

**Section I: General Information**

Project Title North Shore Flathead Lake Shoreline Restoration Project

**Project Sponsor Information**

Name Flathead Land Trust, Inc. Tax Identification Number 36-3479966

Address P.O. Box 1913 Website www.flatheadlandtrust.org

City Kalispell State Montana Zip Code 59903 County Flathead

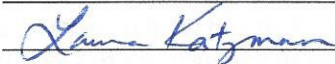

Primary Contact Laura Katzman Signatory Paul Travis

Title Land Protection Specialist Title Executive Director

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E-mail Address lkatzman@bigsky.net E-mail Address pctravis@amerion.com

Signature  Signature 

**Project Funding**

319 Funds Requested \$190,000.00 Does the project sponsor have any open 319 contracts? No

Matching Funds

State Cash Match	<u></u>
Local Cash Match	<u>\$100,000.00</u>
In-Kind Match	<u>\$27,000.00</u>
Total Match	<u>\$127,000.00</u>
Other Federal Funds	<u>\$110,000.00</u>
Total Project Budget	<u>\$427,000.00</u>
Administrative Fee	<u>\$10,000.00</u>

Project Title

DEQ Contract Number

319 Award

Projected Closing Date

Project Title

DEQ Contract Number

319 Award

Projected Closing Date Jun 30, 2019

**Project Location**

Which WRP does this project implement? Flathead Lake What is the status of the WRP? DEQ Accepted

Does the project address impairments in a TMDL? Yes 12 Digit HUC #(s) 17010208

(1) Waterbody Name from 2014 List of Impaired Waters Flathead Lake Activity 1 Name Shoreline Restoration

(1) Probable Cause(s) of Impairment to be addressed (ex. metals) Sedimentation Latitude (1) -114.215645 Longitude (1) 48.078397

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

(2) Probable Cause(s) of Impairment to be addressed (ex. metals)  Latitude (2)  Longitude (2)



## Section II: Project Description

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

A dynamic gravel beach will be used 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 project will prevent future wave erosion of the north shore and potential erosion of sediments contaminated by a historic railroad tie treating facility on BNSF property into Flathead Lake. This proposed shoreline erosion control project is a first step in a bigger conservation and community park project for the Sliter family property. This project is also part of a larger vision for conserving the north shore of Flathead Lake and the Flathead River by the Flathead River to Lake Initiative (see comments p. 4 for further information about larger vision).

**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 shoreline protection structure with a 500 foot long off-shore dynamic gravel beach\*. This will control erosion of the shoreline and restore riparian and wetland buffers behind the structure.
2. Construct a dynamic gravel beach along the remaining 1,400 feet of shoreline not protected by the off-shore beach. This will control erosion of the shoreline and protect a riparian buffer behind the structure.

\*Dr. Mark Lorang has designed and implemented this soft structure approach to restore lakeshore on over 2.5 miles of shoreline on Flathead Lake with the USFWS along north shore, CSKT at Blue Bay, the State of MT at Finley Point State Park, and the City of Polson. The Army Corps and local lake shore agencies have been very supportive of this approach to shoreline restoration on Flathead Lake.

**Summary:** Provide a brief summary of the project.

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. Most of the north shore of Flathead Lake is protected by the U.S. Fish and Wildlife Service Flathead Lake Waterfowl Production Area (WPA) and the dynamic gravel beach technique has been used along much of it to successfully control erosion caused by wave action.

The western portion of the north shore of Flathead Lake (the Sliter family property) adjacent to the WPA remains as an area needing similar shoreline restoration. In addition, BNSF constructed a hard erosion control structure on their property adjacent to the Sliter family property in the mid-1980s which exacerbated the wave erosion of the Sliter family property. It is estimated about 500 feet of shoreline on the Sliter family property has eroded to a depth varying but up to about 200 feet over the past 30 years. Another 1,400 feet of shoreline on the Sliter family property has also been eroding, but at a slower rate. Some of the neighboring BNSF property was historically used as a railroad tie treating facility and contains contaminated sediments. The BNSF property which has contaminated sediments is now within about 125 feet of the eroding shoreline of Flathead Lake on the Sliter property.

**Monitoring:** Describe the monitoring you will conduct to measure project effectiveness.

We 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. A Sampling and Analysis Plan will be developed to guide the monitoring activities.

**Education and Outreach:** Briefly describe the education and outreach component of this project and the target audience.

We will conduct education and outreach about the innovative dynamic gravel beach technique and the value of conserving the north shore of Flathead Lake with an event at the site showcasing the shoreline restoration, news releases, newsletter articles, website posts, e-blasts, Facebook posts, and other communications targeting Flathead Lake watershed landowners.

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

Partner	Role
Sliter family (landowners)	Providing cash match for shoreline restoration and bargain sale of land for conservation
BNSF (adjacent landowner)	Providing cash match for shoreline restoration
Dr. Mark Lorang - Univ. of MT Biological St.	Completing project design, shoreline restoration, and monitoring
National Fish and Wildlife Foundation	Providing cash to complete shoreline restoration
Flathead Lakers	Helping to complete education component of proposal
Montana Fish, Wildlife and Parks	Planned future landowner of the Sliter property



### Section III: Scope of Work

#### Task 1 Title Project Design

319 Funds

Non-Federal Match

\$10,000.00

Other Federal Funds

Total Cost

\$10,000.00

Timeline July-Aug. 2016

#### Description

Dr. Mark Lorang of the University of Montana Biological Station will complete the project design.

#### Task 2 Title Permitting, Environmental Policy Act Compliance, and Landowner Agreement

319 Funds

Non-Federal Match

\$12,000.00

Other Federal Funds

Total Cost

\$12,000.00

Timeline July 2016 to Oct. 2017

#### Description

Flathead Land Trust, in cooperation with partners, will obtain the necessary permits, complete the necessary environmental policy act process, and obtain landowner agreement for project.

#### Task 3 Title Off-shore Dynamic Gravel Beach Construction

319 Funds

\$75,000.00

Non-Federal Match

\$100,000.00

Other Federal Funds

Total Cost

\$175,000.00

Timeline Dec. 2017 to Feb. 2018

#### Description

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

#### Task 4 Title Dynamic Gravel Beach Construction Along Remaining Shoreline

319 Funds

\$100,000.00

Non-Federal Match

Other Federal Funds

\$110,000.00

Total Cost

\$210,000.00

Timeline Dec. 2017 to Feb. 2018

#### 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 off-shore beach.

#### Task 5 Title Monitoring

319 Funds

\$5,000.00

Non-Federal Match

Other Federal Funds

Total Cost

\$5,000.00

Timeline May 2018 to May 2019

#### 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. A Sampling and Analysis Plan will be developed to guide the monitoring activities.

Task 6 Title Education

319 Funds

Non-Federal Match

Other Federal Funds

Total Cost

Timeline Jan 2018 to May 2019

## 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 with an event at the site showcasing the shoreline restoration, news releases, newsletter articles, website posts, e-blasts, Facebook posts, and other communications targeting Flathead Lake watershed landowners.

Task 7 Title Project Administration

319 Funds

Non-Federal Match

Other Federal Funds

Total Cost

Timeline Throughout

## Description

Flathead Land Trust will oversee and be accountable for the completion of all tasks. We will prepare and submit attachment B-billing statements, status reports, annual reports, and a final report.

Task 8 Title Operation and Maintenance

319 Funds

Non-Federal Match

Other Federal Funds

Total Cost

Timeline 2019 and beyond

## 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.

## Task 9 Title \_\_\_\_\_

319 Funds

Non-Federal Match

Other Federal Funds

Total Cost

Timeline \_\_\_\_\_

## Description

Comments: Use the space provided for any additional information that may not have been captured elsewhere in this proposal form.

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 lands 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.