

Bedrock in the mountains on either side of U.S. Highway 395, which passes through Long Valley, is almost all granite, probably related to that in the Sierra Nevada a few miles to the west. Bedrock in the young volcanic mountains consists largely of light-colored ash deposits and black basalt lava flows, along with a few other kinds of rock.

Climatic conditions are influenced to a great extent by landward movement of warm moisture-laden air from the central and northern Pacific Ocean, which is cooled in its ascent of the western slope of the Sierra Nevada Mountains. Abrupt changes in topography (in elevation as well as configuration) cause sudden changes in seasonal precipitation as well as temperature. One of the greatest contrasts in precipitation within a short distance in the United States occurs between the western or California slopes of the Sierras and the contiguous valleys of this area and the adjoining western part of the State of Nevada. Seasonal precipitation is more than 70 inches, less than 15 miles southwest of this area near the Sierran crest. For the Sierra Valley as a whole, mean annual precipitation is about 25.6 inches. Most precipitation falls as snow. Monthly rainfall in July, August, and September is usually less than one inch. The length of the frost-free season ranges from 30 to 90 days. The summers are generally mild, and midday temperatures are around 80 degrees F. Winter temperatures are often around 0 degrees F.

Winds are generally light and variable, though windspeeds can become strong at times, especially during winter storms or in connection with local thunderstorms in summer. Sunshine is abundant in summer and is fairly abundant during spring, fall, and winter.

3.2 Vegetation

Pine forest provides light to heavy cover in the encircling mountainous uplands. Grass meadows and sagebrush cover the valley floors, and the vegetation on the highlands in the east is predominantly sagebrush and grass.

The principal tree species are ponderosa pine, Jeffrey pine, sugar pine, white fir, Douglas fir, and incense cedar. Other common tree species are California black oak, cottonwood, and several species of willow. Juniper serves as an excellent source of

fencepost material. Plumas County is California's number one Christmas tree producing area.

Cheatgrass is the most common grass since it was introduced into the area in the early 1900's while perennial grasses and forbs have steadily declined. Other understory include greenleaf manzanita, snow brush, mountain white thorn, bitterbrush, and basin sagebrush. Sagebrush is used mostly for livestock grazing and wildlife habitat.

Improved plant species and management practices are continually being developed by ranchers' cooperatives with the Soil Conservation Service and the County Agricultural Agent.

3.3 Fish and Wildlife

Most wildlife species can be generally grouped into two categories:

- Those most dependent on young vegetation, or early successional species.
- Those most dependent on mature or overmature vegetation, or late successional species.

Other species depend on special habitats such as riparian areas, wetlands, or boulder fields; or on special habitat elements such as snags, or dead and fallen wood. Many species depend on combinations of several habitat types, seral stages, and special habitat elements.

Snags provide needed habitat for numerous bird species, mammals, and many reptiles and amphibians in the forest. Dead and fallen wood attracts the hairy woodpecker, pine marten, bufflehead, black bear, bald eagle, spotted owl, and osprey.

Mule deer and trout are the most prominent wildlife species, but mourning doves, quail, chukar, and waterfowl are also important. Resident nongame birds are broadwinged hawks, eagles, prairie falcons, goshawks, shore birds, and others.

Other game are Columbian blacktail deer, coyotes, bobcats, mountain quail, tree squirrels, black bear, snowshoe rabbits, and a few blue grouse.

Irrigation reservoirs, stock water ponds, and live streams are cool enough for trout (surface water temperatures less than 75 degrees F). Rainbow trout is the principal species, but both rainbow and brown trout are found in the streams. Bass and bluegill have been stocked in various ponds along with various trout species.

Water flowing from the forest in creeks and streams is vital for its fisheries and downstream uses. Water quality in forest streams and lakes is good; it now meets State standards in all major streams. Water quality is currently maintained and improved through the application of State-certified and EPA-approved Best Management Practices (BMP's) for controlling non-point sources of pollution to surface water.

3.4 Threatened and Endangered Species

The Natural Diversity Data Base division of the California Department of Fish and Game conducted a computer search of the database in the service area where construction is to be performed. The search revealed the presence of the following species in the service area although no species are located in the specific construction area:

- Many flowered Navarretia, Federal candidate 2, California endangered
- Swainson's Hawk, Federal candidate 2, California threatened
- Short eared Owl, California Special Concern
- Sierra Nevada Red Fox, Federal candidate 2, California threatened
- Modoc Bedstraw, Federal candidate 2
- Greater Sandhill Crane, California threatened

(See map overlays for specific location in relation to proposed construction.)

3.5 Wetlands

Riparian areas occur in stream corridors, along lakeshores, and around springs, wetlands, and wet meadows. Vegetation in riparian zones includes characteristic

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hardwood types, such as aspen, cottonwood, or willow; it also includes larger and hardier trees of the same species as found on adjacent uplands.

Riparian vegetation is critical for maintaining water quality and fisheries. It is also important for many wildlife populations because it provides food, nesting sites, shade, overhead cover, and hiding cover. In addition, it provides nutrients necessary for stream life.

Riparian areas are protected by establishing streamside management zones in timber sale areas and by regulating livestock grazing on Forest Service and BLM land. Riparian areas have been locally damaged by livestock grazing, roadbuilding, skidding logs, timber harvest, and fire. The actual acreage of damaged riparian areas is unknown. Restoration includes such measures as seeding with grass; planting riparian hardwoods (willows, aspen, and cottonwoods); building streambank protective measures; and excluding livestock. Currently, some watershed and fisheries improvement projects aim at curing persistent riparian problems.

3.6 Floodplain

Federal Emergency Management Agency (FEMA) Flood Hazard Boundary Maps numbered 060092 0047 A, 060092 0048 A, 060092 0049 A, 060092 0050 A, and 060092 0051 A have been investigated. It has been determined that in all instances of close proximity to the floodplain adjacent to Long Creek, the area will be spanned.

3.7 Cultural Resources

Cultural resources provide information on the Area's unique prehistoric and historic ethnic heritage, including evidence of a number of Native American groups and their predecessors. In addition to providing archaeological evidence of past lifestyles and adaptation to the environment, cultural resources also lend a historic perspective on modern day technological and sociological change.

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The most common historic sites are homesteaders' cabins, ranchers' line shacks, logging railroads, mining camps and flumes, and emigrant trails and wagon roads. Basque, Chinese, Swiss, Blacks, and Native Americans are some of the ethnic groups that made significant contributions to the local ranching, mining, logging, and dairy industries. Ethnic sites include Native American religious and hunting sites, Chinese mining camps and gold diggings, and Basque aspen-wood carvings. More recently, the Civilian Conservation Corps (CCC) has left its legacy in the form of roads and trails, fire lookouts, recreation facilities, and wildlife and fishery conservation projects.

The cultural resources of the Area provide information about patterns of human adaptation to the diverse physiographic provinces of the Sierra Nevada, the Great Basin, the Modoc Plateau, and the Southern Cascades. The Area is situated in the center of a contact zone between several very distinct prehistoric populations: the nomadic foragers of the arid Great Basin, the dense village settlements in the Central California Valley, and the diverse cultures from the Columbia Plateau.

At our request, the California Archaeological Inventory Information Center, California State University at Chico completed a search of the archaeological maps, files, and records in the area of the projects. Their comments are included in a letter in the Agency Consultation section.

3.8 Air Quality

The Clean Air Act is administered through the State Air Resources Control Board under a State Implementation Plan (SIP). The State in turn has delegated implementation and monitoring to the counties. P-SREC must comply with the SIP and with the regulations of the air pollution control districts (APCD) in Lassen and Plumas counties.

Smoke, dust, engine emissions, and other materials can affect the quality of air, visibility, scenic quality, and human health. Activities such as lumber mills, firewood burning, agricultural burning, and automobiles are main sources of air pollution in the service area.

The Forests, through the use of prescribed fires to improve wildlife habitat or reduce fuels, generate large amounts of smoke, and wildfires produce even more. Timber management results in dust and smoke from road building, maintenance, log skidding and hauling, and slash burning. Mining creates open pits and clouds of fine dust. Cattle movements can create clouds of fugitive dust as can motorized recreation.

New sources of air pollution are expected to develop in the future. Increasing use of wood stoves and fireplaces is increasing smoke levels while geothermal energy production is releasing noxious gasses, including sulphur dioxide, into the air.

3.9 Water Resources

Surface water, used almost entirely for agriculture, supplies about 80% of water requirements for agriculture, stock, and domestic needs. The largest uses of ground water in Sierra Valley are irrigation, stockwater, and domestic needs.

The surface water comes from natural runoff, minor flow from springs, stored water, and imported water.

Ground water in the area is extracted by pumping or by artesian flow. The major ground water supply is from a series of confined aquifers. These are in sedimentary deposits that underlie the valley floor to a depth of 2,000 feet. These aquifers are recharged mainly by infiltration and percolation of streamflow, and rainfall and snowmelt runoff occurring around peripheries of the basins. Ground water occupies voids below the land surface in the zone of saturation. Historically, its chief source has been precipitation, but only a fraction of the precipitation that falls on a given area percolates into the subsurface to become ground water. Some of the precipitation is returned to the atmosphere in a process called evapotranspiration. The rest becomes surface runoff.

The ground waters of Sierra Valley vary greatly in temperature, with some wells producing water of less than 55 degrees F, while others exceed 150 degrees F. The highest water temperatures are generally associated with deep artesian wells in the west central portion of the valley near Grizzly Valley. Ground waters exceeding 68

degrees F are also found elsewhere, but usually they are also associated with deep wells.

Average annual water yield varies considerable from year to year. Over 63 percent of the average annual runoff occurs during the months of April, May, and June. This is a result of the melting of the winter snowpack. Monitoring of streams within the basin exhibited downstream impairment of water. This is a result of both natural and man-induced pollution.

Honey Lake has properties of excessive fluorine, boron, iron, and arsenic content. Therefore, the water quality of Honey Lake is poor. Surface water originating in the Sierra Nevada are of the calcium bicarbonate type, soft to slightly hard, and generally good for all uses. Long Valley Creek is an exception and due to the boron content contains poor quality water.

The ground water resources are closely related to the surface water resources in that recharge of the ground water supply comes mostly from surface water. Some ground water recharge occurs directly from infiltrated precipitation. Honey Lake is a major valley ground water reservoir. It is composed of the alluvial deposits that also partly fill other valleys of the Central Lahontan Basin. These deposits generally contain sand and gravel aquifers that in most cases provide the only supply of ground water available for large-scale development.

In general, the bedrock found in this area is relatively impermeable and yields limited quantities of ground water. The valley fill areas are almost totally isolated from the saturated valley fills of adjoining areas by relatively impervious bedrock. Relatively little ground water movement occurs between the sub-basins. However, the recent basalt flows are highly permeable in the Eagle Lake area. Ground water moves freely to discharge in springs, streams, and lakes in the surrounding area.

Because there is an inadequate supply of water in the basin to meet all of the demands, the users of water must compete for the available supply. Water is the controlling factor in land use. Future resource planning will require integration between the four major water consumers - agriculture, mining, urban and industrial uses, and terminal lakes for recreation.

3.10 Aesthetics

The proposed 69kV line from Chilcoot to Herlong will be located in the existing utility corridor that is already occupied by Pacific Bell and Sierra Pacific Power Co. As a result of locating the line in or near the existing right of way, the Lassen County Planning Commission has issued a Negative Declaration. No new scenic areas will be involved.

3.11 Transportation

There will be no construction near airports, microwave towers, or any other potential obstacles. When any lines are to cross highways, additional permits are required to assure there is no impairment of highway traffic.

3.12 Noise & Electromagnetic Interference

The areas where lines will be constructed are extremely rural, there are about three people per square mile; however, should any neighbors be affected, work will be scheduled during normal weekday hours.

Construction is performed so that little or no terrestrial interference will occur to any communication source.

3.13 Socio-economic and Community Resources

The economy of the Area is based mainly on lumber and agriculture. Although the initial settlement of the area was based on agriculture, after 1900 the lumber industry rapidly came to dominate the local economy. Timber is harvested principally from federally administered national forests. Annual Timber Production is approximately 250 million board feet. In 1982, nearly 97% of the gross receipts of the forests came from selling timber; while the Forest Service accounts for about 27% of the total employment of the area.

Most ranchers are descendents of the earliest emigrant homesteaders and are very proud of their pioneer ancestry. Initial settlement of the area was related to agriculture, especially dairy, beef and sheep ranching.

The average-sized ranching unit is about 1,400 acres. The trend in land ownership is toward consolidation. Smaller ranches are being bought and combined into existing large cooperative-type units. The principal crops are alfalfa and hay, but the choice of crops is severely restricted by the climate. The supply of irrigation water after the runoff early in spring is quite reliable but dependent upon the amount of snowpack. Wells have been drilled to provide dependable irrigation water supplies. As dependable sources of irrigation water develop, improved management practices are being applied. Old sod bound meadows are broken up, the land is leveled for better use of irrigation water, and improved mixtures of grass and legumes are seeded.

The population density in this particular area is estimated to be about three people per square mile.

Mining is at a low ebb at present but evidence of the gold rush days still abounds throughout the Feather River. Abandoned stone work, tunnels, tailings, mining equipment, ghost towns, and once-thriving bars along the rivers and canyons are nostalgic reminders of the booming days when men toiled and died for the precious yellow metal. Gold panning is still a popular hobby, and skin divers have unearthed gold from previously unreachable river bottoms.

Hunting and fishing are important to the economy of this area. They furnish recreational opportunities for local residents and the general public. Over 100 lakes and 1,000 miles of rivers and streams provide some of the finest fishing to be found anywhere. Retired individuals in the area have become knowledgeable, and notable, fishing and hunting guides.

Almost 70 percent of outdoor recreation activities is spent fishing while most of the remainder occurs as hiking or camping. This recreation is valued at approximately \$1,370,000 annually.

Campgrounds and picnic areas are in several areas. Development of several large reservoirs has produced excellent fishing and camping sites for the local and general public. There are 42 campgrounds in the area with approximately 1,000 campsites. This type of recreation is becoming more popular and is expected to increase consistently in the future.

In spite of the demand for more campgrounds, recent reduction in capital financing for recreation has reduced the emphasis on construction of new facilities for developed recreation. Reductions in operations and maintenance funds have provided the impetus to explore concession operation of public campgrounds by the private sector. The operation of the Eagle Lake campgrounds by a concession is the first attempt at this. If the trend toward reduced recreation financing continues, the Forest will shift emphasis toward providing opportunities for dispersed recreation and relying on private enterprise to meet demand for additional developed recreation facilities.

Social and economic impacts resulting from implementation of the proposed action will be positive. The contractor performing construction on the facilities will be encouraged to hire local labor, while the goods and services pertinent to construction personnel and operations (e.g., motels, restaurants, service station, and recreation facilities) as well as sundry construction materials will be purchased from the local commercial sectors, thereby further bolstering the area's economy. All contractors and subcontractors must be equal opportunity employers. Probably the most significant impact of the proposed construction will be the positive impact that a more adequate and reliable energy supply will have on the lifestyle and livelihood of P-SREC's consumers. Existing income producing operations may be expanded or utilize more modern technological methods; opportunity for new industry may be enhanced. System consumers will be assured of the quality of service to which they are entitled.

4.0 Agency Consultation



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
CARSON CITY DISTRICT OFFICE
1535 Hot Springs Rd., Ste. 300
Carson City, Nevada 89701

IN REPLY REFER TO:

2800
NV-03580

MAR 22 1988

Power Engineers, Inc.
c/o Mary Ann Mix
1020 Airport Way
P.O. Box 1066
Hailey, ID 83333

Gentlemen:

On March 14, 1988, we received a letter from Mary Ann Mix, Senior Environmental Specialist, regarding up-grade of the proposed Plumas-Sierra Rural Electric Cooperative power line near Hallelujah Junction from a 69kV to 115kV. We understand that the differences between the two lines would be: Increase in insulator length from 35 inches to 47 inches, increase the right-of-way width from 50 feet to 75 feet and increasing the span between the poles thus reducing the number of wood pole structures that would be utilized. The pole heights of 65 feet would remain the same as originally proposed.

The differences between the pole and insulator structures and right-of-way widths needed to accommodate the larger capacity line are not significant changes from the original proposal.

Since it is expected that number of pole structures would be reduced due to the increase in span lengths, we would not object to submission of a application requesting a 116KV voltage powerline with a 75 foot wide right-of-way as described.

Sincerely yours,

James M. Phillips
Area Manager
Lahonton Resource Area

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MINUTE PAGE 2928

MAR 6 1988

DEPARTMENT OF FISH AND GAME

801 LOCUST STREET
REDDING, CA 96001
(916) 225-2300



March 4, 1988

Ms. Mary Ann Mix
Senior Environmental Specialist
P. O. Engineers, Inc
P. O. Box 1066
Hailey, ID 83333

Dear Ms. Mix:

As you requested, we have discussed the Plumas Sierra Rural Electric Cooperative 69 KV Transmission Line with the Carson District of the Bureau of Land Management.

We were not able to come to any agreement as to whether the power line should be located east of Highway 395 outside the critical deer holding area but inside the deer winter range or west of Highway 395 inside the critical deer holding area and in deer winter range.

Since BLM has the authority to issue the power line easement across their administered lands, it appears that their concern for protecting scenic values may outweigh the state's wildlife concerns.

There is no need to delay the construction of the power line because two agencies can't agree. Therefore, we will support the Carson District's preferred alternative route through the critical deer holding area along existing roads. Where there are no roads in the southern area of Section 27, we recommend no new roads. Secondly, we recommend that the power line does not impact wetlands along Long Valley Creek.

If you have any questions regarding our comments, please contact Tom Stone of our Redding office at (916) 225-2368.

Sincerely,

A. E. Naylor
for A. E. Naylor
Regional Manager
Region 1

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California
Archaeological
Inventory

Information Center



ROUTE SIERRA
GLEN SISKIYOU
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Department of Anthropology
California State University, Chico
Chico, CA 95929
(916) 895-6256

February 11, 1988

Mary Ann Mix
Environmental Specialist
Power Engineers Inc.
P.O. Box 1056
Hailey, Idaho 83333

re: Plumas-Sierra Rural Electric
Cooperative (P-SREC) 69kV
Transmission Line

Dear Ms. Mix,

As requested, we have completed a search through our records regarding the above mentioned project. No portion of the new route for the transmission line has been previously surveyed for cultural resources. One archaeological site, CA-LAS-895, is located in very close proximity to the proposed transmission line. This site consists of an extensive prehistoric lithic scatter and habitation area, and the site boundaries may actually extended into the path of the proposed transmission line. There are also several sites in the vicinity which we have penciled in on our maps with the notation that they are maintained by the BLM in Carson City, Nevada. One of these sites is in very close proximity to the proposed transmission line, and this site has also been mapped in for your convenience.

As we indicated in the previous records searches of 3/4/87 and 11/3/87, the entire area is considered to be extremely sensitive for cultural resources. Beckwourth Pass is in close proximity, and was a very heavily traveled emigrant pass in historic times. The existence of several intermittent streams, south and east-facing slopes, ridgetops and saddles and known historic resources all combine to make this area a prime area for both historic and prehistoric cultural resources. We highly recommend that a survey be conducted of the entire proposed transmission line by a qualified archaeologist. This person will be able to locate cultural resources, assess site significance and suggest appropriate mitigation measures.

Please feel free to contact us if you have any further questions.

Sincerely,

Dr. Makoto Kowta
Northeast Information Center Coordinator

ROUTE PAGE 446
ROUTE PAGE 2730

REC'D SEP 28 1987

DEPARTMENT OF FISH AND GAME

901 LOCUST STREET
SACRAMENTO, CA 95831
(916) 225-2205



September 21, 1987

Ms. Mary Ann Mix
Environmental Specialist
Power Engineers Incorporated
P. O. Box 1066
Hailey, Idaho 83333

Dear Ms. Mix:

This is in response to your September 2, 1987 letter requesting our input concerning a powerline project that may adversely impact the Sierra Valley Evening Primrose Camissonia tanacetifolia ssp quadriperforata.

Based on our records and discussions with the US Forest Service regarding this plant, we understand this plant has been determined to be much more common than originally believed and was recently delisted as a species of concern for this reason. Consequently, we believe your project will not have any adverse impact on this previously considered sensitive plant and we would concur with a Negative Declaration for the project.

Thank you for the opportunity to provide this input.

Very truly yours,

Ray B. Naylor
for A. E. Naylor
Regional Manager

447
2731

REC'D SEP 28 1987

August 19, 1987

POWER Engineers, Inc.
P.O. Box 1056
Hailey, Idaho 83333

Attention: Mary Ann Mix, Environmental Specialist

Subject: Plumas-Sierra Rural Electric Cooperative System Improvements

Dear Ms. Mix:

My staff and I have reviewed the proposed system improvements and transmission line installation requested by Plumas-Sierra Rural Electric Cooperative as explained in your letter and Borrower's Environmental Report.

While it appears the transmission line routing, which follows Highway 395 and is already in a utility corridor right of way, may be in prime farmland, the pole planting would have minimal effect on water quality and wind erosion potential.

Sincerely,

Soil Conservation Service

Daniel A. Kaffer

Daniel Kaffer 9-24-87
District Conservationist

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TELEPHONE RECORD

To Robert Sorvaag/Rick Simon
Lassen County Planning Dept.
From HAM

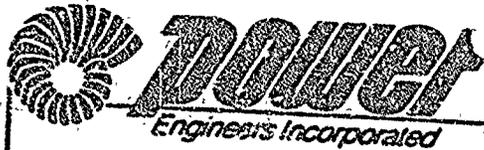
Project _____
Job No. 1147-01.24
Phone No. 9160257-8311, x.269
Date 9/16/87
Time 2:40 P.M.

Subject Comments on P-SREC 69kV Transmission line preferred route

Rick Simon assigned project, received my letter, concurs with Negative Declaration. Simon will present project description to Planning Commission at October meeting. Pursuant to their comments, a Negative Declaration can be issued.

cc:

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August 11, 1987

FILE

Lassen County Planning Department
Room 103, Courthouse Annex
Susanville, CA 96130

Attention: Robert K. Sorvaag, Planning Director

Subject: #1147-01 24; Plumas-Sierra Rural Electric Cooperative (P-SREC)
Proposed 69kV Transmission Line

Dear Mr. Sorvaag:

Reference is made to your letter dated March 6, which was a response to our prior notification of the above referenced project to traverse Long Valley from the Herlic substation, north of Doyle, to the Chilcoot substation in Plumas County.

Due to the length of the line, approximately 32 miles, the Rural Electrification Administration (REA) decided a low-level environmental assessment was required.

The preferred route for the line has now been identified, and copies of the maps delineating it are enclosed. Please note we have attempted to follow the right of way of the existing distribution line, which will be an underbuild to the transmission line. However, there are wetland and floodplain areas that should be spanned or completely avoided; consequently, it has not always been possible to remain outside of the highway scenic corridor.

In addition, we reached a compromise with the California Department of Fish & Game and agreed to remain south of the Doyle Deer Wintering Area with the provision that the line would be allowed to stay within the existing distribution right of way.

We have modified the project and addressed the concerns of the California Dept. of Fish & Game, thereby mitigating adverse impacts. Pursuant to the California Environmental Quality Act (CEQA), section 15063, it would appear that the project qualifies for a Negative Declaration.

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