CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Bowling Easement Proposal
Proposed Implementation Date:	February, 2011
Proponent:	Robert C Bowling
Location:	Section 36, Township 5 South – Range 3 West
County:	Madison County

I. TYPE AND PURPOSE OF ACTION

Robert C Bowling has requested that the Montana Department of Natural Resources and Conservation grant an easement across an existing road on state property in Section 36, Township 5 South – Range 3 West to access his property. The purpose of the easement would be for access to deeded property in Section 31, Township 5 South – Range 3 West. Mr. Bowling would like receive and easement which would include the ability to construct a single family dwelling on his property at some undetermined date.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

BLM, Dillon Field Office
Madison County Commissioners
Madison County Planner
Robert Brannon, Department of Fish Wildlife & Parks Wildlife Biologist
Woods Three Creeks Ranches (lessee)
Steve Woods, Horse Creek Hay & Cattle LLC
Spanish Q Ranches LLC
Patrick Rennie, DNRC Archeologist
NRIS Search
Gary Frank, MT DNRC Hydrologist

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

A 310 permit would be required from the Madison County Conservation District when the culvert in Hudson Creek is replaced.

3. ALTERNATIVES CONSIDERED:

Action Alternative: Grant Robert Bowling a permanent right- of -way easement across state land to access deeded property in Section 31, T 5S – R 2W.

No Action Alternative: Deny Robert Bowling and an easement across state land to access their deeded property using an existing road on state land in Section 36, T 5S – R 3W.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

NRSC soil survey for this area in Madison County describes the soils as being Tiban very stony loam. This soil is usually found in hills and moraines with parent material being gravelly till and or alluvium and or colluviums. The land capability rating is 7s. These are generally well drained soils; however they are also highly erosive when on steep slopes. The roads location is on gentle slopes (5-7%) that are vegetated with grass, forbs, shrubs and trees. This road should hold up well if maintained on a regular basis. This would include the installation of rolling dips and grading of road surface to retain good drainage features.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

The proposed road crosses Hudson Creek, a perennial stream that flows into Granite Creek. The crossing currently has a 24" culvert that has washed out during high spring run-off events. Madison County had to re-install the culvert on one occasion a number of years ago. Currently the culvert is not to state standards and is undersized for the amount of potential flow in the drainage. With the erosive soils that are present rock armoring of the inlet and outlet is also needed. There are indications that water has run over the top of the culvert and then over the road in the past. To meet current Best Management Practices (BMP) the culvert needs to be replaced with at least a 36 "culvert with a mitered inlet and with extensive rock armor around the inlet and outlet with an engineered drain dip overflow to meet a 25 year flooding event. A 310 permit and inspection by the Madison County Conservation District would be required to do any work at the stream crossing.

In order to withstand a 50 year flooding event a 42 " culvert would need to be installed which would involve the import of a large amount of fill material to cover the CMP adequately. Any disturbance and excavation along the drainage will require the seeding of the site with native grass species regardless of which culvert is installed.

(See enclosed hydrology report.)

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

This proposal would not affect air quality standards in Madison County.

7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

The sides of the road are currently vegetated with grass and forbs. An NRIS search didn't identify any sensitive or rare plant types in this area. Because of the limited use of the road by the public any long term or cumulative effects to the vegetation along the road are not anticipated with this proposal.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:
Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

A variety of big game, small mammals, raptors, songbirds, and grouse may use this area. Minimal impacts may occur when the road is used but no long term or cumulative effects are anticipated. Construction of a structure such as a house could affect animal movements in the area. Occasional road use as applied for at this time would have no long term or cumulative impacts to the area.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:
Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

Gray Wolf (Canus Lupus) Wolves are distributed throughout Southwest Montana. The project would not have any measurable effect on wolf prey or wolves, thus direct, indirect, or cumulative effects are not anticipated.

Brewer's Sparrow (Spizella breweri) – Brewer's sparrow is a BLM sensitive species. According to the Montana Natural Resource Information Service (NRIS), the species prefers nesting in sagebrush averaging 16 inches in height. The roads location isn't near any sage brush thus use of the area by brewer's sparrow is limited. The Brewer's sparrow could use the area during certain times of the year; however the proposed project would not significantly alter the current vegetative community so little impact to the bird is anticipated.

Wolverine (Gulo gulo) – Wolverines are listed as sensitive species by both the BLM and USFS. Per Montana Natural Resource Information Service (NRIS) wolverines have been seen within three miles of the proposed easement site. This proposal however has a small foot print and use by the proponents will be intermittent in nature and should not alter the current existing habitat in the area. No cumulative effects to wolverines are anticipated.

Westslope Cutthroat Trout (Oncorhynchus clarkia lewisi) – Westslope cutthroat trout are listed by both the USFS and BLM as a sensitive species and a Species of Concern within the State of Montana. Current populations are outside of the direct impact area posed by the proposal. Westslope Cutthroat trout are found in the upper reaches of Mill Gulch Creek but currently are not present in Granite Creek or Hudson Creek where the proposal is located. As proposed the project should not cause erosion or stream degradation so no long term or cumulative effects are anticipated from this proposal to westslope cutthroat trout.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine effects to historical, archaeological or paleontological resources.

Patrick Rennie Archeologist for the DNRC found no recorded archeological or paleontological resources in the area of the easement proposal. He had no concerns with issuing an easement over this area of state land.

11. AESTHETICS:
Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

This proposal is not located near any populated areas and will not affect the scenic values of the area. The road already exists and minor maintenance will not affect the aesthetics of the area.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:
Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

This road is currently being used by two different ranchers for access to their adjacent ranch properties through Land Use Licenses. Horse Creek Hay and Cattle Co and Max & Terri Moltich are the two license holders. The lessee, Woods Three Creeks Ranches also uses the road for his operations. The easement proposal will not interfere with the current land use or demands on environmental resources. No cumulative effects are anticipated to environmental resources if this proposal is approved.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:
List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

I am unaware of any known studies or plans by surrounding landowners or federal, county or state agencies for this area.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:
Identify any health and safety risks posed by the project.

No known safety or health risks are anticipated by this proposal.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:
Identify how the project would add to or alter these activities.

This proposal will not affect the current agricultural activities in the area.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:
Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

This proposal will not create, move or eliminate any jobs.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:
Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

This proposal will not affect the local tax base or have any cumulative effects to taxes and revenue.

18. DEMAND FOR GOVERNMENT SERVICES:
Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services.

This proposal will not affect government services to the surrounding area, and no cumulative effects are anticipated.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:
List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

This proposal will not affect any State or County environmental or zoning laws.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:
Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

This State section is located off of a County road (Granite Creek Road) and allows access to the public for recreational use. Use is limited however to foot or horseback so no additional heavy use is anticipated from granting this proposed easement. The section is surrounded by private property that is not currently open to recreational use so any new use of the trail by the public will be limited.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

One new residence could be constructed on the deeded property.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

This will not change the traditional lifestyle of the area or communities surrounding this proposal.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

This easement if granted will fit in with the current lifestyle and livelihood of the surrounding area.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:
Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

This easement if granted will generate a onetime easement fee of $ 2,350.00 to the common schools trust.

EA Checklist Prepared By:	**Name:** Tim Egan	**Date:** 2/ 8/ 2012
	Title: Dillon Unit Manager	

V. FINDING

25. ALTERNATIVE SELECTED:

Recommend issuing an easement for the road use to Robert Bowling to include access to one single family dwelling.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

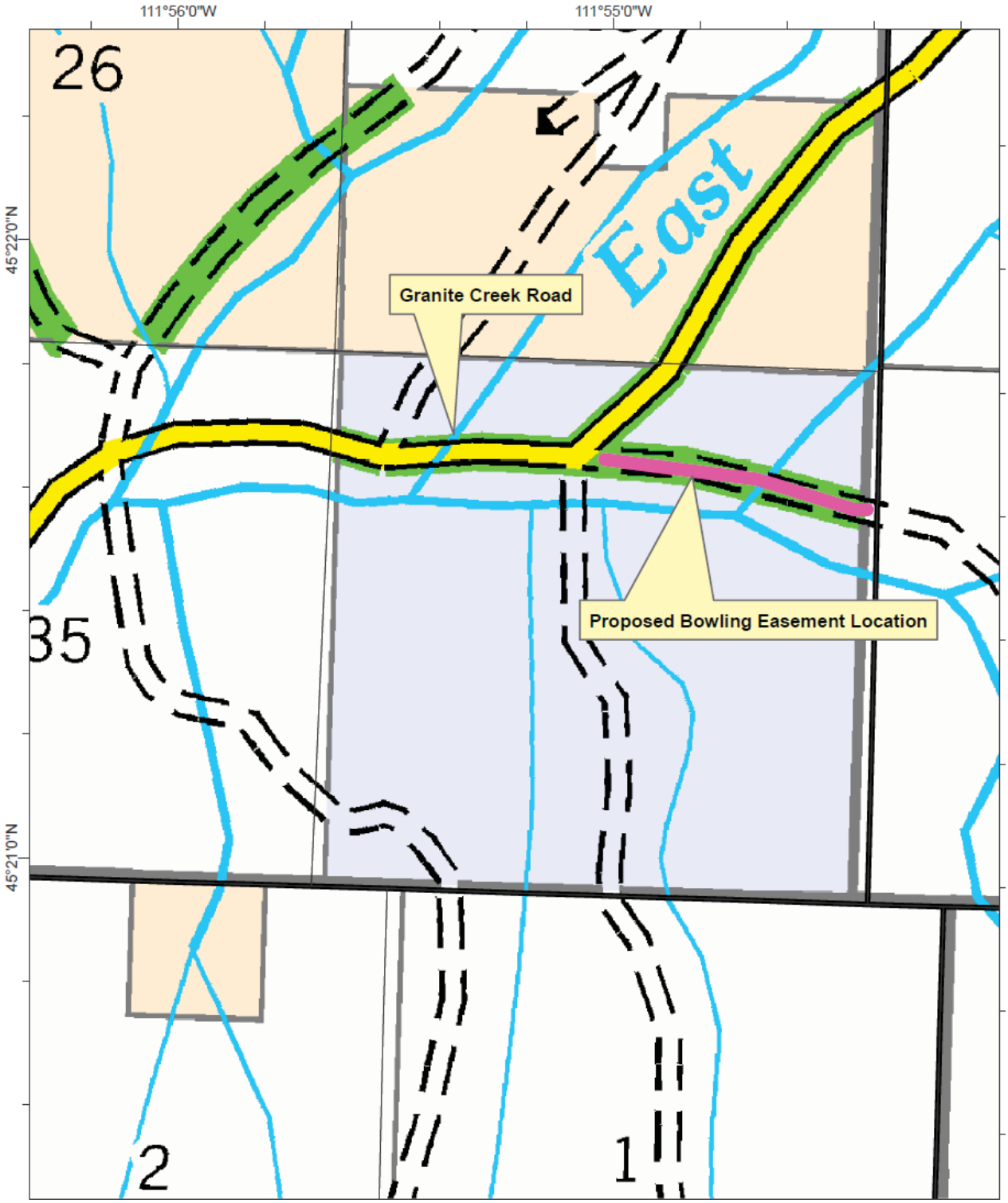
Significant impacts are not expected to occur with issuing an easement for the proposed use. The road is existing and in use for other purposes. The installation of a new larger culvert will likely prevent it from washing out as it has in the past and will tend to slightly improve water quality. There are no unique or special habitats or conditions associated with this tract.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

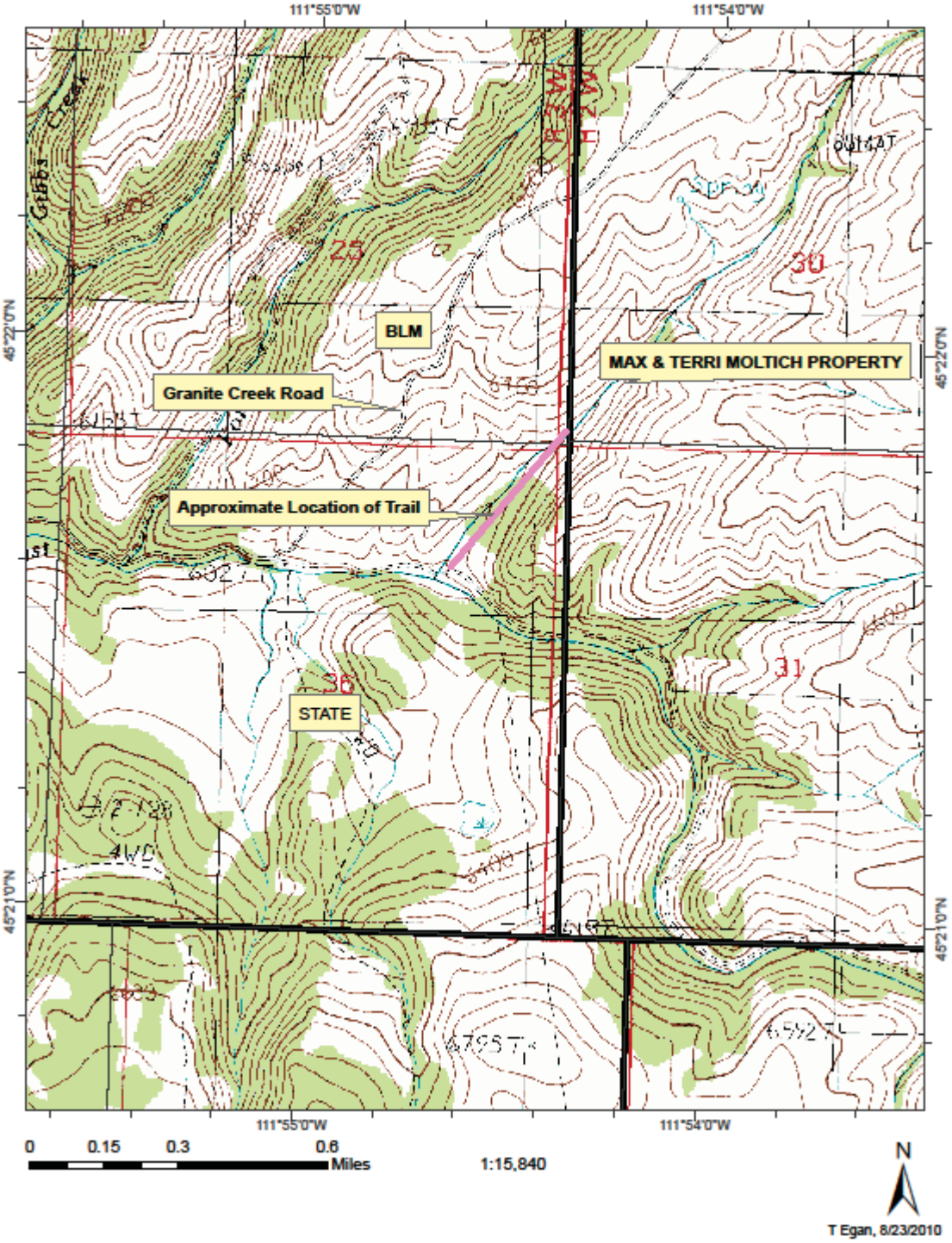
	EIS		More Detailed EA	X	No Further Analysis

EA Checklist Approved By:	**Name:**	Garry Williams
	Title:	Area manager, Central Land Office
Signature:		**Date**: 2/8/2012

Bowling Easement Proposal
Section 36, T 5 S - R 3 W, Madison County



State Section 36, Township 5 South - Range 3 West
Moltich Land Use License Application Map



From: Frank, Gary
Sent: Friday, October 15, 2010 1:19 PM
To: Egan, Tim
Subject: Hudson Creek Culvert

I have taken a look at the information you sent regarding the proposed Bowling Road Easement stream crossing of Hudson Creek and put together the following assessment and recommendations.

From the description and photos you provided of the site, it's apparent that the existing 24 inch cmp crossing does not meet minimum BMPs due to the following reasons: 1) Inadequate capacity to meet even the minimum BMP design of a 25-year flood event. Apparently several of the previous culvert installation have washed out during flood events; 2) The existing culvert does not conform to the natural stream grade. The outlet is situated approximately 3 feet above the outfall stream elevation; 3) Inadequate rock armoring of inlet and outlet; and 4) Inadequate depth of fill over CMP inlet;

In order to meet Montana Forestry BMPs at the road crossing of Hudson Creek should comply with the following design and construction standards:

1) The culvert should be of adequate capacity to accommodate at a minimum a 25-year frequency flood event.
2) Install culvert to conform to the natural stream bed and slope.
3) Design-stream crossing for adequate passage of fish (if present). Ensure fish movement is not impeded.
4) The culvert should be of adequate length to allow for a minimum depth of road fill.
5) Minimum fill depth for culverts 18-36 inches in diameter is 1 foot, and for larger culverts the minimum recommended cover is 1/3 the diameter of the culvert.
6) Minimize stream channel disturbance during installation of the stream crossing structure
7) Prevent erosion of stream crossing fill. Armor inlet and outlet with rock or other suitable material. Seed fill and disturbed areas with native grasses.
8) Do not place erodible material into stream channel.
9) Remove waste or stocked piled material from immediate vicinity of stream.

While BMPs only require that stream crossing structures accommodate a minimum 25-year flood event, DNRC typically installs stream crossings with a capacity to accommodate a 50-year flood event on major system roads, road accessing blocked ownership, or on sensitive streams and watersheds. Road access to a subdivision or year round residence may warrant this higher design standard.

I used the standard Flood Frequency model from the Montana Office of the USGS to estimate flood flows for given frequencies at the Hudson Creek road crossing. Information regarding this method is available at the USGS Montana website:

http://mt.water.usgs.gov/freq?page_type=gen_stats_1

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The results of the flood frequency analysis are included in the attached text file. These results indicate that a 25 year recurrence interval flood would be between 32 and 49 cubic feet per second (cfs). The maximum capacity of a 36" diameter culvert would be required just to pass flows at the low end of this range. The maximum capacity is approximately 32.5 cfs. A larger 42" diameter culvert would be needed to pass flows at the higher end of this estimated range. The maximum capacity of a 42" cmp is approximately 49 cfs. The stated capacities assume a headwater to depth ratio of 1with the inlet projected from the fill. By mitering the inlet to conform with the slope the maximum capacity of the 36" cmp can be increased to approximately 36 cfs, and the capacity of the 42" cmp can be increased to approximately 51 cfs.

The 50-year recurrence interval flood would be between 47 and 63 cfs. As stated above a 47 cfs (the lower end of the estimated 50 year flood range) would be adequately handled by a 42" cmp. However, a 63 cfs event (higher end of estimated range) would require a 48" cmp.

Recommendations:

Install a 42 inch cmp with rock armor on the inlet and outlet. Although this installation would require the import of extensive amount of fill to bed and cover the pipe (minimum fill depth of approximately 4.5 feet).

An alternative would be to install as 36 inch cmp with a mitered inlet, extensive rock armor at the inlet, and constructed drain-dip overflow. The rock armor at the inlet should cover the entire face of the fillslope. The inlet and outflow ends of the drain-dip should also be rock armored to prevent erosion of the road fill when utilized for culvert overflow.

Give me a call if you need any more assistance.

Gary