Appendix E

Rising Sun Enterprises
Consultants Report

SUPPLEMENTAL INFORMATION

HUMBOLDT COUNTY
PROGRAM EIR FOR GRAVEL REMOVAL
ON THE LOWER MAD RIVER

VIEWSHED

RECREATION

NOISE

TRAFFIC

APRIL 1993

RISING SUN
ENTERPRISES

PLANNING • PERMITTING • ENVIRONMENTAL CONSULTING
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SUMMARY

The following document analyzes the affects that the existing gravel extraction and processing operations have in relationship to Viewshed, Recreation, Traffic and Noise. Reading this report should make it apparent that the four topics are interrelated to each other. For instance, the viewshed is primarily affected by the duration of extraction equipment on the gravel bars, particularly by recreationists on the river. The duration of and volume of gravel extracted determines the type and level of noise on nearby receptors. Transportation of extracted materials as well as processed materials determines the amount of truck traffic.

Initially, it may be felt by some that, if the extraction season and duration was limited, the affects on the surrounding environment would also be reduced. This is not true. Reducing the extraction period without reducing the extraction volumes would actually increase the intensity of operations. If hours were reduced, the operator would need to bring in more loaders and trucks and have more material leaving the site. If volumes were also decreased, then activities in surrounding rivers or quarries would be increased. Since extraction activity and subsequent processing is market-driven, with operators attempting to stockpile materials to carry through to the next extraction season, curtailment of extraction activity could have adverse affects on the local economic framework dependant on aggregate products. One could also argue a range of proposed actions from "There is no reason to make any changes since this is the way that it's been for the past 25-30 years" to "the river should be returned to its natural state prior to human interference." Neither of these are realistic alternatives to manage the river resources.

Operations have varied greatly in the past as to volumes, extraction season, hours of operation, and number of trucks and equipment, with no coordination between the different operations. All these operations were in existence prior to permits being required or have obtained permits at a time when extraction activity was not an expressed concern. As these sites have become established over the years and difficulty of finding new sites has increased, there is an increased awareness for the need to coordinate the activities that occur on this portion of the Mad River. In light of recent opposition to these operations and the overbearing amount of new regulations, reports and fees, the operators on the Mad River have expressed a willingness to undergo an annual review process similar to what has been approved for several individual operations. This process allows the County, in conjunction with the CA Department of Fish & Game, to place limits on extraction activity based on specific annual conditions. It is this annual review mechanism that the proposed mitigation measures in this report are based on.

Attached to this report is a draft standardized Surface Mining and Reclamation Plan that includes attachments describing the annual review, monitoring and performance standards. It is anticipated that other issues addressed in separate reports will result in limitations to extraction volumes and season. Only after all the relevant sections of the EIR are compiled comprehensively will the effectiveness of the proposed mitigation measures be able to be further analyzed.

Even with the proposed mitigations, there are still unavoidable significant impacts that occur from the ongoing operations. These include noise impacts to (1) recreational users on the river as a result of gravel extraction activity, (2) the RV park residences adjacent to the Arcata Readimix operation as a result of processing, and (3) residences adjacent to the Arcata Readimix, the Glendale Trailer Park and adjacent residences along the City of Blue Lake truck route from truck transportation. The actual impact would depend on the duration and hours of activity and be limited to those present at the time of the activity. Another unavoidable impact would result from the cumulative impact of truck traffic and associated deterioration of the designated truck route through the City of Blue Lake.

VIEWSHED

Setting

The area between Swaesey Dam and the Mad River Fish Hatchery area is characteristically steep forested slopes on either side of a generally narrow confined river channel. This area is within private ownership and is not accessible to the general public. Below the Mad River Fish Hatchery the river flows through a valley with wide river meanders, steep cut river banks and corridors of established riparian vegetation. Between the Mad River Fish Hatchery and the Highway 101 bridge are several communities exhibiting a mixture of agricultural, residential, commercial and industrial activities. Below the Highway 101 bridge, land use is generally agricultural grazing land and forested sand dunes (adjacent to the Pacific Ocean).

Viewshed information was obtained by reviewing gravel extraction and processing operations from adjacent public roads and recreational areas. Analysis occurred both in late fall when leaves were still on deciduous vegetation as well as winter after leafdrop.

Views along North Bank Road, as described driving east from Highway 101, consist primarily of grazing land, inter-dispersed with thick streambank vegetation consisting primarily of alders, willows, cottonwoods and spruce and very short segment of the Mad River. There are several small pull-offs from the road which are generally utilized by fisherman early in the morning during the season when fish are running. North Bank Road leaves the river when across from the Redwood Empire Aggregates Graham Bar. The asphalt plant and conveyor belt can be seen in the distance. More pull-offs are available along North Bank Road adjacent to Arcata Readimix Bar and Johnson-Spina Bars. A short view opens up again to look at the Spini Bar and the Highway 299 bridge.

The river along North Bank Road, for the most part, is screened by vegetation or by distance by grazing lands during the months of extraction. The most visible part of the river along North Bank Road is of the Johnson/Spina Bars downstream from the Highway 299 bridge. A casual passer-byer would not readily notice the intermittent gravel extraction operations occurring on this section of the river due to the curvature and narrowness of North Bank Road. However, equipment would be seen when present on the gravel bar.

Joining Highway 299 going east, the highway passes several of the pump stations and the Water District buildings. Mercer, Fraser Essex Bar processing plant area can be seen. Only short glimpses of the river are visible along this stretch. Again, the streambank is lined with cottonwoods, willows and alders with conifer trees planted both within the CalTrans right-of-way and growing naturally on adjacent land. Adjacent to the Essex Lane underpass, a short glimpse of the railroad bridge and the river

can be seen. The river is then hidden by the adjacent streambank and dense vegetation.

The next available view of the river from Highway 299 travelling east occurs at the Glendale Road underpass looking at the upstream end of Johnson Bar and the Eureka Sand & Gravel - Christie Bar. The river view is of two meanders, where much of the 1990-91 trenching occurred. Further east the Eureka Sand & Gravel plant is highly visible along Highway 299. Some evergreen plantings occur within the CalTrans right-of-way, but most of the processing plant area is exposed to views from Highway 299 traffic, showing the equipment, stockpiles and trucks. The highway at this point veers to the north away from the river and no other views of the river are available when driving east. When driving west from Lord Ellis Summit down towards the Glendale exit, distant views of the river and gravel bars are visible, primarily of the Blue Lake/Christie/Johnson bars.

Within the City of Blue Lake, access to and views of the river are very limited, generally because of streamside vegetation along Dave Powers Creek. Views of gravel bars can be obtained crossing the Hatchery Road bridge and are available by many who utilize the top of the flood control levee north of the river. The primary access to the river at Blue Lake is via the Hatchery Road bridge and levee. Both the Emmerson and Blue Lake bar extraction areas are visible from the bridge and levee. No other views of the river are available along Hatchery Road. Mad River Sand & Gravel processing site is visible but is located approximately 650 feet from Hatchery road.

The Old Meander where the Mad River use to flow until 1964 has become vegetated and portions of the adjacent land is utilized for vegetable growing as part of Potters Produce. Signs of the old bridge location and old river channel are still visible for the wary eye along the road; however, for the most part they are not readily visible.

Views were also analyzed along West End Road, driving between Blue Lake and Arcata. Similar to North Bank Road, West End Road was separated from the river bank by grazing lands. Views were mostly screened by dense stands of riparian vegetation. Views of the Blue Lake and Eureka Sand & Gravel stockpiles and extraction activity could be seen along a limited stretch of the road directly opposite the operations. Warren Creek Road, off of West End Road, had views available of the river from the park adjacent to Pump Station #4 (Park #4) to Pump Station #5, upstream where the railroad crosses Warren Creek Road. Warren Creek Road ends in a private road with no public access or views of the river.

Further west along West End Road, the road parallels closer to the river and offers views of the Essex Bar when summer foliage begins to fall from the trees and further west at the recreational park located adjacent to the Humboldt Bay Water District facilities. Views of the river can only be obtained by a walk through the park. Highway 299 can clearly be heard at

this location. The area between the Water District buildings and Highway 299 bridge can also be viewed through the trees driving further along West End Road.

The only view of the river along Highway 299 west of North Bank Road is as one crosses the river on the Highway 299 bridge. Views of either the Water District buildings or the Johnson-Spina Bar can be seen depending on the direction the person is driving on the Highway. Gravel extraction is visible when it occurs on the Johnson-Spina Bars.

On Guintoli Lane, no views of the river are available. However, Redwood Empire Aggregates and Arcata Readimix processing plants and stockpiles are visible along Guintoli Lane. Guintoli Lane is affected by truck traffic from the importation of gravel to the plants and exportation of aggregate products (including sorted or crushed aggregate, cement and asphalt.)

Views of the river upstream from the U.S. Highway 101 bridge are limited to vehicles as they cross the northbound Highway 101 bridge. No extraction activity can be seen from this vantage point.

Analysis

Views of gravel extraction/processing activity in the study area are generally limited to where public roads run close to processing plants and segments of the river and from the river itself. The area affected by gravel extraction and processing activities is restricted to the area between the Mad River Fish Hatchery downstream to Highway 101. The natural condition of the riverine environment is most noticeably altered within this section. Viewshed impacts would be experienced most by those that use the river for recreation and sports fishing purposes. Noticeable impacts would include gravel extraction areas including skimming, trenching and off-channel pits, summer bridge crossings and haul roads as well as processing and stockpile areas.

Besides views of extraction areas, access roads and stockpiles can generally be seen where adjacent riparian vegetation does not occur. Most of the time the raw material stockpile occurs adjacent to the riparian vegetation, screening processing equipment from river users. Viewers on the river also see the five pump stations and the Water District facility along 1½ miles of river above the Highway 299 bridge.

Views afforded along public roads are, for the most part, screened during the extraction season by dense streamside vegetation and steep streambanks. Views of the river and processing plants during winter months when streambank vegetation loses its foliage are increased. However, extraction activity has generally ceased by that time.

All six processing and/or stockpile sites are visible from public roads. The two sites that are most visible outside of urban areas are the Essex and Eureka Sand & Gravel sites. The Redwood Empire Aggregate site and Arcata Readimix site adjacent to Guintoli Lane are within an industrial and commercial area. The Mad River Sand & Gravel processing plant is visible but not close to local traffic on Hatchery Road.

Though the extraction areas and processing sites may be visible, there is no evidence that would indicate that impacts can be considered significant. Contrarily, it is this section of the river that has historically had high levels of industrial operations, including adjacent aggregate processing as well as wood product industries. It has been these uses (primarily the wood products industry) that has generated the growth of the communities surrounding them.

However, if mitigation measures were found necessary to minimize the impacts, such measures might include dense landscaping at select places adjacent to roadways and the river, and minimization of the extraction season. These mitigation measures are not proposed for this concern since the impacts are not considered to be significant.

Mitigation Measures

None proposed.

RECREATION

Setting

Recreational use of the river includes sportsfishing, swimming, hiking, boating, horseback riding, hunting and off-road vehicle use by dirt bikes and three-wheelers. Recreational off-road vehicle access is limited to only a couple locations. However, once on the river, access is available to long stretches of gravel bar. Controlled vehicular access occurs at gravel extraction/processing sites.

Designated recreational use areas include the Water District's two pump station parks and the Mad River Fish Hatchery. Handicapped fishing access is available at the Mad River Hatchery. Other public accesses include the Hammond Bridge and the County Mad River Beach Park and Boat Ramp. See Figure 1 for these locations. Figure 2 also indicates locations that show signs of river access by fisherman, bathers or others. Many of these locations are utilized without permission by landowners.

Users of the river and river's edge would be able to see gravel extraction activities and skimmed or trenched gravel bars during and subsequent to extraction periods. Extraction has recently been limited to 4-5 months per year. Most operators do not operate on weekends which is also the time that most family recreational use occurs. The majority of fishing activity occurs early in the morning, beginning just prior to dawn, or in the evening hours when processing activities are not occurring. However, fishermen can be seen utilizing the river at all times of the day.

Occasional boating, primarily kayaks and inner tubes, are seen in the summertime. These users have been affected by as many as four summer bridge crossings if one traveled from the Fish Hatchery to Highway 101. The culvert and concrete ramp at REA's Guintoli site would represent a blockage and require portaging. In addition, low flow conditions would require portages at several other places on the river due either to channel configuration or sometimes by artificial blockages such as the weirs at the Humboldt Municipal Water District and the Fish Hatchery. See Figure 2 for some of these locations.

Analysis

The impacts on recreation caused by gravel extraction/processing include adverse affects from increased sound levels; negative aesthetics of equipment on the river bed and as seen through the riparian zone; dust from scraping operations and limits on accessibility to all parts of the river bar. The noise levels generated from the operations are discussed under "Noise". The project area can be expected to have an environment that has been altered by developments along the river banks. Many of these

have been long-term alterations. Gravel processing plants tend to generate higher levels of noise, dust and traffic, though often intermittent. These aspects could be viewed to have an adverse affect on the recreational quality of the project area.

During gravel extraction certain portions of the river bar are physically changed so that, when viewed by a recreationist, they are not natural. The unnatural man-made forms which result from gravel extraction exist generally from May through October or until the first substantial storm. Extraction operations could be viewed as having an adverse affect on the river viewshed and related recreational use.

If all projects operated at maximum permit allowances at the same time in a year, the quality of the recreational experience would be significantly decreased during the extraction season. However, the activity on the gravel bar has been recently restricted by the amount of recruitment and available gravel for the subsequent year. Many years this level is far below the maximum permitted amounts. As a result, the amount of extraction activity on the gravel bar is also limited.

Skimming operations have recently been required to stake and flag extraction areas, turning the gravel bar into what looks like a construction site. Placement of metal fence posts or rebar on the gravel bar detracts from the recreational experience of the river user. However, this has been determined necessary by the CA Department of Fish & Game in order to review compliance to 1603 agreements. Though the final appearance of the gravel bar correlates to the experience and care of the operator, use of a scraper instead of a loader for skimming generally leaves a smoother final grade. Not all operators have a scraper.

Past practices of trenching and allowing stockpiles to be temporarily stored along the trench for several days represents the most-noticeable change on the gravel bar. Adherence to permitting requirements by the U.S. Army Corps of Engineers would severely limit the amount of this type of activity. A nationwide permit for stockpiles below Ordinary High Water and for summer bridge crossings is required to be obtained from the Army Corps of Engineers.

Decreasing the number, length and height of the small stockpiles temporarily placed next to the trenches would minimize the visual impacts to the natural river scene in the area. Requiring general smoothing off or feathering of the limits of skimming would also tend to minimize residual visual evidence of the gravel extraction process between October 1st and May 1st.

Another impact related to trenching is that it limits wading across to the other side of the river and has been found dangerous to those trying to climb back out because of the steep side slopes. During early spring when the river is fairly muddy it is difficult to discern the change in depth caused by the trench and could cause a hazard to persons, horses and vehicles.

The length of the trench would affect the ability to cross the river. When trenching is utilized, a public safety plan, including signs, should be submitted for review and approval as part of the annual review process.

The trenches that were dug in 1990 and 1991 can also be said to have had a positive impact on recreation. These areas are heavily utilized and preferred by bathers in the summertime and subject to heavy fishing pressure during the fall and early winter months.

Some of the gravel operations and other landholdings have been utilized for access to the river bed for sports fishermen and recreationists. This is done without permission and the owners and operators may someday restrict these accesses, particularly if increased use or abuse occurs. Additional public accesses to the river may be desirable.

Sports fishermen and other recreationists that have utilized the project area for many years have learned to cope with many of the impacts associated with gravel extraction operations. Sports fisherman or recreationists new to the area attempting to utilize this stretch of river may be less tolerable to the impacts.

As discussed under "Noise," passive recreational experiences would be impacted by noise levels caused by extraction activities during the period of time when extraction is occurring. However, observations made in the summer of 1992 indicated that people continue to use the river for fishing, swimming, picnicking, horseback riding and other uses, even with extraction activities occurring close by. Some may be intrigued by the activity or not mind the disturbances.

Mitigation Measures

1. When trenching is utilized, a public safety plan, including signs, should be submitted for review and approval as part of the annual review process. Extraction design should consider the length of the trench in relationship to recreational uses and access.

2. See Mitigation Measures listed under the Noise section.

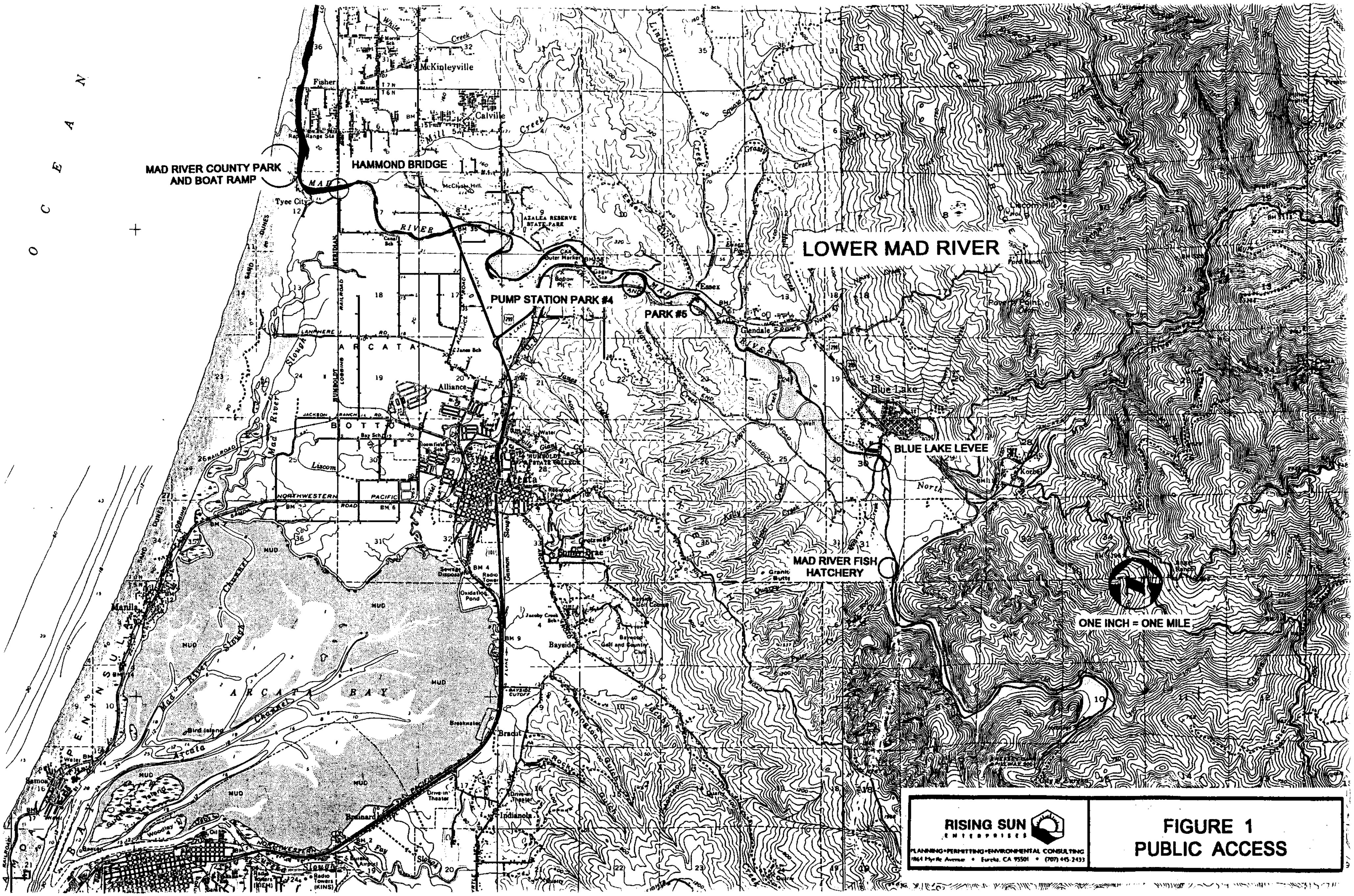

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FIGURE 1
PUBLIC ACCESS

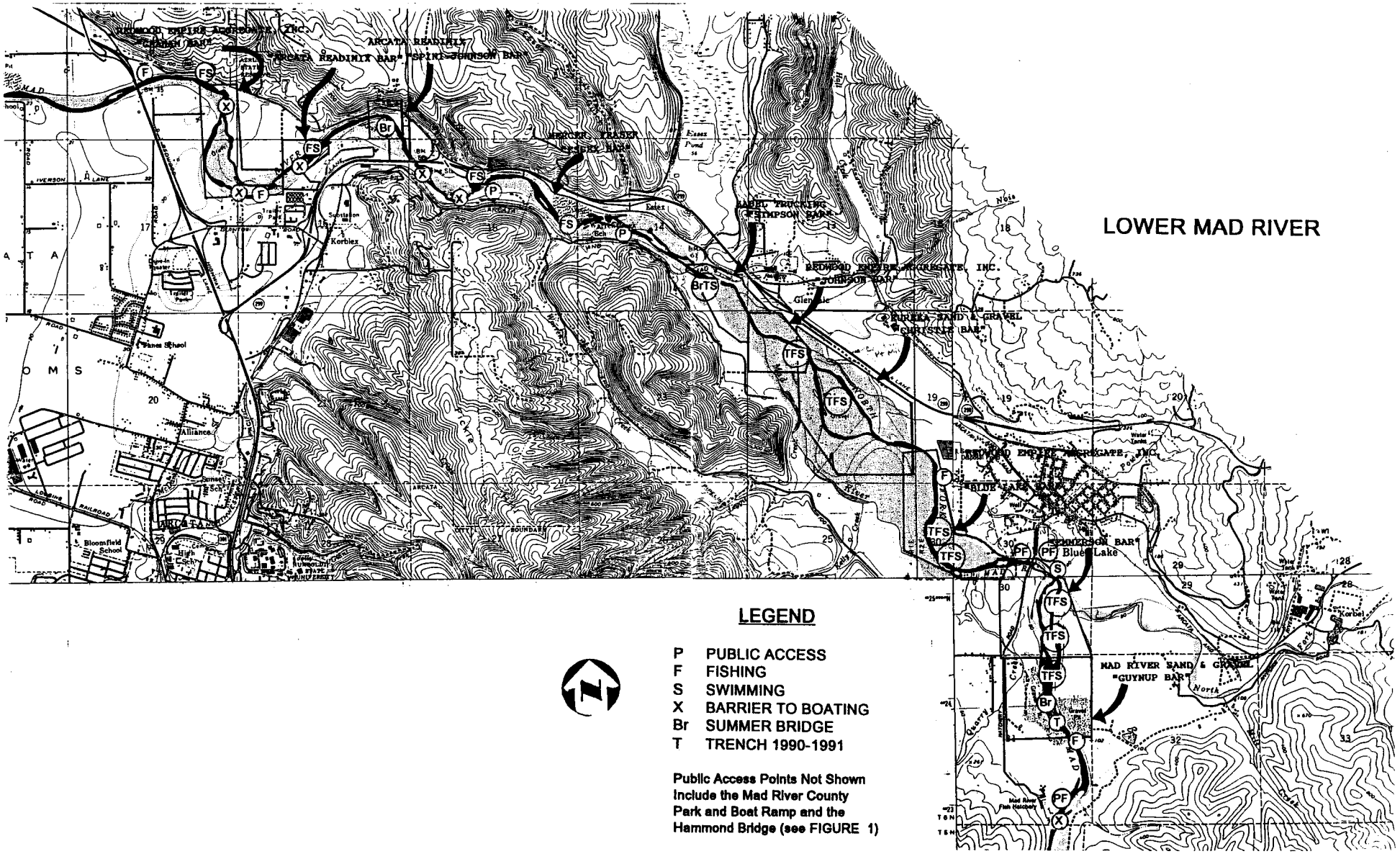
LOWER MAD RIVER
LEGEND
P PUBLIC ACCESS
F FISHING
S SWIMMING
X BARRIER TO BOATING
Br SUMMER BRIDGE
T TRENCH 1990-1991
Public Access Points Not Shown Include the Mad River County Park and Boat Ramp and the Hammond Bridge (see FIGURE 1)
0
4000'
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FIGURE 2
RECREATION USE AREAS

NOISE

Setting

Of the 17 miles of river length within the project area (from the Swaesey Dam downstream to the Hammond Bridge), approximately 10 miles is generally quiet, consistent with resource areas, parks and agricultural/rural residential uses. Noise measurements taken in these relatively "quiet" areas away from gravel extraction and processing activities, are approximately 43-45 dBA, rising occasionally to 48-55 dBA when the wind was blowing through nearby vegetation. For the most part, sounds in these areas are created by the wind and rushing water of the river and adjacent creeks. This would generally be considered the ambient level of noise within that portion of the project area. Noise sources affecting this area are limited primarily to periodic agricultural and timber management related noises.

However, this is not true within the noisier segment of the study area, primarily the 7 miles between the Highway 101 bridge and the Mad River Fish Hatchery, and including the developed land uses that occur adjacent to the river and within the valley slopes. Primary noise generating sources as one travels upstream in this section includes: 1) U.S. Highway 101 traffic; 2) Guintoli Lane traffic; 3) North Bank Road traffic; 4) Guintoli Lane industrial and commercial activity including REA and Arcata Readimix processing plants; 5) Highway 299; 6) West End Road traffic; 7) Humboldt Municipal Water District pump stations; 8) Glendale Drive traffic; 9) Glendale industrial and commercial operations; 10) Eureka Sand & Gravel processing plant; 11) City of Blue Lake commercial and industrial processing including UltraPower, Inc., J & S Stakes and Calgon Carbon; 12) Hatchery Road traffic; 13) Mad River Sand & Gravel processing plant; 14) Mad River Fish Hatchery. Noise on the river include gravel extraction equipment and occasional recreational off-road vehicle use on the gravel bars. Other noise sources include airplanes flying over the Mad River heading towards the Arcata Airport and noise associated with railroad use.

Noise is generally defined as unwanted sound by the receiver. Gravel extraction and processing involves the use of noise-generating heavy equipment operating out on the river bar, crushing/processing equipment and batch plants in the yards up out of the river and trucks transporting material from the sites. In considering analysis of impacts related to noise generated by gravel extraction and processing operations, one must consider the ambient noise levels, contributions from other noise sources, distance to the nearest receptor, the types, times and duration of noise.

Land uses generally considered noise sensitive include residential, educational and health facilities, research institutions, certain recreational and entertainment facilities (typically indoor theaters and parks for passive activities) and

churches. Uses considered less sensitive to noise include commercial and industrial facilities and certain noise generating recreational facilities such as playground and gymnasiums.

Though much of the extraction and processing noise along with other industrial, commercial and traffic noises has been occurring since prior to 1965, the cumulative total impact from noise has increased. The past 35 years has seen a substantial increase in residential development consisting of trailer parks and urban residential subdivisions. In addition, surrounding rural residential and farm properties are now more highly sought after as upscale estate type properties. As more people continue to move into the northcoast area for the "rural amenities," conflicts between existing industrial sources and new residents are expected to increase. This is the same phenomena of land use conflicts that occurs with new subdivisions near airports or at the edge of agricultural lands. These impacts are not a result of an increase of industrial processing activities, but to the increase in residential development and the recreational use of the river.

Several terms have been used throughout this report to describe and analyze noise impacts which should be understood by the reader. Decibels (dB) is the unit of measurement to describe sound amplitude and is measurable by noise meters designed for that purpose. Generally, an A-weighted scale is utilized resulting in "dBA" measurements. Since sound levels are intermittent, averaging mechanisms have been developed. The most commonly used measurement for this purpose is Ldn, which is the Day-Night Average Level. When noise sources occur only between 7:00 a.m. and 10:00 p.m., the average decibel (dBA) reading during that period is utilized. If noise sources occur outside of that time period, an added factor is applied to the average, resulting in a slightly higher Ldn level.

Several standards generated by the State Office of Noise Control are applied in analyzing noise impacts. In general, noise sources should be low enough to allow normal conversation and activity to occur inside a residence. Generally this would be at the 45 dBA Ldn level during daytime hours. Considering that older residential construction reduces noise levels by 12-18 dBA (with windows partially open), the 60 dBA, Ldn outdoor value is utilized. Newer construction, with double glazed windows and insulated ceilings, walls and floors would further reduce interior noise levels. A reduction of noise levels also occurs with distance from the source. Generally, noise levels (as measured at 50') would decrease 6 dBA's with a doubling of distance. Utilizing this method allows calculations of noise levels at the nearest receptors.

Noise measurements utilized in this study were taken for short periods of time (5, 10 or 30 minutes intervals) when equipment was operating. Longer periods of time were utilized to obtain an average reading when noise levels fluctuated. Maximum levels were sometimes utilized to measure moving objects such as trucks

and equipment. Measurements have been recorded in decibels (dBA's). To obtain an Ldn level one would calculate the length of time that an activity occurred in a day and average it with the ambient levels occurring during the remainder of the day. For instance, if noise levels were measured at a receptor at 70 dBA for 4 hours and 60 dBA for the other 4 hours of the work day, and ambient levels were 50 dBA after work hours, then the resulting average noise level would be 58 dBA Ldn. Since duration varies to a greater degree the readings were recorded in decibels (dBA's).

For the purpose of this study, noise measurements were taken at and adjacent to the processing and extraction areas and nearby receptors. The following represents site specific noise analysis for each of the extraction and/or processing sites. Table 1 contains a summary analysis of all the sites:

1. Redwood Empire Aggregates Graham/Zanzi Bar

   This site has historically had a processing plant as well as an asphalt batch plant running with large amounts of gravel being processed. The nearest occupied structure is approximately 200'-300' south of the processing equipment. Noise measurements taken from the north sidewalk along Guintoli Lane approximately 350 feet south of the processing equipment with plant operating, were at 68.5 dBA with no traffic. However, levels increased to 73.3 to 79.9 dBA when traffic passed on Guintoli Lane. Levels at this residence would be subject to levels of 65 dBA for the processing plant and 67-74 dBA for Guintoli Lane traffic. The nearest residence to the east is approximately 500' away, resulting in noise levels of 67 dBA. Residences west and north were 1,400' and 1,800' respectively. Noise levels would be reduced to below 55 dBA.

   Fisherman and recreationists utilizing the river bar north of the site would be subjected to sound levels of 48 dBA when processing equipment operated. The primary noise source heard along the river bar at this location is from Highway 101 which generated noise levels of up to 52 dBA when traffic passed over the Highway 101 bridge. When extraction is occurring, noise levels along the river would range from 67-74 dBA at 100'.

2. Arcata Readimix Processing Plant and Associated Gravel Bars

   The Arcata Readimix site consists of processing equipment and a cement batch plant. Other equipment includes front end loaders, dump trucks and mixers. The site, developed in 1951, is located within an industrial area. However, it is located adjacent to and directly north of the Town and Country Trailer Park built in 1955. Some noise complaints have occurred in years past primarily at times when operations needed to start prior to normal operating periods.

Noise levels, measured adjacent to the trailer park range from 55 dBA with no equipment running to 80 dBA when a gravel truck passed within 75 feet. The average noise level for a one hour period, Leq (60), was 63 dBA. When the cement batch plant operated (10 minutes for one load) noise levels increased to 73.5 dBA.

The noise levels during normal working hours would not affect those residents who have gone to work. Others who are retired or of pre-school age or those who work in the home would be affected. Furthermore, since many requests for readymix products are made for early morning deliveries, some processing occurs very early in the morning, during the more sensitive time period (before 7:00 a.m.). These residents are impacted from this operation. Other noise levels in the area include those generated by Highway 299 and from planes flying overhead towards Arcata Airport.

Fisherman and recreationists utilizing the river bar to the north are subjected to noise levels of 51 to 52 dBA when mixer trucks are in high idle when receiving readymix materials. Commercial air flights overhead at this location registered 55 dBA. This noise level could be considered too high to permit high quality, passive recreation and could, therefore, be perceived as an annoyance and impact by people recreating in that area. Further upstream at the Spina-Johnson Bar no processing occurs. Operations are limited to gravel extraction. Equipment on the gravel bar would range from 67-74 dBA at 100'. This too could present a noise impact. Extraction activities at this bar as well as the Arcata Readimix Bar and the Graham-Zanzi Bar are limited and have not occurred to any extent in the past couple of years. When operating, extraction amounts are less than further upstream locations; therefore, extraction periods are less as well.

3. Essex Plant and Gravel Bar

This site historically had a processing plant running with large amounts of gravels being processed. The nearest occupied structures, approximately 450' to the south, would receive a level of 62-65 dBA at the exterior of the structure.

Highway 299 divides the processing site from several residences to the north. Noise levels generated by passenger cars and trucks on the freeway would be higher than that contributed by the processing and extraction operations.

Fisherman and recreationists utilizing the river bar south of the site would be subjected to sound levels of about 67-74 dBA during periods of extraction. The site is adjacent to a popular swimming hole, though no public access other than walking along the river from one of the water district's pump station parks is available. Most access to this hole occurs from individuals trespassing across the Essex site.

Operations are currently limited by the size and replenishment of the gravel bar. The primary method of historic extraction at this site was utilization of a drag line during winter months, allowing for high levels of materials to be extracted annually. Less than 3,600 cubic yards was removed from the gravel bar in 1990 and 2,240 cubic yards was removed in 1991. No material was removed in 1992.

4. Simpson Bar

This site has historically had large amounts of materials extracted and high levels of activity on the gravel bar. No processing has occurred in recent years. Presently there is no processing or stockpile site; material would need to be removed from the site at the time of extraction.

The nearest residences are approximately 400 feet to the north within the Glendale trailer park area, consisting of approximately 35 trailers. These trailers would also be subjected to noise from Highway 299. No noise measurements were taken during extraction since no extraction activity occurred in 1992. Extraction could generate noise levels of 60-62 dBA in the trailer park. The primary activity that affects nearby residences would be hauling of gravel by trucks along Glendale Drive resulting in noise levels of 68-70 dBA at 100'.

Other residences are located on the south side of the river off of Walnut Creek Road and could be located within 600' of extraction equipment. This would result in noise levels of approximately 55-60 dBA when extraction was occurring at this distance away.

5. Johnson Bar

This site is similar to the Simpson Bar in that no processing occurs on-site but material is hauled off from this site primarily from a summer bridge crossing located at the Simpson Bar. This site is further away from the previously mentioned trailer park, but primarily affected residences are located on Warren Creek Road approximately 1,200'-1,800' to the southwest. Extraction equipment producing noise levels of 67-74 dBA at 100' would be reduced below 55 dBA at the residences along Warren Creek Road. Fisherman and recreationists utilizing the river and adjacent river bar would be subjected to sound levels similar to other extraction sites of 67-74 dBA at 100'.

6. Christie Bar/Eureka Sand and Gravel Plant

Noise levels from the processing plant were measured at 85 dBA 50' away from the screen. This was reduced to 65-68 dBA adjacent to Highway 299 approximately 200' north of the plant at times when no traffic was occurring. However, noise levels increased to 63 dBA when cars passed the site

and 73 dBA when trucks passed the site. The closest residence to the north is approximately 1,600' from the processing site and would be affected by traffic on Highway 299 rather than the processing plant. Levels would be less than 60 dBA.

Measurements were also taken adjacent to the river. Ambient levels were primarily between 45 to 50 dBA, but increased to 59 dBA from traffic on Highway 299 at the Glendale interchange. The processing plant can be heard from the river, but did not contribute to ambient noise levels.

Extraction equipment on the gravel bar could produce noise levels audible to residents, primarily to the south of the site. Noise levels of 80 dBA adjacent to the river would be reduced to 52 dBA at the closest residence approximately 1,300' to the southwest and 48 dBA 2,100' to the southeast. The County, during the Notice of Preparation for this EIR, received a complaint about the noise from a resident to the south. In discussing the concern further with the resident, it was not the processing plant but the extraction activity that occurred early in the morning and during weekends in 1992. The 1992 extraction season was compressed to less than 2 months, requiring operators to work extended hours in the 36 days of extraction. In addition, since the season did not begin until July 24th instead of June 1st, the previous year's stockpile of riverrun material had been depleted and there was an immediate need to extract and process a larger percentage at the very beginning of the extraction season.

These are generally short-term intermittent impacts that have occurred in the past and, unless regulated in some manner, would be expected to occur in the future depending on extraction limitations and contract needs. However, resulting noise levels at residences were within acceptable standards.

7. <u>REA Blue Lake Bar</u>

Ambient levels at the Nicholls industrial/stockpile area off of Taylor Way are approximately 56-60 dBA. Major noise sources include industrial operations in the City of Blue Lake Industrial Park. Activities within the Nicholls Trucking facility would be at 55-80 dBA within the industrial land area, caused primarily by loading equipment and trucks. If a portable processing plant was set up at this location it would be anticipated that it would generate noise levels of 73 dBA at 100'. The closest residences are two houses owned by REA 100' and 400' from the truck yard and 800' to 1,000' from the gravel bar. These residences would receive noise levels of 54 dBA and 55 dBA from extraction activities and 74 dBA and 62 dBA from processing. The next closest residences are within and adjacent to the Blue Lake Rancheria, approximately 1,000' from the levee and 900' from the truck yard. There are also approximately 17 trailers located at

the end of Rancheria Road. These would be subject to noise levels of less than 55 dBA. Residences to the south on West End Road are approximately 1,200'-1,400' from the edge of the extraction area based on current river conditions. These residences would probably hear the extraction activity occurring but noise levels would be at approximately 52 dBA.

This site as well as the two other sites upstream from this location all contribute to truck traffic onto Hatchery Road which proceeds along the truck route along Greenwood Avenue to Blue Lake Boulevard. This truck traffic is required to go through a residential area with adjacent school offices, public library and a church. Noise levels measured in October, 1992, 50' from the centerline of Greenwood Avenue averaged 62 dBA over a 10 minute period. Noise levels from cars and pickup trucks range from 60 to 65 dBA. Flat bed trucks, chip trucks, dump trucks and belly dump trucks produce noise levels from 72 to 77 dBA. No truck percentage ratios were available. It was estimated by City personnel that the percent of trucks passing City Hall were less than 10% in the winter time. In the summer time this percentage was estimated to increase to 50-66%, primarily due to gravel and logging trucks. Utilizing the above percentages, adjacent residences and school would be subject to exterior levels of approximately 55-60 Ldn during the winter and 61-66 Ldn during the summer daytime at 100' distance. Though transportation of gravel occurs year-round, transportation coincides with construction jobs which generally occur during the summer or during the dry periods in the fall or early winter. Therefore, the school has and would continue to be subject to the higher noise levels during the drier periods of the year. This level is within acceptable noise standards for schools.

8. REA Emmerson Bar

This site primarily consists of an extraction site with material being hauled off from the site. Noise related traffic is discussed under the previous site.

The closest residences to this site are located approximately 1,100' to the northwest and 1,200' to the south. There are also approximately 20 houses off of West End Road within 2,000' of the processing area. Extraction activities and transport of gravel would be audible at these locations; however, noise levels would drop to less than 55 dBA due to distance. This would be slightly higher than ambient noise levels.

This bar is popular for use by fisherman during fishing season, which generally occurs in October after extraction activities are completed. Boaters and swimmers utilizing this section of the river in the summer months would be subjected to noise levels, as discussed previously for other sites.

9. Mad River Sand and Gravel, Guynup Bar

Noise measurements taken at 50' from the screen plant/crusher were are approximately 88 dBA. This was slightly higher than other screen plants measured since this material was being washed and sorted at the same time. The closest residence is a house owned by the operator approximately 650' southwest of the processing plant would be subject to exterior noise levels of 66 dBA. Residences on Hatchery Road at West End Road are approximately 1,700' from the processing plant and would be more affected by truck traffic leaving the site. Residences directly west of the processing site are approximately 900' from the processing plant. When the plant is operating these residences would receive noise levels of approximately 63 to 65 dBA at the exterior of the structure. This noise level would be audible but should allow a normal level of conversation to occur. Noise levels adjacent to the river were taken while processing equipment was running and increased from 45 to 49 dBA. However, noise from the processing equipment was drowned out when the wind blew.

Fisherman and recreationists would hear the plant operating but would not be subjected to high noise levels. However, at times of extraction, as mentioned previously, they would be subjected to noise levels ranging from 67-74 dBA at 100 feet. This would be decreased by 5-10 dBA depending where equipment was in relation to the river and the recreationist.

Table 1 - Noise Analysis

Operations	Distance to Receptor (ft.)	Receptor	Approx. Noise Level (dBA)	Source of Prominent Noise
REA Guintoli	200	1 residence (so.)	65	Processing Plant
Arcata Readimix	100	Town & Country	74	Processing Plant
	75	RV Park	80	Truck Traffic
Essex	450	1 residence (so)	62-65	Extraction
Simpson	100	Glendale	68-70	Truck Traffic
	400	Trailer Park	60-62	Extraction
Johnson	100	Glendale Trlr. Pk.	68-70	Truck Traffic
	1,200	2 residences (so.)	53	Extraction
ES & G	1,300	1 residence (so.)	52	Extraction
Blue Lake	100	1 residence (so.)	74	Processing Plant
	400	1 residence (no.)	62	Processing Plant
	900	Blue Lake Mobile Home Park	55	Processing Plant
Emmerson	1,100	1 residence	54	Truck Traffic
MRS & G	650	1 residence	66	Processing Plant
All	100	River users	67-74	Extraction

Analysis

Based on information in Table 1, the most impacted receptors as a result of gravel extraction are river users. This would be too high to permit high quality passive recreation and could, therefore, be perceived as an annoyance and impact by people recreating in that area during the times of extraction. Fisherman and recreationists utilizing the river and adjacent river bar would be subjected to sound levels of 67-74 dBA at 100' from extraction activity.

At times of processing, the Town and Country RV Park next to the Arcata Readimix operations, one residence south of the Essex processing site and the REA owned residence at the Nicholls Trucking facility are adversely affected by existing noise levels. From truck traffic, the Town and Country RV Park adjacent to Arcata Readimix, the Glendale Trailer Park to the north of the Simpson and Johnson Bars and adjacent residences along the City of Blue Lake truck route are adversely affected by high noise levels. The actual impact would depend on the duration and hours of activity and would be limited to those at home at the time of the activity.

Impacts from existing gravel operations, including extraction, processing and transporting of aggregates, do occur to surrounding areas and primarily to surrounding residential areas. It is anticipated that these impacts will increase, not because of increases in noise levels, but because of increased residential developments and recreational uses.

The primary impact from noise, as discussed previously would occur from extraction activities located adjacent to the river when fisherman and recreationists are also utilizing the river's edge. Currently, most operations occur during daylight hours with the vast majority of the activity occurring weekdays during periods of dry weather. The majority of family recreational use that occurs during extraction occurs in the summertime on weekends. However, when school is out, students are seen utilizing the river bar and river at all times even when extraction occurs. To reduce the impact a mitigation measure could be included that would limit the hours of operation for extraction to Monday - Friday during daylight hours, generally 7:00 a.m. to 7:00 p.m., or as otherwise authorized by the Planning Director. This would allow flexibility for specific short-term needs.

Restrictions in the extraction season have resulted in operators extending their normal extraction hours to longer weekday hours and occasional weekend hours. Regulating the hours of the processing operation and truck traffic may affect the ability of operators to meet contract needs, particularly highway projects or emergency repairs. If regulations on the hours and days that operations can occur are proposed, these concerns should be taken into consideration. In the long period of operation at most of these sites noise complaints have been minimal and there is a general acceptance of the operations.

Other methods to reduce impacts would require new residential developments within 200-300 feet of extraction/processing sites and along certain truck routes to be insulated for noise attenuation and/or require notices in deeds of new developments that "Noise levels, due to surrounding aggregate production operations, may be higher than normally acceptable noise levels. These operations are protected by 'Right-to-mine' policies." As the State Geologist classifies the minerals in Humboldt County and designates important sites, further protection may be afforded to those extraction sites.

Even if mitigation measures are proposed to regulate operating periods or noise levels from equipment, the impacts of gravel extraction processing and transporting will remain significant both to nearby residents and recreationists. The practicality of enforcing such regulations may also adversely effect the local economic framework dependant on aggregate products. Therefore, a finding that an unavoidable significant impact occurs should be made. Rather than limiting hours of operation, it is proposed that an annual pre-extraction review of proposed extraction amounts occur. Based on cumulative volumes, proposed extraction season and specific contract needs, limits could be placed on specific operations.

Mitigation Measures

1. As part of pre-extraction annual review, operators are to submit proposed volumes, duration of extraction season, hours and days of extraction and approximate loads per day. Notification of changes is to be provided to the Planning Director for approval.

TRAFFIC

Setting

Traffic information was compiled from existing County, State and local information. The following section assesses the adequacy of existing transportation routes as they relate to increased activity and a description of the existing circulation setting along transportation routes utilized for transporting gravel and aggregate products. The current operations generate a wide range of traffic, primarily dictated by contract demands, weather conditions and extraction seasons.

Specific construction contracts generally dictates the time and duration of traffic generation. Weather is a factor in traffic generation because extraction occurs generally during the drier months of the year. The majority of construction activity also occurs concurrently. During the wetter months of the years, demands of materials are generally decreased and, therefore, processing activity and transportation is also decreased. However, the past several years of drier than normal winters caused an increase in winter season construction projects resulting in an increase demand for aggregate materials during the off-season. When the length of extraction season is shortened, more activity occurs, resulting in a compressed period of higher volume traffic.

Road traffic generated from extraction activities would generally be limited to those sites that have no on-site processing occurring. This would include transporting of equipment and river-run material. Those sites that have processing activities occurring on-site would not generate extraction-related traffic but would generate traffic related to transportation of various aggregate materials including sorted rock, sand, readymix concrete and asphalt paving materials.

All operations reviewed accessed onto city and County roads from private drives. All sites had adequate sight stopping distance based on information in the Highway Design Manual. For roads with 35 m.p.h. traffic, approximately 250' of visual clearance in each direction is required. All sites met this requirement at the locations where driveways accessed onto public roads.

Table 2 shows approximate volumes extracted at the various sites during the years 1990-1991. The table also indicates the average daily traffic (ADT) based on this information, assuming a 5 day work week, 4 month extraction period, 8 month processing/transporting period and 15 yard dump trucks. The actual number of trips per day would be limited by the number of trucks that are available to transport the material and the types of product, whether riverrun material or manufactured aggregate products. The service area for most of the operations range from Eureka to Orick and east to Willow Creek for approximately 50 mile radius.

Table 2 - Approximate Traffic Generation

Site	Cubic yds/yr	Extraction ADT[1] (4 months)	Processing ADT (8 months)
REA (Graham)	36,000 (1990)	118[2]	15
REA (Johnson)	29,700 (1990)	25	13[3]
REA (Blue Lake)	82,750 (1991)	69	35[3]
REA (Emmerson)	28,950 (1991)	24	12[3]
Arcata Readimix	84,950 (1990)	70	35
Essex	3,500 (1990)	3	0
Simpson	62,300 (1990)	52	0
ES & G	50,000 (1990)	0	21
MRS & G	85,000 (1991)	0	35
TOTAL	463,150	361	166

Traffic count information was obtained for the intersections on city, County and State roads and, where available, percentage of traffic that consisted of trucks. Those figures are noted in Table 3. Because these operations are existing, the listed average daily traffic (ADT) totals have incorporated the traffic generated by these projects.

Table 3 - Existing Traffic Levels

Site/Road Segment	ADT[4]	Peak Hour	% Trucks
REA Guintoli			
Highway 299 at Highway 101	9,700	1,050	15
Guintoli, west of Valley West Blvd.	12,200		
Janes Road west of Highway 101	8,500		
Guintoli, east of Valley East Blvd.	6,200		
Arcata Readimix			
Boyd Road	2,200		
Highway 299 at Guintoli	9,800	1,100	14.5
Highway 299 at North Bank Road	10,600	1,150	11.7

[1]These figures represent one-way trips. Figures should be doubled to account for return trips.

[2]This amount includes importation of materials from the other three REA sites.

[3]This amount represents exports from the Guintoli site as a result of importation from this site.

[4]Figures represent totals in both directions.

Table 3 Continued

Site/Road Segment	ADT*	Peak Hour	% Trucks
Essex			
Highway 299 at Essex Lane	9,400	1,050	
Simpson/Johnson/Eureka Sand & Gravel			
Glendale Drive near E & O Market	1,700		
Highway 299 at Glendale Drive	8,500	940	
Blue Lake/Emmerson/Mad River Sand & Gravel			
Highway 299 at Blue Lake Blvd.	3,550	500	18
Blue Lake Blvd. west of Greenwood	5,600		
Greenwood Ave. south of Blue Lake Blvd.	4,000		
Taylor Way north of Hatchery Road	775		
Hatchery Road north of West End Road	750		
West End Road west of Hatchery Road	175		

*CalTrans Information, 1991
City of Arcata Information, 1990-91
County of Humboldt Information, 1992

Individual Sites

Note: Unless otherwise indicated, all truck trips represent one-way trips. Figures should be doubled to account for round trips.

1. The Redwood Empire Aggregates' (REA) site off of Guintoli Lane during the extraction season receives gravel not only from on-site but also from the Johnson, Blue Lake and Emmerson gravel bars. Importation also occurs during the winter months from stockpiles in the Nicholls Trucking yard in Blue Lake. REA has 3 dump trucks and rents others as necessary. Exportation of materials from the Guintoli site averages about 50 loads per day during the summer months with maximums approximating 120 loads per day. In addition, approximately 30-50 customers a day bring their private vehicles to be loaded with various aggregate materials. During winter months the number of loads is reduced to approximately 12 per day, on an average. Accesses onto Guintoli Lane are either at Valley East or Valley West Boulevard where it is a short distance to Highway 299 or Highway 101. All intersections are qualitatively operating at an acceptable Level Of Service (LOS). No access conflicts were noted from this project site.

2. Arcata Readimix has 16 dump trucks and 9 concrete mixers, and accesses onto Boyd Road adjacent to an industrial area. Boyd

Road is also utilized by the adjacent Town and Country Trailer Park. Highway access from Boyd Road is immediately available to the south for both Highway 101 and Highway 299. Qualitatively this intersection also is operating at an acceptable Level Of Service. During summer months there are approximately 50-60 loads per day leaving the processing site, with an average maximum of 110 loads. As many as an additional 100 loads per day are transported along Boyd Road to the processing site when extraction at the Johnson/Spina Bar is occurring. During winter months, trips leaving the processing site are reduced to an average of 20 loads per day. Approximately fifty percent of those loads are presently attributable to material being imported to the plant from materials extracted from the Eel River and stored at Fields Landing. No access conflicts were noted from this project site.

3. Essex yard extraction levels have been reduced in recent years because of the drought and market conditions. Access from this site is directly onto a little used portion of Glendale Drive which then has direct access onto Highway 299 at the Essex Road interchange. In addition to material that is extracted from the gravel bar, this site has historically been used for storage of other aggregate/riprap materials which also results in both importation and exportation traffic. No access conflicts were noted at this project site.

4. The Simpson Bar is an extraction only bar. As material is extracted from the gravel bar it is directly loaded onto trucks and removed from the site, generally to specific construction sites. Therefore, traffic is generally limited to extraction months. The number of trucks leaving this site is limited to both the number of trucks available and the ability of the front-end loader to fill the trucks. A substantial amount of material was removed between April to October in 1990 which resulted in approximately 10-15 trucks per hour or 110-130 loads per day from the Simpson Bar.

   Traffic leaving the site and accessing onto Glendale Drive generally turns right towards the industrial/commercial area on Glendale and accesses onto Highway 299 or left past the trailer park and onto the Essex Lane interchange. Access problems at this location include a narrow and steep access drive which could result in conflicts for two-way traffic. However, radio control in trucks is generally used to prevent conflicts. Cross-traffic includes vehicles on Glendale Drive as well as train traffic. Views of on-coming traffic from the west is partially screened by the existing fence and vegetation, but the higher profile of the trucks provides sufficient sight clearance. Trains currently run in the evening or late at night. No access conflicts remained at this project site.

5. In addition to the traffic generated by the Simpson Bar, extraction on the Johnson Bar also leaves by the same access drive. Estimates provided for 1991 indicated that approximately 100 loads leaving the site per day occurred during the extraction season. Very little activity, if any, occurs during the non-extraction season at both the Simpson and Johnson Bar locations.

6. The Eureka Sand & Gravel operation which is located south of Highway 299 has vehicular access under 299 to Glendale Drive to the north. This operation has 3 dump trucks and 8 mixers. During the summer construction season an average of 35-50 trucks per day leave the site. This is reduced to an average of 5 trucks per day during winter or wet periods. Of the total loads, approximately half are aggregate materials with the other half readimix concrete.

   Access from this site is to Glendale Drive where trucks proceed westerly through the lumber processing and commercial areas and onto Highway 299. No access conflicts were noted from this project site.

7. Traffic associated with the Blue Lake Bar primarily occurs during the extraction season when material is exported to the REA Guintoli processing site. However, some of the material is stockpiled at the Nicholls Trucking facility for transportation during less active periods of the year. Nicholls has 8 dump trucks. In the 1992 winter season, only one truck was utilized to haul gravel daily to the Guintoli site. Traffic from the Blue Lake Bar accesses onto Taylor Way through the City of Blue Lake Industrial Park which currently has a high percentage of chip truck and lumber truck traffic.

8. Traffic from the Emmerson Bar is generally limited to the extraction season except that the post-extraction removal of small stockpiles could end up at the Nicholls Trucking site or the REA Guintoli Lane processing site. Trucks leaving Emmerson Bar access onto Hatchery Road and either proceed through the City of Blue Lake or travel to the Nicholls Trucking facility to stockpile the gravel.

   During the 1992 season, a combined 71,600 cubic yards were extracted on the Blue Lake and Emmerson Bars. Extraction on the Blue Lake Bar occurred on 23 days between August 11th and September 5th, 1992. A total of 1,352 loads for an average of 59 loads per day were removed during this period. Extraction on the Emmerson Bar occurred on 14 days between September 8th and September 24th, 1992. A total of 697 loads for an average of 50 loads per day occurred. However, the number of loads per day actually ranged from 7 to 101 on the Blue Lake Bar and 8 to 96 on the Emmerson Bar. Approximately fifty percentage of the above amounts were stockpiled at Nicholls Trucking with the remaining fifty percentage being transported to the Guintoli Lane site.

9. Traffic from Mad River Sand & Gravel is, for the most part, limited to transportation of sorted and/or washed materials. Trucks on-site range from 2-4 trucks. The majority of material is transported by Wes Green who has 2 additional trucks, or by other contractors. On an average, approximately 3-5 trucks transport material from the site resulting in 25-30 loads per day in the summer months. For a large job, as many as 100 loads per day may leave the site. During the winter months activity is reduced to an average of 4 or 5 truck loads. Many days the gate remains shut and no loads are exported.

Analysis

All sites reviewed had adequate access onto public roads and sufficient sight stopping distance clearance. All intersections function adequately during observations occurring in the study period, which was during the winter months. Highways 101 and 299 adjacent to the project area had a percentage of truck traffic similar to areas away from the Mad River (approximately 13-18%). Truck traffic attributed solely by gravel manufacturers represents a small percentage of the total truck traffic.

Though the majority of sites are dispersed so that there is no concentration of traffic and are located close to suitable transportation routes, one area of conflict does exist, and that is on the truck route through the City of Blue Lake. Transportation of aggregate materials or products from the Blue Lake Bar, Emmerson Bar and Mad River Sand & Gravel processing site are all transported along Hatchery Road to Railroad Avenue and onto Greenwood Avenue where it accesses onto Blue Lake Boulevard (see Figure 3). This transportation route requires that truck traffic travel adjacent to developed residential areas, offices, a church, public library and elementary school. At times when material was removed from the sites for large construction projects such as in the 1960's and 1970's with the construction of Highway 299, large volumes of associated truck traffic proceeded through the town of Blue Lake. This also occurred in 1990 and 1991 when trenching occurred and large volumes of material were extracted. For instance, if the 197,000 total cubic yards extracted in 1991 for these operations was transported in an 8 month period, 5 days per week with 15 yard dump trucks, approximately 82 truck trips (one way) per day would occur. Considering round trips this would amount to 16-20 trucks per hour. Again, summer months would be at higher volumes than winter.

Truck traffic associated with gravel producers also occurs in conjunction with other truck traffic. UltraPower, Inc., in the City of Blue Lake Industrial Park generates a substantial amount of chip truck traffic. A 1988 Conditional Use Permit Amendment estimated that approximately 34 one-way truck trips per day year-round occurs for this operation. Other industrial uses in the industrial park also generate truck traffic. Furthermore, in recent years, Simpson Timber Company has conducted timber

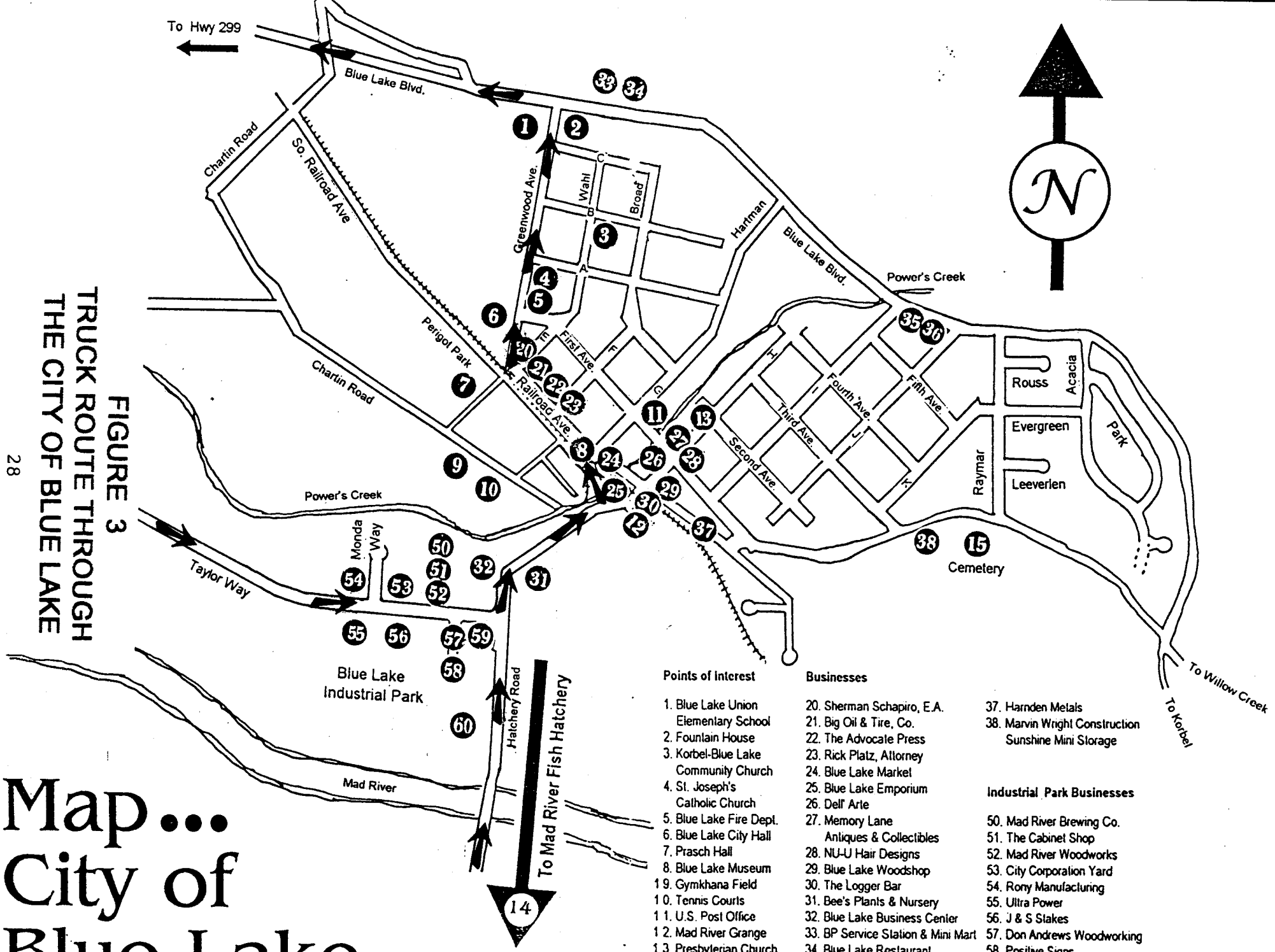

FIGURE 3
TRUCK ROUTE THROUGH
THE CITY OF BLUE LAKE

Map... City of Blue Lake

Source: Blue Lake Chamber of Commerce

Points of Interest

1. Blue Lake Union Elementary School
2. Fountain House
3. Korbel-Blue Lake Community Church
4. St. Joseph's Catholic Church
5. Blue Lake Fire Dept.
6. Blue Lake City Hall
7. Prasch Hall
8. Blue Lake Museum
9. Gymkhana Field
10. Tennis Courts
11. U.S. Post Office
12. Mad River Grange
13. Presbyterian Church
14. Mad River Fish Hatchery
15. Cemetery

Businesses

20. Sherman Schapiro, E.A.
21. Big Oil & Tire, Co.
22. The Advocate Press
23. Rick Platz, Attorney
24. Blue Lake Market
25. Blue Lake Emporium
26. Dell' Arte
27. Memory Lane Antiques & Collectibles
28. NU-U Hair Designs
29. Blue Lake Woodshop
30. The Logger Bar
31. Bee's Plants & Nursery
32. Blue Lake Business Center
33. BP Service Station & Mini Mart
34. Blue Lake Restaurant
35. Blue Lake Video
36. Blue Lake Laundromat
37. Harnden Metals
38. Marvin Wright Construction
    Sunshine Mini Storage

Industrial Park Businesses

50. Mad River Brewing Co.
51. The Cabinet Shop
52. Mad River Woodworks
53. City Corporation Yard
54. Rony Manufacturing
55. Ultra Power
56. J & S Stakes
57. Don Andrews Woodworking
58. Positive Signs
59. Almquist Lumber
60. Trans Pacific Carbon

activities on the west side of the Mad River where logs were transported along Hatchery Road through the City of Blue Lake. When truck associated traffic occurs at the same time from all these uses, the combined amount of truck traffic that travels through the town of Blue Lake can be significant. In the City of Blue Lake 1986 General Plan Circulation Element it was noted that truck traffic was at 6.5% and lower than Highway 101 through Eureka (7-8%). At that time it was felt that 33% of the total truck traffic was from outside the City. As far as a separate truck route, it was felt from a capacity standpoint alone, that one would not be necessitated until trucks made up 30%-40% of the total traffic or if volumes exceeded 8,000 ADT on Greenwood Avenue.

Greenwood Avenue, in 1986, carried 370 vehicles per hour during peak hour traffic (8:00 - 9:00 a.m.). Approximately 1,200-1,300 vehicles per hour would be a high level of traffic for Greenwood Avenue. Traffic levels have increased on Greenwood Avenue from 3,764 in 1985 to 4,000 in 1992. Comparing the % truck traffic with traffic volume would indicate 245 per day in 1985. Extrapolating this to 1992 volumes would indicate 260 truck trips per day on Greenwood Avenue. Therefore, the estimated 164 (82 x 2) trucks per day associated with gravel extraction for 1991, indicated earlier, is realistic.

The percentage of truck traffic through town is an important factor in road maintenance. Based on the CalTrans Highway Design Manual, loading on one three axle truck is equivalent to 1,840 passenger car trips in regards to street degradation. This has less of an impact when streets are constructed to handle truck traffic, such as much of the City of Blue Lake truck route. The Industrial Park EIR recognized that the increased traffic volumes and accompanying degradation of city streets from the Industrial Park was a significant environmental affect which could not be avoided. It has also been noted that the additional truck traffic proposed was not more than that which occurred when the Macnamara and Peepe Mill was in operation at the same location. Mitigation measures proposed in the Industrial Park EIR to reduce the significant impacts related to traffic generation included development and extension of Chartin Road and directing truck traffic through the less-developed western portion of town. This project has not occurred and funding is not likely to be made available.

The City of Blue Lake has effectively enforced the 25 m.p.h. speed limit through town for the chip trucks headed to the City Industrial Park through a condition of the use permit requiring compliance. There is no similar mechanism that the City of Blue Lake has on existing projects outside of the City Industrial Park, including the gravel operations. Neither does it receive funds from property or sales tax from operations outside of the City, which could be utilized in the continued maintenance of the truck route through town. The City has formed and recently expanded its police department, which is now equipped with radar to enforce the speed limit through town.

Another associated impact is the noise generated by the truck traffic. This issue and proposed mitigation measures are discussed in the "Noise" section.

The City of Blue Lake does not have the ability to regulate the number of truck trips or hours of transport for projects outside of City Limits or which have been grandfathered in. The Nicholls Trucking facility could be regulated for truck traffic by the City of Blue Lake if a processing operation was further developed, as part of the use permit process. The Mad River Sand & Gravel operation is outside of any regulatory control of the City. Therefore, such regulations would need to be developed by the County if found necessary.

Measures that limit extraction amounts at the upper sites for other reasons, such as limited bedload replenishment, would reduce the truck traffic through the City of Blue Lake. However, measures that limit extraction periods on the Emmerson and Blue Lake bars would result in shorter but more intense periods of truck traffic. Restrictions in the extraction season have resulted in operators extending their normal extraction hours to longer weekday and occasional weekend hours. Regulating the hours of truck traffic may affect the ability of operators to meet contract needs, particularly for highway projects. If regulations on the hours and days that truck traffic can occur are proposed, these concerns should be taken into consideration. For this reason, a mitigation measure limiting volumes of truck traffic was not proposed. However, annual pre-extraction analysis of proposed volumes and operating hours could occur with limits placed based on cumulative volumes proposed, and contract needs.

Other mitigation measure alternatives include pursuing the Chartin Road extension discussed in the Blue Lake Industrial Park EIR (approximate cost is $2,000,000) or pursue some other truck route alternative such as directing traffic along the County flood protection levee towards the Christie Bar and onto Highway 299 at the Glendale interchange (approximate cost is $6,000,000). This is an alternative that has been proposed in the past; however, no funding has been identified. Unless some feasible mitigation measure or alternative is pursued, the cumulative impact of truck traffic and associated deterioration of the designated truck route through the City of Blue Lake would not be able to be avoided. This finding would be similar to the finding made by the City of Blue Lake in its Industrial Park EIR.

Mitigation Measures

1. As part of pre-extraction annual review for those sites that transport extracted materials directly off-site, operators are to submit information on proposed volumes, duration of extraction season, hours and days of extraction and approximate loads per day. Notification of changes is to provided to the Planning Director for approval.