



319 Nonpoint Source Final Application

FY2017 Final Applications are due Monday, September 26, 2016 by 2:00 pm

Section I: General Information

Project Title Lower Swan Valley Road Sediment Reduction Project

Project Sponsor Information

Sponsor Name Swan Valley Connections

Registered with the Secretary of State? Yes

Registered with SAM? Yes

County Lake

Website SwanValleyConnections.org

Tax Identification # 81-0512368

DUNS # 002001027

Primary Contact Maria Mantas

Signatory Maria Mantas

Title Executive Director

Title Executive Director

Address 6887 MT Hwy 83

Address 6887 MT Hwy 83

City Condon State Montana Zip Code 59826

City Condon State Montana Zip Code 59826

Phone Number 406-754-3137

Phone Number 406-754-3137

Fax Number 406-754-2965

Fax Number 406-754-2965

E-mail Address maria@svconnections.org

E-mail Address maria@svconnections.org

Signature _____

Signature _____

Project Location

12 Digit HUC #(s) Goat/Squeezer:170102110303; Fenby Lane-Grassy Cr:170102110401; Whitetail/S. Woodward:170102110304

(1) Waterbody Name from 2016 List of Impaired Waters Goat Creek

(1) Probable cause(s) of impairment to be addressed (ex. metals) sediment

(2) Waterbody Name from 2016 List of Impaired Waters Swan Lake

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

(3) Waterbody Name from 2016 List of Impaired Waters _____

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

Activity 1 Name Goat Cr. and Squeezer Cr. Latitude (1) 47o45'00.13" Longitude (1) -113o48'24.47"

Activity 2 Name Fenby Lane - Grassy Cr. Latitude (2) 47o56'04.46" Longitude (2) -113o49'43.51"

Activity 3 Name Upper S. Woodward and Whitetail Slump Latitude (3) 47o45'58.13" Longitude (3) -113o52'45.40"

Nonpoint Source (NPS) Information

Which WRP does the project implement? Swan Basin Restoration What is the WRP status? DEQ-Accepted

Does the project address impairments identified in a TMDL? Yes Waterbody Type River/Stream

Functional Category Erosion Control Projects

1st Pollution Category Silviculture (Road Construction/Maintenance) Percent of Total (%) 90

2nd Pollution Category Urban Runoff/Stormwater (Residential, e.g., non-commercial automotive/p Percent of Total (%) 10

3rd Pollution Category _____ Percent of Total (%) _____

4th Pollution Category _____ Percent of Total (%) _____

Project Funding

319 Funds Requested	<input type="text" value="\$101,376.00"/>	Does the project sponsor have any open 319 contracts?	<input type="text" value="No"/>
Matching Funds		Project Title	_____
<i>State Cash Match</i>	<input type="text" value="\$90,000.00"/>	DEQ Contract Number	_____
<i>Local Cash Match</i>	<input type="text" value="\$16,900.00"/>	319 Award	_____
<i>In-Kind Match</i>	<input type="text" value="\$19,670.00"/>	Projected Closing Date	_____
Total Match	<input type="text" value="\$126,570.00"/>	Project Title	_____
Other Federal Funds	<input type="text" value="\$8,000.00"/>	DEQ Contract Number	_____
Total Project Budget	<input type="text" value="\$235,946.00"/>	319 Award	_____
Administrative Fee	<input type="text" value="\$9,216.00"/>	Projected Closing Date	_____

Section II: Project Description

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

Implement the Swan Basin Restoration plan through rehabilitating several sites along existing roads that contribute sediment related impairments in Goat Creek, Swan Lake, and tributaries of these water bodies. The projects outlined in this proposal are part of a six year history of implementing restoration efforts on listed water bodies in the Swan. We expect that cumulatively these efforts will successfully move the Swan Watershed into improved water quality and eventual delisting. These projects will be monitored for project effectiveness. We also will incorporate our restoration efforts in local education and outreach programs.

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

Activities to address erosion at the various locations include: 1. Replacing non-functioning culverts 2. Removing culverts 3. Removing old log bridge abutments 4. Applying road based aggregate 5. Stabilizing road prisms by recontouring 6. Rehabilitating and abandoning an unstable road segment 7. Installing road surface drainage structures 8. Stabilizing all sites with revegetation.

Post project effectiveness monitoring will be conducted at all sites. All activities will be incorporated into Swan Valley Connections educational programs. Outreach activities (field trips) and media (website, newsletters) will highlight projects to partners and the community.

Summary: Provide a brief summary of the project.

The TMDL and Swan Lake WRP identifies roads and crossings as the main sediment sources to the Swan Lake Watershed. The WRP identifies implementing BMPs and road restoration as primary methods for achieving TMDL load allocations. These proposed projects, primarily on DNRC lands, will reduce/eliminate road sediment delivery. Site 1: Goat Cr(1) Failed log abutments could contribute sediment to Goat Cr at an abandoned bridge site. We will remove log abutments and rehabilitate stream banks. Site 2: Goat Cr(2). Goat Cr road crosses a stream that is tributary to Goat Cr. We will replace a creek ford with a CMP. Site 3: Squeezer Cr. An abandoned road traverses a wetland that is tributary to Squeezer Cr. We will remove a CMP and rehabilitate the site. Site 4: Fenby Lane is an unmaintained poorly designed Lake Co. road that accesses private residences and a USFS Trailhead. We will meet BMPs on this road segment adjacent to Grassy Cr. that drains into Swan Lake. Site 5: Whitetail Cr. A failed road bank is contributing sediment to a wetland that is tributary to Whitetail Cr. We will abandon and reclaim the road by CMP removal and site stabilization through terracing and re-vegetation, and rehabilitate an existing alternate road route with brushing and improved road surface drainage. Site 6: South Woodward Cr. We will recondition an abandoned road in the S. Woodward Drainage, install CMPs at creek crossing sites, and install drive-through dips and rubber flappers for surface drainage. DNRC will administer contracts, conduct project effectiveness monitoring, and contribute matching funds. In partnership will be Swan Valley Connections who will administer the grant and provide the educational and outreach component. FWP will permit and oversee in-stream work, Lake Co. will help pay for materials at Fenby Lane and provide engineering plans, and the USFS will provide federal match by conducting complimentary work in Goat Cr.

Section III: Background Information

Statement of Project Need and Intent

Two water bodies in the Swan Watershed are listed as impaired: Goat Cr. by sediment and Swan Lake by particulate organic carbon. Probable causes for impairment were identified as roads, bridges and logging activities. For Swan Lake, the TMDL allows no increase in POC and identified a target of no decreasing dissolved oxygen (DO) at the bottom of the Lake. A target for Goat Cr. is TSS < 30 mg/L during peak flow. This project will implement the Swan Watershed Restoration Plan (“Swan Basin Restoration Plan”) through the outlined tasks in this proposal in an effort to “reduce sedimentation from roads (BMPs)” (WRP, page 11), by “monitoring water quality” (WRP page 12-13) and to “provide education and Outreach (WRP page 13).

Describe the pre-project planning that has already occurred.

Swan Valley Connections (formerly Swan Ecosystem Center) convenes annual meetings of a multi-agency, multi-partner Technical Advisory Group (TAG) to aid in developing and implementing water quality restoration projects. The TAG evaluates and prioritizes projects brought to the committee via collaborative discussions and field trips. This group has been implementing the WRP over the last six years and much restoration work has occurred in the Swan Watershed on USFS and DNRC lands through prior 319 Grants, TPL assisted grants, and USFS project work. This 2017 proposal is the next step in a successful history of watershed restoration in the Swan Watershed. The projects proposed herein were developed after identifying issues on recently acquired lands through the Montana Legacy Project, past problems on DNRC lands that have not been addressed due to lack of funds, and concern raised by private land owners at Fenby Lane regarding poor road conditions. The TAG conducted two field trips and met several times over the last year to assess these projects and develop a proposal for a 319 grant. DNRC staff have developed site plans and budgets to address the sediment delivery issues on these proposed projects.

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

Swan Valley Connections (formerly Swan Ecosystem Center) convenes annual meetings of a multi-agency, multi-partner Technical Advisory Group (TAG) to aid in developing and implementing water quality restoration projects. Members include: USFS, DNRC, MTFWP, DEQ, Missoula Co., Swan Valley Connections, Friends of the Wild Swan, Swan Lakers, and private citizens. All watershed restoration proposals on public lands in the Swan Watershed are discussed and evaluated in a collaborative manner with this group. Letters of support from various TAG members and other stakeholders will be part of this proposal. For this project we have obtained the support of 9 homeowners on Fenby Lane who wish to see the road improved.

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

Partner	Role
State Agencies: DNRC; FWP; DEQ	DNRC will design projects, hire contractors, and administer restoration work on all sites except for Fenby Lane. DNRC will also conduct project effectiveness monitoring on these sites. FWP will issue required permits. DEQ will provide project funding and issue permits
Swan Valley Connections	SVC will be the project sponsor and contract with DEQ. SVC will administer the entire project including budgeting and reporting to DEQ. SVC will provide the educational and outreach component of the project, as well as assist with effectiveness monitoring at the Fenby Lane site.
USFS	USFS will conduct a matching project in Upper Goat Creek. USFS also advises the TAG providing technical expertise.
Swan Lakers	Swan Lakers conducts annual monitoring of Swan Lake, measuring numerous water quality variables in the entire water column in two places in the lake. This monitoring will be provided as project match.
Local Partners: Lake Co; Fenby Lane Road Homeowners	Fenby Lane Homeowners and Lake Co will work together to design, contract, and implement the restoration work on Fenby Lane. Lake Co. will provide match in the form of road aggregate materials and CMPs, as well as design, contract, and oversee project work.

Technical and Administrative Qualifications

For at least six years, SVC (formerly Swan Ecosystem Center) has convened the Swan TAG - coordinated its efforts and actions, and supported water quality restoration geared at achieving the Swan WRP goals. SVC has provided technical information and support for projects. SVC has administered several 319 Grants through DEQ for implementing the Swan Watershed WRP, most recently the Cold Jim Project #212115. SVC accounting and administrative staff are experienced at entering into contracts with DEQ and administering projects budgets.

Past and Current Projects

Funding Organization	Award Amount	Project Description	Project Status	Contact Information
DEQ	\$80,000.00	#212115 - Cold-Jim Restoration Project Support the Flathead National Forest to initiate restoration in the Jim Creek and Cold Creek watersheds in the Swan River Basin by funding an assessment of newly acquired lands in the watershed and funding BMP work on former MLP lands.	Completed	Maria Mantas, Swan Valley Connections
DEQ	\$49720.00	#210115- A primary focus was to reduce sedimentation from heavily used forest roads on national forest land in the Beaver Creek area through BMPs.	Completed	Maria Mantas, Swan Valley Connections
DEQ	\$40,000.00	#209068 - Beaver Creek. This project was to reduce nonpoint source pollution and ensure full beneficial uses by implementing the recommendations in Montana DEQ's 2004 <i>Water Quality Protection Plan and TMDLs for the Swan Lake Watershed (Swan TMDL)</i>	Completed	Maria Mantas, Swan Valley Connections
DEQ	\$40000.00	#208033 - Herrick Run. The primary focus was to reduce sedimentation from a heavily used forest road, Herrick Run Road. We implemented the recommendations in the <i>Swan TMDL</i> for restoration and source reduction and halted erosion at 7 sites.	Completed	Maria Mantas, Swan Valley Connections
DEQ	\$58340.00	#207047 - Swan Watershed TMDL Implementation - Elk Creek, QAPP. We restored 12 forest road TMDL sediment sites, reducing an estimated 33.55 tons of sediment per year. We continued lake and stream monitoring to establish solid baseline data and meet TMDL targets.	Completed	Maria Mantas, Swan Valley Connections

Section IV: Scope of Work

Task 1 Title Project Development and Coordination

Description

We will complete project planning, design, and obtain all necessary permits associated with DNRC and Lake Co. to achieve Best Management Practices for projects in the Swan watershed as described in Tasks 2,3, 4, and 5 below. We will develop the framework for administration and oversight and develop a budget for all projects for the six sites. SVC will work closely with DNRC, Lake County, and partners providing match (Swan Lakers, USFS) to accomplish this task. SVC will work closely with all partners and coordinate all activities through the life of the contract. SVC will develop and obtain DEQ approval of landowner agreements for maintenance of implemented on-the-ground projects. Funds requested will cover SVC staff time (12 days over three years) to set up project and coordinate with DNRC and TAG. Match will be SVC staff time.

Deliverables

- Site maps.
- Project designs for the projects described in Task 2,3,4 and 5 for review and comment and final copies of project designs. (In the final designs, we will address to DEQ's satisfaction all concerns raised by DEQ in the review of previous drafts.)
- Copies of all permits necessary for implementation of the project designs.

Task 1 Funding

319 Funds	\$3,000.00
Non-Federal Match	\$850.00
Other Federal Funds	\$0.00
Total Cost	\$3,850.00
Is Match Secured?	No

Timeline Upon contract execution through entire project Match Source none

Task 2 Title Goat Creek and Squeezer Creek Restoration

Description

Goat Creek Abutment Removal: Old log abutments at an abandoned bridge site would deliver a large amount of sediment to Goat Creek if/when these logs fail. We will remove old log bridge abutments on both sides of creek, stabilize stream banks by removing fill behind abutments, recontour banks, and place rip-rap and slash filter windrow. Grass seeding will stabilize soil surface and prevent weed establishment.

Goat Creek Ford: We will eliminate a ford crossing, which delivers sediment to an intermittent tributary of Goat Creek, by installing a CMP and revegetating to stabilize soil surfaces and prevent weed establishment.

Squeezer Creek Abandoned Road: We will completely restore a tributary to Squeezer Cr. by removing a CMP, restoring channel geometry and recontouring and revegetating to stabilize soil surfaces and prevent weed establishment.

Funds requested cover costs of implementing projects and DNRC staff time to administer. Match is from other DNRC Road BMP work to be conducted in the vicinity. Other Federal matching funds are from Upper Goat Creek Restoration Project on USFS land.

Deliverables

Draft and final design plans and copies of all necessary permits. Photo documentation of completed project (before and after). Invoices from contractors for completed services. DNRC project administration reports. Documentation of BMP activities. Documentation of completed USFS Upper Goat Creek Restoration Project.

Task 2 Funding

319 Funds	\$11,000.00
Non-Federal Match	\$30,000.00
Other Federal Funds	\$8,000.00
Total Cost	\$49,000.00
Is Match Secured?	Yes

Timeline Completed by October 2018 Match Source DNRC Road BMP work

Task 3 Title Fenby Lane - Grassy Creek Restoration

Description

Fenby Lane is a poorly designed road that delivers sediment to Grassy Creek, a stream that flows directly into Swan Lake. Use is high on this road due to the access it provides to numerous homesites in the community, as well as access to a recently reconstructed trailhead. We expect road use will increase and cause even more problems, so our proposed fix includes resurfacing a long segment of the road making this project costlier. We will deliver, spread, and compact up to 300 yards of crushed gravel or ground asphalt to 1 1/2 miles of road prioritizing areas next to Grassy Creek along Fenby Lane and apply drainage structures to the road prism. We will stabilize cut and fill slopes on areas currently eroding for approximately 500 ft. Replace one CMP at Grassy Creek crossing to meet BMPs. We will improve the road to a 16' to 20' wide with pull out, and stabilize cut and fill slopes to 1:1 and provide road drainage features in areas where washing is occurring. Local match will be from Lake County in materials (crushed gravel or asphalt aggregate), project engineering, and site administration. The county has committed to future road maintenance once it is brought to standard.

Deliverables

Draft and final design plans and copies of all necessary permits. Photo documentation of completed project (before and after). Invoices from contractors for completed services. Commitment letter from Lake Co. on match contribution, and project administration reports.

Task 3 Funding

319 Funds	\$30,000.00
Non-Federal Match	\$10,000.00
Other Federal Funds	\$0.00
Total Cost	\$40,000.00
Is Match Secured?	Yes

Timeline Completed by October 2018

Match Source

Task 4 Title Whitetail Creek Slump Rehabilitation

Description

Whitetail Creek Slump Rehabilitation: A large slope failure along Upper Whitetail Road delivers a large amount of sediment to a tributary of Whitetail Creek. We will abandon the unstable road segment by removing three CMPs and stabilizing the slope through terracing and revegetation. An alternate road will be reconditioned to BMPs (gravel resurfacing, cleaning and maintaining drainage structures, etc.). Grass seeding will stabilize soil surface and prevent weed establishment. Match is from other DNRC Road BMP work to be conducted in the vicinity.

Deliverables

Draft and final design plans and copies of all necessary permits. Photo documentation of completed project (before and after). Invoices from contractors for completed services. Project administration reports.

Task 4 Funding

319 Funds	\$30,000.00
Non-Federal Match	\$30,000.00
Other Federal Funds	\$0.00
Total Cost	\$60,000.00
Is Match Secured?	Yes

Timeline Completed by October 2018

Match Source

Task 5 Title Upper South Woodward Road Recondition

Description

Upper S. Woodward Road was a former Plum Creek Road that was poorly maintained and is in need of BMP upgrades to prevent erosion. We will install CMPs at four creek crossings on S. Woodward Road; install surface drainage structures (four rubber flappers and one drive through dip) and reshape entire road surface to improve drainage. Grass seeding will follow to stabilize soil surface and prevent weed establishment. Match is from other DNRC Road BMP work to be conducted in the vicinity.

Deliverables

Draft and final design plans and copies of all necessary permits. Photo documentation of completed project (Before and after). Invoices from contractors for completed services. Project administration reports.

Task 5 Funding

319 Funds	\$15,200.00
Non-Federal Match	\$30,000.00
Other Federal Funds	\$0.00
Total Cost	\$45,200.00
Is Match Secured?	Yes

Timeline Completed by October 2018

Match Source _____

Task 6 Title Monitoring

Description

Project Effectiveness Monitoring: Project partners (DNRC and SVC) will use WEPP to report on estimated sediment load reductions from all restoration projects in this proposal. FWP: Bull Trout Habitat Monitoring: McNeal coring which monitors fine sediment is conducted by Montana Fish, Wildlife & Parks in Goat Creek and other Swan Trib bull trout streams. HOBO Temperature Monitoring (SVC): hourly temperature monitoring using data loggers in the Swan River and in 7 main streams including Goat Creek will occur. Swan Lakers Swan Lake Monitoring: Swan Lake is sampled four times a year. The tests are performed in the north and south basins, each being 35-40 meters deep. A 'hydro-lab multi meter' is used to gather data at 1 meter intervals for numerous variables. These are tested at the Flathead Lake Biological Station for levels of phosphate, nitrogen, organic carbon, chlorophyll, and other constituents. All but the WEPP monitoring are conducted annually and will be continued beyond the completion of this project, so long term effects will be ascertainable. Funds will be used for sediment load reduction reporting. Swan Lakers and MTFWP long term monitoring will be match to this project.

Deliverables

Sediment Load Reduction estimates for all projects. (at completion of project)
 Swan Lakers, Swan Lake Monitoring Annual Reports
 FWP McNeal Core - Bull trout Habitat Monitoring Data (annual)
 Verification of data upload from HOBOS (temperature monitoring) into e-WQX Database (annual)

Task 6 Funding

319 Funds	\$2,000.00
Non-Federal Match	\$25,400.00
Other Federal Funds	\$0.00
Total Cost	\$27,400.00
Is Match Secured?	Yes

Timeline Upon completion of the project July 2019

Match Source _____

Task 7 Title Education and Outreach

Description

Swan Valley Connections will incorporate a water quality section into "Watersheds Weed" during the fall Landscape and Livelihood Student semester program. Students will visit project sites, learn about the Swan TMDL and WRP and as an educational exercise will assist with WEPP monitoring for the Fenby Lane - Grassy Creek site.

SVC will host field tours of the projects during and at completion for TAG partners and stakeholders as well as the public.

Projects will be highlighted in newsletters and on the SVC website.

Deliverables

Evidence of above activities, including field trip photos, advertisements, newsletters, and webpages.

Task 7 Funding

319 Funds	\$960.00
Non-Federal Match	\$320.00
Other Federal Funds	\$0.00
Total Cost	\$1,280.00
Is Match Secured?	Yes

Timeline Throughout the project until July 2019

Match Source

Task 8 Title Project Administration

Description

SVC will oversee and be accountable for the completion of all tasks. SVC will prepare and submit billing statements, quarterly status reports and annual reports, throughout the duration of the project, and a final report. SVC will maintain regular contact as defined by the DEQ project manager.

Deliverables

Quarterly status reports, annual reports, Billing statements and a final report. We will work with DEQ project manager to ensure that all reports are written clearly and are acceptable to DEQ.

Task 8 Funding

319 Funds	\$9,216.00
Non-Federal Match	\$0.00
Other Federal Funds	\$0.00
Total Cost	\$9,216.00
Is Match Secured?	No

Timeline Upon Contract Execution through 06/2019

Match Source

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.

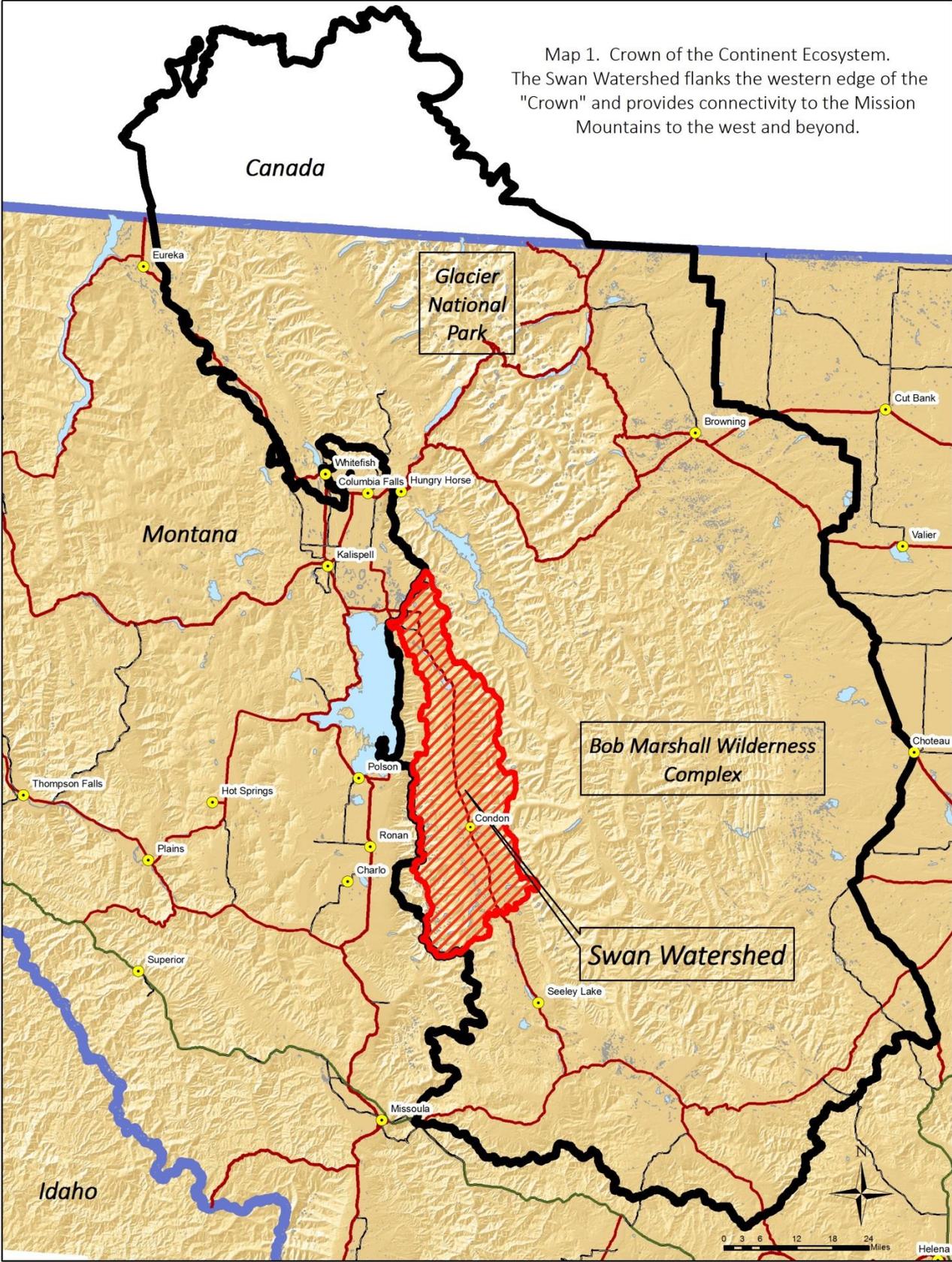
Milestone	Spring 2017	Summer 2017	Fall 2017	Winter 2017	Spring 2018	Summer 2018	Fall 2018	Winter 2018	Spring 2019	Summer 2019	Fall 2019
Task 1: Project Development and Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Task 2: Goat Creek and Squeezer Creek Restoration	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Task 3: Fenby Lane - Grassy Cr. Restoration	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Task 4: Lower Whitetail Slump	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Task 5: Upper South Woodward Road Recondition	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Task 6: Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
Task 7: Education and Outreach	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Task 8: Project Administration	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
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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

Priorities are in the order displayed in the Summary of Projects and in order of Tasks. We set our priorities based on listed water bodies (Goat Creek and Swan Lake) and degree of sediment or concern for potential sediment delivery. Although Whitetail Slump is lower on the priority list, it is an accident waiting to happen if the slope mass fails, and must be addressed at some point in the near future. If necessary, we are willing to accept partial funding to implement our highest priority tasks.

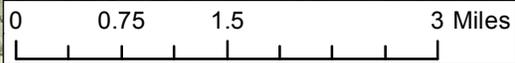
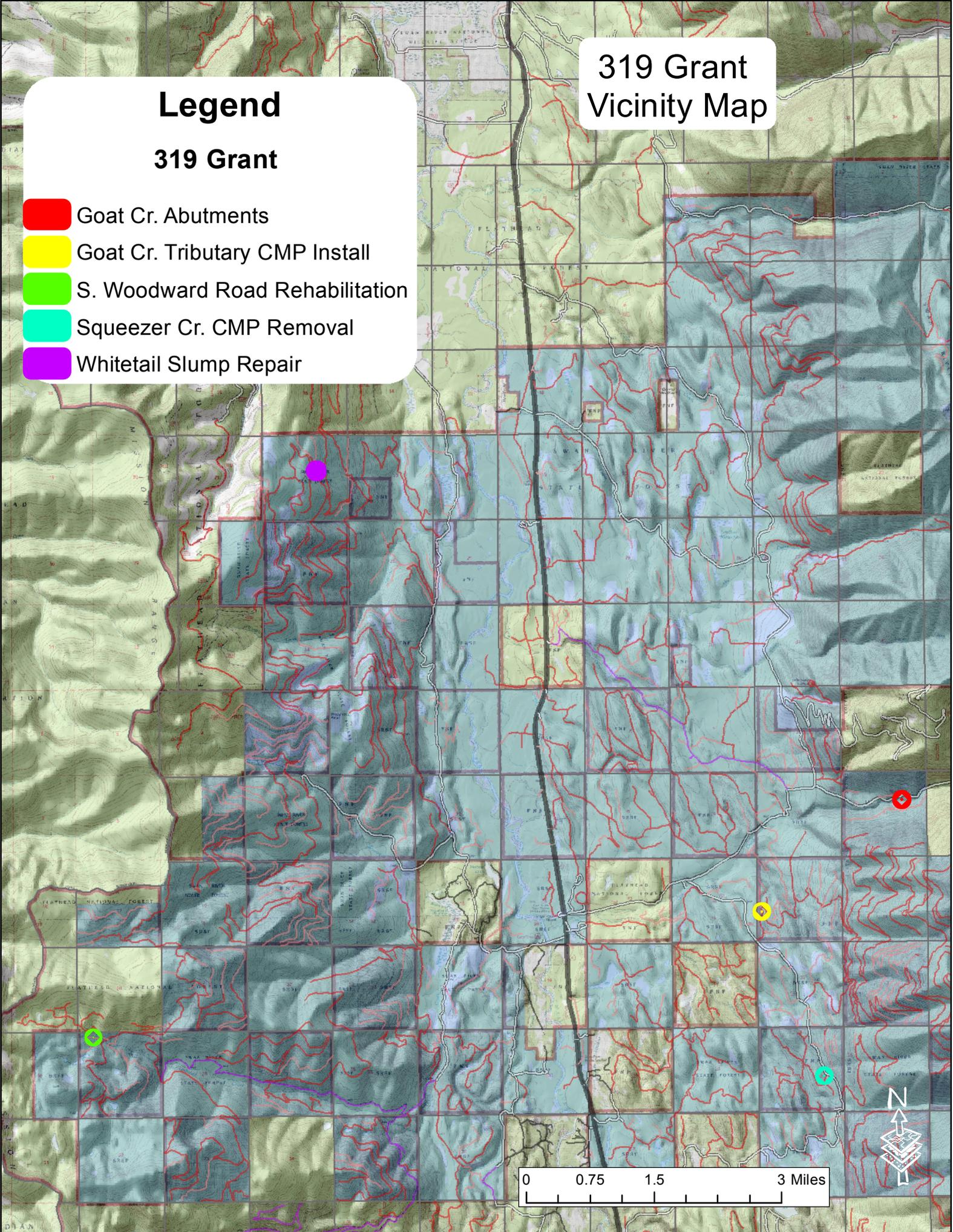


319 Grant Vicinity Map

Legend

319 Grant

- Goat Cr. Abutments
- Goat Cr. Tributary CMP Install
- S. Woodward Road Rehabilitation
- Squeezer Cr. CMP Removal
- Whitetail Slump Repair

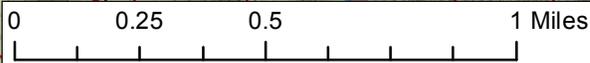


319 Grant Goat Squeezer

Legend

319 Grant

- Goat Cr. Abutments
- Goat Cr. Tributary CMP Install
- Squeezer Cr. CMP Removal

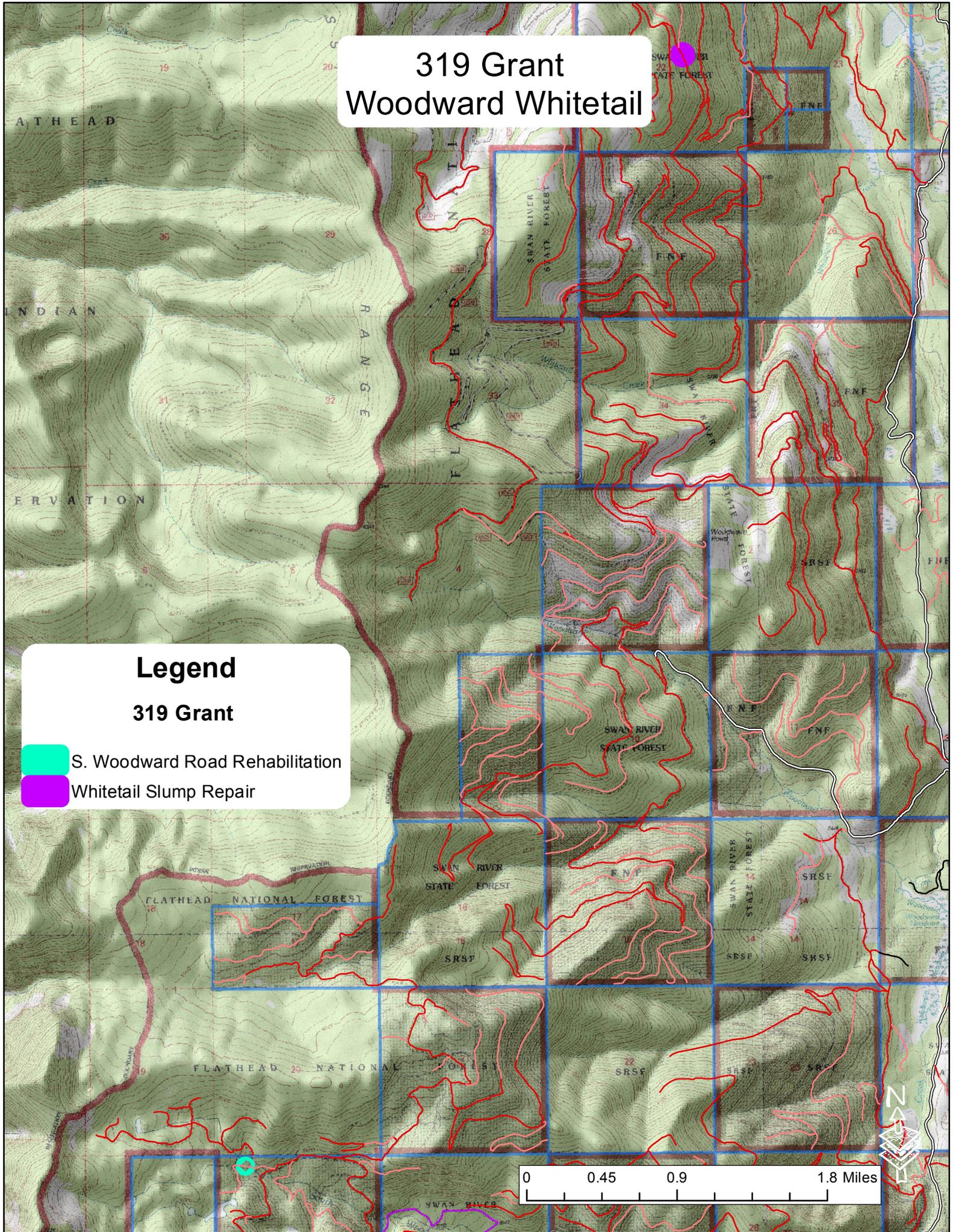


319 Grant Woodward Whitetail

Legend

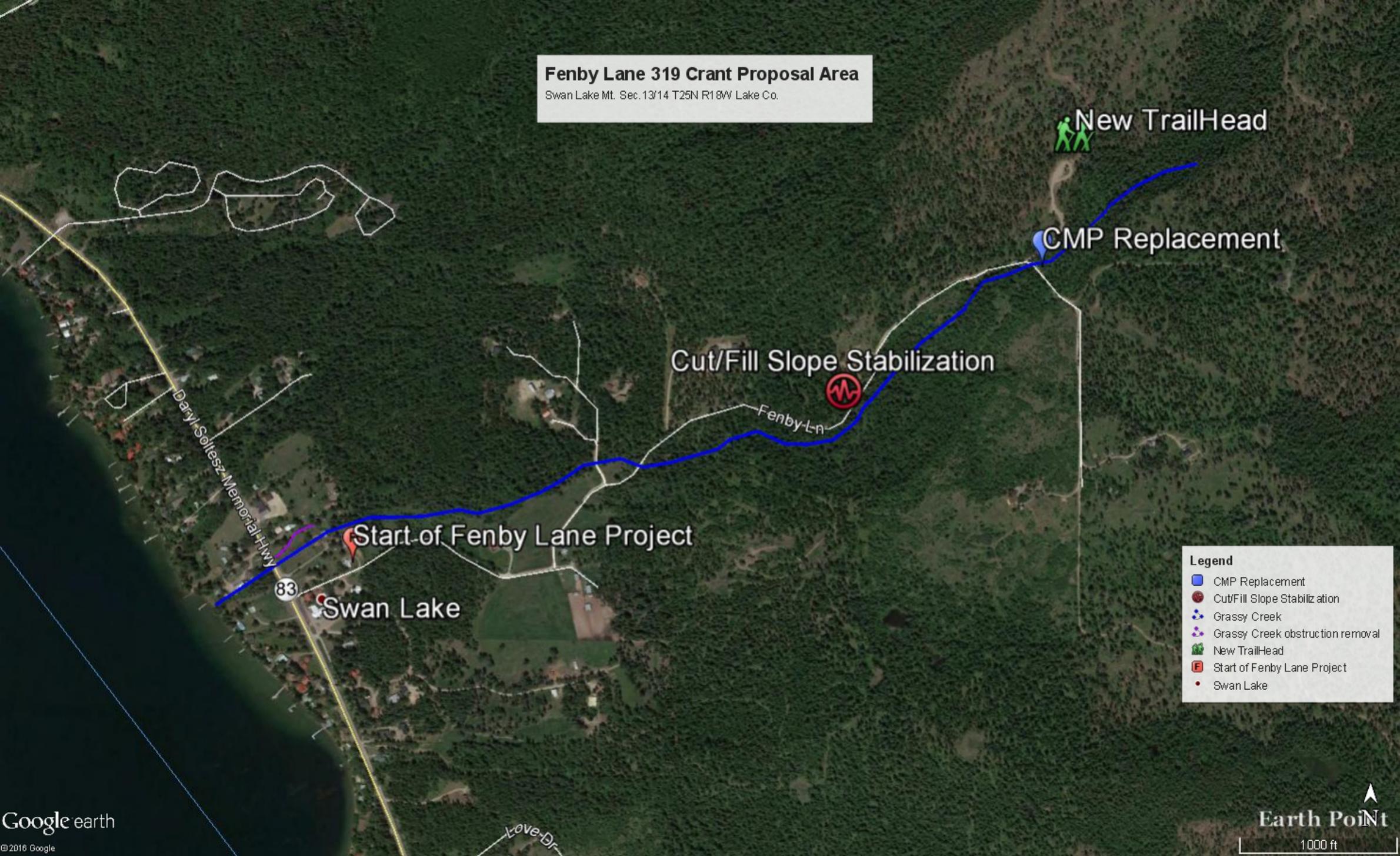
319 Grant

-  S. Woodward Road Rehabilitation
-  Whitetail Slump Repair



Fenby Lane 319 Crant Proposal Area

Swan Lake Mt. Sec. 13/14 T25N R18W Lake Co.



Legend

- CMP Replacement
- Cut/Fill Slope Stabilization
- Grassy Creek
- Grassy Creek obstruction removal
- New Trail-Head
- Start of Fenby Lane Project
- Swan Lake

Swan Valley Connections – 2017 Project Proposals
Current Condition Photos

Fenby Lane Sedimentation



Fenby Lane, CMP Outlet



Whitetail Slump





LAKE COUNTY

106 4th Ave. E.

Polson, Mt. 59860

September 19, 2016

RE: Fenby Lane project for the 319 Water Quality Grant

To whom it may concern;

Fenby Lane is located in a rural part of Lake County in which it is commonplace that the road maintenance is the responsibility of homeowners who share access along the road. The road has never been developed to County standards and as such does not receive County maintenance.

The Flathead National Forest agency has constructed an improved trailhead approximately 1.25 miles up Fenby Ln. and traffic has increased. The existing road is not suitable to handle storm water runoff in its current configuration. Lake County recognizes the need for improvements to this road with regard to storm water runoff and improved traffic safety. Lake County supports the request for grant funding to improve this corridor and tributary flow into Swan Lake. Lake County is willing to commit asphalt millings as top surfacing for this project if funding is granted.

If you require further clarification please feel free to contact me.

Sincerely,

Jay Garrick
Road Dept. Supervisor
Lake County, MT
jgarrick@lakemt.gov



**Montana Fish,
Wildlife & Parks**

490 North Meridian Road
Kalispell, Mt. 59901

9/26/2016

Maria Mantas
Executive Director
Swan Valley Connections
6887 Highway 83
Condon, MT 59826

Dear Maria,

We are aware that you and your organization, Swan Valley Connections (SVC), is seeking a 319 grant from Montana DEQ to improve water quality on impaired water bodies in the Lower Swan River Basin. We are familiar with prior work Swan Valley Connections has implemented through 319 Grants over the last six years, and we commend your continued efforts to see that the impaired water bodies are restored and removed from the list.

SVC's work compliments FWP's land conservation efforts with other partners in the Swan such as TNC and TPL by restoring lands heavily impacted by timber management.

The grant's scope of work includes continuing the annual activities and coordination of the partners and stakeholders through the Technical Advisory Group; continued lake and stream long-term trend monitoring; overseeing the development of long-term and annual monitoring and restoration plans, restoration activities, and related conservation projects; road restoration to reduce sedimentation in the Goat, Squeezer, South Woodward, Whitetail, and Grassy Creek tributaries; and continued education and outreach to encourage support for water quality protection.

These activities will serve to prevent the flow of contaminants into Swan Lake and thereby protect and enhance the quality of water of the Swan Basin. Montana Fish Wildlife & Parks fully support SVC in coordinating the efforts of a broad range of participants to improve water quality in the Swan River and Swan Lake.

Sincerely,


Fisheries Conservation Specialist

September 14, 2016

Maria Mantas
Executive Director
Swan Valley Connections
6887 Highway 83
Condon, MT 59826

RE: Swan Valley Connections 319 Watershed Grant Request

Maria,

This letter is written to inform you of the Department of Natural Resources and Conservation's (DNRC) support for Swan Valley Connection's (SVC) 319 grant proposal to accomplish the following tasks:

- 1) Continuing the annual activities and coordination of the Technical Advisory Group.
- 2) Facilitate and develop action planning.
- 3) Continue lake and stream long-term trend monitoring.
- 4) Continue overseeing the development of long-term and annual monitoring and restoration plans, restoration activities, and related conservation projects.
- 5) Road restoration to reduce sedimentation in the Goat, Squeezer, South Woodward, Whitetail, and Grassy Creek tributaries.
- 6) Continue education and outreach to encourage support for water quality protection.

The DNRC and Swan River State Forest is strongly committed to protecting water quality and is continuing to look forward to actively participating in the Swan Valley Connection's Technical Advisory Group. SVC has been and continues to be effective and efficient in coordinating the efforts of a broad range of participants to better water quality in the Swan Valley. Without these types of funds, completing actions necessary to ensure healthy watersheds into the future would be extremely difficult for the various stakeholders.

Sincerely,

Daniel J. Roberson
Unit Manager, Swan River State Forests
34925 HWY 83
Swan Lake, MT 59811
(406) 754-2301
droberson@mt.gov



File Code: 2600

Date: September 20, 2016

Dear Maria,

I am pleased to learn of your effort to secure a 319 grant from Montana DEQ to improve water quality on tributaries of the Lower Swan River Basin. We have been successful in working together for about ten years to implement various water quality restoration projects elsewhere in the Swan River Basin; namely, in the Cold Creek, Jim Creek, Elk Creek, Herrick Run and Beaver Creek watersheds. These projects have curtailed chronic erosion and prevented future problems from forest roads.

Although your current proposal in Goat, Woodward, Whitetail and Grassy Creek does not involve any National Forest system roads, I commend your continued effort to improve water quality in the Swan River basin. We plan to conduct similar work on a National Forest system road in the Goat Creek basin which will compliment your work.

My staff and I will be happy to continue to partner with you and other stakeholders in the Technical Advisory Group, monitoring efforts and related conservation projects. I fully support SVC in your effort to improve water quality in the Swan River and Swan Lake.

Sincerely,

RICHARD KEHR
Swan Lake District Ranger

cc: Beth Gardner



September 16, 2016

Maria Mantas
Executive Director
Swan Valley Connections
6887 Highway 83
Condon, MT 59826

Dear Maria,

As a retired Swan Ecosystem Center director, I'm pleased to know that Swan Valley Connections is continuing the partnership work begun several years ago to improve and maintain water quality in the Swan River Watershed, and that SVC is continuing to work with Montana DEQ and other groups and organizations in the Swan Valley. Your efforts to restore impaired waterbodies and remove them from the impaired streams' list are commendable.

It's great that the Swan TAG, always a high functioning collaborative group, is continuing with annual activities, including lake and stream long-term trend monitoring; the development of long-term and annual monitoring and restoration plans, road restoration to reduce sedimentation in the Goat, Squeezer, South Woodward, Whitetail, and Grassy Creek tributaries, and continued education and outreach to encourage support for water quality protection.

Swan Valley Connections is the organization with the leadership and skills to coordinate this project. SVC deserves full funding for this work.

Sincerely,

A handwritten signature in cursive script, appearing to read "Anne Dahl".

Anne Dahl
P.O. Box 1351
Condon, MT 59826



September 14, 2016

Maria Mantas
Executive Director
Swan Valley Connections
6887 Highway 83
Condon, MT 59826

RE: Swan Valley Connections, '319' Watershed Grant Request

Maria:

This letter is to inform you that your organization, Swan Valley Connections (SVC), has the full support of the Swan Lakers, a 501(c) 3, not for profit organization. The fundamental mission of the 'Swan Lakers' is to protect and enhance the water quality of Swan Lake. To assure that quality we carry out comprehensive testing of the water in Swan Lake four times a year.

The grant's scope of work includes:

- 1) Continuing the annual activities and coordination of the Technical Advisory Group.
- 2) Facilitate and develop action planning.
- 3) Continue lake and stream long-term trend monitoring.
- 4) Continue overseeing the development of long-term and annual monitoring and restoration plans, restoration activities, and related conservation projects.
- 5) Road restoration to reduce sedimentation in the Goat, Squeezer, South Woodward, Whitetail, and Grassy Creek tributaries.
- 6) Continue education and outreach to encourage support for water quality protection.

These activities will serve to prevent the flow of contaminants into Swan Lake and thereby protect and enhance the quality of water in this special place. The Swan Lakers fully support the SVC in coordinating the efforts of a broad range of participants to better water quality in the Swan Valley and the downstream watershed. Without these types of funds, completing actions necessary to ensure healthy watersheds into the future would be extremely difficult for the various stakeholders.

Sincerely,

Jeff Kemp, President
Swan Lakers
Jkemp42@rocketmail.com

*Friends of the Wild Swan
P.O. Box 103
Bigfork, MT 59911*

September 19, 2016

Maria Mantas
Executive Director
Swan Valley Connections
6887 Highway 83
Condon, MT 59826

Dear Maria,

This letter is to express Friends of the Wild Swan's support for the 319 grant to implement the Swan Lake Water Quality Restoration Plan. The grant's scope of work includes continuing the annual activities and coordination of the partners and stakeholders through the Technical Advisory Group; continued lake and stream long-term trend monitoring; overseeing the development of long-term and annual monitoring and restoration plans, restoration activities, and related conservation projects; road restoration to reduce sedimentation in the Goat, Squeezer, South Woodward, Whitetail, and Grassy Creek tributaries; and continued education and outreach to encourage support for water quality protection.

It is important that we continue to make progress towards achieving the goals in the Swan Lake Water Quality Restoration Plan and Total Maximum Daily Load and this grant would contribute to that goal.

Sincerely,

A handwritten signature in cursive script that reads "Arlene Montgomery". The signature is written in dark ink on a light-colored background.

Arlene Montgomery
Program Director

SPECIFICATION DRAWINGS

Clear Limits and Typical Cross Sections

CLEARPK.WPG

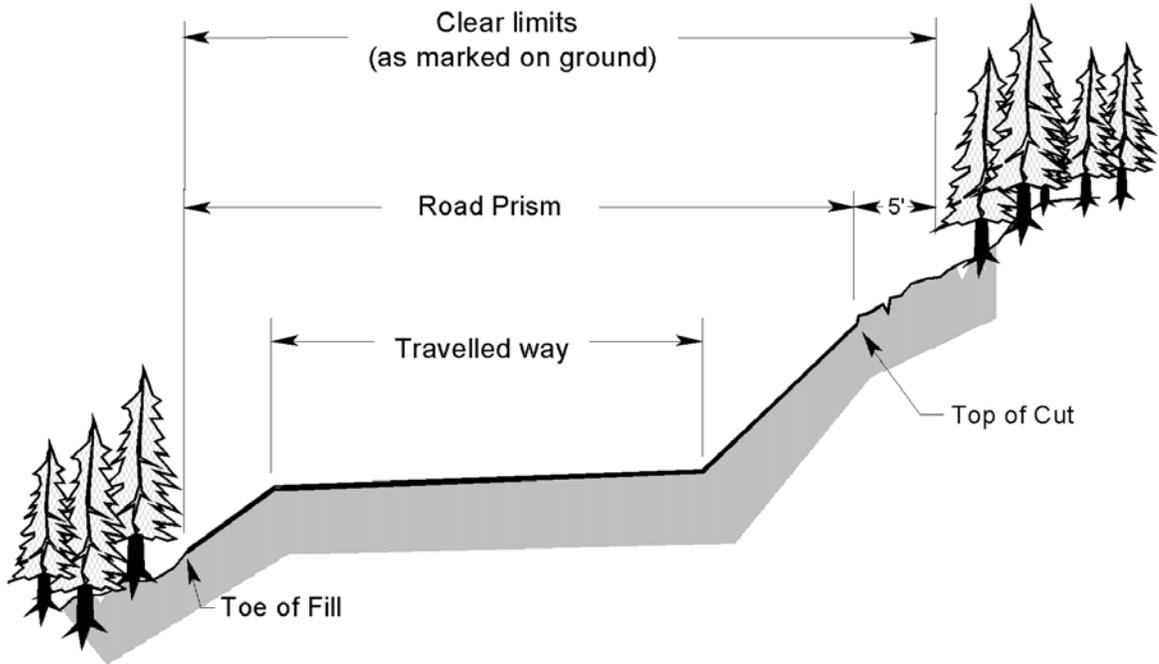


Figure I: Clear limits for New Construction

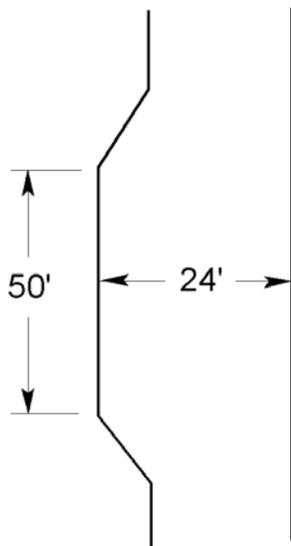


Figure II:
Typical turn out
construction

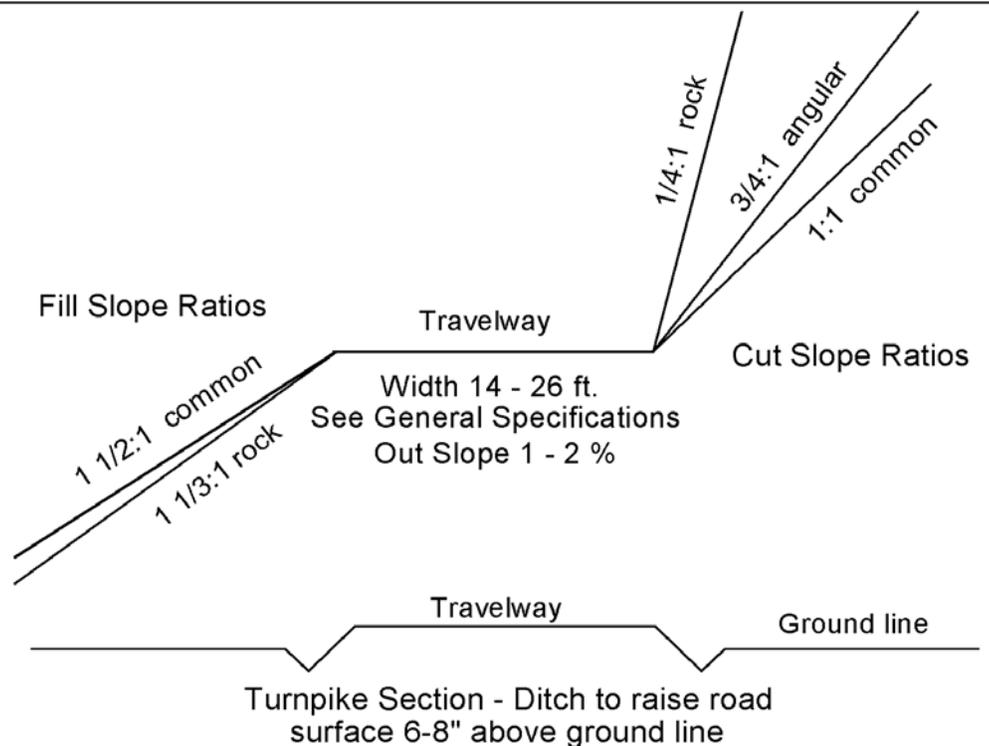


Figure III: Typical Cross Sections

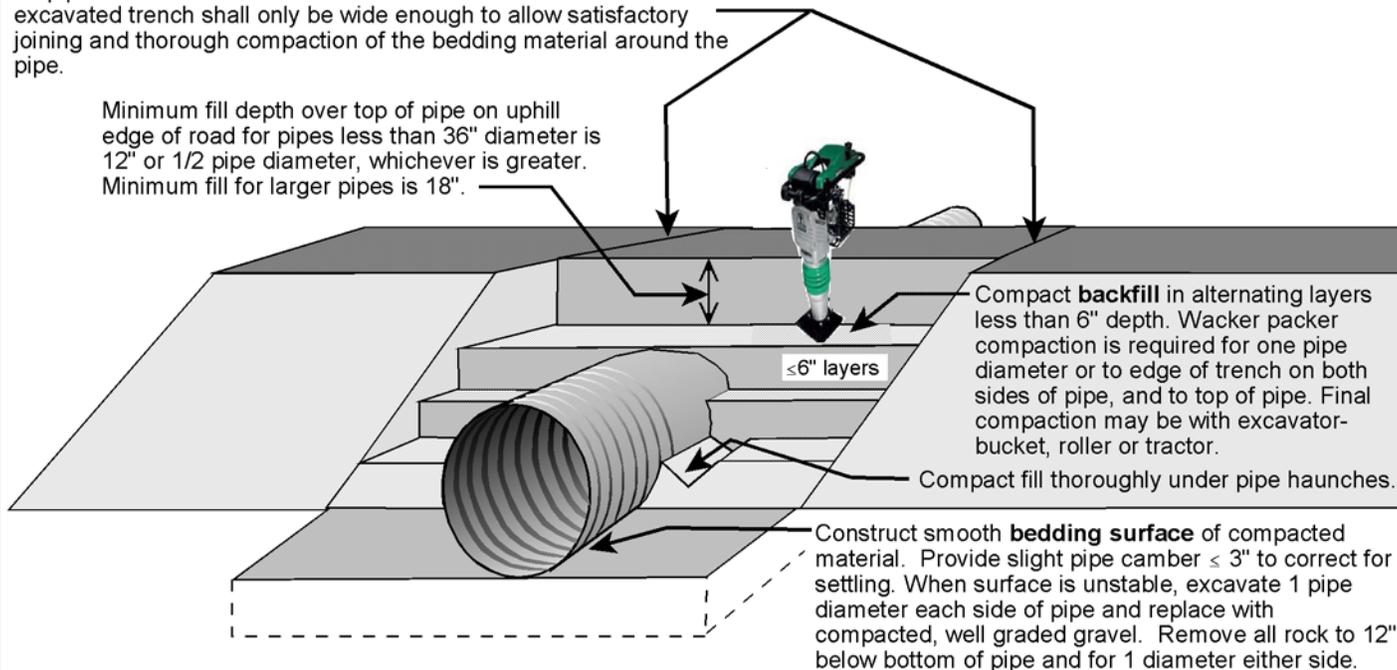
CULVERT REQUIREMENTS

- ▶ Exact locations for pipes shall be determined by the Forest Officer after right of way has been cleared.
- ▶ Backfill shall be select, sorted material. Gravel may be required in road log. If native backfill is used, rocks over 3 inches diameter, organic or frozen materials are not permitted.
- ▶ Pipe shall be protected by adequate fill before equipment is allowed to cross.
- ▶ Pipe that is damaged or improperly installed shall be repaired or replaced at purchaser's expense.
- ▶ The Forest Officer must be contacted two days before any culvert installation and must be present for any wet site culvert installation.
- ▶ Wet site installations will have additional requirements for timing, erosion control and management.

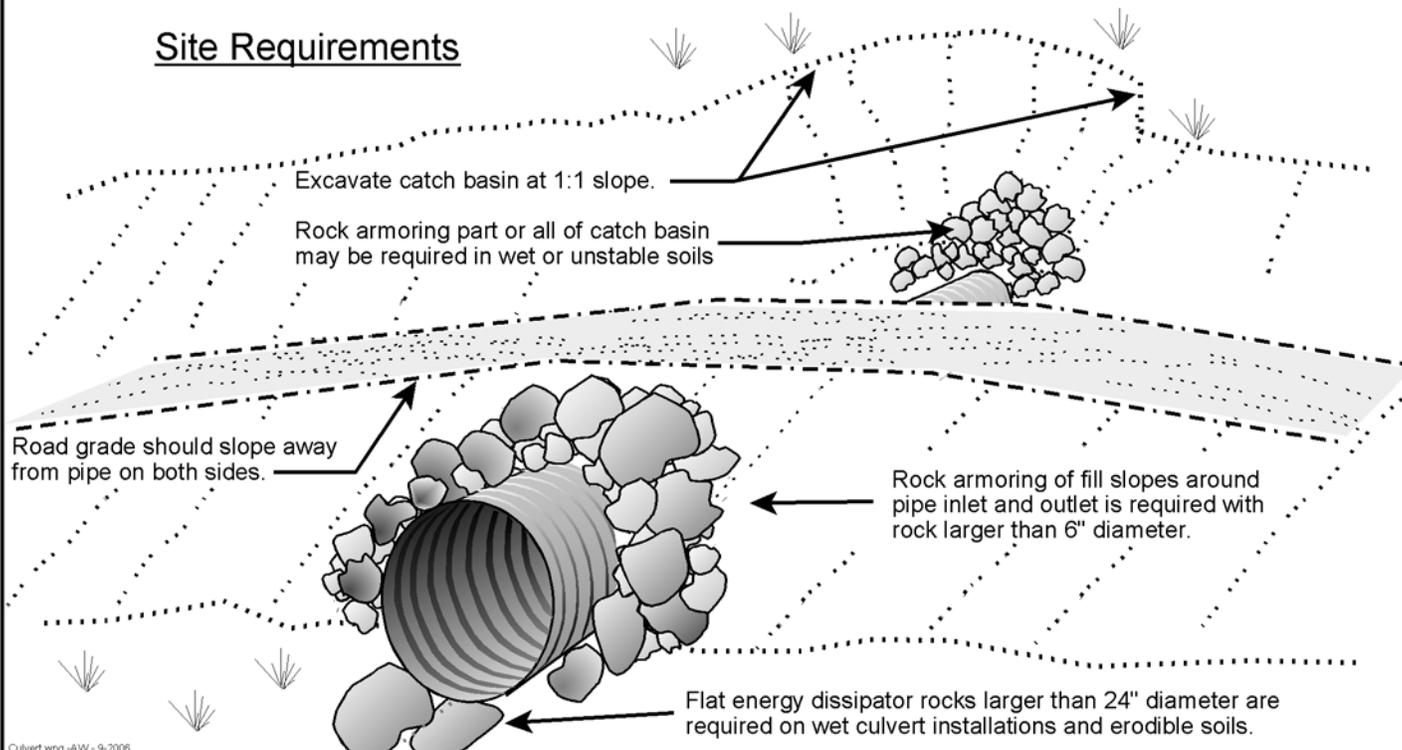
Installation Requirements

All pipes shall be installed with a backhoe or excavator. The excavated trench shall only be wide enough to allow satisfactory joining and thorough compaction of the bedding material around the pipe.

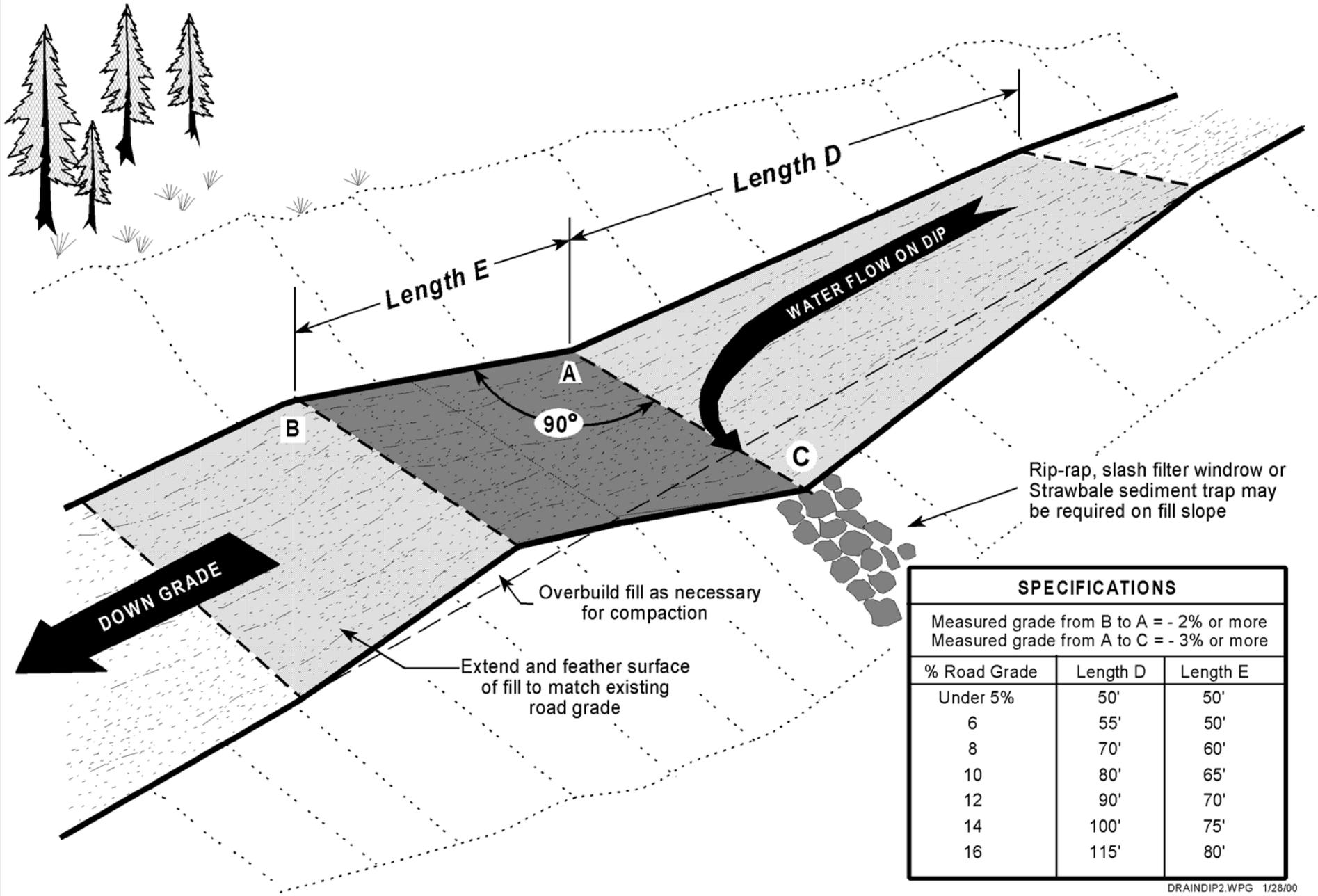
Minimum fill depth over top of pipe on uphill edge of road for pipes less than 36" diameter is 12" or 1/2 pipe diameter, whichever is greater. Minimum fill for larger pipes is 18".



Site Requirements



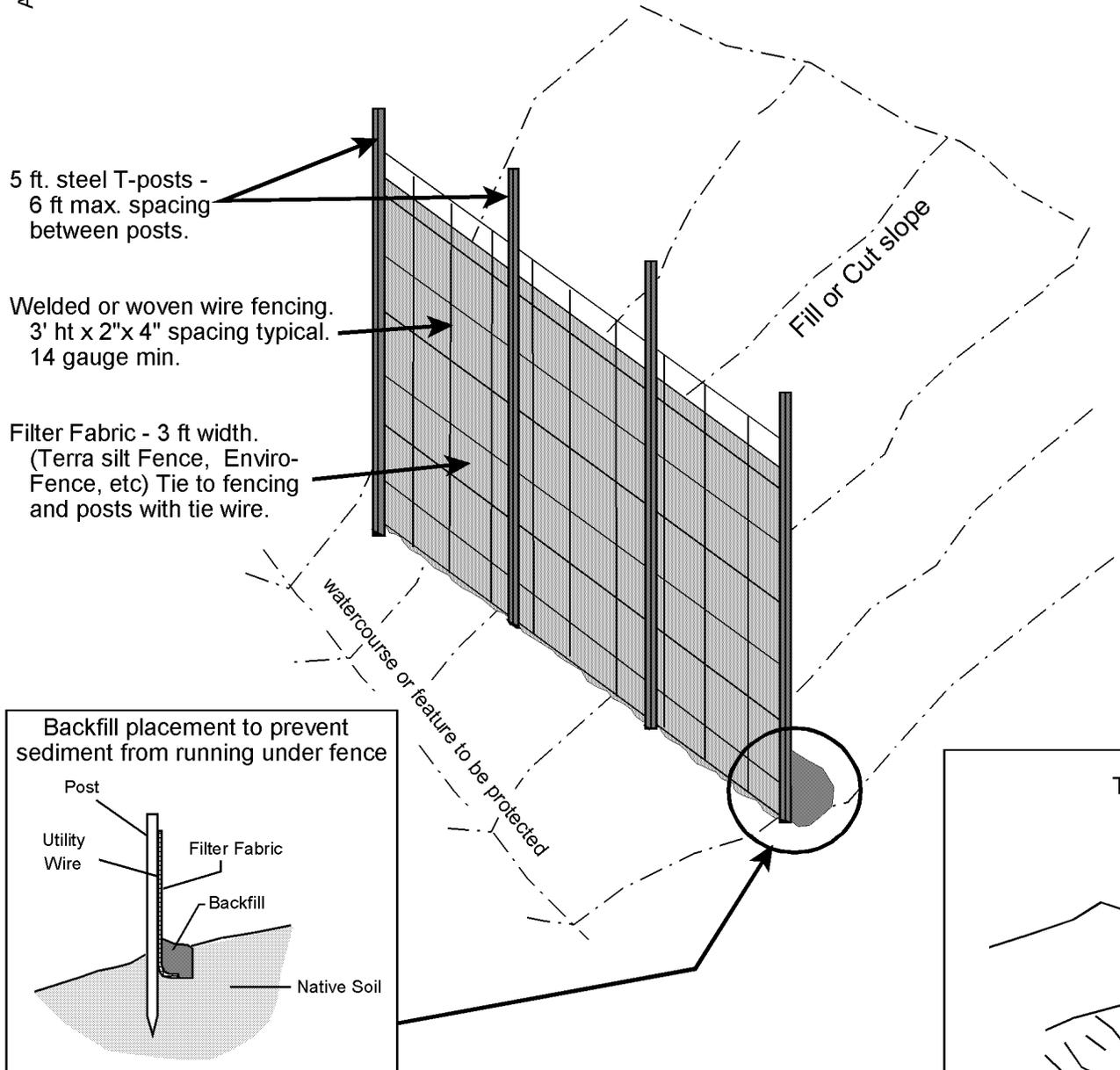
STANDARD DRAIN DIP FOR SINGLE LANE ROAD



SPECIFICATIONS		
Measured grade from B to A = - 2% or more		
Measured grade from A to C = - 3% or more		
% Road Grade	Length D	Length E
Under 5%	50'	50'
6	55'	50'
8	70'	60'
10	80'	65'
12	90'	70'
14	100'	75'
16	115'	80'

FILTER FABRIC SEDIMENT CONTROL FENCE

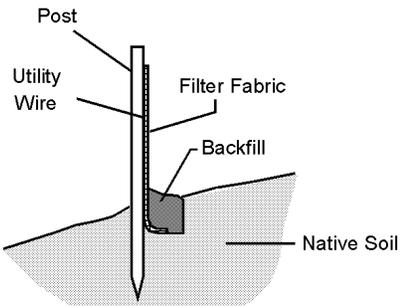
Install on stream bank or fill slopes to prevent sediment from entering watercourses



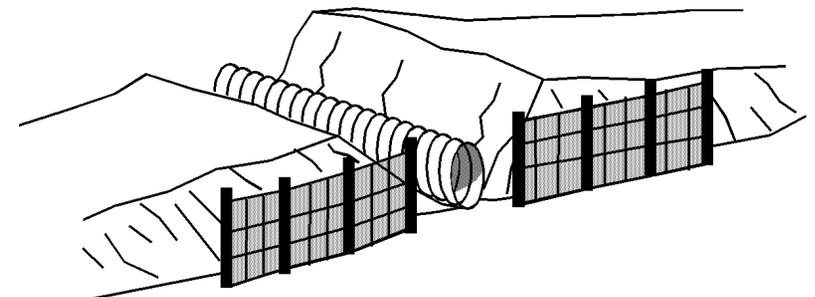
INSTALLATION REQUIREMENTS

1. Installation may be required prior to any construction activities at crossing sites.
2. Two to four fences per crossing site may be required.
3. Fences will be removed or left in place following construction as directed by the Forest Officer.
4. Wood-staked commercial silt fence may be approved by the Forest Officer only for short-term, light duty fences used for less than one season.
5. Steel posts and wire backing are required for all heavy duty applications, fences where fill may back up against the fence, fences that may overwinter, and permanent applications.

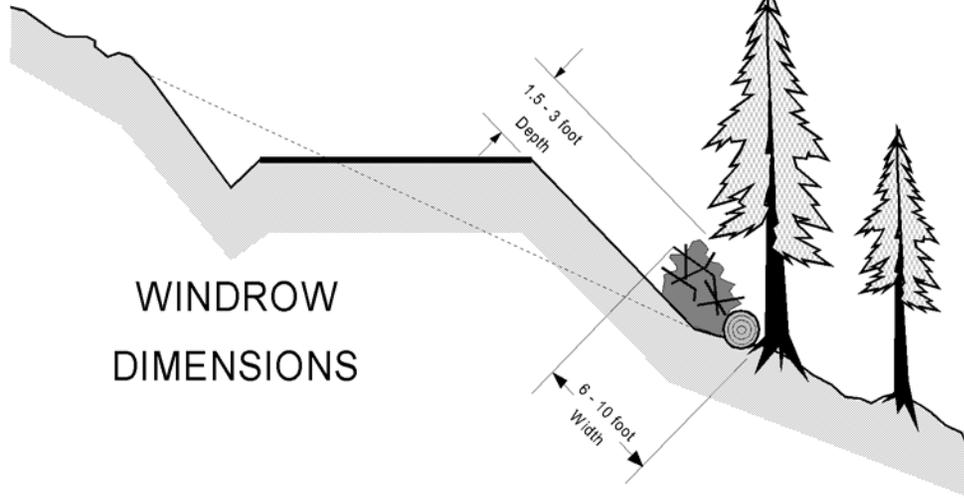
Backfill placement to prevent sediment from running under fence



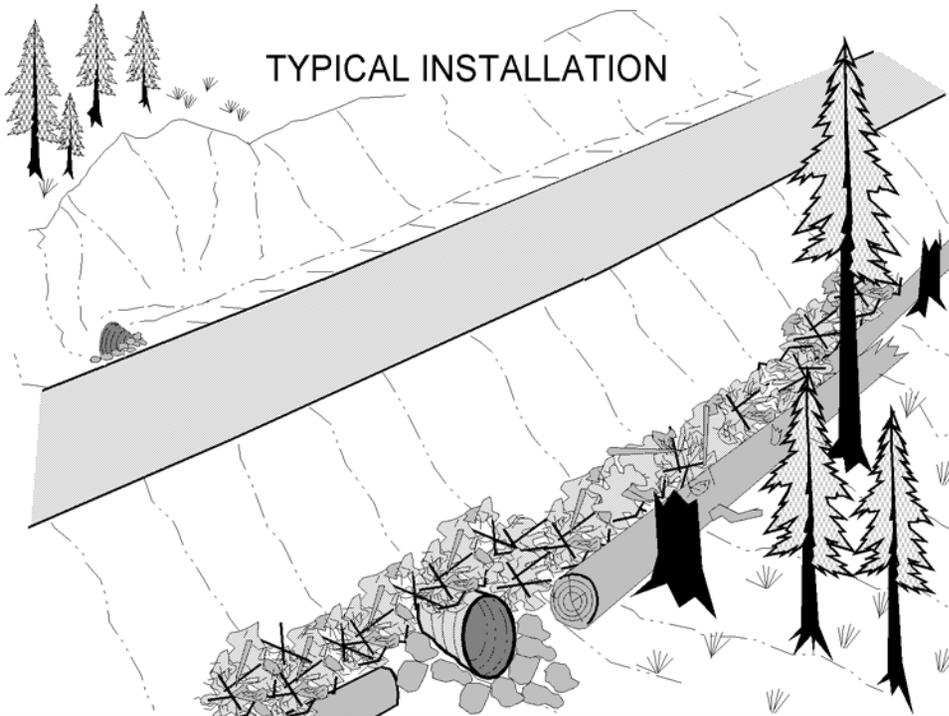
Typical Application at Culvert Installation



WINDROW DIMENSIONS



TYPICAL INSTALLATION



SLASH FILTER WINDROW SPECIFICATIONS

Materials must be stockpiled prior to construction of windrows.

Cull logs must be anchored in place against undisturbed stumps, large rocks or trees at the toe of the fill.

Slash must be placed above the logs with a backhoe and tamped into place with the bucket.

Slash should be tamped so it is embedded approximately 6 inches into the fill surface to prevent water from running under the windrow.

Slash, limbs and tops must be smaller than 12 feet long and 6 inches diameter. Stumps and root wads may not be used.

Anchor logs must be larger than 16 inches diameter. Reasonably sound cull logs may be used.

Windrows shall not interfere with the functioning of drainage structures or block stream channels.

All locations will be staked or flagged by the Forest Officer.

When installing windrows over the top of culverts, pipe length must be increased by 3 - 4 feet to accommodate windrow placement.