



RED RIVER RETENTION AUTHORITY

1120 28th Avenue North, Suite C - Fargo, ND 58102 - Phone: 701-356-6644

Red River Retention Authority

6 Month Progress Report

Reporting Period 5

May 21, 2017 through November 20, 2017

To

Natural Resource Conservation Service

For

Regional Conservation Partnership Program

NRCS Agreement 14-C-ND-669

December 2017

The Statement of Work between the USDA Natural Resource Conservation Service (NRCS) and the Red River Retention Authority (RRRA) summarizes the activities and responsibilities of the entities for the Regional Conservation Partnership Program (RCPP). Item 6, under responsibilities of the RRRA, requires that a semi-annual report be provided to the NRCS that documents project accomplishments and goals achieved. The Memorandum of Understanding was signed on May 21, 2015. The following is a report that summarizes activities that occurred during the 6 month period from May 21, 2017 through November 20, 2017

Numbers of WD, WRD and SLO assisted and/or cooperating agencies in the project effort.

The NRCS will provide a maximum of \$11,040,000 for the development of watershed protection plans within the approved project locations. Within the first reporting period, the RRRA was provided 20 requests to complete watershed protection plans following the guidelines described in the NRCS National Watershed Program Manual. The RRRA accepted the applications and approved the 20 requests. They provided the 20 applications to the NRCS and requested that the NRCS pursue a cooperation agreement with the local sponsor of the project. One of the applications was not accepted, because the watershed was larger than allowed.

At the December 2, 2015 meeting of the RRRA, 3 additional study requests were received. The RRRA approved these requests, and provided the applications to the NRCS. They requested the NRCS to pursue a cooperative agreement with the local sponsor.

The proposed sponsor for two of the study requests (Rabbit River in the Bois de Sioux Watershed District and Five Mile Creek in the Bois de Sioux Watershed District) have decided not to sign the cooperative agreement. They are concentrating their effort on the Bois de Sioux Direct Plan Study.

This leaves a total of 20 study requests in which a cooperative agreement between the local watershed sponsor and the NRCS. Twelve of these studies are in MN, with the remaining 8 studies in ND. There was also a request to modify the agreement for the Forest River Watershed Study, adding area 1B to the study area. This amended agreement was signed on May 11, 2017.

Seven different WD in MN have entered into a cooperative agreement. Six different WRDs, or joint WRDs, in ND have signed a cooperative agreement. The Cass County Joint WRD, made up of 4 individual WRDs, is the local sponsor for three of the studies. One of those studies, Upper Maple River Watershed, also includes involvement from the Barnes County WRD and Steele County WRD. The Forest River Joint WRD, consisting of 3 individual WRDs, is the local sponsor for one study. The Park River Joint WRD, comprised of 2 individual WRDs, is the local sponsor for one of the studies.

The Omaha District Corps of Engineers has agreed to act as cooperating agency for the watershed studies in North Dakota. The St. Paul District Corps of Engineers has agreed to act as a cooperating agency for the watershed studies located in MN.

A map providing the location of the 20 potential RCPP studies is shown in **Appendix 1**. An update has been made to the short description for each of the RCPP studies, as well as the table that summarizes each of these studies. This appendix has been updated for reporting period 5.

Contributions from other agencies or organizations which help implement provisions of the agreement and further project objectives.

Listed in the Plan of Work are the objectives for the study effort:

Objective 1: Develop and implement watershed plans and environmental documents for flood damage reduction, water quality, and watershed protection projects in the Red River of the North Basin.

Objective 2: Improve watershed health through promotion of sustainable agricultural systems.

Staff from the MN Department of Natural Resources (MN DNR), ND State Water Commission (ND SWC), and the Red River Basin Commission (RRBC) are members of the RRRA and have been involved in the approval of the RCPP proposal.

The ND State Water Commission (ND SWC), Red River Joint Water Resource District (RRJWRD) in ND, and the Red River Water Management Board (RRWMB) in MN, and the local WRDs or WDs are some of the agencies that have provided cost sharing to assist the local project sponsor to complete the watershed protection studies.

There will continue to be discussion with various State agencies in MN and ND. Representatives of the ND Game and Fish Department, ND Health Department, and ND State Water Commission have been attending the majority of the meetings for the studies in ND. Some of the other agencies that have attended some meetings and/or contributed input include Tribal representatives, State Historical Preservation Office, ND Parks and Recreation. A representative of the Fish and Wildlife Service has been active with the Forest River and North Branch of Park River studies. Input from the SCDs has been essential when developing the watershed protection plans.

The ND Health Department has provided modeling information on the extent of soil erosion in various watersheds. They have also provided information on channel segments listed as impaired waters.

Historical flood damage reduction costs have been provided by road entities and various other agencies.

Representatives of the NRCS and SCD are members of the Task Teams. Amongst other valuable input, they provide information on various farm programs that may provide watershed protection.

The MN Flood Damage Work Group includes participation from multiple agencies and organizations; such as the individual watershed district boards, MN Department of Natural Resources (DNR), MN Board of water and Soil Resource (BWSR), MN Pollution Control Agency (MPCA), U.S. Fish & Wildlife Service, County government representatives, citizens, USDA NRCS, USDA Farm Services Agency, MN Department of Agricultural, Tribal representatives, Soils and water conservation districts (SWCD), environmental/conservation representatives, and agricultural representative.

The International Water Institute (IWI) has developed several decision tools to assist in the analysis of potential project sites. Chuck Fritz and Dr. Jay Leitch have also been developing supporting information for the benefit-cost analysis that may assist studies in various study watersheds.

The Red River Basin Commission (RRBC) is developing a Water Quality Strategic Plan for the Red River of the North. The initiative will develop a nutrient reduction strategy for the basin that will include reduction goals by sub-watersheds and actions to implement the strategy. The draft plan will be submitted by February, 2018 and completed by June 30, 2018.

The RRBC will also be scheduling 12 initial events in the southern part of the Red River of the North watershed to discuss citizen engagement for voluntary nutrient management strategies. The goal of the public involvement is to educate the audience on water quality problems, the regulatory and enforcement approaches of each State and the new possibilities of addressing non-point pollution on a voluntary approach.

The RRJRD, RRWMB, and ND State Water Commission have approved cost sharing for the non-federal portion of the watershed planning study. The total estimated cost to develop the RCPP watershed plans is estimated at about \$16.1 million. The current federal commitment for the watershed plans is about \$10.265 million.

Assistance provided to WD, WRD and SLO to help meeting local, State, and/or Federal regulatory requirements.

The Omaha District Corps of Engineers has agreed to be a cooperating agency for the ND studies, while the St. Paul District Corps of Engineers has agreed to be a cooperating agency for the MN studies.

The majority of the regulatory agencies are part of the agency teams, task teams, or flood damage work groups and have been involved with the study process.

A workshop was held between the NRCS, Corps, RRRRA, and MN project sponsors to coordinate determine the most efficient process to accomplish the various steps required by the NRCS for the watershed plan with the Corps of Engineer approval process for permitting.

Information and contributions related to project efforts to address flood damage reduction, flooding, water quality, water conservation, and other natural resource related concerns.

Much detail was provided in the first 6-month update that was provided. There have been many entities that have assisted in the development of tools and information that will assist in the development of the watershed protection studies. Some of the main contributions include:

- The Red River Basin Commission (RRBC) overseeing the development of the Long Term Flood Solutions (LTFS) that was completed in 2011.
- The International Water Institute (IWI) has been instrumental in the development of various decision support tools to assist and streamline project planning.
- The IWI, with the RRJWRD and RRWMB as local sponsors, was responsible for obtaining the LIDAR data that is now available for the Red River watershed.
- The IWI website provides access to these tools as well as the hydrology models that had recently be developed for every tributary in the Red River watershed.
- The IWI has recently developed the PTMapp. The Prioritize, Target, and Measure Application (PTMApp) is a vision for a state-wide desktop and web application which be used by practitioners to provide the technical bridge between the general description of the

types of strategies in a local water plan and the identification of implementable on-the-ground Best Management Practices (BMPs) and Conservation Practices (CPs).

- The Corps of Engineers, with the RRWMB and RRJWD being cosponsors, have also been active with the Red River Watershed Feasibility Study since 2008. Study products include the LiDAR acquisition, development of hydrologic and hydraulic models, and decision support tools. The Corps of Engineers and RRBC are overseeing the Comprehensive Watershed Management Plan and updating of the LTFS. Overall cost for this study is expected to be about \$18 million when completed.
- HEC-HMS hydrology models for each tributary have recently been updated. This was a joint effort between WRDs, WD, RRJWRD, RRWMB, and Corps of Engineers.
- Using the updated HEC-HMS models, distributed detention analysis has been done for each tributary watershed. These studies located possible temporary storage areas within each watershed and calculated the change in various flood hydrographs at various points within that watershed.

Ongoing partner efforts for flood damage reduction includes:

- The FM Diversion Authority has offered to provide cost share for the design and construction of detention structures that would provide benefit to the Fargo-Moorhead area during flood events. They had made \$25 million available for this effort.
- The FM Diversion Authority continues to pursue a major flood protection project for Fargo, Moorhead and surrounding communities.
 - Significant work has been done to improve the flood protection for Fargo and Moorhead. Work within the cities includes purchase of homes located near the river, construction of levees, construction of lift stations, and other activities to improve the level of flood protection.
 - Study, design, and preparation for construction also continues for the diversion and staging area.
- Roseau Lake Bottom: This project did not qualify for RCPP funding and is continuing under the regular project mediation process. The project team is working on alternative formulation and selection of a preferred alternative (Concurrence Point #3). Held a Project Team meeting on October 19th.
- Roseau River WMA retention project is complete.
- Middle-Snake-Tamarac Watershed continues to develop a project plan for Newfolden, MN; they have requested funding from the Red River Watershed Management Board.
- Red Lake Watershed District has developed a purpose and need statement and begun alternative formulation for a flood damage reduction project on the Black River. A tributary of the Red Lake River.
- Construction of flood damage reduction projects at the cities of Grafton, Lisbon and Valley City continue.
- Various agencies have provided data on land use, crop types, past flood damage in Counties, and other useful information for the watersheds.
- The ND Health Department has provided information on model results for soil loss and information on impaired waterways.

- There is ongoing discussion on acceptable methods to account for all benefits of a potential project. The RRWMB of MN contracted with an economist and IWI to address consistent methods to account for these benefits. White papers have been drafted for economics for the RCPP watershed planning process. The RRRA is working with International Water Institute (IWI) in exploring other economic studies relating to water quality, recreation, irrigation and wildlife benefits of RCPP watersheds.

There are several other projects that are ongoing in the watershed. Accurate costs incurred within the 6-month window ending November 20, 2017 were not able to be obtained for all projects. **Appendix 2** includes a list of the majority of ongoing studies/construction that is not part of the RCPP studies but is being pursued by various partner entities.

Project Accomplishment/Goals Achieved

Table A lists the proposed RCPP studies and their current status.

Progress on the RCPP watershed studies has varied, depending on when the agreement for the study was signed. Some of the accomplishments obtained so far:

- Agreements for 20 of the expected 20 watershed studies have been signed.
- Public scoping meetings have been held for all 20 RCPP watersheds.
- Omaha District Corps of Engineers has agreed to act as cooperating agency for the ND studies. State agencies have been asked to act as consulting/advising agencies for all of the ND studies.
- St. Paul District Corps of Engineers has agreed to act as cooperating agency for MN studies. The St. Paul Corps of Engineers, NRCS, and MN local sponsors has discussed the most efficient method to proceed with the NRCS watershed study process while also adequately addressing the various steps required by the Corps of Engineers for permitting.
 - Workshops held on June 7 and September 20, 2016
- Workshop held with representatives of the National Water Management Center of NRCS
 - Discussion of requirements/procedure to satisfactorily complete studies.
 - Ongoing discussion on procedure to accurately account for all benefits of a potential project and to be consistent in the approach to determine the benefits.
- Engineering firms and economists communicating to determine most efficient, and uniform, method of analysis
- Draft purpose and need statements have been submitted to the NRCS for all the ND studies and five Minnesota NRCS comments have been provided.
- Task Teams for many of the ND watershed studies have discussed possible alternatives to address the purpose and need.
 - Preliminary hydrologic/hydraulic modeling has been performed in order to determine possible impacts of various alternatives.
 - Conceptual alternatives have been narrowed down to those most likely to meet the purpose and need.

- Continued development of other flood damage reduction projects pursued by partners in watershed.
- Funds provided for the RRBI have been prioritized to EQIP options that help to slow down, or reduce, excess water runoff. RRRA organized a RRB Technical Subcommittee meeting in August 2017.
- RRRA conducted a PL566 Subcommittee meeting on November 14, 2017 to address issues relating to developing comprehensive benefit cost analysis for RCPP watershed plans. Also discussed potential to develop larger watershed or sub-basin plans beyond the scope of PL566 watershed size.
- NRCS and RRRA conducted a “Question and Answer” meeting on May 17, 2017 to address issues relating to drafting of “Purpose and Need” statements and how and when to address benefit-cost analysis during the RCPP watershed planning process.

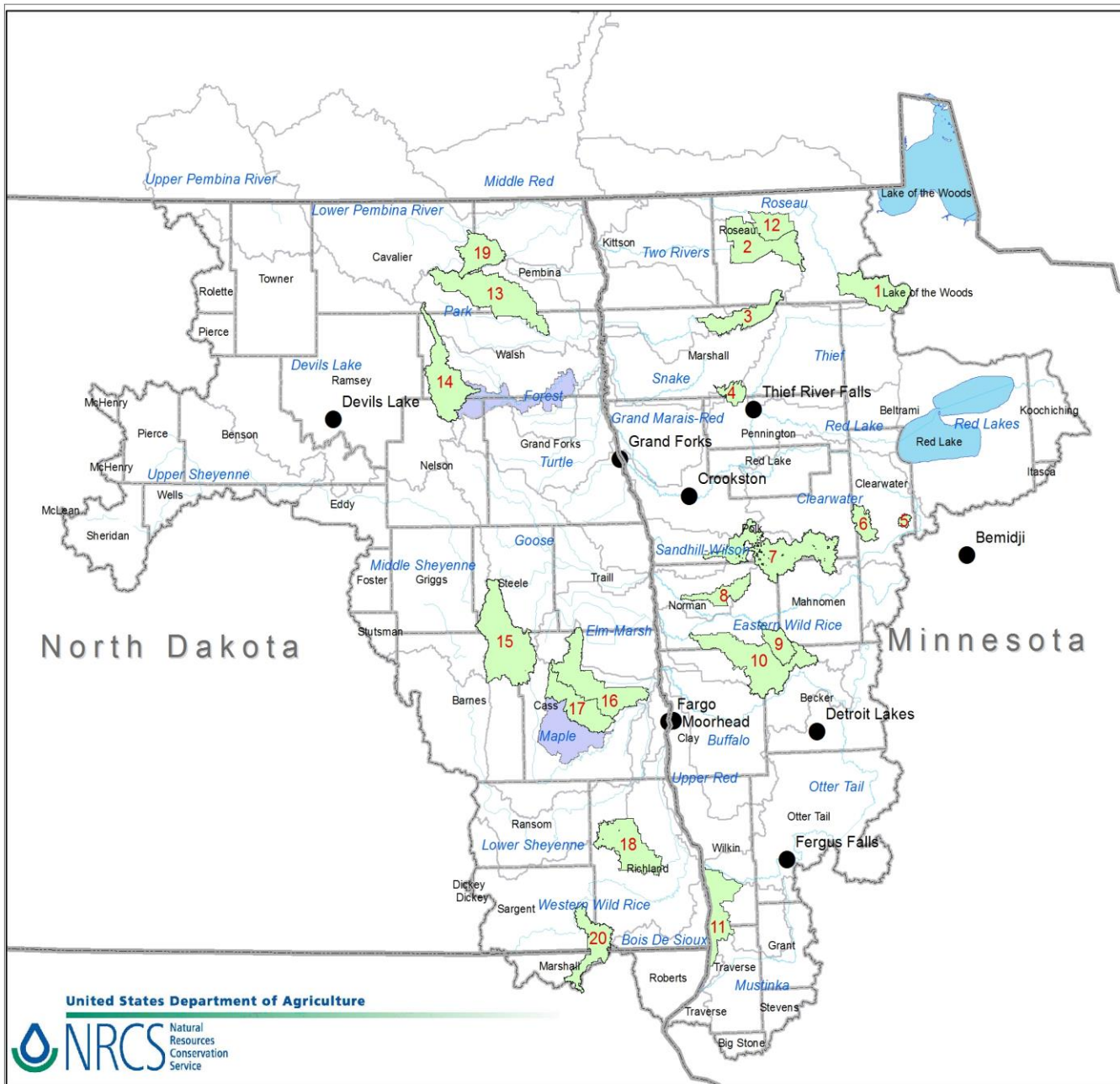
Emails were sent to the RCPP watershed sponsors asking that purpose and need statements be completed as soon as possible. Formal letters were sent to the Cass County Joint WRD, Wild Rice WD and Sand Hill WD requesting the planning process be accelerated on those watershed where planning had not begun or had ceased for several months.

Appendix 2 includes a table that lists a portion of other studies/construction of flood damage reduction projects being pursued by other partners. Costs incurred within the 6 month period were only included if costs could be documented. A sizeable amount of expenditures were not included because they were not verified.

Appendix 1

Location Map, Short Description,
and Summary Table
for each of Proposed RCPP Studies

Updated December, 12-2017



Red River Basin of the North

RCPP Watershed Project Areas



ID	Name
1	Beltrami Island State Forest
2	Klondike
3	Middle-Snake-Tamarac JD-19
4	Middle-Snake-Tamarac JD-14
5	Four Legged Lake
6	Pine Lake
7	Upper Sandhill River
8	Green Meadow
9	Moccasin Creek
10	South Branch Wild Rice River
11	Bois De Sioux Direct
12	Whitney Lake
13	North Branch Park River
14	Forest River
15	Upper Maple River
16	Rush River
17	Swan Creek
18	Antelope Creek
19	Tongue River
20	Shortfoot Creek

Legend

- RCPP Project Watershed
- City
- Counties

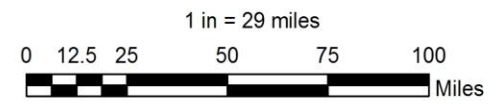


Table A. Summary of Flood Damage Reduction Activities in Red River Watershed - May 21, 2017 to November 20, 2017

	WD/WRD - Watershed Name	Agreement Signed	Amendment Signed	Study Area (acres)	Cost Incurred in Previous Reporting Periods	Accomplishments: To November 20, 2017					Draft Plan	RCPP Cost Incurred To Date	Total Estimated Study Cost
						Plan of Work	Purpose & Need	Env. Document	Alternatives	Env. Affects			
1	Roseau River Watershed - Beltrami Island Area Water Management Project	2/18/2016		93,043	\$78,705	7/11/16 Scoping	10/16/2017	ongoing				\$93,444	\$715,133
2	Two Rivers Watershed - Klondike Clean Water Retention Project	2/11/2016		113,776	\$145,411	6/30/16 Scoping	7/20/2017	ongoing				\$179,909	\$714,286
3	Middle-Snake-Tamarac Rivers Watershed - J.D. #19 East Park WMA Watershed	2/18/2016		66,270	\$50,103	9/26/16 Scoping	draft 11-30-17					\$67,839	\$715,680
4	Middle-Snake-Tamarac Rivers Watershed - J.D. #14 Watershed	2/18/2016		23,068	\$87,714	4/21/16 Scoping	draft 5/31/17					\$96,818	\$715,889
5	Red Lake - Four Legged Lake Watershed	2/10/2016		6,253	\$213,508	7/12/16 Scoping	10/21/16 Draft	ongoing				\$278,051	\$378,697
6	Red Lake - Pine Lake Watershed	2/10/2016		29,360	\$309,023	7/12/16 Scoping	3/9/2017	ongoing	ongoing			\$467,774	\$757,395
7	Sand Hill - Upper Sand Hill River Watershed	9/14/2016		173,369	\$4,704	8/16/2017 Scoping	Meeting Planned					\$13,158	\$732,360
8	Wild Rice - Green Meadow Sub watershed	3/9/2016		43,310	\$79,956	5/5/16 Scoping	ongoing 1/25/17					\$82,090	\$715,248
9	Wild Rice - Moccasin Creek Sub watershed	3/9/2016		38,799	\$6,255	6/12/17 Scoping	11/22/2017	ongoing				\$56,073	\$715,283
10	Wild Rice - South Branch Wild Rice River Sub watershed	3/9/2016		165,236	\$3,718	6/12/17 Scoping	11/22/2017	ongoing				\$57,505	\$715,295
11	Bois de Sioux - Rabbit River	WD Declined		80,136									
12	Bois de Sioux - Bois de Sioux Direct Watershed	4/4/2016		96,328	\$217,000	7/27/16 Scoping	8/10/16 Meeting	ongoing	Under review	ongoing		\$340,939	\$875,000
13	Bois de Sioux - Five Mile Creek	WD Declined		77,643									
14	Park River Joint WRD - North Branch Park River Watershed	9/16/2015		165,245	\$171,204	2/17/16 Scoping	5/5/16 Draft	ongoing	5/25/16; 8/31/16			\$219,038	\$732,000
15	Forest River - Forest River Watershed	*9/18/2015	5/11/2017	245,300	\$122,143	2/18/16 Scoping	6/22/16 Draft		5/25/16; 8/31/16			\$127,554	\$1,428,885
16	Cass County Joint WRD - Upper Maple River Watershed	9/24/2015		187,006	\$243,000	1/6/16 Scoping	7/14/16 Draft	ongoing	2 chosen+No Action	Ongoing		\$312,267	\$940,000
17	Cass County Joint WRD - Rush River Watershed	9/24/2015		141,929	\$183,000	1/6/16 Scoping	7/1/16 Draft	ongoing	8/2/16; 11/16/16			\$300,370	\$940,000
18	Cass County Joint WRD - Swan Creek Watershed	9/24/2015		87,707	\$258,800	1/6/16 Scoping	6/29/16 Draft		7/25/16; 11/10/16			\$253,185	\$940,000
19	Richland County WRD - North Branch Antelope Creek Watershed	4/26/2016		111,327	\$0	11/10/16 Scoping	11-29-17 Draft					\$31,932	\$824,000
20	Pembina County WRD - Tongue River Watershed	5/27/2016		67,000	\$0	4-5-17 Scoping	11/21/2017 Draft					\$102,927	\$799,151
21	Sargent County WRD - Shortfoot Creek Watershed	4/25/2016		74,247	\$255,000	6/28/16 Scoping	7/28/16 Draft	ongoing	Under review	Ongoing		\$281,840	\$940,000
22	Roseau River - Whitney Lake Watershed	5/4/2016		47,384	\$103,318	4-28-17 Scoping	8/24/2017	ongoing	ongoing			\$268,869	\$757,395
	Roseau River - Lower Roseau Lake Bottom Watershed	Ineligible		109,000									
	Totals for Approved RCPP Studies			2,242,736	\$2,532,562							\$3,631,581	\$16,051,697

Note: Updated figures for cost incurred may not have been obtained for all studies.

*Note: Expansion of the study area and budget increase for the Forest River Watershed was approved for area 1B on 5-11-17

RCPP Watershed Plans

The following tables display the current status of planning on the RCPP watersheds. Progress has been made on development of watershed plans. The watersheds have sent NRCS a draft purpose and need statement and have begun alternative formulation. It is anticipated several of the plans will be submitted to the National Water Management Center in Little Rock, Arkansas in the spring of 2018 for a technical review.

NORTH DAKOTA RED RIVER RCPP WATERSHED PLANNING UPDATE - 11/29/17

Watershed	Sponsor	Contact	Engineer	Estimated Planning Costs			NRCS Funds Expended										Total Fed Expended	% Federal Expended	Task 5 Sch Date	Status	Start Date	End Date	% Schedule Expired
				Federal	Non-Federal	Total	Non-Federal	FY16-Q1	FY16-Q2	FY16-Q3	FY16-Q4	FY17-Q1	FY17-Q2	FY17-Q3	FY17-Q4								
Forest River	Walsh County WRD	Jennifer Lindenberger 352-0081 wcvrb@nd.gov	Houston	\$1,000,000	\$428,885	\$1,428,885	30.0%	\$0	\$6,792	\$25,257	\$32,033	\$0	\$960	\$17,615	\$6,631	\$89,288	9%	9/30/2018	Tasks 1,2 done 3&4 in progress- conceptual strategies developed, H&H started. Agreement amended to double project size, extend planning date. Still basically working on modeling existing conditions.	9/18/2015	6/30/2019	58.1%	
Rush River	Cass County Joint WRD	Carol Lewis 298-2381 lewisc@casscountynd.gov	Moore	\$500,000	\$440,000	\$940,000	46.8%	\$17,273	\$34,891	\$11,835	\$46,724	\$18,859	\$1,371	\$1,929	\$77,378	\$210,259	42%	3/30/2018	Tasks 1,2 done 3 in progress. Scope has been narrowed to the City of Armenia, new project team now revisiting some of tasks 1, 2, and 3.	9/24/2015	9/30/2018	72.3%	
NB Antelope Creek	Richland County WRD	Monica Zentgraf 642-7773 mzentgraf@co.richland.nd.us	Interstate	\$500,000	\$324,000	\$824,000	39.3%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$31,932	\$31,932	6%	3/30/2018	Tasks 1 and 2 in progress, project team has been meeting regularly.	4/26/2016	9/30/2018	65.6%	
Tongue River	Pembina WRD	LuAnn Kemp 265-4511 lkemp@nd.gov	Houston	\$500,000	\$299,151	\$799,151	37.4%	\$0	\$0	\$0	\$0	\$0	\$0	\$57,546	\$14,503	\$72,049	14%	9/30/2018	Tasks 1, 2, and 4 are in progress. A draft purpose and need statement and scoping table is being developed for review with the Interdisciplinary Team. The HEC-RAS model required for Task 4 is nearly completed, and will be used to reinforce the purpose and need, and scoping table.	5/27/2016	6/1/2019	50.1%	
NB Park River	Park River Joint WRD	LuAnn Kemp 265-4511 lkemp@nd.gov	Houston	\$500,000	\$232,000	\$732,000	31.7%	\$6,499	\$11,668	\$5,596	\$32,596	\$20,185	\$26,807	\$33,926	\$16,049	\$153,327	31%	3/30/2018	Tasks 1,2 done 3&4 in progress- conceptual alternatives developed, H&H work ongoing for them, sedimentation work done, economics in progress.	9/16/2015	9/30/2018	72.5%	
Shortfoot Creek	Sargent County WRD	Sherry Hosford 724-6241 sherry.hosford@co.sargent.nd.us	Moore	\$500,000	\$440,000	\$940,000	46.8%	\$0	\$0	\$29,620	\$26,309	\$33,978	\$55,497	\$45,253	\$6,631	\$197,288	39%	9/30/2018	Tasks 1,2 done 3&4 in progress. Economic crop modeling setup, field surveys completed (including bathymetric in standing water areas). Preliminary alternative evaluation (task 3) has been submitted to NRCS for review.	4/25/2016	3/31/2019	54.5%	
Upper Maple	Cass County Joint WRD	Carol Lewis 298-2381 lewisc@casscountynd.gov	Moore	\$500,000	\$440,000	\$940,000	46.8%	\$13,997	\$35,779	\$17,502	\$51,022	\$18,957	\$14,888	\$33,073	\$33,369	\$218,587	44%	3/30/2018	Tasks 1,2 done 3&4 in progress- analyzing 2 alternatives in detail. Economic crop modeling setup, topographic surveys completed, geotechnical work completed, affected landowner coordination ongoing.	9/24/2015	9/30/2018	72.3%	
Swan Creek	Cass County Joint WRD	Carol Lewis 298-2381 lewisc@casscountynd.gov	Moore	\$500,000	\$440,000	\$940,000	46.8%	\$31,581	\$35,879	\$20,569	\$68,887	\$18,925	\$1,388	\$0	\$0	\$177,230	35%	3/30/2018	Tasks 1,2 done 3 was in progress. Suspended due to controversy over alternatives (neighboring landowners) and intending to request termination.	9/24/2015	9/30/2018	72.3%	
				\$4,500,000											\$1,149,960	26%				Average=	64.7%		

Minnesota RCPP Watershed Planning Status

Agreement #	Watershed	Sponsor	Contact	Engineer	Estimated Planning Costs			NRCS Funds Expended										% Expended	Status	End Date
					Federal	Non-Federal	Total	Non-Federal	FY16-Q1	FY16-Q2	FY16-Q3	FY16-Q4	FY17-Q1	FY17-Q2	FY17-Q3	FY17-Q4	Total			
68-6322-16-503	Pine Lake	Red Lake River	Myron Jesme 218-681-5800 jesme@wiktel.com	HDR	\$500,000	\$257,395	\$757,395	34.0%	\$0	\$5,844	\$33,342	\$42,946	\$41,788	\$54,530	\$71,445	\$77,546	\$327,442	65%	RP1 and RP2 completed, submitted RP3 for review	9/30/2019
68-6322-16-505	Four Legged Lake	Red Lake River	Myron Jesme 218-681-5800 jesme@wiktel.com	HDR	\$265,088	\$113,609	\$378,697	30.0%	\$0	\$0	\$24,421	\$43,187	\$42,032	\$36,395	\$22,861	\$25,740	\$194,636	73%	RP1 and RP2 completed, working on RP3	9/30/2019
68-6322-16-506	Moccasin Creek	Wild Rice River	Kevin Ruud 218-784-5501 kevin@wildricewatershed.org	Houston	\$500,000	\$215,295	\$715,295	30.1%	\$0	\$0	\$0	\$0	\$0	\$815	\$31,068	\$7,369	\$39,251	8%	P&N drafted, working on affected environment	9/30/2019
68-6322-16-508	South Branch Wild Rice River	Wild Rice River	Kevin Ruud 218-784-5501 kevin@wildricewatershed.org	Houston	\$500,000	\$215,295	\$715,295	30.1%	\$0	\$0	\$0	\$0	\$0	\$218	\$14,542	\$25,493	\$40,253	8%	P&N drafted, working on affected environment	9/30/2019
68-6322-16-509	Green Meadow Sub	Wild Rice River	Kevin Ruud 218-784-5501 kevin@wildricewatershed.org	Houston	\$500,000	\$215,295	\$715,295	30.1%	\$0	\$800	\$21,676	\$16,570	\$11,179	\$5,411	\$740	\$1,089	\$57,463	11%	RP1 completed, working on RP2	9/30/2019
68-6322-16-510	Bois de Sioux Direct	Bois De Sioux	Jamie Beyer 320-563-4185 bdswd@runestone.net	Moore	\$500,000	\$375,000	\$875,000	42.9%	\$0	\$0	\$10,367	\$20,755	\$37,041	\$71,097	\$38,851	\$60,546	\$238,657	48%	RP1 and RP2 completed, working on RP3	9/30/2019
68-6322-16-511	JD#14 MSTWD	Middle Snake Tamarac Rivers	Joel Praska 218-745-4741 joel.praska@mstrwd.org	Houston	\$500,000	\$214,286	\$714,286	30.0%	\$0	\$1,141	\$15,267	\$7,499	\$26,307	\$5,965	\$9,908	\$1,685	\$67,773	14%	RP1 completed, P&N drafted	9/30/2019
68-6322-16-512	Beltrami Island State Forest	Roseau River	Tracy Halstengard 218-463-0313 rrwd@mncable.net	Houston	\$500,000	\$215,133	\$715,133	30.1%	\$0	\$0	\$6,536	\$28,098	\$0	\$20,459	\$10,317	\$0	\$65,411	13%	RP1 completed, working on RP2	9/30/2019
68-6322-16-513	Klondike Clean Water Retention	Two Rivers	Dan Money 218-843-3333 daniel.money@mn.nacdn.net	HDR	\$500,000	\$214,286	\$714,286	30.0%	\$0	\$0	\$14,088	\$18,496	\$26,779	\$42,425	\$22,581	\$0	\$124,369	25%	RP1 completed, submitted RP2	9/30/2019
68-6322-16-514	JD #19 MSTWD	Middle Snake Tamarac Rivers	Joel Praska 218-745-4741 joel.praska@mstrwd.org	Houston	\$500,000	\$214,286	\$714,286	30.0%	\$0	\$406	\$4,216	\$4,829	\$11,547	\$7,561	\$9,868	\$9,059	\$47,487	9%	RP1 completed, working on RP2	9/30/2019
68-6322-16-515	Whitney Lake	Roseau River	Tracy Halstengard 218-463-0313 rrwd@mncable.net	HDR	\$500,000	\$257,395	\$757,395	34.0%	\$0	\$0	\$0	\$0	\$0	\$72,322	\$42,724	\$73,162	\$188,209	38%	RP1 and RP2 completed, working on RP3	9/30/2019
68-6322-16-522	Upper Sandhill River	Sand Hill River	Daniel Wilkens 218-945-3204 daniel.wilkens@sandhillwatershed.org	Houston	\$500,000	\$232,360	\$732,360	31.7%	\$0	\$0	\$3,293	\$0	\$0	\$0	\$1,503	\$4,414	\$9,210	2%	RP1 completed, working on RP2	5/31/2020
					\$5,765,088												\$1,400,160	24%		

Note: Costs are estimates based on NRCS estimates and are not final figures.

1. Beltrami Island Area Water Management Project

Project Sponsor: Roseau River Watershed District

Project Watershed: Upper Roseau River Watershed

Project Location: Southeast Roseau County, with a small portion in Beltrami, Lake of the Woods, and Marshall Counties.

Total Estimated Study/Plan Cost: \$715,133

Short Description of Watershed: The watershed to be studied is about 145 square miles.

Types of Benefits to be obtained: The Beltrami Island Area Water Management Project is intended to assist in obtaining the basin-wide, regional, and local planning region purposes on an incremental basis for the upper sub watershed located above Roseau County Road No. 9 over the Roseau River. The original purpose of this project was to reduce 100-yr peaks flows and flood volume on the Roseau River at Roseau County Road No. 9 by approximately 50-60%. Updated hydrologic and hydraulic modeling completed since beginning the RCPP effort has indicated that storing water upstream of County Road 9 has limited effect on agricultural flooding. As a result, it will be necessary to revisit the prior purpose and need as part of this effort. The RRWD has agreed to extend the study area to include the entire North Branch Sub Watershed.

The purpose of the action is to provide flood damage reduction from a 10-yr 24-hr storm for agricultural land and to reduce flood damage to public transportation infrastructure in the Beltrami Island State Forest RCPP subwatershed.

Reporting Period: May 21, 2017 through November 20, 2017

The following is a summary of ongoing activities during this reporting period:

- Review Point 2 was submitted and accepted
- Scoping work for the EA/EIS
- Affected Environment – Establishing Indicators to analyze each indicator; establishing methodology to analyze each indicator; compiling resource information.

2. Klondike Clean Water Retention Project Study

Project Sponsor: Two Rivers Watershed District

Project Watershed: Two Rivers

Project Location: Eastern Kittson County & Western Roseau County, Minnesota

Total Estimated Study/Plan Cost: \$714,286

Short Description of Watershed: The watershed to be studied covers 92,800 acres (145 square miles).

Types of Benefits to be obtained: A large naturally occurring rich fen is present in the area, but is threatened by drainage, excessive inflows, and other influences. This study will develop a fen

protection, enhancement, and management plan to be mutually endorsed by the MN DNR and the TRWD. The Plan/EA will also address excessive sediment and water quality downstream on the Two Rivers and Lake Bronson, a lake located within Lake Bronson State Park. A moist soils management plan will also be developed to benefit migrating waterfowl and provide other habitat. Several downstream river reaches have been identified as impaired by the MN Pollution Control Agency, and this project will identify ways to restore and protect the watershed. Further description of expected benefits will be outlined in the purpose and need statements.

Purpose and Need statement

Version 1 Submitted February 10, 2017

The purpose of the project is to protect, improve, and enhance natural resources associated with the 'Klondike Clean Water Retention Project' along the State Ditch 72 and State Ditch 95 systems, and also to contribute to local, regional, and state planning goals that will address the degradation of a naturally occurring rich fen, wetland and upland habitat losses, and water quality impairments that are listed within the Two Rivers watershed.

The TRWD was told by NRCS to rewrite the Purpose and Need to include a flood control aspect. One meeting and one phone conference were held to discuss and re-do the purpose and need.

The second version was submitted on April 17, 2017. NRCS has not to date decided if this purpose and need will be adequate.

The purpose of the project is to address 1) flood damage reduction and agricultural water management by contributing to the regional goal of 20% reduction in peak flows on the Red River of the North and providing 10 year agricultural drainage capacity to lateral 1 of State Ditch 95; 2) Provide water quality management to address existing water quality impairments on the Two Rivers that have been identified by the MN Pollution Control Agency; 3) manage fish and wildlife by addressing stream flows and habitat concerns that have been identified in federal, state, and local resource plans.

Reporting Period: May 21, 2017 through November 20, 2017

The RCPP watershed study agreement was signed on February 11, 2016.

Activity after signing of RCPP watershed plan agreement

- Public scoping meeting held on June 30, 2016.
- An interagency team of resource professionals from MPCA, MN DNR, HDR Engineering, and TRWD have been meeting on a monthly basis to discuss issues regarding the naturally occurring prairie rich fen that exists adjacent to the project area. A fen management plan is being written and will be utilized in looking at project alternatives.
- A draft preliminary engineer's report has been completed and the TRWD is reviewing it. This draft will detail the proposed layout of the impoundment and various options that could be utilized in the design.
- Monitoring plans for both groundwater and surface water are being crafted and various agencies will be cooperating to begin data collection. This will help to inform the EA and provide information that will aid in devising a range of alternatives.
- Submitted Purpose and Need Statement, USACE has approved 7-20-2017.
- Continue to scope resource concerns and begin alternative formulation.

3. Judicial Ditch #19/East Park Subwatershed Plan

Project Sponsor: Middle-Snake-Tamarac Rivers Watershed District

Project Watershed: Middle-Snake-Tamarac Rivers Watershed

Project Location: Marshall and Roseau County, Minnesota

Total Estimated Study/Plan Cost: \$715,680

Short Description of Watershed: The Judicial Ditch #19 sub-watershed is the northeast most sub-watershed in the Middle-Snake-Tamarac Rivers Watershed District and outlets into the Tamarac River. The drainage area of Judicial Ditch #19 starts approximately 8 miles east and 8 miles north of the Middle River, MN and has a total drainage area of approximately 104 square miles. Localized flooding, water quality, channel erosion and sedimentation are common within the sub-watershed.

Types of Benefits to be obtained: Flood damage reduction to agricultural land, public infrastructure, and individual properties are anticipated as well as natural resource enhancement to lands in the sub-watershed. Reduced erosion problems could improve water quality and soil health as well.

The purpose of this project is to provide flood damage reduction to agricultural lands due to a 10-year 24-hour rainfall event and to reduce flood damage to public and private infrastructure in the JD 19 sub-watershed.

There is a need for 10-year 24-hour flood damage reduction for agricultural land and reduction in public and private infrastructure flood damages in the JD 19 sub-watershed.

Reporting Period: May 21, 2017 through November 20, 2017

The RCPP watershed study agreement was signed February 18, 2016.

The following is a summary of ongoing activities during this reporting period:

- **Public Meetings:**
 - None this period
- **Technical Advisory Team / Project Team Meetings**
 - July 26, 2017
 - November 14, 2017
- **Status of Study/NRCS Review Point:**
 - Review Point 1 has been approved (September 2016)
 - Review Point 2 has been submitted (Waiting Approval)
 - Development of information for review points 3-4 is ongoing
- **Accomplishments by Task:**
 - **Pre-Planning Activities 001**
 - Task Complete
 - **Purpose and Need for Action 002**
 - Development of Purpose and Need
 - Review Point 2 Submitted (Waiting Approval)

- **Scope of the EA/EIS 003**
 - Development of the Environmental Assessment
 - Task on-going
 - **Affected Environment Activities 004**
 - Development of Affected Environment
 - Task on-going
-

4. Judicial Ditch #14 Watershed Plan

Project Sponsor: Middle-Snake-Tamarac Rivers Watershed District

Project Watershed: Middle-Snake-Tamarac Rivers Watershed

Project Location: Marshall and Pennington County, Minnesota

Total Estimated Study/Plan Cost: \$715,889

Short Description of Watershed: The Judicial Ditch #14 Subwatershed consists of 36 square miles of drainage area in portions of Marshall and Pennington Counties, Minnesota. The drainage area of Judicial Ditch #14 starts approximately 8.5 miles east Viking, MN and outlets to the South Branch of the Snake River approximately 1 mile west of Viking, MN.

Types of Benefits to be obtained: Improve drainage and provide flood damage reduction to agricultural land, public infrastructure, and individual properties as well as natural resource enhancement to lands in the subwatershed. Reduced erosion problems could improve water quality and soil health as well.

The purpose of this project is to provide flood damage reduction to agricultural lands due to a 10-year 24-hour rainfall event and to reduce flood damage to public and private infrastructure in the JD 14 sub-watershed.

There is a need for 10-year 24-hour flood damage reduction for agricultural land and reduction in public and private infrastructure flood damages in the JD 14 sub-watershed.

Reporting Period: May 21, 2017 through November 20, 2017

The RCPP watershed study agreement was signed February 18, 2016.

The following is a summary of ongoing activities during this reporting period:

- **Technical Advisory Team / Project Team Meetings**
 - None this period
- **Status of Study/NRCS Review Point:**
 - Review Point 1 has been approved (July 2016)
 - Review Point 2 has been submitted
 - Development of information for review points 3-4 is ongoing
- **Accomplishments by Task:**
 - **Pre-Planning Activities 001**
 - Task Complete
 - **Purpose and Need for Action 002**

- Development of Purpose and Need
 - Review Point 2 Submitted (Waiting Approval)
 - **Scope of the EA/EIS 003**
 - Development of the Environmental Assessment
 - Task on-going
 - **Affected Environment Activities 004**
 - Development of Affected Environment
 - Task on-going
-

5. Four Legged Lakes Watershed

Project Sponsor: Red Lake Watershed District

Project Name: Four Legged Lakes Watershed

Project Watershed: Clearwater River

Project Location: Clearwater County (Leonard, MN)

Total Estimated Study/Plan Cost: \$378,697

Short Description of Watershed: The watershed is about 6,253 acres (9 square miles).

Types of Benefits to be obtained:

The purpose of this project is 1) **Flood Damage Reduction:** Reduce flood damages to lakeshore properties, shorelines, and Clearwater County Roads 2 and 23 caused by high water.

Reporting Period: May 21, 2017 through November 21, 2017

Project cooperation agreement was signed on February 10, 2016.

Activity during reporting period:

- **Public Meetings:** None
 - **Project Team Meetings:** July 2017 and October 2017
 - Development of purpose and need.
 - Development of affected environment.
 - Development of alternatives.
 - Selection of preferred alternative by RLWD Board.
-

6. Pine Lake Watershed

Project Sponsor: Red Lake Watershed District

Project Name: Pine Lake Watershed

Project Watershed: Clearwater River

Project Location: Clearwater County (Gonvick, MN)

Total Estimated Study/Plan Cost: \$757,395

Short Description of Watershed: The watershed is about 29,360 acres (45 square miles).

Types of Benefits to be obtained: The purpose of this proposed action is **1) Flood Damage Reduction:** Reduce damages to cabins, properties, and shorelines adjacent to Pine Lake caused by minor and major floods, ranging from a minor 2-yr event above Pine Lake El. 1284.4 to a major 100-yr event above Pine Lake El. 1285.4.

Reporting Period: May 21, 2017 through November 20, 2017

Project cooperation agreement was signed on February 10, 2016.

Activity during reporting period:

- **Public Meetings:** None
- **Project Team Meetings:** July 2017 and October 2017
- Development of purpose and need.
- Development of affected environment.
- Development of alternatives.
- Draft EA issued for review December 2017 - TBD

7. Upper Sand Hill River Watershed

Project Sponsor: Sand Hill River Watershed District

Project Watershed: Sand Hill River Watershed

Project Location: The Sand Hill River Watershed is located in northwest Minnesota, in Polk, Norman, and Mahnommen Counties. Some of the cities within the watershed include Climax, Beltrami, Fertile, and Winger.

Total Estimated Study/Plan Cost: \$732,360

Short Description of Watershed: The entire area of the Sand Hill River Watershed encompasses approximately 425 square miles. Land use is predominately agricultural with county and private ditch systems throughout the region. Topography is generally characterized by flat landscape slopes in the west with increasing slopes further east. Kittleson Creek and the Sand Hill River are the primary water courses within the watershed. In the eastern half of the watershed, most streams quickly outlet into the Sand Hill River and Kittleson Creek and generally have a contributing area of 15 square miles or less.

Types of Benefits to be obtained: The main emphasis for any potential project is to address the flood issues in the watershed. Flood risks have been documented for the area located east of Beltrami. High flows in the Sand Hill Ditch, and insufficient channel capacity for spring events is the cause of this risk. Rural residences and infrastructure are also at risk of flooding. Excessive runoff results in prolonged inundation of agricultural land. This causes delays in beginning

spring field work and planting after spring runoff events. Severe summer rain events lead to growing crops becoming inundated. The Red River Basin Commission's Long Term Flood Study included recommendations to reduce the peak flow on the Red River. To achieve this goal, individual tributary goals were generally to provide about 35 percent peak flow reduction and 15 to 20 percent volume reduction on the tributaries.

Reporting Period: May 21, 2017 through November 20, 2017

Agreement between local sponsor and NRCS signed on September 14, 2016.

Activity during this reporting period includes:

- Public Meeting was held on August 16, 2017
- Field survey to aid in the development of a hydraulic model is underway
- Draft Planning Structure document

8. Green Meadow Project Sub watershed

Project Sponsor: Wild Rice Watershed District

Project Name: Green Meadow Watershed Plan

Project Watershed: Marsh River Basin of Wild Rice Watershed

Project Location: North Central Norman County, Minnesota

Total Estimated Study/Plan Cost: \$715,248

Short Description of Watershed: The Green Meadow Sub watershed consists of 69 square miles of drainage area in Norman County, Minnesota. The sub watershed collects approximately 30 square miles of drainage above the Lake Agassiz beach ridge. Much of this is routed through the existing Green Meadow Dam, and then continues approximately 15 miles west in natural and constructed channels through agricultural land to its outlet into the Marsh River.

Types of Benefits to be obtained: Flood damage reduction to agricultural land, public infrastructure, and individual properties are anticipated as well as natural resource enhancement to lands in the sub watershed. Reduced erosion problems could improve water quality and soil health as well.

Purpose and Need: Pending Project Team Review/Concurrence

Reporting Period: May 21, 2017 through November 20, 2017

The RCPP watershed study agreement was signed March 9, 2016.

Activity after the signing of the RCPP watershed plan agreement is as follows:

- **Public Meetings:**
 - None
- **Technical Advisory Team / Project Team Meetings**
 - September 13, 2017 Board Committee Meeting
- **Status of Study/NRCS Review Point:**

- Review Point No. 1 has been approved
- **Accomplishments by Task:**
 - ***Pre-Planning Activities 001***
 - Preplanning documents were previously submitted
 - ***Purpose of Need for Action 002***
 - Discussions for Developing Purpose and Need
 - ***Scope of EA/EIS 003***
 - Developing criteria for Scoping EA
 - ***Affected Environment 004***
 - Review hydrology and hydraulic model details.

Total Cost Incurred to Date: \$85,180.94

Cost Incurred within Reporting Period: \$4,505.00

9. Moccasin Creek Sub watershed

Project Sponsor: Wild Rice Watershed District

Project Watershed: Moccasin Creek Sub watershed, Wild Rice River Watershed

Project Location: Becker, Clay, and Norman Counties.

Total Estimated Study/Plan Cost: \$715,283

Short Description of Watershed: The Moccasin Creek Sub watershed is located near the center of the Wild Rice Watershed. The sub watershed consists of 60 square miles of drainage area in Norman, Becker, and Mahnommen Counties. Moccasin Creek commences approximately 8 miles south and 5 miles east of Fossum, MN. The channel flows northwesterly to its outlet in the Wild Rice River approximately 3 miles east of Twin Valley, MN. Localized flooding, road overtopping, channel erosion and sedimentation are common within the sub watershed.

Types of Benefits to be obtained: Flood damage reduction to agricultural land, public infrastructure, and individual properties are anticipated as well as natural resource enhancement to lands in the sub watershed. Reduced erosion problems could improve water quality and soil health as well.

Flooding along the lower Wild Rice River has inundated up to 70,000 acres of prime farmland several times in recent years. The Moccasin Creek area contributes directly to the Wild Rice River flood peak.

In addition, substantial erosion through the beach ridge area of the Wild Rice River has also been experienced. This erosion during high flow events results in substantial sedimentation to the downstream reaches of the Wild Rice River and the Red River of the North.

Reporting Period: May 21, 2017 through November 20, 2017

The RCPP watershed study agreement was signed March 9, 2016.

Activity after the signing of the RCPP watershed plan agreement is as follows:

- **Public Meetings:**
 - June 12, 2017, Public Meeting

- **Technical Advisory Team / Project Team Meetings**
 - August 2, 2017, Board Committee Meeting
- **Status of Study/NRCS Review Point:**
 - Review Point 1 was submitted
- **Accomplishments by Task:**
 - ***Pre-Planning Activities 001***
 - Submitted Planning Structure Document, Plan of Work, and Preliminary Investigation Feasibility Report
 - ***Purpose of Need for Action 002***
 - Developing draft Purpose and Need
 - ***Scope of EA/EIS 003***
 - Developing criteria for Scoping EA
 - ***Affected Environment 004***
 - Establishing indicators for analyzing resource data
 - Establishing methodology for analyzing each indicator
 - Developing hydrology and hydraulics for evaluating affected environment

Total Cost Incurred to Date: \$57,530.81

Cost Incurred within Reporting Period: \$51,061.31

10. South Branch Wild Rice River Watershed Plan

Project Sponsor: Wild Rice Watershed District

Project Watershed: South Branch of Wild Rice River Watershed

Project Location: Becker, Clay, and Norman County, Minnesota

Total Estimated Study/Plan Cost: \$715,295

Short Description of Watershed: The South Branch of the Wild Rice River Sub watershed consists of 248 square miles of drainage area in Becker, Clay, and Norman County, Minnesota. The sub watershed collects approximately 200 square miles of drainage above the Lake Agassiz beach ridge, and then continues approximately 15 miles west in natural and constructed channels through agricultural land to its outlet into the Wild Rice River.

Types of Benefits to be obtained: Flood damage reduction to agricultural land, public infrastructure, and individual properties are anticipated as well as natural resource enhancement to lands in the sub watershed. Reduced erosion problems could improve water quality and soil health as well.

Flooding along the lower Wild Rice River has inundated up to 70,000 acres of prime farmland several times in recent years. The South Branch of the Wild Rice River typically contributes approximately 30 percent of the Wild Rice River flood peak.

In addition, substantial erosion through the beach ridge area of the South Branch of the Wild Rice River has also been experienced. This erosion during high flow events results in substantial sedimentation to the downstream reaches of the South Branch, the Wild Rice River, and the Red River of the North.

Reporting Period: May 21, 2017 through November 20, 2017

The RCPP watershed study agreement was signed March 9, 2016.

Activity after the signing of the RCPP watershed plan agreement is as follows:

- **Public Meetings:**
 - June 12, 2017, Public Meeting
- **Technical Advisory Team / Project Team Meetings**
 - August 2, 2017, Board Committee Meeting
- **Status of Study/NRCS Review Point:**
 - Review Point 1 was submitted
- **Accomplishments by Task:**
 - ***Pre-Planning Activities 001***
 - Submitted Planning Structure Document, Plan of Work, and Preliminary Investigation Feasibility Report
 - ***Purpose of Need for Action 002***
 - Developing draft Purpose and Need
 - ***Scope of EA/EIS 003***
 - Developing criteria for Scoping EA
 - ***Affected Environment 004***
 - Establishing indicators for analyzing resource data
 - Establishing methodology for analyzing each indicator
 - Developing hydrology and hydraulics for evaluating affected environment

Total Cost Incurred to Date: \$62,796.15

Cost Incurred within Reporting Period: \$58,934.40

11. Rabbit River

Project Sponsor: Bois de Sioux Watershed District

Project Watershed: Rabbit River

Project Location: Parts of Grant, Otter Tail, and Wilken Counties in Minnesota. Cities included in the study area include Nashua and Campbell. The upper reaches of the sub watershed are in the glacial moraine area which constitutes 25 percent of the area. Sixty eight percent is lake plain and 7 percent is beach ridge.

Total Estimated Study/Plan Cost: \$875,000

Short Description of Watershed: The watershed to be studied covers 80,640 acres (126 square miles). Agricultural development has resulted in diminished wildlife habitat, and channelization of natural watercourses has converted over 75 percent of the riparian habitat in the watershed to cropland. Over 92 percent of the land within this sub watershed is in agricultural production.

Types of Benefits to be obtained: The Rabbit River sub watershed has significant surface water management problems (i.e. flooding, drainage, erosion, water quality, water supply, and fish and wildlife).

Reporting Period: May 21, 2017 through November 20, 2017

The sponsor has decided not to sign the RCPP watershed study agreement at this time.

12. Bois de Sioux Direct

Project Sponsor: Bois de Sioux Watershed District

Project Watershed: Bois de Sioux

Project Location: Parts of Wilken and Traverse Counties in Minnesota. Cities included in the study area include Breckenridge, Doran and Tenny.

Total Estimated Study/Plan Cost: \$875,000

Short Description of Watershed: The watershed to be studied covers 96,000 acres (150 square miles). This watershed contains Doran Creek, a portion of the Rabbit River, and other lands that drain directly into the Bois de Sioux River. The land mass is almost 97 percent glacial lake plain. Agriculture dominates the land use, covering almost 95 percent of the land area.

Types of Benefits to be obtained: Surface water management problems within this watershed include: flooding, drainage, erosion, water quality, water supply, wildlife issues and cropland irrigation.

Approved Purpose & Need:

Purpose: The purpose of the action is to provide flood damage reduction from a 10-yr 24-hr storm for agricultural land in the Doran Creek sub watershed (with priority in the area shown on the attached map). Additionally, the purpose of this action is to provide flood protection from a 100-yr event for public and private infrastructure within the City of Doran.

Need: There is a need for 10-yr 24-hr flood damage reduction for agricultural land in the Doran Creek sub watershed. There is also a need to provide 100-yr flood protection to the City of Doran.

Reporting Period: May 21, 2017 through November 20, 2017

The RCPP watershed study agreement was signed on April 4, 2016.

- **Technical Advisory Team / Project Team Meetings**
 - June 6, 2017 meeting (#5)
- Held a landowner meeting July 11, 2017.
- Submitted review point #3 – Affected Environment – June 23 (partial submittal)
- Submitted the completed review point #3 – Indicator goals, alternatives report, and the affected environment. (Oct 13, 2017)
- Submitted concurrence point #1 to the COE. Approved: July 24, 2017.
- Submitted concurrence point #2 to the COE. Approved: Nov 3, 2017.

- Continued preliminary HEC-HMS modeling for the various watershed conceptual alternatives (as outlined by the Project Team), including wetland restoration, floodways, temporary storage, ground cover and best management practices.
- Acquired access agreements from most landowners in the project areas.
- Initial wetland areas were reviewed
- Geotechnical work was started
- Refined HEC-RAS 2-D modeling to outline inundation areas to better define and confirm problem areas and outlines acres damaged for economic analysis. Also utilized 2-D modeling to quantify breakout flows from a neighboring watershed.
- Produced inundation model and map information, for the 100 year and 10 year rain events, for base economics showing and quantifying the inundated acres with depth of duration of the flooding. The other frequency event information is pending.

Main activities in **previous** reporting periods:

- **Public Meetings:**
 - July 27, 2016
- **Technical Advisory Team / Project Team Meetings**
 - March 28, 2017 (#4)
 - November 2, 2016 (#3)
 - August 23, 2016 (#2)
 - July 13, 2016 (#1)
- **Status of Study/NRCS Review Point:**
 - Review Point #3 submitted (Oct 13)
 - Review Point #2 approved
 - Review Point #1 approved

Cost Incurred within Reporting Period: Approximately: \$120,000

13. Five Mile Creek

Project Sponsor: Bois de Sioux Watershed District

Project Watershed: Five Mile Creek, tributary to Bois de Sioux

Project Location: Located in Grant Stevens, and Traverse Counties in Minnesota. The City included in the study area is Herman.

Total Estimated Study/Plan Cost: \$875,000

Short Description of Watershed: The watershed to be studied covers 85,120 acres (133 square miles). The land mass is almost 82 percent glacial moraine, 16 percent glacial lake plain, and 1 percent beach ridge. Agriculture dominates the land use, covering about 84 percent of the land area.

Types of Benefits to be Obtained: Surface water management problems within this watershed include: flooding, drainage, erosion, water quality, water supply, wildlife issues and cropland irrigation.

Reporting Period: May 21, 2017 through November 20, 2017

The sponsor has decided not to sign the RCPP watershed study agreement at this time.

14. North Branch Park River Watershed

Project Sponsor: Park River Joint WRD

Project Watershed: North Branch of Park River, including Cart Creek

Project Location: Watershed includes portion of Walsh County, Pembina County, and Cavalier County. The Cities of Milton, Mountain, Crystal, and Hoople are within the study area. The City of Grafton is located further downstream.

Total Estimated Study/Plan Cost: \$732,000

Short Description of Watershed: The North Branch Park River Watershed consists of 258 square miles located in portions of Walsh, Pembina, and Cavalier Counties, North Dakota. The North Branch Park River joins the Park River main stem near Grafton, ND. There are currently no impoundments to control runoff within the watershed, resulting in frequent flooding in the region.

Draft Purpose Statement: The purpose of the project is to reduce flood damages within the North Branch Park River Watershed associated with spring snow melt and rains.

Draft Need Statement: The North Branch Park River Watershed has frequently occurring flood issues during spring snow melt and rain events. The area is characterized by steep landscape slopes and rapid runoff accumulation in the upstream watershed, with slopes moderating further downstream attributing to the recurring flooding. Flooding in the Watershed results in damages to crop land due to field erosion and deposition, channel erosion and deposition, delayed planting, prevented planning, and prolonged inundation resulting in reduced yields. Flooding also results in damages to transportation and infrastructure, rural residents, area communities, and disruptions to local commerce. In recent years, FEMA disaster declarations have been made in 2004, 2005, 2006, 2009, 2010, 2011 and 2013.

Reporting Period: May 21, 2017 through November 20, 2017

The RCPP watershed study agreement was signed September 16, 2015, with the initial public scoping meeting held on February 17, 2016.

Activity during this reporting period includes:

- **Status of Study/NRCS Review Point:**
 - Finalize existing conditions hydrology and hydraulics
 - Draft Affect Environment Section
 - Preliminary Alternative Development
 - Economic review of the existing conditions flood damages

15. Forest River Watershed

Project Sponsor: Walsh County WRD; Forest River Joint WRD

Project Watershed: Forest River Watershed

Project Location: Watershed includes portion of Grand Forks, Walsh, and Nelson Counties in northeast North Dakota.

Total Estimated Study/Plan Cost: \$ 1,440,035

Short Description of Watershed: The Forest River Watershed planning area is located in portions Nelson, Walsh, and Grand Forks Counties, North Dakota. Land use within the study area is dominated by agricultural uses. Several communities are located within the study area including Minto, Forest River, Inkster, and Fairdale.

The watershed to be studied includes two sub watersheds, each meeting PL 83-566 requirements. Topography of the region is generally characterized with moderate slopes and numerous wetlands in the west, with reduced slopes to the east. The moderate slopes in the western half of the watershed cause runoff to accumulate rapidly, resulting in frequent and severe overland flooding between the communities of Forest River and Minto. The lower portion of the Forest River has limited channel capacity and an adjacent floodplain that slopes away from the river channel. These conditions result in excessive flows to break out and travel overland away from the Forest River.

Draft Purpose Statement: The purpose of the project is to reduce agricultural flood damages resulting from a 10-year rainfall event that occur along the Forest River between the community of Forest River, ND and Lake Ardoch.

Draft Need Statement: The purpose of the project is also to increase flood resiliency during the 100-year rainfall event for the communities of Minto, ND and Forest River, ND. The project is needed due to frequent flooding that occurs within the project area. Near the community of Forest River, ND, the Forest River breaks out of its banks during a 2-year rainfall event. Inundation caused by these breakouts leads to field erosion and deposition, delayed planting, prevented planting, and prolonged inundation resulting in reduced yields and loss of pasture land. The communities of Forest River, ND and Minto, ND reside on the Forest River and experience flood damages during the 100-year rainfall event. Project components will reduce peak flows during a 100-year rainfall event.

Reporting Period: May 21, 2017 through November 20, 2017

The RCPP watershed study agreement was signed September 18, 2015. The initial public meeting was held on February 18, 2006.

Activity during the current reporting period is as follows:

- **Status of Study/NRCS Review Point:**
 - Finalize existing conditions hydrology and hydraulics
 - Refine Purpose and Need statement based on additional technical evidence from hydraulic modeling results
 - Draft Affect Environment Section
 - Preliminary Alternative Development
- **Study Area Expansion**

- Study area expanded to include the two sub watersheds.
 - Expanded area includes sub watershed 1A (247,400 Acres) and sub watershed 1B (116,600 Acres)
 - Cooperative Agreement amended in April of 2017
-

16. Upper Maple River Watershed Planning

Project Sponsor: Cass County Joint Water Resource District

Project Watershed: Upper Maple River Watershed

Project Location: Northwestern Cass County, Barnes County, and Steele County.

Total Estimated Study/Plan Cost: \$940,000

Short Description of Study Area: Study area is 185,600 acres (290 square miles). Most of the Maple River sub watershed area is generally flat topography, however in the Upper Maple River sub watershed area there are moderate slopes which may create more opportunities for flood water storage or other flood mitigation measures. The study area begins in western Steele County, just south of Finley, ND, running south through Steele County, the northeast corner of Barnes County and then into northwest Cass County south to about where it meets Cass County Road #4.

Draft Purpose Statement: To reduce and minimize erosion, crop losses, damage to transportation systems, and other public infrastructure and to lower flood risks within the Upper Maple River Watershed.

Draft Need Statement: Within the Upper Maple River Watershed excess runoff and intense rain events cause frequent overland and overbank flooding causing damages nearly every year. This flooding cause's damage to fields due to erosion, crop losses, delayed planting which reduces yields. Flooding also overtops and washes out roads, damages bridges and culverts and further disrupts transportation systems. The flooding may also degrade water quality with increased sediment and nutrient loading.

- No updates to Purpose and Need statement this period.

Reporting Period: May 21, 2017 through November 20, 2017

Signing of the RCPP watershed plan agreement occurred on September 24, 2015. The initial agency team meeting was held on December 10, 2015 and the first public scoping meeting was held on January 6, 2016.

Main activities in this reporting period:

- Technical Advisory Team / Project Team Meetings/Land Owner Meetings
 - Landowner meeting – August 18, 2017.
 - Landowner meeting – June 14 2017.
- Conducted wetland field reviews of both alternative sites
- Conducted topographical survey of alternative sites
- Began HEC-RAS 2-D modeling setup and evaluation of frequency events
- Prepared for the design, environmental review, mitigation needs and land needs for the alternative areas.

- Economics consultant continued work on the crop damage budget templates for the B/C.
- Handled landowner follow-up questions and concerns.
- Drafted an alternative report for NRCS review point #3.

Main actions in the previous reporting periods:

- **Technical Advisory Team / Project Team Meetings/Land Owner Meetings**
 - August 3, 2016; August 18, 2016; November 17, 2016
 - Landowner meeting Feb 8th, 2017.
- **Status of Study/NRCS Review Point:**
 - Approved draft purpose and need statement
 - Project goals stated
 - Strategy evaluation
 - Ranked proposed alternatives
 - Preliminary Alternative Review of Suitable Strategies
 - Preliminary Hydrology/Hydraulic Modeling Used to Compare Results
 - Obtained historical flood damage information
 - Using Rusle2 model to determine average sediment loss
 - Submitted the Affected Environment – Review point #3 (approved by NRCS)

Cost Incurred within Reporting Period: Approximately: \$75,000

17. Rush River

Project Sponsor: Cass County Joint Water Resource District

Project Watershed: Rush River Watershed

Project Location: Cass County

Total Estimated Study/Plan Cost: \$940,000

Short Description of Study Area: Study area is 140,800 acres (220 square miles).

Draft Purpose Statement: To reduce and minimize erosion, crop losses, damage to transportation systems and other public infrastructure, and to lower flood risks within the Rush River watershed.

Draft Need Statement: Within the Rush River Watershed, spring runoff and intense rain events cause frequent overland and overbank flooding, resulting in recurring damages. This flooding cause's damage to fields due to erosion, crop losses, delayed planting which reduces yields. The flooding also causes disruptions to transportation by overtopping and washing out roads, and damaging bridges and culverts. The flooding may degrade water quality with increased sediment and nutrient loading.

- No updates to Purpose and Need statement

Reporting Period: May 21, 2017 through November 20, 2017

The RCPP watershed plan agreement was signed on September 24, 2015. An agency team meeting was held on December 10, 2015 and a public scoping meeting was held on January 6, 2016.

Main activities in this reporting period:

- Technical Advisory Team / Project Team Meetings/Landowner Meetings
 - Project team meeting held on Nov 8, 2017
- Met with the Amenia City Council on Aug 6, 2017 to discuss FEMA mapping
- Developed a new project team to focus on the needs of Amenia
- Began the review of the purpose and need statements
- Drafted an alternative report on previous planning activities

Main activities in the previous reporting periods:

- **Technical Advisory Team / Project Team Meetings**
 - August 2, 2016; August 17, 2016; November 16, 2016
- Reviewed options and comments about Flood Protection for the City of Amenia
 - Looked at the option to re-open the study for the Amenia community in May 2017.
 - Then met with the Mayor of Amenia about planning for flood damage protection for the City and using the RCPP watershed planning as the mechanism for the study. The Amenia city then met about the planning process and agreed to ask the Cass County Joint Water Resource District to re-open the planning for flood protection options for Amenia.
- **Status of Study/NRCS Review Point:**
 - Approved draft purpose and need statement
 - Project goals stated
 - Strategy evaluation
 - Ranked proposed alternatives
 - Preliminary Alternative Review of Suitable Strategies
 - Preliminary Hydrology/Hydraulic Modeling Used to Compare Results
 - Obtained historical flood damage information
 - Using Rusle2 model to determine average sediment loss

Cost Incurred within Reporting Period: Approximately: \$12,000

18. Swan Creek Watershed Planning

Project Sponsor: Cass County Joint Water Resource District

Project Watershed: Swan Creek, tributary of Maple River

Project Location: Cass County

Total Estimated Study/Plan Cost: \$940,000

Short Description of Study Area: Study area is 83,200 acres (130 square miles). The Swan Creek sub watershed area is located in Cass County, mainly northwest of Casselton, ND and within the Maple River watershed. In this portion of the Maple River watershed the topography is relatively flat and flood runoff breaks out of the channel and spreads out across the adjacent farm land.

Draft Purpose Statement: To reduce flood damages within the Swan Creek watershed associated with spring snow melt and rains in order to minimize erosion, crop losses, damage to transportation systems and other public infrastructure, and homes and businesses.

Draft Need Statement: Within the Swan Creek Watershed, excessive spring runoff and intense rain events cause overland and overbank flooding causing damages. This flooding cause's damage to fields due to erosion, crop losses, delayed planting which reduces yields, roads washed out and overtopped, damages to bridges, culverts and transportation disruptions.

- No updates to the Purpose and Need statement during this period.

Reporting Period: May 21, 2017 through November 20, 2017

RCPP watershed plan agreement was signed on September 24, 2015. An agency team meeting was held on December 10, 2015 and a public scoping meeting was held on January 6, 2016.

Main activities in this reporting period include:

- Work is in motion to end the Planning study for this watershed.

Main activities in the previous reporting periods include:

- **Technical Advisory Team / Project Team Meetings**
 - July 25, 2016; August 17, 2016; November 10, 2016
- **Status of Study/NRCS Review Point:**
 - Approved draft purpose and need statement
 - Project goals stated
 - Strategy evaluation
 - Ranked proposed alternatives
 - Preliminary Alternative Review of Suitable Strategies
 - Preliminary Hydrology/Hydraulic Modeling Used to Compare Results
 - Obtained historical flood damage information
 - Using Rusle2 model to determine average sediment loss

Cost Incurred within Reporting Period: Approximately \$1,000

19. North Branch Antelope Creek

Project Sponsor: Richland County Water Resource District

Project Watershed: Antelope Creek (tributary of Wild Rice River)

Project Location: Richland County

Total Estimated Study/Plan Cost: \$824,000

Short Description of Study Area: The proposed study area consists of approximately 174 square miles of the Antelope Creek Watershed in Richland County. The watershed is primarily agricultural land. Cities in the watershed include Barney and Mooreton. The area is well drained

for the most part. The topography varies considerably with flat reaches and steep gradients along with a variety of soil types. There are 5 legal drains that act as laterals to Antelope Creek.

Draft Purpose Statement: The purpose of this watershed plan and associated projects is to reduce flood damage within the watershed and downstream towns and agricultural land in Richland County. Flood damage is primarily from the spring snow melt along the North Branch of the Antelope Creek. Targeted damages include erosion, sedimentation, crop losses, road damage, other public infrastructure, and private property damage.

Draft Need Statement: The North Branch of the Antelope Creek Watershed is a large watershed with established agricultural drainage systems. Runoff from spring snow melts has a history of not only creating flash flood damage but sustained, prolonged flood damage in the lower reaches of the watershed creating health and safety concerns. Flood damages include erosion within ditches and streams and across farm fields, downstream sedimentation blocking channels reducing their capacity, crop losses from drowning of planted crops or yield losses from delayed planting, road damage such as washouts and culvert/bridge damage, and flooding of rural homes and several communities.

Reporting Period: May 21, 2017 through November 20, 2017

RCPP watershed plan agreement was signed on April 26, 2016. The initial public meeting was held on November 10, 2016

The following are items accomplished within the current reporting period:

- **Technical Advisory Team / Project Team Meetings**
 - July 6, 2017; August 3, 2017; September 13, 2017; November 29, 2017
- **Status of Study/NRCS Review Point:**
 - Draft purpose and need statement developed
 - Existing conditions hydrology and hydraulic model development started
 - Preliminary Alternative Review of Suitable Strategies

Cost Incurred within Reporting Period: Approximately \$20,000

20. Tongue River Sub watershed Study

Project Sponsor: Pembina County Water Resource District

Project Watershed: Tongue River, tributary of the Pembina River

Project Location: Northern portion of Pembina County and the northeast portion of Cavalier County, North Dakota. The City of Cavalier is located near the downstream end of the study area.

Total Estimated Study/Plan Cost: \$799,151

Short Description of Watershed: Currently, the watershed above Renwick Dam has many small dams that were constructed through SCS PL-566 projects. While these structures provide some relief from flooding, larger magnitude events still present a major risk for the region. This was highlighted during the 2013 flood event, when the community of Cavalier had to be evacuated because of the potential breach of Renwick Dam.

Types of Benefits to be obtained: Senator Young Dam has been evaluated informally for possible rehabilitation. This study could analyze the possibility of including modifications to the dam to add more efficient flood storage. Further, a completed watershed plan could also be used to evaluate benefits by incorporating any additional storage to the watershed – which could potentially increase the efficiency of Renwick Dam and reduce flood risk at Cavalier and points further downstream. Further detail will be available after the purpose and need statement is developed.

Reporting Period: May 21, 2017 through November 20, 2017

RCPD watershed plan agreement was signed on May 27, 2016.

Public scoping meeting April 5, 2017.

- **Technical Advisory Team / Project Team Meetings**
 - Project Team Meeting held November 21, 2017
- **Progress Towards NRCS Review Point No. 1**
 - Present Purpose and Need statement to Project Team
 - Present Scope of EA Table for review to Project Team
 - Finalize existing conditions hydrology and hydraulic models

21. Shortfoot Creek Sub watershed

Project Sponsor: Sargent County Water Resource District

Project Watershed: Shortfoot Creek, tributary of Wild Rice River in ND

Project Location: Marshall County and Roberts County in SD, western Richland County in ND, and Sargent County, ND

Total Estimated Study/Plan Cost: \$940,000

Short Description of Watershed: The watershed to be studied covers 55,203 acres (86.3 square miles). The upper portion of the watershed has steeper slopes, allowing higher velocities of flow. The slopes become flatter further downstream. Various depressional wetlands exist in the sub watershed.

Draft Purpose Statement: The purpose of the project is to reduce upland erosion and flood damages within the Shortfoot Creek Watershed associated with spring snow melt and seasonal rains in order to minimize sedimentation and channel erosion, reduce ag damages, and reduce damages to private and public infrastructure.

Draft Need Statement: The Shortfoot Creek watershed is a part of the Wild Rice River basin and then the Red River Basin which have histories of spring snow melt and seasonal rains resulting in frequent overland and overbank flooding resulting in recurring damages. This flooding causes damages to fields due to upland and channel erosion, flushing nutrients, crop losses, and delayed planting. The flooding also causes disruptions to transportation by overtopping and washing out roads, and damaging bridges and culverts. Additionally, the existing conditions have resulted in new previously non-contributing areas now contributing, and degraded water quality with increased sediment, nutrient loading and known high bacteria levels.

Purpose and Need statement – no current updates or changes.

Reporting Period: May 21, 2017 through November 20, 2017

RCPP watershed plan agreement was signed on April 25, 2016.

Main activities in this reporting period:

- **Technical Advisory Team / Project Team Meetings/Landowner Meetings**
 - Landowner meetings; Aug 4 & Sept 8, 2017
 - Meeting with USFWS – Consulted with USFWS on water levels and easement effects.
- Wetland field review was conducted for alternative site #7
- Fieldwork continued for detailed analysis of alternatives including topographical survey in site areas
- Submitted alternative development and review report to NRCS for review point #3
- Consulted with the ND Game & Fish Department on water levels of Park Lake and effects to G&F lands. Waiting for a definitive direction in relation to their land.
- Bathymetric survey was done on alternative site areas
- Economic crop modeling is being developed for alternative sites

Main activities in **previous** reporting periods:

- **Technical Advisory Team / Project Team Meetings/Landowner Meetings**
 - January 31, 2017
 - March 2, 2017
 - March 23, 2017
 - April 12, 2017
 - June 15, 2016; July 28, 2016; August 30, 2016
- Reviewed alternatives, narrowed and screened alternatives that can meet the purpose and need.
- Project team selected 4 alternatives for further review and analysis.
- Further refined the HEC-RAS modeling to outline inundation areas to better define and confirm problem areas. Inundation mapping also assists the project team to confirm problem areas.
- Continued preliminary HEC-HMS modeling for the various watershed conceptual alternatives (as outlined by the Project Team), including wetland restoration, floodways, temporary storage, ground cover and best management practices.
- Fieldwork has begun for detailed analysis of alternatives
- **Status of Study/NRCS Review Points:**
 - Approved draft purpose and need statement – Review Point #1
 - Project goals stated
 - Strategy evaluation
 - Reviewed proposed alternatives
 - Preliminary HEC-RAS modeling and HEC-Modeling for the watershed
 - Affected environment draft submitted – approved for review point #2

Cost Incurred within Reporting Period: Approximately: \$ 71,000

22. Whitney Lake Sub watershed

Project Sponsor: Roseau Watershed District

Project Watershed: Whitney Lake Sub watershed, tributary of Roseau River

Project Location: Watershed is located in the northwest portion of the Roseau River watershed and lies in Roseau County.

Total Estimated Study/Plan Cost: \$757,395

Short Description of Watershed: The Roseau River was dredged and straightened in this area, with State Ditch #51 from the Old Roseau Lake to near the Caribou outlet. These efforts to move water faster through the area by deepening and straightening the channel were not very successful due to the limited outlet into Canada, near Caribou. Numerous public drainage ditches provide limited capacity for drainage due to extremely flat grades and frequent high water levels on the Roseau River.

State Ditch #51, SD #69, CD#16 and WD #3 are the ditches in the study area. Numerous laterals feed these ditches. Minimal maintenance has been conducted on these systems.

Types of Benefits to be Obtained: Surface water problems within this sub watershed include: flooding, overland flooding, flood damage, drainage, water quality and quantity (too much at times and not enough at other times), low stream flows, outlet into Canada undersized for volume of water, fish & wildlife issues and access to public waters.

The Whitney Lake area is also part of the Big Swamp, which is a natural large water storage area. Once this area floods, it may take weeks or months for water to recede back into the river. Flooding occurs most years in the Whitney Lake area and while spring flooding is most common summer flooding can also be problematic.

This area floods when the water comes too fast or too high of volume. The comprehensive plan for the whole watershed will address the water problems of this area.

Reporting Period: May 21, 2017 through November 20, 2017

- Three Project Team meetings were held (7-20-17, 9-21-17, 11-16-17)
- Development of purpose and need. (Approval of Concurrence Point #1)
- Development of affected environment. (Approval of Review Points #1 - #3)
- Development of alternatives.

RCPP Watershed Outreach

As outlined in the MOU Objective 2 the RRRA has worked on providing outreach and education opportunities to producers, local soil and water conservation district supervisors and watershed board managers and other conservation partners in the basin. The following activities and efforts were undertaken in the last 6 months.

- 1) Conducted soil health and drainage water management tour in September in Clay and Wilkin counties in MN and Richland and Cass counties in ND.
- 2) Conducted a joint RRJWRD and RRWMB bus tour of two RCPP watersheds (Forest River and JD 14) in July 2017.
- 3) Developed a RCPP watershed display and educational fact sheet for the 2017 Big Iron show at the Red River Valley Fairgrounds.
- 4) Working with a joint ND and MN NRCS group to develop a soil health fact sheet for the Red River valley. Anticipate printing the fact sheet in winter of 2018.
- 5) Participating in a planning team effort for a 2018 Ag BMP workshop.
- 6) Assisting with a drainage water management workshop at the Red River Basin Commissions annual conference in January 2018
- 7) Sent out a RCPP postcard to over 8,600 people who own and farm land in the 20 RCPP watersheds.
- 8) Developed a RCPP fact sheet with links to NRCS soil health and drainage water management web sites. Also included links to RRRA, RRJWRD and RRWMB web pages.
- 9) Made a presentation in May to Minnesota Area 1 SWCD staff and supervisors about Red River Basin Initiative and RCPP watershed planning efforts in MN.
- 10) Met with ND legislature Water Topics Committee member to make them aware of RCPP watershed planning efforts and need for future state funding to implement plans.
- 11) Will be making RCPP watershed outreach materials available to the public at the 2017 MAWD and ND WUA conferences in December 2017 and making a formal RCPP presentation at ND WUA conference.
- 12) In November 2017 the RRRA sent out over 8,600 postcards to RCPP landowners in the 20 RCPP watersheds

Appendix 2

Table 1 Summarizing Partner Flood Damage Reduction Projects in Red River Watershed

May 21, 2017 through November 20, 2017

		Cost Incurred	Costs from	Costs for	Cost For	Cost For	Total Cost	Total		
		Prior To	May 21, 2015 to	May 21, 2016 to	Nov. 21, 2016 to	Nov. 21, 2016 to	Incurring for	Project	Project	
Name of Project	WD/WRD Watershed	21-May-15	20-May-16	Nov. 20, 2016	May 20, 2017	Nov. 20, 2017	Project	Cost	Cost	
Pembina River Watershed in ND:										
Renwick Dam Rehabilitation	Pembina County WRD; Tongue R. Subwatershed		\$250,000			\$0	\$8,926,418	\$8,926,418	Note 1	
Renwick Dam Gate Retrofit	Pembina County WRD; Tongue R. Subwatershed		\$140,000			\$0		\$164,722		
Renwick Dam Emergency Action Plan	Pembina County WRD; Tongue R. Subwatershed				\$4,490	\$4,734		\$79,600		
Hydrology Model - Pembina River	Pembina County WRD	\$7,232			\$3,480		\$10,712	\$10,712	Note 1	
Pembina River border dike	Pembina County WRD					\$55,948			Note 1	
Detention study - Pembina River	Pembina County WRD	\$52,795	\$110,917	\$20,094	\$19,221	\$0	\$203,027	\$203,027		
Detention study - local between Pembina & Park	Pembina County WRD & Walsh County WRD	\$49,886	\$6,672	\$0	\$0	\$0	\$56,538	\$56,538		
Park River Watershed in ND:										
Hydrology Model - Park River	Walsh County WRD & Pembina County WRD	\$4,531			\$2,393	\$0	\$6,924	\$6,924		
Grafton Flood Control Project - Preliminary Design	City of Grafton				\$475,700	\$676,500	\$2,465,569	\$47,400,000	Note 1	
Detention study - Park River	Walsh County WRD & Pembina County WRD	\$116,426	\$23,672	\$23,143	\$2,677	\$0	\$165,918	\$165,918		
Forest River Watershed in ND:										
Michigan spillway	Nelson County WRD		\$1,060,100	\$384,744	\$0	\$0	\$4,586,668	\$4,628,853		
Turtle River Watershed in ND:										
Upper Turtle River Dam #1 Emergency Action Plan (EAP)	Grand Forks County WRD		\$11,707				\$11,707	\$11,707		
Upper Turtle River Dam #4 EAP	Grand Forks County WRD		\$10,820				\$10,820	\$10,820		
Upper Turtle River Dam #5 EAP	Grand Forks County WRD							\$15,000		
Upper Turtle River Dam #8 EAP	Grand Forks County WRD		\$11,337				\$11,337	\$11,337		
Rush River Watershed in ND:										
	Rush River WRD									
Sheyenne River Watershed in ND:										
Sheyenne Diversion Low Flow Improvements	SE Cass WRD - Sheyenne River					\$0	\$14,000	\$350,000		
Valley City - Flood Protection, several phases					\$3,891,881	\$1,953,674	\$1,641,044	\$143,000,000	Note 2	
Lisbon - Several Phases					\$278,925	\$1,821,769	\$1,383,702	\$47,000,000	Note 3	
McVille Dam	Nelson County WRD		\$15,600			\$0	\$15,600	\$15,600		
Maple River Watershed in ND:										
Lake Bertha Flood Control Project	Cass County Joint WRD					\$0		\$541,780		
Swan Buffalo Detention Dam #5 Improvements	Maple River WRD					\$0	\$150,098	\$192,180	Note 1	
Swan Buffalo Detention Dam #8 Improvements	Maple River WRD					\$0	\$0	\$183,760		
Swan Buffalo Detention Dam #12 Improvements	Maple River WRD					\$0	\$116,263	\$168,964	Note 1	
Upper Maple River Dam	Maple-Steele Jt. WRD - Maple River Watershed		\$5,000,000			\$0	\$8,500,000	\$8,800,000		
Wild Rice River Watershed in ND:										
Gwinner Dam Study	Sargent County WRD - Wild Rice R. Watershed				\$22,605	\$308	\$4,723	\$22,913	\$122,410	Note 1
Upper Wild Rice Watershed Study	Sargent County WRD - Wild Rice R. Watershed		\$136,000			\$0	\$160,000	\$210,000		
Storm Lake Outlet Study	Sargent County WRD - Wild Rice R. Watershed					0		\$35,255		

Bois de Sioux Watershed in MN:										
Redpath Impoundment	Bois de Sioux Watershed-Mustinka River		\$27,388	\$107,158	\$145,242	\$145,242	\$8,529,907	\$34,000,000		
North Ottawa Impoundment	Bois de Sioux Watershed-Rabbit River		\$866,542				\$18,507,848	\$18,900,000		
Big Lake	Bois de Sioux Watershed-Rabbit River									
Middle-Snake_Tamarac Watershed in MN:										
Newfolden	Middle Snake Tamarac Watershed - ??River									
Swift Coulee	Middle Snake Tamarac Watershed - ??River									
Red lake Watershed in MN										
Black River	Red Lake River Watershed - Black River			\$30,000	\$140,684	\$588,665				
Roseau River Watershed in MN:										
Roseau River WMA	Roseau River Watershed - Roseau River									
Roseau Lake	Roseau River Watershed - Roseau River									
Sand Hill Watershed in MN										
Neilsville Community Levee	Sand Hill Watershed									
Climax Community Levee	Sand Hill Watershed									
Sediment Control Basins	Sand Hill Watershed									
Two Rivers Watershed in MN										
Wild Rice River Watershed in MN										
Halstad Levee Improvement							\$62,256			
Goose Prairie WMA							\$5,119			
Lower Wild Rice Corridor							\$8,167			
Red River Mainstem:										
Oslo Access Project	Middle-Snake-Tamarac R. Watershed									
FM Diversion		\$197,189,625	\$98,360,000	\$98,829,625	\$42,437,002	\$40,402,817	\$357,632,197	\$2,200,000,000	Note 4	
Upstream Detention		\$1,400,000							Note 5	
MN EIS										
Oxbow, Hickson, Bakke Levee										
Moorhead Acquisitions, Interior Levees										
Fargo Acquisitions, Interior Levees							\$120,000,000	\$247,000,000		
Entire Watershed:										
Comprehensive Watershed Management Plan	Red River Watershed						\$330,000	\$1,000,000		
USGS Stream Gages - FY 2017	Red River Watershed		\$619,405	\$435,263		\$238,500			Note 6	
Regional Detention	Red River Watershed		\$1,080	\$4,421		\$1,725	\$5,501	\$985,000	Note 7	
Nutrient Management	RRBC									
Red River Watershed Management Board Mainstem Benefit	Red River Watershed									
Totals for Partners Projects		\$198,820,495	\$106,651,240	\$104,513,922	\$47,201,811	\$47,269,837		\$2,764,196,524		
Note 1: Values shown in time periods is for non-federal costs incurred										
Note 1A: Recent cost estimated by comparing SWC spreadsheet from Feb. 2017 and October 2017. Assumed SWC cost share at 35% for engineering cost.										
Note 1B: Only RRJWRD costs shown.										
Note 1C: Only SWC costs shown.										
Note 2: Recent cost estimated by comparing SWC spreadsheet from Feb. 2017 and October 2017. Assumed SWC cost share at 80% for construction.										
Note 3: Recent cost estimated by comparing SWC spreadsheet from Feb. 2017 and October 2017. Assumed SWC cost share at 85% for construction.										
Note 4: \$1.4B non-federal cost; Comparison of April 28, 2017 and October 31, 2017 Fiscal Report used to obtain current expenditures										
Note 5: Amount obligated to upstream detention projects. Not paid out yet.										
Note 6: Amount paid is 1/2 of non-federal portion for FY 2018.										
Note 7: \$230,000 non-fed., \$754,086 federal; payment shown is from RRJWRD										