319 Nonpoint Source Final Project Proposal

FY2016 Final Proposals are due Monday, September 28, 2015

Section I: General Information

Project Title: North Shore Flathead Lake Shoreline Restoration Project

Project Sponsor Information

Sponsor Name: Flathead Land Trust, Inc.

Registered with the Secretary of State? Yes

Registered with SAM? Yes

County: Flathead

Website: www.flatheadlandtrust.org

Tax Identification #: 36-3479966

DUNS #: 171114569

Primary Contact	Signatory
Laura Katzman	Paul Travis
Title: Land Protection Specialist	Title: Executive Director
Address: P.O. Box 1913	Address: P.O. Box 1913
City: Kalispell State: Montana Zip Code: 59903	City: Kalispell State: Montana Zip Code: 59903
Phone Number: (406) 752-8293	Phone Number: (406) 752-8293
Fax Number:	Fax Number:
E-mail Address: lkatzman@bigsky.net	E-mail Address: ptravis@amerion.com
Signature: Laura Katzman	Signature: Paul Travis

Project Location

12 Digit HUC #(s): 17010208

(1) Waterbody Name from 2014 List of Impaired Waters: Flathead Lake

(1) Probable cause(s) of impairment to be addressed (ex. metals): Sediment, Nitrogen and Phosphorus

(2) Waterbody Name from 2014 List of Impaired Waters:

(2) Probable cause(s) of impairment to be addressed (ex. metals):

(3) Waterbody Name from 2014 List of Impaired Waters:

(3) Probable cause(s) of impairment to be addressed (ex. metals):

Activity 1 Name	Shoreline Restoration	Latitude (1)	-114.215645	Longitude (1)	48.078397
Activity 2 Name		Latitude (2)		Longitude (2)	
Activity 3 Name		Latitude (3)		Longitude (3)	

Nonpoint Source (NPS) Information

Which WRP does the project implement? Flathead Lake

What is the WRP status? DEQ-Accepted

Does the project address impairments identified in a TMDL? Yes

Waterbody Type: Lake

Functional Category: Erosion Control Projects

1st Pollution Category	Hydromodification (Streambank or Shoreline Modification/Destabilization)	Percent of Total (%)
2nd Pollution Category	Hydromodification (Removal of Riparian Vegetation)	Percent of Total (%)
3rd Pollution Category	Agriculture (Non-Irrigated Crop Production)	Percent of Total (%)
4th Pollution Category	Other (Groundwater Loadings)	Percent of Total (%)

9/25/15

Project Funding

319 Funds Requested	$190,000.00	Does the project sponsor have any open 319 contracts?	No
Matching Funds		Project Title	
State Cash Match		DEQ Contract Number	
Local Cash Match	$100,000.00	319 Award	
In-Kind Match	$27,000.00	Projected Closing Date	
Total Match	$127,000.00	Project Title	
Other Federal Funds	$112,000.00	DEQ Contract Number	
Total Project Budget	$429,000.00	319 Award	
Administrative Fee	$10,000.00	Projected Closing Date	

Section II: Project Description

Goal and Objectives: Describe the overall goal and specific objectives for this project.

The goal of this project is to restore about 1,900 feet of shoreline along with riparian and wetland buffers on the Sliter family property on the north shore of Flathead Lake. The objectives of the project are to prevent future wave erosion of the north shore and maintain and restore the wetland and riparian buffer between Flathead Lake and agricultural ground on the Sliter property and sensitive neighboring property owned by BNSF which historically contained contaminated sediments from a railroad tie treating facility and still has a controlled groundwater zone. This project is a first step in a bigger conservation and community park project for the Sliter property and part of the vision of the collaborative Flathead River to Lake Initiative for conserving the north shore of Flathead Lake.

Methods: Describe the approach selected to address/correct the problem(s), e.g. types of BMPs to be installed, and other important activities.

1. Extend an existing hard shoreline protection structure on neighboring BNSF property with a 500 foot long offshore dynamic gravel beach* on the Sliter family property. This will control erosion of shoreline on the Sliter family property and restore about 3 acres of wetland behind the structure.
2. Construct a shore attached dynamic gravel beach along the remaining 1,400 feet of shoreline not protected by the offshore beach on the Sliter family property. This will control erosion of shoreline on the Sliter family property and protect an existing riparian and wetland buffer behind the structure.

*The dynamic gravel beach is a soft erosion control technique that mimics natural processes on shorelines. The beach remains dynamic adjusting to the changing wave climate without washing away. The offshore beach ends with a spit configuration to radiate wave energy away from the end of the structure and trap organic debris and sediment in the spit embayment and, in time, restore wetland. The dynamic gravel beach technique has been implemented to successfully restore over 2.5 miles of shoreline on Flathead Lake.

Summary: Provide a brief summary of the project.

The dynamic gravel beach shoreline restoration project will prevent future wave erosion of the north shore of Flathead Lake and its wetlands along a 0.4 miles of lakeshore and increase the wetland buffer on the Sliter family property by 3 acres. The Sliter family property on the north shore of Flathead Lake has been eroding at higher than natural rates due to Kerr Dam holding the lake level at full pool elevation during summer. In addition, a hard erosion control structure that was built in the mid-1980s on neighboring BNSF property as a mitigation requirement of the Environmental Protection Agency during the clean up of the site contaminated by a historic railroad tie treating facility exacerbated the erosion on the Sliter family property. It is estimated about 4 acres of land has been eroded over the past 30 years adding 30,000 to 50,000 tons of sediment to Flathead Lake. This project will prevent further excess erosion and reduce nitrogen and phosphorus loading and potential contamination of Flathead Lake. Some of the neighboring BNSF property which historically contained contaminated sediments is adjacent to the eroding shoreline on the Sliter property. Although the contaminated sediments have been cleaned up at this point, a controlled groundwater zone still exists in the area, and restoration of the shoreline and wetlands would add a buffer of protection to this sensitive area. The wetlands would also help clean and filter any undetected contamination that may remain at the BNSF site. The Sliter family property is in agricultural production; maintaining the wetland buffer along agricultural land will also reduce nitrogen and phosphorus entering Flathead Lake. The project is also a necessary first step before the Sliter family property can be acquired by Montana Fish, Wildlife and Parks to protect fish and wildlife habitat and establish a community park providing much desired access to Flathead Lake by the public. It will also restore and protect habitat critical to the tens of thousand of migratory birds that use the north shore each year and bull trout (threatened) and westslope cutthroat trout (species of concern).

Section III: Background Information

Statement of Project Need and Intent

The proposed shoreline erosion control project is needed to protect the water quality in Flathead Lake. The project will implement one of the objectives of the Flathead Lake Watershed Restoration Plan, which is to develop and maintain dynamic equilibrium beaches to reduce erosion on Flathead Lake through in part expanding the existing dynamic equilibrium beach restoration on the Flathead Lake Waterfowl Production Area to an adjacent private property. The project will prevent further erosion of a wetland buffer adjacent to agricultural property and property previously contaminated by a railroad tie treating facility which now has a controlled groundwater zone. The restored wetlands will help clean and filter any undetected contamination that may remain at the site and reduce nitrogen and phosphorus from agricultural use from entering Flathead Lake. This project will facilitate a larger conservation and community park project for the Sliter property, preventing residential and commercial development of the property further reducing future potential nitrogen and phosphorus input to Flathead Lake. If no action is taken, wave-induced erosion of the north shore of Flathead Lake will continue at an estimated rate of 1.6 to 8.2 feet per year (Lorang and Stanford 1993) and the land conservation project will not occur.

Describe the pre-project planning that has already occurred.

The Flathead River to Lake Initiative has been working to protect and restore the north shore of Flathead Lake for the past 15 years. The landowners have been working for the past 10 years to find funding for this project. Dr. Mark Lorang of the University of Montana Biological Station did preliminary design work and completed cost estimates for the offshore and attached dynamic gravel beaches to control the lakeshore erosion in 2008, when Montana Fish, Wildlife and Parks (MFWP) sought funding for the project. We began working on this project in 2010 and have been working hard the past 3 years to plan the restoration and larger conservation and community park project with project partners. The lakeshore and wetland restoration is a key first step in this bigger conservation project. MFWP has agreed to be a future landowner of 100 acres of the Sliter property and provide operation and maintenance funding for the project. However, they cannot afford to acquire the land if they have to fix the erosion problem on the property. Thus, we have been working on this project with the Sliter family and partners as a multi-step project in which we need commitment to as a package to move forward. After implementing the shoreline erosion control project the Sliter family will complete a bargain sale of their property to MFWP to conserve 60 acres of the eastern portion of their property as fish and wildlife habitat and establish a community park on the remaining 40 acres, hopefully along with the BNSF property. The eastern 60 acres will serve as a transition from the community park to the Flathead Lake Waterfowl Production Area. The community park will provide highly desired year-round public access to Flathead Lake.

Collaborative Effort: Describe the collaborative effort you have engaged in to ensure support from all appropriate partners.

We have been working with the collaborative Flathead River to Lake Initiative for the past 15 years to conserve and restore the Flathead River and north shore of Flathead Lake. The landowners have actively been seeking partners to complete this project for the past 10 years and Flathead Land Trust has been working collaboratively to engage appropriate partners for this project for the past 3 years. We have gained support of neighboring landowner, BNSF (including a $50,000 contribution); Ben Quinones of the Department of Environmental Quality; Roger Hoogerheide of the Environmental Protection Agency; Flathead Lakers, author of the Watershed Restoration Plan; Montana Fish, Wildlife and Parks to be the future landowner of the property; the Bonneville Power Administration to support acquisition of such properties to protect fish and wildlife habitat; and Dr. Mark Lorang to provide in-kind support to design and implement the project. In addition, the landowner - the Sliter family - has stepped up to provide a $50,000 contribution. We have also applied for $60,000 and plan to apply for $52,000 in funding from National Fish and Wildlife Foundation grants to support the project.

Partners and Roles: Identify the project partners and their roles.

Partner	Role
Sliter family (landowners)	Providing $50,000 cash match for shoreline restoration and bargain sale of land to protect fish and wildlife habitat and facilitate land becoming a community park with public access to Flathead Lake.
BNSF (adjacent landowners)	Providing $50,000 cash match for shoreline restoration
Dr. Mark Lorang - University of Montana Biological Station	Providing $10,000 in-kind to complete project design; also will complete shoreline restoration and monitoring of project.
Flathead Lakers	Author of Watershed Restoration Plan and supporter of project; helping to complete education component of proposal.
Montana Fish, Wildlife and Parks	Planned future landowner of the Sliter family property; would complete any needed maintenance of project.

Technical and Administrative Qualifications

Dr. Mark Lorang of the University of Montana Biological Station has designed and implemented this soft structure approach to restore lakeshore on over 2.5 miles of shoreline on Flathead Lake with the U.S. Fish and Wildlife Service on the north shore, the Confederated Salish and Kootenai Tribe at Blue Bay, the State of Montana at Finley Point State Park and the City of Polson. The Army Corps and local lakeshore agencies have been very supportive of this approach to shoreline restoration on Flathead Lake and monitoring of these projects has proven them successful.

Ben Quinones with the Department of Environmental Quality and Roger Hoogerheide with the Environmental Protection Agency support the project and think it should protect the remediation efforts that have occurred on the BNSF Somers site. They have offered their technical support to obtain permits and complete environmental policy act documents as well as to ensure our restoration project does not exacerbate contamination or interfere with the required remediation of the BNSF Somers site.

Montana Fish, Wildlife and Parks has also offered their support to obtain permits and complete environmental policy act documents.

As a former fish biologist, Laura Katzman of Flathead Land Trust, has experience in the permit and environmental policy act needs for such work. She and Flathead Land Trust also have experience administering large government grants.

Past and Current Projects

Funding Organization	Award Amount	Project Description	Project Status	Contact Information
North American Wetland Conservation Act (NAWCA)(U.S. Fish and Wildlife Service (USFWS))	$1,000,000.00	Administer collaborative grant to fund a land conservation project held by Flathead Land Trust, another held by Montana Land Reliance, and another held by the Confederated Salish and Kootenai Tribe; a restoration project; and facilitating NAWCA process for 5 projects used as match for grant. Responsible for all financial and progress tracking and reports.	Ongoing	Brad Gunn, USFWS Grant Officer USFWS Headquarters Div. of Bird Habitat Cons. 5275 Leesburg Pike Falls Church, VA 22041 (703) 358-2317 brad_gunn@fws.gov
North American Wetland Conservation Act (U.S. Fish and Wildlife Service)	2,000,000	Administered two collaborative grants between 2004 and 2012, each $1 million to fund land conservation projects held by Flathead Land Trust, Montana Fish, Wildlife and Parks, and Montana Land Reliance and a restoration project, and facilitated NAWCA process for multiple projects used as match for grant. Responsible for all financial and progress tracking and reports.	Past	Leakhena Au, USFWS Grant Officer - now - Wildlife Program Leader Eastern Region U.S. Forest Service 626 E. Wisconsin Ave. Milwaukee, WI 53202 (414) 297-3612
Farm and Ranch Lands Protection Program (FRPP)(Natural Resource and Conservation Service) (NRCS))	$2,500,000.00	Administered about $2,500,000 for 10 land conservation projects between 2003 and 2011. These were projects involving match from the Bonneville Power Administration Fisheries Mitigation Program and cooperation with Montana Fish, Wildlife and Parks. Responsible for all financial and progress tracking and reports.	Past	Dennis Dellwo, NRCS Program Specialist (retired) Montana State Office Federal Bldg., Room 443 10 East Babcock Bozeman, MT 59715 (406) 587-6748
Bonneville Power Administration (BPA) Fisheries Mitigation Program	1,600,000	Administered over $1,600,000 for 5 land conservation projects between 2009 and 2013. The BPA funding for these projects was often the match for the FRPP grants discussed above and were in cooperation with NRCS, and Montana Fish, Wildlife and Parks.	Past	Kris Tempel Montana Fish, Wildlife and Parks 490 N. Meridian Rd. Kalispell, MT 59901 (406) 751-4573 ktempel@mt.gov
Intermountain West Joint Venture (IWJV)	$30000.00	Implementing second year of IWJV Capacity Building grant. Reached out to 75 new landowners, conducted 4 bird watching events, and successfully developed 3 new land conservation projects and wrote and received successful $1 million NAWCA grant to fund migratory bird habitat conservation projects.	Ongoing	Ali Duvall, IWJV Assistant Coordinator 1001 S. Higgins Ave., Ste. A1 Missoula, MT 59801 (406) 549-0346 (406) 370-5047 ali.duvall@iwjv.org

Section III: Scope of Work

Task 1 Title: Project Design

Description

Dr. Mark Lorang of the University of Montana Biological Station will complete the final project design and will donate $10,000 in-kind time to the design phase of the project. He has done all of the design work and oversight of dynamic gravel beach construction and shoreline restoration work for over 4,000 feet of the neighboring Flathead Lake Waterfowl Production Area for the U.S. Fish and Wildlife Service and a total of 2.5 miles of shoreline of Flathead Lake with the U.S. Fish and Wildlife Service, Confederated Salish and Kootenai Tribe at Blue Bay, the State of Montana at Finley Point State Park and the City of Polson. His monitoring of the lakeshore restored with this dynamic gravel beach technique in the past has shown great success of the technique working to control shoreline erosion and restore wetlands.

Deliverables

Final Project Design

Task 1 Funding

319 Funds	$500.00
Non-Federal Match	$10,000.00
Other Federal Funds	
Total Cost	$10,500.00
Is Match Secured?	Yes

Timeline: July-Aug. 2016

Match Source: Dr. Mark Lorang, University of Montana Biological Station

Task 2 Title: Permitting, Regulatory Compliance, and Landowner Agreement

Description

Flathead Land Trust, in cooperation with partners, will obtain the necessary permits, complete the necessary Environmental Policy Act process, State Historic Preservation Act, and Endangered Species Act needs, and obtain a landowner agreement for the project. Ben Quinones of the Department of Environmental Quality and Roger Hoogerheide of the Environmental Protection Agency have offered their assistance and expertise with the permitting process. Montana Fish, Wildlife and Parks will also help with environmental policy act compliance. Ben Quinones will also work with us to ensure the proposed work does not exacerbate the contamination or interfere with the required remediation at the BNSF site. Roger Hoogerheide has assured us that should any contamination be encountered during this project BNSF is under an enforcement order to clean it up. The funds requested from the 319 grant would cover the fees required to obtain the following permits - MT Land Use License or Easement on Navigable Waters ($50); Lakeshore Construction Permit ($375); MT Floodplain Development Permit ($380); and Short-term Water Quality Standard for Turbidity "318" Authorization ($250).

The dynamic gravel beach technique has been implemented to restore lakeshore on over 2.5 miles of shoreline on Flathead Lake in the past. The U.S. Army Corps of Engineers and local lakeshore agencies have been very supportive of this approach to shoreline restoration on Flathead Lake.

Deliverables

MT Land Use License or Easement on Navigable Waters - Dept. Natural Resources & Conservation
Federal Clean Water Act "404" Permit from U.S. Army Corps of Engineers
Lakeshore Construction Permit from Flathead County
Montana Floodplain Development Permit from Flathead County Floodplain Development
Short-term Water Quality Standard for Turbidity "318 Authorization" - Dept. of Environ. Quality
Environmental Assessment (if needed)
State Historic Preservation Act approval
Endangered Species Act Biological Assessment (if needed)
Landowner Agreement

Task 2 Funding

319 Funds	$1,000.00
Non-Federal Match	$12,000.00
Other Federal Funds	
Total Cost	$13,000.00
Is Match Secured?	Yes

Timeline: July 2016-Oct. 2017

Match Source: Flathead Land Trust

Task 3 Title Offshore Dynamic Gravel Beach Construction

Description

Dr. Mark Lorang of the University of Montana Biological Station will extend an existing shoreline protection structure with a 500 foot long offshore dynamic gravel beach.

The offshore dynamic gravel beach will require a cobble core for support. The core of the offshore dynamic gravel beach will be constructed of about 2,500 yards of pit run material (clay to 6")(about 5 yards per foot of structure). The beach face of the offshore dynamic gravel beach will require about 1,500 yards of a 50/50 mixture of 3/4" and 2"-4" drain rock (about 3 yards per foot of structure). The offshore beach will end with a spit configuration in order to radiate wave energy away from the end of the structure and trap logs, organic debris, and sediment within the spit embayment and, in time, create wetland habitat. The material will be hauled to the site with trucks and placed with excavators. Placement of the offshore beach will begin in winter as soon as the lake has been drawn down far enough to allow construction and the lake bed is frozen enough to allow trucks to drive over the lake bed. The project will take 2-4 weeks to complete depending on weather conditions. See attached schematic diagrams and photos of examples of an offshore dynamic gravel beach.

Deliverables

construction of 500 foot offshore dynamic beach; photos of constructed offshore dynamic beach

Task 3 Funding

319 Funds	$75,000.00
Non-Federal Match	$100,000.00
Other Federal Funds	
Total Cost	$175,000.00
Is Match Secured?	Yes

Timeline Dec. 2017 to Feb. 2018

Match Source Sliter family (landowner) and BNSF (neighboring landowner)

Task 4 Title Attached Dynamic Gravel Beach Construction

Description

Dr. Mark Lorang of the University of Montana Biological Station will construct a dynamic gravel beach along the remaining 1,400 feet of shoreline not protected by the offshore dynamic gravel beach.

This shore attached dynamic gravel beach will be supported by the existing shore land. The shore attached dynamic gravel beach will require about 4,200 yards of the 50/50 mixture of 3/4" and 2" to 4" drain rock (about 3 yards per foot of shoreline). The material will be hauled to the site with trucks and placed with excavators. Most of the shoreline in need of the dynamic gravel beach material is fronted by logs that will be aligned with the shore and buried with the gravel; however, some will need to be purchased and brought to the site. The wood will function to promote growth of riparian vegetation by holding moisture and providing organic strata for roots to take hold. The wood will function for decades before it completely decays and then new wood that is delivered to the beaches will continue to function similarly. Placement of the shore attached beach will begin as soon as the lake has been drawn down far enough to allow construction and the lake bed is frozen enough to allow trucks to drive over the lake bed. The project will take 2-4 weeks depending on weather conditions. See attached schematic diagrams and photos of examples of a shore attached dynamic gravel beach.

Deliverables

construction of 1,400 feet of attached dynamic gravel beach; photos of attached dynamic gravel beach

Task 4 Funding

319 Funds	$98,000.00
Non-Federal Match	
Other Federal Funds	$112,000.00
Total Cost	$210,000.00
Is Match Secured?	No

Timeline Dec. 2017 to Feb. 2018

Match Source National Fish and Wildlife Foundation

Task 5 Title Monitoring

Description

Dr. Mark Lorang of the University of Montana Biological Station will monitor the project by surveying the shoreline position in the future to evaluate its success of controlling shoreline erosion and the stability of the dynamic gravel beach. We will also monitor the project by surveying the wetlands restored behind the dynamic gravel beach. A Sampling and Analysis Plan will be developed to guide the monitoring activities.

Monitoring of lakeshore restored with this dynamic gravel beach technique in the past has shown great success of the technique working to control shoreline erosion and restore wetlands.

We will use the Region 5 Model described in the MT DEQ Load Reduction Estimation Guide to estimate the annual pollutant load reductions of sediment, nitrogen and phosphorus from bank stabilization and maintaining filter strips.

Deliverables

Sampling and Analysis Plan
Surveyed location of constructed offshore and attached dynamic gravel beach and status of wetlands restored behind the dynamic gravel beach
Load reduction estimates for sediment, nitrogen and phosphorus

Task 5 Funding

319 Funds	$4,500.00
Non-Federal Match	
Other Federal Funds	
Total Cost	$4,500.00
Is Match Secured?	

Timeline May 2018 to May 2019

Match Source NA

Task 6 Title Education

Description

Flathead Land Trust, in cooperation with our partners including the Flathead Lakers, will conduct education and outreach about the innovative dynamic gravel beach technique and the value of conserving the north shore of Flathead Lake. This will help us transfer lessons learned about this emerging technique with the other lakeshore landowners and communities around Flathead Lake. We will do this with an event at the site showcasing the shoreline restoration, news releases, newsletter articles, website posts, e-blasts, Facebook posts, and other communication targeting Flathead Lake watershed landowners.

The Flathead Lakers is a nonprofit organization working to protect clean water, healthy ecosystems, and lasting quality of life in the Flathead Watershed and helps to lead the Flathead River to Lake Initiative. They are also the author of the Flathead Lake Watershed Restoration Plan.

Deliverables

Event showcasing shoreline restoration (photos of event and copies of invitations, news releases, e-blasts, and Facebook posts for event)
Flathead Land Trust newsletter featuring story of project
Flathead River to Lake Initiative newsletter featuring story of project
Newspaper articles about project
Copies of other communications targeting Flathead Lake watershed landowners

Task 6 Funding

319 Funds	$500.00
Non-Federal Match	$5,000.00
Other Federal Funds	
Total Cost	$5,500.00
Is Match Secured?	Yes

Timeline Jan. 2018 to Aug. 2019

Match Source Flathead Land Trust and Flathead Lakers

Task 7 Title Project Administration

Description

Flathead Land Trust will oversee and be accountable for the completion of all tasks. We will prepare and submit attachment status reports, annual reports, and a final report as well as appropriate billing and contract management.

Flathead Land Trust has a proven track record in implementing collaborative conservation projects with specific, measurable results. We have successfully implemented collaborative land conservation and restoration projects funded by two $1 million North American Wetland Conservation Act (NAWCA) grants since 2004 for multiple projects; and are currently administering another $1 million NAWCA grant for multiple projects; administered about $2,500,000 in Farm and Ranch Land Protection Program grants to implement 10 land conservation projects between 2003 and 2011; and administered over $1,600,000 in Bonneville Power Administration Fisheries Mitigation Program funding for 5 land conservation projects between 2009 and 2013. We have worked collaboratively with Montana Fish, Wildlife and Parks, the U.S. Fish and Wildlife Service, Confederated Salish and Kootenai Tribe, Montana Land Reliance, and Natural Resource Conservation Service in the past on projects successfully. We also work collaboratively with many government agencies, nonprofit organizations, tribes, and landowners with the Flathead River to Lake Initiative.

Deliverables

Billing statements and contracts
Status reports
Annual reports
Final report

Task 7 Funding

319 Funds	$10,000.00
Non-Federal Match	
Other Federal Funds	
Total Cost	$10,000.00
Is Match Secured?	

Timeline July 2016 to Aug. 2019

Match Source NA

Task 8 Title Operation and Maintenance

Description

The Sliter family plans to complete a bargain sale of their property to Montana Fish, Wildlife and Parks to conserve about 60 acres of the eastern portion of their property as fish and wildlife habitat and establish a community park on the remaining 40 acres. The operation and maintenance costs of the project will be covered by Montana Fish, Wildlife and Parks in the future. Montana Fish, Wildlife and Parks owns other public access points on Flathead Lake and owns other land that is managed for fish and wildlife on the north shore of Flathead Lake adjacent to the U.S. Fish and Wildlife Service Flathead Lake Waterfowl Production Area.

Deliverables

Task 8 Funding

319 Funds	$500.00
Non-Federal Match	
Other Federal Funds	
Total Cost	$500.00
Is Match Secured?	Yes

Timeline Spring 2018 and beyond

Match Source Montana Fish, Wildlife and Parks

Section IV: Supporting Documents

Detailed Project Budget

Task Number and Specific Action	319 Funds	State Cash Match	Local Cash Match	In-Kind Match	Federal Funds	Total Costs
Task #1 - Project Design	$500			$10,000		$10,500
Task #2 - Permitting and Regulatory Compliance	$1,000			$12,000		$13,000
Task #3 - Offshore Dynamic Gravel Beach Construction	$75,000		$100,000			$175,000
Task #4 - Attached Dynamic Gravel Beach Construction	$98,000				$112,000	$210,000
Task #5 - Monitoring	$4,500					$4,500
Task #6 - Education	$500			$5,000		$5,500
Task #7 - Project Administration	$10,000					$10,000
Task #8 - Operation and Maintenance	$500					$500
TOTAL	$190,000		$100,000	$27,000	$112,000	$429,000

Project Milestone Table: 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 years(s) in which you will be working on the task.

Milestone	Spring 2016	Summer 2016	Fall 2016	Winter 2016	Spring 2017	Summer 2017	Fall 2017	Winter 2017	Spring 2018	Summer 2018	Fall 2018
Task #1 - Project Design	■	■									
Task #2 - Permitting and Regulatory Compliance		■	■	■	■	■	■				
Task #3 - Offshore Dynamic Gravel Beach Construction								■			
Task #4 - Attached Dynamic Gravel Beach Construction								■			
Task #5 - Monitoring									■	■	■
Task #6 - Education									■	■	■
Task #7 - Project Administration	■	■	■	■	■	■	■	■	■	■	■
Task #8 - Operation and Maintenance									■	■	■

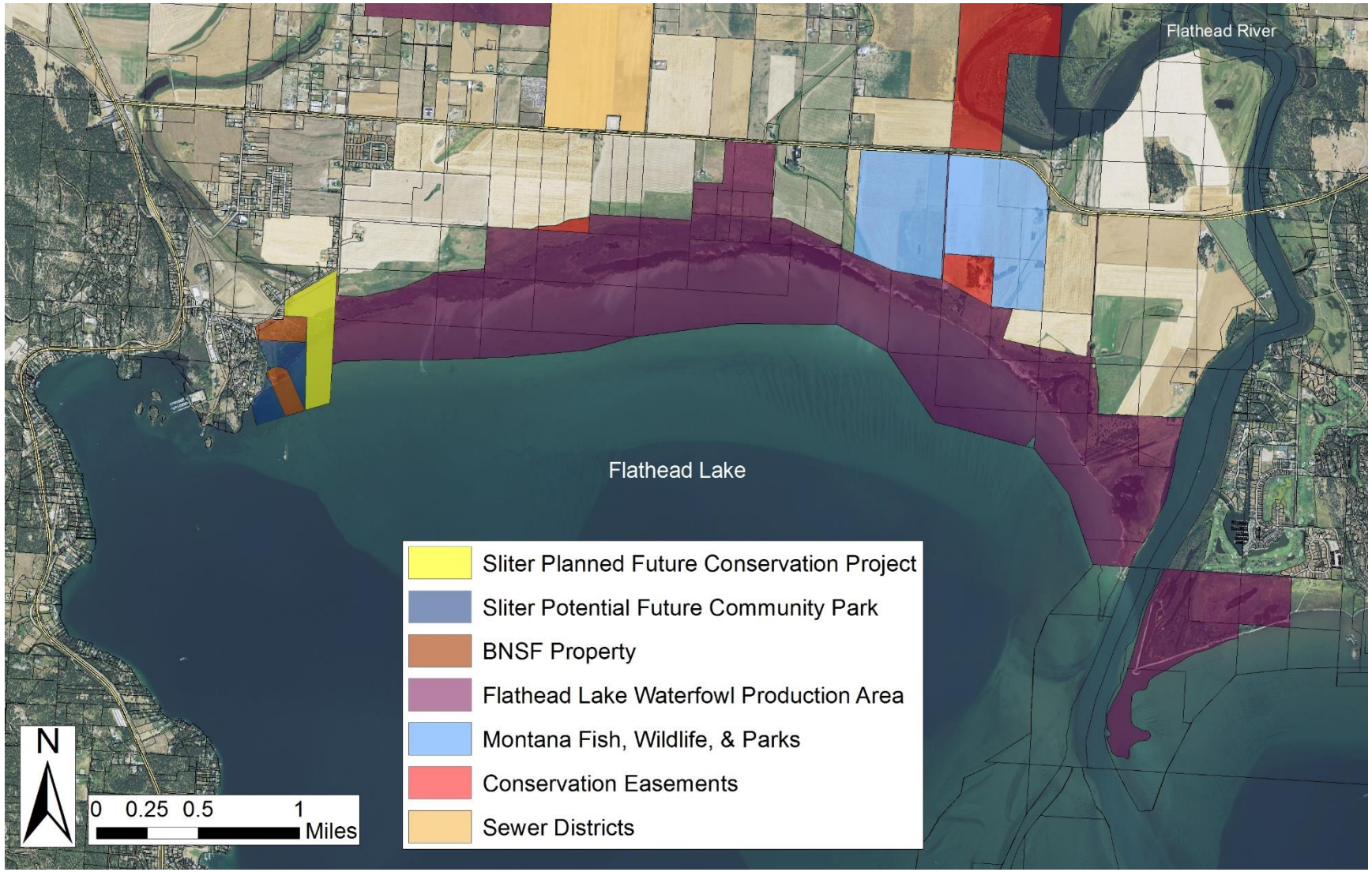
Submit **project map(s)** and **letters of support (at least 3)** along with the Final Project Proposal form. If your organization is not the author of the WRP you hope to implement, you must request a letter of support from the original authoring entity. If the authoring entity refuses to provide a letter of support, use the additional space at the end of the application to describe their response. If design drawings are available, provide those as well. For on-the-ground work, include copies of applicable permits if available.

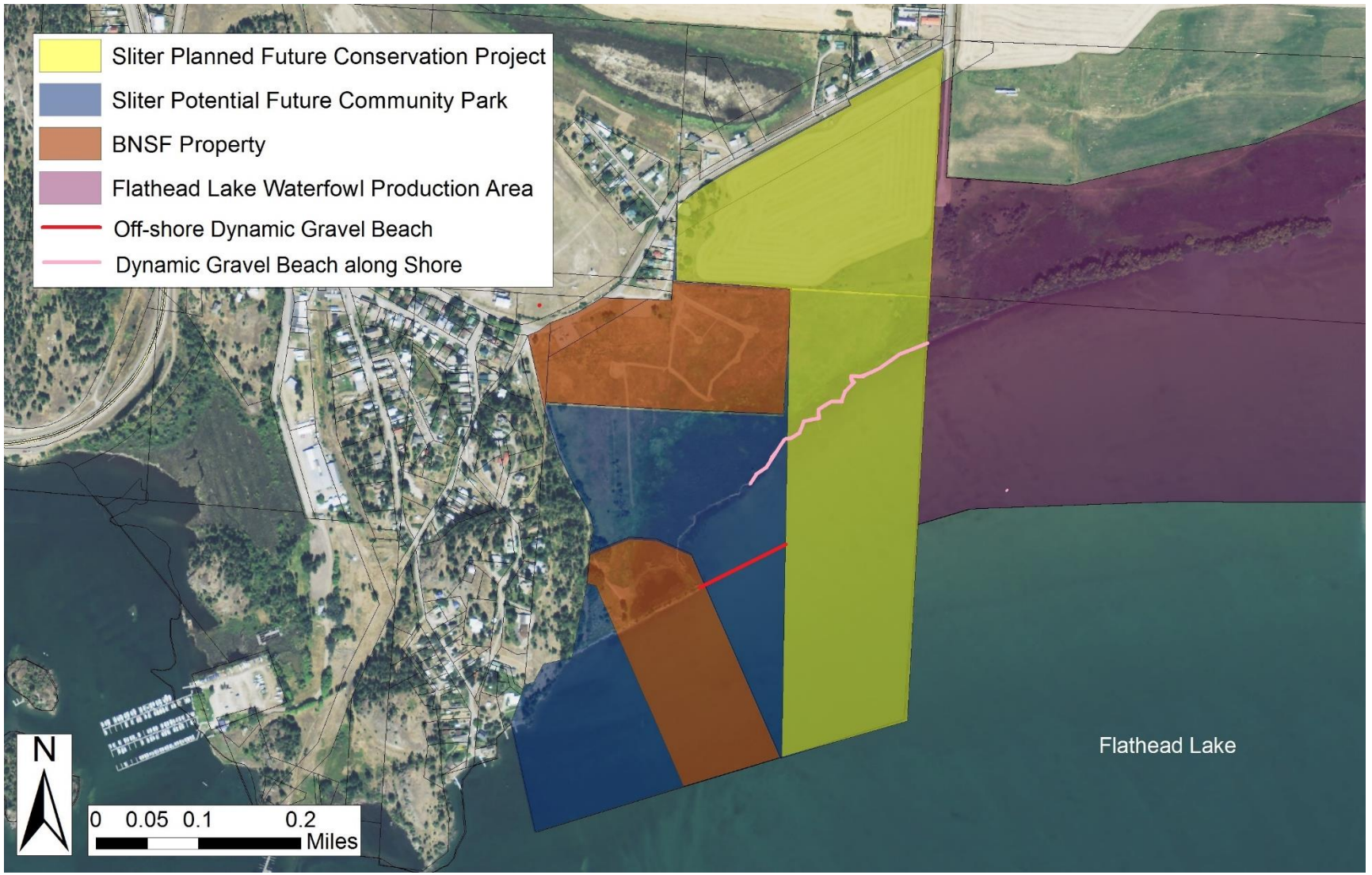
- ☒ Project Map
- ☒ Letters of Support
- ☒ Design Drawings
- ☐ Applicable Permits
- ☐ Draft of amended WRP (if applicable)
- ☒ Photos
- ☐ Landowner Agreements

Use the space provided for any additional information that may not have been captured elsewhere in this Final Project Proposal

Flathead Lake was identified as impaired for sediment as recently as 2014 on the list of impaired waters due to hydrologic modification linked to shoreline erosion from Kerr Dam operations. The shoreline erosion this proposal addresses is due to hydrologic modification caused by Kerr Dam operations so it is clearly linked to the original listing of Flathead Lake for sediment.

Flathead Land Trust has been a major partner in the Flathead River to Lake Initiative, a collaborative effort to conserve and restore the Flathead River and north shore of Flathead Lake. The Flathead River to Lake Initiative involves private landowners, land trusts, conservation organizations, and county, tribal, state, and federal agencies working together to conserve critical lands along 43 miles of the Flathead River and 7 miles of the north shore of Flathead Lake. These critical lands include wetlands, floodplains, riparian areas, and associated uplands that help sustain our excellent water quality, important fish and wildlife habitat, outstanding recreational opportunities, rich farm soils, and beautiful scenery. The Flathead River to Lake Initiative has conserved over 5,000 acres of these critical lands adding to a network totaling over 11,000 acres of protected private and public lands along the Flathead River and north shore of Flathead Lake. This network of land conservation protects 41% of the 100-year floodplain of the Flathead River, 29% of the banks along the main channel of the Flathead River, 43% of the land overlying shallow groundwater in the focus area, 51% of the wetlands in the focus area, 49% of the high quality riparian areas in the focus area, 34% of the important agricultural soils in the focus area, 27% of the buffers to major sloughs of the Flathead River, and 60% of the north shore of Flathead Lake.


Flathead River
Flathead Lake
Sliter Planned Future Conservation Project
Sliter Potential Future Community Park
BNSF Property
Flathead Lake Waterfowl Production Area
Montana Fish, Wildlife, & Parks
Conservation Easements
Sewer Districts
N
0 0.25 0.5 1
Miles


Sliter Planned Future Conservation Project
Sliter Potential Future Community Park
BNSF Property
Flathead Lake Waterfowl Production Area
Off-shore Dynamic Gravel Beach
Dynamic Gravel Beach along Shore
N
0 0.05 0.1 0.2
Miles
Flathead Lake

SLITERS
LUMBER & BUILDING SUPPLY
SINCE 1933 | BIGFORK | SOMERS | LAKESIDE

SOMERS:
55 Somers Road | P.O. Box 130
Somers, MT 59932
Ph: 406-857-3306
Fax: 406-857-3369

BIGFORK:
55 Somers Road | P.O. Box 528
Bigfork, MT 59911
Ph: 406-837-5070
Fax: 406-837-0000

LAKESIDE:
55 Somers Road | P.O. Box 787
Lakeside, MT 59922
Ph: 406-844-2442
Fax: 406-844-0000

www.sliters.com

September 11, 2015

Laura Katzman
Flathead Land Trust

Re: Flathead Land Trust – North Shore Flathead Lake Shoreline Restoration Project

Dear Laura,

I am writing a letter of support for the North Shore Flathead Lake Shoreline Restoration Project. I am very pleased to see this restoration over the portion of the North Shore that is owned by SLITERS and that of neighboring properties such as the USFWS Flathead Lake Waterfowl Production Area.
Our families support of the project and commitment to contribute $50,000 towards the restoration of the north shore is jest of this letter. Your efforts on moving this project forward are appreciated

Sincerely,

Thomas E. Sliter

Thomas E. Sliter
President
SLITERS
PO Box 130
Somers, MT 59932-0130
Phone: 406-857-3306
Fax: 406-857-3369
tsliter@sliters.com
www.sliters.com

Brooke C. Kuhl
General Attorney

BNSF Railway Company
201 W. Railroad, Suite 300
Missoula, MT 59802

Direct 406-256-4293
brooke.kuhl@bnsf.com

August 19, 2015

NFWF ConocoPhillips SPIRIT of Conservation and Innovation Program
1133 Fifteenth St., N.W., Suite 1100
Washington, D.C. 20005

DEQ 319 Nonpoint Source Program
Lee Metcalf Building, Main Office
1520 E. 6th Avenue
P.O. Box 200901
Helena, MT 59620-0901

Re: Flathead Land Trust – North Shore Flathead Lake Shoreline Restoration Project

To Whom it May Concern,

The Flathead Land Trust approached BNSF in 2014 regarding the shoreline restoration project proposed for restoration of shoreline along property adjacent to that owned by BNSF. BNSF recognizes the benefits of such a project and has pledged $50,000 to support the project.

Under the direction of the United States Environmental Protection Agency (EPA) and in consultation with the Montana Department of Health and Environmental Sciences (now known as the Department of Environmental Quality or DEQ), BNSF has long been engaged in environmental investigation and remediation efforts relating to historic wood treatment activities in Somers, Montana.

BNSF completed excavation of impacted materials and beach sediments on its property adjacent to the lake in the late 1980's and early 1990s. No additional sediment impacts have been identified in this area. At the direction of EPA, BNSF installed rip rap along the shoreline fronting its property to prevent shoreline erosion in the late 1980's. Although it appears BNSF's efforts to prevent shoreline erosion on its own property were successful, erosion on the adjacent shoreline continues unabated. BNSF believes that this project will remedy that issue and facilitate potential conservation projects for the Sliters' property.

Sincerely,

Brooke Kuhl

Brooke Kuhl

cc: Laura Katzman, Flathead Land Trust
Matt Jones

32125 Bio Station Lane
Polson, Montana, U.S.A. 59860-6815
Phone (406) 982-3301
Fax (406) 982-3201
flbs.umt.edu
http://flbs.umt.edu/webcams/default.aspx

September 8, 2015

Laura Katzman
Flathead Land Trust

Re: Flathead Land Trust – North Shore Flathead Lake Shoreline Restoration Project

Dear Laura,

I am writing a letter of support for the North Shore Flathead Lake Shoreline Restoration Project and will donate $10,000 worth of time and effort for the design phase of the project. I have done all of the design work and oversight of beach construction and shoreline restoration work for over 4000 feet of the neighboring the USFWS Flathead Lake Waterfowl Production Area. I am very pleased to see this last remaining portion of the North Shore finally receiving similar restoration efforts.

Cheers,

Mark

Dr. Mark Lorang
The University of Montana
Flathead Lake Biological Station
32125 Bio Station Lane
Polson, MT 59860-9659 USA
(406) 982-3301 Ext. 231

AA/EOE/ADA

P.O. Box 70 · Polson, MT 59860
(406) 883-1346
Fax (406) 883-1357
lakers@flatheadlakers.org
www.flatheadlakers.org

Flathead Lakers:
Working for clean water, a healthy ecosystem, and lasting quality of life in the Flathead Watershed

DEQ 319 Nonpoint Source Program
PO BOX 200901
Helena, MT 59620

September 23, 2015

To whom it may concern:

The Flathead Lakers encourage you to fund the proposed Flathead Land Trust's North Shore Flathead Lake Shoreline Restoration Project to protect and restore 0.4 miles of shoreline and 3 acres of wetland the north shore of Flathead Lake. The Flathead Lakers is a nonprofit organization working to protect clean water, healthy ecosystems, and lasting quality of life in the Flathead Watershed. Our organization was founded in 1958 and currently has 1,500 members.

The North Shore of Flathead Lake comprises a special combination of beautiful scenery, farm lands, lakeshore, wetlands and riparian habitat. It was designated an Important Bird Area in 2010 by Montana Audubon and support a high number and wide diversity of resident, migratory, and wintering birds. The area's wetlands and shallow groundwater help protect water quality, fish and wildlife habitat, scenic beauty and recreational opportunities in Flathead Lake. These natural assets significantly contribute to the area's quality of life and economy.

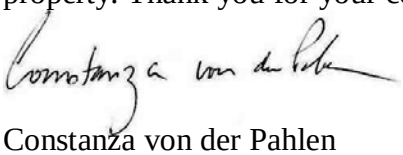
The Flathead Lake Watershed Restoration Plan, completed by the Flathead Lakers in 2014 and subsequently approved, specifically identifies conservation and restoration of the north shore of Flathead Lake as an important goal to conserve and restore critical lands and waters that sustain clean water in Flathead Lake and its watershed. Specifically, objective 2.3 is to develop and maintain dynamic equilibrium beaches and other site-appropriate erosion control measures to reduce erosion on Flathead Lake, and expand the existing dynamic equilibrium beach restoration on the U.S. Fish and Wildlife Service Flathead Lake Waterfowl Production Area to an adjacent private property.

The Flathead Lakers support the Flathead Land Trust proposal to work with the Sliters' family to extend the protection and lakeshore restoration along the north shore of Flathead Lake to reduce lakeshore erosion, potentially preventing erosion of contaminated groundwater sites, and restores the lakeshore to a more natural dynamic system.

The Flathead Lakers have been working with Flathead River to Lake Initiative partners to conserve the special attributes of the North Shore by helping willing land owners find conservation solutions that work for them. Since 2003, Initiative partners have conserved over 5,000 acres of critical lands - 400 of which are on the North Shore - adding to an existing network of over 11,000 acres of protected lands along the Flathead River and north shore of Flathead Lake. The proposal by Flathead Land Trust to protect and restore the Sliter family property on the North Shore is an important project that will protect and restore wetlands and lakeshore, and enhance protection of the adjacent U.S. Fish & Wildlife Service Waterfowl Production Area.

The proposed lakeshore restoration and protection project is an important step toward achieving a larger conservation vision for the North Shore area that would provide long-term benefits to future generations. It also adds to the network of conserved critical wetlands, riparian habitat, and wildlife corridors fostered by the *Flathead River to Lake Initiative* that protects and enhances clean water in the Flathead River and Flathead Lake, healthy populations of native fish and wildlife, and recreation opportunities.

We encourage you to support the Flathead Land Trust proposal to conserve and restore the Sliter property. Thank you for your consideration.



Constanza von der Pahlen
Critical Lands Program Director

DEQ
Montana Department
of Environmental Quality

August 18, 2015

DEQ 319 Nonpoint Source Program
Water Quality Planning Bureau
Montana Department of Environmental Quality
1520 E. Sixth Avenue
P.O. Box 200901
Helena, MT 59620-0901

Re: North Shore Flathead Lake Shoreline Restoration Project

Hello:

As the Montana Department Environmental Quality's Project Manager of the Burlington Northern (Somers Plant) site in Somers, Montana, I am writing in support of the Flathead Land Trust's North Shore Flathead Lake Shoreline Restoration Project.

The BNSF Somers site has undergone both soil and groundwater remediation due to creosote contamination. The groundwater has not been fully remediated, and additional remedial measures are being taken and treatment technologies investigated. From 1985 through 1993, contaminated soils near Flathead Lake were excavated and treated. BNSF also placed riprap along a portion of the lakeshore to protect that area where clean soil fill was placed. While the erosion has not been seen to impact the remediated area, significant shoreline erosion has been observed adjacent to the riprap treatment over the past 30 years. I believe the dynamic gravel beach proposed by the Flathead Land Trust will not only stabilize the north shore of Flathead Lake, but it should also remain protective of the BNSF Somers Site remediation. DEQ looks forward to working with the Flathead Land Trust to ensure that the proposed work will not exacerbate the contamination or interfere with the required remediation at the BN Somers site. Implementation of the North Shore Flathead Lake Shoreline Restoration Project will also enhance wildlife/wildfowl habitat, which in turn will lead to greater recreational opportunities for Montanans and visitors to our Great State.

Feel free to contact me should you wish to further discuss DEQ's support for the Flathead Land Trust's proposed project.

Sincerely,

Ben Quiñones, Environmental Project Manager
Montana Department of Environmental Quality – Remediation Division
1225 Cedar Street
P.O. Box 200901
Helena, Montana 59620-0901

Cell phone: (406) 461-7128
e-mail: bequinones@ mt.gov

Montana Fish, Wildlife & Parks

490 North Meridian Road
Kalispell, MT 59901
(406) 752-5501

August 19, 2015

RE: DEQ 319 Nonpoint Source Program

Dear DEQ,

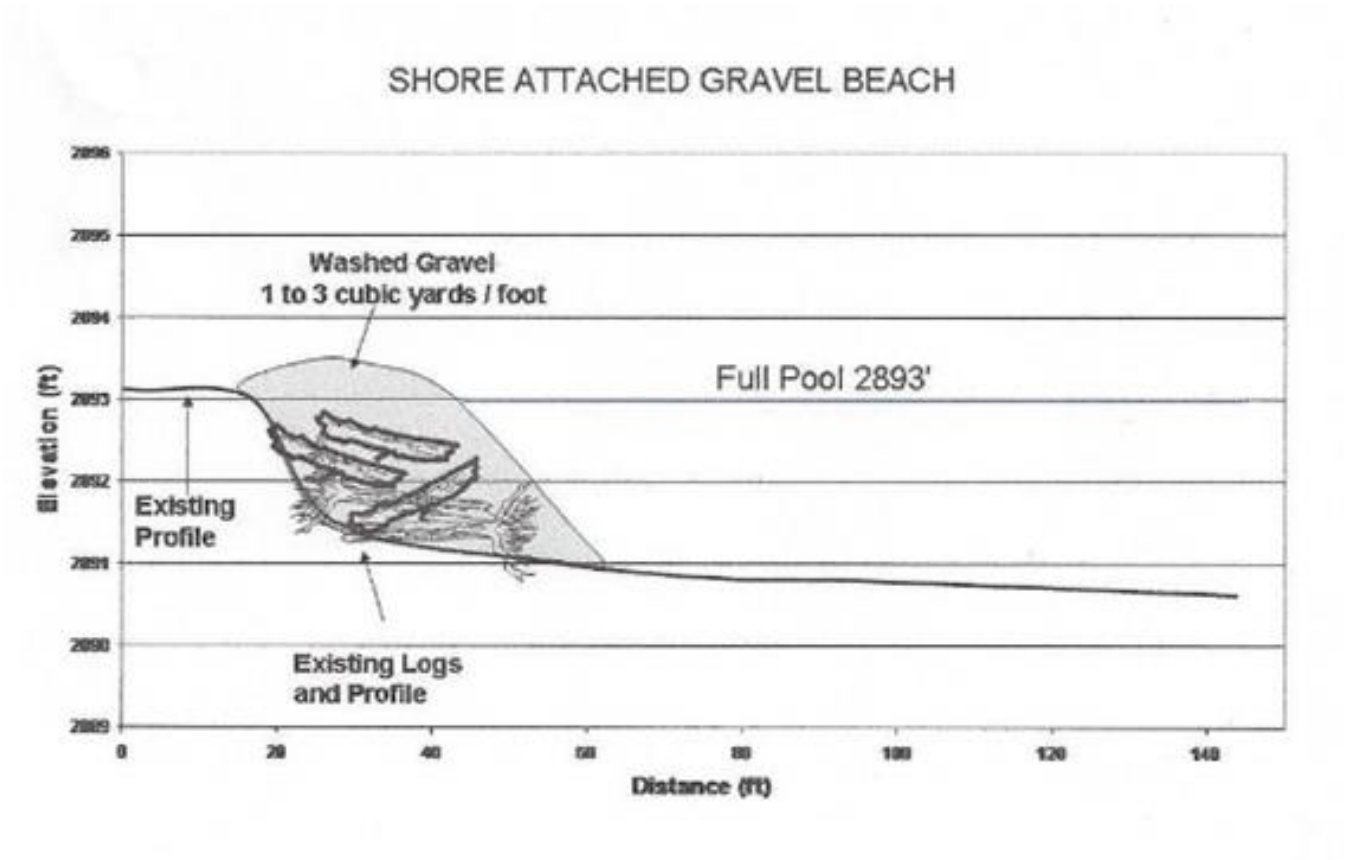
I am writing in support of DEQ 319 Nonpoint Source Program funding for the Flathead Land Trust's North Shore Flathead Lake Shoreline Restoration Project. Montana Fish, Wildlife & Parks (FWP) has been working with the Flathead Land Trust (FLT) for over 15 years protecting Flathead River and Lake properties through conservation easements and habitat restoration on conserved properties. These habitats are critically important to migratory waterfowl, shorebirds, neo-tropical migrants, nesting and wintering raptors, as well as for resident and native fish and other wildlife species. FWP and FLT work together under the broader River to Lake Initiative that has conserved over 5,000 acres along the Flathead River and north shore of Flathead Lake. These projects not only provide habitat protection for fish and wildlife, but also help to protect the incredible water quality of the Flathead watershed.

The North Shore Flathead Lake Shoreline Restoration Project will serve two very important functions. First, it will allow the shoreline of Flathead Lake to be protected from continued wave erosion and stop degradation of the associated wetlands. Second, this project will protect 60 acres of property for fish and wildlife habitat while providing the public an opportunity to enjoy the gorgeous north shore of Flathead Lake on the remaining 40 acre parcel. The north shore of Flathead Lake is the only remaining undeveloped area around the lake's entire 161 mile perimeter. FWP has agreed to help secure funding for the 60 acres that will be protected solely for fish and wildlife habitat and also to own and manage the entire property in the future, pending Fish and Wildlife Commission and Land Board approval. FWP will provide future O&M and help manage the area in a way to balance the desires of the recreating public with the need to provide protection for the north shore's fish and wildlife resources.

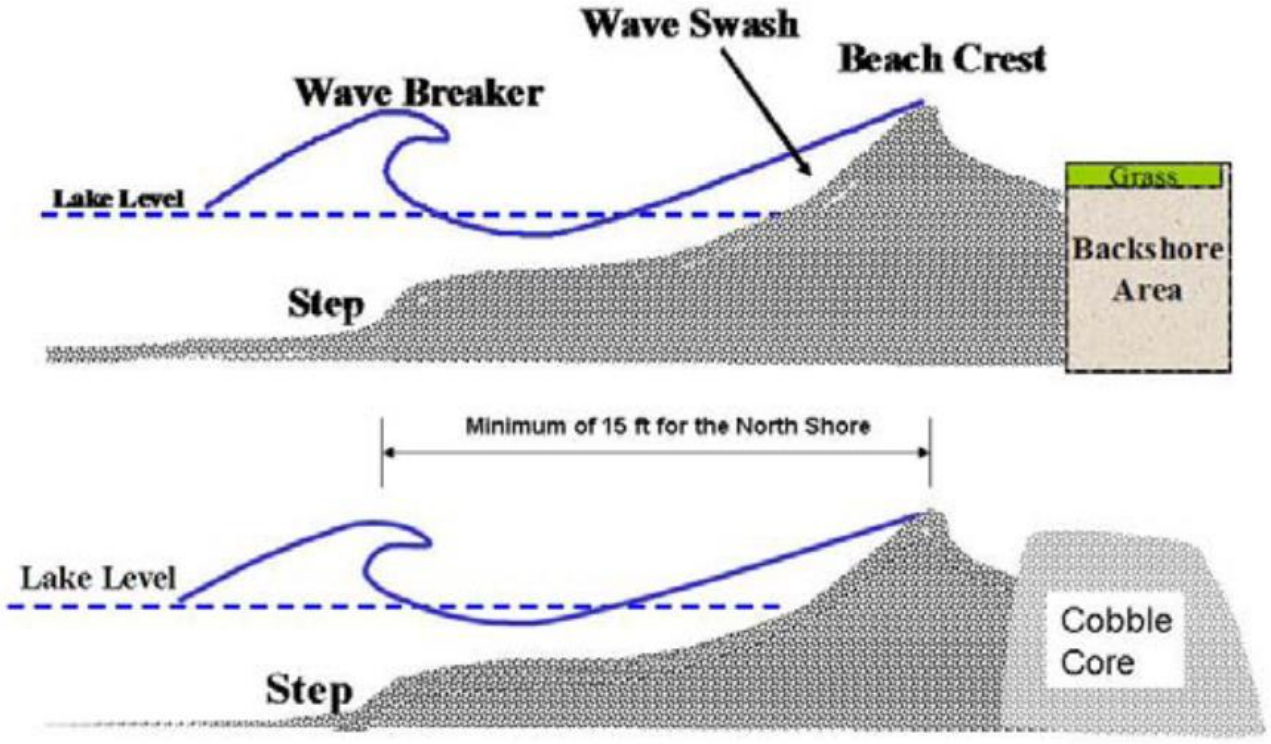
The FWP Region One Fish and Wildlife Habitat Conservation Program encourages the approval of the Flathead Land Trust's 319 funding application so we complete this important conservation project along the north shore of Flathead Lake.

Sincerely,

Kris Tempel
Resource Specialist
Fish and Wildlife Habitat Conservation Program



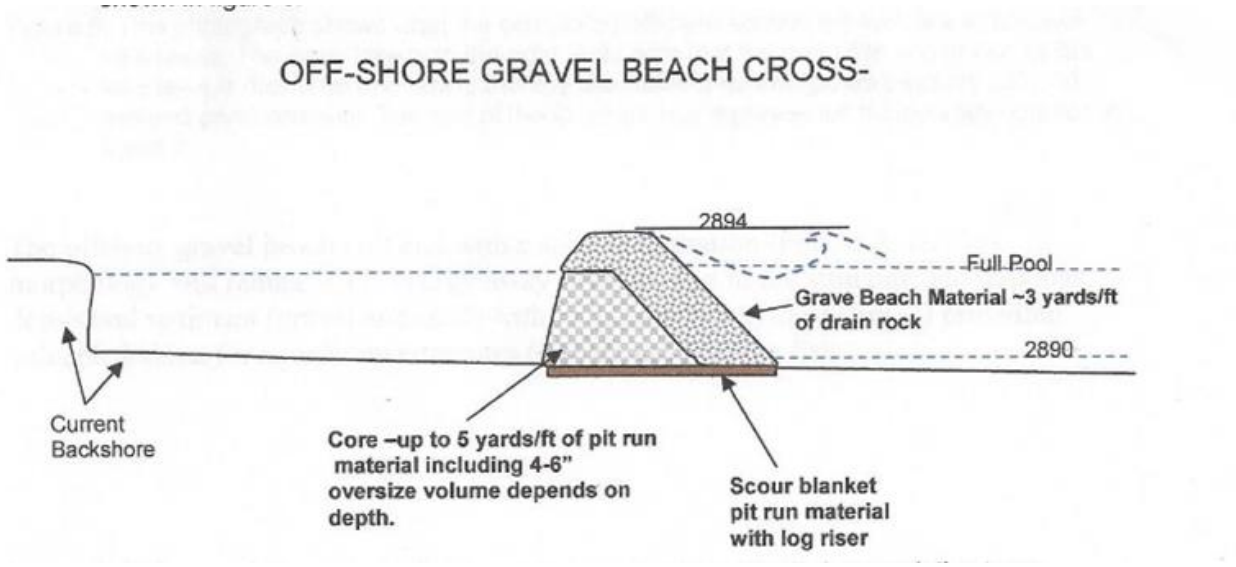
Schematic of attached dynamic gravel beach.



Schematic showing wave breaking on a beach step and wave swash on the beach face.

Example of finished shore attached dynamic gravel beach before wave action during full pool lake levels.

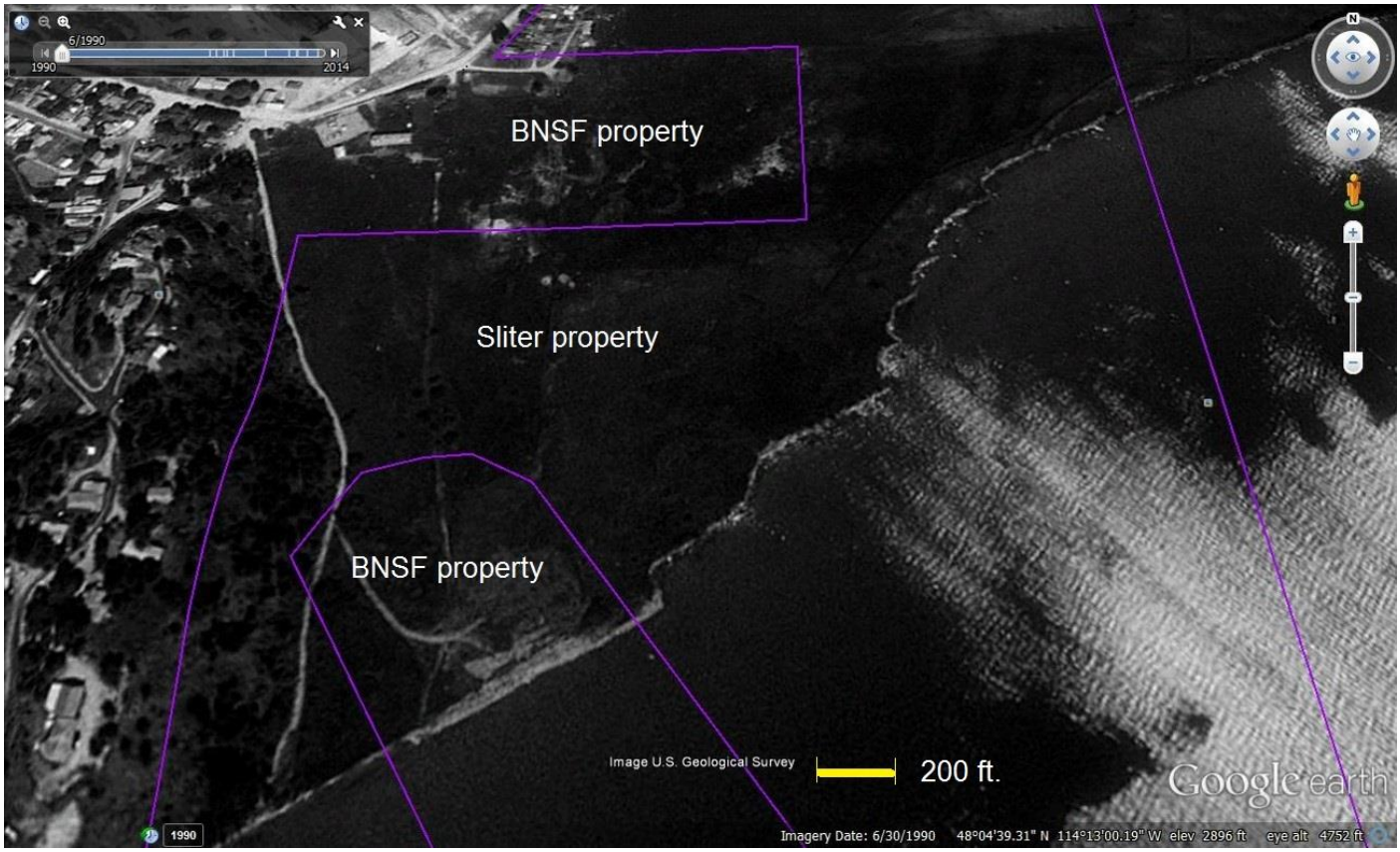
Example of attached dynamic gravel beach after 3 full pool seasons of wave action. Note: All wood on the beach was delivered to the beach by waves and that overtopping during storms occurs maintaining the process of connectivity with the wetland.



Schematic of offshore dynamic gravel beach.

Example of completed offshore dynamic gravel beach with spit at end of structure.

Example of offshore dynamic gravel beach spit embayment after construction and a few weeks of full pool lake levels.



Project area on the north shore of Flathead Lake in 1990.

Erosion that has occurred in project area on the north shore of Flathead Lake by 2014.

Example of completed dynamic gravel beach along north shore of Flathead Lake after three full pool seasons of wave action. Note that all the wood on the beach was delivered to the beach by waves and that overtopping during storms occurs maintaining process connectivity with the wetland. Over-topping delivers material (sand and wood) into the wetland creating complex topography and driving a shift mosaic habitat which increases biodiversity.