



Grant All-Detail Report Disaster Relief 2016

Grant Title - 2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)

Grant ID - P16-9584

Organization - Carver SWCD

Original Awarded Amount	\$138,690.00	Grant Execution Date	9/21/2015
Required Match Amount	\$0.00	Original Grant End Date	12/31/2017
Required Match %	0%	Grant Day To Day Contact	Mike Wanous
Current Awarded Amount	\$138,690.00	Current End Date	12/31/2017

Budget Summary

	Budgeted	Spent	Balance Remaining*
Total Grant Amount	\$107,221.95	\$93,907.20	\$44,782.80
Total Match Amount	\$34,672.50	\$26,813.08	\$7,859.42
Total Other Funds	\$0.00	\$0.00	\$0.00
Total	\$141,894.45	\$120,720.28	\$52,642.22

**Grant balance remaining is the difference between the Awarded Amount and the Spent Amount. Other values compare budgeted and spent amounts.*

Budget Details

Activity Name	Activity Category	Source Type	Source Description	Budgeted	Spent	Last Transaction Date	Matching Fund
DRAP-01 David Peterman	Agricultural Practices	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)	\$6,274.50	\$6,274.50	11/19/2015	N
DRAP-02 Dan Brahee	Agricultural Practices	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)	\$17,475.45	\$17,475.45	12/27/2018	N
DRAP-03 Richard Molnau	Agricultural Practices	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)	\$14,532.50	\$14,532.50	9/21/2017	N

Activity Name	Activity Category	Source Type	Source Description	Budgeted	Spent	Last Transaction Date	Matching Fund
DRAP-04 Ron Olson	Agricultural Practices	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)	\$10,890.00	\$10,890.00	6/20/2016	N
DRAP-05 Bruce Tice	Streambank or Shoreline Protection	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)	\$14,503.47	\$14,503.47	8/20/2018	N
DRAP-06 Roseann McMahon	Streambank or Shoreline Protection	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)	\$15,107.29	\$15,107.29	8/17/2016	N
DRAP-07 Tony Hesse	Agricultural Practices	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)	\$13,314.75			N
DRAP-08 Roseann McMahon	Special Projects	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)	\$988.58	\$988.58	10/23/2017	N
DRAP-Landowner Costs	Agricultural Practices	Landowner Fund	Landowner Portion	\$34,672.50	\$26,813.08	2/22/2018	Y
DRAP3-03 Camden Township	Streambank or Shoreline Protection	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)	\$2,398.91	\$2,398.91	9/26/2018	N
Professional Engineering	Agricultural Practices	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)	\$11,736.50	\$11,736.50	12/27/2018	N

Activity Details Summary

Activity Details	Total Action Count	Total Activity Mapped	Proposed Size / Unit	Actual Size / Unit
342 - Critical Area Planting	2	1	1 COUNT	1 COUNT
412 - Grassed Waterway and Swales	1	1	940 LINEAR FEET	940 LINEAR FEET
342 - Critical Area Planting	1	1	400 LINEAR FEET	400 LINEAR FEET
410 - Grade Stabilization Structure	1	1	51 LINEAR FEET	51 LINEAR FEET
412 - Grassed Waterway and Swales	1	1	2134 LINEAR FEET	2134 LINEAR FEET
412 - Grassed Waterway and Swales	6	6	1829 LINEAR FEET	1829 LINEAR FEET

Proposed Activity Indicators

Activity Name	Indicator Name	Value & Units	Waterbody	Calculation Tool	Comments
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Final Indicators Summary

Indicator Name	Total Value	Unit
SEDIMENT (TSS)	9.10	TONS/YR
SOIL (EST. SAVINGS)	58.50	TONS/YR
PHOSPHORUS (EST. REDUCTION)	41.52	LBS/YR

Grant Activity

Grant Activity - DRAP-01 David Peterman

Description	DRAP-01 David Peterman Grassed Waterway		
Category	AGRICULTURAL PRACTICES		
Start Date	1-Oct-15	End Date	16-Oct-15
Has Rates and Hours?	No		
Actual Results	1 Grassed Waterway totaling 940 feet was constructed to eliminate a gully that had formed in the crop field . The 39.1 acre watershed results in water velocities of 65 cfs following a 10 yr, 24 Hr rain event. An estimated 7.3 tons of sediment and 2.5 pounds of phosphorus will be removed annually from downstream areas as a result of establishing the permanent grassed waterway. Subsurface drain tile was installed adjacent to the waterway to keep the 20' bottom width from remaining saturated. Waterway grades range from 3% to 1%, and subsurface drainage was recommended due to equipment travel across the waterway. Construction occurred October 16, 2015 and was completed by Steve Burns Exc.		

Activity Action - DRAP-01_Peterman WW

Practice	412 - Grassed Waterway and Swales	Count of Activities	1
Description	1 Grassed Waterway totaling 940 feet was constructed to eliminate a gully that had formed in the crop field.		
Proposed Size / Units	940.00 LINEAR FEET	Lifespan	10 Years
Actual Size/Units	940.00 LINEAR FEET	Installed Date	16-Oct-15
Mapped Activities	1 Polygon(s)		

Final Indicator for DRAP-01_Peterman WW			
Indicator Name	PHOSPHORUS (EST. REDUCTION)	Value	2.5
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) LBS/YR	Calculation Tool	BWSR CALC (FILTER STRIP)
Waterbody	South Fork Crow River		
Final Indicator for DRAP-01_Peterman WW			
Indicator Name	SEDIMENT (TSS)	Value	7.3
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	Calculation Tool	BWSR CALC (FILTER STRIP)
Waterbody	South Fork Crow River		

Grant Activity - DRAP-02 Dan Brahee			
Description	DRAP-02 Dan Brahee - Grade Stabilization Structure & Underground Outlet on the bank of Bevens Creek		
Category	AGRICULTURAL PRACTICES		
Start Date	17-Jun-16	End Date	18-Jul-16
Has Rates and Hours?	No		
Actual Results	<p>The purpose of this project was to construct a grade stabilization structure and underground outlet on the bank of Bevens Creek. The grade stabilization structure was designed using NRCS MN Standard 410 and 638. Drainage area direct to the structure was 4.4 acres, approximately 51 lineal feet of berm was constructed, and an outlet tile was extended to a stable outlet along the creek. The gully occurred from rain events in June, 2014. Approximately 17.3 tons of soil and 12.4 lbs. of phosphorus will be saved annually from entering the creek as a result of this project.</p>		

Activity Action - DRAP-02 Dan Brahee			
Practice	410 - Grade Stabilization Structure	Count of Activities	1
Description	<p>The purpose of this project was to construct a grade stabilization structure and underground outlet on the bank of Bevens Creek. The grad stabilization structure was designed using NRCS MN Standard 410 & 638. Drainage area direct to the structure was 4.4 acres, approximately 51 lineal feet of berm was constructed, and an outlet tile was extended to a stable outlet along the creek. The gully occurred from rain events in June, 2014. Approximately 17.3 tons of soil and 12.4 lbs. of phosphorus will be saved annually from entering the creek as a result of this project.</p>		
Proposed Size / Units	51.00 LINEAR FEET	Lifespan	10 Years
Actual Size/Units	51.00 LINEAR FEET	Installed Date	5-Aug-16
Mapped Activities	1 Point(s)		

Final Indicator for DRAP-02 Dan Brahee			
Indicator Name	PHOSPHORUS (EST. REDUCTION)	Value	12.4

Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) LBS/YR	Calculation Tool	BWSR CALC (GULLY STABILIZATION)
Waterbody	Bevens Creek		
Final Indicator for DRAP-02 Dan Brahee			
Indicator Name	SOIL (EST. SAVINGS)	Value	17.3
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	Calculation Tool	BWSR CALC (GULLY STABILIZATION)
Waterbody	Bevens Creek		

Grant Activity - DRAP-03 Richard Molnau			
Description	The objective of this project is to construct 2,134 linear feet of grassed waterway to address significant gully erosion that is occurring in the cropland from rain events in 2014.		
Category	AGRICULTURAL PRACTICES		
Start Date	31-Mar-16	End Date	11-Sep-17
Has Rates and Hours?	No		
Actual Results	The purpose of this project was to construct 2,134 linear feet of grassed waterway to address significant gully erosion that was occurring in the cropland. Construction consisted of waterway shaping and the installation of 6" CPE drain tile adjacent to the waterway bottoms. A rock lined scour hole was also constructed at an upstream road culvert to provide outlet protection and also reduce runoff velocities. An estimated annual loss of 21.8 tons of soil and 23.2 lbs of phosphorus will be reduced from entering downstream areas as a result of this project.		

Activity Action - DRAP-03 Richard Molnau			
Practice	412 - Grassed Waterway and Swales	Count of Activities	1
Description	The purpose of this project was to construct 2,134 linear feet of grassed waterway to address significant gully erosion that was occurring in the cropland due to a 100-year rain event in June, 2014. Construction consisted of waterway shaping and the installation of 6" CPE drain tile adjacent to the waterway bottoms. A rock lined scour hole was also constructed at an upstream road culvert to provide outlet protection and also reduce runoff velocities. An estimated annual loss of 21.8 tons of soil and 23.2 lbs. of phosphorus will be reduced from entering downstream areas as a result of this project.		
Proposed Size / Units	2,134.00 LINEAR FEET	Lifespan	10 Years
Actual Size/Units	2,134.00 LINEAR FEET	Installed Date	7-Jun-16
Mapped Activities	1 Polygon(s)		

Final Indicator for DRAP-03 Richard Molnau			
Indicator Name	PHOSPHORUS (EST. REDUCTION)	Value	23.2
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) LBS/YR	Calculation Tool	BWSR CALC (FILTER STRIP)
Waterbody	Carver Creek		
Final Indicator for DRAP-03 Richard Molnau			
Indicator Name	SOIL (EST. SAVINGS)	Value	21.8
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	Calculation Tool	BWSR CALC (FILTER STRIP)
Waterbody	Carver Creek		

Grant Activity - DRAP-04 Ron Olson			
Description	The objective of this project is to construct 6 grassed waterways totaling 1,980 linear feet to address gully erosion that is occurring in the cropland. Sediment from 3 of the eroded areas has been deposited on the neighboring property for multiple years, the rain event in 2014 resulted in significant impacts to this neighboring property. Construction will consist of waterway shaping and the installation of 6”CPE drain tile adjacent to the waterway bottoms. Seeding and mulching of the waterway will be completed following construction.		
Category	AGRICULTURAL PRACTICES		
Start Date	31-Mar-16	End Date	23-May-16
Has Rates and Hours?	No		
Actual Results	<p>The objective of this project was to construct 6 grassed waterways totaling 1,829 linear feet to address gully erosion that was occurring in the cropland. Sediment from 3 of the eroded areas had been deposited on the neighboring property for multiple years, the rain event in 2014 resulted in significant impacts to this neighboring property.</p> <p>An estimated 14 tons of soil and 1.5 pounds of phosphorus will be removed annually from downstream areas.</p> <p>Construction consisted of waterway shaping and the installation of 6”CPE drain tile adjacent to the waterway bottom. Seeding and mulching of the waterways was completed following construction.</p>		

Activity Action - DRAP-04 Ron Olson			
Practice	412 - Grassed Waterway and Swales	Count of Activities	6
Description	<p>The objective of this project was to construct 6 grassed waterways totaling 1,829 linear feet to address gully erosion that was occurring in the cropland. Sediment from 3 of the eroded areas had been deposited on the neighboring property for multiple years, the rain event in 2014 resulted in significant impacts to this neighboring property.</p> <p>Construction consisted of waterway shaping and the installation of 6" CPE drain tile adjacent to the waterway bottom. Seeding and mulching of the waterways was completed following construction.</p>		
Proposed Size / Units	1,829.00 LINEAR FEET	Lifespan	10 Years
Actual Size/Units	1,829.00 LINEAR FEET	Installed Date	17-May-16
Mapped Activities	6 Polygon(s)		

Final Indicator for DRAP-04 Ron Olson			
Indicator Name	PHOSPHORUS (EST. REDUCTION)	Value	1.5
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) LBS/YR	Calculation Tool	BWSR CALC (FILTER STRIP)
Waterbody	Bevens Creek		
Final Indicator for DRAP-04 Ron Olson			
Indicator Name	SOIL (EST. SAVINGS)	Value	14
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	Calculation Tool	BWSR CALC (FILTER STRIP)
Waterbody	Bevens Creek		

Grant Activity - DRAP-05 Bruce Tice			
Description	DRAP-05 Streambank Stabilization to save the landowners driveway.		
Category	STREAMBANK OR SHORELINE PROTECTION		
Start Date	1-May-18	End Date	18-May-18
Has Rates and Hours?	No		
Actual Results	<p>The objective of this project was to repair an eroded streambank that was placing infrastructure (landowner's driveway) in jeopardy following the rain events of 2014. The erosion was occurring at an outside bend of Bevens Creek and forced the landowner to relocate his driveway in the past. The streambank stabilization project was designed using NRCS MN Standard 580. 166 feet of the streambank was reshaped to a uniform slope and rock rip rap placed at 18" thickness with a 1.5:1 slope (max).</p>		

Grant Activity - DRAP-06 Roseann McMahon

Description	DRAP-06 Roseann McMahon - Slope Stabilization, tile installation to intercept groundwater seeps, seeding, and an underground outlet.		
Category	STREAMBANK OR SHORELINE PROTECTION		
Start Date	28-Jun-16	End Date	13-Jul-16
Has Rates and Hours?	No		
Actual Results	The objective of this project was to repair a slope failure with compacted earth fill, tile installation to intercept potential groundwater seeps, seeding and an underground outlet. The slope failure is a tributary to Bevens Creek, an intermittent stream, and the Minnesota River. The slope stabilization was designed using NRCS MN Standard 342 and 606 and 620. Fill was trucked to the site from a borrow site on the landowners property, benched into the slope and compacted. Following the slope repair, seeding and Landlok CS2 erosion blanket was installed to promote revegetation.		

Activity Action - DRAP-06 Roseann McMahon

Practice	342 - Critical Area Planting	Count of Activities	1
Description	The objective of this project was to repair a slope failure with compacted earth fill, tile installation to intercept potential groundwater seeps, seeding and an underground outlet. The slope failure is a tributary to Bevens Creek, and intermittent stream, and the Minnesota River. The slope stabilization was designed using NRCS MN Standard 342, 606 & 620. Fill was trucked to the site from a borrow site on the landowner property, benched into the slope and compacted. Following slope repair, seeding and Landlok CS2 erosion blanked was installed to promote vegetation.		
Proposed Size / Units	1.00 COUNT	Lifespan	10 Years
Actual Size/Units	1.00 COUNT	Installed Date	25-Jul-16
Mapped Activities	1 Polygon(s)		

Final Indicator for DRAP-06 Roseann McMahon

Indicator Name	SOIL (EST. SAVINGS)	Value	2.7
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	Calculation Tool	BWSR CALC (GULLY STABILIZATION)
Waterbody	Bevens Creek		

Final Indicator for DRAP-06 Roseann McMahon

Indicator Name	PHOSPHORUS (EST. REDUCTION)	Value	0.96
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) LBS/YR	Calculation Tool	BWSR CALC (GULLY STABILIZATION)
Waterbody	Bevens Creek		

Final Indicator for DRAP-06 Roseann McMahon			
Indicator Name	SEDIMENT (TSS)	Value	0.9
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	Calculation Tool	BWSR CALC (GULLY STABILIZATION)
Waterbody	Bevens Creek		

Grant Activity - DRAP-07 Tony Hesse			
Description	DRAP-07 Tony Hesse Grade Stabilization		
Category	AGRICULTURAL PRACTICES		
Start Date	1-Jul-17	End Date	01-Dec-17
Has Rates and Hours?	No		
Actual Results			

Grant Activity - DRAP-08 Roseann McMahon			
Description	DRAP-08 Roseann McMahon - Repair Slope Sloughs		
Category	SPECIAL PROJECTS		
Start Date	1-Sep-17	End Date	15-Sep-17
Has Rates and Hours?	No		
Actual Results	The purpose of this project was to repair an area of the slope stabilization project that sloughed shortly after the July 2017 project completion and seeding. A rain event totaling 3-1/2" on August 11th caused some sloughing midway down the slope that needed to be repaired. The slope stabilization repair included stripping vegetation and erosion matting and re-compacting the sloughed material. Following the slope repair, approximately 400 SY of seeding and Landlock CS2 erosion blanket was installed to promote revegetation.		

Activity Action - DRAP-08 Roseann McMahon			
Practice	342 - Critical Area Planting	Count of Activities	1
Description	The purpose of this project was to repair an area of the previous slope stabilization project that sloughed shortly after the July 2017 project completion and seeding.		
Proposed Size / Units	400.00 LINEAR FEET	Lifespan	10 Years
Actual Size/Units	400.00 LINEAR FEET	Installed Date	27-Sep-17
Mapped Activities	1 Polygon(s)		

Final Indicator for DRAP-08 Roseann McMahon			
Indicator Name	SOIL (EST. SAVINGS)	Value	2.7
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	Calculation Tool	BWSR CALC (GULLY STABILIZATION)
Waterbody	Bevens Creek		
Final Indicator for DRAP-08 Roseann McMahon			
Indicator Name	PHOSPHORUS (EST. REDUCTION)	Value	0.96
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) LBS/YR	Calculation Tool	BWSR CALC (GULLY STABILIZATION)
Waterbody	Bevens Creek		
Final Indicator for DRAP-08 Roseann McMahon			
Indicator Name	SEDIMENT (TSS)	Value	0.9
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	Calculation Tool	BWSR CALC (GULLY STABILIZATION)
Waterbody	Bevens Creek		

Grant Activity - DRAP-Landowner Costs			
Description	DRAP-Landowner Costs		
Category	AGRICULTURAL PRACTICES		
Start Date		End Date	
Has Rates and Hours?	No		
Actual Results			

Activity Action - DRAP-06 Slope Stabilization			
Practice	342 - Critical Area Planting	Count of Activities	1
Description	Slope was stabilized due to the 2014 flooding.		
Proposed Size / Units	1.00 COUNT	Lifespan	10 Years
Actual Size/Units	1.00 COUNT	Installed Date	25-Jul-16
Mapped Activities	No		

Grant Activity - DRAP3-03 Camden Township

Description	<p>DRAP3-03 Camden Township - Additional Funding needed for the repair of an eroded streambank in Camden Twp. near 84th St. The erosion occurs on a bend of the Crow River, is eroding very quickly, and is approaching the road right of way.</p> <p>8/17/2016-Brought this contract to Board for approval. SWCD Board requested the engineer design the project with alternative practices (not riprap), and the possibility of rerouting 84th Street.</p> <p>9/15/2016-Staff reported the engineer did look into alternative practices, but he felt riprap would be the best option for this project. The Board instructed staff to contact another engineer and get another opinion.</p> <p>11/17/2016-Staff reported that WENK designed J-hooks to solve the erosion problem. The original design had 5 J-hooks installed. The SWCD Board approved installing 2 J-hooks, with the remainder of the project rip rapped.</p> <p>12/15/2016-Terry reported that an onsite meeting was held with the engineer, and Nick Proulx, DNR Ecological & Water Resources Clean Water Specialist. Nick doesn't think J-hooks will work on this site, and recommended rerouting the Crow River. Preliminary costs associated with the recommendation (at the low end) are approximately \$200,000. Terry will apply for a CLP grant for funding assistance.</p> <p>7/5/2017: CPL Grant is signed by both parties, and ready to be executed.</p>		
Category	STREAMBANK OR SHORELINE PROTECTION		
Start Date	22-Jul-16	End Date	16-Feb-18
Has Rates and Hours?	No		
Actual Results			

Grant Activity - Professional Engineering			
Description	Professional Engineering		
Category	AGRICULTURAL PRACTICES		
Start Date		End Date	
Has Rates and Hours?	No		
Actual Results			

Grant Attachments

Document Name	Document Type	Description
2014 DR-4182 Flood Relief Phase 2	Grant Agreement	2014 DR-4182 Flood Relief Phase 2 - Carver SWCD
2014 DR-4182 Flood Relief Phase 2 executed	Grant Agreement	2014 DR-4182 Flood Relief Phase 2 - Carver SWCD
All Details Report	Workflow Generated	Workflow Generated - All Details Report - 01/24/2017
All Details Report	Workflow Generated	Workflow Generated - All Details Report - 02/02/2016
All Details Report	Workflow Generated	Workflow Generated - All Details Report - 01/13/2016
All Details Report	Workflow Generated	Workflow Generated - All Details Report - 01/27/2017
All Details Report	Workflow Generated	Workflow Generated - All Details Report - 03/26/2018
All Details Report	Workflow Generated	Workflow Generated - All Details Report - 12/20/2017
Amendment	Grant	2014 - Minnesota Flood Relief Grant Phase 2 (Carver SWCD)
Carver DRAP P2 Amend 19	Grant Agreement Amendment	
P16-9584 Executed Grant Amendment	Grant Agreement Amendment	