ENVIRONMENTAL ASSESSMENT

IMPLEMENTATION OF A FUTURE FISHERIES PROJECT ON ELK CREEK

Prepared by
Montana Fish, Wildlife & Parks
July 11, 1997

GENERAL PURPOSE:

The 1995 Montana Legislature enacted statute 87-1-272 & 273, MCA which directs the Montana Department of Fish, Wildlife & Parks (FWP) to restore and improve degraded wild fisheries. The legislation established a one-time funding account to ensure that this function would be accomplished. The Elk Creek Watershed Project described herein is one of 32 applications made during the third funding cycle which ended January 1, 1997.

BACKGROUND:

The Elk Creek watreshed is that area of land drained by Elk Creek, the East and West Forks of Elk Creek and numerous smaller tributaries. The upper portions of both the East and West Forks traverse lands administered by teh Kootenai National Forest. The remaining lower portion of the drainage is entirely on private property.

The watershed encompasses an area of approximately 55 square miles and extends generally from the headwaters of Elk Creek near Gem Peak to the Cabinet Gorge Reservoir on the Clark Fork River. The drainage flows northward to the Clark Fork and is the last tributary of the Clark Fork River before passing into Idaho.

The Green Mountain Conservation District (GMCD) in partnership with the Montana Watercourse and the Adopt-A-Stream Project sponsored the formation of a new citizens group called the Elk Creek Watershed Council (ECWC). This area was chosen for its manageable size, manageable problems and because of the strong tradition of cooperation in the community. Organizational meetings occurred in November and January in Heron. Meetings have been held monthly since initiation.

In addition to citizen members of the Watershed Council, a technical advisory team was appointed. This team consists hydrologists, biologists, soil scientists and foresters from government agencies and the private sector. The purpose of this team is to provide guidance to the Council.

Sanders

The initiation of the ECWG was very timely. In December and January, this drainage was subjected to two major "rain-on-snow" flooding events. Substantial damage occurred throughout the drainage. Training offered by the U.S. Forest Service in "stream mechanics" helped the group of drainage-wide landowners to begin to think about solutions on the watershed basis.

In February, Watershed members performed a flood damage assessment survey of Elk Creek. This effort was part of the required documentation for the Sanders County Emergency Management Coordinator. The survey revealed considerable erosion, deposition and stream channel modification. The evaluation took the form of walking the entire length of the stream and detailing the damage sites. This documentation followed the "Montana Stream Management Guide for Landowners, Managers and Stream Users" direction. A total of 38 sites along the 9 mile survey reach were identified as needing attention.

With this information, an application to the Future Fisheries Improvement program (FWP) was completed. Funding was secured to hire a professional consulting firm to refine the actual need. Watershed Consulting was the firm selected for the analysis. Of the original identified sites, 32 were will require direct channel work, bank revetment or re-vegetation.

I. DESCRIPTION OF THE PROPOSED ACTION:

Channel work will be performed at four sites. This work includes manipulation of the channel pattern, modification of the channel geometry, bank revetment with natural materials and installation of fish habitat.

Bank revetment will be performed at 23 additional sites. This effort will be accomplished mainly with vegetative measures. This type of bank revetment employs "Rosgen type techniques" including "root wads", header logs, bank sloping, placement of sods and willow clumps. At 14 of the 23 bank revetment sites, the stabilized bank will be re-constructed at the original bank line, and the bankfull width will be returned to its pre-erosion configuration.

The last class of work involves five sites where the work is limited exclusively to revegetation. This work generally involves transplanting of riparian vegetation (willow clumps, alder bushes, sod mats and young trees). In some cases, areas are occasionally seeded when sod volumes are limited.

A. Location of Project

This remediation project is proposed for the Elk Creek drainage, south of Heron, in Sanders County. This work is planned for 32 separate sites located on twelve different ownerships.

B. Project Benefits

Elk Creek currently supports Westslope cutthroat, Eastern Brook and brown trout. Historically bull trout inhabited this drainage,but none have been found in recent years.

It is the intention of this project to enhance the fish habitat on Elk Creek to increase the numbers of resident salmonids. Additionally, there is interest in restoring the Bull trout population - if it can be accomplished.

Private properties along this stream are generally open to public angling if permission is requested.

Other benefits of this work include a return of a naturally functioning stream that has improved water quality, has fewer eroding banks and increased standing crop of fish. Indirect benefits of a restore stream are the demonstration values it has for surrounding tributaries. Lastly, if the streams are maintained ina healthy condition they should be more tolerant of flow fluctuations that result from upland vegetation changes. In time, it is hoped that upper drainage forests will again provide shaded slopes and reduce the risk of violent run-off events.

II. IMPACTS TO THE PROPOSED ACTION

Please review the attached checklist. The proposed project will restore channel stability and reduce sediment contribution to the stream. The intent of this work is to improve the fishery of Elk Creek. Increasing the channel stability and improving the riparian plant community should result in improved fish populations.

A. Impacts to the Physical Environment

1. Terrestrial & Aquatic Life and Habitats

Habitat for riparian dependent wildlife will be restored through the efforts of this project. The cover component of this habitat - once restored - will result in a more attractive and productive wildlife area.

Fishery benefits of this project include the maintenance and enhancement of a resident trout population. The channel stability will be increased, sediment content of the gravel will be reduced, stream cover and shading should be improved.

2. Water quality, quantity and distribution

Most of the work will be accomplished under wet conditions. The least damaging period for construction is during late summer when stream flows are at their lowest level. Even working during this ideal time period will cause some short-term increases in turbidity. A short-term exemption from water quality standards may be necessary. Whatever conditions the Water Quality Division places on the permit, will be followed.

In the long-term, measures to stabilize banks and minimize erosion will improve water quality. Streamflow will not be changed by this project.

3. Geology and soil quality, turbidity and moisture

No effects on the areas geology are expected to occur above the active high-water mark. Once the vegetation is established, it should act as a "filter mat" and help hold the soil on upland areas.

The effects of this project on the geology below the high-water mark are to curtail sediment contribution from the upland locations into the riverine situation. This reduction in sediment contribution should allow the stream to use its energy to transport and sort sediment that already exists within the channel. Ultimately, the active channel should experience a reduction of fine sediment - assuming nothing else in the system changes.

4. Vegetation cover, quantity and quality

This project will eventually restore the riparian plant community to a natural condition along Elk Creek. The process of vegetative recovery will require many years, but should progress in a predictable fashion as long as the bank protection does not fail or grazing practices aren't detrimental.

5. Aesthetics

The aesthetics of the area are pleasant, except for the glaring presence of numerous eroding streambanks. The general appearance of the stream corridor will be vastly improved once the riparian community recovers and Elk Creek again appears to be a functioning waterway.

9. **Historical and archaeological sites**

The proposed activity will be confined to those areas of the stream channel that have been disturbed by man's activities, fluvial process of the stream and/or the process of grazing livestock.

Since the entire area is located on privately owned property and the changes occurred as a result of natural process, this action does not appear to meet the definition of an "undertaking" as described in the state antiquities act.

The proposed project work will be entirely occurring within the floodplain. The four proposed channel modifications will require a Nationwide Army Corps of Engineers "404" permit, therefore necessitating compliance with the federal historic preservation regulations. It is believed, given the present condition of the area, that there exists little likelihood of impacting any significant cultural materials. The State Historic Preseervation Office will be contacted for their concurrence and clearance. If required, a cultural survey will be conducted at FWP expense.

B. Impacts to the Human Environment

7. **Access to & quality of recreational activities**

As stated previously, public recreational access to the stream is only limited requesting access permission from property owners. The quality of the fishery is expected to markedly improve after these active erosion and channel migration problems are corrected. The net result of this work will be to increase the quality of recreational opportunities locally, while maintaining reasonable public access.

III. DISCUSSION AND EVALUATION OF REASONABLE ALTERNATIVES

A. The "No Action" Alternative

If this project is not completed, the following consequences are likely to result:

- the riparian plant community will remain in a degraded condition,
- angling opportunities within this drainage will continue to be minimal,
- erosion of the streambank will continue to worsen, and
- sediment contribution to this already damaged system will increase.

B. The Proposed Alternative

The proposed project will result in the following:

- the riparian plant community will recover from its present degraded condition,
- angling opportunities within the Elk Creek drainage will be greatly improved,
- erosion of the streambank will be greatly reduced,
- sediment contribution to the stream will be minimized.

IV. ENVIRONMENTAL ASSESSMENT CONCLUSIONS SECTION

A. Is an EIS required? No

This review has clearly demonstrated that the impacts associated with this project are not significant. The net result of the proposed action is a return to a more natural situation.

B. Describe the level of public involvement.

The project was reviewed and supported by the public review panel of the Future Fisheries Improvement program at the July meeting. Additionally, a summary of this proposal was sent to all Fish, Wildlife and Parks Commissioners for review.

This Environmental Assessment is being distributed to all individuals and groups listed on the cover letter.

Lastly, the Elk Creek Watershed Remediation project was approved by the Commission at their July 11, 1997 meeting.

C. Duration of comment period?

Public comment will be accepted through 5 p.m. on August 11, 1997.

D. Name, Title, address and phone number of the person responsible for preparing the Environmental Assessment:

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ENVIRONMENTAL ASSESSMENT

Project Title Elk Creek Watershed Remediation Project

Division/Bureau Fisheries Division, Future Fisheries Improvement

Description of Project A Future Fisheries Improvement project is planned for the private property along Elk Creek, south of Heron. This project includes re-shaping of eroding banks, protecting and sloping eroding banks, installing root wads and log headers, revegetating denuded riparian areas with sod and willow plantings and excavating single channels in some cases.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources				X		
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Green Mountain Conservation District, Army Corps of Engineers, Environmental Protection Agency

Individuals or groups contributing to this EA Watershed Consulting, NRCS, U.S.F.S., and the 12 private land cooperators.

Recommendation concerning preparation of EIS No EIS required

EA prepared by : Bruce Rehwinkel

Date: July 11, 1997