

Eccles Creek Streambank Reclamation Erosion Control

Project ID: 4130
Status: Proposed
Fiscal Year: 2018
Submitted By: N/A

Project Manager: Priscilla Burton
PM Agency: Utah Division of Oil Gas and Mining
PM Office: Price Field Office
Lead: Utah Division of Oil Gas and Mining
WRI Region: Southeastern

Description:

Install a culvert to treat highway run-off and excelsior logs along the contour of the steep streambanks of Eccles Creek to protect the soil from erosion while vegetation becomes established.

Location:

On the South side of highway 264, four miles south of Scofield.

PROJECT NEED

Need For Project:

Seven thousand cubic yards of fill and a 36 inch culvert were removed to restore the Eccles Creek channel bottom in 2015. The resulting stream banks have a slope of 2h:1v, in the narrow canyon beside the paved highway 264. Due to a bend in the highway, road run-off concentrates at the top of the reclaimed slope and has created several, deep erosion rills down the slope to Eccles Creek. Erosion of the slopes is affecting vegetation establishment. Sediment has reached the creek, affecting fish habitat.

Objectives:

The objective is to control erosion from the highway to allow establishment of vegetation on the reclaimed south facing slope (approximately 0.2 acre in area). Utah Department of Transportation will construct a roadside ditch and install a culvert at the top of the slope to remove the water from the reclamation area. Excelsior logs will be placed along the contour of the slope to slow sheet wash and fill in existing erosion rills.

This project on Eccles Creek will :

- Stabilize a reclaimed site;
- Improve water quality;
- Improve habitat;
- Improve recreational fishing.

Threats / Risks:

Fine sediments entering the creek will reduce spawning areas and fill in fishing holes and contribute to phosphorus loading in Scofield Reservoir.

Bonneville Cutthroat Trout are a species of concern in the stream. Mule deer and elk utilize the reclaimed slopes.

Relation To Management Plan:

The 2015 reclamation of Eccles Creek (WRI grant #3352) was completed to allow return the perennial flow in Eccles Creek to a stream channel, to prevent a potential hazard of a blocked culvert, to allow fish migration one mile further upstream, and to increase recreational enjoyment of the stream.

This project will control erosion of the recently reclaimed slopes, and protect the stream while vegetation becomes established. This area is within the Deer Herd Management Plan for the Manti Unit 16B on lands that winter large herds of deer and elk.

Fire / Fuels:

The fill and culvert were removed from Eccles Creek in 2015 to allow free flow of water in the channel should there be flooding as a result of a natural disaster, such as wildfire.

Water Quality/Quantity:

This project addresses the impacts of highway run-off, in cooperation with the Utah Department of Transportation. This project will implement sediment control to improve soil infiltration and promote vegetation establishment on the slopes above the creek.

Eccles Creek waters enter Mud Creek and eventually Scofield reservoir, approximately 4 miles down stream. Eccles Creek is protected as a drinking water source and a cold water fishery. Scofield Reservoir has been listed

as an impaired water body for phosphorus and dissolved oxygen. Phosphorus may adhere to soil particles in suspension or be in solution in the water.

Compliance:

The project was under Division of Oil, Gas, & Mining as part of a former coal mine site. Archaeological clearance was obtained in 1980 under the Valley Camp Belina #2 Mine. The investigation was titled, Intensive Archaeological Surface Evaluations in the Proposed Whiskey Creek Canyon. Pleasant Valley Project in Carbon County, Utah. 1980. F.R.Hauck, PhD and D.G. Weder. Archaeological Environmental Research Corporation. Paper No. 21. In. 007001 Mining and Reclamation, Appendix 411.140. No cultural or historic sites were found at this stream crossing location. This project be within the boundaries previously surveyed, on reclaimed slopes. No further survey is planned.

NEPA is no required on private property on a previously disturbed site.

Methods:

The Utah Department of Transportation will contract the work to install a road ditch (asphalt or riprap) and an 18-24 inch culvert. The ditch will parallel the highway at the top of the slope. The ditch will direct road runoff to an 18 or 24 inch culvert to be installed perpendicular to the slope. An excavator and motor grader and a laborer will be required. The Division of Oil, Gas & Mining will oversee the installation of excelsior logs at 10 foot intervals along the contour of the north facing slope. The slope is 200 ft long and 45 feet in height above the stream. Therefore, three, 200 ft lengths of excelsior logs will be required. Logs will be set six inches into the ground using shovels and picks. Logs will be anchored with wooden stakes.

Monitoring:

DOGM will inspect the site monthly during accessible times of the year (May - November). Vegetation and sediment control will be monitored. Photographs will be uploaded annually.

The DOGM water quality database will be used to monitor the water quality at Skyline Mine water monitoring points VC6 (upstream) and VC9 (downstream). Field data and lab analysis collected is as described in Table 2.3.7-1 and 2.7.7.2 of the Skyline Mining and Reclamation Plan. SKYline Mine began in 2007 conducting macro-invertebrate and cutthroat trout surveys every three years. The results of these surveys will be monitored (Skyline Mine MRP, Vol 1A, Sec 2.8, p. 2-71, 2-71A, B, &C and Table 2.8-1a).

Partners:

Brian Nielsen, Utah Department of Transportation. Darin Caine, landowner.

Future Management:

There is no grazing of these slopes. There will be no further logging of the surrounding land owned by the Oman Trust (Darin Caine).

Domestic Livestock Benefit:

Water quality in Mud Creek and Scofield benefits livestock.

BUDGET	WRI/DWR	Other	Budget Total	In-Kind Total	Grand Total
	\$5,000.00	\$9,000.00	\$14,000.00	\$5,000.00	\$19,000.00

Item	Description	WRI	Other	In-Kind	Year
Personal Services (permanent employee)	project management by DOGM and UDOT and one year monitoring.	\$0.00	\$0.00	\$5,000.00	2017
Contractual Services	labor to install excelsior logs: cut trench, stake logs in place.	\$2,500.00	\$0.00	\$0.00	2017
Contractual Services	mobilization and demobilization and operation cost of excavator and motor grader w/operator.	\$0.00	\$6,500.00	\$0.00	2017
Materials and Supplies	purchase, deliver and install 45 ft of 18 inch culvert.	\$0.00	\$2,500.00	\$0.00	2017
Materials and Supplies	4 pallets, 12" x 10 ft. excelsior logs 5 bundles 24" wooden stakes freight	\$2,500.00	\$0.00	\$0.00	2017

FUNDING	WRI/DWR	Other	Funding Total	In-Kind Total	Grand Total
	\$5,000.00	\$9,000.00	\$14,000.00	\$5,000.00	\$19,000.00

Source	Phase	Description	Amount	Other	In-Kind	Year
UDOT		UDOT will pay the costs of heavy	\$0.00	\$9,000.00	\$2,500.00	2017

Source	Phase	Description	Amount	Other	In-Kind	Year
		equipment operators to construct the road ditch and install the culvert. UDOT will monitor the contractor's work (shown as in-kind funding).				
UDOGM		Monitor project during installation. Provide photographs and water quality data.	\$0.00	\$0.00	\$2,500.00	2017
UWRI		UWRI request will pay for excelsior logs, wooden stakes and their installation.	\$5,000.00	\$0.00	\$0.00	2017

EXPENSE	WRI/DWR	Other	Expense Total	In-Kind Total	Grand Total
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Source	Phase	Description	Amount	Other	In-Kind	Year
UDOT		N/A	\$0.00	\$0.00	\$0.00	
UDOGM		N/A	\$0.00	\$0.00	\$0.00	
UWRI		N/A	\$0.00	\$0.00	\$0.00	

SPECIES

Species	"N" Rank	HIG/F Rank
Mule Deer		1
Threat		Impact
Roads – Transportation Network		High
Storms and Flooding		Medium
Elk		2
Threat		Impact
Roads – Transportation Network		Medium
Bonneville Cutthroat Trout	N4	1
Threat		Impact
Soil Erosion / Loss		Low
Stormwater Runoff		Low

HABITATS

Habitat
Mountain Shrub
Threat
Not Listed
Impact
NA

PROJECT COMMENTS

COMPLETION

Start Date:

End Date:

FY Implemented:

2018

FY Completed:

Final Methods:

N/A

Project Narrative:

N/A

Future Management:

N/A

Map Features

ID	Feature Category	Action	Treatment/Type
1147	Water control structure	Reconstruction	N/A