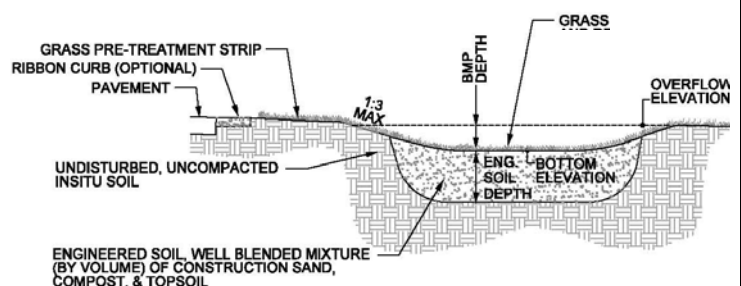
Total 5689
 1" Treatment = 474 cu. ft. Required

Tame Fish

RD Lake



Profile View



Date: 5/1/2014

Hand-drawn site plan for a residential property showing rainwater management features. The plan includes a house with a garage, deck, and well, surrounded by three rain gardens (#1, #2, #3) and a permeable patio. A driveway, sidewalk, and downspout are also shown. The property is bordered by a lake with 15-foot no-mow buffers. A north arrow is in the top left. Calculations for rain garden storage are in the top right.

Rain Gardens:
 ImperVIOUS Surface = 6650
 Required storage = 552 ft³
 Required storage = 552 ft³ (1' depth)
 Actual storage = 600 ft³

Site Features:
 - Rain Garden #1: approx 100 ft²
 - Rain Garden #2: approx 100 ft²
 - Rain Garden #3: approx 300 ft²
 - Permeable patio w/ permeable gaps: approx 115 ft²
 - 15' NO-MOW Buffer (two locations)
 - LAKE
 - DRAIN FIELD
 - DRIVEWAY
 - SIDEWALK
 - GARAGE
 - HOUSE
 - DECK
 - WELL
 - DOWNSPOUT
 - CUT OUT EXISTING ASPHALT TO INSTALL RAIN GARDEN
 - REPAIR EXISTING WALL
 - REPLACE EXISTING SIDEWALK WITH A FLAGSTONE PATH WITH PERMEABLE GAPS

<u> </u> North Arrow	<u> </u> Scale	<u> </u> Do NOT compact
<u> </u> Impervious Areas (Driveways, structures, etc.)		<u> </u> Side slopes should
<u> </u> Contours or drainage arrows		<u> </u> Setbacks from wet
<u> </u> Location of temporary erosion / sediment control		<u> </u> Gopher One: Call
<u> </u> Location of permanent stormwater management areas		
<u> </u> Distances of permanent stormwater areas to nearest structure, septic, and well		

Do NOT compact the soils in proposed rain garden
Side slopes should be 3:1 or flatter (4:1 preferred)
Setbacks from wells, septics, & buildings may apply
Gopher One: Call 811 or www.gopherstateonecall.org

NORTH LONG LAKE

Lake I.D. No.: 18-372

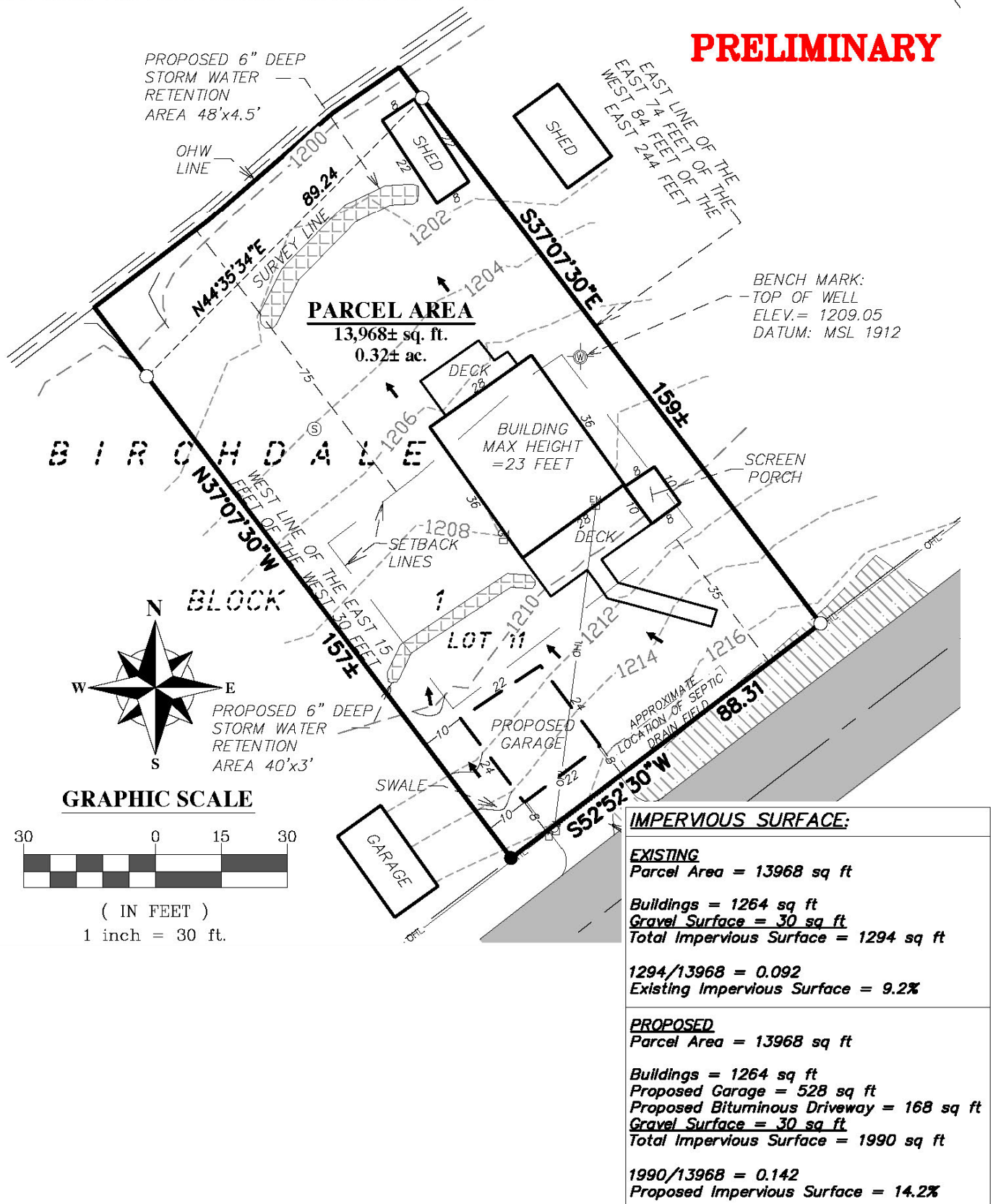
DNR Lake Classification: General Development (GD)

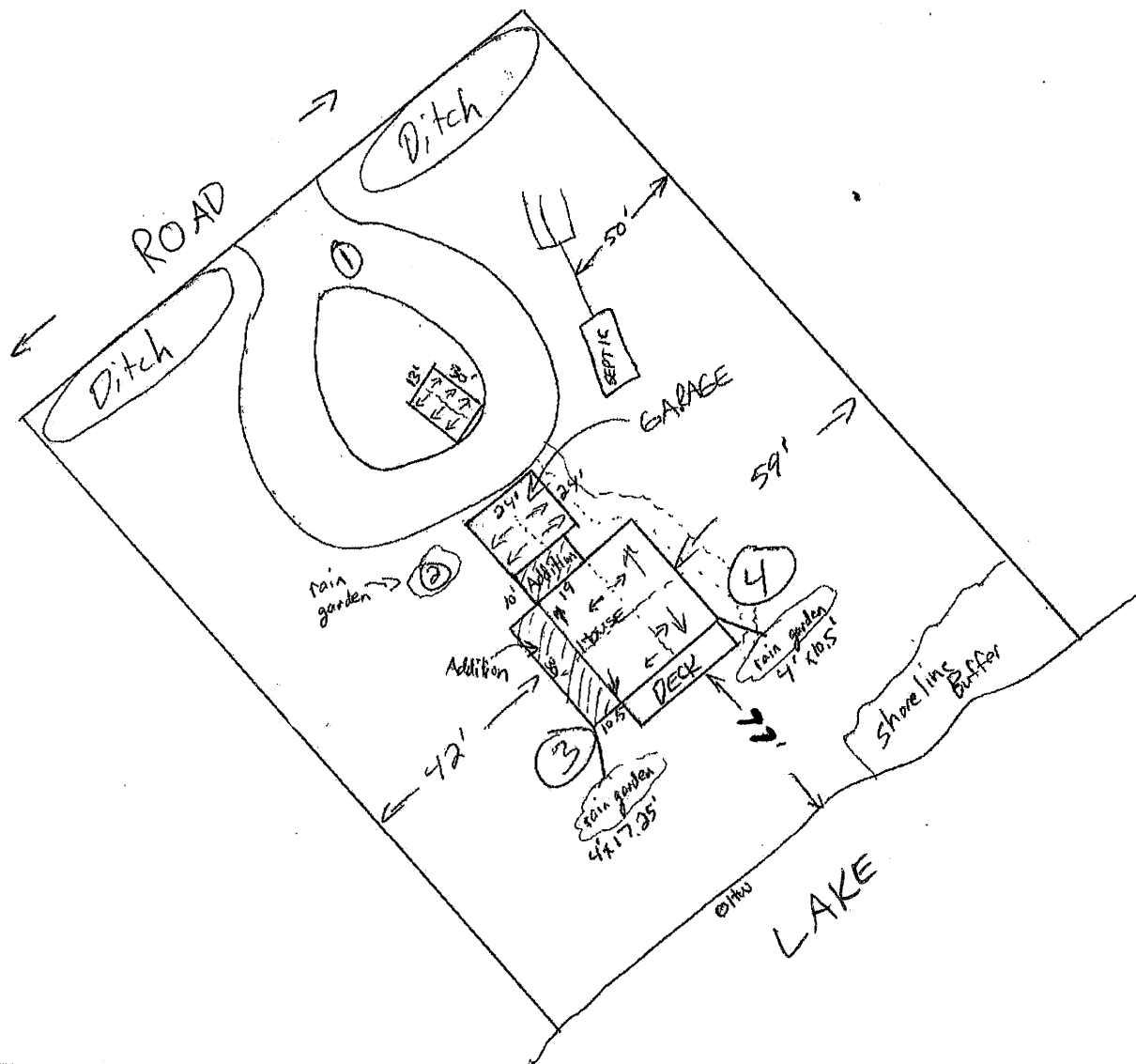
Date: January 24, 2014

Top of ice elevation = 1297.66 feet (MSL 1912)

MNDNR Ordinary High Water Elevation = 1298.6 feet (MSL 1912)

PRELIMINARY





Drainage Area	Impervious Sq ft	Cubic ft req. storage x0.0833	Storage Sq ft based on			Treatment Method
			6"	12"	24"	
1	6060	505	1010	505	252	None use current ditch & natural depression
2	766	64	128	64	32	12" deep 8' x 8' rain garden
3	830	69	138	69	35	12" deep 4' x 17.25' rain garden
4	510	42	84	42	21	12" deep 4' x 10.5' rain garden

Pelican Lake.

100'

94"

This line represents top of grade, from here if falls to lake and beach sand the rest of way to lake, and it falls back towards road from here

crosshatch pattern
is existing building
the rest is new
addition

this 6" depression and
swall will hold 336
cubic feet and direct
overflow down hill
away from adjacent lot

Temporary Silt
Fence for phase
2 2013

4" swall and depression to collect and hold water with overflow going to Garage the lot is flat across flowing towards the road and will hold 572 cubic feet

Will use rain gutter on lake side to direct water from roof to swall on Northwest corner of house

Scale is $7/8" = 25'$

365

Concrete sidewalk

Gravel drive way

672 sf

168 sf

14-

2

Natural ditch
holding pond
up to a
couple of feet

103'

1000 sf x 2' + 2000 cubic feet

-80-

List of Attendees at Crow Wing County Shoreland and Stormwater Workshops

City	Name (Primary)	Company	Address	Phone #	Email Address	Shoreland	Stormwater
Landscapers & Builders							
Backus	Daniel Dix	Woodspirit Gardens	162 State Hwy 371	218-947-3663	ddix@tds.net	x	x
Baxter	Todd Dechaine	Kuepers Construction	14643 Edgewood Dr, Ste 115	218-829-0707	toddd@kuepers.com	x	
Baxter	Brent Gunsbury	Bercher Design & Construction	7676 Design Rd, Suite 100	218-829-1381	brent@bercher.com	x	
Baxter	Mark Matthews			218-839-0401	markmatt63@hotmail.com	x	x
Baxter	Nor-Son	Steve Rose	7900 Hastings Rd	218-828-1722	steve.rose@nor-son.com	x	x
Brainerd	Adam Dewey	YardCreations	18381 State Hwy 371	218-828-4130	adam@yardcreations.net	x	x
Brainerd	Harold Lachelt	Landscape Specialists	16707 State Hwy 371	218-820-9842	hkl@clearwire.net	x	x
Brainerd	Mike	Landsburg Landscape Nursery	16460 State Hwy 371	218-829-5519	mike@landsburnnursery.com	x	
Brainerd	Brett Olsen	Olsen Groundeffex	13968 Trails End Lane	218-851-3135	olsengroundeffex@ymail.com	x	x
Brainerd	Chris Peterson	Green Blade Lawn Care	4817 Gull Lake Dam Rd	218-831-8546	greenbladelawncafe@hotmail.com	x	
Brainerd	Joe Ranweiler	B-Dirt	521 Charles St, Ste 102	218-820-5736	joe@b-dirt.com	x	x
Brainerd	Justin Rudolph	Landwerx		218-831-3435	landwerx@hotmail.com	x	
Brainerd	Ryan Tollefson	Pro-Scape Inc	20447 County Rd 3	218-828-8067	ryan.tollefson@proscapbrainerd.com	x	
Brainerd	Angie Zetah	A & D Landscaping	9620 50th Avenue	218-851-6348		x	x
Crosslake	Trevor John	LA Lawn Care & Landscape	32786 County Rd 3	218-692-1107	office@lalawncare.net	x	
Crosslake	Eric Larson	Remwhirl	33816 County Rd 3	218-692-6700	eric@remwhirl.com	x	x
Crosslake	Charlie Miller	Lands End Development	13718 County Rd 36	218-316-1101	charlie@landsenddev.com		x
Crosslake	Brad Swenson	Swenson Excavating & Landscape	14618 Whitebirch Ln	218-692-2167	swensonlandscaping@crosslake.net	x	x
Deerwood	Jesse Kunz	Greenspaces Property Care	20505 County Rd 10	218-820-3849	greenspacespropertycare@gmail.com	x	x
Ironton	Derek Haukos	Majestic Creations Landscape	19103 County Rd 102	218-330-0228	derek.haukos@yahoo.com	x	x
Ironton	John Laughlin	Laughlin Grounds Landscape	16594 Rowe Rd	218-546-7782	work@laughlinlandscape.com	x	x
Merrifield	Tim Foote	Foote Construction	26423 Old Mill Rd	218-821-8533	footeconstruction@hotmail.com	x	x
Merrifield	Charlie Haukos	Yardmen Greenhouse	County Road 3	218-829-7482		x	
Merrifield	Bill Henry	Gizmo Creations	13483 Ossipee Rd	218-765-4113	drbodkin@yahoo.com	x	
Milaca	Jared DeBoer	Wexco Environmental	6074 Keystone Rd	320-983-2447	jared@septiccheck.com	x	x
Nisswa	Andrew Raisanen	Backyard Reflections	5370 Merrill Ave	877-365-4034	andrew@backyardmn.com	x	x
Pequot Lakes	Rob Abear	Pequot Lakes Sand & Gravel	6110 County Rd 16	218-543-6038	mail@pequotsand.com	x	
Pequot Lakes	Mike Baker	Baker Landscape Construction	PO Box 334	218-820-2975		x	
Pequot Lakes	Chuck Butcher	Rollin' Rock Landscape	32770 County Rd 39	218-543-6309	chuckrrl@charter.net	x	x
Pequot Lakes	Reid Price	The Woods Landscaping	PO Box 727	218-568-4332	reid@thewoodslandscaping.com	x	x

Pequot Lakes	Bruce Zeman	Lakeside Lawn & Landscape	9166 Schaller Rd	218-543-6726	1982III@uslink.net	x	x
Pillager	Jerry Hicks	Oak Hill Landscape	12362 51st Ave SW	218-821-4821	oakhill-landscape@hotmail.com	x	
Pillager	Rob Schreiber	Green Leaf Outdoor Services	PO Box 171	218-838-4571	schreebs@brainerd.net	x	
Pillager	Michael Schwarze	Mike's Tree Company	1400 Oak Ridge Road SW	218-825-8207	mike@mikestreecompany.com		x
Pillager	Ted Sullivan	Northern Tree & Landscape	5298 132nd St SW	218-746-3551	TSBS@brainerd.net	x	
Pine River	Bonnie Hiniker	Sunshine Gardens Landscape Nursery	1286 Shadywood Shores Dr NW	218-947-3154	sgardens@uslink.net	x	x
Pine River	Marty Humphrey	MN Landscaping & Habitat	2458 40th Ave SW	800-996-5760	mlh-llc@tds.net , martylh@tds.net	x	x
Pine River	Phillip Swenson	North Fork Boulders & Excavating	5253 55th Ave SW	218-838-3383	northforkrocks@yahoo.com	x	x
Excavating & Septic Contractors							
Aitkin	Glenn Boyd	Boyd Excavating	42509 282nd St	218-820-1072		x	
Aitkin	Mike Johnson	Johnson Sewer & Exc	34604 395th Place	218-927-2272	jseincorp@yahoo.com	x	
Aitkin	Mark Ritter	Ritter Sewer and Excavating	34753 398th Place	218-927-4125	rittersewer@hotmail.com	x	x
Backus	Bruce Eveland	Bruce Eveland	260 44th Ave SW	218-947-3333		x	x
Baxter	Tom, Cody Kosec	Kosec Construction	PO Box 2794	218-838-7602	kosecconstruction@yahoo.com	x	x
Brainerd	Anderson Brothers	Anderson Brothers	PO Box 660	218-829-1768	www.andersonbrothers.com		x
Brainerd	Bob Bartel	B & T Sales	912 12 St SE	218-829-6937		x	x
Brainerd	Al DeChantal	DeChantal Excavating	PO Box 315	218-828-4636	adechantal@gmail.com	x	x
Brainerd	Steve Fleischhacker	Palimino Sewer Services	16207 Palomino Ln	218-828-3389	palominosewer@gmail.com	x	x
Brainerd	Justin Gerdes	Gerdes & Son's	14456 Laurian Ln	218-820-1762	gerdesson@yahoo.com	x	
Brainerd	Joel Jacobson	Jacobson Excavating & Landscape	13252 State Hwy 18	218-851-1818	jacobson.llc@gmail.com	x	x
Brainerd	Edwin Klause	Ground Breakers LLC	3224 County Road 8	218-764-2681		x	x
Brainerd	LouAnn Maschler	Maschler Septic Consultants	16333 Co Rd 142	218-839-3042	louann@dialomni.com	x	x
Brainerd	Dave Neiman	Blakeman Inspection Services	19517 Love Lk Rd	218-820-0593	bisi1@charter.net	x	x
Brainerd	Randy Peterson	Peterson Excavating	18241 Doe Trl	218-828-0066	colletteandrandy@q.com	x	
Brainerd	Curt Snidarich	Dirt Docter	3076 Co Rd 113	218-851-9839		x	x
Brainerd	Dave Sustercich	Great River Excavating	10728 Blue Jay Trail	218-839-4764	greatriverex@charter.net	x	x
Brainerd	Garth Tretter	Tretter Trucking	15461 Ironwood Lane	218-829-7645			x
Breezy Point	Josh Dingman	Dingman Brothers Excavating	8747 Southview Dr.	218-820-0181	jjdingman@charter.net		x
Breezy Point	Shawn Wagement	Shawn Wageman	7695 Winter Trl	218-851-6487	shawn21@tds.net	x	x
Deerwood	Tom Antonsen	Antonsen Excavating	17633 State Hwy 6	218-534-3355	antonsenexc@gmail.com	x	x
Deerwood	Jerry Hutchison	Hutchison Excavating	20511 Linberg Rd	218-534-3922	hutchyex@centurylink.net	x	x
Fort Ripley	Dale DeRosier	Dales Excavating and Slurry Seal	3791 Legend Lane	218-829-7703		x	x
Hackensack	Rick Smith	Northland Septic	PO Box 115	888-454-4999	northlandseptic@tds.net	x	x

Hillman	Gary Hoffman	Hoffman Gravel & Excavating	26794 Hoffman Road	320-277-3737	hge@brainerd.net	x	x
Lakeshore	Steve James	Moes Contracting & Landscaping	9507 Anderson Rd	218-330-1054	moescontracting@gmail.com	x	x
Manhattan Beach	Isaac Wannebo	Wannebo Excavating	12015 County Rd 1	218-543-4544	wannebo@tds.net	x	x
Merrifield	Matt Borden	Borden Excavating	13110 Borden Rd	218-765-3397	info@bordenexcavatinginc.com	x	x
Merrifield	Martin Joyce	MJ Septic Service	27604 Co Road 3	218-820-2621	joycem@brainerd.net	x	x
Merrifield	Gary Norwood	Norwood & Son Excavating	14274 Co Rd 116	218-820-0712	nynor@brainerd.net	x	x
Merrifield	Shawn Pratt	Pratt's Affordable Exc.	23069 Swan Ln	218-465-4244	slpratt@brainerd.net	x	x
Milaca	Brian Koski	Septic Check	6549 Keystone Road	320-993-2447	brian@septic-check.com	x	x
Nisswa	Mike Rardin	Rardin Excavating	10980 County Rd 77 SW	218-828-0653	Rardinexcavating@yahoo.com	x	
Nisswa	Dave Rasinski	Rasinski Excavating	10775 Pinewood Dr. SW	218-825-8609	rasinexc@brainerd.net	x	x
Nisswa	Paul Smith	Paul Smith Contracting	P.O. Box 887	218-838-4369	paulsmithcontracting@hotmail.com	x	x
Nisswa	Brian Stumvoll	Stumvoll Excavating	PO Box 201	218-963-4793	stumvollex@gmail.com	x	x
Outing	Dan Switzer	Cass County Construction	PO Box 74	218-792-5666	ccconst@brainerd.net	x	x
Outing	Gene Williams	Williams Construction	925 State Hwy 6	218-792-5354	lugene@brainerd.net	x	
Palisade	Michael O'Keefe	A.M. & Associates	29465 442nd Ln	218-768-4430	okeefe.mike@yahoo.com	x	
Pierz	Steve Waytashek	Steve's Backhoe	29817 213th St	320-468-2446		x	
Pine River	Ray Schrupp	Schrupp Excavating	3003 36th St SW	218-587-4038	schruppex@uslink.net	x	x
Suppliers							
Baxter	Mike House, Doug M	Brock White	3855 Independence Rd	218-829-1929	jwkuhl@brockwhite.com	x	x
Baxter	Greg Ohman	Dan's Sod	6163 Pine Beach Rd	218-829-0880	danssod@gmail.com	x	x
Brainerd	Harold, Joe Lachelt	Acorn Inc	16707 State Hwy 371	218-829-7866	acorninc@brainerd.net	x	x
Brainerd	Terry Wanderi	Landsburg Landscape Nursery	16460 State Hwy 371	218-829-5519	terry@landsburnnursery.com	x	
Milaca	Shelly Larson	Hayland Woods Native Nursery	6549 Keystone Rd	320-983-6354	shelley@haylandwoods.com	x	x
Pine River	Bonnie Hiniker	Sunshine Gardens Landscape Nursery	1286 Shadywood Shores Dr NW	218-947-3154	sgardens@uslink.net	x	x