

Potted shrubs can be planted throughout the non-winter months if available. When choosing a shoreline shrub or tree, use the Hardiness Zones of 3 or 4 as a guide. Chose Zone 3, if shrub will be fully exposed to North or West winds. \$4/ft incentive

Please Print Legibly!

The following information will be used to calculate qualifying incentive payment and to whom the payment is to be made. Please indicate if payment is to be made to someone different.

Name(s) _____

Lake Site Address _____

Preferred Mailing Address if different _____

Contact telephone numbers _____ or Cell _____

E-mail address (preferred way to deliver information) _____

Length of shoreline stabilized _____

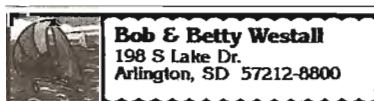
To the best of your knowledge:

1. Was rock added **without** completely reconstructing riprap? Yes _____ No _____
 2. Was the entire riprap or wall rebuilt **with** new fabric or footings? Yes _____ No _____
 3. Was Recyclax "root mat" installed 1-2 inches below the dirt surface? Yes _____ No _____
If yes, how many feet have recyclax installed? _____ ft
 4. Was a native grass seeding used for stabilization? Yes _____ No _____
If yes, how many feet? _____ ft
 5. Were shrubs or shrubs with trees planted to form barrier? Yes _____ No _____
If yes, how many feet? _____ ft*
- *Qualifying shrubs must be planted close enough together for the species to form a solid root base when mature. A minimum of 75% coverage (ie. 75ft of 100ft lot) is required for the shrub stabilization incentive. Shrub incentive will be based on actual length of shrub row planted not lot width.

Because the incentive payment is limited by either 33% of the total cost of hard practice or a fixed rate per foot of \$10-\$22 for those specific practices, whichever is less; **INCLUDE ANY INVOICES**, sales receipts or labor bills. In kind 'do it yourself' labor also is a qualifying expense to consider.

Vegetative practices are not limited to the 33% rule and only subject to the payment per foot of length installed. Invoices and sales receipts are only used to verify purchase.

Return to:



Because of the extreme fluctuations in water levels of Lake Poinsett, stabilization work requires that historic level (1655.5 ft msl) of water and at least 3 ft additional wave protection height is necessary to be considered stable. Even this height does not guarantee that in extreme cases damage will not occur, but it has proven to minimize even the worst conditions when constructed properly. When a project is completed to this height (1658.5 ft) it may qualify for the maximum payment rate (\$22/ft). If either by owner choice or lack of sufficient elevation on property to reach 1658.5 ft, the LPWPD will only provide a maximum incentive of \$10/ft, knowing that the shoreline will not be stable during flood conditions and in all likelihood will fail and have to be redone.

Projects where hard practice (rock or concrete) are at or above 1658.5 ft are not required to have any additional protection to lawn areas above, but are encouraged to use some of the options available for additional incentive payments.

Projects where finished hard practice (rock or concrete) are below 1658.5 are required to have at least one additional practice utilized in the vegetative area to provide stabilization. Practices which are acceptable are:

1. Recyclax TRM "root mat" installed under turf grass
2. Native grass
3. Row of Shrubs or shrubs with trees

The incentive payment for rock or wall work is based on type and extent of work done, total cost, completed elevation, and a maximum incentive schedule. Please answer all the questions on the attached form when you feel your project is completed and submit for incentive payment.

More info:

"Recyclax TRM" with hold down pins is available in 8'X90' rolls from Millborn Seeds, Brookings SD 888-498-7333

Some local contractors are also carrying Recyclax and will sell part rolls. Eligible \$4/ft one 8' pass

A native grass mix for Lake Poinsett has been packaged to cover 1000 sq ft at Millborn Seeds. In addition, a slow release fertilizer to establish new grass is available along with the "Curlex" shredded aspen blanket that is used to prevent seed from being washed out from rain during establishment. Our project recommends all these products as being helpful in getting a new grassed area started. \$2/ ft

Turf grasses do not qualify for incentive payment, but we do recommend if using turf grasses to include Tall Fescue as a major component to any seed mix being used for mowed lawns. Tall Fescue has a deeper root system than many of the other turf grasses. No incentive.

Optional considerations for shoreline stabilization.

1. 2010 peak elevation was 1656.5, 2011 peak elevation so far was 1657.5-Nearly everything below 1658.5 was flooded at sometime . Areas with 10:1 slopes above the full level of 1650.5 to 1658.5 prior to the peak level had no loss of shoreline to actually gaining material along shoreline. Areas without established protection to the 1658.5 level suffered soil erosion or had manmade structures (decks, stairs, landscape block walls, patio pavers, terraces) torn apart. Areas previously protected to the standard 1657.5 had damage that ranged from very minor if the protection held to quite extensive if the protection measure failed. Given these results it would seem prudent that if stabilization structures are to be installed that the minimum top height be 1658.5 to minimize erosion, but that 1660.5 be a desired level if erosion cannot be tolerated by lot owner.

2. The majority of field rock riprap structures held and are still in place. Those that did fail had at least one of the following deficiencies in order of most important first:

- a) fabric was not used under rock,
- b) fabric was placed in vertical position rather than horizontal position,
- c) fabric was not lapped the minimum 3 ft or had been torn from other activity,
- d) rock was sloped less than the minimum 3:1 or more preferred 4:1 slope
- e) the base or first rock layer used was less than the 14 inch minimum diameter or approximate 50#

The only difference or advantage with fractured, quartzite or granite rock is that the minimum slope could be 2:1 slope as all other requirements are exactly the same. Some sites survived having the deficiencies (a-d) by overkill with rock in excess of 4 ft thick, but unless the rock still have the minimum weight they still fall apart.

A good riprap job that doesn't cut corners is still a good solid design, but needs to accommodate the highest elevations of water.

3. Vertical walls as stabilization (poured concrete, steel or concrete block) must be built with sufficient footings and are only good if at least one of the following are also included:

- a) the down splash area is stabilized is rock (not sand) with fabric, poured concrete or cement joined block
- b) the down splash area is grassed with sufficient built in surface inlet drains
- c) sloped rock are placed in front of the wall to break the force of waves

4. Monster concrete block as currently being used are only acting as wave breakers and not stabilization components. There are some designs and installations where blocks are erected by offsetting and creating something like a 28% back slope or 6 inches back for every 18-24 inches up, but while making the wall slightly more stable it still will result in great water splashing up an over, and require the protected down splash area. These may be advantageous in high bank areas near deep water, but would not be the solution where homes are close to the water to begin with although they may be promoted just for those sites.

Information for Vegetation Practices

Root mats- This refers to a product made of non-biodegradable material that is covered completely with 1 to 2 inches of soil and seeded. The purpose of the product is to allow the individual grass plants and roots to grow through and become one large connected unit of deeply anchored protection.

A trade name product 'Recyclex TRM' is an example. Recyclex is made from shredded plastic pop bottles sewn into a plastic grid. Google recyclex or follow link.

<http://www.americanexcelsior.com/ErosionControl/library/Tech%20Notes/Recyclex%20TRM%20From%20Plastic%20Bottles.pdf>

Native South Dakota grasses- Grasses which have survived here for 1000's of years without care of man. Acclimated to our temperatures and moisture conditions. Basically all common native prairie grasses have roots 5 ft or more deep regardless of leaf height versus the 2-3 inch roots of turf type grasses.

Short native grasses- **Buffalo Grass, Blue Grama-** these grasses only reach 4-6 inches leaf height but have 5 ft or deeper roots. Blue Grama establishes the easier of the two from seed, but the Buffalo grass will fill in and mat the fastest after started. Buffalo grass plugs are often used because of this. A combination planting of these two species is acceptable. Once established extremely low maintenance.

Medium height native grasses- **Side Oats Grama, Little Bluestem, Green needle grass-** reach a height of 8 to 15 inches leaf height. These SD natives are commonly easy to establish. Side oats' unique seed head produces subtle color of miniature flowers in June, while Little Bluestem turns red for winter color. Green needle grass is a cool season grass and will bring green earlier than most native grasses. All three grasses are favorites of seed eating small-birds.

Tall height native grasses- **Big Bluestem, Indian grass, Switch grass-** These three grasses were the anchor grasses of the Tallgrass Prairie which surrounded Lake Poinsett. With a leaf height of 3 feet and roots of 8 to 10 feet deep, these grasses prevented the prairie from erosion of any kind. Soft leaves turn from light green to reds and tans followed by sturdy seed stems and intricate seed heads at eye level in September and October.

Shrubs- Shrubs capable of Zone 3-4 winter hardiness are acceptable for shoreline stabilization. Trees can also be included within shrub rows. Lot owners should decide the qualities they would prefer when selecting shrubs. Mature height, color and texture of foliage, flowering or fruiting habits, deciduous or coniferous, suckering or non-spreading all need to be understood before purchasing. Conservation Districts carry several dozen varieties as bare root plantings, but normally these are only available for April or May planting, then Districts shut down their operations. Ordering these shrubs takes place in the Fall for following year planting. Retail nurseries generally have potted shrubs available for Late Spring, Summer and early Fall for planting. Quality nurseries specialize in fewer varieties of improved cultivars at higher prices. Make certain of the winter hardiness from either retail or on-line sources of improved varieties. A good reference for hardy shrubs and trees for this area is <http://www.ag.ndsu.edu/trees/handbook/ndhand-1.htm> .

| | | Incentive Rates for Stabilization Practices per Linear ft of Shoreline Stabilized | | | | | |
|--|---|---|---|--|------------------------------------|--|--|
| Type of grass or erosion | Grass Seed No Root Mat | Grass seed and 8 ft wide root mats | Grass seed and shrubs no root mat | Grass seed, 8ft wide root mats and shrubs | Shrubs Only | | |
| Turf grass planted on previously eroded lawn | Not eligible for stabilization incentive | <i>Option A</i> \$4 | Not eligible for stabilization incentive | <i>Option B</i> \$8 | | | |
| Native grass planted on previously eroded lawn | <i>Option C</i> \$2 | <i>Option D</i> \$6 | <i>Option E</i> \$6 | <i>Option F</i> \$10 | | | |
| No erosion to lawn site, convert to native buffer stabilization | <i>Option G</i> \$2 | | | | <i>Option H</i> \$4 | | |
| Hard Stabilization Practices | *** <u>To receive Hard Practice Incentive funds: Must choose an acceptable <i>Option</i> from above</u> | | | | | | |
| | <u>Choice of Acceptable Options depends on finished elevation of hard practice</u> | | | | | | |
| | | | | | | | |
| Finished hard practice elevation minimum 1658.5 ft (2011 maximum static flood level was 1657.5) | Complete Rebuild w/ fabric | Repair w/ fabric and/or rock and previous cost shared sites | | | | | |
| Finished hard practice elevation below 1658.5 ft | \$22/ft shoreline rebuilt | \$10/ft of shoreline repaired | \$10/ft of shoreline repaired | Available Options -> A, B, C, D, E, F, G, H | Available Options -> B, D, F | | |