Montana Fish, Wildlife & Parks

APPLICATION FOR SCIENTIFIC COLLETOR'S PERMIT
FISHERIES

Date: June 8, 2006 (see information below in original 05 sampling permit request for what the Lolo National Forest accomplished per this permit request)

1. Name, phone number, affiliation, qualifications of the applicant and associates who will be conducting collection of fish. (Please attach additional sheets if necessary.)

Applicant's Name: Brian Riggers

Address: Lolo National Forest
Building 24
Fort Missoula
Missoula Mt 59808

Phone #: 406-329-3793

Affiliation: USDA Forest Service, Lolo National Forest

Qualifications: Brian has past experiences with using Smith-Root Battery backpack, Smith-Root Generator backpack, and Coffelt Generator backpack electrofishers from 1987-1999. The electrofisher units were used for presence/absence surveys, relative abundance, species composition, and pass depletion population estimates (three pass). Most fish sizes where less than 12 inches within headwater streams however electrofishing in large streams produce fish up to 26 inches in size. Prior to each shocking, water quality and conductivity were measured to determine the best shocker settings for the expected fish size. Electrofishing equipment was also used during fish removal operation during stream restoration projects such as Whites Gulch (Helena NF) and Puyear (Lolo NF).

Associate's Name: Scott Spaulding

Address: Ninemile Ranger District
20325 Remount Road
Huson, MT 59846

Phone #: 406-626-5424

Affiliation: USDA Forest Service, Lolo National Forest, Ninemile Ranger District

Qualifications: Scott has past experience using Smith-Root Battery backpack and Coffelt backpack electrofishers starting in 1983 through 1992, and more recently from 2002 to 2004. The electrofishing units were used for juvenile salmon and resident trout population surveys throughout central Idaho using four pass depletion population method and associated estimates, and more recently for species composition and associated tissue collection from westslope cutthroat trout (WCT) to help assess potential degree of hybridization of WCT with rainbow trout. Most fish sizes where less than 12 inches within headwater streams.

Associate's Name: Shane Hendrickson

Address: Lolo National Forest
Building 24
Fort Missoula
Missoula Mt 59808

Phone #: 406-329-3727

Affiliation: USDA Forest Service, Lolo National Forest

Qualifications: Shane has past experiences with using Smith-Root Battery backpack, Smith-Root Generator backpack, and Coffelt Generator backpack electrofishers from 1990-1999. The electrofisher units were used for presence/absence surveys, relative abundance, species composition, and pass depletion population estimates (three pass). Most fish sizes where less than 12 inches within headwater streams however electrofishing in large streams produce fish up to 26 inches in size. Prior to each shocking, water quality and conductivity were measured to determine the best shocker settings for the expected fish size. Electrofishing equipment was also used during fish removal operation during stream restoration projects such as Whites Gulch (Helena NF) and Puyear (Lolo NF).

Associate's Name: Jennifer Copenhaver

Address: Lolo National Forest
Plains/Thompson Falls R.D
PO Box 429
Plains, MT 59859

Phone #: 406-826-4350

Affiliation: USDA Forest Service, Lolo National Forest

Qualifications: Jennifer has past experiences using Smith-Root Battery backpack electrofishers from 2002-2004. The electrofisher units were used for presence/absence surveys, relative abundance and species composition. Most fish sizes were less than 12 inches within headwater streams. Prior to each shocking, water conductivity was measured to determine adequate shocking setting. Electrofishing equipment was also used during the Dry Creek Diversion Dam Removal project for fish removal.

2. Description of supervision provided by the applicant to associates. For example, will the applicant be in the field on a daily basis or will supervision be remote?

The applicant will primarily be remote, however, some field visits will be necessary.

3. Description of why the collection is necessary (i.e., why collection by angling within creel limits by anglers is not possible):

Electrofishing is necessary as the Forest Service is required to maintain and improve native fish populations. This requires that we know the current fish relative abundance, distribution, or presence/absence within a given watershed. Most often we have used snorkeling to meet these objectives; however, smaller streams are difficult to snorkel and electrofishing is more efficient. Electrofishing will also help assess pre-project conditions and post project efficacy on projects such as instream habitat restoration associated with mine site disturbances and fish passage improvement projects.

4. Description of study plan (please attach research proposal if available):

The Lolo National Forest plan for electrofishing is to answer any of the following four key questions of a particular streams fish population: 1) Presence/Absence, to determine which species are present which allows us to assess the need for any fish passage. 2) Relative Abundance, which establishes a monitoring trend or baseline of fish abundance relative to other species. 3) Distribution, determines the occupied length of stream for any give specie. 4) To collect tissue from westslope cutthroat trout to assess potential introgression with rainbow trout

6. Description of collection gear and method(s) of collection. If electrofishing is to be utilized, describe equipment and type of electrical current used. Include description of personnel experience and training with electrofishing if appropriate.

This type of collection gear will be through the use of a backpack electrofisher. An electofisher was purchased in 2003 from Smith-Root. The LR-24 electrosher is a 24 volt battery operated unit that has an adjustable output voltage, frequency, and duty cycle. In conjunction with the shocker is a two piece anode with an 11 inch circular ring. A rat-tail cathode is also attached to the back of the unit.

Water conductivity and stream temperature of the sample stream is checked before initiation of shocking. The relative conductivity of the water and size of the fish allows us to adjust voltage and frequency to more desired levels and minimize the potential of harm to fish and amphibians. No shocking is expected to occur between September 1st and July 1st in order to protect bull and cutthroat trout during spawning and incubating periods.

6. Describe the collection locations, dates, anticipated number of fish to be collected and the anticipated number to be kept.

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location

See below

7. Describe the proposed disposition of those specimens collected and kept:

   Will live fish be transported from the capture location? Yes*_____ No__*X*__

   *If live fish are going to be transported from the location of capture, additional review by the Montana FWP Fish Health Coordinator will be necessary. Please ensure adequate time for this additional review.

8. Describe provisions that will be made to protect Threatened and Endangered Species and Montana Species of Special Concern

Water conductivity and stream temperature of the sample stream is checked before initiation of shocking. The relative conductivity of the water and size of the fish allows us to adjust voltage and frequency to more desired levels and minimize the potential of harm to fish and amphibians. No shocking is expected to occur between September 1st and July 1st in order to protect bull and cutthroat trout during spawning and incubating periods. Also, water temperature will be monitored and fish will typically not be shocked as water temperature begins to exceed 15C to avoid added stress.

9. Attach study plans if available. (see item 4 above)

Lolo National Forest
Electrofishing Streams
2005

Following, in blue text is the Lolo National Forest's reporting information on samples collected off of the 2005 fish sampling permit.

Ranger District
Watershed
Waterbody (objective 1, 2, 3, or 4 per description in proposal item 4 above)

Superior Ranger District:

St Regis Watershed
1. West Fork Big Creek (Removal during stream restoration project)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT,EBT, other	0-10	0	SR Model LR24	July-August	T19N R30W S30 SESE T19N R30W S30 SWSW

2. Storm Creek (Removal during stream restoration project)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT, EBT	0-10	0	SR Model LR 24	July-August	T19N R31W S36 NENE

During stream restoration (culvert removals) in West Fork Big Creek and Storm Creek, it was found that removal during these activities was not needed, so sampling was not done in these two watersheds.

Plains Ranger District

Thompson River Watershed
1. Bay State Creek (Objective 4)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT, other	0-10	0	SR Model LR 24	July-August	Above and below culvert on Road #9991

The objective for Bay State Creek was to gather tissue samples to test genetics of westslope cutthroat trout. No fish were found in this section of Bay State Creek.

2. Barktable Creek (Objective 4)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT, other	0-10	0	SR Model LR 24	July-August	Above and below culvert on Road #56

The objective for Barktable Creek was to gather tissue samples to test genetics of westslope cutthroat trout. No fish were sampled in this section of Barktable Creek due to lack of water.

3. Chippy Creek (Objective 4)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT, other	0-10	0	SR Model LR 24	July-August	Above and below road crossing on Road #9991

The objective for sampling Chippy Creek was to gather tissue samples to test genetics of westslope cutthroat trout. No westslope cutthroat trout were documented to Chippy Creek; however, approximately 20 rainbow trout were found upstream of the road crossings.

4. Big Rock Creek (Objective 4)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT, other	0-10	0	SR Model LR 24	July-August	Above and below culvert on Road #56

The objective for sampling Big Rock Creek was to gather tissue samples to test genetics of westslope cutthroat trout. 2 potential westslope cutthroat trout were found upstream of the road crossing on Road 56 and 3 potential westslope cutthroat trout were found downstream of the road crossing on Road 56. 27 brook trout and 7 brook trout were captured either 100 feet upstream or downstream of the road crossing on Road 56.

5. Lazier Creek (Objective 4)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT, other	0-10	0	SR Model LR 24	July-August	Above and below culvert on Road #56

Sampling did not occur.

6. Twin Lakes Creek (Objective 4)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT, other	0-10	0	SR Model LR 24	July-August	Above and below culvert on Road #56

Sampling did not occur.

Prospect Creek Drainage

1. Daisy Creek (Objective 2)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT, other	0-10	0	SR Model LR 24	July-August	T21N R31W S36

Sampling did not occur.

Clark Fork River Drainage

1. Munson Creek (Objective 2)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT, other	0-10	0	SR Model LR 24	July-August	T21N R27W S19

Sampling did not occur.

Ninemile Ranger District

Fish Creek Watershed

1. Unamed trib to W Fk Fish across from Hole-in-the-wall (objective 1)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Location
WCT?	0-10	0	SR Model LR24	July-August	T13NR25W s5 nwse

This was a very high gradient stream with little potential habitat or water for fish and I deemed sampling would provide fish so this stream was not shocked.

Ninemile Watershed

2. Eustache/Devils (3 sites in preparation for mine site restoration in out year) (objective 2)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT/EBT	30-50	0	SR Model LR24	July-August	T17NR25W s13 swsw T17NR25W s13 swnw T17NR25W s14 nwnw

See attached Excel spreadsheet for numbers and population estimates. In summary 87 westslope cutthroat, 21 brook trout, and 2 bull trout were sampled in these locations as pre-minesite reclamation monitoring. Genetic samples were provided to Ladd Knotek for the lower Devils Creek site. No genetic samples taken from Eustache as these were previously sampled in a joint USFWS and FWP effort.

4. Rock (if FWP is still interested in tissue samples) (objective 4)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT	0-10	Fin clips	SR Model LR24	July-August	T16NR22W s26 swnw

This system was not sampled. Mt FWP Region 2 sampled in early season 2006.

5. Barrette (objective 2)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT/EBT	20-30	0	SR Model LR24	July-August	T16NR23W s20 swne

This system was not sampled.

6. Moncure (objective 2)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT/EBT	20-30	0	SR Model LR24	July-August	T16NR23W s18 sesw

This system was not sampled.

Clark Fork River

2. Sixmile (WFk Sixmile one site and 2 sites on main Sixmile down and up from WFK confluence) (objective 2 for all and 2 and 4 for West Fork site)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT/Bt/EBT	WCT 40-60	0	SR Model LR24	July-August	T15NR22W s12 swsw T15NR22W s12 nwsw T15NR22W s12 sesw T15NR22W s2 nwne

Only one section on the West Fork was sampled for presence/absence above state land diversion (T15NR22W s2 nwne) which is also above FS road crossing culvert in sw of s2. Approximately 15 westslope cutthroat trout were captured in approximately 100 meter section of stream. No genetic samples were collected.

3. Tank Creek (objective 1)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT/EBT	0-10	0	SR Model LR24	July-August	T14NR22W s3 swnw

This system was shocked but no fish found above the diversion or in the diversion canal.

<u>Missoula Ranger District</u>

Rock Creek Watershed

1. Butte Cabin

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
Wct/Bt	10-50	0	SR Model LR24	July-August	Above and below upper Road Crossing

This system was not sampled.

2. Grizzly

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT/Bt/Ebt	10-50	0	SR Model LR24	July-August	Above and below Ranch Cr. Rd Crossing.

This system was not sampled.

3. Brewster

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
Wct/Bt/Ebt/Rb	10-50	0	SR Model LR24	July-August	Repeat sections completed in 1997 (2-3 sites throughout the length)

This system was not sampled.

Lolo Watershed

4. West Fork Butte

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT/Bt/Ebt	10-50	0	SR Model LR24	July-August	Above and below Elk Meadow Rd crossing

This system was not sampled.

Seeley Lake Ranger District

Clearwater Watershed

1. Colt (below Colt Lake)

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT/Bt?/Ebt?	0-10	0	SR Model LR24	July-August	2-3 sites between Clearwater River and Colt Lake

This system was not sampled.

2. Uhler

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT/othr	0-10	0	SR Model LR24	July-August	2-3 sites between Clearwater River and headwaters.

This system was not sampled.

3. Bertha

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT	0-10	0	SR Model LR24	July-August	2-3 sites between Rainy lake and headwaters

This system was not sampled.

4. Auggie

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT	0-10	0	SR Model LR24	July-August	2-3 sites from mouth to headwaters (primarily associated with culvert barriers)

This system was not sampled.

Monture Watershed

5. McCabe

Species	# To Be Collected	# To Be Kept	Gear Used	Dates	Water & Location
WCT	10-50	0	SR Model LR24	July-August	Section 27 – above and below upper most Rd xing

This system was not sampled.