

# **EAST FORK OF THE ILLINOIS RIVER WATERSHED ANALYSIS**

## ***SOCIAL MODULE***

US FOREST SERVICE  
Illinois Valley Ranger District

BUREAU OF LAND MANAGEMENT  
Grants Pass Resource Area

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# *Social Module*

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## **Social Module**

### **I. Social Sciences Key Question Summary**

S-1: How have past and present human activities influenced the watershed?

S-2: What future activities, other than timber harvest, could affect watershed function?

### **II. Key Question #S-1: Historical and Current Uses**

**S-1. How have past and present human activities influenced the watershed?**

#### **A. Prehistory and Ethnography**

Broadly speaking, the native people of the region were hunter-gatherer-fishers who made their living from a wide variety of natural resources found in the narrow canyons and small interior valleys they occupied. People wintered in semipermanent villages located along major rivers and dispersed during the spring-summer-fall season to exploit upland resources. The archaeological record reflects this subsistence-settlement system.

Ethnographically, Penutian and Athapaskan speakers occupied the region. Tribes included the lowland Takelma of the upper Illinois River; Athapaskans occupied the Applegate Valley (Kendall 1990). Gray (1987: 20-24) however, concludes that the whole Illinois River drainage was Athapaskan. At the time of Euro-American contact native cultures could be characterized as simple, stratified, village-based societies, with ceremonial systems much like that found among the Hupa, Karuk, and Wiyot of northwestern California (Aikens 1993; Kendal 1990: 591). Gray (1987) provides an excellent synthesis of the Takelma and their Athapaskan neighbors.

Aikens (1993: 221-266) recently summarized the prehistory of southwest Oregon. The oldest recorded site in our immediate area is located at Marial on the Rogue River. This site has been dated to around 8,000 years before present (Schriendorfer 1985). However, little is known of the archaeology of the upper Illinois River watershed. Recorded archaeological sites located downstream of the analysis area include the MaCalaeb's Ranch site (35JO32) possibly correlated with the ethnographic site "Talsalsan", and the Gallaher site (35JO28), a late Archaic site that was possibly occupied to the mid-1800's. In addition, pit house village sites have been recorded on the wild section of the Illinois River (Steep 1994). Four prehistoric sites are recorded for the watershed (three USFS and one BLM).

Traditional Native American cultures were effectively destroyed in the Illinois Valley area by the intrusion of miners in the early 1850's and the subsequent Rogue Indian Wars. After the 1853 treaty, most of the Takelma were on the Table Rock Reservation. In 1856, after the cessation of hostilities, they were moved to the Grand Ronde Reservation, and also to the Siletz Reservation.

At present there does not appear to be any formal use of the area by Native Americans.

## B. Indian Burning

Fire is an important aspect of ecosystem function in southwest Oregon. Major plant communities are dependent on fire and other types of disturbance to successfully maintain ecosystem health (Atzet and Martin 1991). In this respect, Native Americans played an active role in maintaining fire dependent communities over time, and in establishing themselves as the dominant "edge dependent species" (Bean and Lawton 1993; Lewis 1989, 1993).

There are numerous parallels between modern vegetation management and Indian burning. Each seeks to maintain an array of early to mid-seral plant communities across the landscape. These various plant communities provided small and big game habitat, natural fuel breaks, and for native populations various edible plant foods, materials for basketry, and other technological uses. Other uses for fire included hunting, crop management, insect collection, pest management, warfare, preparing foods, and clearing areas for travel (Williams 1993). Fire also recycles nutrients, provides vistas, and often destroys forest pathogens. See Williams (1993) for a recent bibliography of the use of fire by Native Americans.

Until recently specific ethnographic information for the use of fire in southwest Oregon was limited (Lewis 1989). However, research specific to the Applegate and Illinois Valleys has been published (McKinley and Frank 1995; Pullen 1995). In addition to these recent publications, detailed information is available for the Willamette Valley (Boyd 1986), and it is possible to extrapolate techniques to native populations in the analysis area based on similarities of plant communities. Similar plant communities also occur in northern California, such as chaparral, and ethnographic data is available for burning by those tribes. Natives' burning practices in southwest Oregon must have functioned similarly to those described for such tribes as the Miwok, Hupa, Tolowa, and Wintun found in California (Lewis 1989, 1993). Also see Blackburn and Anderson (1993).

The following review is based on Lewis (1989) and Pullen (1995). In addition, Pullen (1995) provides an extensive review of historic journals and other writings illustrating Applegate and Illinois Valley plant communities at the time of historic contact.

**Riparian zones:** Conifers were an important part of riparian zones along the Illinois River and their tributaries; ponderosa pine along the upper Illinois River (Illinois Valley) and Douglas-fir on its lower reaches.

**Valley floor-oak-grasslands:** These plant communities were burned beginning as early as late July and continuing through September. Burning often occurred after spring rains. Burning initiated early growth of grasses and provided habitat for game. Burning also controlled acorn-destroying insects (McCarthy 1993). Native American seasonal habitation sites are usually found along the boundaries of this zone. Recent research indicates that more oak-pine habitat existed in the past and that these communities were specifically maintained by native burning (Pullen 1995). Open ponderosa pine stands interspersed with open groves of Oregon white oak were maintained.

**Valley slopes:** North-facing slopes in the Illinois Valley were covered with open stands of ponderosa and sugar pine and an occasional Douglas-fir. South-facing slopes were covered with grass, except along ravines where oaks, chaparral, and scattered ponderosa pine occurred.

**Chaparral:** Fires were usually initiated in the fall. The primary goal was to maintain a mosaic of early to mid-seral plant communities that functioned as small and big game habitats. Edible plant species were also produced. This mosaic created natural fuel breaks. Spring burning helped to maintain more permanent openings. Fire was also used to create seedbeds for planting of tobacco; tobacco was the only "cultivated" plant species.

**Mid-elevation forests:** Fire was possibly used to maintain open understories in stands dominated by Douglas-fir and ponderosa pine. Fires eliminated the build up of ladder fuels that could contribute to stand replacement fires. Meadows were maintained but overall the native use of fire in this zone was limited.

**Upper elevation forests:** Upper elevation forests in the Illinois River drainage were composed of mature forest of fir, pine, and cedar. Meadows were likely maintained by native burning but overall use of anthropogenic fire in this zone was limited.

One of the management objectives of native burning was the maintenance of wildlife habitats; therefore, a brief discussion of wildlife populations at the time of contact is in order. Based on a review of historic sources, Pullen (1995: VI-19-20) provides the following general observations:

**Deer, elk, bear and wolf:** Deer, elk, bear and wolf populations were much higher before or at the time of Euro-American contact. This can be attributed to the positive effects of native burning.

**Beaver:** Large numbers of beaver existed along the Applegate River but it is difficult to determine beaver populations for the Illinois River drainage.

**Rabbits and squirrels:** Rabbits and squirrel populations may have been considerable in the Illinois Valley. Jackrabbit populations may have been high due to the maintenance of quality habitat in the valley. Silver gray squirrel populations would have benefitted from fire maintained oak-pine woodland habitats.

## C. Fire in the Landscape: The Potential for Cultural Landscape Restoration

One consequence of the removal of Native Americans through either direct violence or forceful removal to reservations was the interruption of periodic burning of specific plant communities, especially those communities found at the interface of oak-pine valley woodlands and forested slopes. An informal fire study done in mixed conifer stands, somewhat adjacent to the valley floor, noted that the last time fire had moved through the area was in the 1860's (Dick Boothe, personal communication). This would roughly correspond to the period of time after the Rogue Indian Wars and the removal of Native Americans.

Miners, by contrast, tended to burn indiscriminately to improve access to mining areas. Burning by miners, and other Euro-Americans, amounted to an "ecological transition" which changed the distribution of habitats and array of seral communities across the landscape, and may have contrasted sharply with communities that existed over time as a result of Indian burning. The legacy of mining and the subsequent mix of plant communities across the landscape may bias our vision of what we consider to be pre settlement conditions.

Forest Service fire suppression policy also influenced the composition and structure of plant communities. After 1910 fire suppression became better-organized and following WWII new techniques such as smoke jumping, and easy access to previously unroaded areas allowed for more efficient fire suppression. In addition, large fires primarily caused by lightning, such as the Longwood Fire of 1987, still periodically dominate the landscape.

Burning by miners, fire suppression, and the natural fire frequency of the area can lead to questioning the degree and intensity of Native American burning to manage habitats. Is it possible to separate out the effects of Native American habitat management from naturally occurring fire? If we allow for a large time frame in which native people used fire, possibly thousands of years in specific habitats, we can posit that a number of plant communities (e.g., pine-oak savannahs, meadows) were primarily anthropogenic in nature and owed their continued existence to the periodic and systematic use of fire by Native Americans. In this context, prescribed fire will play a critical role in maintaining the vitality of the watershed over time and restoring specific pre settlement plant communities.

#### **D. Native American Management of the Anadromous Fish Resource**

The importance of anadromous fish resources to aboriginal societies is well documented in the ethnographic literature for northwestern California and southwestern Oregon (Hewes 1942, 1947; Kroeber 1925; Kroeber and Barrett 1960; Rostland 1952; Suttles 1990). Estimated total yearly consumption of salmon in native California, which includes northwestern California watersheds, is estimated at more than 15 million pounds (Hewes 1947). Chinook salmon (*Oncorhynchus tshawytscha*) and silver or Coho salmon (*O. kisutch*) dominated aboriginal fish harvest. The abundant seasonal runs and ease of procurement of anadromous fish strongly influenced the distribution of aboriginal settlements and the spiritual life of native peoples.

Harvesting and storage of anadromous fish in the Pacific Northwest has been part of a yearly subsistence routine dating back to prehistoric times (Aikens 1993). Charred salmon bone was recovered at the Marial site located on the Rogue River. This site dates back to at least 8,000 before present (Schriendorfer 1985). Exploitation of riverine resources occurred at the Umpqua-Eden site located on the Umpqua River estuary. Artifacts associated with fish procurement and salmon-coho bones were recovered; this site dates to 1010 BC (Ross 1990). The excavation of the Gallaher site on the lower Illinois River yielded artifacts associated with fishing technology.

Fishing techniques used throughout the region include hook-line, netting from canoes, dip nets from falls, harpoons, night fishing with torches, clubs, salmon fences (weirs), and basketry traps (Gray 1986; Kroeber 1925). Salmon was cooked and then pulverized for storage for winter use. Fish drying was a common method of preservation and extremely important as a winter food source. Salmon eggs were smoked. In hard times toward the beginning of spring, the tails and heads of salmon might be eaten with some acorn mush. Spring runs of salmon were especially important at a time when stored winter reserves were dwindling or exhausted.

The distribution of villages and camps along the Rogue and Illinois Rivers and their tributaries attest to the importance of obtaining and processing fish. Major villages were often located near falls or rapids to facilitate harvesting. Examples are the village sites at Gold Hill and Marial on

the Rogue River, the village site of Tlegetlinten located at the confluence of the Rogue and Illinois Rivers, and McCaleb's Ranch located within walking distance of a waterfall on the Illinois River.

Native peoples were familiar with all major fish species: trout, salmon trout, steelhead, silverside, and Chinook (Gray 1987). In addition, fresh water fish, mussels, and crawfish were taken. Riparian products include willows and other wetlands materials used in basketry.

Harvesting of anadromous fish was incorporated in a larger web of ceremonial interactions. Ritual procedures were used to organize harvest of a variety of food resources and to insure a sustainable resource. Part of the yearly ritual cycle was devoted to salmon (Sewezy and Heizer 1977). Tribes in northwest California and southwest Oregon had "first salmon" rites. Rites were often held with the onset of the spring king salmon run, a fish migration of major importance. These rites were used to recount orally the myth of the origins and travels of the first Salmon, who became a culture-hero and was invited to ascend the rivers and streams again. Priests or formulist controlled the timing of rituals in northwestern California (Kroeber 1925). Tribal members were strictly forbidden to eat salmon until rituals were completed, and often up to ten days afterwards. These restrictions had the ecological effect of avoiding premature harvest of salmon and also insured that a portion of the run could travel upriver. Intertribal conflicts concerning downstream over harvest were thus avoided. A first salmon ceremony was performed at Ti'lo-mi-kh falls in Takelma territory. This was a central place that drew people from the entire watershed (Gray 1987). The first five or ten Chinook salmon, among Athapaskans, were eaten ritually by the entire group (Miller and Seaburg 1990). Failure to incorporate salmon into the ritual cycle was believed to result in poor fish runs or failures of entire watersheds to produce fish.

Ritual specialists also organized the building of fish dams and weirs at critical locations. Weirs were left open at night both to ensure that facilities weren't damaged as well as to allow the continued passage of fish upriver. Dams were removed after a set fishing period (Waterman and Kroeber 1938).

## **E. Gold Mining**

The discovery of gold at the mouth of Josephine Creek in the summer of 1850 brought about tremendous change in the East Fork of the Illinois River area. The first known trails into the Illinois Valley from the west were opened in early 1851, bringing people from Trinidad, California, and over the Siskiyou from above present day Happy Camp. Mining activities at first centered on Josephine and Canyon Creeks, but after 1852 explorations for gold discovered extensive deposits on the alluvial flats of the upper Illinois River and along the streams and gulches that feed the East Fork of the Illinois River. Reviews of regional environmental and mining history are found in McKinley and Frank (1996), Ramp and Peterson (1979), and Francis (1988).

Althouse Creek, just to the east of the analysis area, saw a tremendous amount of gold mining activity, supporting more than a thousand miners along ten miles of its length for perhaps ten years (McKinley and Frank 1996: 25). By 1853, Browntown was a thriving mining center on Althouse Creek, serving miners in the area. In 1852 a trail was opened up from Crescent City, California, which led to an increase in miners coming into the valley.

Within the watershed area, placer gold was first discovered in Sailor, Allen, Fry and Scotch Gulches. These areas were intensively mined and lasted only a few years (Ramp and Peterson 1979: 30). Beginning around 1860, a system of ditches was developed to bring water to the hydraulic mine operations developing in the area; the Osgood Ditch, located above the East Fork of the Illinois River, dates from this era. It is estimated that thirty miles of ditches and flumes at four levels were constructed (McKinley and Frank 1996: 89). Operations included the High Gravel No. 416, the Deep Gravel No. 393 and Esterly mines (Llano de Oro), No. 396. These areas contained several thousand acres of gold and platinum gravels and were hydraulically mined from about 1870 to 1940. Their combined estimated production was about 55,000 oz. (Ramp and Peterson 1979: 30). Bedrock at the Deep Gravel and Esterly Mine was well below the elevation of the Illinois River and huge hydraulic elevators were used to hoist the gravel to the sluices. The Esterly Mine closed in 1942. The Esterly Lakes are remnants of those early hydraulic mining operations.

As miners came into the area whole towns sprang up over night. Towns appeared in Allens Gulch and at Waldo located just outside the watershed. By 1856, 500 people were living in Waldo and by 1858 the town had four hotels (one for Chinese only), a stable, blacksmith shops, saloons, and a bowling alley. Francis (1988: 59) estimated that more than 3,000 people used the services and materials the town had to offer. When Josephine County was formed on January 22, 1856, Waldo, the largest town in the area, was chosen as its territorial seat. Waldo declined until the late 1920's. In the mid-1930s the hydraulic giants of the Esterly Mine mined what was left of Waldo. Between 1852 and 1979 Josephine County produced 567,989 oz. of gold valued at \$12,797,434 (Ramp and Peterson 1979: 20-21). For a detailed discussion of individual mines see the Oregon Metal Mines Handbook (1942).

In addition to gold, copper was produced, primarily before 1920, from the Queen of Bronze Mine No. 421, and the Cowboy Mine No. 446, both in the Waldo-Takilma area. Ore was processed at a local smelter but some ore was shipped by horse drawn freight wagons to the railroad terminal at Waters Creek. More than 25,000 tons of ore were produced (Ramp and Peterson 1979: 33). Copper has been the second most important metal in terms of production in Josephine County.

Mines and later copper processing facilities produced a demand for forest products, and almost certainly impacted forests heavily at the local level. Flumes, chutes and towns needed building materials. Two whipsaws in the Waldo area in the 1850's were producing up to 20,000 board feet per week for mining operations, and Chinese miners ran a mill for the Sailor Diggings. Large pines were the preferred species. By 1886 J.W. Bennet opened a water run lumber mill in Butcher Gulch near Waldo. Other mills opened in the 1890's but lumbering really didn't take off in the analysis area till the 1950's (McKinley and Frank: 1995: 152).

Numerous claims exist on the lower reaches of the East Fork of the Illinois River and Dunn Creek. Currently there are three suction dredging operations on Dunn Creek and two to three operations on the East Fork of the Illinois River. In the near future suction, dredging operations are planned for Poker Creek and upper Dunn Creek. Under current Forest Service mining regulations suction dredging requires a Notice of Intent as opposed to a more formal Plan of Operations.

## **1. Environmental Effects of Mining**

Early placer and hydraulic mining profoundly altered riparian and other habitats that are still in various degrees of recovery. Sediment loads from large-scale hydraulic mining operations in the watershed had an impact on anadromous fish, and water withdrawal, specifically from the East Fork Illinois River, may have had an impact on water temperature, which in turn affected fisheries. Areas within the reaches of the upper East Fork Illinois River were heavily impacted by mining activities. In some areas, the streambeds were virtually turned upon themselves (McKinley and Frank, 1995: 31-33). The French Flat area, just north of Waldo, was heavily modified by early day mining activities.

The timing of the mining season played a major role in terms of severity. Lalande (1995) has pointed out the seasonal effect of severity: the effect upon anadromous species was more pronounced in the fall, when lower water levels and stream turbidity created an environment detrimental to the fall runs of Chinook and Coho salmon. Winter resident species were also impacted. The effect from stream channelization extended beyond seasonal impact. As streams were channelized, their ability to hold water was decreased, with an overall loss of moisture in riparian and marsh communities and a resultant loss of moisture reliant plant species.

## **F. Livestock Grazing**

After the decline of mining, livestock farming grew in the Illinois Valley, and certainly lands within the watershed were used for grazing. The number of cattle doubled in Josephine County between 1875 and 1883 (McKinley and Frank: 1995, 85). Sheep were also raised and large numbers grazed high mountain meadows around the turn of the century. Atzet and Wheeler (1982: 5) state "Sheep grazing has been a significant influence on the vegetation of the Klamath Province, particularly in the high elevations... In 1903, a typical year, 103,000 sheep and 7,500 cattle grazed the backbone of the Siskiyou Mountains between where Interstate 5 and U.S. Highway 199 are now located. By 1917 most meadows along the Siskiyou crest were 'badly depleted' ". Cattle and sheep tend to change understory composition, reduce fine fuel loadings, and create conditions for the establishment of exotics. In addition, unregulated grazing causes the deterioration of soil conditions. By 1910 the Siskiyou National Forest supported grazing of at least 4,000 cattle and horses and about 3,200 head of sheep and goats (*Siskiyou National Forest Grazing Report January 8, 1910*; cited in McKinley and Frank: 1995: 132).

The Upper Illinois River watershed supported at least nine grazing permits in 1912 (McKinley and Frank 1995: 132). The last remaining livestock permit was terminated in 1985. The permit was district wide, for 144 head of cattle, and held by Jack Sauers of Cave Junction (Don McLennan, personal communication).

## **G. Federal Land Ownership**

Land ownership in the watershed is diverse. The Bureau of Land Management (BLM) manages 5,043 acres (2,681 acres in Oregon and California (O&C) status and 2,362 Public Domain (PD) acres) within the watershed. The Forest Services administers 36,688 acres. In addition, there are 15,861 acres of private land located in the watershed. (See the following maps; [Land Ownership](#), [Government Ownership](#), [Land Use Allocations](#), and [Management Areas](#))

The Siskiyou National Forest was created on October 5, 1906. A ranger station was established at

Page Creek in the spring of 1909; Mr. M. M. Lewis was the Ranger (Cooper 1939). Early forest service activities included the surveying of boundaries, making field examinations of timber tracts, checking on the validity of Homestead entries, carrying on minor timber sales for mining companies, constructing trails, fighting fires, and laying phone line. By 1936 the station had been moved to its present location in what is now Cave Junction and the facility at Page Creek became a guard station.

The construction of roads began with the Civilian Conservation Corps (CCC) in the 1930's. CCC camps were located at the Oregon Caves and in Kerby. A smaller CCC camp was located in the Waldo area. The Sanger peak road was constructed at this time. Road construction in earnest began in the watershed in and around 1948 when the first stands of timber were harvested around Takilma. Other roads were constructed in the Page Mountain area in the 1950's. Timber stands during this time were harvested using crawler-tractors. Roads reached the upper reaches of the watershed in the decade of the 1960's when timber stands were harvested in the vicinity of Black Butte. The current road system reflects the introduction of skyline logging technology in the 1970's.

A portion of the land within the watershed administered by the BLM is land formerly owned by the Oregon and California Railroad with title subsequently being revested back to the General Land Office in 1916. The General Land Office was combined with the Grazing Service in 1946 to form the BLM.

The private lands in the watershed were originally public lands. Most of those public lands were transferred to the private parties as authorized by either the General Mining Laws or Homesteading Laws.

## **H. Cultural Resources Sites**

### **1. Forest Service**

Fifteen recorded sites exist in the watershed: four cabin sites, three trails, two historic dumps, two mining sites, two ditches, a bridge, and a road segment. Several of these sites date to the early 1850's. The two mine ditches are among the earliest ditches constructed by miners in the area, and are associated with the Sailors Diggings and the Esterly Mine. None of the recorded cabins are standing, but at least one dates to the 1880's and could have archaeological value. Other sites represent early forest service administrative activities.

### **2. BLM**

Approximately 3,700 acres were surveyed in 1999 as a part of the Esterly Cultural Survey. This survey included lands in the East and West Fork Illinois River watersheds. Forty-two new sites were recorded in the East Fork Illinois watershed. Forty-one of those sites are historic (including two contemporary use areas of special significance to the local community) and one site is prehistoric. Nine isolates were recorded: three are prehistoric and six are historic. Historic sites represent a full range of local mining history. The mining site chronology extends from the discovery of gold in Sailor's Gulch in the early 1850's to more recent prospecting in the 1930's and 1940's and includes sites representing all the important technological developments associated

with hydraulic mining. (Budy 1999.)

## I. Roads

There are approximately 331 road miles within the East Fork Illinois River watershed, consisting of 25 miles of BLM inventoried roads (7%), 144 miles of Forest Service roads (44%) and the remaining 162 miles are on private lands (49%).

### 1. Forest Service

The Forest Service transportation system in East Fork Illinois started with 3.77 miles in 1925. During the 1930's the Forest Service constructed 19.59 miles; 1940's, 17.9 miles; 1950's, 7.95 miles; 1960's, 53.55 miles; 1970's, 37.71 miles; and in the 1980's, 16.81 miles. In the decade of the 90's there was no new construction.

Currently there are 144 miles of road on Forest Service land within the watershed which is 4.8% of the total Forest road system, and 22.5% of the Illinois Ranger District road system. (*Note:* The total mileage of roads included in this report have been collected by odometer road logs and is maintained in a database. This number differs from miles of road provided by GIS mapping and reports generated by Primary Base Series maps. These maps are flat and two-dimensional and do not account for extra mileage due to road grades.) The transportation system can be accessed by the U.S. Highway 199, County Roads 5560 and/or 5828 and National Forest (NF) arterial road 48.

Table S-1 summarizes the mileage of Forest Service roads by operational maintenance level.

Maintenance Level <sup>1</sup>	Miles of Road	Surface Type
5	12.00	Surface Treatment
4	None	N/A
3	None	N/A
2	132.44	Native and Aggregate
1	12.84	Native and Aggregate

<sup>1</sup> *Level 1* - Physically closed for long periods, high clearance vehicles, minor Average Daily Traffic (ADT), open only for selected activities, probably not surfaced, other than native, and passenger cars not a consideration.  
*Level 2* - High Clearance vehicles, minor ADT, usually open, but can be seasonally closed, probably not surfaced, other than native, passenger cars not a consideration.  
*Level 3* - Opened and maintained for prudent driver of passenger car, meets Highway Safety Act (HSA), user comfort/convenience not considered a priority, typically low speed, single lane w/turnouts and spot surfacing, might be aggregate or native surfaced.  
*Level 4* - Provide moderate degree of user comfort/convenience at moderate travel speeds, meets HSA, mostly double lane and aggregate surfacing, some may be single lane, some may be paved or dust abated.  
*Level 5* - Provide high degree of user comfort/convenience, meets HSA, normally double lane and paved, some may be aggregate surfaced and dust abated.

In 1994, a Transportation Network Analysis was completed Forest wide to determine the future needs of the transportation system. Historically, timber management has been the primary reason

for the existing road system development. In the future the Forest envisions a less extensive road system and possibly an expansion of the trails network. This transportation system will allow reasonable access to major points of interest across the Forest. The East Fork Illinois watershed contains 36.55 miles of roads identified as candidates for decommissioning, obliteration or conversion to another use. A list of these roads is included in [Appendix A](#). Roads to be decommissioned within the next 2 years are 4803083 (0.20 miles, constructed in 1940), 4803130 (1.20 miles, constructed in 1950) and approximately the last mile of road on 4906, also known as the Crazy Peak Road. Roads 4803, 4803090 and 4803096 are in contract for storm proofing within the next year.

Current road densities are considered adequate from a recreation and fire perspective. Future roading needs to facilitate timber harvest and other forest management activities will be determined on a site-specific project basis.

Road closures and road decommissioning are controversial on public lands. Many roads have a long history of public use and are used for hunting and other recreational access. Attempts at road closures often fail due to the public’s perception that such resource protection activities infringe of the right to drive where there has been traditional access. Public outreach and education is necessary to develop a successful road management policy.

Table S-2 displays road and stream crossing densities in the watershed on National Forest Land.

Table S-2: Forest Service Road and Stream Crossing Density					
Miles of Road	Stream Crossings	Area (mi <sup>2</sup> )	Crossing Density (per mi <sup>2</sup> )	Crossing Density (per mile)	Road Density (miles per mi <sup>2</sup> )
144	195	90.3	2.16	1.35	1.60

Source: Stream crossings and area gathered from GIS maps and reports.

## 2. BLM

Table S-3 summarizes the mileage of BLM roads by operational maintenance level. [Table A-2](#) (Appendix) lists the maintenance level by road for BLM roads.

Table S-3: BLM Roads by Maintenance Level	
Road Maintenance Level <sup>1</sup>	Miles of Road
5	-
4	-
3	15.91
2	7.72
1	0.93
Total	24.56

<sup>1</sup> *Level 1:* This level is the minimal custodial care as required to protect the road investment, adjacent lands, and resource values. Normally, these roads are blocked and not open for traffic or are open only to restricted traffic. Traffic would be limited to use by high clearance vehicles, passenger car traffic is not a consideration. Culverts, water dips and other drainage facilities are to be inspected on a three-year cycle and maintained as needed. Grading, brushing, or slide removal is not performed unless they affect roadbed drainage. Closure and traffic restrictive devices are maintained.

*Level 2:* This level is used on roads where management requires the road to be opened seasonally or for limited passage of traffic. Traffic is generally administrative with some moderate seasonal use. Typically these roads are passable by high clearance vehicles. Passenger cars are not recommended as user comfort and convenience are not considered priorities. Culverts, waterdips, and other drainage facilities are to be inspected annually and maintained as needed. Grading is conducted as necessary only to correct drainage problems. Brushing is conducted as needed (generally on a three-year cycle) only to facilitate passage of maintenance equipment. Slides may be left in place provided that they do not affect drainage and there is at least 10 feet of usable roadway.

*Level 3:* This level is used on intermediate or constant service roads where traffic volume is significantly heavier approaching an Average Daily Traffic of 15 vehicles. Typically these roads are native or aggregate surfaced, but may include low use bituminous surfaced road. This level would be the typical level for log hauling. Passenger cars are capable of using most of these roads, by traveling slow and avoiding obstacles that have fallen within the travelway. Culverts, waterdips, and other drainage facilities are to be inspected annually and maintained as needed. Grading is conducted annually to provide a reasonable level of riding comfort. Brushing is conducted annually or as needed to provide concern for driver safety. Slides affecting drainage would receive high priority for removal, otherwise they will be removed on a scheduled basis.

*Level 4:* This level is used on roads where management requires the road to be opened all year and have a moderate concern for driver safety and convenience. Traffic volume is approximately an Average Daily Traffic of 15 vehicles and will accommodate passenger vehicles at moderate travel speeds. Typically these roads are single lane bituminous surface, but may also include heavily-used aggregate surfaced roads as well. The entire roadway is maintained on an annual basis, although a preventative maintenance program may be established. Problems are repaired as soon as discovered.

*Level 5:* This level is used on roads where management requires the road to be opened all year and have a high concern for driver safety and convenience. Traffic volume exceeds an Average Daily Traffic of 15. Typically these roads are double or single lane bituminous, but may also include heavily-used aggregate surfaced roads as well. The entire roadway is maintained on an annual basis and a preventative maintenance program is also established. Brushing may be conducted twice a year as necessary. Problems are repaired as soon as discovered.

The BLM's Transportation Management Objectives (TMOs) have not been completed for this watershed. They will be completed as required under the BLM Western Oregon Transportation Management Plan of 1996. This will result in the identification of road improvements, decommissioning, and other road management needs in the watershed.

Current road densities are considered adequate from a recreation and fire perspective. Future transportation system needs to facilitate timber harvest and other forest management activities will be decided on a site-specific project basis. The breaching of road closures is a problem on BLM lands, notably in the French Flat area.

## **J. Economics and Demographics**

The following discussion is from Cosby (1997).

Agriculture, wood products and tourism are the Province's three basic industries. Recent data indicates that the main area of the employment expansion will be in the trades and services industries. Although there has been growth in construction and non-timber related manufacturing, there is still strong reliance upon the wood products industry for the region's economic well-being. The decline in wood products activity through the 1980's was locally amplified by the nation-wide recession. Projections by the State of Oregon Employment Division indicate that the timber industry is expected to lose an additional 1,100 jobs statewide over the next 10 years.

Josephine County has consistently rated among the least wealthy of Oregon counties. Unemployment ranges to 8%, and the per capita income in 1995 was \$15,581. This ranges from

80.2% to 85% of the state's per capita income. Typically, citizens in this region are older, retired individuals who rely heavily on income from Social Security, retirement, and public assistance programs. The State of Oregon Employment Department reports that in 1995, 26% of all income in Coos and Curry counties was provided by transfer payments, including Social Security, Medicare, other retirement income, veteran's benefits, unemployment and food stamp programs.

Approximately 71,100 people live in Josephine County. Approximately 30% of these people live within a one-hour drive of the watershed. Grants Pass is the county seat (pop. 18,120) and the largest city in Josephine County. Cave Junction (pop. 1,200) is the second largest community and is located at the terminus of the watershed. Currently 15,000 people live in the Illinois Valley, scattered in the backwoods and small hamlets such as Takilma, Selma, O'Brien, and Holland.

The population of Josephine County is focused in unincorporated areas. Much of this unincorporated area is identified as the "interface." Throughout the "interface" of forest and rural development there are a number of usually unnamed communities. These communities are defined by little more than a small store or tavern, but they play a role in the dissemination of information and the formation of geographic-based community identity.

Over the past decade, a number of demographic shifts have been taking place. Young people who were raised in southwest Oregon have been inclined to leave in search of employment while the region has been experiencing a steady increase in overall population. The increase is primarily due to an immigration of both young, professional ex-urbanites and senior citizens. The median age of Josephine county residents is 39.9 years (risen from 33.7 years in 1980).

The southern portion of the watershed, in particular, has long been an area of alternative lifestyle cultures. This segment of the population has a very strong interest in the management of public lands around their homes and around Takilma.

In Josephine County the proportion of citizens aged 65 years and older is on the increase. Between 1980 and 1990, the proportion of persons over 65 in Josephine County increased 42%. Seniors are frequently not tied economically to southern Oregon; most receive an annuity of some type. They are commonly here for other reasons including a favorable social climate, proximity to family, and/or enjoyment of southwest Oregon's many amenity values. The new, young immigrants generally possess a higher income, higher education level, and they generally have strong environmental values but little experience in land management. Few of these folks have ties to the traditional industries of southwest Oregon.

At a coarse level, demographics of the watershed area seem to match those of the Province. As a point of departure, the Applegate Adaptive Management Area's Ecosystem Health Assessment lists a number of social and economic trends that, at a general level, could be applied to the East Fork Illinois River area. These include:

- Strong population influx and residential development;
- Dispersed settlement patterns, which have created widespread residential/forest interface;

- In-migration of younger, more educated ex-urbanites with strong environmental values and community interest;
- Dramatic shrinking of the local, traditional economic base (specifically, ranching, farming, and timber employment);
- Strong representation and economic contribution of "lone eagles"; "global entrepreneurs" with few ties to the local economy;
- Declining ties to the land for economic contributions and reliance on commuting to urban employment sites;
- Newcomers are less integrated into the community and less knowledgeable about the local ecosystem than in previous decades;
- An increase in a wide-range of recreation activities on public lands, creating endemic conflict between users and challenging management to incorporate these different interests.

Economic opportunities are limited only by human imagination and initiative, although the scope will be constrained by current and future market values and location. Several potential areas of economic development and employment that could be explored include:

- Certified timber production
- Watershed Restoration
- Special forest products, Forest Nurseries
- Small log utilization
- Community forestry
- Stewardship contracts
- Ecotourism

### **1. Josephine County Rural Enterprise Community**

The Josephine County Enterprise Community was designated a Rural Enterprise Community in 1994. Three census tracts make up the community: Cave Junction, Selma, and Wolf Creek. To facilitate community outreach Cave Junction and Selma have been organized into the Illinois Valley Community Response Team (CRT). The program, enacted into law in August 1993, is designated to give low-income communities opportunities and guidance for growth and revitalization. The program is based on four key principles:

- a. **Economic Opportunity:** Creation of jobs provides the foundation for economic self-sufficiency and community revitalization.
- b. **Sustainable Community Development:** Creation of jobs is the first critical step toward the creation of a livable and vibrant
- c. **Community-based Partnerships:** Economic opportunities and community development starts with broad participation by all segments of the community
- d. **Strategic Vision for Change:** The Josephine County EC, through the Community

Response team, has already developed a community action plan with a double focus: Community quality of life and Business development

## **2. Forest Service Community Based Partnerships**

Partnerships and cooperation are key principles for Rural Enterprise Communities, and were emphasized by Chief Mike Dombeck as a focus for the Forest Service. Traditionally, public involvement and participation have been limited in the NEPA process to issue identification, responses to draft documents, appeals, and lawsuits. In 1994 the Northwest Forest Plan gave clear direction to more closely involve communities in management processes.

The Illinois Valley CRT has formed working partnerships with a number of community-based organizations. These organizations include USDA Rural Conservation and Development, the Illinois Valley Soil and Water Conservation District, the Forest Action Committee, and the Siskiyou Regional Education Project.

## **3. Economic Contribution of Timber Harvest**

The East Fork Illinois River watershed has been providing timber products for many years. Timber harvest began on lowlands in the analysis area in the mid-1850's. Harvesting was associated primarily with mining and housing construction. Timber harvest began in earnest on public lands in the 1950's. Approximately 217 million board feet (MMBF) of public timber (National Forest) was harvested. This accounts for 3,906 jobs (direct, indirect, and include jobs, based upon the formula provided by the Siskiyou National Forest of 18 jobs/MMBF harvest). This averages 4.4 MMBF annually with an mean of 79 jobs.

On BLM Oregon and California (O&C) lands, 50% of the total revenue generated by timber sales is distributed to western Oregon communities. Average payments to Josephine County from 1984-1988 was \$7.6 million. Additionally, approximately five percent of the revenues generated from public domain lands are dispersed through the state to the counties based on total land area of the county. (USDI, BLM, 1994)

Although timber production will continue to provide employment in southern Oregon, the continued survival of communities, especially rural communities, will depend on the region's ability to diversity their economic base. For many rural areas, the path to sustainable economic development will include innovative approaches to natural conservation, management, and utilization (USDA FS 1993).

## **4. Economic Contribution of Mining**

Today, mining of precious metals does not offer the same level of economic contribution to the county as it did in the past. Some panning and dredging for gold still occurs along streams, but the primary mining activities in the Province are the quarrying of sand and gravel for construction (Oregon 1993). In 1992, total reported employment from mining was 57 jobs, and these were reported for non-metallic mining (Oregon 1992). Some employment exists from gold mining, but

information is difficult or impossible to collect and verify.

## 5. Special Forest Products

Non-timber forest resources ("special forest products") are a commodity resource that is developing in support of economic diversification. Special forest products include: aromatics, berries, chips, shavings, excelsior, sawdust, bark, smokewood, fuelwood, decorative wood, forest botanicals, greenery and floral products, honey, Christmas trees, Port-Orford cedar boughs, fir boughs, and wildlife. Except for the collection of fuelwood, which is tied to timber harvest activities, managers in the Province state that the sale of these products has been on the increase. Exact use data for the watershed is unknown, but is undoubtedly used for mushroom harvest, bear-grass gathering, and other products.

## K. Watershed Recreation Use

Tourism is the third largest industry in Oregon (SCORP 1988). In 1988 visitors to Jackson and Josephine counties spent \$126,235,000 creating 2,826 jobs (Runyan 1991). Approximately 73% of all visitors to southern Oregon are from out-of-state. Regionally, "driving for pleasure" and "sight-seeing" are ranked the #1 and #2, respectively, demanded outdoor recreation activities in 1987 and they are projected to remain 1 and 2 through the year 2040 (USDA FS 1993).

Recreation use on National Forest lands is diverse. Activities include swimming, hiking, backpacking, horseback riding, fishing, and driving for pleasure. Two major concentrated use areas are Hogue Pasture and the Page Creek meadow area; both located in the area of Takilma. Other popular recreation areas are Whiskey Lake and Camp Chicago located near Sanger Peak. Concentrated use areas are often found adjacent to riparian areas. The Page Mountain Sno-Park is the only developed Forest Service recreation site in the watershed area.

In addition, *The State of Jefferson Scenic Byway* traverses through part of the watershed.

BLM lands in the watershed are used for dispersed recreation activities, such as horseback riding, hiking, OHV riding, and mountain bike riding. This use is concentrated in the French Flat Area of Critical Environmental Concern (ACEC), Allen Gulch, Rockydale Road area and the area around Limestone Rock in the northern part of the watershed. There are many non-maintained trails on BLM lands in the watershed that are used by OHVs, hikers and horseback riders. Off highway vehicle use is also occurring in the French Flat ACEC.

Off Highway vehicle designations are identified as open, closed or limited on all BLM lands. Open lands are open to motorized use, closed lands are closed to all motorized use and limited lands limit motorized use to designated roads and trails. In the Medford District, 391,400 acres are open, 441,700 acres are limited and 25,200 acres are closed to motorized use.

There is a Recreation and Public Purposes Lease on BLM land in the northwestern part of the watershed. The State of Oregon's State Parks, leases an eighty acre piece of land at the location of the Illinois River Forks State Park. This area is currently being used as a picnic area, however,

the State has proposed an undeveloped area as a campground for the park.

## 1. Trails and Concentrated Use Areas

The following chart displays National Forest trails and concentrated use areas (CUA) in the watershed:

Trail Name	Trail Number	Miles	Use
Sanger Peak LO	1270	0.6	Old LO site
Sanger Creek	1271	1.8	Wilderness
Black Butte	1272	2.2	Wilderness
Black Butte Tie	1273	1.5	Wilderness
EF Illinois River	1274	10.0	Partial Wilderness
Crazy Peak	1275	0.8	-
Osgood Ditch	1278	1.8	Old mine ditch
Sanger Peak	1277	2.0	Longwood Fire
Page Meadow	-	-	CUA
Hogue Meadow	-	-	CUA
Sno-Park	-	(24 miles of road)	Winter use
Elder Interpretive Trail	-	0.7	Under construction

There are approximately 21 miles of trail in the watershed.

## 2. Page Mountain Sno-Park Winter Recreation Area

The Page Mountain Sno-Park winter recreation area is located on the eastern edge of the watershed and is accessed by Forest Road 48. The area is open for recreation use from November 15 to April 1, depending on snow conditions. A Sno-Park permit is required. Facilities and infrastructure include:

- \$ Composting toilet (currently functioning as a regular vault toilet)
- \$ Two log warming huts and sledding hill
- \$ 30 vehicle parking lot
- \$ 10 miles of cross-country ski trails (not open to snowmobiles)
- \$ 14 miles of snowmobile trails

The park serves as a starting point for access to the high Siskiyou backcountry, primarily the Red Buttes area. A volunteer host lives at the site during the heavy use season. Illinois Valley

residents primarily use the Sno-Park with some people coming from the Grants Pass area, and as far away as Crescent City, California.

The Page Mountain Sno-Park is not accessed by a State highway. Normally permit fees are used to pay for snow plowing but since access is provided by a county road State funds for snow removal are not available. Instead, Josephine County pays to plow the road; State funds are only used to plow the parking lot. The availability of county funds to plow the main road may be an issue in the future. In addition, the existing toilet needs to be replaced due to vandalism.

Opportunities exist for stand density treatments in managed stands adjacent to the Sno-Park. Treatments would provide forested areas favorable for snowboarding while meeting objectives for managed stands located in Late-Successional Reserves.

### **3. Siskiyou Wilderness**

The northern portion of the Siskiyou Wilderness is located in the watershed. The district manages 5,405 acres of the 150,000-acre wilderness. The lead forest for the wilderness is the Klamath National Forest in Region 5.

The district portion of the Siskiyou Wilderness is accessed primarily from the Black Butte trailhead, vis-à-vis road 4906-053. Black Butte is the most popular wilderness access point. Other trails include the East Fork Illinois River trail, #1274 and the Sanger Canyon trail, #1271. The Sanger Canyon trail receives little use. Other access through the analysis area includes road 4803, crossing through the Six Rivers National Forest, to the Youngs Valley trailhead. Youngs Valley was accessible to motorized vehicles until 1984 when the road was closed with the enactment of the California Wilderness Act. Local residents still lament the closing of the valley to motorized traffic. The Youngs Valley road was built to access mining claims.

No use data for the wilderness exists at the district level. The Klamath National Forest characterizes wilderness use as "light" (Recreation staff, Happy Camp Ranger District). Heavy recreation use is commonly associated with extended holiday weekends. Under the Wilderness Recreation Spectrum, as outlined in the Siskiyou LRMP, the area is managed for a semi-primitive (trailed) recreation experience. Other information on the wilderness is found in the Siskiyou LRMP, pages IV: 68-75.

The visual quality management objective for the Siskiyou Wilderness is Preservation.

### **4. Other Recreation Management Allocations**

Other recreation allocations in the watershed include non-motorized backcountry recreation. Approximately 630 acres are allocated to MA-6, Chicago, and north and adjacent to the Siskiyou Wilderness. (Siskiyou LRMP: IV: 97-99) (See section below on Assessing Recreation Settings).

### **5. Amenity Values**

Amenity values relate to visitor satisfaction. These are subjective and personal values, which vary from individual to individual. Generally, satisfaction can be predicted by examining such items as the scenic quality, wilderness values (or how well the watershed provided for an individuals need for solitude), and what settings are available within the watershed for recreational activities to take place.

Many Illinois Valley residents value unmanaged landscapes for their beauty and as a medium to appreciate aesthetic and spiritual values. People feel that forest management, specifically timber harvest, detracts from the beauty of an area and interferes with natural processes. Residents of the Takilma area are especially attached to the "Takilma Forest", located on BLM lands. This forest is used for spiritual renewal, social gatherings, and as a natural area that engenders community identity.

a. Assessing Visual Quality

1) Forest Service

The East Fork Illinois River watershed encompasses four National Forest viewsheds: Bolan Lake, Crazy Peak, Highway 199, and Siskiyou Wilderness. Visual quality management allocations are displayed below:

Viewshed	Total Viewshed Acres	Viewshed Acres in Watershed	Partial Retention Visual Management Allocation (MA-13)
Bolan Lake	16,459	6,886	1,768
Crazy Peak	25,947	23,913	622
Highway 199	12,983	481	15
Siskiyou Wilderness <sup>1</sup>	5,405	5,405	-

<sup>1</sup> Preservation is the visual quality management objective for the Siskiyou Wilderness

Visitors participating in recreational activities are generally more sensitive to highly modified landscapes. For that reason, the Forest Service manages for scenic quality in highly used recreational areas. The Siskiyou National Forest outlines management of Forest Visual Resources in their Land Management Plan (LRMP) by assigning Visual Quality Objectives (VQO's) to the landscape. Criteria used to define VQO's are: scenery quality ratings, public sensitivity ratings, and distance from viewer. The LRMP describes management objectives by VQO as follows:

**MA 12: Retention Visual.** This land is managed with the primary goal being " to provide a level of attractive scenery by maintaining a natural or near natural condition." "Management activities will be conducted in such a way that they are completely subordinated to the character of the landscape and not evident to the casual Forest visitor." There are no retention visual quality allocations present in the East Fork Illinois watershed.

**MA 13: Partial Retention Visual:** This land is managed with the primary goal being "to provide a level of attractive scenery by maintaining the area in a near natural condition." "Management activities will be conducted in such a way that they are subordinated to the character of the landscape." There are 2,405 acres of Partial Retention Visual VQO in the watershed.

Standards and Guidelines for MA-13 state that no more than 16% of the watershed may be in visually perceived created openings at any one time. Visually perceived openings are harvest units with trees less than 20 feet tall. Analysis of the current status of MA-13 lands in the watershed will occur on a site-specific basis during timber sale design. An important MA-13 visual allocation is *The State of Jefferson Scenic Byway*.

There is a difference between Siskiyou National Forest Plan MA-13 allocations and the Northwest Forest Plan. The majority of acres in the watershed previously allocated to MA-13 are now subsumed under Late-Successional Reserve (LSR) management allocations. Regeneration harvest schemes are not allowed for LSR lands.

**MA 14: General Forest.** Land managed with the primary goal being "to obtain a full yield of timber within the capabilities of the land..." The VQO for this management area is modification. The Northwest Forest Plan details additional green tree retention requirements that mitigate the visual impacts of timber harvest in areas allocated to MA 14 (Matrix).

Assessing visual quality is a two-step process. Standardized, objective size and area criteria have been established as a general "rule of thumb." Site-specific analysis is more objective.

The East Fork Illinois River watershed generally meets the stated visual quality objectives. Large scale events, such as the Longwood Fire of 1987, has impacted visual quality in the Takilma area.

## 2) BLM

Visual Resource Management Classes on BLM lands are all classified as VRM III. Objectives for VRM class III lands are to "partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape." (BLM Manual, 1986)

### b. Assessing Recreation Settings: Forest Service

In addition to Visual Quality Objectives the Forest Service uses the "Recreation Opportunity Spectrum" (ROS) as a method to classify land as to its suitability as a setting for recreation activities.

Settings within the watershed are classified as "Roaded Natural" (RN) and Semi-primitive non-Motorized" (SPNM). SPNM includes the Siskiyou Wilderness and the Chicago Backcountry Recreation management allocation.

Portions of East Fork Illinois River watershed has been modified over time, and generally meet the intent of land classified as MA-14 (see above). During the early part of this century this land was undeveloped, and substantially unroaded. Users including miners, packers, and explorers who were physically fit and very self-reliant. At this time the wildness of the land was looked at as an inconvenience. As trails were constructed, they provided the only access into the watershed during the early part of this century. During the 1940's, 50's and 60's roads replaced many of the trails. During the 1970's and 80's, as roadless area acres were reduced, the public demand for such areas was increasing. Public opinion regarding undeveloped forestland had begun to change.

Today the East Fork Illinois River watershed provides scenic quality, clean water, and recreation settings for most visitors to have a satisfying experience in a roaded and unroaded setting. The settings are present for a wide-variety of uses; however, user conflicts can exist. Encounters between recreationists and more industrial-type users of the forest can be a potential source of problems.

With careful management, recreationists can find satisfying roaded experiences through a large portion of the watershed. Visual quality will play an important role in the future of tourism in the area. Timber harvest or other management activities should be programmed to protect the scenic quality of sensitive watersheds, particularly from Forest Road 48, the State of Jefferson Scenic Byway, which is managed as MA-13, Partial Retention Visual.

#### **L. Illegal dumping**

Illegal dumping occurs at several locations within the watershed, primarily along roads off main travel arteries. BLM is actively cleaning up these illegal dumpsites as time and public funds allow. On National Forest lands illegal dumping occurs at Hogue Pasture and Page Creek Meadow.

### III. Key Question #S-2: Effects of future activities

#### ***S-2: What future activities, other than timber harvest, could affect watershed function?***

##### **A. Recreation**

Given current trends, recreation use of the watershed, especially in the area of the Siskiyou Wilderness, is expected to gradually increase over time. Impacts to watershed function should be minimal if recreationists practice a *leave no trace* outdoor ethic. Contact with the public will enforce the need for an outdoor ethic. Limits of Acceptable Change (LAC) analysis will be conducted, if necessary, to determine the impact to watershed recreational carrying capacity.

Impacts at concentrated use areas will most likely remain at current levels for the foreseeable future. Hogue Pasture will continue to be a minor problem during the summer months but signing this area as *day use only* may help to mitigate impacts.

The French Flat area, managed by the BLM, will continue to have conflicts with off-road vehicle (OHV) use and there is a recurring need to protect the plant species and habitat, and the cultural resources of the site.

##### **B. Cultural Resources**

The Allen Gulch/Esterly Lakes area, managed by the BLM, has a rich history of mining documented by historic mining sites. Management of this area should protect these historic resources and retain the integrity of the sites consistent with their values and legal requirements.

##### **C. Mining**

The Llano-de-Oro gravel of the Takilma-Waldo area, including the Leonard and Sucker Creek placer, contains extensive gold deposits. Current estimates are 117,140,000 cubic yards averaging 43 cents in gold per cubic yard at 1973 dollars (Close and Ramp 1973: 37). Currently, suction dredging is confined to the Dunn Creek area, and is expected to remain at existing levels for the foreseeable future. The potential, however, exists for gold exploration at a larger scale when market conditions improve.

The watershed also contains large copper reserves. Unlike gold, which has had a history of controlled prices, copper values have varied with the economy. Only when the price has been high has it been economically feasible to exploit copper ore from Josephine County deposits (Ramp and Peterson 1979: 33). Currently world wide copper prices are extremely low and no mining is anticipated.

On the lands administered by the BLM there are three levels of operations that may occur. The lowest level of operations is considered casual use. Casual use operations include those

operations that usually result in only negligible disturbance. These types of operations usually involve no use of mechanized earthmoving equipment or explosives, and do not include residential occupancy. There is no administrative review of these types of operations. In fact, individuals mining at the casual use level are not required to notify the BLM of their activities. The number of casual users in this category are not known.

The most common level of operations involve activities above casual use and below a disturbance level of five acres. This level of operations requires the claimant/operator to file a mining notice pursuant to the BLM Surface Management Regulations. The mining notice informs the authorized officer of the level of operations that will occur, the type of existing disturbance at the location of the operations, the type of equipment to be used in the mining operations, and the reclamation plans following the completion of the mining activities.

Mining notices involve an administrative review of access routes used in the mining operations and a review to determine if unnecessary or undue degradation may occur as a result of the mining operations. This level of activities is not considered a Federal action and no administrative review or approval of mining notices occurs.

There are three mining notices that have been submitted for operations at the location of the BLM-administered lands within the watershed. The notices have been filed for placer operations.

A plan of operations is required for mining operations that meet any of the following criteria:

- a. Proposed operations that may exceed the disturbance level of five acres;
- b. Activities above casual use in specially-designated areas such as areas of critical environmental concern (ACEC), lands within an area designated as a Wild or Scenic River, and areas closed to off-highway vehicle use; and
- c. Activities that are proposed by an operator who, regardless of the level of operations, has been placed in noncompliance for causing unnecessary or undue degradation.

The review of plans of operations involves a NEPA environmental review to be completed no later than 90 days from the date of the submission of the plan. No plans of operations exist within the watershed at this time.

In addition to federal laws mining claimants must comply with state laws where applicable:

- The State Department of Environmental Quality monitors and permits dredging activities and activities where settling ponds are used.

E. The Department of Geology and Mineral Industries (DOGAMI) permits all activities over one acre in size and ensures reclamation is completed in a timely manner. DOGAMI requires reclamation bonds where applicable.

F. The Department of State Lands permits in stream activities where the removal, or displacement, of 50 cubic yards of material is anticipated and where the movement of a stream channel is planned.

G. The Department of Fish and Wildlife (ODFW) monitors turbidity discharges from mined sites. ODFW also recommends preferred dredging periods for operations within anadromous fish bearing streams. ODFW also approves variances for operations outside the preferred work periods where applicable.

No plan of operations have been filed within the watershed.

If mining claim occupancy is proposed by the operator/claimant the use is reviewed by the Authorized Officer. The occupancy must be determined to be reasonably incident to mining and reviewed in a manner similar to a plan of operations since this determination is a Federal action covered by NPEA. No occupancy may occur until the proposed occupancy is reviewed and written permission is issued by the authorized officer. There are no mining claim occupancies within the watershed at this time.

#### **D. Surface Uses of a Mining Claim**

In some instances the mining claimant has surface rights on the BLM administered lands. These are usually claims that were filed before August 1955 and determined to have a valid discovery. The claimants in these cases have the same rights as mining claimants without surface rights, however, they have the right to eliminate public access across that area where they have surface rights. There are no claims within the watershed where the claimants have surface rights.

### **IV. Data Gaps**

Research has identified a number of data gaps. These are:

#### **A. Cultural Resources**

1. Archaeological surveys are lacking for the Illinois Valley proper; however, BLM lands have been surveyed.
2. Subsistence-settlement data is lacking that is watershed specific.

#### **B. Livestock grazing**

1. Grazing impacts that are watershed specific are lacking.

#### **C. Mining**

1. The stream carrying capacity for the number of suction dredging operations is unknown. Currently suction dredging activities operate under a Notice of Intent. A "trigger" needs to be established to determine when a Notice of Intent becomes a Plan of Operations.

On BLM lands suction dredging is both allowed as casual use in some instances, and in larger operations involving residential occupancy a mining notice is required. Activities under a mining notice are not considered a Federal action, thus no NEPA review is undertaken.

#### **D. Recreation**

1. Backcountry use data for the Siskiyou Wilderness is lacking.
2. Standardized or realistic models are lacking to quantify watershed aesthetic and spiritual values.
3. Non-designated trails have not been inventoried, amount of use on BLM lands not quantified.
4. The Recreation Opportunity Spectrum (ROS) has not been inventoried for BLM lands.

#### **E. Roads**

1. Transportation Management Objectives (TMOs) have not been completed for this watershed. They will be completed as required under the BLM Western Oregon Transportation Management Plan of 1996.
2. BLM Non-Capitalized Roads and Skid Trails have not been inventoried.

### **V. Findings**

1. Using fire Native Americans intensively managed valley floor and valley-foothill habitats for specific resource outputs
2. Wildlife populations at the time of historic contact were, to a large degree, a function of habitat manipulation by Native Americans
3. Seral forested conditions at the time of the establishment of the Siskiyou National Forest were partly a function of native American burning *and* indiscriminate burning by miners
4. Hydraulic mining heavily impacted riparian habitats, notably in the Allen and Scotch Gulch areas, and areas in the watershed are still in various degrees of recovery

5. Suction dredge mining is currently occurring on Dunn Creek. Future exploitation of gold in the watershed is dependent on global gold prices
6. Areas within the watershed were heavily grazed at the beginning of the century but the legacy of impact is difficult to quantify
7. The next decade will continue to see immigration of younger more educated exurbanites with strong environmental values and community interests. There will continue to be declining ties to the land for economic contributions and greater reliance on commuting to urban employment sites
8. The continued survival of communities, especially rural communities, will depend on the region's ability to diversify their economic base. For many rural areas, the path to sustainable economic development will include innovative approaches to natural conservation, management, and utilization
9. Timber production has made important economic contributions in the past. However, future harvest levels will probably be at a much-reduced level
10. Recreation will continue to increase at a slight rate with the majority of use occurring in the Siskiyou Wilderness

## **VI. Management Recommendations**

### **A. Recreation**

1. Future recreation development in the watershed is tied to public input, community partnerships primarily focused around the Community Response Team (CRT), funding, and cooperation between federal agencies. Projects might include diverse trail opportunities including horses, mountain bikes and motorcycles, campgrounds, improvement and expansion of existing infrastructure, and development of activities associated with Ecotourism. Open public meetings, possibly under the auspices of the Community Action Team, local Watershed Council, or the Southwest Oregon Provincial Advisory Committee, could meet with the Forest Service, BLM, and appropriate state and county agencies, to work together on management options in the EF Illinois River watershed.
2. Identify signing needs associated with trail heads, etc.
3. Nominate Hogue Pasture as "day use only"; maintain for trailhead parking only.
4. Maintain registration cards at the Black Butte trailhead, Siskiyou Wilderness. Compile use data trends. Develop a Memorandum of Understanding (MOU) with the Klamath National Forest to manage the Illinois Valley Ranger District portion of the Siskiyou Wilderness.
5. Work closely with the public to understand the diversity of views associated with road closures and decommissioning
6. Treat managed stands adjacent to the Sno-Park to provide snowboarding opportunities and meet long-term Late Successional Reserve objectives.
7. Replace the toilet at the Page Mountain Sno-Park with a conventional vault toilet. Investigate expansion of the sledding hill to accommodate increased use.
8. Develop a management plan for French Flat ACEC (BLM) by 2005.
9. Clean up and close dump sites on all public ownerships. Consider road access restrictions as a part of the Transportation Management Objectives process (BLM).

### **B. Cultural Resources**

1. Interpretative opportunities of historic mining activities exist in the watershed. Data gaps relating to the prehistoric subsistence-settlement system will be filled as site-specific surveys take place. Continue the policy of contacting Tribes regarding project undertakings.
2. Further evaluate the historic values in Allen Gulch and French Flat area. Evaluate their potential for special designation as, for example, a National Historic Mining District. Provide

protection for individual sites appropriate to the value and significance of the site.

3. Further evaluate the unique vegetation types / areas for possible designation as an ACEC or Research Natural Area. Identify vegetation management prescriptions and techniques that would be needed to reestablish and maintain the presence and vitality of these types / areas.

### **C. Mining**

1. Continue to monitor suction dredging activities in the watershed. Monitor the impacts of camping and sanitation. Establish a system to determine when Notice of Intent needs to upgrade to a Plan of Operations. For activities in California maintain better communications with California Fish and Game.

### **D. Roads**

1. BLM: road inventories, Transportation Management Objectives (TMOs) are determined through the interdisciplinary team process as field data is collected and presented for evaluation. Recommendations for roads will come from the TMO process and will be attached to the watershed analysis.

## APPENDIX A: Roads and Transportation System

### I. National Forest lands

#### A. Definitions

**Decommission:** Eliminates most of the risk and impacts of major storm events, except for the first year when erosion and sedimentation may occur. However, the road is no longer available for use.

**Storm proofing and closing to Level 1:** Reduces the risk of damage and allows the road to better handle large storm events. Eliminates casual vehicle use, allowing the road surface to stabilize and eliminate most surface rill. Reduces the risk of damage and allows the road to remain in the system and will be less costly to open if needed in the future. May or may not include culvert removal.

**Storm proofing Level 2 roads:** These roads need to be open for various uses. Storm proofing will reduce the risk of damage from major storm events and reduce the need for recurrent maintenance.

#### B. Transportation System Recommendations

The following are the recommendations for storm proofing (level 2), decommissioning and road closures (level 1) on National Forest lands. High priority locations are followed by an “\*”.

Table A-1: Forest Service Transportation System Recommendations	
Road #	Recommendation
4800023	Decommission
4800049	Level 2
4800057	Need to field check [Matrix land (active instability)]. If level 2, need redesign
4800065	Decommission the last half of a mile; rest, level 2
4800070	Level 2
4800450	Level 1
4800455	Level 1
4800460	Level 1
4800520	Level 1
4800570	Level 1*
4800571	Decommission
4803	Level 2*
4803097	Decommission
4803101	Decommission
4803124	Active instability, but need to access managed stands and fire access. Needs field check.
4803130	Maintain remaining road as level 2 (already decommissioned past Whiskey Lake)

Road #	Recommendation
4804013	Power line right-of-way, fire, timber access, and hydrology concerns. No consensus for recommended treatment.
4804420	Level 1
4804023	Level 1
4804424	Level 1
4804442	Level 1
4804445	Level 1
4804447	Level 1
4808012	Level 1
4808013	Level 1&2
4808015	Level 2 with redesign*
4808019	Level 2 with redesign*
4808027	Needs field check before recommendation consensus.
4808030	Level 2
4808064	Level 1
4808520	Level 1
4808530	Level 2 (POC rock pit)
4808532	Level 1
4808534	Level 1
4808581	Level 1
4808585	Level 1
4810	Level 2*
4810011	Level 2
4810012	Decommission the last one half mile; rest, level 2
4810020	Level 2
4810027	Level 1
4810630	Level 2
4810036	Level 2
4810590	Decommission
4810591	Decommission
4810601	Decommission
4810610	Level 1
4810650	Decommission from #652; rest of road -level 1
4810652	Level 1
4810653	Level 1
4810690	Decommission
4904011	Decommission last half mile; rest of road-level 1*
4904035	Decommission
4904036	Level 2
4904060	Decommission from crossing; rest, no consensus on decommission vs. level 1
4904581	Decommission
4904585	No consensus (fire needs road)*
4904555	No consensus (fire needs road)

Road #	Recommendation
4904588	Decommission
4904589	Decommission
4904625	Decommission
4904635	Level 1
4906017	Needs field review; may access Sunstar private property
4906039	Level 1
4906053	Level 2
4906615	Decommission
4906620	Decommission
4906621	Decommission
4906642	Decommission
4906643	Decommission
4906674	Decommission

## II. BLM ROADS

BLM road conditions/status in the East Fork Illinois River watershed are summarized in [Table A2](#). Total road miles indicated have been collected by road logs, odometer readings and GIS information. Recommendations for management of these roads will be reviewed and updated as a part of the BLM’s TMO process which is currently underway.

Road Number / Segment	Total Miles (within watershed)	Surface Type	Subgrade Width	Maintenance Level <sup>1</sup>
38-7-31 D	0.18	NAT	16	2
39-7-7	0.09	NAT	14	1
39-7-8 A	0.07	NAT	14	1
39-7-8 B	0.07	NAT	17	1
39-7-8 C	0.19	NAT	14	2
39-7-8 D	0.73	NAT	14	2
39-7-8 E	0.35	NAT	14	2
39-7-8.2 B	0.09	NAT	17	1
39-7-9.4	0.40	ASC	14	3
39-7-9.6	0.07	ASC	16	3
39-7-17 A	0.19	ASC	14	3
39-7-17 B	0.83	NAT	14	2
39-7-17.1	0.09	NAT	14	2
39-7-17.2	0.74	ASC	14	3
39-7-17.3	0.38	ASC	14	3
39-7-18 A	0.92	NAT	14	2
39-7-18 B	0.39	NAT	14	2
39-7-18.2	0.24	ASC	16	3
39-7-18.3	1.41	ASC	14	3
39-7-18.4	0.48	ASC	17	3
39-7-19 A	2.82	ASC	14	3
39-7-19 B	1.77	ASC	14	3

Road Number / Segment	Total Miles (within watershed)	Surface Type	Subgrade Width	Maintenance Level <sup>1</sup>
39-7-19.1	0.06	ASC	17	3
39-7-19.2	0.37	ASC	16	3
39-7-21.1	2.74	ASC	14	3
39-7-29	0.20	NAT	14	1
39-8-12 B	0.08	NAT	12	2
39-8-13.1	0.33	ASC	17	3
39-8-13.2	0.22	ASC	17	3
39-8-13.3	0.46	ASC	17	3
39-8-13.4	0.20	ASC	17	3
39-8-13.5	0.32	ASC	17	3
39-8-22 B	0.22	NAT	14	1
40-8-3	0.13	PRR	16	2
40-8-15	1.23	NAT	14	2
40-8-15.1	1.25	NAT	14	2
40-8-23 A	0.95	ABC	14	3
40-8-23 B	1.07	ABC	17	3
40-8-23.1	0.34	ABC	14	3
40-8-23.2	0.21	NAT	14	2
40-8-24 A	0.33	ABC	14	3
40-8-24 B	0.02	NAT	14	3
40-8-35 A	0.68	NAT	12	2
40-8-35 B	0.36	NAT	12	2
40-8-35 C	0.10	NAT	12	2
40-8-35 D	0.19	NAT	12	1
<b>TOTALS</b>	<b>24.56</b>			

<sup>1</sup> **BLM Road Maintenance Levels:** The extent and intensity of road maintenance scheduled for a road is as follows.

*Level 1:* This level is the minimal custodial care as required to protect the road investment, adjacent lands, and resource values. Normally, these roads are blocked and not open for traffic or are open only to restricted traffic. Traffic would be limited to use by high clearance vehicles, passenger car traffic is not a consideration. Culverts, water dips and other drainage facilities are to be inspected on a three-year cycle and maintained as needed. Grading, brushing, or slide removal is not performed unless they affect roadbed drainage. Closure and traffic restrictive devices are maintained.

*Level 2:* This level is used on roads where management requires the road to be opened seasonally or for limited passage of traffic. Traffic is generally administrative with some moderate seasonal use. Typically these roads are passable by high clearance vehicles. Passenger cars are not recommended as user comfort and convenience are not considered priorities. Culverts, waterdips, and other drainage facilities are to be inspected annually and maintained as needed. Grading is conducted as necessary only to correct drainage problems. Brushing is conducted as needed (generally on a three-year cycle) only to facilitate passage of maintenance equipment. Slides may be left in place provided that they do not affect drainage and there is at least 10 feet of usable roadway.

*Level 3:* This level is used on intermediate or constant service roads where traffic volume is significantly heavier approaching an Average Daily Traffic of 15 vehicles. Typically these roads are native or aggregate surfaced, but may include low use bituminous surfaced road. This level would be the typical level for log hauling. Passenger cars are capable of using most of these roads, by traveling slow and avoiding obstacles that have fallen within the travelway. Culverts, waterdips, and other drainage facilities are to be inspected annually and maintained as needed. Grading is conducted annually to provide a reasonable level of riding comfort. Brushing is conducted annually or as needed to provide concern for driver safety. Slides affecting drainage would receive high priority for removal, otherwise they will be removed on a scheduled basis.

*Level 4:* This level is used on roads where management requires the road to be opened all year and have a

moderate concern for driver safety and convenience. Traffic volume is approximately an Average Daily Traffic of 15 vehicles and will accommodate passenger vehicles at moderate travel speeds. Typically these roads are single lane bituminous surface, but may also include heavily-used aggregate surfaced roads as well. The entire roadway is maintained on an annual basis, although a preventative maintenance program may be established. Problems are repaired as soon as discovered.

*Level 5:* This level is used on roads where management requires the road to be opened all year and have a high concern for driver safety and convenience. Traffic volume exceeds an Average Daily Traffic of 15. Typically these roads are double or single lane bituminous, but may also include heavily-used aggregate surfaced roads as well. The entire roadway is maintained on an annual basis and a preventative maintenance program is also established. Brushing may be conducted twice a year as necessary. Problems are repaired as soon as discovered.

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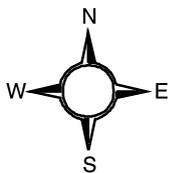
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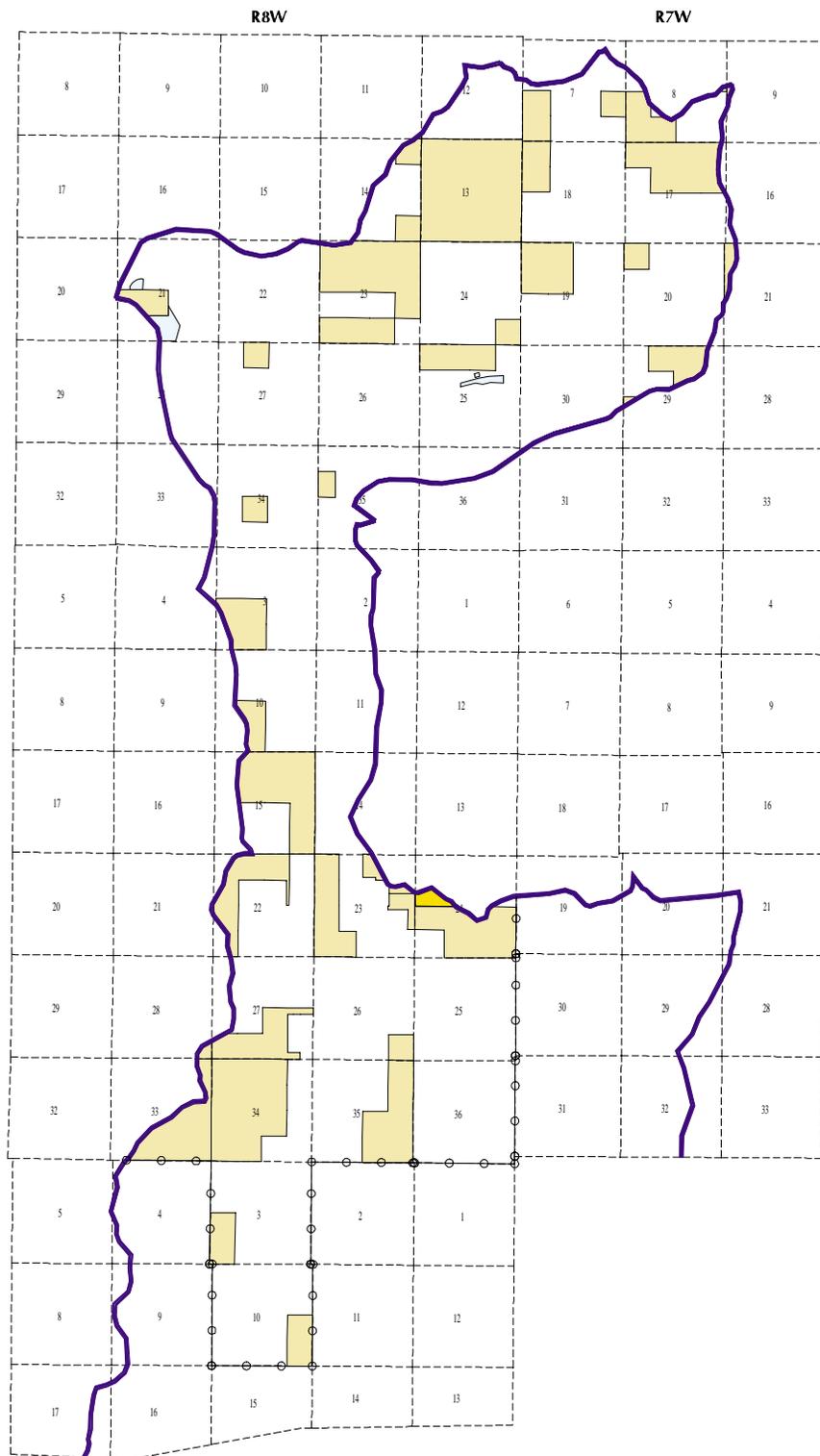
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**Ownership**

- Private
- State Lands
- USFS National Forest
- BLM



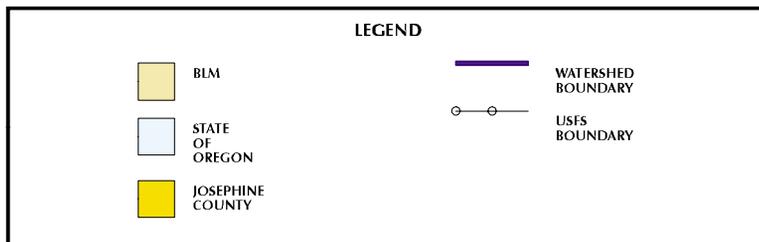
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**GOVERNMENT OWNERSHIP  
OUTSIDE THE USFS BOUNDARY  
IN THE EAST ILLINOIS WATERSHED**



August 1999

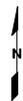
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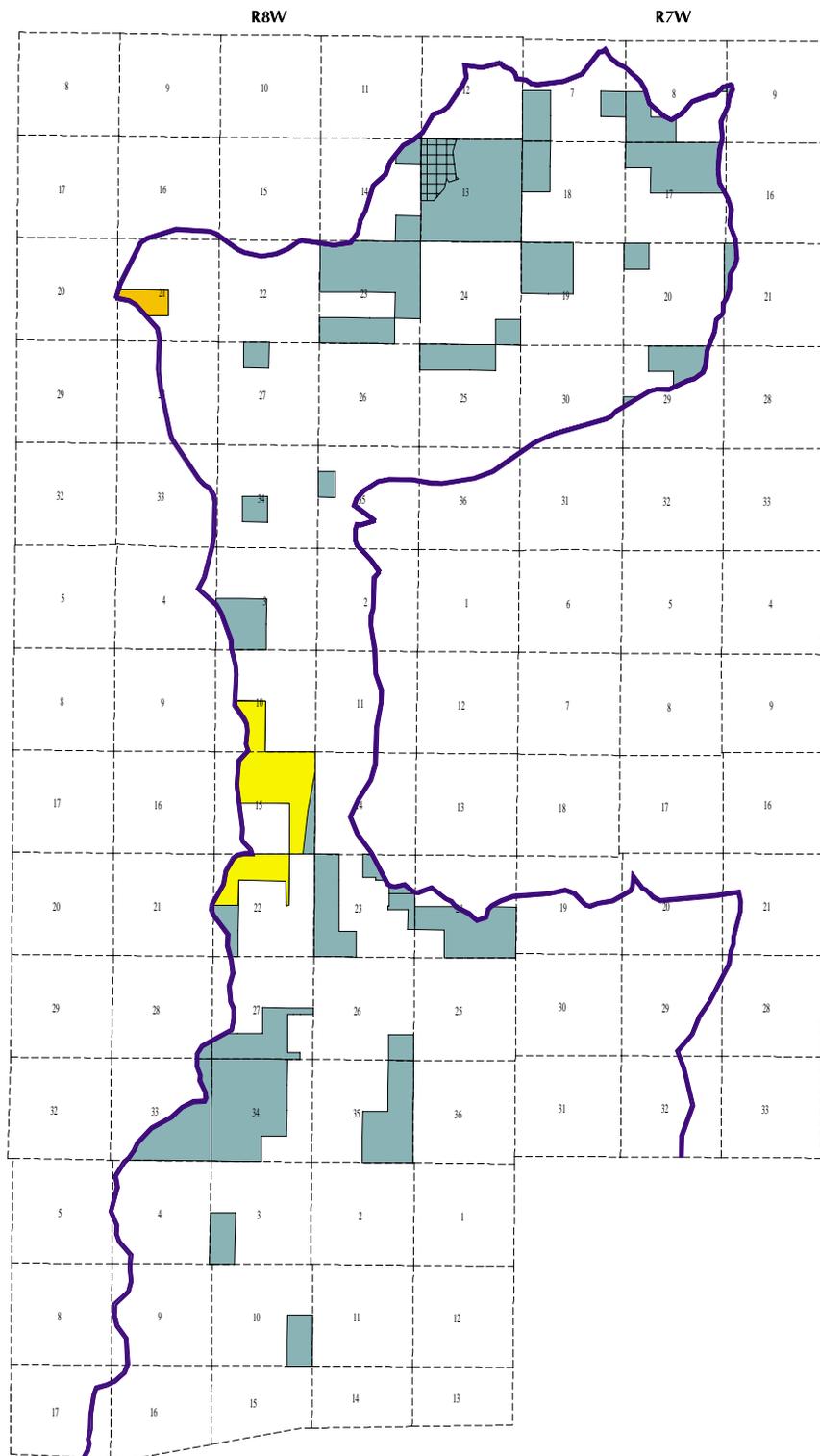
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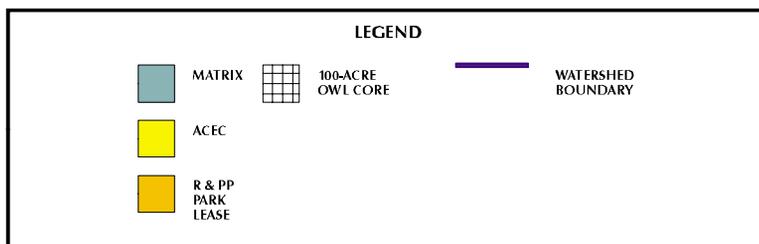
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**LAND USE ALLOCATIONS  
ON MEDFORD BLM DISTRICT LANDS  
IN THE EAST ILLINOIS WATERSHED**



August 1999

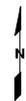
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# East Fork Watershed Analysis Management Areas

