Agenda Item: 12.f.

Memorandum

To: Program Projects and Operations Subcommittee
From: Lori Laster, Stormwater Management Engineer
Date: April 5, 2012
Re: Stormwater Best Management Practices Program FY 2013 Applications

The District received 7 eligible applications for Fiscal Year 2013 for the Stormwater Best Management Practices Program.

SID #245 – Summit Ridge – The Summit Ridge SID is requesting $6,250 to install a rain garden at Summit Ridge Park to address erosion issues due to runoff from a nearby parking lot.

Sarpy County Courthouse – Sarpy County is requesting $10,000 to install a rain garden in an area that accumulates and holds runoff from the parking lot.

Douglas County Health Center – Douglas County is requesting $10,000 to install bioretention gardens at the Douglas County Health Center as part of their continuing effort to reduce the amount of stormwater that is discharged to the CSO system.

Scenic Park Campground 1 – The City of South Sioux City is requesting $10,000 to install a rain garden at the Scenic Park Campground in a low-lying area near the campsites where water currently accumulates without infiltrating.
Scenic Park Campground 2 – The City of South Sioux City is requesting $3,183 to install a rain garden at the entrance to the Scenic Park Campground to infiltrate water that currently runs off Riverview Drive and floods the campground entrance.

Scenic Park Pool Rain Garden – The City of South Sioux City is requesting $3,183 to install a rain garden near the pool at Scenic Park to treat runoff before it enters the Missouri River.
17th Street Rain Garden – The City South Sioux City is requesting $10,000 to install a rain garden adjacent to 17th Street in order to filter runoff from snow removed from city streets rather than discharge directly to the Missouri River.

The FY 2012 budget for this program was $77,500.

<table>
<thead>
<tr>
<th>Project Sponsor</th>
<th>Project Name</th>
<th>Total Project Cost</th>
<th>Cost Share Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>SID 245</td>
<td>Summit Ridge</td>
<td>$12,500</td>
<td>$6,250</td>
</tr>
<tr>
<td>Sarpy County</td>
<td>Sarpy County Courthouse</td>
<td>$20,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>Douglas County</td>
<td>Douglas County Health Center</td>
<td>$28,740</td>
<td>$10,000</td>
</tr>
<tr>
<td>South Sioux City</td>
<td>Scenic Park Campground 1</td>
<td>$24,678</td>
<td>$10,000</td>
</tr>
<tr>
<td>South Sioux City</td>
<td>Scenic Park Campground 2</td>
<td>$6,365</td>
<td>$3,183</td>
</tr>
<tr>
<td>South Sioux City</td>
<td>Scenic Park Pool</td>
<td>$6,366</td>
<td>$3,183</td>
</tr>
<tr>
<td>South Sioux City</td>
<td>17th Street Rain Garden</td>
<td>$24,785</td>
<td>$10,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$123,434</strong></td>
<td><strong>$52,616</strong></td>
</tr>
</tbody>
</table>

Staff recommends that the Subcommittee recommend to the Board of Directors that the District approve the Summit Ridge application for $6,250, the Sarpy County Courthouse application for $10,000, the Douglas County Health Center application for $10,000, the Scenic Park Campground 1 application for $10,000, the Scenic Park Campground 2 application for $3,183, the Scenic Park Pool application for $3,183, and the 17th Street Rain Garden application for $10,000, a total of $52,616 for District Program 17.41, Stormwater BMP Program, subject to funding the in Fiscal Year 2013 budget.
### 17.41 Stormwater Best Management Practices Program Special Project Request Application

#### Project Information

<table>
<thead>
<tr>
<th>Date</th>
<th>03/15/2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name</td>
<td>Summit Ridge Stormwater Best Management Practices Program</td>
</tr>
<tr>
<td>Project Sponsor</td>
<td>Sarpy County SID 245</td>
</tr>
<tr>
<td>City ST ZIP Code</td>
<td>Papillion, NE 68046</td>
</tr>
<tr>
<td>Contact Person/Title</td>
<td>Bob Czerwinski</td>
</tr>
<tr>
<td>E-Mail/Phone</td>
<td><a href="mailto:bczerwinski@eacg.com">bczerwinski@eacg.com</a></td>
</tr>
</tbody>
</table>

#### Project Location

Southeast corner of 96th and Schram Road in Summit Ridge Park at the South end of the playground located at the intersection of Stony Point Drive and Lakewood Drive.

---

#### Project Description

Summit Ridge Park Playground located at Stony Point Drive and Lakewood Drive is approximately 4,500 square feet. The surrounding area drains at an infiltration rate of 1 inch every 4 hours or 6 inches per day. The proposed rain garden would be 750 square feet, the dimensions being 15' X 50'. There have been some erosion issues on the South part of Summit Ridge Park. The location of the rain garden would be great to make the park more aesthetically pleasing, while also providing a functional BMP.

#### Cost Estimate

<table>
<thead>
<tr>
<th>Total Estimated Cost</th>
<th>$12,500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Share Requested</td>
<td>$6,250</td>
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</table>

#### Agreement and Signature

<table>
<thead>
<tr>
<th>Name (printed)</th>
<th>Bob Czerwinski</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature</td>
<td>![Signature Image]</td>
</tr>
<tr>
<td>Date</td>
<td>03/15/2012</td>
</tr>
</tbody>
</table>
Summit Ridge Stormwater Best Management Practice Project
BioRetention Garden Concept

This letter and the attached application is a submittal for the Stormwater Best Management Practices Program Special Project Request.

Summit Ridge Park Playground located at Stony Point Drive and Lakewood Drive is approximately 4,500 square feet. The surrounding area drains at an infiltration rate of 1 inch every four hours or 6 inches per day. The proposed rain garden would be 750 square feet, the dimensions being 15' X 50'. There have been some erosion issues on the South part of Summit Ridge Park. The location for the rain garden would be great to make the park more aesthetically pleasing, while also providing a functional BMP.

A bioretention garden is one cost effective way to help reduce damaging stormwater runoff and improve water quality in this area. It also adds value to the property with distinctive landscaping options improving the overall aesthetics of the site. The area that we are looking at is in need of improvement and by doing this we can implement a more efficient way to manage stormwater runoff in the park. This area of the SID could yield many benefits:

- Increased aesthetics for the neighborhood
- Deep rooting native plants & amended soils help increase the infiltration rate; thus it is able to decrease the overall amount of runoff.
- Increase pollutant filtering

There is an opportunity to design a bioretention garden to aid in the management of stormwater runoff in this neighborhood. It is great that the NRD for our area recognizes the need for people to learn about these types of projects and what they can provide to the citizens of our area. With everyone's efforts combined, a bioretention garden can be built to create a functional, but also beautiful addition to this neighborhood.
17.41 STORMWATER BEST MANAGEMENT PRACTICES PROGRAM

SPECIAL PROJECT REQUEST APPLICATION

1. DATE: March 13, 2012

2. PROJECT NAME Sarpy County Rain Garden Project

3. PROJECT SPONSOR: Sarpy County

   ADDRESS: 1210 Golden Gate Drive

   Papillion, NE 68046

4. CONTACT PERSON: Lisa A. Haire

   TITLE: Sarpy County Grant Coordinator

5. EMAIL AND PHONE: 402-593-1565 lhaire@sarpy.com

6. PROJECT LOCATION:

The Sarpy County Rain Garden Project will be located on the corner of Golden Gate Drive and East Gold Coast Road in Papillion, Nebraska on Sarpy County property. The project will be situated on the northeast corner of the Sarpy County Courthouse and the Administration overflow parking lot (attachment 1, proposed Rain Garden #1). This particular area accumulates stormwater and stormwater runoff from impervious surfaces following rainfall events and drains through a nearby outlet into the Municipal Separate Storm Sewer System (MS4).

7. DESCRIPTION OF STORMWATER BEST MANAGEMENT PRACTICE AND HOW IT WILL BE INCORPORATED IN THE PROJECT:

Sarpy County will incorporate Low Impact Development (LID) water quality measures through the implementation of a rain garden located on the corner of Golden Gate Drive and East Gold Coast Road in Papillion, Nebraska.

Rain gardens are an example of a low impact development (LID) approach to storm water management. The LID approach retains and infiltrates rainfall on-site, emphasizing site designing and planning techniques that mimic the natural infiltration-based, groundwater-driven hydrology of our historic landscape (www.papionrd.org/downloads/howtohelp/NRD_RainGardens_NRCS.pdf).

Traditionally, pollutants accumulate on paved surfaces and are washed into the MS4 at concentrated levels during a rainfall event. The primary purpose of a rain garden is to store the first few inches of rain helping water infiltrate into the ground and limiting runoff pollutants which normally run through an outlet, draining into the MS4 and continuing downstream into creeks, ponds, lakes, and rivers. Rain gardens help to reduce this pollution by holding and
filtering the water. Loose, absorbent soil collects the rainwater running off streets and parking lots. Native plants help absorb water, sand and soil filter out pollutants helping to naturally manage stormwater runoff.

According to the National Pollutant Discharge Elimination System’s (NPDES) menu of Best Management Practices (BMP’s), “bio-retention (rain gardens) can be used in parking areas to collect and treat stormwater” (www.epa.gov/npdes/stormwater/menuofbmps/index). The Environmental Protection Agency (EPA) lists rain gardens as a Low Impact Development (LID) BMP strategy because “they restore the natural, pre-developed ability of an urban site to absorb stormwater, mimicking the natural hydrology of the area by capturing and managing storm water on-site”(www.epa.gov/npdes/stormwater/menuofbmps/index). Additionally, rain gardens recharge groundwater, keep rainwater on the property, remove standing water naturally, reduce mosquito breeding, and beautify the landscape.

Sarpy County will work with a contractor to construct a rain garden on the northeast corner of the County Courthouse and Administration overflow parking lot. This area accumulates and holds stormwater runoff following rainfall events eventually draining into the MS4 through a nearby outlet (attachments 2-5). Constructing a rain garden in this area will assist in capturing the rainfall and runoff from nearby impervious surfaces limiting pollutants from draining into the MS4.

The Sarpy County rain garden will be landscaped with perennial flowers and native vegetation which will absorb rainfall, filtering pollutants that currently run across the parking lot. The rain garden will be a natural way to capture, filter, and hold rainfall on site helping protect fragile water resources downstream (attachments 6 and 7).

9. TOTAL ESTIMATED COST: $20,000 (see attachment 8 for cost breakdown and 9 for schedule)

10. COST SHARE REQUESTED: $10,000

11. SIGNATURE/TITLE: [Signature]

Chairman, Board of Commissioners
Attachment 8

Sarpy County Rain Garden Proposed Project

Estimated Costs for Component Parts

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>UNIT</th>
<th>UNIT COST</th>
<th>EXTENDED COST</th>
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<tr>
<td>1</td>
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<td>2</td>
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<td>CY</td>
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<tr>
<td>3</td>
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<td>CY</td>
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<td>4</td>
<td>Under-Drain Piping (6” Slotted HDPE)</td>
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<td>LF</td>
<td>$1.79</td>
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<tr>
<td>5</td>
<td>Fittings (3-45degree elbows and 2-90 degree elbows)</td>
<td>6</td>
<td>Each</td>
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<tr>
<td>6</td>
<td>Vegetation</td>
<td>1600</td>
<td>SF</td>
<td>$2.39</td>
<td>$3,824.00</td>
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<td>7</td>
<td>Connection to Existing Area Drain</td>
<td>1</td>
<td>Each</td>
<td>$1,195.42</td>
<td>$1,195.42</td>
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</table>

**TOTAL**                                           |     |      |           | **$20,000**   |
<table>
<thead>
<tr>
<th>Event</th>
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<tbody>
<tr>
<td>Sarpy County notified of award from Papio-Missouri NRD:</td>
<td>June 2012</td>
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<td>Sarpy County Purchasing Department releases RFP:</td>
<td>July 9, 2012</td>
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<tr>
<td>Advertisement</td>
<td>July 18-July 25, 2012</td>
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<td>Prebid Meeting</td>
<td>July 31, 2012</td>
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<td>Open Bids:</td>
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<td>Award Bid:</td>
<td>August 14, 2012</td>
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<td>Contract Documents Completed:</td>
<td>August 24, 2012</td>
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<tr>
<td>Project Start</td>
<td>September 3, 2012</td>
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<tr>
<td>Project Completion</td>
<td>September 21, 2012</td>
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</table>
17.41 STORMWATER BEST MANAGEMENT PRACTICES PROGRAM

SPECIAL PROJECT REQUEST APPLICATION

1. DATE: March 12, 2012

2. PROJECT NAME: Douglas County Health Center-Parking Lot 12/Pacific Street Bioretention

3. PROJECT SPONSOR: Douglas County Environmental Services
   ADDRESS: 3015 Menke Circle
   Omaha, NE 68134

4. CONTACT PERSON: Kent E. Holm, CSM
   TITLE: Environmental Services Director
   EMAIL AND PHONE: kent.holm@douglascounty-ne.gov

5. PROJECT LOCATION:
   40th and Pacific Street, Omaha, NE 68105

7. DESCRIPTION OF STORMWATER BEST MANAGEMENT PRACTICE AND HOW IT WILL BE INCORPORATED IN THE PROJECT:
   Background: Parking lot #12 at the Douglas County Health Center was renovated in 2011. The redesign of the parking lot included bioretention gardens on the east of this lot that met the City of Omaha's stormwater requirements. The County wishes to capture additional runoff from this parking lot and adjacent areas and keep that runoff from entering the combined sewer system.

   Description: For this grant application, additional bioretention gardens are proposed for the area immediately north of the parking lot and adjacent to Pacific Street (see attached maps). These bioretention gardens will provide water quality and quantity benefits by retaining and draining stormwater runoff from the northern portion of parking lot #12 which has a drainage area of approximately 0.44A. The proposed bioretention gardens will also be designed to incorporate some stormwater runoff from Pacific Street if the design parameters permit. The intent is to provide as much stormwater volume control as possible to reduce the amount of stormwater runoff flowing into the combined sewer. This is consistent with the stormwater volume reduction goals for the entire Health Center campus.

   Final design of the proposed bioretention gardens is anticipated to be similar to the design for the Eastern Nebraska on Ageing (ENOA) bioretention project in terms of soil mix, underdrains, and plant selection. However, the County does wish to use the latest best technology available for these new proposed bioretention gardens and will continue to evaluate the design and function of the ENOA and other bioretention gardens. Lessons learned from these projects will be incorporated into the design for this project. It is anticipated that the final design will account for at least the first ½ inch of runoff from the northern part of the parking lot #12 with the goal being retention of the maximum amount feasible. A conceptual design drawing is attached and indicates a series of bioretention cells with stormwater runoff from parking lot #12 conveyed to the cells via storm sewer pipes. Final design will most likely include 6 level spreaders to dissipate some of the concentrated flow from the parking lot before it enters the bioretention. Some of the existing trees will most likely be removed prior to installation of the bioretention cells.

   Costs: The preliminary cost estimate for this bioretention project is based on the recent ENOA project costs. Final design will be by a licensed, professional engineer in the State of Nebraska. Estimated construction (bioretention and associated level spreaders, etc.) $21,704.00. Final design and construction observation $7,000.00. Total estimated project costs $28,740.00

   Timeline: Final design on this project will commence upon notification of the award. Bidding and contractor selection will follow completion of the final design. Installation would follow in the fall of 2012 or Spring 2013, depending primarily on the weather and site conditions. Anticipated completion will be no later than June 30, 2013, with the exception of plant maintenance requirements of the contractor which would typically conclude on year from the date of substantial completion of the bioretention gardens.

9. TOTAL ESTIMATED COST: $28,740.00

10. COST SHARE REQUESTED: $10,000.00

11. SIGNATURE/TITLE: [Signature]

FORM 1741

19
March 14, 2012

Gerry Bowen
Natural Resources Planner
Papio-Missouri River NRD
8901 S. 154th Street
Omaha, NE  68138-3621


Dear Gerry:

I’ve enclosed the completed grant application for the Douglas County Health Center – Parking Lot 12/ Pacific Street Bioretention project. An electronic copy of this application was also emailed to you today.

I’m requesting a cost share from the NRD in the amount of $10,000 for this estimated $28,740 project. This project represents another step in Douglas County’s effort to retrofit stormwater best management practices on the Health Center campus and reduce the amount of stormwater runoff into the combined sewer system. To date the County has installed several rain gardens, bioretention gardens, a stormwater harvesting and drip irrigation system and green roof on the campus and all of these best management practices are eliminating stormwater runoff that would normally enter the combined sewer and contribute to combined sewer overflow events.

Thank you for making this funding opportunity available and please do not hesitate to contact me if you have questions about this application or need further information. I thank you and the NRD for your past support of the County’s stormwater management efforts and look forward to your favorable review of this new bioretention project.

Yours Truly,

Kent E. Holm, CSM
Attachments
17.41 STORMWATER BEST MANAGEMENT PRACTICES PROGRAM

SPECIAL PROJECT REQUEST APPLICATION

1. DATE: 3/13/12

2. PROJECT NAME: Scenic Park Campground Rain Garden

3. PROJECT SPONSOR: City of South Sioux City

   ADDRESS: 1615 1st Avenue
             South Sioux City, NE 68776

4. CONTACT PERSON: Lance Hedquist

   TITLE: City Administrator

5. EMAIL AND PHONE: lhedquist@southsiuccity.org 402-494-7517

6. PROJECT LOCATION:

   South Sioux City Scenic Park Campground — See Attached Location Map

7. DESCRIPTION OF STORMWATER BEST MANAGEMENT PRACTICE AND HOW IT WILL BE INCORPORATED IN THE PROJECT:

   The City of South Sioux City's campground is located in Scenic Park and is a popular destination for over 100,000 visitors per year. During major rainfall events, a low-lying area near the heart of the campground is often flooded and ponding of stormwater occurs as a result of run-off from the camp sites and roads in the campground. Debris and sediment are washed into this low lying area and are eventually absorbed into the ground or carried to the storm-sewer outfalls that lead to the adjacent Missouri River. Utilizing best management practices for improving water quality, a 5,616 SF rain garden will be constructed in the project location located on the attached map marked campground rain garden.

9. TOTAL ESTIMATED COST: $ 24,678

10. COST SHARE REQUESTED: $ 10,000

11. SIGNATURE/TITLE: [Signature]

FORM 1741
## EXECUTIVE LAWNS & POOLS

2302 West 29th Street

Knight and Dave Inc.
DBA
Bloomers / Executive Lawns & Pools
PO BOX 1067 SOUTH SIOUX CITY NEBRASKA 68776
402-412-2700 712-223-5296

Bid
Scenic Park Rain Garden – Campground

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Build new rain garden 78ft East and West by 18ft North and South with rounded corners at a depth of 4ft. Form an inlet of SE corner and an outlet for overflow on NW corner.</td>
<td>5616 SF</td>
<td>.70</td>
<td>3931.20</td>
</tr>
<tr>
<td>2</td>
<td>Place 12&quot; depth of pea gravel in bottom of rain garden.</td>
<td>52 CY</td>
<td>52.00</td>
<td>2704.00</td>
</tr>
<tr>
<td>3</td>
<td>Place 1450 sq feet of filter fabric over top of pea gravel.</td>
<td>1450 SF</td>
<td>1.00</td>
<td>1450.00</td>
</tr>
<tr>
<td>4</td>
<td>Mix and place in lifts, engineered soil mix at a ratio of 30:30:40 of sand, compost, and top soil. Place soil mix in a shallow bowl design.</td>
<td>130 CY</td>
<td>54.00</td>
<td>7020.00</td>
</tr>
<tr>
<td>5</td>
<td>Furnish and install plants: A mix of Shrubs, Perennial Grasses and Flowers</td>
<td>485</td>
<td>17.20</td>
<td>8342.00</td>
</tr>
<tr>
<td>6</td>
<td>Furnish and install mulch 3&quot; depth over top of rain garden.</td>
<td>13 CY</td>
<td>90.00</td>
<td>1170.00</td>
</tr>
<tr>
<td>7</td>
<td>Finish grade, seed, and install starter fertilizer on disturbed area around rain garden and in new drainage ditch area.</td>
<td>400 SF</td>
<td>.15</td>
<td>60.00</td>
</tr>
</tbody>
</table>

Total Cost of Project $24677.20
Planning and Design

Renee Palmersheim from Executive Lawns & Pools / Bloomers has been in the landscape business since 1996. She has helped in the design and development of four other rain gardens in South Sioux City, Nebraska.

Installation and Management

Executive Lawns & Pools / Bloomers will be required to maintain the project for a one year period. They will ensure that the plant material is thriving and will replace any non living or troubled plant if needed at no charge to the city for the first twelve months. Weeding will be done on a weekly basis at a minimum charge of $25.00 per hour our normal hourly rate. Executive Lawns & Pools will also be responsible to maintain the mulch at the desired thickness and will do so at no charge for the first growing season any new mulch needed to maintain a 3” depth and proper appearance will be done and charged to the City of South Sioux City according to above specs.

Submitted by: Renee Palmersheim  
Executive Lawns & Pools  
Bloomers  
2302 W 29th Street  
South Sioux City, NE 68776  
402-412-2700 or 712-223-5296  
On: March 12, 2012

Above referenced work will begin as soon as contract has been signed.
Scenic Park Campground  Park Rain Garden

30 – Wild Hydrangea
30 - Hibiscus
30 – Golden Rod
45 – Little Blue Stem
45 – Prairie Drop Seed
45 – Cardinal Flower
45 - Lobelia
45– Milk Weed
45 – Purple Cone Flowers
45 – Black Eyed Susan
40 – Iris
40 – Blue Flag
Schedule for Construction of Scenic Campground Rain Garden

After announcement of being funded.

- Notify media of grant from Papio Missouri River Natural Resource District.
- We will order the plants and materials.
- We will do the site grading and excavating.
- We will work with the contractor to schedule construction.
- In the fall of 2012 or the spring of 2013, weather permitting.
17.41 STORMWATER BEST MANAGEMENT PRACTICES PROGRAM

SPECIAL PROJECT REQUEST APPLICATION

1. DATE: 3/14/12

2. PROJECT NAME: Scenic Park Campground Entrance Rain Garden

3. PROJECT SPONSOR: City of South Sioux City

ADDRESS: 1615 1st Avenue
South Sioux City, NE 68776

4. CONTACT PERSON: Lance Hedquist

TITLE: City Administrator

EMAIL AND PHONE: lhedquist@southsiouxcity.org

6. PROJECT LOCATION: South Sioux City Scenic Park Campground See attached location map

7. DESCRIPTION OF STORMWATER BEST MANAGEMENT PRACTICE AND HOW IT WILL BE INCORPORATED IN THE PROJECT:
The City of South Sioux City's campground is located in Scenic Park and is a popular destination for over 100,000 visitors per year. During major rainfall events, a low-lying area near the entrance of the campground is often flooded and ponding of stormwater occurs as a result of run-off from Riverview Drive and the camp entrance. This often results in flooding of the campground entrance and Riverview Drive creating road hazards. Additionally, debris and sediment are washed into this low lying area and are eventually absorbed in the ground or carried to the storm-sewer outfalls that lead to the adjacent Missouri River. Utilizing best management practices for improving water quality, a 1,440 SF rain garden will be constructed in the project location on the attached map marked campground entrance rain garden.

9. TOTAL ESTIMATED COST: $6,365.20

10. COST SHARE REQUESTED: $3,183.00

11. SIGNATURE/TITLE: [Signature]

FORM 17.41
# EXECUTIVE LAWNS & POOLS

2302 West 29th Street

Knight and Dave Inc.

DBA

Bloomers / Executive Lawns & Pools

PO BOX 1067 SOUTH SIOUX CITY NEBRASKA 68776

402-412-2700 712-223-5296

Bid

Scenic Park Rain Garden – Main Entrance

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Build new rain garden 20ft East and West by 17ft North and South with rounded corners at a depth of 4ft. Form an inlet of SE corner and an outlet for overflow on NW corner.</td>
<td>1440 SF</td>
<td>.70</td>
<td>1008.00</td>
</tr>
<tr>
<td>2</td>
<td>Place 12&quot; depth of pea gravel in bottom of rain garden.</td>
<td>13 CY</td>
<td>52.00</td>
<td>676.00</td>
</tr>
<tr>
<td>3</td>
<td>Place 400 sq feet of filter fabric over top of pea gravel.</td>
<td>400 SF</td>
<td>1.00</td>
<td>400.00</td>
</tr>
<tr>
<td>4</td>
<td>Mix and place in lifts, engineered soil mix at a ratio of 30:30:40 of sand, compost, and top soil. Place soil mix in a shallow bowl design.</td>
<td>34 CY</td>
<td>54.00</td>
<td>1836.00</td>
</tr>
<tr>
<td>5</td>
<td>Furnish and install plants: A mix of Shrubs, Perennial Grasses and Flowers</td>
<td>125</td>
<td>17.20</td>
<td>2150.00</td>
</tr>
<tr>
<td>6</td>
<td>Furnish and install mulch 3&quot; depth over top of rain garden.</td>
<td>3 CY</td>
<td>90.00</td>
<td>270.00</td>
</tr>
<tr>
<td>7</td>
<td>Finish grade, seed, and install starter fertilizer on disturbed area around rain garden and in new drainage ditch area.</td>
<td>168 SF</td>
<td>.15</td>
<td>25.20</td>
</tr>
</tbody>
</table>

| Total Cost of Project | $6365.20 |
Planning and Design

Renee Palmersheim from Executive Lawns & Pools / Bloomers has been in the landscape business since 1996. She has helped in the design and development of four other rain gardens in South Sioux City, Nebraska.

Installation and Management

Executive Lawns & Pools / Bloomers will be required to maintain the project for a one year period. They will ensure that the plant material is thriving and will replace any non living or troubled plant if needed at no charge to the city for the first twelve months. Weeding will be done on a weekly basis at a minimum charge of $25.00 per hour our normal hourly rate. Executive Lawns & Pools will also be responsible to maintain the mulch at the desired thickness and will do so at no charge for the first growing season any new mulch needed to maintain a 3” depth and proper appearance will be done and charged to the City of South Sioux City according to above specs.

Submitted by: Renee Palmersheim
Executive Lawns & Pools
Bloomers
2302 W 29th Street
South Sioux City, NE 68776
402-412-2700 or 712-223-5296
On: March 12, 2012

Above referenced work will begin as soon as contract has been signed.
Scenic Park Rain Garden Main Entrance

15 — Hibiscus
25 — Little Blue Stem
25 — Bee Balm
30 — Purple Cone Flowers
30 — Black Eyed Susan
Schedule for Construction of Scenic Campground Entrance Raingarden

After announcement of being funded.

- Notify media of grant from Papio Missouri River Natural Resource District.
- We will order the plants and materials.
- We will do the site grading and excavating.
- We will work with the contractor to schedule construction.
- In the fall of 2012 or the spring of 2013, weather permitting.
17.41 STORMWATER BEST MANAGEMENT PRACTICES PROGRAM

SPECIAL PROJECT REQUEST APPLICATION

1. DATE: 3/13/12

2. PROJECT NAME: Scenic Park Pool Rain Garden

3. PROJECT SPONSOR: City of South Sioux City
   ADDRESS: 1615 1st Avenue
   South Sioux City, NE 68776

4. CONTACT PERSON: Lance Hedquist
   TITLE: City Administrator

5. EMAIL AND PHONE: lhedquist@southsiouxcity.org 402-494-7517

6. PROJECT LOCATION:
   South Sioux City Scenic Park Outdoor Pool - See Attached Location Map

7. DESCRIPTION OF STORMWATER BEST MANAGEMENT PRACTICE AND HOW IT WILL BE INCORPORATED IN THE PROJECT:
   The City of South Sioux City's Municipal Pool is located in Scenic Park. The area surrounding the pool is flat and during major rain events, flooding and ponding of stormwater occurs as a result of storm water run-off from adjacent parking lots, tennis courts and the pool area. Debris and sediment are washed into this low-lying area and eventually absorbed into the ground or carried to the storm-sewer outfalls that lead to the adjacent Missouri River. Utilizing best management practices for improving water quality, a 1,440 SF rain garden will be constructed in the project location located on the attached map marked pool rain garden.

9. TOTAL ESTIMATED COST: $ 56,366

10. COST SHARE REQUESTED: $ 3,183

11. SIGNATURE/TITLE: [Signature]

FORM 17.41
EXECUTIVE LAWNS & POOLS

2302 West 29th Street

Knight and Dave Inc.
DBA
Bloomers / Executive Lawns & Pools
PO BOX 1067  SOUTH SIOUX CITY  NEBRASKA  68776
402-412-2700  712-223-5296

Bid
Scenic Park Rain Garden – Outdoor Pool

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Build new rain garden 20ft East and West by 17ft North and South with rounded corners at a depth of 4ft. Form an inlet of SE corner and an outlet for overflow on NW corner.</td>
<td>1440 SF</td>
<td>.70</td>
<td>1008.00</td>
</tr>
<tr>
<td>2</td>
<td>Place 12” depth of pea gravel in bottom of rain garden.</td>
<td>13 CY</td>
<td>52.00</td>
<td>676.00</td>
</tr>
<tr>
<td>3</td>
<td>Place 400 sq feet of filter fabric over top of pea gravel.</td>
<td>400 SF</td>
<td>1.00</td>
<td>400.00</td>
</tr>
<tr>
<td>4</td>
<td>Mix and place in lifts, engineered soil mix at a ratio of 30:30:40 of sand, compost, and top soil. Place soil mix in a shallow bowl design.</td>
<td>34 CY</td>
<td>54.00</td>
<td>1836.00</td>
</tr>
<tr>
<td>5</td>
<td>Furnish and install plants: A mix of Shrubs, Perennial Grasses and Flowers</td>
<td>125</td>
<td>17.20</td>
<td>2150.00</td>
</tr>
<tr>
<td>6</td>
<td>Furnish and install mulch 3” depth over top of rain garden.</td>
<td>3 CY</td>
<td>90.00</td>
<td>270.00</td>
</tr>
<tr>
<td>7</td>
<td>Finish grade, seed, and install starter fertilizer on disturbed area around rain garden and in new drainage ditch area.</td>
<td>168 SF</td>
<td>.15</td>
<td>25.20</td>
</tr>
<tr>
<td></td>
<td>Total Cost of Project</td>
<td></td>
<td></td>
<td>$6365.20</td>
</tr>
</tbody>
</table>
Planning and Design

Renee Palmersheim from Executive Lawns & Pools / Bloomers has been in the landscape business since 1996. She has helped in the design and development of four other rain gardens in South Sioux City, Nebraska.

Installation and Management

Executive Lawns & Pools / Bloomers will be required to maintain the project for a one year period. They will ensure that the plant material is thriving and will replace any non living or troubled plant if needed at no charge to the city for the first twelve months. Weeding will be done on a weekly basis at a minimum charge of $25.00 per hour our normal hourly rate. Executive Lawns & Pools will also be responsible to maintain the mulch at the desired thickness and will do so at no charge for the first growing season any new mulch needed to maintain a 3” depth and proper appearance will be done and charged to the City of South Sioux City according to above specs.

Submitted by: Renee Palmersheim
Executive Lawns & Pools
Bloomers
2302 W 29th Street
South Sioux City, NE 68776
402-412-2700 or 712-223-5296
On: March 12, 2012

Above referenced work will begin as soon as contract has been signed.
Outdoor Pool Park Rain Garden

15 – Wild Hydrangea
25 – Prairie Drop Seed
25 – Milk Weed
30 – Purple Cone Flowers
30 – Black Eyed Susan
Schedule for Construction of Scenic Campground Pool Raingarden

After announcement of being funded.

- Notify media of grant from Papio Missouri River Natural Resource District.
- We will order the plants and materials.
- We will do the site grading and excavating.
- We will work with the contractor to schedule construction.
- In the fall of 2012 or the spring of 2013, weather permitting.
URBAN CONSERVATION ASSISTANCE PROGRAM

SPECIAL PROJECT REQUEST

1. DATE: 3/13/12

2. PROJECT NAME: 17th Street Rain Garden

3. PROJECT SPONSOR: City of South Sioux City

   (ADDRESS) 1615 1st Avenue
   South Sioux City, NE 68776

4. CONTACT PERSON: Lance Hedquist  TITLE: City Administrator

5. TELEPHONE: 402-494-7517

6. PROJECT LOCATION **: City property located adjacent to 17th Street (see attached map for detailed project location)

7. DESCRIPTION OF PROBLEM **: Potential Contamination of the Missouri River - See Attached Documentation for Further Details

8. PROPOSED IMPROVEMENTS **: Installation of a Rain Garden with Overflow - See Attached Documentation for Further Details

9. TOTAL ESTIMATED COST: $24,785

10. COST SHARE REQUEST: $14,871

11. SIGNATURE/TITLE: [Signature] Mayor

** Attach additional sheets as necessary.
17.0 Urban Conservation Assistance Program

**Description of the Problem:**

Annually, the City is responsible for the removal of snow from city streets following major snow events. Excess snow removed from city streets is transferred to the property outlined in the attached project map. Snow removed often contains sediment, debris and road salt that are harmful pollutants and as the snow melts, are at great risk for entering the storm sewer systems where they are carried to the Outfall waters of the Missouri River.

**Proposed Improvements:**

In an effort to utilize best management practices to protect the stormwater run-off that results from the complied snow melt and prevent the sediment, debris and road salt from entering the storm sewer systems, the City is proposing to install a 6000SF rain garden. An inlet will be formed at the Southeast corner of the property with an outlet for overflow on the Northwest Corner of the property.
EXECUTIVE LAWNS & POOLS

Knight and Dave Inc.
DBA
Bloomers / Executive Lawns & Pools
PO BOX 1067  SOUTH SIOUX CITY  NEBRASKA  68776
402-412-2700  712-223-5296

Bid
Rain Garden – 17th Street

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Build new rain garden 150ft East and West by 10ft North and South with rounded corners at a depth of 4ft. Form an inlet of SE corner and an outlet for overflow on NW corner.</td>
<td>6000 SF</td>
<td>.70</td>
<td>4200.00</td>
</tr>
<tr>
<td>2</td>
<td>Place 12&quot; depth of pea gravel in bottom of rain garden.</td>
<td>56 CY</td>
<td>52.00</td>
<td>2912.00</td>
</tr>
<tr>
<td>3</td>
<td>Place 1500 sq feet of filter fabric over top of pea gravel.</td>
<td>1500 SF</td>
<td>1.00</td>
<td>1500.00</td>
</tr>
<tr>
<td>4</td>
<td>Mix and place in lifts, engineered soil mix at a ratio of 30:30:40 of sand, compost, and top soil. Place soil mix in a shallow bowl design.</td>
<td>138 CY</td>
<td>54.00</td>
<td>7452.00</td>
</tr>
<tr>
<td>5</td>
<td>Furnish and install plants: A mix of Shrubs, Perennial Grasses - Select Areas Only</td>
<td>100</td>
<td>25.00</td>
<td>2500.00</td>
</tr>
<tr>
<td>6</td>
<td>Furnish and install mulch 3&quot; around Shrubs and Grasses Only</td>
<td>5 CY</td>
<td>90.00</td>
<td>450.00</td>
</tr>
<tr>
<td>7</td>
<td>Seed the remaining 1 acre site in low maintenance perennial grass mix of Big Blue, Switch, and Indian Grasses.</td>
<td>43560 SF</td>
<td>.09</td>
<td>3920.40</td>
</tr>
<tr>
<td>8</td>
<td>Spread Straw on seeded area slopes only.</td>
<td>15000 SF</td>
<td>.10</td>
<td>1500.00</td>
</tr>
<tr>
<td></td>
<td>Total Cost of Project</td>
<td></td>
<td></td>
<td>$24434.40</td>
</tr>
</tbody>
</table>

This price does not include any removal of top soil or grading of the ground except in the 10 by 150 ft basin in bottom of rain garden. Additional grading can be done at .06 per sf.
Planning and Design

Renee Palmersheim from Executive Lawns & Pools / Bloomers has been in the landscape business since 1996. She has helped in the design and development of four other rain gardens in South Sioux City, Nebraska.

Installation and Management

Executive Lawns & Pools / Bloomers will be required to maintain the project for a one year period. They will ensure that the plant material is thriving and will replace any non living or troubled plant if needed at no charge to the city for the first twelve months. Weeding will be done on a weekly basis at a minimum charge of $25.00 per hour our normal hourly rate. Executive Lawns & Pools will also be responsible to maintain the mulch at the desired thickness and will do so at no charge for the first growing season any new mulch needed to maintain a 3" depth and proper appearance will be done and charged to the City of South Sioux City according to above specs.

Submitted by: Renee Palmersheim
Executive Lawns & Pools
Bloomers
2302 W 29th Street
South Sioux City, NE 68776
402-412-2700 or 712-223-5296
On: March 12, 2012

Above referenced work will begin as soon as contract has been signed.
17th Street Rain Garden overflow pipe

84 ft of 8" pvc drain runs $350.00 this is for pipe only
Schedule for Construction of 17th Street Rain Garden

After announcement of being funded:

- Notify media of grant from Papio Missouri River Natural Resource District.
- We will order plants, grasses and materials.
- We will do the site grading and excavating.
- City crew's will install overflow pipe under 17th Street.
- We will work with the contractor to schedule construction.
- In the fall of 2012 or the spring of 2013, weather permitting.
Rain Garden 17th Street

30 – Grow Low Sumac   

35 – Purple Cone Flower   

35 – Black-eyed Susan   

18# - Prairie Grass Seed Mix
filtering the water. Loose, absorbent soil collects the rainwater running off streets and parking lots. Native plants help absorb water, sand and soil filter out pollutants helping to naturally manage stormwater runoff.

According to the National Pollutant Discharge Elimination System’s (NPDES) menu of Best Management Practices (BMP’s), “bio-retention (rain gardens) can be used in parking areas to collect and treat stormwater” (www.epa.gov/npdes/stormwater/menuofbmps/index). The Environmental Protection Agency (EPA) lists rain gardens as a Low Impact Development (LID) BMP strategy because “they restore the natural, pre-developed ability of an urban site to absorb stormwater, mimicking the natural hydrology of the area by capturing and managing stormwater on-site” (www.epa.gov/npdes/stormwater/menuofbmps/index). Additionally, rain gardens recharge groundwater, keep rainwater on the property, remove standing water naturally, reduce mosquito breeding, and beautify the landscape.

Sarpy County will work with a contractor to construct a rain garden on the northeast corner of the County Courthouse and Administration overflow parking lot. This area accumulates and holds stormwater runoff following rainfall events eventually draining into the MS4 through a nearby outlet (attachments 2-5). Constructing a rain garden in this area will assist in capturing the rainfall and runoff from nearby impervious surfaces limiting pollutants from draining into the MS4.

The Sarpy County rain garden will be landscaped with perennial flowers and native vegetation which will absorb rainfall, filtering pollutants that currently run across the parking lot. The rain garden will be a natural way to capture, filter, and hold rainfall on site helping protect fragile water resources downstream (attachments 6 and 7).

9. TOTAL ESTIMATED COST: $20,000 (see attachment 8 for cost breakdown and 9 for schedule)

10. COST SHARE REQUESTED: $10,000

11. SIGNATURE/TITLE: Chairman, Board of Commissioners