USDA Forest Service - Northern Region
Beaverhead-Deerlodge National Forests

Biological Evaluation

SENSITIVE AQUATIC SPECIES

A. Project Information

Name:	**Cowfly Timber Salvage - Cat EX**				
Type:	Commercial Timber Salvage			**ID #:**	
District:	Madison	**Contact Person:**	Mark Petroni, District Ranger		

Specific Activities That This Determination Applies To:

The Madison Ranger District, Beaverhead-Deerlodge National Forest (Forest) proposes to salvage harvest dead, dying and insect damaged trees (primarily Douglas-fir) in the Meridian Creek area of the West Fork of the Madison River drainage. Harvest will occur on about 249 acres in multiple stands. Scattered dead, dying and insect damaged trees in each unit will be hand-felled. Helicopters would be used move harvested material from the harvest units to existing landings prior to transport by log trucks on existing roads (West Fork #209 and Cliff Lake Bench #1209). It is anticipated that harvest and hauling activities would require about 2 months and would occur sometime between the summer of 2007 and the fall of 2009.

Activity created slash would be lopped and left on-site. In areas where it is necessary to hand-pile the slash due to heavy slash concentrations, piles will be burned following a period of suficient drying and under guidelines in the Montana Airshed Group's Memorandum of Understanding.

Harvest activities would not occur during the winter. The West Fork Road is and intregal part of an established system of groomed snowmobile trails, and snow plowing for winter access .

To minimize the potential for the spread of noxious weeds, all heavy off-road equipment would have an undercarriage wash prior, and will be inspected prior to entering National Forest System lands. Noxious weed infestations will be controlled following procedures in the Noxious Weed Control Program ROD (2002) for the Beaverhead-Deerlodge National Forest.

Sites disturbed by log and service landings will be allowed to naturally re-vegetate using existing native seed in the topsoil. Similar sites near the project area have quickly re-vegetated following past activity. However, if the sites do not re-vegetate naturally, they will be artificially seeded using only native species common to the site. All seed and mulch material will be certified noxious weed seed free.

If cultural resource sites or artifacts are found during project implementation, activities will be curtailed until the site has been evaluated by the Forest Archeologist (Forest Plan page II-33).

- Only roads currently open to motorized use will be used for log hauling (drop the limit to "full-sized vehicles" included in the 3/13/06 IDT meeting notes).
- The contractor will provide flaggers to control traffic, while helicopters are yarding logs in the area.
- In the harvest units, we will retain 1.5 snags/acre giving preference to retaining snags in clumps. We will exceed this Forest Plan Standard in the snag retention area.
- On the Meridian Creek Road, road maintenance completed by the purchaser after log hauling is completed will include cleaning ditches and installing dips suitable for use by ATVs.
- Dust abatement, as necessary, will be completed along the first 2 miles of the West Fork Road.
- Recommended road maintenance will be completed along the West Fork Road above the bridge.
- BD work along the roads and in the sale units with high concentrations of slash (in excess of 20 tons/acre) will be completed to reduce slash to 10-15 tons/acre.
- Snow plowing will not be allowed.
- No log hauling will be permitted on weekends (noon on Fridays through Sunday), federal holidays and during the general big game hunting season unless the contracting officer determines hauling can be safely completed using flaggers provided by the contractor.

B. Determination Information

	Northern Leopard Frog	Western (Boreal) Toad	Fluvial Arctic Grayling	Westslope Cutthroat
Date	2006	2006	2006	2006
Species in Analysis Area?	No, outside elevational and spatial ranges	Possible	No	Yes
Species Down Stream?	Historically	Possible	Yes	Yes
Point of Effect	Madison River valley, over 40 miles away (Maxell 2002).	Project is within native spatial and elevational range (Maxell 2002, Reichel & Flath 1995)	Madison River near McAllister, MT	Meridian Creek

C. Determination Summary

	Northern Leopard Frog	Western (Boreal) Toad	Fluvial Arctic Grayling	Westslope Cutthroat
DETERMINATION	NI	MIIH	NI	MIIH

NI = NO IMPACT

MIIH = MAY IMPACT INDIVIDUALS OR HABITAT, BUT WILL NOT LIKELY CONTRIBUTE TO A TRENDS TOWARDS FEDERAL LISTING OR LOSS OF VIABILITY TO THE POPULATION OR SPECIES.

WIFV = WILL IMPACT INDIVIDUALS OR HABITAT WITH A CONSEQUENCE THAT THE ACTION MAY CONTRIBUTE TO A TREND TOWARDS FEDERAL LISTING OR CAUSE A LOSS OF VIABILITY TO THE POPULATION OR SPECIES.

BI = BENEFICIAL IMPACT.

D. Criteria For Reaching A Determination of "No Impact" or "Beneficial Impact"

Criteria	N. Leopard Frog	Boreal Toad	Grayling	WCT
1. Does the activity likely involve the 'direct taking' of a sensitive species (including the capture, collection, harassment, or harm to individuals)?	No	No	No	No
2. Is the activity likely to involve the introduction of significant amounts of sediment (or other materials) into a perennial stream or intermittent stream channel immediately above a perennial stream?	No	No	No	Low Risk
3. Is the activity likely to significantly change the natural process of Large Woody Debris (LWD) recruitment into a perennial stream?	No	No	No	No
4. Is the activity likely to measurably increase water temperatures during critical low flow periods, or decrease winter water temperatures?	No	No	No	No
5. Is the activity likely to significantly disturb stream morphology within areas suitable for sensitive species?	No	No	No	No
6. Is the activity likely to significantly change riparian vegetation along a perennial stream or riparian area?	No	No	No	No
7. Is the activity likely to significantly change water quantity through diversion, withdrawal, or a change in water yield or groundwater?	No	Low Risk	No	No
8. Does the activity involve significant amounts of toxic or hazardous materials which could possibly be introduced into a stream course?	No	No	No	No
9. Does the activity involve activity on landtypes with the potential for mass movement and does the activity have the potential to change the natural rate and volume of mass movement?	No	No	No	No
10. Is there significant question or controversy regarding the potential effect of this activity on sensitive species, or their downstream habitat?	No	No	No	No
11. Would the decision document required to permit/allow this activity likely require an EIS?	No	No	No	No
All of the responses to the criteria #1 through #10 above are 'NO'. The determination of effects of this activity is either "NO IMPACT" or "BENEFICIAL IMPACT".	NI	MIIH	NI	MIIH
One or more of the responses to the above criteria (#1 through #10) are 'Yes'. The determination of effects of this activity is MAY AFFECT. A narrative Biological Evaluation is needed to assess the extent of impact.	No (See Comments/ Rationale below)	No (See Comments/ Rationale below)	No (See Comments/ Rationale below)	No (See Comments/ Rationale below)

E. Signature

Prepared by: Chris Riley

Title: Zone Fisheries Biologist

Signature: *C. W. Riley*

Date: 26 February 2007

F. Comments/Rationale:

Westslope Cutthroat Trout : Westslope cutthroat trout (*Oncorhynchus clarkii lewisii*; WCT) are historically native to streams in the project landscape, and within the project area specifically a hybrid (75%) population is sustained in Meridian Creek. Given the scale of the proposed action, combined with streamside buffers of units and landings that exceed the state SMZ buffer law of 50 feet, and in most cases vastly exceeding this distance, the threat of the project to WCT and other aquatic resources, particularly invertebrate taxa that are a mjor foor souce for WCT, is extremely low due to the spatial and hydrologic separation of the activity(s) to current WCT populations. The hydrologist's report specifically states **"The probability of sediment delivery to a stream from harvest and yarding from any unit is extremely low."** The greatest potential impact would be under the circumstances of an extended rain event during operations, sediment, specifically from road traffic, could be routed to streams, particularly from the Meridian Creek trail (#19) in the vicinity of its closest point to the stream channel, and also in the West Fork where it is adjacent to FSR 209. The probability of such an event happening during the summer season is very low, but greater during fall when rainfall is greatest, and also during spring snowmelt. Since activities are expected to last a total of two months, and not occur during winter, the risk of sediment routed from an extreme rain event during operations is very low. WCT and aquatic resources will derive a long term benefit of reduced sediment routing into stream from mitigation (road maintenance) associated with the project on Trail #19 (Meridian Creek) and FSR 209 (West Fork Madison River). Considering all these factors in combination, **it is my determination that the implementation of the proposed action may impact individuals or habitat, but will not contribute to a trend towards federal listing or loss of viability to the population or species**.

Fluvial Arctic Grayling : Arctic grayling (*Thymallus arcticus*) do not occur within the analysis area. The nearest location where individuals have been observed is a small population associated with the Madison River and Ennis Reservoir near McAllister, MT, over 40 miles downstream. Given the type and scale of the proposed action and the low threat of the project to aquatic resources due to the spatial and hydrologic separation associated activity(s) to current grayling in Ennis Reservoir and the Madison River, **it is my determination that this project will result in no impact to populations, individuals, or habitat of this species**.

Northern Leopard Frog : According to Maxell (2000), the Northern leopard frog (*Rana pipiens*; RAPI) historically ranged from Newfoundland and Alberta south to the Great Lakes, Great Basin, and desert Southwest, in addition to isolated populations in the Pacific Northwest and California. In Montana, historic populations ranged across the state up to elevations of 6,700 feet (Werner et al 2004). Since the 1970's, RAPI populations in western Montana have undergone steep declines including extinctions, leading to their listing by the Regional Forester as a sensitive species. Range maps and information described by Reichel and Flath (1995), Maxell et al (2003), and Werner et al (2004) indicate that the project area (SW MT; **6,800** ft elevation) is outside the *spatial* and *elevational* (6,700 ft) ranges for this species. Respective to the analysis area, intensive lentic habitat surveys specific to amphibian presence/absence drainage-wide were completed in 2001 by contract crews from the University of MT (Maxell 2004). Of five wet lentic sites surveyed, no RAPI were observed, but four of these sites supported populations of Columbia spotted frogs (RALU). Similar surveys were made in the Wade, Cliff, and Hidden Lake landscape, adjacent and east of the project area, in 2003. Of 10 non-dry lentic water bodies visited, no RAPI populations or individuals were observed. Five of these sites were observed to support Columbia spotted frogs, of which four entailed breeding populations. Four of the 10 sites supported breeding populations of Tiger salamanders, and two sites supported breeding populations of boreal chorus frogs. The nearest native habitat of RAPI is located about 35 miles down-valley in the vicinity of Moores Creek, based on a museum voucher specimen collected there in 1964. Given this information, **it is my determination that the implementation of the proposed action will have no impact to individuals, populations, or habitat of RAPI**.

Boreal Western Toad : According to Maxell (2000), the boreal toad (*Bufo boreas boreas*; BUBO) is one of two subspecies of the Western toad (*B. boreas*) that range from the Rocky Mountains to the Pacific coast from Baja California to southeast Alaska and the Yukon Territory. The boreal toad is considered one group occuring in Montana, northern Idaho, and northern

Wyoming. In Montana, the species has been documented across the mountainous portion of the state west of the Beartooth Plateau and the eastern edge of the Castle, Little Belt, and Highwood mountains at elevations up to 9,220 feet (Maxell et al 2002). Since the 1970's, BUBO populations in Colorado, Utah, New Mexico, and southeast Wyoming have undergone steep declines and is considered by the U.S. Fish and Wildlife Service as a candidate species warranted but precluded from federal listing. Declines in populations have also been reported in Oregon and California. Surveys during the late 1990's in Montana indicate that while still widespread across their native range, BUBO occupy an extremely small proportion (5-10%) of suitable habitat and many historic populations were found to be missing. These findings lead the Regional Forester to list BUBO as a sensitive species in Region 1(Maxell 2000).

The project area occurs within the spatial and elevation ranges of BUBO. Respective to the analysis area, intensive lentic habitat surveys specific to amphibian presence/absence drainage-wide were completed in 2001 by contract crews from the University of MT (Maxell 2004). Of five wet lentic sites surveyed, no BUBO were observed, but four of these sites supported populations of Columbia spotted frogs (RALU). Similar surveys were made in the Wade, Cliff, and Hidden Lake landscape, adjacent and east of the project area, in 2003. Of 10 non-dry lentic water bodies visited, no BUBO populations or individuals were observed. Five of these sites were observed to support Columbia spotted frogs, of which four entailed breeding populations. Four sites of the 10 sites supported breeding populations of Tiger salamanders, and two sites supported breeding populations of boreal chorus frogs. The nearest native habitat of BUBO is a reproducing population located about 4 miles down-valley in a series of beaver ponds no longer active. Another BUBO observation - made in 1961 - is located about 4 miles west of the project area at 8000 feet elevation where a museum specimen was collected. No information further describing this observation is available.

Suitable habitats exist within the project analysis area, particularly in the wetland haitat of upper Meridian Creek, and also riparian habitat along the West Fork of the Madison River. BUBO are known to migrate considerable distances over land. The probability that boreal toads could occur within the project area is moderate, however the presence of wet lentic habitat immediately near potential habitat is limited, making the risk of direct mortality (trampling, vehicle impact, etc.) very low. Work crews should be aware of their potential presence and notify the district biologist if any BUBO are observed and implement mitigation/BMP's to avoid impacts. Given this information, **it is my determination that the implementation of the proposed action may impact individuals or habitat, but will not contribute to a trend towards federal listing or loss of viability to the population or species**.

Literature Cited

Maxell, B. A. 2004. Report on amphibian and aquatic reptile inventories conducted on and around the Beaverhead-Deerlodge National Forest, 2001-2003. Report and data on file in CD format, Madison Ranger District, Ennis, MT.

Maxell, B. A., J. K. Werner, P. Hendricks, and D. L. Flath. 2003. Herpetology in Montana. Northwest Fauna Number 5, Society for Northwestern Vertebrate Biology. Olympia, WA. 135 pp.

Maxell, B. A. 2000. Management of Montana's Amphibians: A review of risk factors to population viability. Contract Number 43-0343-0-0224, USDA Forest Service Northern Region, Missoula, MT. 161 pp.

Reichel, J. and D. Flath. 1995. Identification of Montana's amphibians and reptiles. Montana Outdoors, May/June issue, 1995. Montana Department of Fish, Wildlife, and Parks, Helena, Montana.

Werner, K. J., B. A. Maxell, P. Hendricks, and D. L. Flath. 2004. Amphibians and reptiles of Montana. Mountain Press Publishing Company, Missoula, MT. 262 pages.