Section 319 Grant - Final Proposal Form

FY2014 Final Proposals are due Friday, October 4, 2013

Section I: General Information

Project Title: Deep Creek Watershed Restoration Project

Project Sponsor Information

Sponsor Name: Broadwater Conservation District

County: Broadwater | Website: N/A

Tax Identification #: 81-0362187 | DUNS #: 07-887-8895 | SAMs #: delayed due to govt. shutdown

Primary Contact: Denise Thompson	Signatory: Gary Flynn
Title: District Administrator	Title: Chairman of the Board
Address: 415 S Front St	Address: 415 S Front St
City: Townsend State: Montana Zip Code: 59644	City: Townsend State: Montana Zip Code: 59644
Phone Number: 406-266-3146 x 104	Phone Number: 406-266-3146 x 104 (BCD) or 406-266-4414 (H)
Fax Number: 406-266-5429	Fax Number: 406-266-5429
E-mail Address: Denise.Thompson@mt.nacdnet.net	E-mail Address: N/A
Signature:	Signature:

Project Location

Watershed Name or HUC #: Deep Creek, 1003010108 | TMDL Planning Area: Deep Creek

(1) Waterbody Name from 2012 List of Impaired Water: Deep Creek

(1) Probable Cause(s) of Impairment: Sedimentation/Siltation

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

(2) Probable Cause(s) of Impairment: Low Flow Alterations

(3) Waterbody Name from 2012 List of Impaired Waters:

(3) Probable Cause(s) of Impairment:

Activity 1 Name: CMZ & Watershed Health Projects	Latitude (1): 46.315102	Longitude (1): 111.518158
Activity 2 Name: Education & Outreach	Latitude (2): 46.315102	Longitude (2): 111.518158
Activity 3 Name: Streamflow Enhancement Projects	Latitude (3): 46.315102	Longitude (3): 111.518158

Nonpoint Source (NPS) Information

Which WRP does the project implement? Other | What is the WRP status? Under Development

Does the project implement recommendations in a TMDL? Yes | Waterbody Type: River/Stream

Functional Category: Watershed Management

1st Pollution Category	Hydromodification (Channel Erosion/Incision)	Percent of Total (%): 50
2nd Pollution Category	Hydromodification (Flow Regulation/Modification)	Percent of Total (%): 30
3rd Pollution Category	Construction (Highways/Roads/Bridges)	Percent of Total (%): 10
4th Pollution Category	Silviculture (Forest Management)	Percent of Total (%): 10

Project Funding

319 Funds Requested	$217,220.00
Matching Funds	
State Match	$35,000.00
State In-Kind Match	$38,000.00
Local Funds	$13,000.00
Other Match	$138,670.00
Total Matching Funds	$224,670.00
Other Federal Funds	$323,010.00
Total Project Budget	$764,900.00
Administrative Fee	$21,722.00

Does the project sponsor have any open 319 contracts? No

Project Title

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.

This comprehensive watershed restoration project is multi-faceted: Channel Migration Zone defined; Riparian Restoration (fence installation/repair at appropriate locations within CMZ, re-vegetation(plant/encourage new growth of woody species), installation of off-stream livestock water projects; Monitoring water quality, sediment, riparian health, & developing an upper watershed monitoring plan; Specific Channel Restoration efforts; Noxious Weed Management efforts/plan; Streamflow Enhancement/Water Temperature reduction through a number of irrigation efficiency projects; Education & Outreach; and Upper Watershed Coordination & Project Coordination.

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

1. Eroding stream banks will be reduced by 50% (based on 1992 estimates of pre-project erosion).
2. Summer streamflow will exceed 3 cfs at three monitoring locations (Stock's Bridge, Lower D.C. Road, and Hahn's near the mouth).
3. Max. water temp. 73 degrees F<= 10 days in 4 out of 5 yrs. @ 3 locations (Clopton Lane, Lower D. C. Road, and Hahn's near the mouth).
4. Reduce noxious weed distribution by 50% within stream corridor; expand bio-control and monitoring efforts.
5. Evaluate sediment sources, watershed health actions & concerns, weeds & past studies within the upper watershed for future projects.
6. Expose every landowner and local school students to the Deep Creek Restoration Project through various means.

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

*In 1991, Broadwater CD lead an effort to begin addressing ongoing erosion problems at Deep Creek by conducting a stream assessment. This assessment resulted in a large scale TMDL implementation in 1996-97 when approximately 18,000 feet of streambank was revegetated using "soft techniques" (bank sloping, willow planting, and installing juniper revetments). This project reduced the area of eroding streambank by approximately 50% to reduce sediment delivery. Concurrently, riparian fence was installed and livestock management was improved on a large scale. Due to ongoing erosion and stream migration (particularly during the 2011 flood event), approximately 40% of the previously treated streambanks are in fair or poor condition and the riparian fence constructed in 1996-97 has been compromised in many locations. Although streamside vegetation has improved after the previous TMDL implementation, low streamflow (and associated high water temperature) was not sufficiently addressed in the previous TMDL implementation.
*After the 2011 flood event, Broadwater CD lead efforts to return to Deep Creek and evaluate the status of this watershed. Reports from Skidmore/Boyd & a Riparian Survey by NRCS are the basis for a new approach at Deep Creek. As an alternative to proposing widespread repair/maintenance of streambank stabilization efforts, the current grant proposal uses a different mind-set of encouraging long term, gradual recovery of the health of Deep Creek. This 319 Grant proposal is intended to define and map the channel migration zone, install/repair fencing at/within the CMZ boundary, implement riparian re-vegetation projects, perform and facilitate various monitoring endeavors, implement reach specific restoration projects, develop a Watershed Weed Mgmt. Area, noxious weed monitoring program & expand bio-control efforts to improve water quality, implement off-stream livestock water & specific irrigation improvement projects to improve fisheries, inform producers of grazing management alternatives, streamflow, and water quality. Education, community outreach, volunteer programs, & coordination will continue to be paramount for the success of this collaborative effort. After all watershed health involves many players working together to implement a wide array of scientifically-based, effective projects.
*Additional tasks are proposed that were not included in the previous TMDL implementation in 1996/97: Significant streamflow improvement & water temperature reduction will be accomplished by modifying irrigation practices; an evaluation of upstream sources of disturbance in the headwaters (particularly related to MDT & the U.S.F.S. activities) will be conducted for the first time; weed management; and past & future project consolidation. This comprehensive approach will be an effective means to a healthy watershed.

Section II: Background Information

A: Statement of Need and Intent

Since the 2011 flood there has been a renewed interest and realization that for watershed restoration to ultimately be effective many entities must come together, sit at the table, evaluate the science, and formulate a comprehensive approach that will ensure projects and funds are implemented and used effectively and wisely to improve a watershed over the longterm. A watershed includes not only the stream itself, but also the tributaries that feed that stream, the soils, the vegetation, the land mass within the entire watershed, the landowners, professionals, and various needs of that watershed, whether it be a municipality, agriculture, fisheries, forests, recreation, or a tributary to one of the largest rivers in America, the Missouri River.

Upon review of the tasks one will see that much thought has been put into how best to address numerous concerns and move forward with an effective watershed restoration endeavor. Following are some specific intentions that clearly articulate Broadwater Conservation District's need and desire to put locally-led conservation on-the-ground through a comprehensive and acceptable means, supported by local constituents, policy makers and various agencies. It is in using this approach a community will be educated, engaged, and enhanced. What better way to ensure our natural resources are preserved and responsibly used and conservation efforts are carried on!

Decreasing sediment delivery and increasing streamflow at Deep Creek will improve several beneficial uses of Deep Creek, including aquatic life, agriculture, and recreational uses. Significant erosion of streambanks on private land results in high sediment loading which impacts all beneficial uses. Summer flow depletion due to irrigation demand results in severe de-watering, which also impacts all beneficial uses of the stream.

In addition, management activities in the upper watershed (roads, land use practices, noxious weeds, and wildfire) potentially have significant influence on the downstream reaches of Deep Creek. A source assessment of sediment and modified hydrology of the upper watershed will be comprehensively addressed for the first time in this 319 proposal, enabling a complete and effective Watershed Restoration Plan to be put to use, directing future projects; thus establishing a healthy watershed.

B: Collaborative Effort

Partner	Role
NRCS	Evident in the tasks & budget (other federal funds), NRCS, under the direction of local District Conservationist, Justin Meissner, is a key player in this project. The NRCS partnership, cost-share endeavors, rapport & knowledge makes this comprehensive restoration work possible.
MTFWP	For 23 years, Ron Spoon has been involved with numerous projects within the Deep Creek Watershed. His knowledge of the stream, rapport with personnel and landowners, and his unique ability to implement effective on-the-ground projects makes FWP's a key partner.
Deep Creek Landowner Advisory Group	The 5 members of this group, selected by the BCD, have met for 12 months, listening, learning, sharing concerns and helping to prioritize watershed projects. This group has been the hub from which this 319 proposal has been developed. Community buy-in is crucial.
DEQ	319 funds are a critical piece to the Deep Creek Watershed Restoration Project. It is this hands-on, thoughtful & intellectual dialogue over the past 12 mths. that has enabled this project proposal to move forward. BCD appreciates the expert advice & assistance from DEQ.
USFS, MDT, DNRC, County & Local Working Group, Townsend Public Schools, and landowners within the watershed	Nearly 1/2 of this watershed is FS; MDT is working on a $12+ million project in the canyon of this watershed; DNRC is a vital funding source & resource; Townsend Schools, community, landowners are vital partners/ volunteers; County project collaboration ensures success.

Additional Information (Collaborative Effort)

Following important dialogue with the Local Working Group, NRCS identified Deep Creek as a priority #1 watershed in Broadwater County, and has a very active program in the watershed. Priority fishery restoration and monitoring will be provided by FWP. DCLAG maintains a vested interest. Landowners provide matching funds for projects. DEQ will continue to guide. School will take part in monitoring and Bug and Weed Program. BCD, Jim Beck will work on monitoring, E&O, and coordination. MCC may assist with noxious weed monitoring & bio-control. County Weed Dept. & Extension will help with Watershed Weed Management Area development, spray days. weed control & education, GIS and Kite Photography. USFS, MDT, County will continue to help ensure the entire watershed is being addressed by sharing information and potential funds. This project will serve as a model for future projects.

C: Project Planning and Management

Funding Organization	Award Amount	Project Description	Project Status	Contact Information
DNRC	$20,000	RDGP Planning Grant for Skidmore Study, monitoring site development, and the formation of a Watershed Restoration Plan.	9/30/13 was the termination date. Final invoice, report and WRP still need to be submitted.	DNRC Alicia Stickney Broadwater CD Denise Thompson
NRCS	NRCS Funded ($7500-$12000) NRCS Funded ($1500)	Riparian Survey Cross-Section Analysis in Reach 8	Completed	NRCS Justin Meissner, District Conservationist Townsend Office or Cory Wolf, Engineer, Bozeman Office
DNRC/FWP	$15000	2011Soil Lift Project (within Reach 10)	Completed	FWP Ron Spoon or DNRC Laurie Zeller
DEQ/EPA 319	$300,000	1996-97 TMDL Implementation	Completed	FWP Ron Spoon
Toston Mitigation - DNRC	$200,000	1991 Siphon Project at Montana Ditch	Completed	FWP Ron Spoon

Additional Information (Planning and Management)

Broadwater Conservation District, Montana Fish, Wildlife & Parks, and NRCS have worked closely together with a focus on Deep Creek for over 20 years.
LWG, NRCS have identified Deep Creek as a priority watershed and has numerous current and ongoing projects in the Deep Creek watershed.
MTFWP identified Deep Creek as an important recreational fishery and a critical spawning stream for the Missouri River and Canyon Ferry Reservoir. Reduced sediment loading and improved instream flow will benefit aquatic life and the recreational fishery. In addition, Broadwater County is very active with past flooding concerns and weed management. In the upper watershed, MDT and the USFS have participated in efforts to improve understanding of sediment sources and hydrology. HNF has completed a handful of studies within this watershed in the past decade. The collaboration of this information will help establish priority restoration projects for a healthy watershed.
BCD volunteer, Jim Beck, has been diligently working on a monitoring program, already providing key data. With BCD being approved to host a BSWC member for at least one year, this should enable the district to implement a lasting monitoring program, facilitating monitoring expansion into other watersheds.
The support from the Deep Creek Landowner Advisory Group and landowners has provided a streamlined approach to planning and management, laying the foundation for continued conservation and watershed health.

Section III: Project Components

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

Target audience will be students, local residents, landowners, legislators, agency personnel, watershed groups, and other conservation minded folks such as MRCDC and MWCC. Various agencies, BSWC and other experts will be important components to this project. To ensure watershed health is understood and long range programs for such, are developed and implemented, an extensive and broad E & O approach will be incorporated. While working with other agencies, volunteer stream & noxious weed monitoring projects will be developed. A Weed Management Area will be established. Two MSU Extension Programs, Kite Photography and GIS, used for mapping and unique tracking tools for re-veg work, monitoring flow data, etc. will be explored and considered. Various workshops or training opportunities will be offered such as Best Management Practices, Noxious Weed I.D. and treatment, stream health, irrigation improvements, Beaver Education, riparian health, floodplain ed, 310 contract work, and grazing management and Ag-improvement education, will be articulated as well. DNRC's Rolling Rivers Trailer will be incorporated when possible. A local Quiz Bowl, Envirothon or Conservation Jeapordy will be considered for a fun educational activity.
Additionally at least one 6th Grade Conservation Day will be within this watershed, news articles will be submitted, and project sign(s) will be installed within the watershed to articulate all the players who made this project possible and to spotlight the endeavor as a whole. A district website will be developed. Radio, MT Outdoor Report (FWP), newsletters, mailings, and local radio will be explored and likely implemented. A high school student volunteer scholarship program will be considered. And there will be some Fire Prevention, Forest Health issues articulated as well, with a focus on water quality and watershed improvement. The BCD Annual Dinner(s) will serve as a vehicle to educate and spotlight accomplishments.

C: Operation and Maintenance

Past work in Deep Creek required significant maintenance of fencing close to the stream, bank stabilization structures located throughout miles of stream. These projects required significant maintenance. Since the proposed project is focused on giving the stream additional room to migrate in the floodplain, fewer structures that require maintenance are planned.

Primary maintenance needs will be for fencing and irrigation structures. Any contract work done in these areas will include an NRCS based Landowner Agreement, which will include maintenance protocol.

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

Riparian health will be monitored using the NRCS riparian survey conducted in 2013 as a baseline./ Stream channel migration & erosion will be monitored using the Skidmore Report & air photos (2012) as a baseline./ Streamflow & water temperature will be monitored at a minimum of 3 locations./ Fisheries trends will be based on historic brown trout redd counts in approximately 5 miles of stream./ Peroid bentic invertebrate assessments will be conducted at locations previously completed in 1992 & 2001./ There will be a focus on developing volunteer monitoring programs. Streambank erosion will be monitored with ground surveys and photo points.

Weed monitoring will be implemented to track progress. The establishment of a Weed Management Area and at least one successful weed treatment event (i.e. Spray Day or Weed Roundup) will be successfully completed.

Because the Education and Outreach task within this project is comprehensive and activity driven, effectiveness thereof will be determined by how many of the activities or sub-tasks are successfully implemented/completed. Additionally, one will use at least one survey/ quiz to test student's acquired knowledge. The increase in # of landowners who inquire and possibly take part in cost-share endeavors to improve their operations will be a strong indicator of the success of the E&O. Interest and participation in watershed volunteerism will determine the effectiveness of the E&O. At least one workshop/year will be given. At least two field tours will be implemented.

Section IV: Scope of Work

Task 1 Title: Define the Channel Migration Zone corridor.

Description

Loss of riparian habitat and streambank modification/destabilization are the impairment sources addressed in this task.

A Channel Migration Zone corridor will be defined based on stream reach recomendations provided in the Skidmore/Boyd Report, 2012 aerial photos, and the NRCS Riparian Assessment. Detailed maps will be developed and used for future floodplain management. Residential, agriculture and natural resource management decisions will be able to use the detailed CMZ maps for project planning. For example, fence relocation, infra-structure placement, weed treatment, and channel restoration activities can be planned based on the defined CMZ boundary.

Deliverables

Detailed Channel Migration Zone Maps for the Lower Watershed.
Contracted Services will be used for this task.

Task 1 Funding

319 Funds	$12,000.00
Non-Federal Match	$3,000.00
Other Federal Funds	$0.00
Total Cost	$15,000.00
Is Match Secured?	No

Timeline: 2014

Match Source: DNRC

Task 2 Title: Riparian Restoration

Description

Loss of riparian habitat and streambank modifications/destabilization are the impairment sources addressed in this task.

2.1 - Fence construction, repair and/or relocation of riparian fence further away from the active stream channel (preferably along the defined CMZ). Use of the 75% NRCS cost match will be an important component of the project, and wildlife-friendly wire fence or permanent electric fence will be required. Approximately 15 miles of fence is needed within the 20 mile project reach (79,200 ft at $2.15/ft) in the Lower Watershed . NRCS Grazing Management Tools will be implemented.

2.2 - Up to 10 off-stream livestock water projects will be installed to help distribute grazing pressure and replace problem water gap projects implemented in the past. Each project includes one tank ($2000), winter pipeline installation ($2.50/ft), and a pump ($650).

2.3 - Vegetation Enhancement Project - Tree/Shrub re-vegetation is needed in some areas to assist natural regeneration, using transplants and nursery stock. Volunteer labor will be used whenever possible on this task.

Deliverables

Install approximately 15 miles of permanent/ electric fence to NRCS standards within the CMZ
Install up to 10 off-stream livestock water projects to NRCS standards.
Plant $2500 worth of Riparian Trees/ Shrubs to assist with re-vegetation efforts.

Task 2 Funding

319 Funds	$41,500.00
Non-Federal Match	$27,570.00
Other Federal Funds	$143,710.00
Total Cost	$212,780.00
Is Match Secured?	No

Timeline: 2015, 2016

Match Source: NRCS, FWP, Landowners

Task 3 Title Monitoring

Description

Loss of riparian habitat, streambank modifications/destabilization, and flow alterations are the impairment sources addressed in this task.

3.1 - Flow, Temperature & Fish Monitoring by Jim Beck and FWP (Fisheries trends will be based on historic brown trout redd counts in approximately 6 miles of stream).
3.2- Macro-invertebrate study will be contracted out to an expert.
3.3 - SAP and EQUIS
3.4 - Riparian Health (Sediment, Bank Erosion, Beaver Inventory) Monitored using the NRCS riparian survey conducted in 2013 as a baseline. Stream channel migration & erosion will be monitored using the Skidmore Report & air photos (2012) as a baseline. Sediment load reduction will be estimated using appropriate models based on implementation activities.
3.5 - BSWC member assisting Jim Beck with monitoring tasks and establishing a model to use on other watersheds in the county.

Deliverables

Flow and temperature will be monitored at a minimum of 3 locations in lower watershed
Flow and temperature will be monitored at a minimum of 3 locations in upper watershed
Develop a volunteer monitoring program
A DEQ approved sampling and analysis plan (SAP and EQUIS)
Data uploaded to EQUIS/Annual Data Summaries/A five year monitoring report
Benthic invertebrate Report

Task 3 Funding

319 Funds	$25,000.00
Non-Federal Match	$36,000.00
Other Federal Funds	
Total Cost	$61,000.00
Is Match Secured?	Yes

Timeline 2014, 2015, 2016, and ongoing

Match Source Jim Beck, FWP

Task 4 Title Specific Channel Restoration

Description

Loss of riparian habitat, streambank modifications/destabilization, and flow alterations are the impairment sources addressed in this task.

In contrast to previous work, specific channel restoration projects are limited to four, high priority projects. Skidmore's assessment and the NRCS Riparian Assessment identified 3 locations where passive channel recovery is unlikely without active channel work. Gravel deposition at the mouth of the canyon (reach 15) and at the grade break (reach 8/9) require active channel restoration to resolve flooding and erosion problems. In addition, reach 7 riparian/wetland restoration compliments channel modifications upstream.

4.1 - Reach 15 (mouth of canyon) - Because concerns within this reach are more residential and structural in nature, 319 funds are only being requested to help with Coordination efforts between FEMA and the County and the Landowners. BMP's will be shared with landowners in this area and educational workshops will include issues facing residents in this reach. Additional engineering may be needed and will be addressed through the county and via other funding sources.
4.2 - Reach 8 & 9 - (grade break and gravel deposition area near Flynn/McArthur Diversion)
4.3 - Reach 7 - Riparian and Wetland Enhancement Project
4.4 - Reach 10- Repair 2011 soil lift project

Deliverables

4.1 - Facilitate meeting/ ed. opportunities with FEMA, Broadwater County, and Landowners
4.2 - Design and implement channel change to a stable location
4.3 - Facilitate landowner agreement between NRCS/Stocks to implement channel change and place structures (fence and water tanks) at appropriate location along the CMZ boundary
4.4 - Complete soil lift repair

Provide photos of pre and post projects for all tasks

Task 4 Funding

319 Funds	$25,000.00
Non-Federal Match	$5,500.00
Other Federal Funds	$9,000.00
Total Cost	$39,500.00
Is Match Secured?	No

Timeline 2014, 2015, 2016

Match Source NRCS, Landowners

Task 5 Title Noxious Weed Management

Description

Loss of riparian habitat and streambank modifications/destabilization are the impairment sources addressed in this task.
Weed invasion of the Watershed, particularly w/in the riparian corridor is a significant concern. If the CMZ concept is fully implemented, noxious weed control will be a high priority of the overall project & an ongoing main concern for NRCS, Ag, County, FS and landowners.
5.1 - Weed Treatment by landowners and NRCS, primarily in Lower Watershed. Approximately 200 acres of land will be w/in the corridor (lower watershed) of the project area. Participating landowners may receive one year of weed treatment through NRCS at $101.50 per acre, while being required to implement weed control during the following two years. Weed mapping for Long Range Tmt Plan.
5.2 -Lower Watershed Inventorying, Mapping, Coordination, & bio-control expansion using the school Bug & Weed Program & otheres
5.3 Upper Watershed: Weed distribution on public lands (mostly USFS) and along the highway corridor requires coordination, gathering of past information, and detailed surveys. Consolidation of data, inventory work, and maps to develop tmt. plan. Bio-control expansion.
5.4- Development of a Cooperative Weed Management Area for the entire Watershed for effective weed tmt., plan, funds, collaboration
5.5 - County, FS, BCD Weed Tmt Events such as Weed Round-up, Spray Days. Provide educational workshops, etc.

Deliverables

NRCS cost-share projects will be implemented with at least 1/3 of the qualifying landowners.
A CWMA will be established and a Work Plan will be put in place for the entire watershed.
Collect past acres of weed tmt. info, upper watershed data, maps to develop a Tmt Plan/ Map
Weed priority treatment map and plan will be established for entire watershed.
Implement Bio-control into the CMZ in at least 1/2 of the appropriate locations.
Seek Noxious Weed Trust Fund monies (50-50 cost share) and other sources for a watershed treatment plan and on the group treatments
Assist FS on watershed treatment plans and implementation.
See Justin Meissner's (NRCS DC) Weed Treatment Support Letter within the letters of support

Task 5 Funding

319 Funds	$15,000.00
Non-Federal Match	$50,600.00
Other Federal Funds	$20,300.00
Total Cost	$85,900.00
Is Match Secured?	No

Timeline 2014, 2015, 2016, and ongoing

Match Source NRCS, Landowners

Task 6 Title Streamflow Enhancement and Irrigation Improvement Projects

Description

Streambank modifications/destabilization and flow alterations are the impairment sources addressed in this task.

Stream flow depletion and associated high water temperature significantly impact Deep Creek in some reaches. Fish loss to diversions is also a concern at some diversion. Four landowner driven/proposed projects will significantly improve flow and temperature conditions, fish habitat and bank conditions:
6.1 - Gravity Pipeline and Grade Control Irrigation Project for HPS (move POD off Deep Creek to B-M canal)
6.2- Phase II -POD for McArthur, pump installation for Flow Enhancement. (Phase I completed without 319 funds in 2013)
6.3 - Reach 9 - Antonick Irrigation Improvement Project- Irrigation Pump Consolidation & BMP Implementation, along with 2 used pivots being installed to address CMZ and streamflow concerns.
6.4 - Lambott Fish Friendly Diversion Improvement -

Deliverables

6.1 - Eliminate ditch and replace with alternative water source, and install fish friendly grade control
6.2 - Assist NRCS with alternative pump site to abandon ditch diversion
6.3 - Establish stable pump location, appropriate grade control structure, and 2 used pivots (cost-share endeavor with the landowner w/ DEQ funding 25% of cost)
6.4- Install a fish friendly diversion component at an existing diversion site.

Flow measurement will be incorporated with participating landowners.

Task 6 Funding

319 Funds	$53,000.00
Non-Federal Match	$93,000.00
Other Federal Funds	$145,000.00
Total Cost	$291,000.00
Is Match Secured?	No

Timeline 2014, 2015, 2016

Match Source NRCS, FWP, LANDOWNERS

Task 7 Title Upper Watershed Project Coordination

Description

Loss of riparian habitat, streambank modifications/destabilization, and flow alterations are the impairment sources addressed in this task.

Past efforts to reduce sediment delivery in Deep Creek focused on bank erosion on private land. Upstream sediment sources and changes in hydrology influence sediment loading, but have never been thoroughly evaluated. No sediment source evaluation has been attempted and an upper watershed prioritization plan does not exist. In addition, the highway corridor occupies a significant portion of the Deep Creek floodplain. No specific management actions are proposed in the upper watershed, but considerable data gathering of numerous FS studies and coordination is planned to begin to address the water quality concerns.
7.1- Hydro-tech Contract to catalog and quantify numerous USFS studies/projects already completed, to assist with sediment source evaluation to develop an Upper Watershed Prioritization/ monitoring program, and facilitate collaborative projects for Watershed/Forest Health focused on impairment concerns.
7.2 - BCD/BSWC will assist and help direct the multi-agency coordination effort w/in the Upper Watershed to ensure tasks are completed, and an Upper Watershed Prioritization/monitoring/ implementation program is established for overall watershed health.
7.3 - Bedload Transport Sampling and additional monitoring options will be explored with FS/MDT to help establish baseline information

Deliverables

Hydro-tech contract will be established and completed to assist with mitigation (Bedload Transport Sampling/ Sediment Source Evaluation will be contracted with consultation with USFS/ MDT)
MDT road sand evaluation will be completed
Upper watershed prioritization plan will be completed
A monitoring plan for the Upper Watershed will be developed by 2016
Jim Beck is already working with the FS and monitoring at 2 new locations.

BCD time spent on Task 7 will be paid at $15/ hour + payroll taxes.

Task 7 Funding

319 Funds	$10,000.00
Non-Federal Match	$1,000.00
Other Federal Funds	$2,000.00
Total Cost	$13,000.00
Is Match Secured?	No

Timeline 2014, 2015, 2016, and ongoing

Match Source USFS, MDT

Task 8 Title Education and Outreach (see 8.2 for impairment sources)

Description

8.1-While engaging youth, landowners/ citizens in the mission of conservation, watershed health, & volunteerism, BCD will focus on providing BMP's and educational workshop(s), and at least 1 field tour. Educational workshops will relate to Agriculture and 310 BMP's, Weed ID and control, watershed health, ag improvement programs such as on-site livestock operations and grazing management, cover crop, riparian health. All workshops will make a clear connection to how all endeavors correlate to water quality. Website and newsletter development will be important components. Additionally kite photography for monitoring and E&O and GIS for watershed and ag inventorying will be explored and implemented where possible. 6th Grade Conservation Day's will have a Deep Creek theme, Annual Dinners will provide a great opportunity to keep the community engaged and informed. An effort will be made to explore youth school to work or scholarship for work opportunities. Additionally weed incentive programs will be discussed & put in place if possible.
8.2-Loss of riparian habitat, streambank modifications/destabilization, and flow alterations will be the primary focus of the Education & outreach activities, potentially under the assistance of a Big Sky Watershed Corp member, will be spearheaded by the BCD administrator.
8.4 - Beaver Education -Beaver are tolerated in some reaches, and are completely unacceptable in others. BCD and FWP will continue to coordinate with landowners to improve management of beaver based on landowner tolerance. In addition, we propose purchasing protective wire for wrapping trees impacted by beaver to distribute to landowners with beaver problems. At least 1 workshop will include beaver education components. Beaver experts will be used to educate whenever possible.

Deliverables

At least 1 BMP workshop to guide contractors and landowners through various concerns/issues
At least 1 educational workshop will be executed including topics articulated in 8.1 and 8.4
At least 1 field tour will be given. Plan to include MRCDC & governor/ leg/agencies/ community
At least 1 Noxious weed treatment day or Weed Roundup Rodeo will be executed
Interpretive/Watershed health informational sign(s) showing partners, and projects will be installed
At least one Annual dinner presentation, and one 6th Grade Cons. Day event for Deep Creek
Organize student/youth education events/ volunteer monitoring program w/ the help of BSWC, MWCC, Extension, County and MSU, and MT Water Center / BCD time =$15/ hour + payroll taxes

Task 8 Funding

319 Funds	$17,000.00
Non-Federal Match	$8,000.00
Other Federal Funds	
Total Cost	$25,000.00
Is Match Secured?	No

Timeline 2014, 2015, 2016, and ongoing

Match Source BCD, DNRC, FWP

Task 9 Title Project Coordination

Description

Loss of riparian habitat, streambank modifications/destabilization, and flow alterations are the impairment sources being addressed in this task, via coordination efforts specifically targeted through Tasks 1-8. Task 9 goal is to ensure the impairment sources are at the cusp of the work set forth.

The Broadwater Conservation District Administrator will be responsible for coordination efforts for Task 1-8 over the course of 3 years to help ensure this 319 project is successful and effective.

Deliverables

District Administrator will be paid at $15/ hour plus payroll taxes.
District administrator will spend roughly 1 day a week over the course of 3 years working on project coordination of Tasks 1-8.
Plan and implement at least 9 public coordination events in 3 years while working w/all agencies.
BCD will serve as th hub for agency personnel, landowners, contract work, volunteer programs, BSWC member, Upper Watershed collaboration and education and outreach endeavors.

Task 9 Funding

319 Funds	$18,720.00
Non-Federal Match	$0.00
Other Federal Funds	$0.00
Total Cost	$18,720.00
Is Match Secured?	

Timeline 2014, 2015, 2016

Match Source N/A

Task 10 Title 319 Contract Administration

Description

Broadwater Conservation District will be responsible for contract administration of the 319 grant, and this will include invoicing and reporting requirements set forth by DEQ. (10% of the 319 award)

Deliverables

District Administrator will process and submit all invoices.
District Administrator will fulfill all DEQ reporting requirements.

Wages will include $15/ hour plus payroll taxes.

Task 10 Funding

319 Funds	$21,722.00
Non-Federal Match	$0.00
Other Federal Funds	$0.00
Total Cost	$21,722.00
Is Match Secured?	

Timeline 2014, 2015, 2016

Match Source N/A

Section V: Supporting Documents

A: Detailed Project Budget

	Cash Match			In-Kind Match				
Task Number and Specific Action	**Private**	**State**	**Federal**	**Private**	**State**	**Federal**	**319 Funds**	**Total Costs**
TASK 1- CMZ Map		$3,000					$12,000	**$15,000**
TASK 2 - Riparian Restoration								
2.1 Fence Construction	$12,570	$10,000	$127,710				$30,000	**$180,280**
2.2 Off Stream Water	$5,000		$15,000				$10,000	**$30,000**
2.3 Vegetation Enhancement			$1,000				$1,500	**$2,500**
TASK 3 - Monitoring								
3.1 Flow, Temp, Fish				$24,000	$12,000			**$36,000**
3.2 Macro-invertebrates (contracted)							$10,000	**$10,000**
3.3 SAP and EQUIS							$4,000	**$4,000**
3.4 Riparian Health							$6,000	**$6,000**
3.5 BSWC assistant/ Jim Beck							$5,000	**$5,000**
TASK 4 - Channel Restoration								
4.1 Reach 15 - Coordination					$1,000		$1,000	**$2,000**
4.2 Reach 8,9 - Seiler/Antonick	$2,000						$18,000	**$20,000**
4.3 Reach 7,8 - Stocks	$2,500		$9,000				$1,000	**$12,500**
4.4 Reach 10 - Repair Soil Lift							$5,000	**$5,000**
TASK 5 - Noxious Weed Mgmt.								
5.1 Weed Tmt (landowners/NRCS)	$40,600		$20,300				$0	**$60,900**
5.2 Lower Watershed Projects							$7,500	**$7,500**
5.3 Upper Watershed Projects							$7,500	**$7,500**
5.4 CWMA and Tmt Plan					$1,000			**$1,000**
5.5 FS/County/BCD Weed Tmt Evts					$9,000	$3,000		**$12,000**
TASK 6 - Irrigation Improvements								
6.1 HPS Gravity Pipeline	$19,000	$10,000	$95,000				$16,000	**$140,000**
6.2 Phase II-McArthur POD	$10,000	$5,000	$50,000				$12,000	**$77,000**
6.3 Reach 9 -Antonick Irrigation	$46,000						$23,000	**$69,000**
6.4 - Lambott Div. Imp.	$1,000	$2,000					$2,000	**$5,000**
TASK 7 - Upper Watershed Coord.								
7.1 Hydro-tech Contract						$2,000	$5,000	**$7,000**
7.2 Task coordination (BCD/BSWC)					$1,000		$5,000	**$6,000**
7.3 Bedload/ Monitoring, etc (7.1$)								
TASK 8 Education/ Outreach								
8.1 Events, PR, Signage		$2,500			$1,000		$13,000	**$16,500**
8.2 BCD Wage & BSWC fund match		$2,500					$2,000	**$4,500**
8.3 Beaver Ed and Tree Protection					$2,000		$2,000	**$4,000**
8.4Volunteer Monitoring Program								
TASK 9 Project Coordination (DT)							$18,720	**$18,720**
TASK 10 Grant Administration (BCD)								
10% of 319 grant total = $21,722								
TOTAL	**$138,670**	**$35,000**	**$318,010**	**$24,000**	**$27,000**	**$5,000**	**$217,220**	**$764,900**

B: Project Milestone Table: Please complete the following Project Milestone Table by entering task numbers and titles in the left hand column, then check the box(es) for the appropriate quarter(s) and year(s) in which the task will take place.

Milestone	2QT 2013	3QT 2013	4QT 2013	1QT 2014	2QT 2014	3QT 2014	4QT 2014	1QT 2015	2QT 2015	3QT 2015	4QT 2015	1QT 2016
TASK 1- CMZ Map	☐	☐	☐	☐	☐	■	■	☐	☐	☐	☐	☐
TASK 2 - Riparian Restoraton	☐	☐	☐	☐	☐	☐	■	■	■	■	■	■
TASK 3 - Monitoring	☐	☐	☐	☐	☐	■	■	■	■	■	■	■
TASK 4 - Channel Restoration	☐	☐	☐	☐	☐	☐	☐	■	■	■	■	■
TASK 5 - Noxious Weed Management	☐	☐	☐	☐	☐	■	■	■	■	■	■	■
TASK 6 - Irrigation Improvement Projects	☐	☐	☐	☐	☐	■	■	■	■	■	■	■
TASK 7 - Upper Watershed Coordination	☐	☐	☐	☐	☐	■	■	■	■	■	■	■
TASK 8 - Education and Outreach	☐	☐	☐	☐	☐	■	■	■	■	■	■	■
TASK 9 - Project Coordination	☐	☐	☐	☐	☐	■	■	■	■	■	■	■
TASK 10 - Contract Administration	☐	☐	☐	☐	☐	■	■	■	■	■	■	■
Tasks 2-10 will proceed through December of 2016	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Please ensure that you submit a **project map(s)** and **letters of support (at least 3)** along with this Final Application form. If design drawings are available please provide those as well. For on-the-ground work please include copies of the applicable permits.

☑ **C: Project Map**

☑ **D: Letters of Support**

☑ **E: Design Drawings**

☑ **F: Applicable Permits**

☑ **G: Draft of amended WRP**

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

▫Broadwater County
Office of Disaster & Emergency Services
515 Broadway, Townsend MT 59644
Mike Koehnke, Interim DES Coordinator
michaelkoehnke@yahoo.com
406-949-3522

October 4, 2013

Denise Thompson, Administrator
Broadwater Conservation District
415 South Front Street
Townsend MT 59644

Dear Denise:

As Broadwater County's Interim Disaster and Emergency Services (DES) Coordinator, I have reviewed your Section 319 Grant – Final Proposal for the Deep Creek Watershed Management. I am in support of the proposed objectives to address ongoing erosion problems, enhance stream flow, lower water temperature, reduce weed distribution, and the evaluation of the upper watershed health.

It is widely known that the 2011 flood event increased eroding of the stream banks throughout the watershed, particularly in the lower reaches of the creek near homesteads, ranch and croplands. Decreasing sediment delivery and increasing stream flow of Deep Creek will improve water quality for aquatic life, agriculture purposes and recreational uses.

To help improving the Deep Creek watershed, Broadwater County government has a pending FEMA Hazard Mitigation Grant Project (HMGP) proposal with Montana Disaster and Emergency Services resulting for Presidential Declaration No. 1996 relating to the floods of 2011. That grant application needs to be reevaluated and closely coordinated with the Conservation District's Deep Creek Watershed management efforts. The proposed FEMA mitigation project needs to focus on the erosion problems along Reach No. 15 (south of North Fork to Hwy 12 Bridge) of the watershed and the various county road crossings over Deep Creek – especially Carson Lane, Litening Barn Road and Clopton Lane.

As the recently appointed Interim DES Coordinator for Broadwater County, I will take an acting role to liaison with the Conservation District to ensure a unity of effort between the two public entities. Each grant proposal must complement the other to improve steam quality, enhance watershed restoration, and spend taxpayer dollars wisely with the best cost/benefit to improve Deep Creek.

I strongly support Broadwater Conservation District's proposed Section 319 Grant application.

Sincerely yours,

/s/ Mike Koehnke
Interim DES Coordinator

Cc: Board of County Commissioners
Shawn Higley, WWC Engineering

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
415 South Front Street
Townsend, MT 59644

Office (406) 266-3146
Fax (406) 266-5429

9/30/2013

Broadwater Conservation District
415 South Front Street
Townsend, MT 59644

Dear Chairman Flynn & Board Members,

The NRCS has contracted over $200,000 in conservation projects within the Deep Creek Watershed over the past three years. These activities were primarily focused on removing points of diversion from Deep Creek and relocating them to the Broadwater Missouri Water Users Canal (BMWU), grazing improvement projects, and noxious weed control. Additionally we are currently in the planning phase for conservation practices to address noxious weeds, removing diversion points from Deep Creek and relocating them to the Broadwater Missouri Canal, conversion from flood irrigation to sprinkler irrigation, riparian buffer improvements, cross fencing and off stream livestock watering facilities to name a few. It is anticipated that this planning effort will result in approximately $450,000 of additional EQIP contracts throughout the Deep Creek Watershed over the next 5 years.

Thank you for your efforts in submitting a 319 grant to the MT DEQ to address resource concerns identified in the Deep Creek Watershed. The Natural Resources Conservation Service (NRCS) fully supports these efforts and is eager to further our partnership in soil and water conservation throughout the watershed and Broadwater County.

If you have any questions please feel free to contact me Monday – Friday 7:00am – 5:00 pm.

Respectfully,

Justin Meissner
District Conservationist

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
415 South Front Street
Townsend, MT 59644

Office (406) 266-3146
Fax (406) 266-5429

9/19/2013

Broadwater Conservation District
415 South Front Street
Townsend, MT 59644

Dear Chairman Flynn & Board Members,

The Deep Creek Watershed has been identified as the top priority in Broadwater County by the Local Working Group. This attention is due impart to Deep Creek being listed as a TMDL dewatered stream and as a result of flooding in 2010 and 2011.

Streambank destabilization is rarely caused by any one factor. However to pick one that leads to most others, would be the spread of invasive species. In my professional judgment noxious weeds are the number one threat to the Deep Creek Watershed. From the highest ridge in the Big Melt Mountain Range to the mouth at the Missouri River the Deep Creek Watershed is under attack from invasive species. This has led to a decline in forest health, decreases in range productivity, and a reduction of deep rooted native riparian plant species.

It is with this reduction in native riparian species where the stream banks lose their anchor; the deep large roots of the willow, dogwood, aspen and cottonwood to name a few. These tall statured woody species also shade the water surface reducing temperatures throughought the fishery. Additionally the native grass, forb, sedge, and rush communities also deep rooted are being replaced by non native grasses and noxious weeds with virtually no ability to stabilize stream banks.

Without a wide scale comprehensive approach to the management of noxious and invasive species throughout the watershed it is likely that all other factors will continue to be degraded.

If you have any questions please feel free to contact me Monday – Friday 7:00am – 5:00 pm.

Respectfully,

Justin Meissner
District Conservationist

THE STATE BANK OF TOWNSEND

Your Bank for Life

October 3, 2013

Montana Department of Environmental Quality
Re: Section 319 Grant Application

Please accept this letter of support of the Section 319 Grant Application that is being submitted. As a member of the Landowner Advisory Group, I have been privileged to be a part of a team that is deeply concerned with the restoration of this important watershed. To have so many organizations including the Broadwater Conservation District, Fish, Wildlife and Parks, Natural Resources Conservation Service, County Commissioners and local volunteers, working together toward one goal is government at its best.

These people have put many hours into research and analyzing all available data to develop a plan of priorities that that will be most beneficial to the Deep Creek watershed. I have lived on Deep Creek for more than 30 years and while no funds have been allocated to my area, I fully support this plan as one that will have the most positive impact on the watershed.

I ask that you approve this Section 319 Grant Application as it is submitted. With these funds and the continued hard work of governmental groups and volunteers, we will be able to substantially improve this watershed for the use and enjoyment of generations to come.

Sincerely,

Joni Carlton
EVP/CFO

400 Broadway, PO Box 250, Townsend, MT 59644
Phone: 406-266-3176 Fax: 406-266-3360 Toll Free: 800-735-6385
www.statebankoftownsend.com

Deep Creek Watershed Restoration Project