



## Grant All-Detail Report Disaster Relief 2016

**Grant Title** - 2014 - Minnesota Flood Relief Grant Phase 3A (Carver SWCD)

**Grant ID** - P16-6228

**Organization** - Carver SWCD

<b>Original Awarded Amount</b>	<b>\$82,500.00</b>	<b>Grant Execution Date</b>	<b>5/23/2016</b>
<b>Required Match Amount</b>	\$0.00	<b>Original Grant End Date</b>	12/31/2018
<b>Required Match %</b>	0%	<b>Grant Day To Day Contact</b>	Mike Wanous
<b>Current Awarded Amount</b>	<b>\$82,500.00</b>	<b>Current End Date</b>	12/31/2018

### Budget Summary

	Budgeted	Spent	Balance Remaining*
Total Grant Amount	\$82,500.00	\$82,500.00	\$0.00
Total Match Amount	\$12,163.19	\$12,163.19	\$0.00
Total Other Funds	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$94,663.19</b>	<b>\$94,663.19</b>	<b>\$0.00</b>

*\*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
DRAP3 - Landowner Portion	Agricultural Practices	Landowner Fund	DRAP3 - Landowner Portion	\$12,163.19	\$12,163.19	7/20/2017	Y
DRAP3-01 Hesse (Tony & Dale)	Agricultural Practices	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 3A (Carver SWCD)	\$16,833.00	\$16,833.00	7/5/2016	N
DRAP3-02 David & Tracy Marks	Streambank or Shoreline Protection	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 3A (Carver SWCD)	\$19,656.56	\$19,656.56	7/20/2017	N

Activity Name	Activity Category	Source Type	Source Description	Budgeted	Spent	Last Transaction Date	Matching Fund
DRAP3-03 Camden Township	Streambank or Shoreline Protection	Current State Grant	2014 - Minnesota Flood Relief Grant Phase 3A (Carver SWCD)	\$46,010.44	\$46,010.44	9/26/2018	N

### Activity Details Summary

Activity Details	Total Action Count	Total Activity Mapped	Proposed Size / Unit	Actual Size / Unit
410 - Grade Stabilization Structure	1	1	287 LINEAR FEET	287 LINEAR FEET
580 - Streambank and Shoreline Protection	1	1	900 LINEAR FEET	900 LINEAR FEET
580 - Streambank and Shoreline Protection	1	1	118 LINEAR FEET	118 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
<b>SOIL (EST. SAVINGS)</b>	6.30	TONS/YR
<b>SEDIMENT (TSS)</b>	406.10	TONS/YR
<b>PHOSPHORUS (EST. REDUCTION)</b>	428.50	LBS/YR

## Grant Activity

Grant Activity - DRAP3 - Landowner Portion		
Description	DRAP3 - Landowner Portion	
Category	AGRICULTURAL PRACTICES	
Start Date		End Date
Has Rates and Hours?	No	
Actual Results		

Grant Activity - DRAP3-01 Hesse (Tony & Dale)		
Description	DRAP3-01 Hesse (Tony & Dale) A grade stabilization structure and underground outlet is planned to eliminate a large gully head that formed along the landowner's field edge.	
Category	AGRICULTURAL PRACTICES	
Start Date	2-Jun-16	End Date 14-Jun-16
Has Rates and Hours?	No	
Actual Results	1 Grade Stabilization structure and underground outlet was constructed to eliminate a large gully head that had formed along the landowners field edge. Three gullies were created from the significant rain events in June of 2014. An estimated 6.3 tons of sediment and 3.4 pounds of phosphorus will be removed annually from entering Carver Creek as a result of this project. Construction consisted of 287 linear feet of earthen embankment, a 24" inlet riser, and 74 linear feet of 15" HDPE outlet tile extending to a stable outlet. Engineering was provided by Michael M Mayer, PE for this project and construction occurred in June of 2016.	

Activity Action - DRAP3-01 Tony Hesse			
<b>Practice</b>	410 - Grade Stabilization Structure	<b>Count of Activities</b>	1
<b>Description</b>	1 Grade Stabilization structure and underground outlet was constructed to eliminate a large gully head that had formed along the landowners field edge. Three gullies were created from the significant rain events in June of 2014. An estimated 6.3 tons of sediment and 3.4 pounds of phosphorus will be removed annually from entering Carver Creek as a result of this project.. Construction consisted of 287 linear feet of earthen embankment, a 24" inlet riser, and 74 linear feet of 15" HDPE outlet tile extending to a stable outlet. Engineering was provided by Michael M Mayer, PE for this project and construction occurred in June of 2016.		
<b>Proposed Size / Units</b>	287.00 LINEAR FEET	<b>Lifespan</b>	10 Years
<b>Actual Size/Units</b>	287.00 LINEAR FEET	<b>Installed Date</b>	16-Jun-16
<b>Mapped Activities</b>	1 Point(s)		

Final Indicator for DRAP3-01 Tony Hesse			
<b>Indicator Name</b>	PHOSPHORUS (EST. REDUCTION)	<b>Value</b>	3.4
<b>Indicator Subcategory/Units</b>	WATER POLLUTION (REDUCTION ESTIMATES) LBS/YR	<b>Calculation Tool</b>	BWSR CALC (GULLY STABILIZATION)
<b>Waterbody</b>	Carver Creek		
Final Indicator for DRAP3-01 Tony Hesse			
<b>Indicator Name</b>	SOIL (EST. SAVINGS)	<b>Value</b>	6.3
<b>Indicator Subcategory/Units</b>	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	<b>Calculation Tool</b>	BWSR CALC (GULLY STABILIZATION)
<b>Waterbody</b>	Carver Creek		

Grant Activity - DRAP3-02 David & Tracy Marks			
<b>Description</b>	DRAP3-02 David & Tracy Marks The objective of this project is to repair an eroded streambank that is placing infrastructure (landowner's home) in jeopardy. The erosion is occurring at the base of a significant slope which leads to within feet of the landowners home. The streambank failure is occurring on Bevens Creek.		
<b>Category</b>	STREAMBANK OR SHORELINE PROTECTION		
<b>Start Date</b>	22-Jul-16	<b>End Date</b>	01-Jun-17
<b>Has Rates and Hours?</b>	No		
<b>Actual Results</b>	The streambank stabilization project was designed using NRCS MN Standard 580. 118 ft of streambank was reshaped and 18" of rock rip rap placed at a 1.5:1 slope. Construction occurred the week of June 12th, 2017 and was completed by Minger Construction Co., Inc. Project was completed as described		

Activity Action - DRAP3-02 David & Tracy Marks			
<b>Practice</b>	580 - Streambank and Shoreline Protection	<b>Count of Activities</b>	1
<b>Description</b>	The objective of this project is to repair an eroded streambank that is placing infrastructure (landowner's home) in jeopardy. The erosion is occurring at the base of a significant slope which leads to within feet of the landowners home. The streambank failure is occurring on Bevens Creek.		
<b>Proposed Size / Units</b>	118.00 LINEAR FEET	<b>Lifespan</b>	10 Years
<b>Actual Size/Units</b>	118.00 LINEAR FEET	<b>Installed Date</b>	16-Jun-17
<b>Mapped Activities</b>	1 Line(s)		

Final Indicator for DRAP3-02 David & Tracy Marks			
<b>Indicator Name</b>	SEDIMENT (TSS)	<b>Value</b>	46.1
<b>Indicator Subcategory/Units</b>	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	<b>Calculation Tool</b>	BWSR CALC (GULLY STABILIZATION)
<b>Waterbody</b>	Bevens Creek Watershed		
Final Indicator for DRAP3-02 David & Tracy Marks			
<b>Indicator Name</b>	PHOSPHORUS (EST. REDUCTION)	<b>Value</b>	42.1
<b>Indicator Subcategory/Units</b>	WATER POLLUTION (REDUCTION ESTIMATES) LBS/YR	<b>Calculation Tool</b>	BWSR CALC (GULLY STABILIZATION)
<b>Waterbody</b>	Bevens Creek Watershed		

**Grant Activity - DRAP3-03 Camden Township**

<p><b>Description</b></p>	<p>DRAP3-Camden Township</p> <p>The objective of this project is to repair an eroded streambank that is placing 84th Street in Camden Township in jeopardy. The erosion is occurring at an outside bend of the Crow River, causing land loss and is quickly approaching the 84th St. 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 &amp; 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> <p>02/20/2018: Invoice received from MN Native Landscapes for work performed over winter (\$194,847.50).</p>		
<p><b>Category</b></p>	<p>STREAMBANK OR SHORELINE PROTECTION</p>		
<p><b>Start Date</b></p>	<p>22-Jul-16</p>	<p><b>End Date</b></p>	<p>16-Feb-18</p>
<p><b>Has Rates and Hours?</b></p>	<p>No</p>		
<p><b>Actual Results</b></p>	<p>This project stabilized approximately 900 feet of actively eroding streambank on the Crow River in Camden Township, MN. This project constructed a toe-wood sod mat, which is a structure developed by Wildland Hydrology to stabilize eroding banks, to protect infrastructure as well as provide aquatic habitat. It was constructed using woody debris and vegetation mats to create a floodplain bench to reduce sheer stress and velocities on bank material.</p> <p>Logistically, this project provided unique challenges as construction activity occurred on both sides of the river. Approximately 530 cubic yards of Toe-wood material was harvested on site and staged for later use. Approximately 4,216 cubic yards of common excavation to remove a portion of the point bar for channel reshaping occurred and was hauled to the opposite river bank as well. Staging areas for these materials were tight, and the ever changing river conditions and flow depths made river access the most challenging. To minimize or mitigate environmental effects to the river, the in-water BMP's were performed during the winter months when the river is generally at its lowest, most of the river was ice covered and the soils were frozen. Steps were also taken to lay out a schedule for construction that condensed the timeline as much as possible.</p>		

Activity Action - DRAP3-03 Camden Township			
Practice	580 - Streambank and Shoreline Protection	Count of Activities	1
Description	The objective of this project was to repair 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.		
Proposed Size / Units	900.00 LINEAR FEET	Lifespan	10 Years
Actual Size/Units	900.00 LINEAR FEET	Installed Date	16-Feb-18
Mapped Activities	1 Line(s)		

Final Indicator for DRAP3-03 Camden Township			
Indicator Name	PHOSPHORUS (EST. REDUCTION)	Value	383
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) LBS/YR	Calculation Tool	BWSR CALC (STREAM & DITCH STABILIZATION)
Waterbody	Crow River		
Final Indicator for DRAP3-03 Camden Township			
Indicator Name	SEDIMENT (TSS)	Value	360
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) TONS/YR	Calculation Tool	BWSR CALC (STREAM & DITCH STABILIZATION)
Waterbody	Crow River		

## Grant Attachments

Document Name	Document Type	Description
<b>2014 DR-4182 Flood Relief Phase 3A</b>	Grant Agreement	2014 DR-4182 Flood Relief Phase 3A - Carver SWCD
<b>2014 DR-4182 Flood Relief Phase 3A executed</b>	Grant Agreement	2014 DR-4182 Flood Relief Phase 3A - Carver SWCD
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 12/20/2017
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 01/07/2019
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 12/13/2018
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 01/27/2017
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 01/24/2017
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 03/26/2018
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 01/04/2019
<b>Final financial report</b>	Progress	Progress Dated - 12/13/2018
<b>Final financial report</b>	Grant	2014 - Minnesota Flood Relief Grant Phase 3A (Carver SWCD)

