



Section 319 Grant - Project Proposal Form

FY2014 Project Proposals are due Friday July 26, 2013

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Project Title Shields River Watershed Sediment Reduction

DEQ
Planning Division

Project Sponsor Information

Name	<u>Park Conservation District</u>	Tax Identification Number	<u>81-0444222</u>
Address	<u>5242 Hwy 89 South</u>	Website	<u></u>
City	<u>Livingston</u>	State	<u>Montana</u>
		Zip Code	<u>59047</u>
		County	<u>Park</u>
Primary Contact	<u>Jessica Anderson</u>	Signatory	<u>Dave Haug</u>
Title	<u>District Administrator</u>	Title	<u>Chairman</u>
Phone Number	<u>406-222-2899 ext. 111</u>	Phone Number	<u>406-222-2899 ext. 111</u>
Fax Number	<u>406-222-8538</u>	Fax Number	<u>406-222-8538</u>
E-mail Address	<u>jessica.anderson@mt.nacdnet.net</u>	E-mail Address	<u>haugfarm@gmail.com</u>
Signature		Signature	

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Project Funding

319 Funds Requested	<input type="text" value="\$42,631.80"/>
Matching Funds	
State Match	<input type="text"/>
State In-Kind Match	<input type="text" value="\$4,012.56"/>
Local Match	<input type="text" value="\$41,078.00"/>
Other Match	<input type="text"/>
Total Matching Funds	<input type="text" value="\$45,090.56"/>
Other Federal Funds	<input type="text" value="\$3,860.00"/>
Total Project Budget	<input type="text" value="\$91,582.36"/>
Administrative Fee	<input type="text" value="\$1,500.00"/>

Nonpoint Source (NPS) Information

Functional Category	<input type="text" value="Sediment Control"/>
1st Pollution Category	<input type="text" value="Hydromodification (Streambank or Shore)"/>
2nd Pollution Category	<input type="text" value="Agriculture (Grazing Related Sources)"/>
3rd Pollution Category	<input type="text" value="Hydromodification (Channel Erosion/Inc)"/>
Waterbody Type	<input type="text" value="River/Stream"/>

Project Location

Which WRP does this project implement?	<input type="text" value="Shields"/>
What is the status of the WRP?	<input type="text" value="DEQ Accepted"/>
Does the project implement a TMDL?	<input type="text" value="Yes"/>

Watershed Name or HUC # Shields River watershed
(1) Waterbody Name from 2012 List of Impaired Waters
Brackett Creek

(1) Probable Cause(s) of Impairment
Sediment

(2) Waterbody Name from 2012 List of Impaired Waters
Potter Creek

(2) Probable Cause(s) of Impairment
Sediment

Activity 1 Name Brackett Creek Sediment Reduction

Latitude (1) 45.86693 Longitude (1) -110.67648

Activity 2 Name Potter Creek Sediment Reduction

Latitude (2) 46.03220 Longitude (2) -110.67662

Does the project sponsor have any open 319 contracts?

Project Title Shields River Watershed Sediment Reduction

DEQ Contract Number _____

319 Award _____

Projected Closing Date _____

Project Title _____

DEQ Contract Number _____

319 Award _____

Projected Closing Date _____

Project Description

Methods: Please describe the specific activities of this project.

Reduce sediment loading through creation of new banks using rock toes (where needed), stacked sod mats, willow transplants, development of off-channel stock water, implementation of grazing BMPs, and management of flows from a storage reservoir. Other components include informing and educating watershed residents and the general public of restoration, and development of a SAP/QAPP.

Objectives: Please describe the specific/measurable objectives that will ensure the achievement of the project goal(s).

The measurable milestones or objectives of these efforts follow the watershed restoration plan developed for the Shields River watershed. Combined, these projects will exceed the 5-year goals. The first milestone is to reduce or eliminate an average of one sediment source per year for five years. This project will reduce or eliminate sediment sources on two streams. The milestones also call for reducing bank erosion in one high priority watershed for five years and both these streams are in priority sub-watersheds. In addition to the programmatic objectives of the watershed restoration plan, these projects will meet the SVWG's mission of improving its water resources. Other measurable objectives include meeting TMDL goals, which include measures of stream morphology and substrate.

Overview: Please provide a brief background of the proposed project.

The proposed project entails decreasing or eliminating erosion from 5 eroding banks on Brackett Creek and implementation best management practices on Potter Creek. Both are within high priority sub-watershed in terms of sediment contributed from eroding banks. Eroding banks on Brackett Creek contribute large quantities of fine sediment, especially during flood events. For example, a single eroding terrace sloughed an estimated 500 tons of sediment during the 2011 flood. Four other banks experienced significant increases in length of bank erosion, sometimes doubling in length as compared to the 2009 aerial photos, and some banks retreated as much as 21 feet into hay meadows. Bank restoration will entail installation of inset floodplains through use of stacked sod mats and willow transplants. Coir fabric and rock toes may be necessary in some locations.

Increased flows through reservoir releases and livestock grazing practices have contributed to considerable bank erosion and down-cutting on Potter Creek. The bordering rangeland, which includes both upland and riparian topography, of the proposal-related stream reach is currently assessed in fair condition. Implementing improved riparian grazing BMPs through cross-fencing the pasture and developing off-stream watering will dramatically reduce livestock use of the stream. The grazing system will eliminate livestock use of the stream during spring and high flow conditions while giving the uplands periods of rest to enhance vegetation and ground cover, resulting in minimized erosion.

Other components of this project is to develop a SAP/QAPP to quantify the response of selected parameters to restoration activities. This project will also include an information and education component that will keep watershed residents and the general public apprised of the watershed group's efforts.

Monitoring: Please briefly describe the monitoring component of this proposal.

Monitoring will follow a yet to be developed sampling and analysis and quality assurance plan for data collection. These will include water quality goals detailed in the TMDL plan. In addition, parameters may include quantifying bank line vegetation using green line methods, evaluating bank retreat rate through biennial aerial photos, evaluating cross sections, and quantifying lines on the streambed.

Education and Outreach: Please briefly describe the education and outreach component of this proposal and the target audience.

This component will occur through SVWG meetings and press releases detailing the success of restoration activities. Existing conditions on target streams and approach to reducing sediment will be detailed at a SVWG meeting. Upon project completion, and vegetation recovery, a field trip will be offered to interested parties to view the improvements. Press releases will be provided to local papers as recognition of the restoration/stewardship ethic of landowners and contributions by the SVWG, DEQ, and other collaborators.

Collaborative Effort: Please briefly describe project partners. Include other agencies, organizations and private citizens and their role in this project.

Partner	Role
Carol Endicott, FWP	Permitting, restoration planning assistance, education and outreach, SAP preparation
Larry Dolan, DNRC	Hydrologic assistance

Scope of Work- Outline

Task 1 Title Brackett Creek sediment reduction

319 Funds	\$25,156.00
Non-Federal Match	\$36,035.76
Other Federal Funds	
Total Cost	\$61,191.76

Timeline October 2014

Description

This task will entail restoration of stability and riparian function to over 500 feet of eroding bank across 5 eroding banks. Methods will vary among the banks, with bank height and the need to protect irrigation infrastructure being considerations. For banks with low heights, an inset floodplain will be constructed using a rock toe, stacked sod mats, and transplant of mature willows. Higher banks will require sloping, but the other components will be the same. Restoration of a bank with an irrigation pump will use more rock, as protecting this is vital. The 5th bank is a 20-ft high terrace that delivered over 500 tons of sediment in 2011. An extended floodplain bench will move the channel away from this terrace.

Task 2 Title Potter Creek sediment reduction

319 Funds	\$10,975.80
Non-Federal Match	\$6,586.00
Other Federal Funds	\$3,860.00
Total Cost	\$21,421.80

Timeline April 2014 - April 2016

Description

This task will incorporate the installation of bilateral fencing of the pasture and off-stream watering units. Cross fencing the pasture will allow the implementation of a grazing system which removes livestock from the stream during high flow periods and significantly reduce sediment deposition. By limiting grazing time on the uplands, native vegetation will have the opportunity to recover, enhancing ground cover and reducing erosion. The installation of off-stream watering units will serve to notably minimize livestock use of the stream and allow stream banks to stabilize and depress the current rate of erosion. A hydrologist from DNRC will develop a reservoir release plan that will reduce stress on banks

Task 3 Title SAP/QAPP Development

319 Funds	\$0.00
Non-Federal Match	\$1,234.00
Other Federal Funds	\$0.00
Total Cost	\$1,234.00

Timeline April 2014 - April 2015

Description

In conjunction with DEQ and the SVWG, the FWP's Yellowstone cutthroat trout biologist will take the lead on development of the sampling and analysis plan/quality assurance project plan. Specific parameters have not been selected, but will follow existing plans developed for other watersheds and will address goals for water quality detailed in the TMDL plan. In addition, several parameters will likely be tailored to these projects such as continuing to monitor bank retreat through the biennial aerial photos.

Task 4 Title Education & Outreach

319 Funds	
Non-Federal Match	\$1,754.00
Other Federal Funds	
Total Cost	\$1,754.00

Timeline April 2014 - April 2015

Description

Education and outreach will serve the multiple purposes of informing Shields Valley residents of progress towards water quality goals and promoting to the public the watershed resident's commitment towards stewardship of land and water resources. An initial description of these projects will be part of a regular SVWG meeting and the press will be invited to attend. Upon project completion, and sufficient time allowance for recovery, site visits will provide interested parties an opportunity to see conservation at work in the Shields Valley. A press release will accompany these events so the larger community is aware of the ongoing commitment to conservation.

Task 5 Title Contract Management

319 Funds	\$3,800.00
Non-Federal Match	
Other Federal Funds	
Total Cost	\$3,800.00

Timeline April 2014 - April 2016

Description

Both project components will be completed within the referenced time frame. The project manager will comply with the project's associated milestone table as well as the reporting requirements defined by DEQ. The project manager is cognizant of the agency's requisition of quarterly, annual, and final grant reporting schedule.

Task 6 Title _____

319 Funds

Non-Federal Match

Other Federal Funds

Total Cost

Timeline _____

Description

Task 7 Title _____

319 Funds

Non-Federal Match

Other Federal Funds

Total Cost

Timeline _____

Description

Task 8 Title _____

319 Funds

Non-Federal Match

Other Federal Funds

Total Cost

Timeline _____

Description

Task 9 Title _____

319 Funds

Non-Federal Match

Other Federal Funds

Total Cost

Timeline _____

Description

Comments: Please use the space provided for any additional information that may not have been captured by this application form.