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SECTION VI

HUMAN USES

VI.1 - GENERAL

REFERENCE CONDITIONS

ANALYSIS QUESTION VI.1.1

What and where were the major prehistoric and historic human uses?

Prehistorically the watershed was a resource acquisition area and travel route for Native Americans. It also may have been the location for one or more villages and camps, although none have been documented. During late prehistoric times, the native people, now federally-recognized as the Coquille Indian Tribe (CIT), had a primary permanent village near what is now the town of Myrtle Point (Coquille Indian Tribe, n.d.), see Appendix A - Map A.1a.

Historic settlement began in the early 1850's after the discovery of gold in the coastal sands and in gravels within the Coquille River estuary. By 1856, Euro-American settlements had spread throughout the region. Recurring conflicts between Indians and settlers resulted in wholesale relocation of remaining Indian populations to northern Oregon reservations.

Euro-American settlement accelerated in the 1860s, but inadequate transportation routes limited development of the area. In 1868, Horace Brewster followed a long-used Indian trail from the Roseburg vicinity to an upland valley (which now bears his name) in the middle of the watershed. He homesteaded at the west end of Brewster Valley and developed the route between Coos Bay and Roseburg into a pack trail (Beckham 1997). At this time there were Euro-American settlements at Lookingglass, in the Umpqua Valley (near Roseburg), and Coos City (on Isthmus Slough) on the coast. However, the travel route along the East Fork Coquille River was only lightly settled.

In 1869 the U.S. Congress approved the use of land grants to encourage private road construction linking inter-mountain valleys (Umpqua and Rogue) to the southern Oregon coast (Beckham 1997). The development of the east-west route through the watershed, which came to be known as the Coos Bay Wagon Road (CBWR), was the result. Even today, this is the main east-west travel route through the watershed. Much of the secondary forest road system within the watershed branches from this main route.

The Coos Bay and Roseburg BLM Districts recently co-sponsored historic research about the CBWR. Dr. Stephen Dow Beckham's research resulted in a 1997 report (*Coos Bay Wagon Road: Historical Investigations and Identification of Interpretive Options*) documenting CBWR development and use. This report provides an account of the personalities and history behind

the wagon road's development, title transfers for the roadway and associated land grants, and the 1918 Federal government revestment of the remaining unsold land grants. A copy is retained on file at the Coos Bay District office.

The CBWR provided the earliest overland public transportation between Roseburg and Coos Bay, beginning in 1872. Although initial road use was high, it later became mainly a route for mail delivery and the telegraph line between Roseburg and Coos Bay (Beckham 1997). The CBWR ceased to be a primary travel route when more comfortable competing routes were completed via the Umpqua River (through Scottsburg and Reedsport) and the Middle Fork Coquille River (through Camas Valley and Bridge). The Middle Fork Coquille River route (now Highway 42) completed during the 1920s, had a better road bed and was served by more modern coaches (Beckham 1997).

Development of specialized trucks which could move large logs stimulated the growth of a forest road system. Use of motorized equipment accessed more remote forests than had been previously possible. After WWII, timber companies improved the CBWR and attached a network of ridge and valley-bottom roads, so logs could be transported to the mills.

CURRENT CONDITIONS

ANALYSIS QUESTION VI.1.2

What and where are the dominant current human uses?

The human population centers in the watershed are two small communities, Dora and Sitkum. Dora's population is estimated at 150 families (500-600 people), while Sitkum's is about 90 families (300-350 people). Neither town is incorporated and both are administered by Myrtle Point. Dora has one small market and a public library attached to a firehouse. Sitkum has no commercial businesses or public buildings. There are some farms and ranches located within these communities. Both towns are primarily "bedroom communities" to the larger towns of Coos Bay, North Bend, Roseburg, Coquille, and Myrtle Point. Most visitors recreating in the watershed are from these nearby towns. However, the "Growing Forest Driving Tour" and accompanying recreation stops (Burnt Mountain recreation site and Brummit Fir) bring tourists into the watershed via the Burnt Mountain Access Road. The CBWR is a popular road for tourists as well as locals. The majority of recreation can be characterized as dispersed. Fishing and swimming are the most popular recreational activities along the CBWR. In addition, the annual Lookingglass to Coos Bay Bike event is routed along the CBWR. In the rest of the watershed, hunting and mushroom picking are dominant recreation activities. Other recreational activities include: target shooting, horseback riding, off-highway vehicle driving, hiking, and mountain biking.

Developed Recreation Sites

Most developed recreation sites (day use and overnight campgrounds) within the watershed are not managed by the BLM. The only developed site the District manages is the Burnt Mountain Recreation Site (a.k.a. Skeeter Camp). However, there are several sites located immediately outside of the watershed including Rock Creek and Cherry Creek. Burnt Mountain Recreation Site receives approximately 1,000 visits a year. Other recreation sites not managed by the BLM include:

- Judge Hamilton Park (Coos County – day use only),
- Frona Park (Coos County – camping and day use), and
- Maria Jackson State Park (Oregon State Parks – day use only).

These recreation sites seem to be meeting current demand. However, if the Coos Bay Wagon Road were to be designated as a scenic/historic byway, as currently proposed, or if visitation increases, there may be a need for more developed sites.

Dispersed Recreation Opportunities

There are numerous dispersed camping sites around the watershed. During elk and deer hunting seasons, it is common to find “camps” at many logging landings, rock quarries, and water holes. The majority of dispersed camps are on or immediately adjacent to established roads, so impacts like soil erosion and compaction are relatively minor. The need to monitor and manage dispersed sites may arise if dispersed camping increases. Actions like “hardening” of some sites may become necessary.

Bank fishing is popular, primarily along mainstem river. Fishing from driftboats is prevalent below Brewster gorge during Steelhead season.

Trail Opportunities

The only District-maintained trail is the 0.5 mi. long Doerner Fir Trail. This trail (appropriate for hiker use only) provides a scenic, old-growth forest experience, including the world’s largest known Douglas-fir tree. There currently are no trails appropriate for equestrians and mountain bikers.

Tioga Special Recreation Management Area (SRMA)

The Tioga SRMA was created in recognition of existing and potential recreation opportunities in the central portion of the District. SRMAs are intended to provide the public a better means of taking advantage of the full breadth of recreational sites and opportunities in the area. Federally-administered lands in Steel Creek, and Dora drainages, and the entire Brummit Creek subwatershed comprise a portion of the Tioga SRMA (14,881 out of 42,540 ac). SRMA planning uses a more ‘holistic’ approach, allowing for promotion of the District’s recreation opportunities as a package rather than separate experiences.

ANALYSIS QUESTION VI.1.3

What are the cultural resources?

Only one prehistoric archeological site has been documented on public lands. This site, a rockshelter, may have functioned as a temporary camp and/or hunting station. Seven other prehistoric sites have been reported, but none have been documented. Most of these sites are located on privately-owned terraces along the East Fork Coquille River. These sites probably represent a fraction of the localities where evidence of prehistoric activities existed at the time of Euro-American settlement. It is clear that many prehistoric village and camp sites along the main stem river and stream terraces have been destroyed through natural erosion and land-disturbing practices. Also, many upland resource acquisition areas and travel routes may have been impacted by forestry practices or remain undiscovered because of dense vegetation.

Reported historic sites related to the development of transportation routes include:

- Skeeter camp;
- remnants of the original Brewster trail;
- portions of the CBWR road bed, and;
- portions of an 1875 trail between Camas Creek and Reston.

Historic sites relating to settlement include:

- two homestead cabins (history unknown);
- the Young house;
- the Minard mill, and;
- the Pleasant Hill school.

Recorded historic features related to logging include:

- a Georgia Pacific logging camp, and;
- several splash dam locations.

ANALYSIS QUESTION VI.1.4

What are the tribal uses and treaty rights?

Official representatives of the United States signed two treaties with Indians from the Coquille River area (in 1851 and 1855). Neither treaty was ratified by the U.S. Senate. Therefore, specific Native American treaty rights do not exist on public lands in this area. Regardless of the status of treaty rights, federal law and policy concerning Native American cultural resources still apply.

The CIT was federally recognized by Public Law 101-42 on June 28, 1989. The CIT maintains an active interest in locations of prehistoric human presence and historic Native American land use on public land within the Coquille River basin. Knowledge of specific places and locations of tribal interest are based on recorded or documented evidence, reported speculation, and oral history. The following physiographic and/or resource-based descriptions of potentially

important areas have been adapted, with permission, from a draft CIT policy statement (Coquille Indian Tribe 1997).

Physical features of interest to the CIT in riverine/stream locations include the vicinities of:

- the present (and past) head(s) of tidewater;
- intertidal zones in bays or estuaries, and;
- confluences of anadromous fish-bearing tributary streams.

Upland localities of interest to the CIT include:

- meadows, prairies, and other open spaces near perennial water sources;
- rock outcrops/bluffs with the potential for panoramic views, and;
- areas with unique physical, floral, or faunal attributes, such as places where important plant species thrive (in abundance or size) or important animal/bird species congregate.

In addition, the CIT expressed interest in conserving places with botanical/faunal conditions connected with traditional collecting, gathering, and hunting/fishing activities, such as:

- migratory routes and gathering places of important big game animals (e.g., bear, elk and deer);
- wetland/woodland habitats for raptors (e.g., osprey, hawk, and eagle) and/or small game species (e.g. beaver, otter, raccoon, and coyote);
- woodland bird habitats (e.g., woodpecker, blue jay, and owl);
- forest environments where important tree (e.g., cedar, spruce, hemlock, and yew), berry (e.g., salmonberry and huckleberry) and/or nut producing tree and/or shrub (e.g. myrtle and hazel) species thrive, and;
- places where traditionally-used indigenous plants prosper (e.g., camas, iris, beargrass and ferns).

The "Coquille Forest" was created by Federal act (H.R. 3610) in 1996. This act transferred 5,400 ac. of BLM-managed land to the Bureau of Indian Affairs to be held in trust for the Coquille Indian Tribe. Several scattered parcels which compose the Coquille Forest are within the watershed (a total of 1,367 ac). The implementing legislation specifies that the Coquille Forest be managed in compliance with the Northwest Forest Plan and

...applicable State and Federal forestry and environmental protection laws, and subject to critical habitat designations under the Endangered Species Act, and subject to the standards and guidelines of Federal forest plans on adjacent or nearby Federal lands... (H.R. 3610, subparagraph 5).

SYNTHESIS AND INTERPRETATION

ANALYSIS QUESTION VI.1.5

If the Coos Bay Wagon Road (CBWR) is designated as a "BLM Backcountry Byway", what effect will this have on meeting ACS objectives?

Designation of the CBWR as a Backcountry Byway would introduce a type of recreation use that is not currently popular (e.g., sightseeing, birding and touring), as well as increase the number of visitors to the area. These visitors may be looking for recreational opportunities currently unavailable in the watershed, including interpretive sites and trails. An influx of visitors could conceivably make better use of existing developed recreation sites, but also could increase the quantity and impact from dispersed campsites. Additional tourism and related service expenditures resulting from Backcountry Byway designation is expected to have positive economic effects. However, it is important to understand that the CBWR is under the sole jurisdiction of Coos County and the BLM has no authority over its upgrade, maintenance or use. If BLM Backcountry Byway status is desired, it must be coordinated with Coos County.

Increased visitation may have some negative impacts upon ACS objectives. Without management or planning, vegetation may be denuded and stream bank erosion could result if dispersed camping increases in Riparian Reserves. Current rates of trail use and hunting should have inappreciable impacts on ACS objectives. However, a large increase in numbers of fishermen could have negative impacts through trampling of vegetation and stream bank erosion. Monitoring and management of activities such as fishing and dispersed camping near streams may become necessary to ensure that increased visitation does not retard or prevent attainment of ACS objectives.

Vehicle traffic is likely to increase with Backcountry Byway designation. Increased traffic often requires additional road maintenance, or upgrading surface materials, to reduce adverse impacts like erosion and sedimentation. There has been some discussion about paving the gravel portions of the CBWR. If completed, ACS objectives would be furthered by substantially reducing the erosion and sedimentation into the East Fork.

Demands for non-motorized trail opportunities are increasing rapidly. According to the District's Outdoor Recreation Program Plan (USDI 1995b), the need for trails is "obvious" (pg. 31). The District should consider providing a greater array of trail opportunities to meet the diverse demands of the recreating public.

ANALYSIS QUESTION VI.1.6

What are the management objectives for recreation on Federal lands?

The overall recreation objectives are listed in the *Coos Bay District Outdoor Recreation Program Plan*. Watershed-specific recommendations follow.

Recreation Opportunity Spectrum

To portray available recreation opportunities, the watershed was classified using a modified version of the Recreation Opportunity Spectrum (ROS). The ROS classification system uses factors such as naturalness, potential social encounters, remoteness, and access to characterize the recreation experience setting for an area (Clark and Stankey 1979.) The result is seven classes ranging from most natural to most developed, these are:

- Primitive (P),
- Semi-Primitive Non-Motorized (SPNM),
- Semi-Primitive Motorized Non-Managed (SPMNM),
- Semi-Primitive Motorized Managed (SPMM),
- Roaded Natural Rustic (RNR),
- Roaded Managed (RM), and
- Rural (R).

The two predominant classes in the watershed are RNR and RM (Appendix A - Map A.24). However, there are some blocks of SPNM, SPMNM, SPMM and R. The *State Comprehensive Outdoor Recreation Plan* (OPRD 1988) demonstrates a shortage of recreation opportunities in the Semi-Primitive and Primitive settings relative to measured demand. Given the gap between supply and demand of Semi-Primitive settings, these more natural land blocks should be managed in a manner that will preserve or enhance their unique recreational settings.

ANALYSIS QUESTION VI.1.7

What are the appropriate recreation uses on Federal lands in the watershed?

BLMs checkerboard land-ownership and the steep topography limit opportunities for the lengthy, off-road trails sought by motorcycle and ATV users. Motorized recreation planning needs to be consistent with District policies, including: POC management guidelines, noxious weed management, ACS objectives (where appropriate), T&E species management and RMP open road density objectives. The following discusses appropriate uses, based on District policies.

Road Closures and Trail Opportunities

Abandoned roads and roads slated for closure are potential recreation resources. The District can avoid trail construction and related costs by utilizing existing travel corridors that have been closed. To ensure these opportunities are realized, recreation planners should be included with other specialists when planning for road closures. In addition, road closures can be a means of increasing SPNM opportunities.

Dispersed Recreation

Hiking, horseback riding, mountain biking, wildlife viewing, interpretation, and canoeing and kayaking are appropriate recreation activities. Hunting, fishing and mushroom picking (and other special forest product gathering) also are appropriate activities as long as applicable laws and regulations are followed. Dispersed camping also is appropriate for this analysis area, providing that the camps are located in environmentally sound areas. If dispersed recreational use increases, the District may want to increase the monitoring and managing of these activities.

Interpretive Opportunities

The only existing interpretive activity is the Growing Forest Driving Tour, which displays and describes forest growth and management along a 60 mile (round trip) route. According to the District's Outdoor Recreation Program Plan, the demand for cultural and historic interpretive experiences is increasing. The CBWR, in particular, has numerous opportunities which merit further consideration for development. See Beckham 1997 for historical sites and points of interest which could be developed. Other interpretive opportunities include, but are not limited to:

- watershed restoration,
- salmon and steelhead restoration, and
- wildlife habitat viewing.

VI.2 COMMERCIAL

TIMBER HARVEST

CURRENT CONDITIONS

ANALYSIS QUESTION VI.2.1

How much acreage presently is available for timber harvest in the Matrix?

The following analysis was used to identify general areas of harvest, leaving the specifics such as selection of logging systems, specific unit prescriptions and final unit boundaries to be addressed through the NEPA process.

The first step in the selection process of potential harvest areas was the development a GIS map of all available stands. The map identified areas only within Matrix (GFMA and CONN) designated lands; which were >30 years of age; and not located within Riparian Reserve, "Withdrawn" Timber Production Capability Classification allocated lands, or other administratively withdrawn areas.

This step identified 1900 ac of potential thinning on GFMA lands between 30 and 45 years of age and 215 ac on CONN between 30 and 70 years of age. In order to concentrate on areas which are economically or physically feasible to harvest, only areas >5 ac. in size were mapped. It was understood that commercial thinning areas would receive first priority for treatment depending upon results of site-specific stand exam analysis. These exams would identify actual tree stocking density (TPA) and appropriate silvicultural prescription to obtain the desired stocking level should be used.

This step also identified 1807 ac of potential regeneration harvest based upon stands which were >60 years of age and, again, only areas >4 ac. in size were mapped. General guidance used to identify the potential regeneration harvest areas were:

- Maintain connectivity within portions of LSR 261 and to adjacent CONN blocks. Predominately unfragmented areas offer suitable connection for mobile and less mobile species. Key areas are those in T28S, R10W, Sections 13, 14 & 18.
- Maintain the large unfragmented interior habitat area in T28S, R11W, Section 36. This area is largely unroaded and unharvested.
- Harvest within CONN blocks should be selected on the edge of the block and designed to minimize fragmentation, to maintain the largest block of habitat intact, and to avoid breaking an otherwise contiguous stand into two stands.
- Concentrate the timing of harvest activities to more closely emulate patterns of infrequent natural disturbance. Remove the portion of the decadal PSQ commitment attributable to the analysis area within a few years, rather than a gradual harvest schedule throughout the decade.
- The concept of connectivity between adjacent watersheds was to be addressed through the LSR which crosses over the watershed on the north, south, and east boundary.

Regeneration harvest areas

Potential regeneration harvest areas (see Appendix A - Map A.25, and Appendix I) were categorized as a harvest priority 1, 2, or 3, based upon the definitions listed below. Regeneration harvest areas <4 ac. in size, and hardwood and brushfield conversion areas were not prioritized in this process. From a landscape perspective, these areas could be harvested/converted as opportunities are presented. Possible concerns could better be addressed at the site-specific (NEPA) level.

Priority 1 (1183 ac) are areas that are available for harvest during the first entry into the watershed. These potential units do not have obvious conflicts with wildlife, fisheries, soils, and are physically operable. These areas offer little, if any, interior habitat and do not contribute connectivity on a larger scale to adjoining LSR, CONN, or other large areas of unfragmented interior habitat.

Most of the road construction associated with harvesting these units could be limited to temporary spur roads. Extensive field review is required prior to proposing to cross small streams, even those already impacted by roads. Changes to unit size and shape are anticipated upon extensive field review.

Priority 2 (392 ac) are areas that are a moderate to high preference to defer from harvest for wildlife concerns to minimize fragmentation of the remaining areas. Extensive field review is required prior to proposing to cross small streams, even those already impacted by roads.

It was understood that the expected presence of occupied marbled murrelet sites in Priority 1 areas would have the effect of shifting harvest into these areas.

Priority 3 (350 ac) are areas that are a high preference to defer from harvest for wildlife concerns to minimize fragmentation of the remaining areas and to retain the oldest stands (150 yrs+) in the watershed. In addition, these areas offer a high degree of hydrologic and habitat connectivity. Road construction associated with harvesting these units could involve longer permanent type roads across streams which are currently unroaded.

Additional concerns to be incorporated into the site-specific analysis process:

- Evaluate effects of planned regeneration harvest activities on peak flow increase and channel response caused by rain-on-snow events in the Upper East Fork, Camas, and Brewster subwatersheds.
- Occupied marbled murrelet sites can be expected within a the west portion of the watershed. Surveys to determine occupancy should be conducted as early as possible to assist in the selection of alternate harvest areas.

OTHER FOREST PRODUCTS

CURRENT CONDITIONS

ANALYSIS QUESTION VI.2.2

What are the current harvest levels of special forest products and where are they harvested?

The amount of special forest products harvested in the Myrtlewood Resource Area cannot be readily determined for all years. However, some basic assumptions and trends can be evaluated. Permits authorizing collection of special forest products are recorded in a District data base. Information as to type and amount of product being harvested are available from that database. However, after 1996, the specific geographic area is not noted on the permit, rather the entire Resource Area was listed. Also, prior to 1994, the East Fork Coquille watershed included part of the former Tioga Resource Area as well as the Myrtlewood Resource Area. Based on the type and format of information available, some interpretation of this earlier data is necessary. Table VI.1 tabulates harvest data for various special forest products.

Except for mushrooms, the harvest of special forest products has declined substantially since implementation of the Northwest Forest Plan and RMP. The decrease in salvage logs and cedar bolts is the result of RMP guidelines which require a minimum amount of down log material to be left for habitat and site productivity. In addition, removal of down material is

generally not compatible with LSR and Riparian Reserve objectives (most cedar bolt material is found adjacent to streams).

The decrease in forest greenery collection (huckleberry, fern, salal, and cedar boughs) is probably related to the BLM prohibition on harvest of Port-Orford cedar boughs since 1993. The amount of forest greenery collection is slowly increasing, but is still below historic levels.

The increasing market and demand for edible mushrooms throughout the Northwest is evident in the increase harvest (primarily chanterelles) from Coos Bay District lands.

**Table VI.1
Harvest Levels of Special Forest Products in the Myrtlewood Resource Area
for FY 1986, 1991, 1996, and 1997.**

SPECIAL FOREST PRODUCT	FY 1986*	FY 1991*	FY 1996	FY 1997
Salvage/Sawlogs/Chip Cull	467 MBF	2,570 MBF	2 MBF	21 MBF
Fire Wood	385 MBF	357 MBF	28 MBF	122 MBF
Cedar Bolts	397 MBF	216 MBF	0	0
Greens/Boughs	32,263 lbs	119,267 lbs	16,612 lbs	24,472 lbs
Burls	0	3,618 lbs	0	1,000 lbs
Mushrooms	0	25 lbs	3,094 lbs	10,264 lbs
Cones	0	95 bu	0	322 bu

* For analytic purposes, a percentage (25%) of data for Tioga Resource Area is included with Myrtlewood.

SYNTHESIS AND INTERPRETATION

ANALYSIS QUESTION VI.2.3

What effects have been observed from harvesting special forest products?

The effect of harvesting down logs, snags, and Port-Orford cedar boughs have been the most notable. Salvage of dead and down trees has primarily occurred adjacent to roads. As a result, these areas often contain less course woody debris than areas further from roadways. With the implementation of the RMP, NWFP, and the recently completed LSR assessment, guidelines for salvage logging have become much more restrictive, as evident above (see Table VI.1).

Port-Orford-cedar trees adjacent to roads, or on easily negotiable terrain, have been heavily pruned by bough harvesters. Bough harvest has been identified as one mechanism for

spreading Port-Orford-cedar root rot disease. Bough harvest also left trees with $\approx 25\%$ live crown and three to four inch stubs along the tree bole. Harvest has also reduced the health and vigor of the trees, reducing their growth rate and making them more susceptible to disease. The effects of removal of other products, such as greenery, edibles (i.e., mushrooms, berries), cones, etc. have not resulted in any obvious negative impact.

ANALYSIS QUESTION VI.2.4

What timing and quantity of special forest products should be allowed? What restrictions are imposed for removal of special forest products on LSR/MMR lands?

The harvest of those special forest products which previously resulted in detrimental effects is restricted by current guidance. For those special forest products with no noticeable detrimental effects, harvest should be allowed to continue in all land use allocations.

VI.3 - TRANSPORTATION AND UTILITIES

CURRENT CONDITIONS

ANALYSIS QUESTION VI.3.1

What is the current ownership, surface type, and density of the road transportation system?

According to 1992 GIS information, the total transportation network in the East Fork Coquille watershed (all ownerships) is 550.9 mi. of road (See Appendix J - Table J.7). The road density for the watershed as a whole is 4.11 mi/mi². The BLM controls 296.4 mi. (53.8%), which closely corresponds to the percentage of BLM ownership within the watershed (53%). The road density on BLM land is 3.93 mi/mi². Over 75% of BLM road miles are surfaced either with crushed rock or a bituminous oil (asphalt) treatment.

The BLM road system is comprised of three major arterial roads and numerous tributary roads. The three major arterials are: Burnt Mtn. Access Road on the northeast boundary, Weaver Road on the southeast boundary, and Elk Creek Road in the southwest portion. These roads access thousands of acres and were constructed to allow timber harvesting in the late 1950s and early 1960s. Substantial tributary road construction followed during the next two decades, in conjunction with BLM timber sales.

Private owners, both large timber companies and small agricultural and forest land owners, control 214.4 mi. (38.7%) of the roads. Road density on these lands is 4.35 mi/mi². The

surfacing status of these roads is unknown, but it is assumed most of them have no surface treatments.

Other entities that control roads in the watershed include Coos County, which controls ≈7% of the roads, and the CIT, which controls 0.5%. Most of these roads are surfaced with rock or asphalt.

ANALYTIC QUESTION VI.3.2

What are the effects to resource values of the Bonneville Power Administration (BPA) utility corridor?

The BPA utility corridor parallels the mainstem East Fork Coquille River for much of its length, throughout the Upper East Fork Coquille and Brewster Canyon subwatersheds (see Map A.4). The corridor also extends into the Lower East Fork Coquille subwatershed, where it diverges from the mainstem channel and extends into the North Fork Coquille watershed. In the analysis area, the utility corridor easement is 125 feet wide, and it extends for 17.9 miles. The corridor contains a 375 Kv line, which is a main source of electric power for the Southwest Oregon coast.

Most (5.35 mi.) of the 8.8 mi. of corridor crossing BLM land is GFMA LUA, while the remainder (3.45 mi.) is LSR/MMR. Nearly half (4.12 mi.) of the BLM land crossed by the corridor is classified as riparian reserve. The powerline crosses the mainstem river nine times and crosses fish-bearing tributaries in at least seven additional locations (see Map A-4).

Soils

Most impacts are within the Brewster Canyon Subwatershed, where the utility corridor crosses the steep slopes and ridges. Removal of large trees adjacent to the powerline can prevent stability from returning to cleared areas along the corridor. Cutting large trees that are within the riparian zones removes soil stability near stream channels and increase surface erosion potential in the vicinity of the stream.

Erosion and Water Quality

Because periodic removal of vegetation and large tree does not allow full recovery of bare land surfaces, erosion from these areas will be elevated over natural background forest levels.

Dirt spurs and service roads receive traffic in all weather situations and degradation of road surfaces is continuing. Sediment delivery to streams generally occurs when precipitation events and traffic combine, such as during the fall hunting season.

Drainage and surfacing are the primary methods for reducing erosion along access roads. Some surfacing of dirt spurs has occurred in the past and continuation of this strategy will reduce the amount of sediment delivered into the stream network. Reducing traffic on these

spur roads by closure with gates or berms also will greatly improve the sediment delivery problem.

Vegetation

This corridor receives regular and periodic support activities to maintain an early seral vegetative condition. In addition to tree removal, chemical applications also are used for the brush and shrub component.

Terrestrial and Riparian Habitat

Maintenance of early seral vegetation produces a permanent loss of late-successional and old-growth habitat within this utility corridor. The corridor creates a sharp edge, often extending for many miles. This condition favors generalist species at the expense of late-successional associated species. The edge also effects adjacent habitats by altering environmental factors (temperature, humidity, etc.) in adjacent forest lands for up to 400 feet.

Stream Channel and Aquatic Life

When the utility corridor crosses a stream perpendicular to the channel, the power lines often are suspended above riparian vegetation, which is left intact. In contrast, where the utility corridor is parallel to the stream channel, riparian vegetation is removed as part of periodic maintenance. It is in these later localities that riparian reserve values are adversely impacted. The primary adverse affects are diminished LWD recruitment and loss of shade.

Species of Management Concern

It is well-documented (Olendorff *et al.* 1981) that powerlines negatively impact many bird species, mainly by collision with the lines and poles. Olendorff *et al.* (1981) also identifies mitigative measures, including powerline avian avoidance and creation of alternative nesting structures.

Periodic visits by vehicle or overflight by helicopter creates disturbance to resident species.

Non-native pest species - including noxious weeds

Vehicular traffic along the utility corridor is a likely source for noxious weed introduction, as well as for weed expansion into other areas (USDI 1996b.) The periodic maintenance of vegetation in the corridor provides a ready location for weed growth and vehicular traffic provides the means to transport seeds and spores. This will continue as long as the corridor is maintained in an early seral stage and vehicle washing is not consistently practiced.

SYNTHESIS AND INTERPRETATION

ANALYTIC QUESTION VI.3.3

What are source areas for sedimentation?

BLM lands

Over all, few roads have had failures, due to stable soils found in most of the area. Even after the 1996 floods and again in 1999, only nine ERFO repair sites were located in the watershed, these were:

- 27-10-16,
- 27-11-12.0,
- 28-10-20,
- 28-10-31.0,
- 28-11-26,
- 28-11-26.3,
- 27-11-12.0 @ mile post 9.7,
- 28-11-36.0 @ end of road, and
- 28-11-29.1 @ mp 2.5.

Most roads adjacent to streams are asphalt surfaced, which significantly reduces sedimentation from surface runoff. Natural-surfaced (dirt) roads on BLM land don't appear to be major contributors to sedimentation. Approximately twenty five percent of the dirt roads are flat roads through 30-50 year old timber.

Most BLM-controlled roads in the east end of the watershed are in uplands and have relatively few stream crossings. Most of the roads are rock surfaced to support winter-time harvest. South Elk Creek, Yankee Run, South Fork Camas, and China Creek Roads parallel creeks. The TMO process identified a need to upgrade these roads to reduce their impact on adjacent creeks.

Other lands

The gravel portion of the Coos Bay Wagon Road parallels the East Fork mainstem for ≈ 10 mi. in the upper watershed, which is a minor source of sedimentation.

ANALYSIS QUESTION VI.3.4

What are the management objectives for Federally-controlled roads?

Present and future uses of BLM's road system were analyzed using the District's Transportation Management Objective (TMO) process. The process involves an interdisciplinary team review of each road use, with recommendations for future management of that road. The team analyzed physical characteristics (surface type, number & location of culverts, etc.), constraints on use (including the public's need for access), and the objectives of land management. The inventory of roads and the results of the analysis are listed in Appendix J. An explanation of the terminology used in these tables can be found in the TMO Data Dictionary, available at the Coos Bay District Office.

ANALYSIS QUESTION VI.3.5

Based on TMO's, what road segments can be decommissioned or improved to obtain ACS objectives?

The TMO's reflect present and near future (within 10 years) management activities within the watershed. Based on this information, future access, maintenance level, and possible changes in road standards were recommended (see Appendix J). These recommendations were organized into three categories.

Closures

The over-riding objective is to close roads identified in the TMO process. This reduces erosion, road's effects on wildlife and water quality, and meets road density objectives.

Self-closing roads and those behind permanent barriers should be left in a self-maintaining condition. These roads will not receive further maintenance, and steps need to be taken to minimize possible erosion. Construction of waterbars/dips, and removal of culverts and fills in streams are some measures which will accomplish these objectives. Prior to any road closure, all noxious weeds should be eradicated behind the barrier.

Culvert Repair or Replacement

A second objective is to reduce erosion from roads caused by culvert failure, outlets, or improper location.

Road Maintenance

A third objective is to reduce erosion from roads caused by surface runoff or lack of maintenance.