

# CITY OF VERGAS

## EROSION CONTROL

### DESCRIPTION:

The City of Vergas is experiencing some erosion along the top of their boardwalk trail, near the shoreline restoration installed in 2020. Along the cement sidewalk at the top of the slope, gravel keeps washing away down towards the lake.

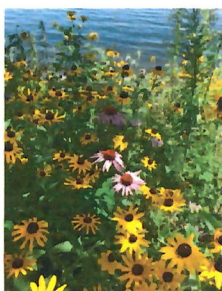
The city should scoop out the top layer of gravel, bring in black dirt, and smooth out the slope. Care should be taken to avoid the native vegetation already growing on the western side, closest to the boardwalk. Once that work is done, the SWCD can come in with native seed and lay a heavy-duty turf reinforcement matting over the top and staple it in. This matting will provide a stable area for plants to establish, and will stay in place for the life of the project. The SWCD will also install a straw wattle along the top edge of the planting area, in order to reduce velocity of water running over the area. Once the plants are established after the first growing season, this can be removed and seed can be spread over that area.

The area is approximately 10 feet wide by 40 feet long, at the edge of the driveway and sidewalk. After installation, the planting should be watered regularly until plants are established.





## SIMILAR PROJECTS IN OTTER TAIL COUNTY





## COST ESTIMATE:

Project Supplies	Estimated Costs
Seed	\$45.00
Materials	\$475.00
SWCD Installation Fee	\$150.00 (estimated 6 hours @ \$25/hour)
Landowner Volunteer Hours	\$398.30 (estimated 10 hours @ \$24.83/hour)
<b>Estimated Project Total (+10%)</b>	<b>\$1010.13</b>
<b>Estimated Cost Share Contribution (75%)</b>	<b>\$757.60</b>
<b>Estimated Landowner Contribution (25%)</b>	<b>\$252.53</b>

*This is only an estimate; size, price, and variety may vary depending on availability.*

## COST SHARE PROGRAM FACTS:

The program works on a reimbursement basis. **You will be required to pay the entire materials and hired labor costs and then submit the receipts for reimbursement.** All Cost Share payments must be approved by the SWCD Board at a monthly board meeting. EOT SWCD Meetings are generally the third Wednesday of the month.

We request that the project area be open to viewing by individuals interested in restorations, with prior arrangement. SWCD employees will be able to check on your planting without prior arrangement on occasion, as we are required to inspect your project on the first, fifth, and ninth years. We will do our best to avoid disturbing quiet times or family events.

There are no guarantees on the survival of plants after they have been planted. Any bare areas where the planting doesn't take should be replanted, ideally with a different species better suited to that particular area. You are responsible for maintenance which will mainly be necessary in the first three years. Technical assistance will be available to help you identify problem species and develop a maintenance plan.

The project must be maintained for the life of the cost share contract (usually 10 years). If the property sells before 10 years, the new owner takes over responsibility of the remainder of the project's life. If the project is not maintained, the landowner will either need to re-do the project without financial assistance or pay 150% of the cost shared amount back to the SWCD to be relieved of the cost share contracts terms & conditions.

## COST SHARE PROGRAM FACTS (CONTINUED):

### ITEMS COVERED BY COST SHARE:

- Site preparation costs: this is performed by the landowner or a contractor, with all associated costs and labor reimbursed. Costs often include herbicide and treatments, tool rentals, time, and any additional equipment. Landowners must submit all receipts and track any hours to be included in the cost share.
- Native plants, both plug and seed
- Installation materials including erosion control fabric, mulch, coco logs, wooden stakes, rope, etc.
- Labor: SWCD, landowner(s), and private contractors, or any combination of the three
- Edging material is recommended, but not required. This helps prevent lawn grass from spreading into the planting.

### ITEMS NOT COVERED BY COST SHARE:

- Rip rap (unless deemed necessary by our engineer in extreme situations)
- Aesthetic Landscaping: any additional services that do not serve in improving/maintaining the function of the buffer, such as large boulders, pavers, or non-native plants
- Maintenance: over the years a planting may require replacement plants, spot spray herbicide treatments, etc.





## TIMELINE OF EVENTS

Fall 2022: The city will review this proposal and discuss any concerns or questions with SWCD Staff. When both Johnstons and the SWCD agree with the proposal, a cost share contract will be written up and brought to the East Otter Tail SWCD Board Meeting for approval (3rd Wednesday of the month).

Spring 2023: The top layer of gravel will be scooped off of the planting area, and black dirt should be smoothed over. A straw matting should be laid over the area to prevent loss of soil.

Early June 2023: On day of installation, a native seed mix and cover crop of oats will be spread across the entire area by hand and a Turf Reinforcement Matting will be stapled down over the area. A straw wattle will be placed at the top of the slope to slow any water running over the planting over the growing season. After installation, the whole thing will be watered to settle everything in.



A hillside on Marion Lake that has been seeded with native flowers & grasses and covered with erosion control matting. Plugs were planted 18 to 24 inches apart.

## OPERATION AND MAINTENANCE:

The establishment of native plantings takes approximately 3 years. At this point in time all plants should have extensive root systems and have filled in the site, outcompeting most weedy species (if the weeds have been managed each growing season). Once the site has been planted, the first growing season produces smaller, weedy-looking plants. The second growing season generates more robust, showy plants. These natives are perennials and take two to three growing seasons to attain their full potential.

### **First Growing Season:**

- Plants should get an inch of water per week (through rainfall or a sprinkler) to ensure the roots can become established. You can stop watering when neighborhood plants start turning brown (going dormant) for winter.
- Weed as necessary. SWCD staff is available to help id “good plants” from “bad plants”. See enclosed handout on common weeds in restorations. If you do a good job of weeding the first year, you will have less weeds the second year.
- Protect new plants from animals (deer, geese, muskrats, etc), if it becomes an issue.

### **Second Growing Season:**

- Plants only need to be watered during times of drought.
- Weed as necessary. You should know by now what your problem weeds are. SWCD staff is available to help id plants. If you do a good job of weeding the second year, you should have hardly any weeds the third year.
- Replace damaged vegetation as needed.

### **Third Growing Season:**

- Plants should be established, no additional watering is necessary.
- Weed as necessary. Continue to control “noxious weeds” if present.
- Replace damaged vegetation as needed

### **Fourth Growing Season and Beyond:**

- Native plants benefit from being “shook up” with a prescribed burn (or a similar disturbance). This rejuvenates the restoration and you may see different flowers & grasses as a result.

### **Notes:**

- Do not stockpile snow in the planting area
- Do not store docks, lifts, etc in the planting area while the plants are green. You may overwinter these items in the planting area when the plants are brown (dormant).
- You may clean out the restoration in the spring, if desired. It’s a personal choice if you want to clip the standing dead vegetation in the spring - It does not affect the planting either way.



## OPERATION AND MAINTENANCE (CONTINUED):

It can be very difficult to distinguish native plants from weeds when they are very small seedlings. Identification can better be done once flowers have emerged. At this point the weed should be pulled (with the root), cut low to the ground, or cut off all flowering heads and dispose of them. Herbicide may be used, but must be spot applied by hand to ensure accuracy. If many weeds are present, the best method is to repeatedly trim the weedy vegetation down to 4-6 inches with a line trimmer. Noxious weeds include Canada & Plumeless Thistle, Spotted Knapweed, Leafy Spurge, Common Tansy, and Wild Parsnip. These noxious weeds will need to be controlled to keep from spreading.

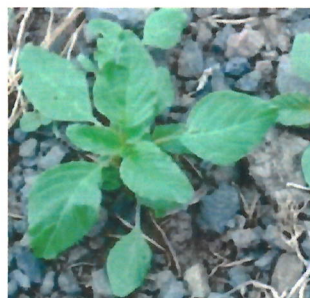
Some common weeds include:



Hoary Alyssum



Black Medic



Pigweed



Lamb's Quarters



Purslane



Sweet Clover



Common Ragweed



Plantain



Leafy Spurge



Canada Thistle



Spotted Knapweed



Orange Hawkweed



Common Mullein



## TECHNICAL ASSISTANCE

The SWCD can provide technical assistance with the installation of this project. This includes:

- Ordering seed and plants for installation
- Coordinating delivery of seed and plants on day of installation
- Providing a no-till ATV seed drill for rent to plant seed (not recommended for steep slopes)
- Staging the planting area for the plugs by laying out 6 packs in the general area they should be planted
- Planting & installation of erosion control material if it's done during our preferred installation period (usually early June).
- Helping with plant identification as the planting becomes more established to determine planted versus weedy species and suggest specific maintenance to help the planting thrive
- Being available to hold educational opportunities such as plant identification, benefits of native plants, how a buffer functions, etc. for lake associations and other organizations.

I have reviewed this design & estimate, and agree to the cost share program, timeline, preparing the planting site, and operations & maintenance.

LANDOWNER

DATE

SWCD TECHNICIAN

DATE



**East Otter Tail**  
Soil & Water Conservation District

**Liz Wiese, Shoreland Specialist**

218-228-2381

[liz.wiese@eot.mnswcd.org](mailto:liz.wiese@eot.mnswcd.org)

**Pete Guck, Assistant Shoreland Specialist**

218-228-2377

[pete.guck@eot.mnswcd.org](mailto:pete.guck@eot.mnswcd.org)