Forest Plan Revision
903 3rd Street
Kamiah, Idaho 83536

March 10, 2020

Dear Sirs:

Enclosed are my comments as to recommending wilderness for all 1.5 million acres of roadless areas in the Clearwater and Nez Perce National Forests.

I emphasized Weitas Creek as the most crucial site to be protected and that water quality, wildlife and fish habitat be quantitative, enforceable and non-discretionary without loopholes. Otherwise there is little science to justify much of the New Draft Plan.

Habitat for the grizzlies should be protected.

I included a number of pictures, captions and stories to better describe how valuable this ecosystem is to the public.

Fred W. Rabe

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1715 Appaloosa Road
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Commentary on Clearwater National Forest Draft Plan Revision

Fred W. Rabe

I am a resident of Moscow, Idaho and retired from the University of Idaho where I taught and did research in the Biological Sciences Department. Over ten years I volunteered to study roadless areas and Research Natural Areas for *Friends of the Clearwater.* In so doing, I wrote six booklets and gave talks describing the natural history of the Lochsa and North Fork Clearwater River roadless areas. Unfortunately the Forest Service combined draft plans of the Nez Perce Forest with the Clearwater Forest which did a disservice to the public.

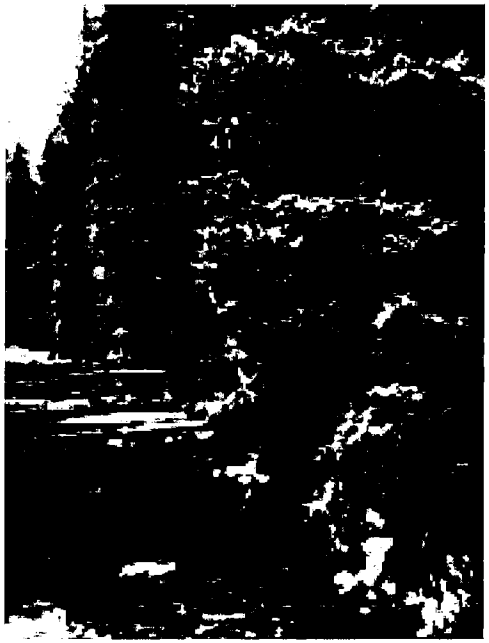
My purpose in doing this project was one part adventure, one part gathering facts and one part enjoyment knowing my pictures and stories would generate further interest in roadless areas. The plan was to travel to unspoiled locales, places that "keep the soul alive." There I photographed what is still pristine and wild, places we must hold and protect. Stories from FOC members of their hikes into roadless country were included here.

The booklets are on the visual side. They say, let's leave town and hike to Steep Lake, fish for cutthroats in Kelly Creek, photograph the rugged Williams Range. Once this happens, you'll be more passionate enjoying and defending the wild since you'll see it first hand. People and myself included know this.

I describe highlights of some of the roadless areas and why they are such important ecosystems. In addition, terms and subjects that relate to my comments are brought into play. These include logging riparian zones, definition of old growth, shrubs and invertebrates, importance of first and second order streams, motorized trails spells less wildlife, Outstanding fishing and trail system describes Kelly Creek, Cayuse Creek has excellent riparian system, Bighorn-Weitas Roadless Area is Number 1 selection, refuge sites and measurable enforcement and standards, BWRA and solitude, bull trout - indicators of sensitivity, fragmentation, contiguity, visual variety, aquatic moss and invertebrates, stringer meadow, dead and dying trees in streams.

I am joining together with Friends of the Clearwater in advocating for full protection of all 1.5 million acres in the form of recommended wilderness, and/or as non-motorized , non mechanized backcountry areas. No road building, logging, or development should occur in the roadless base.

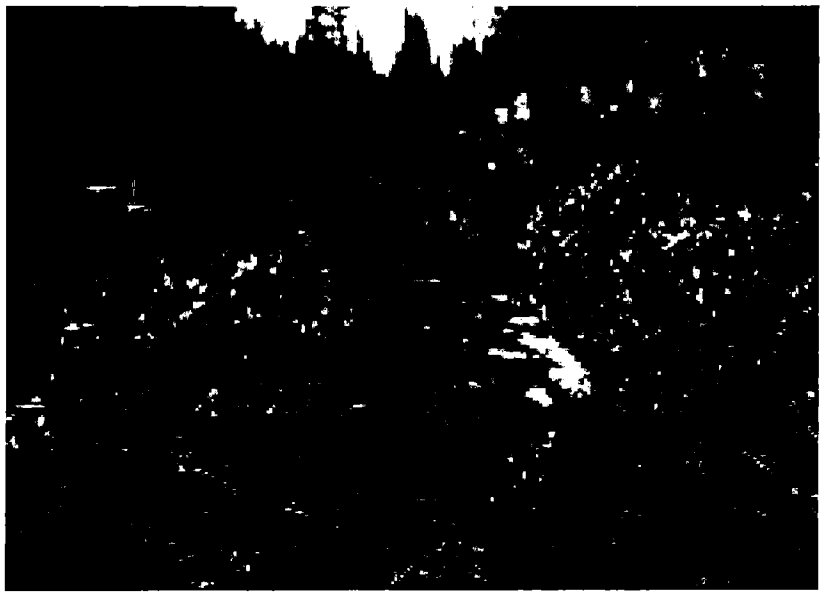
2Riparian vegetationWilderness



A two zone riparian management system is inappropriate since it would allow more trees to be cut in the outer zone. Not only would this destroy the edge effect of such streams as Cayuse Creek seen here but it would create a cosmetic nightmare.

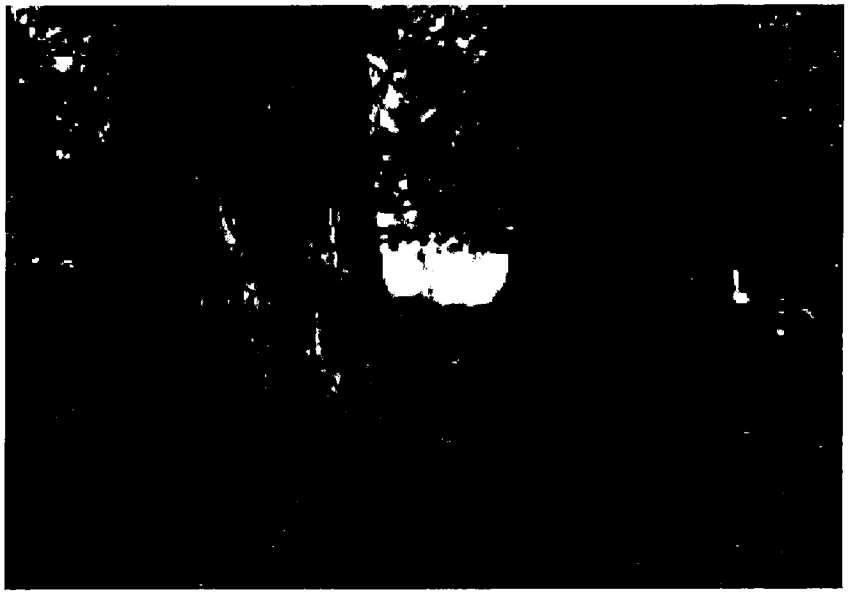
In addition streams like Upper Hemlock Creek (below) would be partially-**deprived of a microbial food source** derived from leaf detritus.

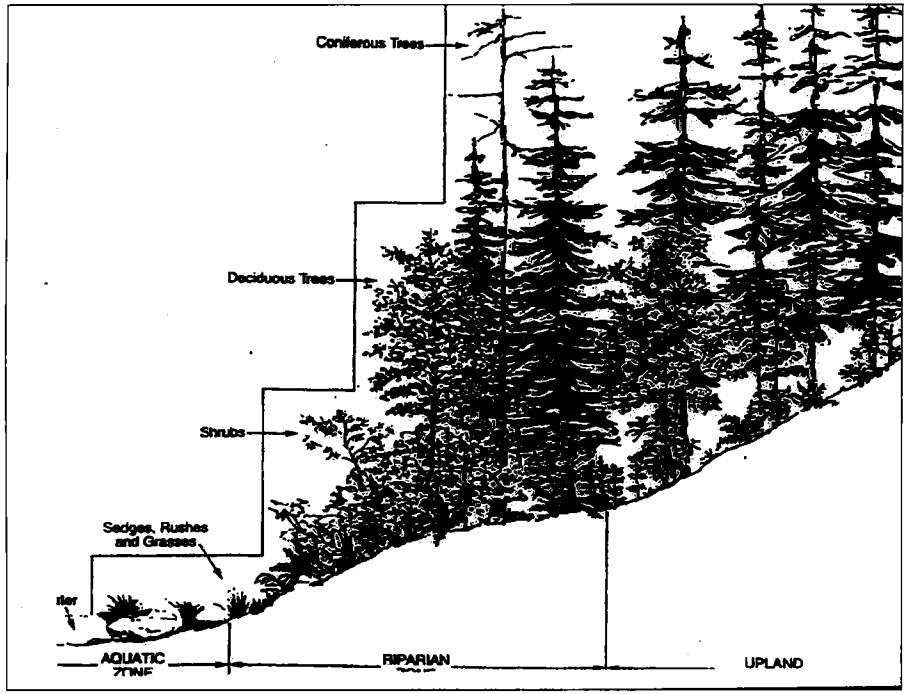
Warmer water temperatures caused by less shading would make it difficult for more sensitive fish like bull trout to exist there.

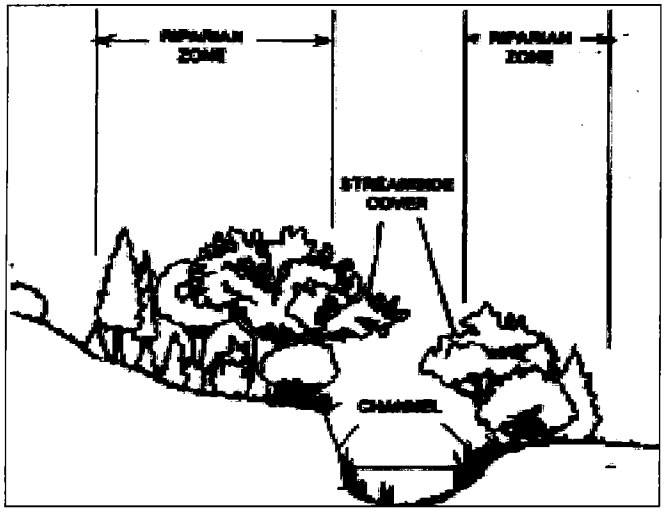


Old growth

There is no way you can convert a forest like Aquarius to **some other type forest.** It has adapted to its environment and reached an old growth condition.



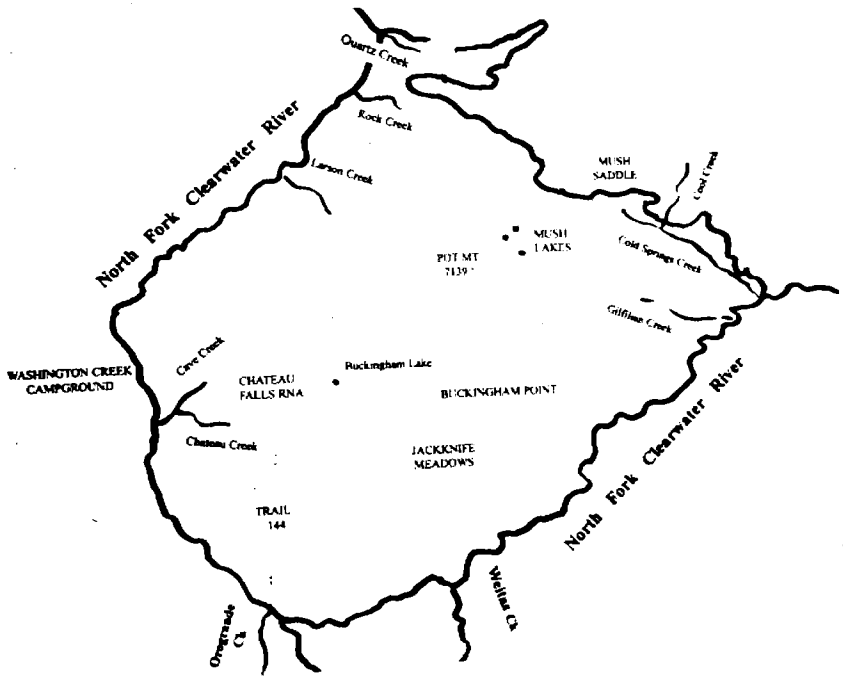




A two riparian zone management system in order to log more timber would disrupt vegetation in the aquatic zone together with shrub cover important as shade and detritus that serves as an energy source for macroinvertebrates. In addition **removal of riparian growth** would erode soil and impact bank stability.

Chateau Falls RNA consists of four spectacular waterfalls with lesser falls and cascades on Chateau Creek.

Pot Mountain



Pot Mountain Roadless Area is almost round-shaped, lying like a huge inverted bowl on the landscape with the North Fork on the bottom edge of the bowl. Most of the 50 separate drainages that enter the North Fork exceed 10 percent in gradient. In addition to nutrients, these first to second order sites provide insect drift for fish and additional water to the river. The Forest Service studied 21 streams here and found **embeddedness** in excess of 25-50 percent in most drainages. Such extreme conditions could worsen if these fragile environments are roaded, further lowering productivity of the tributaries thus impacting the North Fork.

Right: Sediment eroding from hillside along North Fork Clearwater River. Landforms here are underlain by granitic batholith material. Note concrete barrier to prevent encroachment of fines onto the road.

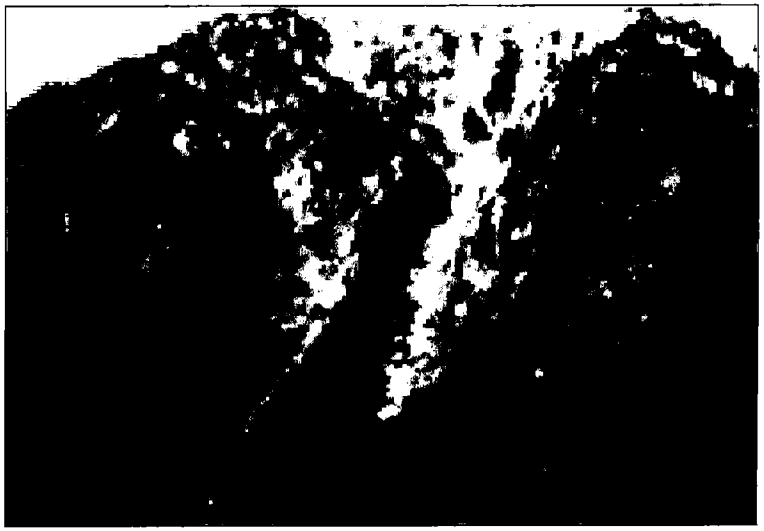
Pot Mountain is one of the most important core areas. It contains interesting landscape forms and diverse aquatic resources: waterfalls, four high lakes, wetlands and about 50 tributary streams which flow into the North Fork.

The river, mile after mile, charges the air with fragrance and energy telling your nose, ears and skin a thousand stories about the myriad places and beings these waters have touched.

Looking north at Pot Mountain Roadless Area. This roadless area is an important **link in the chain of forested habitats** that stretch from the Yellowstone to the Yukon, an chored by the northern spine of the Rocky Mountains and connecting central Idaho's outstanding wilderness complex with many wildlands in Montana.

Moose Mountain Roadless Area

Moose Mountain Roadless Area to the right is sandwiched between Kelly Creek to the left and North Fork Clearwater River.



North Fork Clearwater River bordered by north-northeast side of Moose Mountain Roadless Area. This **rugged country, far from the growing din of ATVs**, is sought after by elk hunters and the stretch of river corridor is highly prized by fishermen.

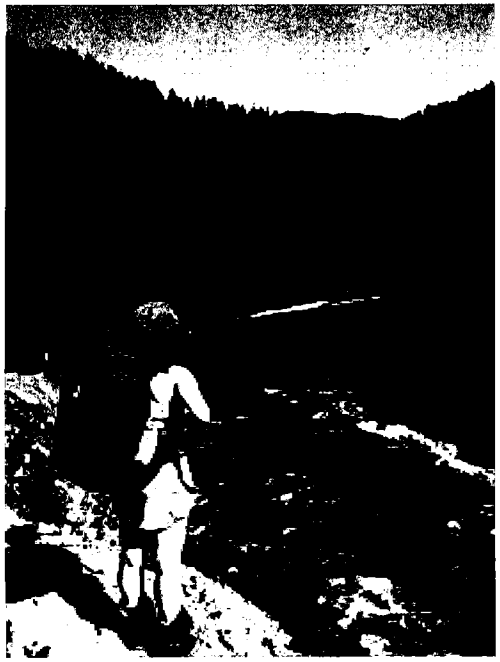
Most of the barren area of Moose Mountain is sheared with metamorphosed rocks susceptible to weathering. Some rocks are very sparsely covered with shrubs and perennials present especially on the south facing slope, A diversity of trees, dominated by lodgepole pine, are more common on the northeast and north side of Black Canyon along the North Fork of the Clearwater River.

The latest maps and travel guides show no motorized trails in the area. The higher meadow complexes between Moose Mountain and Moose Buttes are favorite sites for people to visit.

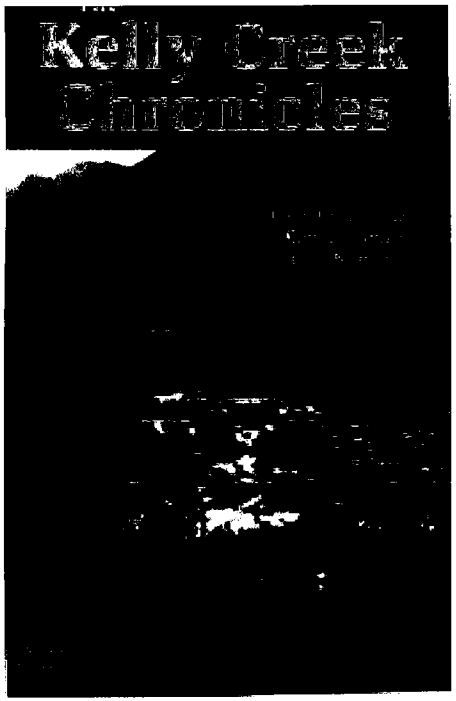
Hunters have said that hearing a number of wolves howling in extremely close proximity made their trip special even though they failed to obtain meat for the freezer.

These same people had spent whole seasons in the Frank Church Wilderness without experiencing anything beyond seeing wolf scat and tracks. Then, during their first visit to Moose Mountain, wolves had paid them an incredible visit.

Kelly Creek



Kelly Creek within the Hoodoo or Great Burn Roadless Area is known for its **Blue Ribbon trout fishery** and **fantastic trail system** that extends to the Bitterroot Mountains. Westslope cutthroat range from 12 to 16 inches with some reaching 20 inches and more and they're usually not fussy over your selection of flies. Mountain whitefish, rainbows, bull trout and spawning kokanee also occur here together with otters playing tag in deep pools. No planters in this river. Catch and release regulations insure a continual supply of big fish but also help maintain nature's balance.

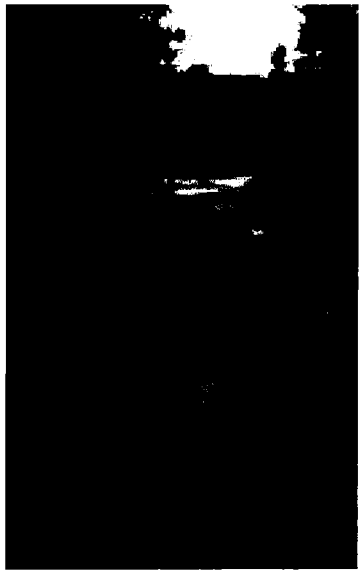


Colbert Cushing, an avid fisherman and colleague spent 18 years infatuated with Kelly Creek. His book, *Kelly Creek Chronicles*, describes the stream's ecology and good fishing times. He shared these experiences over the years with 12 different anglers some of who accompanied him to Kelly Creek every year beginning in 1981. Let's not spoil it for future generations.

Several miles down trail, the river flattens out and a beautiful herbaceous site appears, Hansen Meadows. Let's not **fragment** it with snowmobile and off-road vehicle trails.

Westslope cutthroat is dominant trout in Kelly Creek.

Upper Cayuse Creek



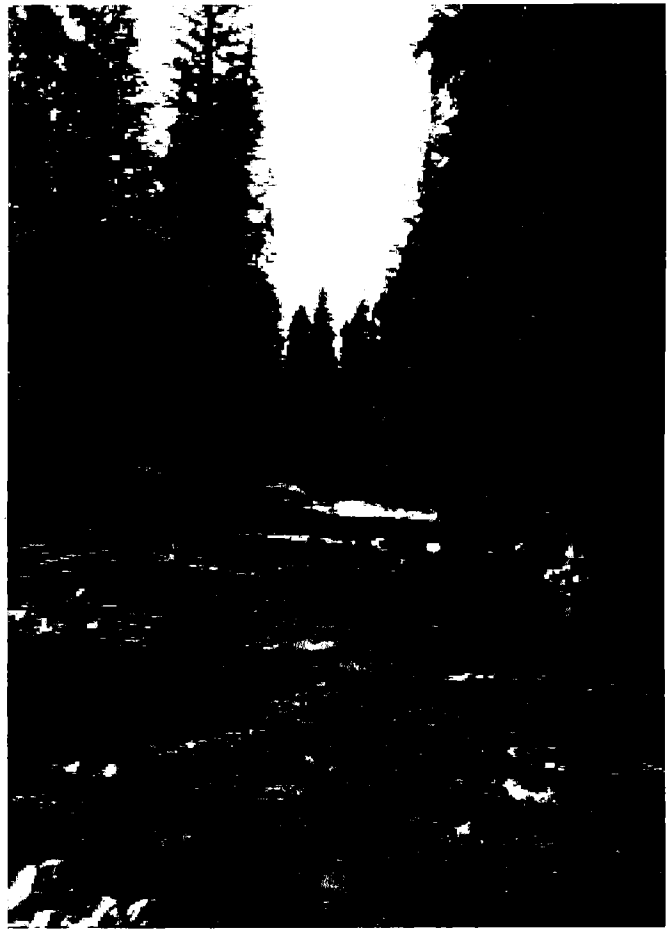
Lost Lakes are set in an extensive meadow. The lakes have an extremely low acidity and conductivity enabling a number of species of moss to sprawl on the lake bottom.The moss appear to be a substitute for aquatic plants as a souce of photosynthesis. Macroinvertebrates are few in number.

The water flow through the lakes and surrounding meadows coalesces to form the upper reach of Cayuse Creek that eventually merges with Kelly Creek miles downstream.

Protect this site.

Upper Cayuse Creek
Riffle/pool type
Boulder/cobble substrate
Dense canopy cover
Minimum surface fines
No channel alteration
Bank covered by vegetation
No evidence of erosion
Wide riparian growth

Upper Cayuse Creek



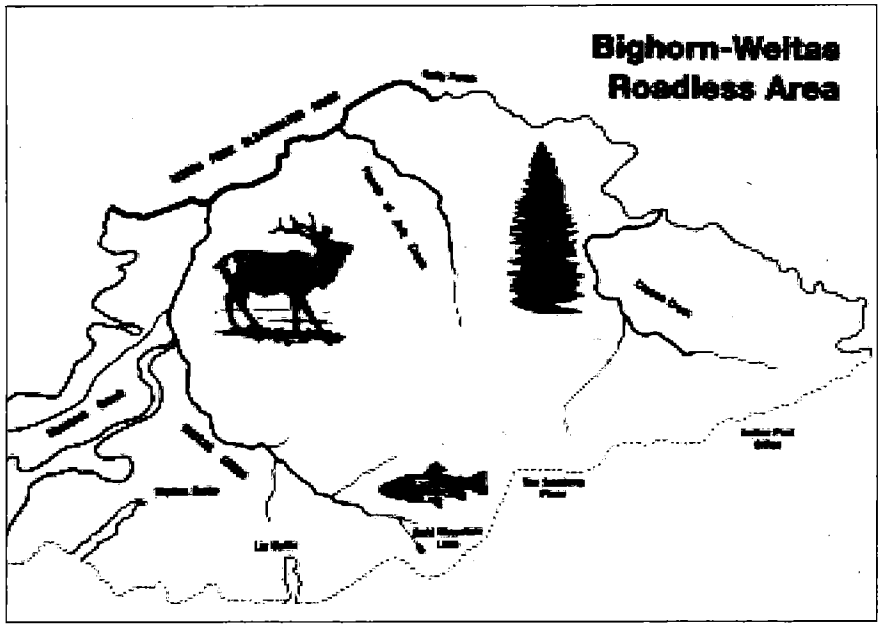
Upper Cayuse Creek near trail 249. The small waterbody is bordered by western hemlock and subalpine fir crowding the stream bank to provide shady conditions and cool water temperatures, the sort of habitat is excellent for bull trout frequenting the stream's reaches.

In 1984, 51,000 acres encompassing most of Cayuse Creek and Tobaggon Creek were proposed as wilderness and both sites were unamiously selected for permanent wildland protection by citizen participation.

So far, it hasn't happened.

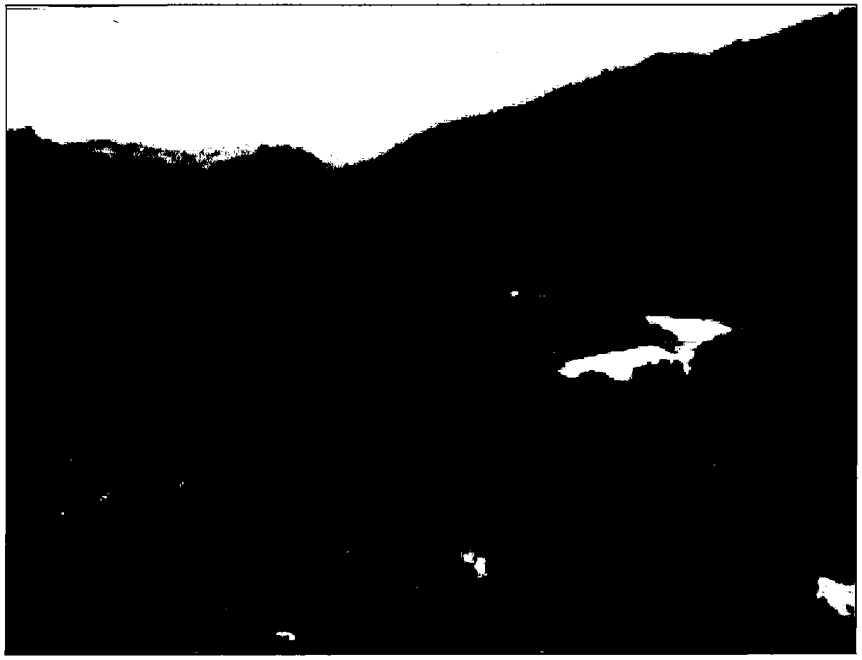
Weitas Creek, largest tributary to the North Fork Clearwater River, is a low elevation broad river valley. Places like this are very rare to find in such a pristine condition. Weitas is located in the **Bighorn Weitas Roadless Area** (BWRA) in the middle of the Clearwater National Forest. It is the largest roadless area in the forest (260,000 acres). **MAKE IT WILDERNESS.**

Weitas River to the left is a B-3 stream type having predominantly cobble size rocks, together with boulders, gravel and sand. The ratio of the river's width to depth here is > 12 and the habitat mostly riffles and pools. Dominant stream cover is shrubs.



BWRA is composed of two large drainages, Cayuse Creek and Weitas Creek. The elevation at the mouth of Weitas Creek is 2,400 feet with most streams in the drainage being higher. The Lolo Motorway bounds Weitas on the south. It was built in 1933 and in places is steep and requires attentive driving.Lands within a mile of the road contain the historic Nez Perce Trail. The North Fork Clearwater River is north of divide and Lochsa River occurs to the south.

Packbridge over confluence of Sand Creek and Upper Weitas Creek about 12 miles upstream from trailhead



Downstream of confluence with Windy Creek and Weitas Creek approximately 20 miles from trailhead. Note low elevation habitat of meandering stream, extensive wetland, and riparian dominated by shrubs and grassy hillside. Moose in picture.

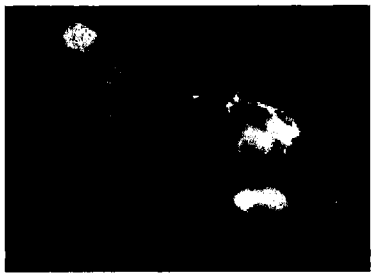
Hemlock Creek is a major tributary to Weitas Creek from the west. The upper reaches were proposed as an RNA since the site was utilized as a reference or control to streams in the Clearwater drainage where extensive landslides occured in 1995. It was found that macroinvertebrate communities from Upper Hemlock Creek waters had a high biointegrity as to number of species and sensitive forms compared to stream invertebrates impacted by the landslides.**The site should continue ro serve as a reference site for the forest.**

Left: Hemlock Creek - Third order stream with open canopy boulder-rubble substrate and shrub riparian. Right: First order stream with closed canopy.

The size and rectangular shape of BWRA tend to **promote solitude.** Two major drainages and six tributary systems together with wide and rounded ridges (see above) isolate people effectively. Numerous primitive trails in creek bottoms also disperse visitors.

No lakes of any size or other such attractions tend to concentrate people in the Weitas. Once immersed in dense vegetation and topographical diversity, one feels isolated from civilization. Visual disturbances of outside activities are minimized due to moderate elevations compared to higher sites. Unique scenic values together with hundreds of miles of low standard trails, help supply a **sense of remoteness and solitude to the hiker.**

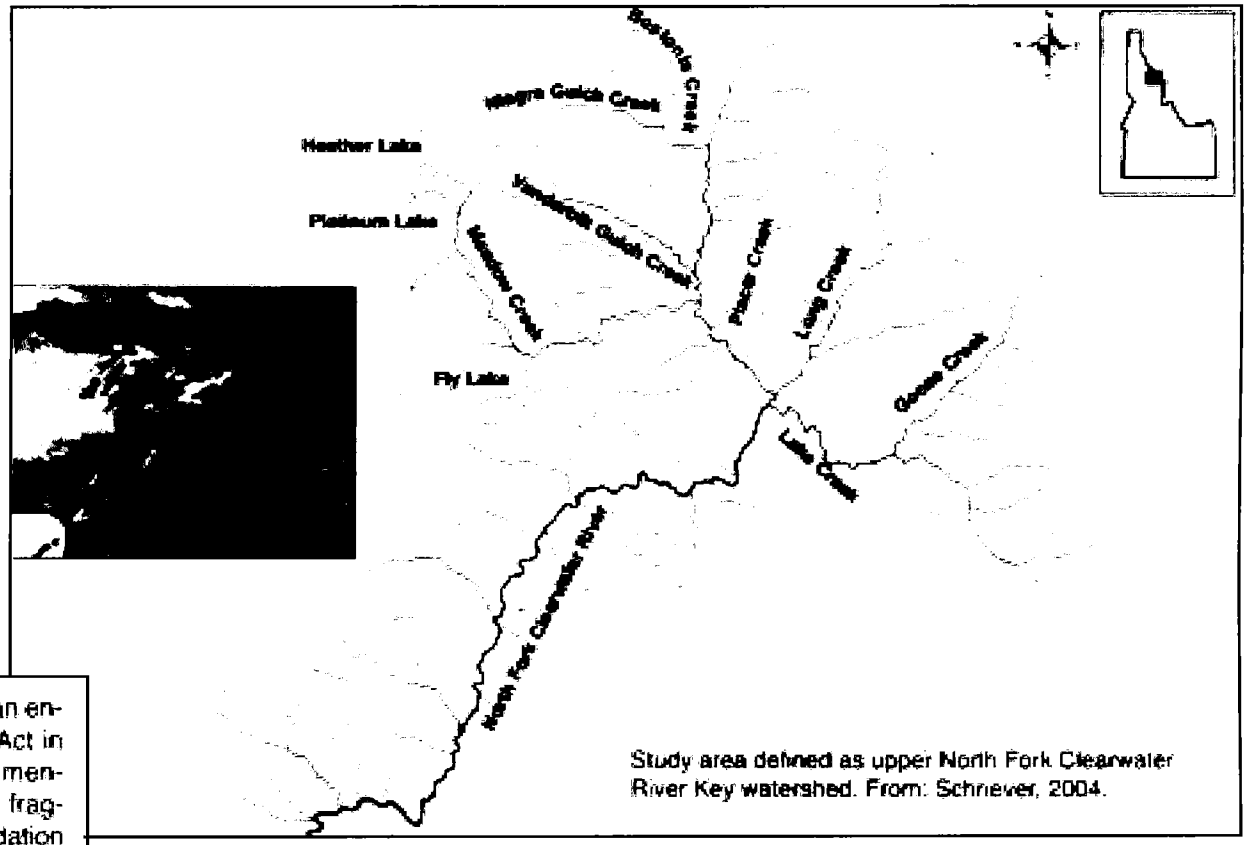
Developing BWRA would destroy the wholeness and character of the largest roadless area in the Clearwater National Forest. No more would its wilderness features blend with the wild lands to the north and south.



.Riffle and glide habitats of Weitas Creek. Crystal clear water, open and closed canopies and well developed riparian shore characterize these stream reaches.

North Fork Clearwater River has been identified by the State of Idaho as **Special Resource Water**. This designation recognizes the NFCR as having at least one if not all the following characteristics: 1) the water is of outstanding high quality, exceeding cold water biota standards, 2) the water is of unique ecological significance, 3) the water posses outstanding recreational or aesthetic qualities and 4) intensive protection of the quality of the water is in the paramount interest of the people of Idaho.

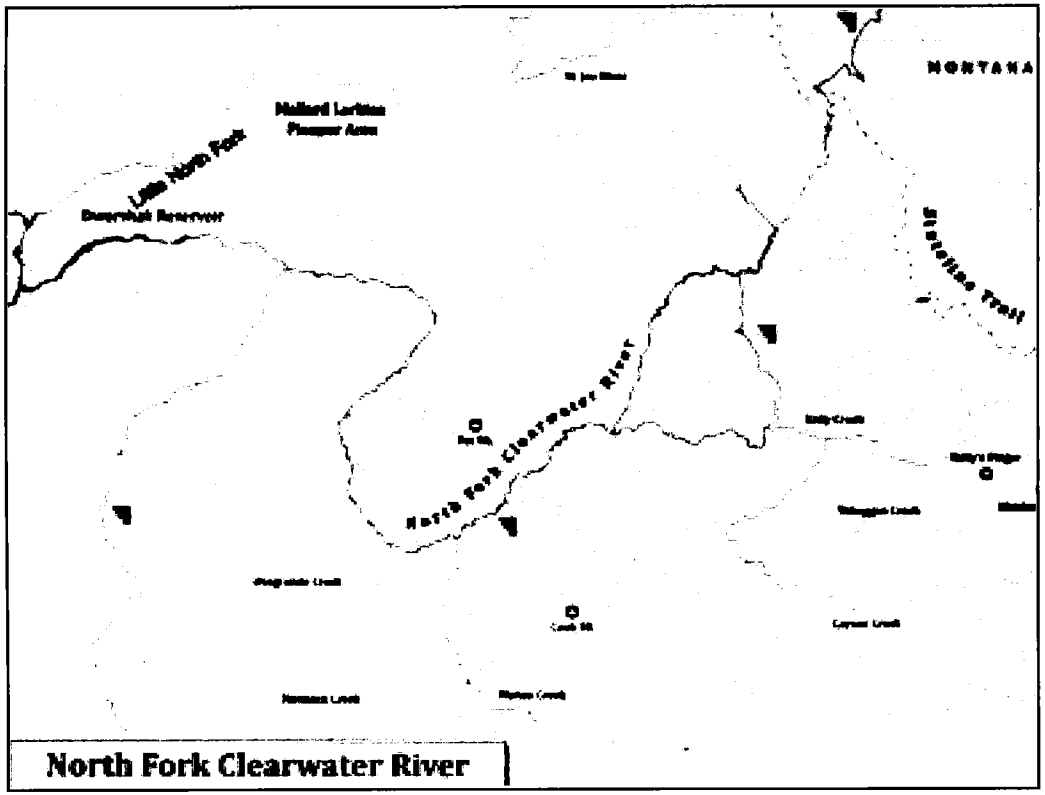
Meadow Creek, major tributary to the North Fork, is the **most important spawning site for bull trout in Idaho**. Consequently, it and adjoining streams have been studied for several years by the Idaho Fish & Game Department. Focal sites and high quality habitat sites for bull trout exist in Meadow Creek, Vanderbuilt Creek, and Long Creek drainages.



Study area defined as upper North Fork Clearwater River Key watershed. From: Schriever, 2004.

The bull trout (*Salvelinus confluentus*) was listed as an endangered species under the Endangered Species Act in 1998. The listing documentary and recovery plan mentioned three significant factors to be addressed: 1) fragmentation and local isolation of populations 2) degradation of spawning and rearing habitats and 3) the introduction and spread of non-native species particularly brook trout (*Salvelinus fontinalis*) which compete and hybridize with bull trout. Bull Trout have more specific habitat requirements and can be quite sensitive to human disturbances. They are bottom oriented and are less abundant where stream bed sediments are high. Bull trout choose complex habitats that provide abundant hiding cover and avoid temperatures exceeding 15 degrees C. Optimum rearing temperature is 7-8 degrees C. which may explain why spawning areas are often in the coldest streams. Harvest of bull trout by anglers has been illegal since 1995. Note the photo of a bull trout to the right.

Bull trout. It is imperative the Forest Service Plan includes **measurable and enforceable standards.** Otherwise, the service discounts science to evaluate environmental quality as it relates to habitat, water and biology.



North Fork Clearwater River

Above: North Fork Clearwater River Watershed showing major tributaries Weitas Creek, Cayuse Creek, Kelly Creek, Little North Fork Clearwater River.

The North Fork is a major tributary of the Clearwater River in Idaho. From its h in the Bitterroot Mountains of eastern Idaho, it flows 135 miles westward and i by the Dworshak Dam just above its mouth in north-central Idaho. It drains a t tershed of 2,462 square miles and has an average flow of over 5,600 cubic feet accounting for a third of the discharge from the Clearwater basin.

Right: Six major roadless areas as part of North Fork Clearwater River Water the historic areas where logging used to occur.

Roadless Areas in the North Fork Clearwater drainage are mostly continuous or adjacent to each other. The word *contiguity* is used to describe such a situation.

Bighorn Weitas Roadless Area is contiguous with the North Lochsa Slope and Weir Post Office roadless areas to the south in the Lochsa River drainage. In the North Fork drainage Big Horn Weitas is contiguous with Pot Mountain, Moose Mountain, Mallard Larkins and Hoodoo roadless areas.

This huge chunk of land should not be fragmented since it provides ecological linkages and bridges allowing animals and plants to migrate across elevations and latitudes uninhibited.

Roads and timber harvest effectively increases edge habitat and decreases wildland for species requiring interior habitat. Travel barriers from timber harvest can fragment and isolate populations into smaller subpopulations causing inbreeding, less genetic variability and local population extinction.

North Fork Clearwater River

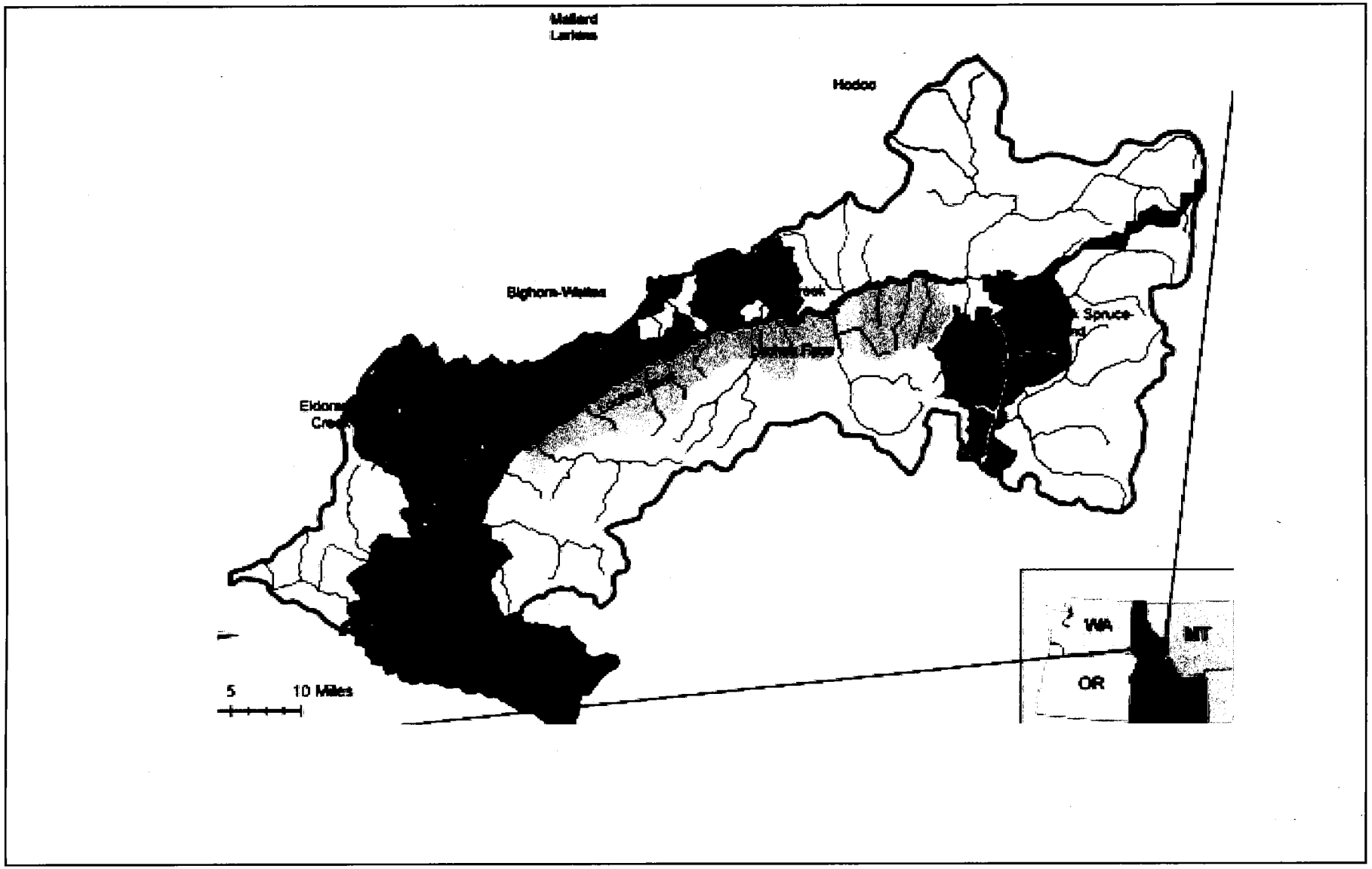
The North Fork Clearwater River flows roughly through the center of Meadow Creek Upper North Fork Roadless Area almost continually in view from Trail 373. Meadow Creek empties into the North Fork about 4 miles northwest of the Cedars Campground near where Long Creek and Lake Creek flow into the North Fork (see map on previous page).

A high degree of visual variety exists here - rapids, pools, runs and cascades. In addition, extensive meadows exist adjacent to the river providing habitat to many species of mammals and birds. The stream bottom landtype association (LTA) is a high quality habitat. The majority of breaklands or steep-sloped landforms create a distinctive frame to the river.

Fish spawning and rearing in the corridor is enhanced by cool spring water originating from the adjoining meadows. Cedar, hemlock and pine forests are common in the lower elevations of the North Fork, Chamberlain Creek and Meadow Creek. Eighty-five percent of fish in Meadow Creek are westslope cutthroat, the largest reaching about 16 inches. Rainbow, bull trout, mountain whitefish and brook trout are also present in these drainages.

The road density is very low and the watershed generally in excellent condition influenced mainly by natural processes. In the last 50 years, about 84 percent of the Upper North Fork drainage burned and tree harvest has been minimal.

North Fork Clearwater River near Aquarius RNA



Lochsa River drainage with six roadless areas emptying into river. Three large roadless areas, in gray, flow into the North Fork Clearwater River to the north. This huge chunk of land should not be **fragmented** since it provides ecological linkages and bridges allowing animals and plants to migrate across elevations and latitudes uninhibited.

Fish Creek

Fish Creek is proposed as a wilderness area. The photo of Upper Fish Creek shows a meandering-glide stream habitat surrounded by a **stringer meadow** with a random distribution of subalpine fir and Englemann spruce.

Collecting macroinvertebrates in Fish Creek. Where the channel is partially covered with **aquatic moss,** as seen here, more insects are present in the moss than in the adjoining sand substrate. As the moss becomes senescent and decomposes, it releases nutrients in the water thus increasing productivity of the stream.

Note false hellebore amongst the stringer meadow.

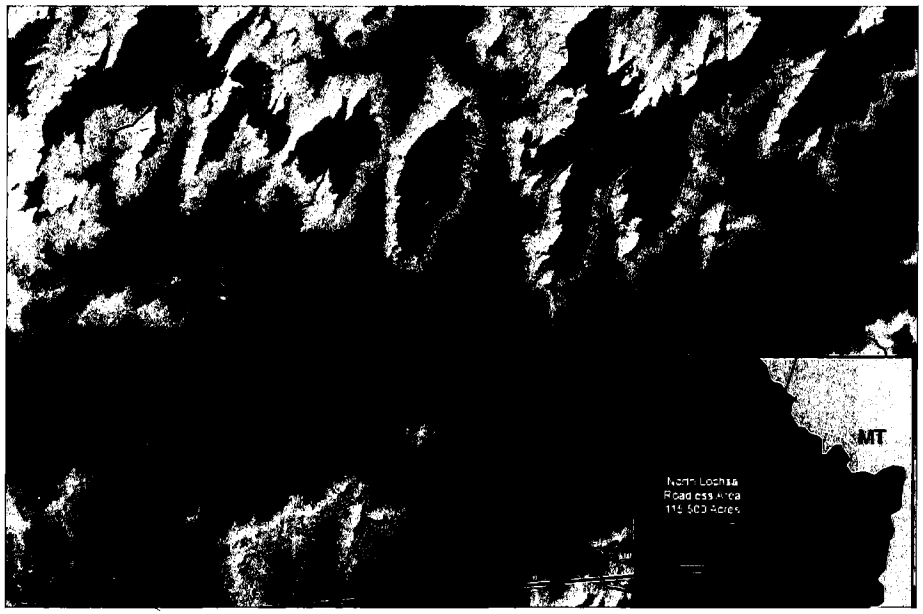
Glide - stream has a slow flow with a sand/gravel, moss substrate

Upper Fish Creek is a second to third order stream with a very low gradient at an elevation of about 1219 m (4000 ft). It occupies a generally wide valley bottom dominated by an extensive graminoid meadow surrounded by a forested terrain of mostly Englemann spruce and subalpine fir. The underlying rock is Idaho Batholith granitics and the water has a low alkalinity and conductivity readings. The channel in places has large moss concentrations which **enhance the biointegrity of the stream**. Moss samples often contain species of aquatic insects absent in the sand samples. As many as 42 macroinvertebrate species were observed there. In 1806, the Lewis and Clark expedition recognized Fish Creek Meadows as the last good grazing place before continuing east.

As you proceed east and then north along the river you'll come to the confluence of the Middle Fork. You follow it until reaching Kidd Lake and then Cedar Log Lake on the Stateline Trail in Montana. It would be criminal to open this entire trail system to industrialized tourism. Instead, let's make this lush river valley and forested slopes beyond part of our wilderness system. Kidd Lake on bottom left.

Cayuse Creek enters Kelly Creek on the right. Great camping site.

Hungery Creek



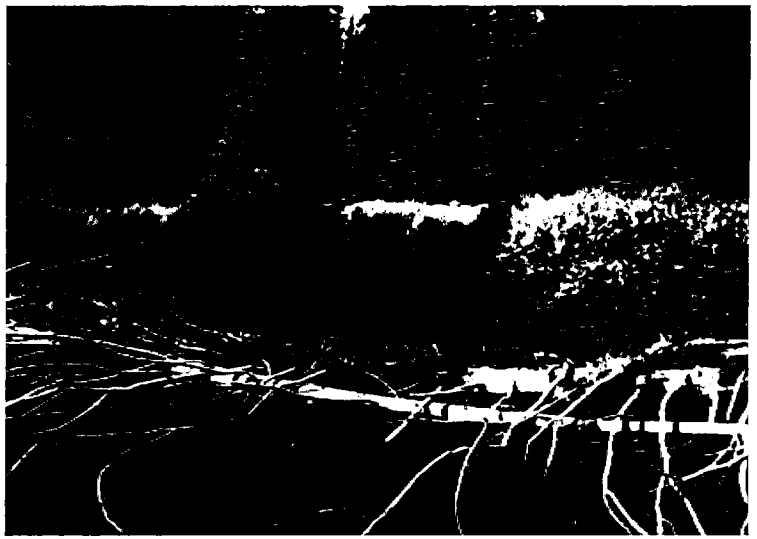
Fish Creek/Hungery Creek Region - North Lochsa Roadless Area

Productive stretch of Hungery Creek for macroinvertebrates as to its shrub riparian vegetation and boulder, rubble, gravel substrate.

Hungery Creek together with Fish Creek should be combined as a wilderness area. Hungery Creek is a third order stream having a riffle /run habitat upstream and a glide/pool habitat downstream with a sizeable meadow occuring on one side of the channel. These contrasting sites provide an **excellent educational opportunity** to compare plant and macroinvertebrate communities there. Along the steep bank upstream, the stream adjoins a bottomland forest community of conifers and shrubs. On the opposite bank are seasonally inundated wetland communities. Downstream the tall meadow community bordering the stream is somewhat separated from the remainder of meadow by a narrow finger of Englemann spruce. The meadow on the other side of the stream is drier and colonized by conifers.

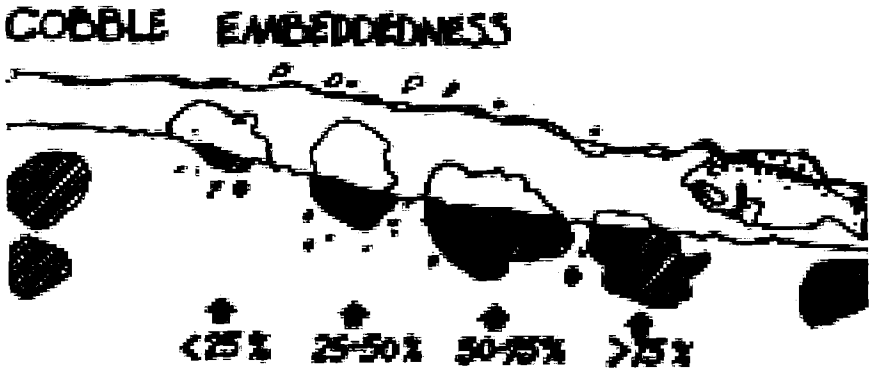
Some 40 species of macroinvertebrates were collected in the moss/mineral samples, a high biotic diversity.

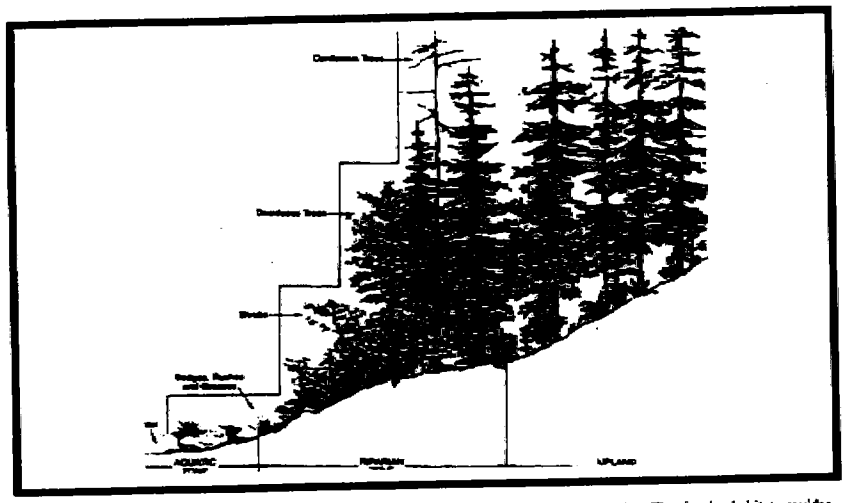
The primitive path paralleling some of the stream is the Lewis & Clark Historical Trail.



Debris dam on Hungery Creek slows water, accumulates fine detritus for invertebrates and provides a habitat for them. The Forest Plan calls for **harvesting dead and dying trees** which in time would lessen richness of a stream ecosystem.

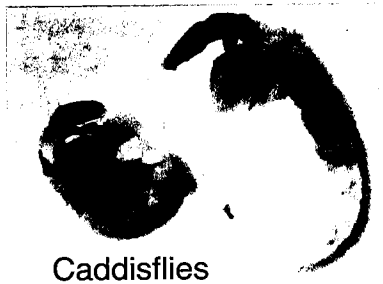
If the the new Forest Service plan occurs, rare fish species such as steelhead, salmon and bull trout would be affeted by reduction in the size of riparian areas and an increase in stream sedment from more logging allowed in the plan. Macroinvertebrates that serve as fish food would also occur in lesser amounts since their habitat would be disturbed. This is especially true of mayflies, stoneflies and caddisflies which are most sensitive to disturbance.





Measure the width of the riparian zone which is the area between the stream and upland vegetation. The riparian habitat provides shading which cools the water and litter that indirectly serves as macroinvertebrate food. (Refer to field data sheet for riparian evaluation).

Mayflies



Caddisflies

Stoneflies

Mayflies, caddisflies and stoneflies are the most sensitive stream insects as to environmental impact. These organisms are dominant in roadless area streams, yet another reason to protect such sites from logging. Fish habitat along with water quality and wildlife habitat should be quanitative, enforceable and non-discretionary. Otherwise science is disregarded and the New Draft Plan loses its credibility.

The Clearwater and Nez Perce National Forests, northern half of the Big Wild, comprise about 4 million acres - largest intact ecosystem in the continental United States! What is so amazing is that this region contains some of the least developed and ecologically diverse landscapes in the lower 48 states. However, fish species (bull trout, Chinook salmon westslope cuthroat) together with lynx and grizzly bear are threatened and endangered with little attention being paid to this fact.in the new plan

The Forest Service by merging both forests results in them combining two plans into one. At the present both forests have their own plans which is much better to protect water quality and fish and wildlife habitat. Also, Research Natural Areas might obtain a better chance of being established.

Proposed Bimerick Meadows RNA

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