



LOWER PLATTE SOUTH natural resources district

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Memorandum

Date: January 11, 2023
To: Board of Directors
From: David Potter, Assistant General Manager DP
RE: Land Resources Subcommittee Meeting Minutes.

The Land Resources Subcommittee met at 5:30 pm on Monday, January 9, 2023 in the NRD Large Conference Room to discuss a number of items and take action on one. Subcommittee members present included Gary Hellerich, Gary Aldridge, Melissa Baker, Ron Nolte, Stacie Sinclair, Mark Spangler, and Ken Vogel. Members absent included Anthony Schutz. Others present included Cory Schmidt, Donna Reid, Drew Ratkovec, and David Potter. Director Hellerich called the meeting to order, gave a brief welcome, and reviewed the agenda.

The first item was **consideration of the NRD/NSWCP 2023 LPSNRD Average Costs for the Surface Water Quality BMP Cost-Share Program**. Potter noted the District has been trying to approve the new dockets in December so applications received after the first of the year will use the new unit prices. NRCS did not receive the new price list until around our December board meeting. Our District Conservationist and technicians met virtually on Wednesday, January 4th to discuss the average costs listed in the 2023 Docket. The DNR NSWCP Payment Schedule is an NRCS regional docket that identifies all the possible practices and recommended unit prices. These unit prices are not always indicative of what we are seeing within LPSNRD. Each year we prepare a LPSNRD Docket that identifies the common practices and scenarios used within our District with our recommended cost-unit rate. In review of the 2023 NSWCP Payment Schedule, our technicians noted a few average costs commonly used in our District were not correctly listed and the changes in unit costs were not reflective to what we have been seeing from contractors. The final draft of the 2023 LPSNRD Average Costs (or Docket) based on those discussions and input was presented and is attached. The 2023 NSWCP Payment Schedule (long list) was also provided to the subcommittee. Schmidt and Potter then discussed the spreadsheet comparing the new 2023 cost-share numbers with those approved for the 2022 Docket (attached). It was noted that some unit costs have gone up while others have decreased. It was recommended to acknowledge those increases for 2023, but to keep the unit cost the same as they were in 2022 for the decreases. If an uncommon project scenario that's not on the LPSNRD docket would occur, then the unit price listed on the DNR NSWCP Payment Schedule would be used.

It was moved by Vogel, seconded by Nolte, and unanimously approved by the Subcommittee to recommend the Board of Directors approve the 2023 LPSNRD Average Costs for the Surface Water Quality BMP Cost-share Program.

The next agenda item included **updates of LPSNRD Program and Projects**. Staff provided updates on the following items and the subcommittee discussed each.

- **Status of Cost-Share Projects.** Due to the 2022 drought, a number of land treatment projects have not been completed or even started. NRCS would not allow construction due to lack of moisture and compaction issues. Only one of the 87 fall cost-share applications has been completed so far and it was in Cass County. With the recent precipitation, we're expecting more projects to be released and completed soon. NRCS will review fields on a case-by-case basis. All the 2022 summer cost-share jobs (15) have been completed and all have been paid so far except for one. Four farm ponds were constructed and paid in FY23 (one in Lancaster County, one in Butler, and two in Saunders). The goal is to construct one more (in Twin Lakes Watershed) this fiscal year and the remaining three in early FY24. Any new farm pond applications will be considered in February. To date, there has not been any new farm pond applications.
- **Extension of Fall cost-share construction deadline.** The construction deadline for fall cost-share applications is February 1st. This date has been established to give the District an opportunity to evaluate the number of cost-share projects during the construction period with the remaining budgeted funds. For most years, this set date has worked well and prevents projects from being drug out. With some projects not completed or started due to the drought and restriction by NRCS and with money still in the budget, staff has planned to extend that deadline to April 30, 2023. The District's Summer Conservation Program construction period begins May 1st, so this would complete those fall applications before the start of that program. Even if all the work is done with the outstanding applications, the District will still be within budget. This has been extended in past years when the current budget allows in order to get more conservation practices completed. We extended the construction deadline last year to April 30th and it worked well. Without any objections from the subcommittee, staff will proceed to coordinate with the technicians to notify the applicants of the extension date.
- **Cover Crop Program.** The district currently has 51 approved cover crop cost-share applications for a total of 3,012 acres in the amount of \$91,603. With the drought conditions in 2022, we do expect a few cancellations from producers that did not want to plant cover crops by the November 1st deadline due to the lack of moisture. Resources Technicians will be inspecting the current cover crop BMPs throughout the winter making sure they were seeded and are growing and then verifying termination of the crop in the Spring. Cost-share payments are not made until the cover crop is verified and terminated.

Staff continues to promote the cover crop program (brochures, website, social media, newspaper, NRCS promotion, and direct mailings). Staff and the subcommittee discussed some of the reasons why farmers are not planting more cover crops or participating in our program. Staff acknowledged LPSNRD's participation in the UNL Extension Section 319 Highboy Cover Crop Program and work with four producers in northern Lancaster County to plant cover crops on 480 acres. Meetings are ongoing to determine a similar program in future years.

- **Twin Lakes 319 Project.** The District worked with Nebraska Game and Parks and with Nebraska Department of Environment and Energy to prepare and submit a 319 Project Implementation Plan (PIP) and funding request to EPA for the Twin Lakes Watershed. In June 2021 the District was notified by NDEE that EPA approved the Twin Lakes Watershed PIP. The LPSNRD Board approved the project agreement in July. Since approving the agreement, staff has mailed a flyer to all of the property owners in the watershed, launched a watershed website (<https://www.lpsnrd.org/programs/landowner-cost-share/twin-lakes-watershed>), ordered project recognition signs, held an open house in Pleasant Dale to

provide additional information, and received and approved 11 cost-share applications (one cover crop, four farm ponds, and six terrace BMPs) to date. The Twin Lakes 319 Project is a three-year grant. Upon completion of the grant, the District will consider keeping the Twin Lakes Watershed as one of our identified targeted areas within the Salt Creek Watershed.

In October LPSNRD approved an Inter-Governmental Agreement Amendment between NeDEE and LPSNRD regarding the Twin Lakes Watershed Target Area Implementation Project. The District received two additional cost-share applications in the Twin Lakes Watershed totaling \$83,945. Based on committed funds, these two applications would have put the project cost over the federal funds by \$36,190. Due to the interest of the landowners to complete water quality BMPs in the Twin Lakes Watershed and with over 1.5 years left in the Project, LPSNRD requested an amendment to Nebraska Department of Environment and Energy (NeDEE) to the Inter-Governmental Agreement for an additional \$60,000 in Section 319 grant funds. This would increase the budget to \$360,000 federal funds and \$240,000 in LPSNRD matching funds for BMPs, or a total up to \$317,000 in nonfederal match as cash and /or services in-kind.

To date, LPSNRD has committed a total of \$336,190 of federal funds on recommended BMPs. Due to the 2022 drought, most of these BMPs are expected to be constructed this spring and summer (with the construction deadline extension). Those projects that don't get constructed this spring are anticipated to be re-applied for next fall. LPSNRD is not currently taking any more BMP cost-share applications in the Twin Lakes Watershed until those approved cost-share projects are constructed or cancelled but will continue to publicize and correspond with interested landowners regarding the Twin Lakes Watershed Section 319 Project.

Drew Ratkovec was introduced as the District's new Stormwater/Watershed Specialist and will be overseeing the Twin Lakes 319 Project.

- Soil Loss Tolerance or T-value Information. In September and October 2022, the Land Resources Subcommittee did not recommend approval on three cost-share applications (one in Otoe County and two in Cass County) due to not having a current resource concern. In the discussion of those applications there were questions asked of the District Conservationist on soil loss tolerance or T-value identified on the applications, specifically how that is determined. T-value represents a maximum rate of erosion that can take place without causing a long-term decline in productivity of the soil versus the acceptable erosion rate. The T-value does not directly correspond with tons lost. There are many factors that go into these calculations and there are also "on-the-ground factors" that may not be in the calculation, such as existing tillage methods and previous erosion control treatment. The soil loss tolerance or T-values are used as a general guide or baseline in determining or recommending types of cropping management and conservation practices. Cory Schmidt provided and discussed the attached summary sheet and answered questions of the subcommittee.

There being no further business, Hellerich adjourned the meeting at 6:35 pm.

Encl. 3 pgs

2023 LPSNRD Average Costs- Surface Water Quality BMP Cost-share Program

Practice Code	Practice Name	Scenario	Scenario Unit	Total Payment per Unit	Program
342	Critical area planting	Vegetation-normal tillage (Organic and Non-Organic)	Acre	\$ 420.33	NRD/NSWCP
362	Diversion	Diversion	Cubic Yard	\$ 4.27	NRD/NSWCP
378	Pond	Embankment Pond with less than 24" pipe	Cubic Yard	\$ 7.08	NRD/NSWCP
378	Pond	Embankment Pond with greater than or equal to 24" pipe	Cubic Yard	\$ 6.11	NRD/NSWCP
380	Windbreak/Shelterbelt Establishment	Hand Planted, Bare Root	Each	\$ 2.66	NRD/NSWCP
380	Windbreak/Shelterbelt Establishment	Trees, machine planted	Foot	\$ 0.36	NRD/NSWCP
410	Grade Stabilization Structure	Concrete Block Chute	SqFt	\$ 8.18	NRD/NSWCP
410	Grade Stabilization Structure	Embankment, with less than 24" pipe	Cubic Yard	\$ 7.08	NRD/NSWCP
410	Grade Stabilization Structure	Embankment, with greater than or equal to 24" pipe	Cubic Yard	\$ 6.12	NRD/NSWCP
410	Grade Stabilization Structure	Rock Chute	Cubic Yard	\$ 137.41	NRD/NSWCP
412	Grassed Waterway	Waterway with Side Dikes or Checks	Acre	\$ 3,756.95	NRD/NSWCP
412	Grassed Waterway	Waterway, 25 to 50 sq. ft.	Acre	\$ 2,518.19	NRD/NSWCP
484	Mulching	Natural Material - Straw	Acre	\$ 462.96	NRD/NSWCP
512	Pasture & Hay Planting	Introduced Perennial & Native Grass Mix	Acre	\$ 80.64	NRD/NSWCP
550	Range Planting	Native, Standard Prep	Acre	\$ 162.10	NRD/NSWCP
550	Range Planting	Native, Wildlife or Pollinator (F1)	Acre	\$ 277.19	NRD/NSWCP
600	Terrace	Broadbase, Non-Storage	Foot	\$ 2.00	NRD/NSWCP
600	Terrace	Narrow Base - Non-Storage	Foot	\$ 3.50	NRD/NSWCP
600	Terrace	Storage - Broadbase	Foot	\$ 3.93	NRD/NSWCP
600	Terrace	Storage - Grass Back	Foot	\$ 4.39	NRD/NSWCP
600	Terrace	Narrow Base - Storage	Foot	\$ 3.77	NRD/NSWCP
620	Underground Outlet	PE, 6" or less	Foot	\$ 5.07	NRD/NSWCP
620	Underground Outlet	PE, 8"	Foot	\$ 7.08	NRD/NSWCP
620	Underground Outlet	PE, 10"	Foot	\$ 10.26	NRD/NSWCP
620	Underground Outlet	PE, 12" or greater	Foot	\$ 13.58	NRD/NSWCP
620	Underground Outlet	PVC or Dual Wall, 4-6"	Foot	\$ 8.64	NRD/NSWCP
620	Underground Outlet	PVC or Dual Wall, 8-10"	Foot	\$ 10.38	NRD/NSWCP
620	Underground Outlet	PVC or Dual Wall, 12-18"	Foot	\$ 14.72	NRD/NSWCP
638	Water and Sediment Control Basin	WASCOB base	Cubic Yard	\$ 4.66	NRD/NSWCP
650	Windbreak/Shelterbelt Renovation	Removal greater than 8". DBH with Dozer.	Foot	\$ 3.03	NRD/NSWCP

Dated and Approved: _____

Costs for additional eligible practices can be found in the 2023 NeDNR/NSWCP cost list (docket.)

2022 vs 2023 LPSNRD Average Costs- Surface Water Quality BMP Cost-share Program

Practice Code	Practice Name	Scenario	Scenario Unit	2022 Total Payment Per Unit	2023 Total Payment Per Unit	Change in Payment Per Unit	Program
342	Critical area planting	Vegetation-normal tillage (Organic and Non-Organic)	Acre	\$ 308.20	\$ 420.33	\$ 112.13	NRD/NSWCP
362	Diversion	Diversion	Cubic Yard	\$ 4.27	\$ 3.78	\$ (0.49)	NRD/NSWCP
378	Pond	Embankment Pond with less than 24" pipe	Cubic Yard	\$ 7.08	\$ 6.86	\$ (0.22)	NRD/NSWCP
378	Pond	Embankment Pond with greater than or equal to 24" pipe	Cubic Yard	\$ 6.11	\$ 5.51	\$ (0.60)	NRD/NSWCP
380	Windbreak/Shelterbelt Establishment	Hand Planted, Bare Root	Each	\$ 2.41	\$ 2.66	\$ 0.25	NRD/NSWCP
380	Windbreak/Shelterbelt Establishment	Trees, machine planted	Foot	\$ 0.33	\$ 0.36	\$ 0.03	NRD/NSWCP
410	Grade Stabilization Structure	Concrete Block Chute	SqFt	\$ 8.18	\$ 6.91	\$ (1.27)	NRD/NSWCP
410	Grade Stabilization Structure	Embankment, with less than 24" pipe	Cubic Yard	\$ 7.08	\$ 6.86	\$ (0.22)	NRD/NSWCP
410	Grade Stabilization Structure	Embankment, with greater than or equal to 24" pipe	Cubic Yard	\$ 6.12	\$ 5.52	\$ (0.60)	NRD/NSWCP
410	Grade Stabilization Structure	Rock Chute	Cubic Yard	\$ 114.86	\$ 137.41	\$ 22.55	NRD/NSWCP
412	Grassed Waterway	Waterway with Side Dikes or Checks	Acre	\$ 3,756.95	\$ 3,346.01	\$ (410.94)	NRD/NSWCP
412	Grassed Waterway	Waterway, 25 to 50 sq. ft.	Acre	\$ 2,842.37	\$ 2,518.19	\$ (324.18)	NRD/NSWCP
484	Mulching	Natural Material - Straw	Acre	\$ 378.10	\$ 462.96	\$ 84.86	NRD/NSWCP
512	Pasture & Hay Planting	Introduced Perennial & Native Grass Mix	Acre	\$ 78.83	\$ 80.64	\$ 1.81	NRD/NSWCP
550	Range Planting	Native, Standard Prep	Acre	\$ 148.59	\$ 162.10	\$ 13.51	NRD/NSWCP
550	Range Planting	Native, Wildlife or Pollinator (F1)	Acre	\$ 266.36	\$ 277.19	\$ 10.83	NRD/NSWCP
600	Terrace	Broadbase, Non-Storage	Foot	\$ 2.00	\$ 1.89	\$ (0.11)	NRD/NSWCP
600	Terrace	Narrow Base - Non-Storage	Foot	\$ 3.50	\$ 3.21	\$ (0.29)	NRD/NSWCP
600	Terrace	Storage - Broadbase	Foot	\$ 3.93	\$ 3.62	\$ (0.31)	NRD/NSWCP
600	Terrace	Storage - Grass Back	Foot	\$ 4.33	\$ 4.39	\$ 0.06	NRD/NSWCP
600	Terrace	Narrow Base - Storage	Foot	\$ 3.77	\$ 3.46	\$ (0.31)	NRD/NSWCP
620	Underground Outlet	PE, 6" or less	Foot	\$ 5.07	\$ 5.06	\$ (0.01)	NRD/NSWCP
620	Underground Outlet	PE, 8"	Foot	\$ 6.69	\$ 7.08	\$ 0.39	NRD/NSWCP
620	Underground Outlet	PE, 10"	Foot	\$ 9.57	\$ 10.26	\$ 0.69	NRD/NSWCP
620	Underground Outlet	PE, 12" or greater	Foot	\$ 12.93	\$ 13.58	\$ 0.65	NRD/NSWCP
620	Underground Outlet	PVC or Dual Wall, 4-6"	Foot	\$ 7.89	\$ 8.64	\$ 0.75	NRD/NSWCP
620	Underground Outlet	PVC or Dual Wall, 8-10"	Foot	\$ 8.98	\$ 10.38	\$ 1.40	NRD/NSWCP
620	Underground Outlet	PVC or Dual Wall, 12-18"	Foot	\$ 13.16	\$ 14.72	\$ 1.56	NRD/NSWCP
638	Water and Sediment Control Basin	WASCOB base	Cubic Yard	\$ 4.66	\$ 3.90	\$ (0.76)	NRD/NSWCP
650	Windbreak/Shelterbelt Renovation	Removal greater than 8" DBH with Dozer.	Foot	\$ 3.03	\$ 2.79	\$ (0.24)	NRD/NSWCP

Soil Loss Tolerance (T)

- Soil Loss Tolerance, or T value, represent the maximum annual rate of soil erosion that could take place without causing a decline in long-term productivity.
 - T values are unique to each soil series and typically range between 1 and 5 tons per acre per year. Low T values reflect fragile soils that degrade more rapidly than deeper, more productive soils that are less vulnerable to erosion.
 - Soil loss can be represented in multiples of T. For example, if a soil has a T value of 5 and the soil loss tolerance is 2T, the acceptable erosion rate is 10 tons per acre per year.
 - T values are not a component of erosion calculations but serve as baseline objectives for implementing specific cropping/management systems to control sheet and rill erosion.

- Highly Erodible Lands Conservation (HEL) and Conservation System Requirements
 - When producing an annual commodity, USDA program participants must:
 - Provide for a substantial reduction in soil erosion on HEL cropland where prior cropping history has been established. Soil loss should not exceed 2T.
 - Permit no substantial increase in soil erosion on HEL cropland converted from native vegetation (sodbuster) after December 23, 1985. Soil loss should not exceed T.
 - The Universal Soil Loss Equation (USLE) is used to predict AVERAGE annual rates of sheet and rill over the length of a cropping rotation.

 - USLE – $A = R \times K \times LS \times C \times P$
 - A – average annual soil loss – This is compared to T values
 - R – rainfall and runoff
 - K – soil erodibility
 - L – slope length
 - S – slope steepness
 - C – cover and management
 - P – supporting practices – contour farming, strip cropping, etc.

 - NRCS currently utilizes RUSLE2 which is computerized version of USLE that can calculate more complex combinations of tillage, crop rotations, and conservation practices.

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