

Taylor Fork Watershed Rehabilitation Section 1 Implementation Review

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On July 25, 2006 an Implementation Monitoring Review was held for the Taylor Fork S1 reclamation project. The Taylor Fork project focused on watershed rehabilitation with benefits to water quality, fisheries, wildlife habitat, recreation and visual quality. In 2002 and 2003, the Gallatin National Forest, Trust for Public Lands, and the 320 Ranch completed a significant Land Conservation project in the Taylor Fork drainage. The purpose of the "320 Ranch - Taylor Fork project" was to acquire over 3,400 acres of critical private lands in the Taylor Fork, in order to conserve critical habitat for elk, moose and grizzly bear, protect streams, water quality and fisheries, preserve historic recreational opportunities, and to avoid future subdivision and development. Congressional and public support for the project was been extensive. Consolidating public land in the Taylor Fork area has benefits for multiple resources. This area is prime habitat for wildlife (grizzly bear and elk) and fisheries (westslope cutthroat trout). The Section 1 developments were visually very impactful with considerable public expectation for restoration with the transition to National Forest management. The developments and associated erosion and sedimentation problems were a major reason for inclusion of Taylor Fork on the Montana DEQ 303(d) list in 1996. Removing the developments (road prism, cabin sites, and culverts) in Section 1 was intended restore the area to a more stable and natural condition and a major part of the 303(d) list water quality compliance action plan and the Taylor Fork 4(b) BMP plan (August 2005).

The goal of this project was to rehabilitate Section 1, T9S R3E by removing the formerly private land developments. Before Section 1 was acquired, 7 miles of new roads and 32 cabins were constructed. NEPA requirements for this restoration project were completed in 2002 with the Taylor Fork Timber Sale and Road Restoration EIS (10/2000). Additional requirements were added in the 320 Ranch – Taylor Fork Land Acquisition and Related Land Use Actions DN and FONSI (4/2002). The S1 cabins were removed in 2004 and the roads decommissioned in 2005. The project consisted of removing cabins and a variety of road treatments including ripping, re-contouring, hydro-mulch, seeding, and erosion blankets, on about 15 acres on 13 sections of road.

Objective or mitigation measure and effectiveness definitions include:

Application

- 5- operation exceeds requirements of objective or measure
- 4- operation meets requirements of objective or measure
- 3- minor departure from measure, objective marginally met
- 2- major departure from measure, objective sporadically met
- 1- gross neglect of measure, objective not met

Effectiveness

- 5- improved conditions over pre-project condition
- 4- adequate protection of resources, effective
- 3- minor and temporary impacts on resources, moderately effective
- 2- major and temporary or minor and prolonged impacts on resources or only slightly effective
- 1- major and prolonged impacts on resources or not effective

Evaluation Items - BMP's	source	Applic	Effect	Comments
Taylor Fork Section 1 Treatment Objectives				
1. TPL purchase approximately 3,400 acres of land in 6 sections in 2 phases and convey to the USFS including 627 acres in S1	320 Ranch – ROD 4/2002 pg. 2	4	4	Completed in 2002 and 2003
Taylor Fork Section 1 Treatment Accomplishment				
1. Remove 29 cabins and the fence in S1.	320 Ranch – ROD 4/2002 pg. 4	4	4	completed fall of 2004
2. Road closure and restoration of roads on offered lands in S1 – ripping, seeding, and stabilization of land in the old road beds.	320 Ranch – ROD 4/2002 pg. 5	4	4	stabilization satisfactory
3. Obliterate existing roads that are closed to public motorized use in Taylor Fork to reduce sediment delivery and improve native fisheries habitat.	Taylor Fork TS and Road Restoration EIS pg. 6	4	4	no evidence of erosion from any treated road segments.
4. Forest Service designates the seed mixture to be used in road rehabilitation activities.	Taylor Fork TS and Road Restoration EIS pg. 23	3	2	Forest Service designated seed mixture which was certified as “weed free”. However considerable field penny cress was evidently in the seed mix with considerable growth on treated areas.
5. Monitor effectiveness of the existing road closures over next 5 years (2001-2006)	Taylor Fork TS and Road Restoration EIS pg. 25	4	4	Road closures throughout the Taylor Fork drainage have been consistently monitored over the last 5 years with satisfactory compliance

Finding will be illustrated in a few photos.



Former cabin site in the north east part of Section 1. Twenty nine of the 32 cabins were removed in the fall of 2004 and the cabin sites reclaimed.



Ripped and drained road on the north side of section 1. These north facing roads had more organic soils than the harsher south facing slopes and had excellent germination of the grass seed mix. No erosion on these ripped roads was occurring. The field penny cress in the seed mixture, however, provided a robust response.



Ripped road on the south part of section 1. Revegetation and grass establishment was excellent. However, heavy use by recreational horses from the Nine Quarter Circle guest ranch has compromised the road recovery. The horse use is re-compacting the ripped roads and creating parallel trails.



Recontoured road segment in the south part of section 1. The recontouring was very successful in obliterating the road prism by eliminating the road surface as well as cut and fill slopes. No erosion along this re-contoured section was observed although the field penny cress in the seed mix is competing with the new and native grass establishment.



Erosion blankets were very effective in checking erosion on some of the most harsh and visually sensitive areas of the re-contoured roads.

Conclusions

1. TPL purchase in Taylor Fork was quite successful in acquiring private lands for conversion to the National Forest system. The purchase and cabin removal required considerable long term diligence on the part of TPL and the Forest Service.
2. The re-contouring and ripping treatments of the roads were very effective in stopping erosion from the road surfaces and preventing sediment sources.
3. Grass establishment from re-sprouting or in the seed mix has been satisfactory. Re-vegetation efforts, however, have been compromised by weeds, evidently in the seed mix (field penny cress) which have robustly established in several of the seeded areas.
4. Recreational guided horse use from the Nine Quarter Circle Ranch is very heavy over the treated area which is compromising re-vegetation in several of the reclaimed road segments.

Recommendations

1. Evaluate the appropriateness of the heavy guided horse use from the Nine Quarter Circle Ranch on the rehabilitated road areas. Consider closing Section 1 to horse use off Trail 223 until the road re-vegetation is complete (approximately 3 years) then confine horse use to a single trail (not multiple trailing widths).
2. Weed treatments in Taylor Fork Section 1 are a high priority since the area is relatively weed free. The field penny cress - evidently introduced in the seed mix, and thistle - likely released by the ground disturbance, should be aggressively treated.
3. No grass/forb reseeding is needed.

4. Erosion blankets greatly enhance vegetative establishment, visual recovery, and retard weed establishment. Erosion blanket use is appropriate for highly visible areas.

5. The Gallatin NF should consider purchase of better (than was available in 2005) hydro-mulching equipment for watershed rehabilitation, range, and road side treatment projects.