

**DRAFT
ENVIRONMENTAL IMPACT REPORT**

Volume I

**BECK RANCH
SAND AND GRAVEL PERMIT
CU 2235 EA 3157**

JULY 1986

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TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION AND SUMMARY	1
II. PROJECTION DESCRIPTION	6
A. Location	6
B. Project Objectives	6
III. NATURAL ENVIRONMENTAL CONDITIONS, PROJECT IMPACTS AND MITIGATION MEASURES	12
A. Geotechnical	12
B. Hydrology	15
C. Vegetation and Wildlife	19
D. Noise	23
IV. CULTURAL ENVIRONMENTAL CONDITIONS, PROJECT IMPACTS AND MITIGATION MEASURES	34
A. Land Use	34
B. Traffic	48
C. Aesthetics	54
V. EFFECTS FOUND NOT TO BE SIGNIFICANT	59
VI. CUMULATIVE IMPACTS	60
VII. UNAVOIDABLE ADVERSE IMPACTS	61
VIII. ALTERNATIVES	62
IX. RELATIONSHIP BETWEEN LONG-TERM AND SHORT-TERM IMPACTS	65
X. IRREVERSIBLE CHANGES AND COMMITMENTS OF RESOURCES	66
Sources Consulted	67
Appendix A - Initial Study	69
Appendix B - Technical Studies Vol II (Separate document available from Fresno County Development Services Department)	
o Geotechnical Investigation	
o Biological Report	
o Noise Analysis	
o Traffic Study	

LIST OF FIGURES

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Regional Location	7
2	Project Site	8
3	Project Design	9
4	Rehabilitation Plans	11
5	Geotechnical Tests	13
6	Ambient Noise Level Monitoring Sites	24
7	Line of Site (Path of Noise) From Excavation Area	27
8	Project-Related Noise Hours 6 a.m. to 6 p.m. Project-Related Noise Hours 7 a.m. to 4 p.m.	31
9	Existing Land Use	35
10	Project Site Soils	37
11	General Plan Land Use Designations	39
12	Mineral Resource Zones	41
13	Existing Zoning	43

LIST OF TABLES

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Wildlife Species	20
2	Summary of Ambient Noise Level Measurements	23
3	Existing Noise Conditions, Friant Road	25
4	Fresno County Noise Ordinance Standards	26
5	Summary of Lone Star's Excavation Noise Level Measurements	27
6	Project Soil Types	36
7	Traffic Count - Friant Road	49

LIST OF TABLES - Continued

<u>Number</u>	<u>Title</u>	<u>Page</u>
8	Average Daily Traffic - Friant Road, 1975-1985	50
9	Truck Mix Friant Road	50
10	Friant School Bus Stops	51
11	Sierra Joint Union School District Bus Stops	51

I. INTRODUCTION AND SUMMARY

This Environmental Impact Report (EIR) has been prepared by Buada Associates to assess the potential environmental impacts of the proposal by Stephen Beck and Lone Star Industries to excavate sand and gravel on a 251 acre site owned by Stephen Beck located near the San Joaquin River in Fresno County. This assessment is based on a review of all project plans; review of appropriate State and County plans for the area; consultation with the applicant and operator; evaluation of technical data specifically prepared for this project; and on-site surveys of the property and surrounding land uses.

In accordance with a proposal approved by Fresno County, the EIR focuses on the relationship of the proposed project to erosion and ground settlement; groundwater quality; riparian water rights and usage; vegetation and wildlife; noise; land use; agriculture; recreation; traffic; and aesthetics. The County has determined that the project will not have significant impacts on other resources including air quality, population, public services, energy, utilities, and archaeology. The basis for the above identified focused issues was determined by two initial studies prepared for similar projects on the same property.

Buada Associates was assisted by the following consultants as subcontractors in preparing the EIR.

- o J. H. Kleinfelder and Associates, Geotechnical Consultants, performed the evaluation of erosion potential and fill settlement potential.
- o Kenneth D. Schmidt, Groundwater Consultant, performed the evaluation of impacts to groundwater.
- o Robert F. Winter, Biologist, performed the evaluation of vegetation and wildlife impacts.
- o Brown-Buntin Associates, Noise Consultants, performed the evaluation of noise impacts.
- o DSK Engineering, Engineering Consultants, performed the evaluation of traffic and surface water hydrology.

The site is located on Friant Road adjacent to Lost Lake Park just south of the town of Friant. The property has been farmed since the 1940's and is planted with vineyards, an almond orchard, and row crops. The San Joaquin Riverbottom area has been historically used for farming and is the primary source for sand and gravel resources for the region. Lost Lake, adjacent to the project, is a flooded quarry used as a source for sand and gravel during the construction of Friant Dam. The adjacent property to the south is currently being excavated for sand and gravel by Lone

land
use

Star Industries. Ledger Island, approximately 1/2 mile to the southwest, is a recent rehabilitated sand and gravel site. The San Joaquin River bluffs overlook the site on both sides of the river. There are seven residences on the bluff just east of the project.

istony
In 1984, Conditional Use Application 2019 (CU2019), was denied by the Fresno County Board of Supervisors. The application was for the excavation of sand and gravel and the recovery of any gold together with a sand and gravel processing plant, concrete ready-mix plant and asphalt batch plant. In October 1985, CU 2172 was approved for the same project. In November 1985, a lawsuit was filed by several adjacent landowners challenging that the approval should be overturned on the basis that the Negative Declaration approved for the project was insufficient and that an EIR should have been prepared.

UIC IMPACTS
Among the issues raised by the Environmental Assessments, by testimony during the public hearings, and by the lawsuit were: conflicts between the loss of agricultural land and the recovery of a needed resource; potential impacts to wildlife in Lost Lake Park; noise impacts from the plant operations, extraction operations and haul trucks to the users of Lost Lake Park, and adjacent residents; traffic conflicts on Friant Road between project trucks and school buses, bicycles and auto traffic; impacts to water quality and quantity; potential illegal use of riparian water from the San Joaquin River; discharge of wastewater to San Joaquin River; the use of large amounts of fuel, water, and energy; and visual impacts to residents on the bluffs, users of Lost Lake and Friant Road travelers.

*rational
know*
This new application does not include a sand gravel processing plant, concrete ready-mix batch plant or asphalt batch plant. All material will be hauled from the site via Lone Star Industries' existing access road down Friant Road to Lone Star's existing processing plant 1-1/2 miles to the south. Potential impacts from any plant site have therefore been eliminated. Potential truck traffic conflicts from additional trucks and a new access point on Friant Road have also been eliminated. Potential impacts have been reduced to those associated with extending Lone Star Industries' existing excavation operation to include the project site and continuing extractive operations in the area for a longer period of time.

ues
Among the remaining issues to be resolved by this EIR include: conflicts between the loss of agricultural land and the recovery of a needed mineral resource; impacts to water quality and quantity; impacts to wildlife; noise impacts to park users and adjacent residents; continuation of existing traffic conflicts between sand and gravel trucks and school buses, bicycles and auto traffic; any use of riparian water; and visual impacts to park users, adjacent residents and Friant Road travelers. A choice

remains to be made between the project including recovery of a needed, mineral resource with its related impacts; no project with a retention of agricultural land and permanent loss of the resource; a reduced project or excavation of only a portion of the resource and permanent loss of the remainder; an alternative location of the project relocating impacts to another area and permanent loss of the site's resources; or alternative uses of the site such as residential, golf courses, or expansion of Lost Lake Park.

If the project is developed as proposed, certain environmental impacts may occur.

- ENVIR. IMPACTS
1. Erosion: Some erosion may occur during construction of the berms and along the banks of the proposed lakes prior to revegetation. Timely planting of the berms with groundcover, shrubs and trees as proposed in the project design should keep erosion to a minimum. A natural revegetation process normally occurs rapidly around the lakes, limiting any erosion to the first month or so if final grading occurs during the rainy season. All run-off will be contained on-site.
 2. Sand and Gravel Resources: Sand and gravel resources will be permanently removed from the site. The only mitigation measure would be no project. Such a measure would reduce available reserves of needed construction materials in the Fresno-Madera region to less than 20 years.
 3. Groundwater: The proposed excavation will intersect the groundwater level. Groundwater will ultimately fill the pits forming freshwater lakes. Runoff from the site will also flow into the lakes. There will be a minor loss of water to evaporation. Mitigation of evaporative loss is limited to chemical treatment of the lakes or shallower excavation. Chemical treatment may create greater impacts. Shallower excavation will result in permanent loss of resource and reduce available construction material reserves.
 4. Riparian Water: The removal of the vineyard and orchard will reduce the current use of riparian water.
 5. Wastewater Discharge: Waste water from the gold recovery lab will be discharged to a small, shallow settling pond. A discharge permit will be required from the California Regional Water Quality Control Board.
 6. Lake Eutrophication: In the long-term, eutrophication

(loss of oxygen) may slowly occur in the lakes created by the project as it has in the adjacent Lost Lake. Culverts placed in the dikes separating the lakes would increase circulation.

7. Dust: Dust from current agricultural operations will be reduced as agricultural production is replaced by excavation of the resource. Dust from excavation operations and from the project's haul roads during the dry season will be minimized by the proposed use of dust palliative on the roads and/or the use of water trucks on the haul roads and in the excavation areas.
8. Wildlife. Some species of wildlife will be temporarily disturbed during construction of berms. The proposed landscaped berms and rehabilitated lakes will provide additional riparian habitat and will attract a more diverse species in larger numbers.
9. Noise: Noise levels will temporarily increase in the area. With the exception of extractive operations within 500 feet of residences, noise levels will be within the standards of the Fresno County Noise Ordinance. Impacts may be reduced by prohibiting excavation operations between the hours of 6 a.m. and 7 a.m. within 500 feet of the nearest residence.
10. Land Use: Agricultural production potential will be reduced on the site. The extraction of sand and gravel will provide a recognized economic resource to the Fresno-Madera region. No County policy clearly establishes priorities when this contradiction arises. The present agricultural areas will be replaced by the proposed lakes which will provide valuable wetlands, riparian habitat, and fishery. This additional habitat will in the long-term attract wildlife in greater numbers and diversity to the Lost Lake area.
11. Hazards: The excavation pits may present a safety hazard during operation. Sloping of the sides during rehabilitation to 2H to IV (horizontal to vertical) as proposed in the project design and fencing of the property as required by the Zoning Ordinance will minimize hazards.
12. Traffic: Existing sand and gravel truck traffic on Friant Road to the Lone Star Industries' processing plant will continue for a longer period of time. By utilizing Lone Star's existing access road, a new access road and additional traffic conflict point will be eliminated.

13. Aesthetics: Areas of active excavation will be visible from the bluffs just east of Friant Road and from the western bluffs in Madera County. Excavation on the eastern half of the site will be visible from Friant Road unless additional landscaping is planted within the set back to provide a more effective screen.

Screen

II. PROJECT DESCRIPTION

A. Project Location

The project is located in Fresno County on the west side of Friant Road, just south of the Town of Friant and approximately 4 miles north of the City of Fresno (Figure 1). The site is within the San Joaquin Riverbottom area adjacent to Lost Lake Park and is overlooked by the adjacent eastern river bluffs in Fresno County and the western river bluffs across the San Joaquin River. It is included in Section 13 & 24 of Township 11 South, Range 20 East, and Sections 18 & 19 of Township 11 South, Range 21 East, Mount Diablo Base and Meridian, the Friant, U.S.G.S. 7 1/2 Minute quadrangle (Figure 2).

B. Project Objectives

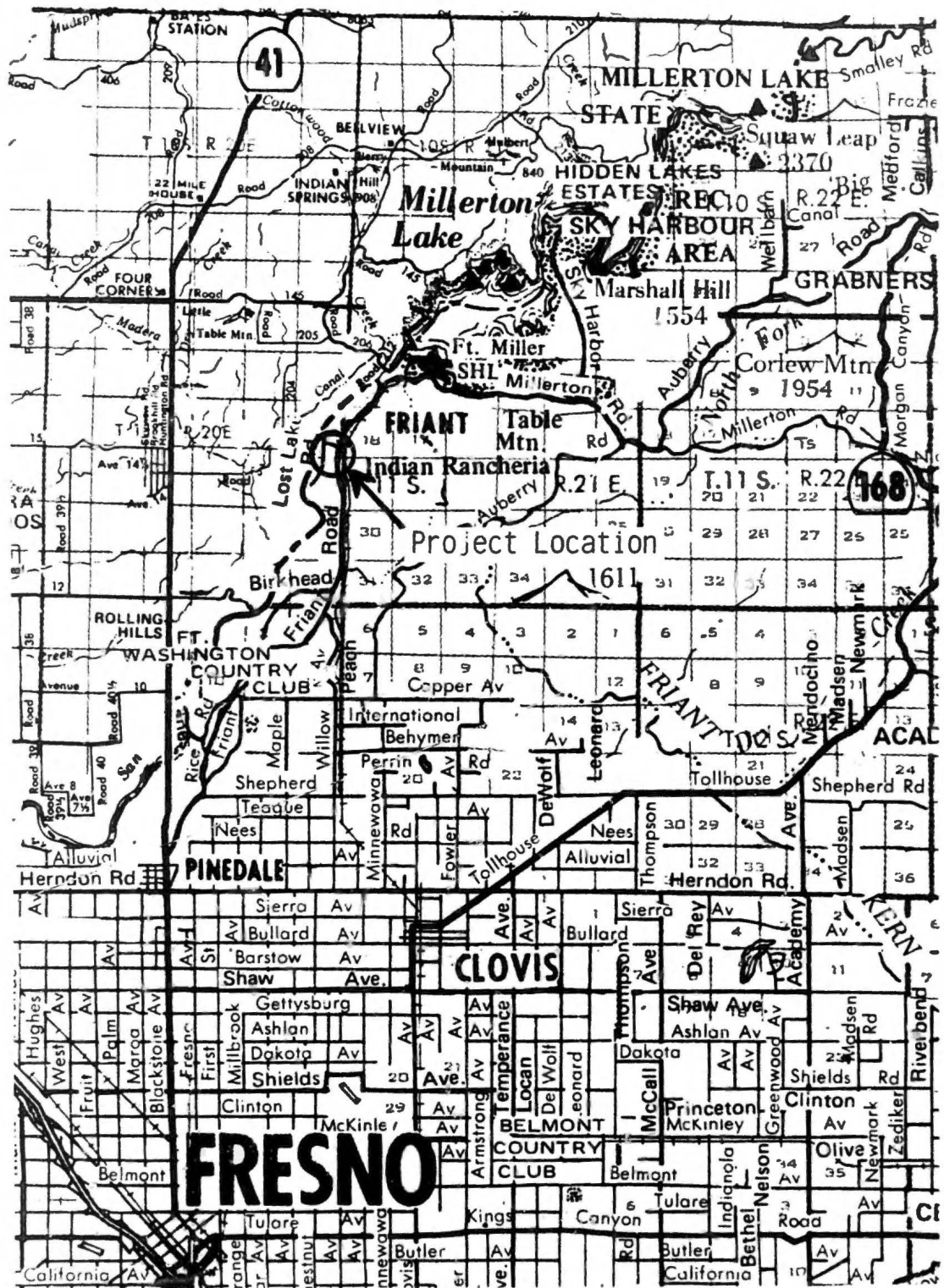
The proposed project is the excavation of sand and gravel resources and the recovery of any gold. Trucks will haul material from the site across Lone Star's adjacent property to their existing access drive onto Friant Rd. to the Lone Star plant approximately 1-1/2 miles away.

It is anticipated that 20 to 30 acres will be excavated each year. A 20 year permit is requested to allow for a fluctuating market. Excavation will occur in four phases (Figure 3). All excavation will occur outside of the designated floodway of the San Joaquin River. There will be no discharge or runoff of water from the project site to the river. The current vineyard and orchard will gradually be removed as excavation occurs. That portion not being excavated will continue to be farmed until excavation reaches that area. Each phase will be excavated and rehabilitated in three stages.

Stage One will be the removal of topsoil to expose the resource material. Topsoil will be removed by excavation equipment and used for berms along the property line adjacent to Lost Lake Park, or stockpiled to be used for rehabilitation of excavated areas.

Stage Two will be the area of active excavation. Material will be removed using either a dragline, scrapper or other excavation equipment. Material will be loaded by a front-loader into haul trucks for transport to the processing plant. During this stage, in areas where gold is likely to occur (i.e. sandy areas at or about the water line) mechanical gold recovery equipment will separate potential gold-bearing sand concentrate. Dust from excavation and haul roads will be controlled by the use of water trucks and/or application of a dust pallative on the road.

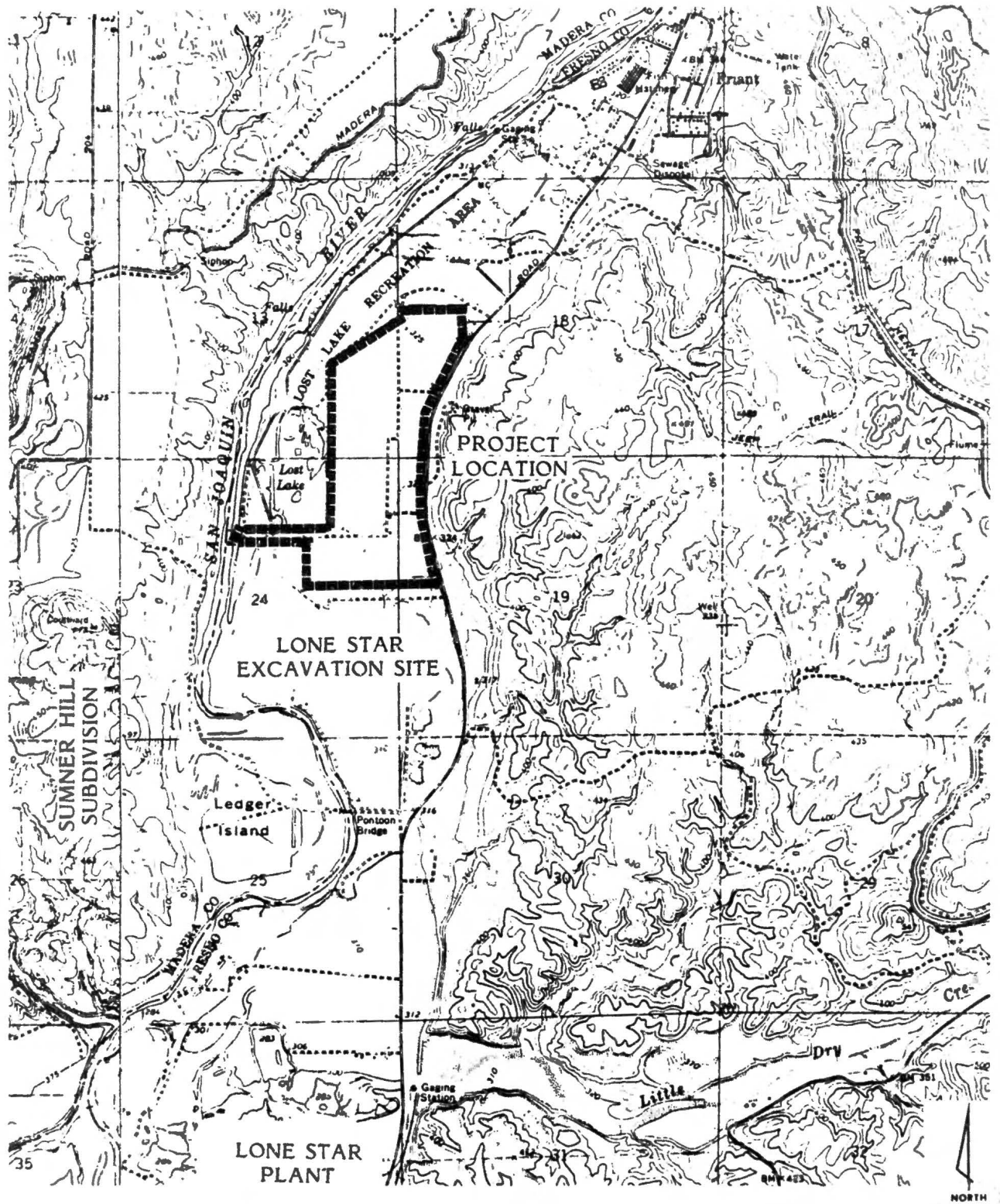
Stage Three will be the rehabilitation of completed excavation areas. After removal of the resource, lakes will be created on the majority of the site (approximately 170 acres). In areas



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REGIONAL LOCATION

FIG.
1



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**PROJECT SITE
AND TOPOGRAPHIC MAP**

**FIG.
2**

where no excavation occurs, or the excavation is shallow due to the limited availability of resources, the overburden will remain or be replaced, allowing these areas to be used for grazing or farm land. The final location of the reclaimed lakes and farm land will depend in part on the depth of material, location and shape of bedrock and other conditions as yet unknown which may be found on-site during excavation. Initial grading and sloping will occur on an on-going basis. Final rehabilitation will be completed within one year of the completion of each area.

A 50 foot setback for excavations will be maintained along Friant Road and along the boundary adjacent to Lost Lake Park and the hamburger stand. Within the setback along Friant Road, the existing almond trees will remain as a screen. Additional landscaping or berms will be located along the frontage where no trees presently exist.

In order to provide a noise and visual buffer between the project and Lost Lake Park, 10-foot high berms will be placed along the western and northern edges of the site and between the site and the residence, hamburger stand and baitshop in the northeast corner. The berms will be constructed of topsoil being saved for future rehabilitation. Native trees, shrubs, and ground cover will be planted on the berm to stop erosion and to aesthetically blend them in with the environment at Lost Lake.

The site will be rehabilitated to wildlife lakes and to grazing/agricultural land (Figure 4). Stored topsoil or topsoil from berms will be utilized in contouring and sloping banks. Native riparian grasses, shrubs and trees are expected to begin to re-establish themselves within one year after final contouring ~~is~~ has been experienced at other sand and gravel lakes along the San Joaquin River. Water in the lakes will be from groundwater percolation due to the excavation being below groundwater level. Final grazing/agricultural areas are anticipated to be areas where tests have shown an overabundance of sand or where minor amounts of recoverable resource occurs.

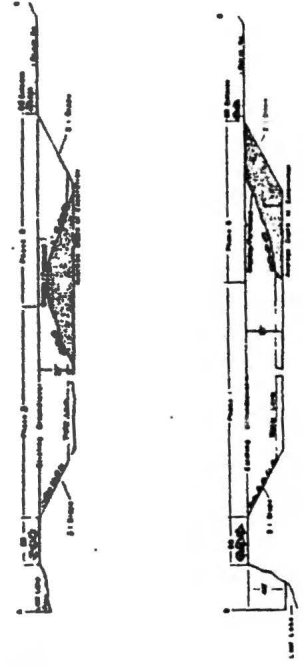
The existing house and structures will remain.

C. Intended Use of EIR.

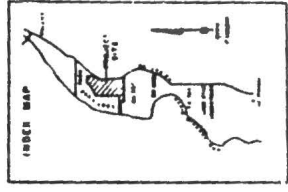
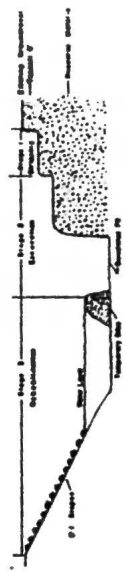
This EIR will be used by the County of Fresno in considering approval of Conditional Use Application CU 2235 filed by Stephen Beck for the above-described project. The California Regional Water Quality Control Board will utilize the EIR for any discharge permit.

TYPICAL BEEM ALONG LOST LAKE
Scale 1" = 100'

TYPICAL CROSS-SECTIONS OF REHABILITATED SITE
Scale 1" = 100'



EXISTING AND REHABILITATION PROFILE
Scale 1" = 100'

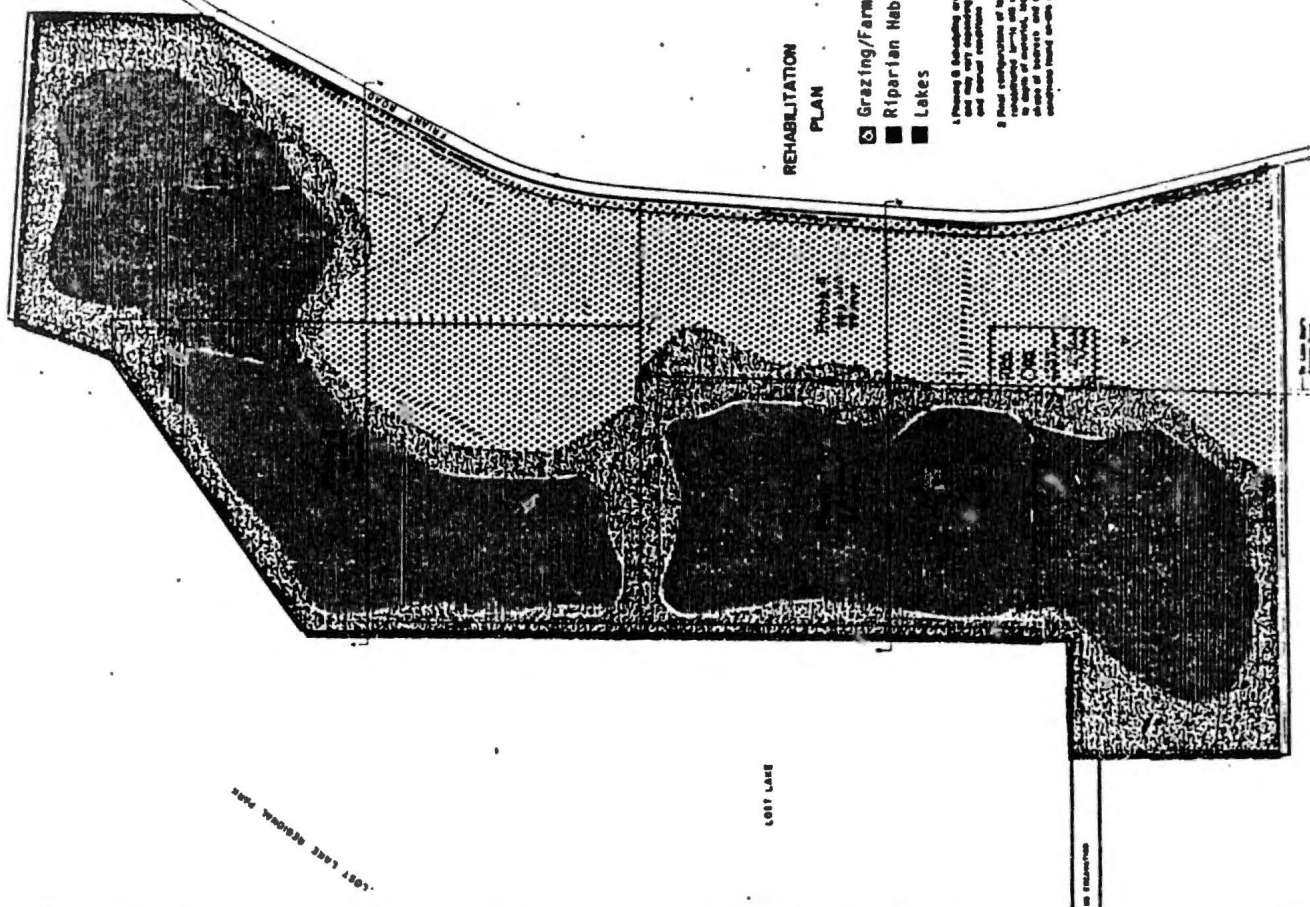


PLAN VIEW
Scale 1" = 100'

- LEGEND**
- ▨ Property land to be restored
 - ▨ Riparian Habitat
 - ▨ Grazing/Farmland
 - ▨ Lakes
 - ▨ Riparian Habitat
 - ▨ Lakes

REHABILITATION PLAN

- 1. Riparian Habitat is designated as a riparian habitat and shall be restored.
- 2. Grazing/Farmland is designated as grazing/farmland and shall be restored.
- 3. Lakes are designated as lakes and shall be restored.
- 4. Riparian Habitat is designated as riparian habitat and shall be restored.
- 5. Lakes are designated as lakes and shall be restored.



Rock, Sand & Gravel Estriacion
OPERATIONAL, PHASING & REHABILITATION PLANS
Prepared for BECK RANCH
Prepared by DUBBA ASSOCIATES, 4334 N. Greenway, Fresno, CA 93710 (508)432-0002

III. NATURAL ENVIRONMENTAL CONDITIONS, PROJECT IMPACTS AND MITIGATION MEASURES

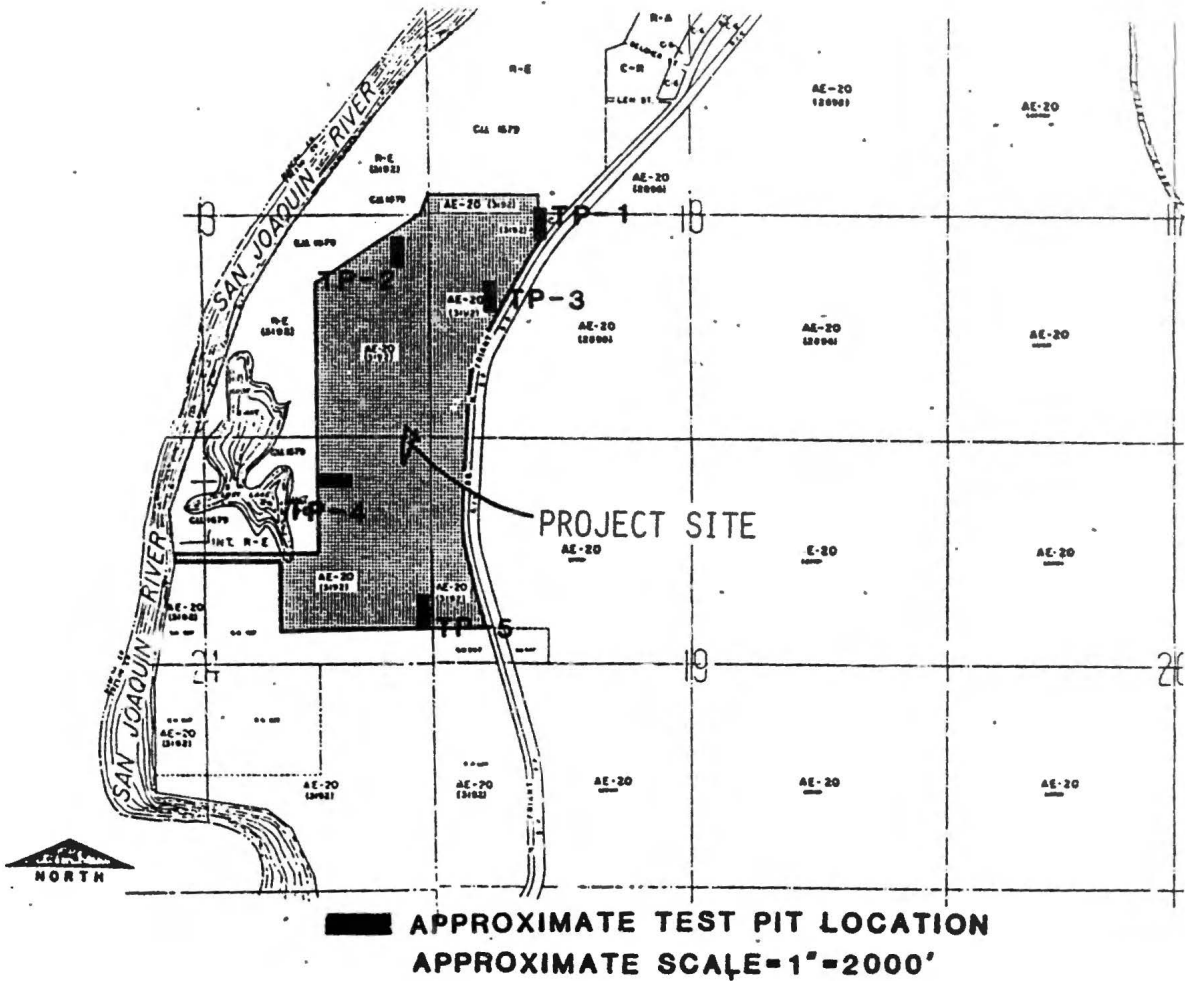
A. GEOTECHNICAL

The site is located on a flood plain in a topographic trough formed by the San Joaquin River. The San Joaquin River is approximately 1050 feet west of the property channel and outside the designated floodway. It is relatively flat, having been leveled prior to planting the existing vineyard and orchards.

The soils of the site were evaluated on two separate occasions by using backhoe test pits (Fig. 5). The surface overburden soils consist of poorly graded silty sands to a depth of 2-1/2 to 9 feet and contain various amounts of fine gravel and some silty lenses. These soils have a moderate to high erosion potential for most types of construction with moderate slopes. Although the surface soils are underlain by a thin layer of silt in a few locations, the majority of the site appears to be immediately underlain by sand and gravel extending to bedrock. Depth to bedrock underlying the site ranges from 15-1/2 to 40 feet.

Impacts

- o The overburden would be removed and used for berms around the western, northern and a portion of the eastern perimeters of the site. Berms could be subject to erosion if not adequately compacted during construction and if left bare of vegetation.
- o Overburden not needed for berms will be used to create gentle sloping banks during the on-going rehabilitation process. The 2H:1V (horizontal to vertical) sloping banks as required by the Zoning Ordinance could be subject to periodic erosion during the rainy season. However, based on observation of numerous other similar excavation operations, a natural revegetation process of native riparian grasses, shrubs and trees occurs rapidly in this area. Erosion would therefore normally be limited to the first few months after final grading if it happened to be the rainy season, after which the natural revegetation process should adequately control erosion.
- o In areas where excavation is shallow due to the availability of limited resources in a particular area, the overburden will be replaced, allowing those areas to be used for grazing/agricultural purposes. Upon completion of the project, the berms will be removed and the material used to complete rehabilitation of the ponds and/or the agricultural areas. Soils presently used to



Source: J.H.Kleinfelder & Associates

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GEOTECHNICAL TEST SITES

FIG. 5

support agricultural production would then support riparian vegetation around the ponds, grasses for grazing and possible field crops.

- o The overburden when replaced as fill will be subject to settlement. The amount of settlement will depend upon the total thickness and soil compaction and will be on the order of 2 to 4 inches for a 5-foot thick fill. The majority of settlement should take place during placement of the fill. The filled areas may not be suitable to support structures unless the fill was engineered for compaction during placement.
- o The underlying sand and gravel would be removed from the site and processed for sale as building products. Upon completion of excavation, the existing sand and gravel, a non-renewable resource, will be permanently gone.

Mitigation Measures

- o Berms should be planted as proposed with vegetation including grasses, shrubs, and trees within six months of construction to reduce erosion.
- o Berms should not exceed an 8-inch loose maximum, and slopes should be constructed no steeper than 2 to 1 horizontal to vertical and no flatter than 3 to 1. Flatter slopes intercept more rainfall and expose more surface to erosion. Care should be taken to avoid nesting of large-size material within the berm to reduce possibility of subsidence and slumping. Compaction by conventional earth-moving equipment during construction of the berms should be sufficient to minimize erosion.

B. HYDROLOGY

The project site was leveled for irrigation in 1950. The profile of the land, and soil types are more conducive to water percolating through the soil to the groundwater table than to surface water runoff flows. An insignificant amount of irrigation water currently drains to the adjacent Lost Lake. There is no run-off to the river.

Based on available well logs and from a number of test pits dug on the site, the average depth to first groundwater occurrence is approximately 25 feet. In the test pits water was first encountered at about 30 feet. Water levels on the southern end of the adjacent Lone Star Operation are currently encountered at 12 to 15 feet.

Water levels in the adjacent Lost Lake average approximately 40 feet below the surface of the subject property. The elevation of lake water fluctuates only slightly with the height of the water in the river. It is apparent that lake levels are maintained primarily by ground water seepage from adjacent properties and to a minor extent by irrigation water from the project site.

The present agricultural operation is presently irrigated with water pumped from the San Joaquin River and from on-site wells. Water is pumped from the river to a 2.5 acre pond on the north end of the site. Irrigation water is then channeled to flood-irrigate the almond orchard, vineyards, and row crops.

In the early 1950's a water rights settlement contract was signed by the property owner with the Bureau of Reclamation. In a recent letter to the property owner, the Bureau confirmed that use of riparian water for the entire property is currently permissive for irrigation and any reasonable use. (Bureau of Reclamation Letter, 1984).

Impacts

- o The proposed excavation would cause a minor alteration of existing surface water flows. The proposed ponds would cause any runoff flows to drain into the ponds rather than off-site or into Lost Lake. Since the ponds intersect the water table, circulation of water within the pond would cause mixing of pond water with ground water. Similar excavation operations in California and Arizona have encountered no instances of groundwater quality impairment due to excavation. During excavation, any contaminants (i.e. diesel fuel, oil, etc.) resulting from equipment operation would be insignificant and would not affect the water quality of the underlying

groundwater table (Schmidt, June 1986). The project itself will use no riparian water since the resource material will be transported to the existing off-site plant for processing.

- o The existing vineyards and orchards presently consume water by evapotranspiration. A portion of the irrigation water re-enters the groundwater supply through percolation. Actual loss of water is through evaporation which averages about 2.3 feet per acre per year for irrigated lands in Fresno County (Interim Best Management Plan for Water Quality). The actual evaporation loss from 251 acres of farmland crops amounts to 577 acre feet per year (2.3 acre feet x 251 acres = 577 acre feet).

The proposed ponds would increase the area of open water by approximately 170 acres and increase local evaporation. The annual pan evaporation at Fresno is approximately 65 inches. Evaporation from a free body of water is approximately 70% of this or 46 inches. Annual rainfall of 11 inches would decrease the evaporation to 35 inches. This represents a loss of water evaporation of approximately 496 acre-feet per year (.35 divided by 12 = 2.92 x 170 acres = 496 acre feet). If the remaining approximately 81 acres were to be irrigated, there would be additional loss of 186.3 acre-feet per year (2.3 acre-feet x 81 acres = 186.3 acre-feet). The total evaporation loss from the rehabilitated project would be 682.3 acre-feet per year (496 acre-feet from lakes + 186.3 acre feet from irrigation). There would be a net increase in evaporation loss between the current agricultural operation and the proposed project of 113.3 acre feet per year. While there is an increase in water lost to evaporation, it is insignificant compared to the total evaporation losses for the County lands. Irrigation ditches and discharge channels would contribute greater losses.

- o Replacement of the existing agricultural operation with the resulting ponds from this project would stop the present flow of irrigation waste water into Lost Lake. Agricultural waste water has been known to contain contaminants from pesticides and fertilizers in some cases. As agricultural operations are reduced, any associated contaminants will diminish accordingly
- o As the vineyard and orchards are gradually removed with each phase, the need for irrigation water from the river will also be proportionally reduced. The rehabilitated grazing/agricultural lands may use riparian water for

irrigation. The project itself will use no riparian water since the resource material will be transported to the existing off-site plant for processing.

- o During the active excavation, the pits will be dewatered (water pumped from excavation pit to temporary holding pond or other rehabilitated pond) to allow deeper excavation. The water that is removed is moved only a short distance and water would continue to percolate in the general area. No domestic wells on the property or in the surrounding area are expected to be impacted during de-watering (Schmidt, June 1986). Upon completion of the excavation, the dewatering pumps are turned off and the water level returns to the level of the surrounding groundwater within a short time, usually 24-48 hours (Mathis, July 86).
- o As part of the excavation operation, gold will be recovered as a by-product. The recovery of gold-bearing sands is accomplished by a mechanical system which separates the sand concentrate (known as black sand). The gold-bearing sand usually occurs at or below the ground water level. Since the system is completely mechanical, no impacts to water quality will occur during this initial recovery process.
- o The resulting concentrates will be transported in barrels to an on-site lab where the gold will be removed using the mercury recovery process. Upon removal of the gold, the mercury is also fully recovered for re-use and any remaining water is drained to a small, shallow (3-4 feet deep) settling pond adjacent to the lab. The pond will not intercept the water table.

Although there are no known problems associated with similar, small gold recovery labs, a discharge permit will be required from the California Regional Water Quality Control Board (Wass, July 1986). The permit may require periodic sampling or monitoring of the discharge water to determine if any trace remnants of mercury remain. No adverse impacts are expected to occur since water discharge will be controlled by the Water Quality Control Board discharge permit.

- o During the life of the project, movement of water during dewatering of excavation areas should provide adequate circulation in ponds and minimize eutrophication (loss of oxygen). A certain amount of circulation will occur between the ponds due to the natural lateral movement of groundwater, especially between the project's ponds and Lost Lake. Any dike between Lost Lake and the project's ponds will be the remaining gravel between them which

will not be excavated. The loose-fitting nature of gravel will allow for a freer flow of water through the dike. However, without a periodic circulation of water, eutrophication may slowly occur as it has in Lost Lake over the last 40 years.

Mitigation Measures

- o Mitigation of evaporative loss is limited to chemical treatment of water surface to reduce evaporation or alternative excavation or rehabilitation plans such as shallower excavation so that the majority of the site would be rehabilitated to dry land instead of lakes. Chemical treatment may have greater adverse impacts (especially to wildlife) than would the effects of evaporative losses. (Sanger Rock & Sand EIR, 1980) Shallower excavation would not allow the full recovery of the aggregate. This would likely result in a permanent loss of the resource since recovery at a later date may not be economically feasible or incompatible uses may have increased in the surrounding area making recovery impossible.
- o Compliance with the discharge permit from the Regional Water Quality Control Board for the gold lab is adequate mitigation.
- o Culverts placed in the dikes separating the rehabilitated lakes would increase circulation. An aerating system would provide long-term benefits and prevent eutrophication.

C. VEGETATION AND WILDLIFE

The area proposed for the gravel extraction area is currently a farm operation. The land is disturbed and can no longer be thought of as a wildlife area even though many species of birds now periodically use the site. The area in its original state probably did not support many species of resident wildlife. With the current farming, almond trees were planted, temporary brush piles were constructed, with some remaining for several years before burning and a small farm pond was created. Most of the species found on the site now are migrants. A very few species found on the site live in the San Joaquin riparian and forage out onto the farm land. In its present use, the land does not provide much food or shelter for species that would normally reside here.

The adjacent Lost Lake recreation site has been studied each spring on a weekly basis for more than fifteen years as a college laboratory for a biology field class (Table 1). There has been a rather steady decline in animal species and numbers of individuals since the first study began. There are several reasons for the loss of wildlife:

- a. Foremost is the development of the river bank for fishing and picnicking with the subsequent loss of riparian habitat.
- b. Increasing use of the area by humans, including car use, loud noises such as radios and people shooting guns or bows.
- c. Loss of wildlife such as destruction of bird nests, killing of reptiles and trapping by the daily human visitors.
- d. Picking of wildflowers or other destruction of vegetation.
- e. The development of farm operations on the Madera side of the river has greatly reduced habitat and species of animals that formerly lived there.

Lost Lake is suffering due to eutrophication. The water and various residues are trapped in the lake with little or no flushing action of the water.

Fresno County appears to be short of funds to make Lost Lake a viable recreational and wildlife pond. They have done very little to improve Lost Lake proper. Many unique plant species have been removed along the river. Plants such as deer brush, Western redbud, Western spice bush, wild cherry, and seedling sycamore trees have been removed in the past.

TABLE 1

WILDLIFE SPECIES THAT HAVE BEEN INVENTORIED ON THE SITE AND
IN LOST LAKE PARK

Mammals--

- | | |
|----------------------|-------------|
| 1. Striped skunk | 5. Gray fox |
| 2. Raccoon | 6. Beaver |
| 3. Longtailed weasel | 7. Muskrat |
| 4. Bobcat | |

Reptiles and Amphibians--

- | | |
|---------------------------|-------------------------|
| 1. Rattlesnake(1) | 6. Western skink |
| 2. Gopher snake | 7. Western toad |
| 3. King snake | 8. Tree frog |
| 4. Red-sided garter snake | 9. Bullfrog |
| 5. Western fence lizard | 10. Western pond turtle |

Birds--

- | | |
|-----------------------------|-------------------------------|
| *1. Western grebe | 30. Forster's tern |
| 2. Horned grebe | 31. Caspian tern |
| 3. Eared grebe | 32. Black tern |
| *4. Pied-billed grebe | 33. Black-shouldered kite |
| 5. Double-crested cormorant | 34. Red-shouldered hawk |
| *6. American bittern | *35. Osprey |
| 7. Black-crowned cormorant | 36. White-throated swift |
| 8. Anthony's green heron | 37. Purple martin |
| 9. American Egret | 38. Anna's hummingbird |
| 10. Great blue heron | 39. Black-chinned hummingbird |
| 11. Mallard | 40. Belted kingfisher |
| 12. Green-winged teal | 41. Black phoebe |
| 13. Cinnamon teal | 42. Say's phoebe |
| 14. Ruddy duck | 43. Tree swallow |
| 15. Canvasback duck | 44. Violet-green swallow |
| 16. Redhead | 45. Cliff swallow |
| 17. Pintail | 46. Rough-winged swallow |
| *18. Ring-necked duck | 47. Barn swallow |
| 19. Lesser scaup | 48. Scrub jay |
| 20. Barros's goldeneye | 49. American crow |
| 21. Bufflehead | 50. Long-billed marsh wren |
| 22. Hooded merganser | 51. Western mockingbird |
| 23. Sora rail | 52. Audubon's warbler |
| *24. Common gallinule | 53. Sage sparrow |
| 25. American coot | *54. Red-winged blackbird |
| 26. Killdeer | 55. Tri-colored blackbird |
| 27. Common snipe | 56. Brewer's blackbird |
| 28. Ring-billed gull | 57. Northern oriole |
| 29. California gull | 58. Phainopepla |

*Species declining in recent years

Impacts

- o The noise levels, if developed as proposed, with berms and vegetation keeping sound levels lower than the operation and downriver, will probably not impact any of the wildlife currently known to inhabit the area or to use it as a resting place. Examples are the geese that formerly stopped on the Ball Ranch. The steady noise levels from the Lone Star gravel operation did not seemingly affect the geese, however, any strange automobile or human intrusion would cause them to vacate the area for varying lengths of time. The Ball Ranch deer herd behaved in a similar fashion to the geese.

The steady, predictable gas cannons firing often used in orchards does not affect most wildlife. The use of gas cannons is rated low in effectiveness and are considered ineffective. (California Agriculture, 1956) The nesting of small bird species often occurs in areas of heavy human use so long as the use appears relatively constant. Female deer will fawn in areas of medium to heavy use by humans if they have cover and are protected from dogs.

- o The gravel operation as proposed, using a dust palliative or water trucks on haul roads and in excavation areas during dry seasons should produce minimal dust. Certain practices for the existing agricultural operation create considerable amounts of dust periodically throughout the year. Dust can and does do extensive damage to vegetation.
- o The heavy use by people and vehicles during gravel operations may tend to force some shy species to temporarily search for other habitat areas with little disturbance. The riparian habitat is becoming so scarce that this is now a major problem in California. 70%-90% of the riparian habitat has been lost in Central California. (Mitchell, May 1986)

Mitigation Measures--

- o The planting of berms with various species of shrubs and trees could improve food and shelter for many species compared to what is currently there.

Examples of fast-growing species:

- a. Red iron-bark eucalyptus-winter food for migrating hummingbirds and orioles
- b. Carolina and Hollyleaf cherries produce lush green foliage and fruits.

- c. Russian olive-excellent food source.
 - d. Pyracantha bushes-food for birds and cover for small mammals.
 - e. Multiflora rose-excellent fencing and habitat for bird or mammal species.
 - f. Liquid amber trees-fall color for humans and excellent seeds for wildlife.
- o The gravel pits, as most others in the past, will provide more riparian habitat for wildlife in the future when they are planted. The rehabilitated complex, in the long term would be richer in habitat and wildlife diversity than current agricultural use.

D. NOISE

1. Existing Noise Environment

Existing sources of environmental noise in the vicinity of the project site include vehicular traffic on Friant Road and within Lost Lake Regional Park, occasional aircraft overflights and extraction and processing activities at the adjacent Lone Star Industries' sand and gravel operation.

Existing ambient noise level* measurements were conducted at several locations in the vicinity of the project site. Monitoring locations were selected in response to specific concerns regarding existing noise levels at typical residential locations on the San Joaquin River bluffs, in an area in Madera County across the river where residential development is proposed, and in the Lost Lake Regional Park. Monitoring sites are shown on a U.S.G.S. topographic map of the project area in Figure 6. The results of the ambient noise level measurements are summarized in Table 2.

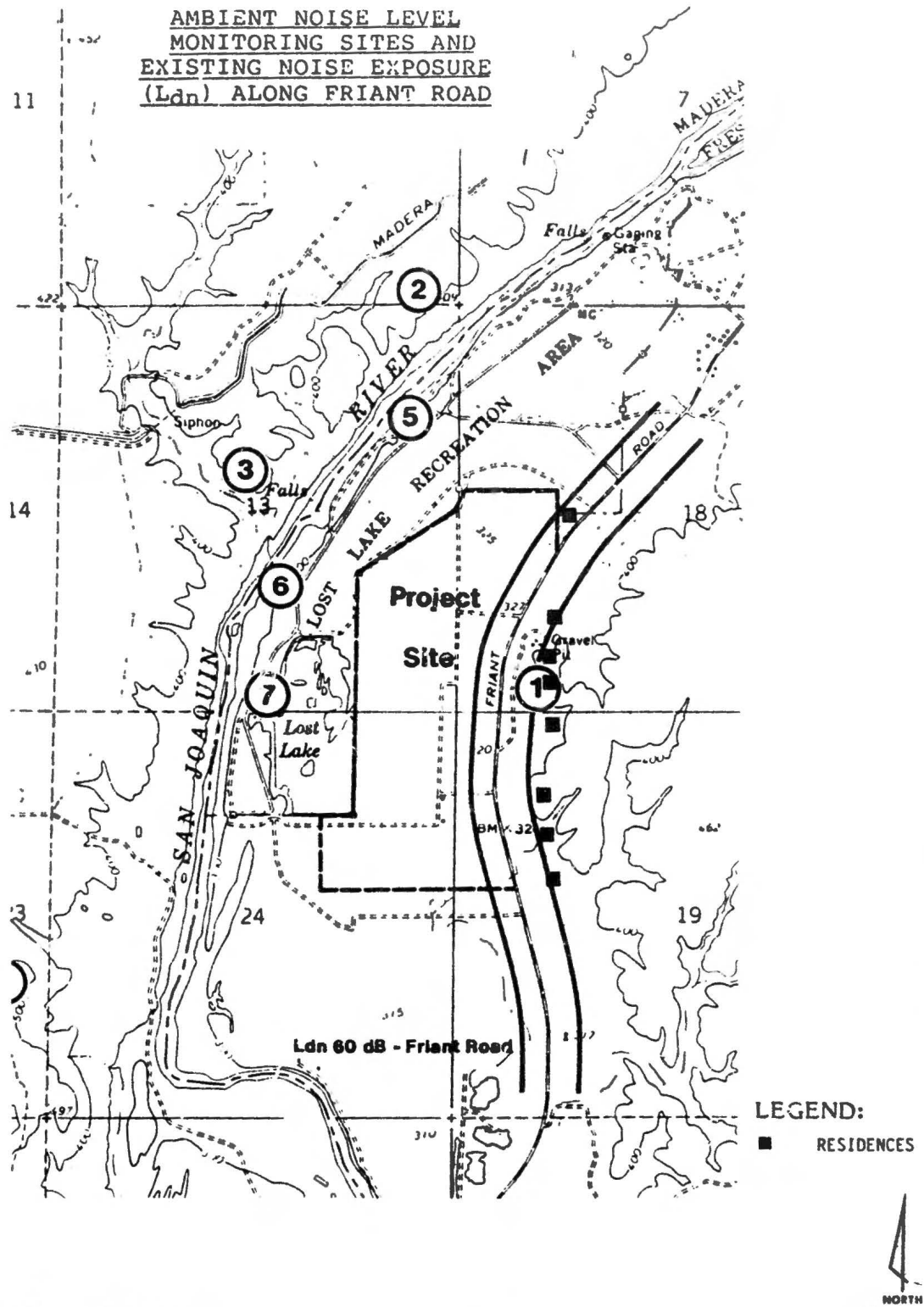
TABLE 2
SUMMARY OF AMBIENT NOISE LEVEL MEASUREMENTS
MARCH 23 AND 25, 1984

Site	Date	Time	L _{eq}	L _{max}	Source (L _{max})
1	3/23/84	7:45 am	49 dB	65-70 dBA	Trucks*
1	3/25/84	5:20 pm	57 dB	70 dBA	Motorcycles
2	3/23/84	8:15 am	38 dB	40 dBA	Trucks
3	3/23/84	8:45 am	38 dB	45 dBA	Aircraft
4	3/23/84	9:30 am	43 dB	50 dBA	Trucks
4	3/25/84	6:30 pm	34 dB	40 dBA	Motorcycles
5	3/23/84	10:45 am	52 dB	60-65 dBA	Autos
5	3/25/84	5:45 pm	65 dB	80-90 dBA	Motorcycles
6	3/23/84	11:15 am	45 dB	50 dBA	Birds
7	3/23/84	11:35 am	48 dB	55 dBA	Aircraft

*Not all sand and gravel trucks

Source: Brown-Buntin Associates

*For an explanation of the terminology used in this discussion, please refer to footnotes at the end of this section



Source: Brown-Buntin Associates

**BECK RANCH
SAND AND GRAVEL PERMIT
ENVIRONMENTAL IMPACT REPORT**

AMBIENT NOISE LEVEL
MONITORING SITES AND EXISTING
EXPOSURE ALONG FRIANT ROAD

FIG. 6

In order to provide additional information concerning the 24-hour variation in existing background noise levels in the vicinity of the project site, noise levels were continuously monitored for a 92-hour sample period. The monitoring system was placed at the edge of the bluff overlooking Friant Road at a distance of approximately 350 feet from the center of the roadway (Site #1, Figure 6). The monitoring site was selected to be representative of typical residential setbacks along the bluffs in the vicinity of the project site. Measured L_{dn} values over the sample period ranged from 59.6 to 60.6 dB L_{dn} with an average of 60.1 dB L_{dn} for the entire 92-hour sample period. Typical maximum noise levels ranged from 74-78 dBA and were presumably caused by trucks and motorcycles with modified exhaust systems. The highest noise level recorded during the sample period was 87 dBA.

According to the Fresno County Department of Public Works, the Average Daily Traffic (ADT) for Friant Road from traffic counts taken in June 1985 in the vicinity of the project site was approximately 4033 with approximately 31% of that volume being medium and heavy trucks. Of the traffic, 89% occurs between the hours of 7:00 a.m. and 10:00 p.m. Based on this data, the distances from the center of the roadway to L_{dn} contour values were calculated. West of Friant Road, the calculations assumed an acoustically "soft" site since existing soil and vegetation provide some absorption of sound. East of Friant Road, an acoustically "hard" site was assumed since persons residing along the bluffs look down on the roadway and sound is attenuated only by atmospheric absorption. L_{dn} contour locations for existing conditions as measured from the center of the roadway are summarized in Table 3 and plotted on a map of the project area in Figure 6.

TABLE 3

EXISTING CONDITIONS

DISTANCE (FEET) FROM CENTER OF

ROADWAY TO L_{dn} CONTOURS

FRIANT ROAD NEAR BECK RANCH

<u>Contour Value</u>	<u>East of Roadway</u>	<u>West of Roadway</u>
L_{dn} 70 dB	85	56
L_{dn} 65 dB	182	120
L_{dn} 60 dB	391	258

Source: Brown-Buntin Associates

Noise levels measured in Lost Lake Park ranged from 45-65 dBA depending upon time and location. Maximum levels in the picnic areas were generally caused by passing automobiles and motorcycles (60-90 dBA at 25 feet) and by radios (45 dBA at 150 feet). Aircraft overflights generated levels of 45-50 dBA depending upon type of aircraft and altitude. Noise levels along the Lost Lake Nature Trail (Site #6, Figure 6) averaged 40-45 dBA depending upon proximity to running water. Vehicular traffic on park roads produced maximum noise levels ranging from 40-45 dBA along the trail. Birds generated noise levels ranging from 40-50 dBA. Noise levels from vehicular traffic on park roads is effectively attenuated in the trail area by topography and vegetation.

2. Noise Standards

The Fresno County Noise Ordinance contains exterior noise level standards. The maximum exterior noise levels allowed by the Fresno County Noise Ordinance are 70 dBA during the daytime hours (7:00 a.m. - 10:00 p.m.) and 65 dBA during the nighttime hours (10:00 p.m. - 7:00 a.m.), when measured at an existing noise sensitive receiver location. As defined by the ordinance, noise sensitive receivers include churches, schools, hospitals, libraries and residential uses. The noise ordinance also contains standards which regulate noise levels of lesser intensity but longer duration. The noise ordinance standards are summarized in Table 4.

TABLE 4

FRESNO COUNTY NOISE ORDINANCE STANDARDS

Category	Cumulative Number of minutes in any one-hour time period	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
1 (rural, res.)	30	50	45
2 (urban)	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65

Source: Chapter 8.40, Fresno County Ordinance Code

Policy #4.02 of the Fresno County Noise Element establishes that in order to maintain an acceptable environment, the maximum allowable noise levels for rural residential uses (Category 1)

should be 55 dB L_{dn} or an L_{50} of 50 dBA during the day (7:00 a.m. - 10:00 p.m.) and 45 dBA during the night (10:00 p.m. - 7:00 a.m.). The rural residential standard is only applied in instances where existing background noise levels are sufficiently quiet (Typically 55 dB L_{dn} or less). The maximum allowable noise levels for urban residential (category 2) and noise sensitive receivers are 60 dB L_{dn} or an L_{50} of 55 dBA during the day and 50 dBA at night. Areas subject to a noise exposure of 60 dB L_{dn} or greater are identified as noise impacted areas by the Noise Element.

From Figure 6 it is apparent that noise levels as defined by L_{dn} and daytime L_{50} presently exceed the Fresno County Noise Element standards for rural residential land uses due to the close proximity of Friant Road which is a major noise source for the area. Since existing noise levels at typical residential setbacks along Friant Road are presently above the county's standards for rural residential receivers, it would seem inappropriate to apply such a standard to the Beck Ranch project. Although the urban residential and noise sensitive receiver land use category of the Noise Element does not adequately describe existing residential uses along Friant Road, the existing noise environment in this area is representative of a more densely-populated area with nearby major transportation-related noise sources.

Impacts

In order to determine project noise levels, noise measurements were taken of equipment at the existing Lone Star Industries' excavation area south of and adjacent to the project. The same equipment will be used for the project. Maximum noise levels during the measurement period were caused by the banging together of the dragline bucket and chain and by aggregate being dumped into empty truck trailers. Table 5 is a summary of the measurements, indicating maximum noise levels and the statistical distribution of noise levels over time.

TABLE 5

SUMMARY OF LONE STAR EXCAVATION
NOISE LEVEL MEASUREMENTS
JUNE 3, 1986

<u>Descriptor</u>	<u>Distance (feet)</u>	<u>Sound Pressure Level (dBA)</u>
L_{50}	400*	63
L_{25}	400*	65
$L_{8.33}$	400*	67

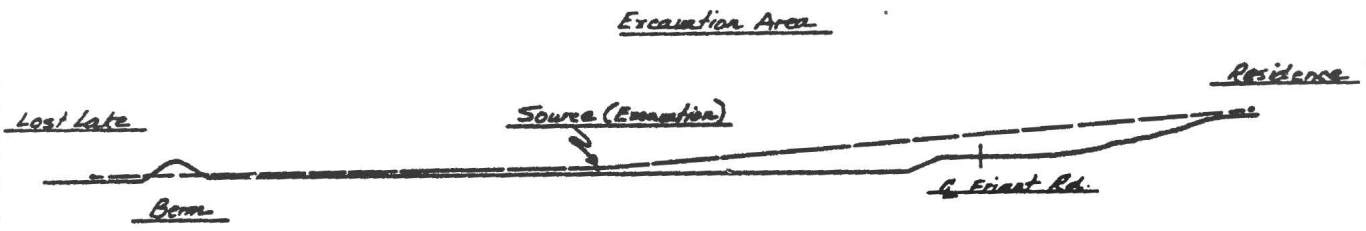
TABLE 5 - Cont'd

<u>Descriptor</u>	<u>Distance (feet)</u>	<u>Sound Pressure Level (dBA)</u>
L _{1.67}	400*	69
L _{max}	400*	72
L _{eq}	400	64
L _{eq} (dragline)	200	72
L _{max} (dragline)	200	82
L _{eq} (loader)	165	72
L _{max} (loader)	165	86

*400 feet from the loader and approximately 600 feet from the dragline

Source: Brown-Buntin Associates

- o The operator has proposed that berms be located along the western, northern and part of the eastern boundaries of the excavation area. The proposed berms are approximately 10 feet high with respect to the existing project grade. The effectiveness of a noise barrier is determined by the geometric relationship between the noise source, receiver and barrier. The amount of attenuation provided by a barrier is calculated from the difference in distance sound must travel when passing through a barrier compared to the distance it must travel when refracted over the barrier. In order to be effective, the barrier must interrupt line-of-sight between the source and receiver. Generally, a barrier will be more effective if it is located either close to the source or receiver. Figure 7 has been prepared to illustrate the topographical relationship between the project site and Lost Lake Regional Park to the west and between the project site and the bluffs area east of the project site. It is apparent from Figure 7 that line-of-sight is effectively blocked between the excavation area and Lost Lake Regional Park. Depending on the depth of the excavation and the proximity of equipment to the berm, noise levels from excavation activities would be reduced by 10-15 dB in the Lost Lake Regional Park area as a result of the proposed berm. It is also apparent from Figure 7 that the proposed berm will not be effective in reducing noise levels from excavation/loading activities as they affect the bluffs



Scale: 1" = 400'
4/2/84 REB

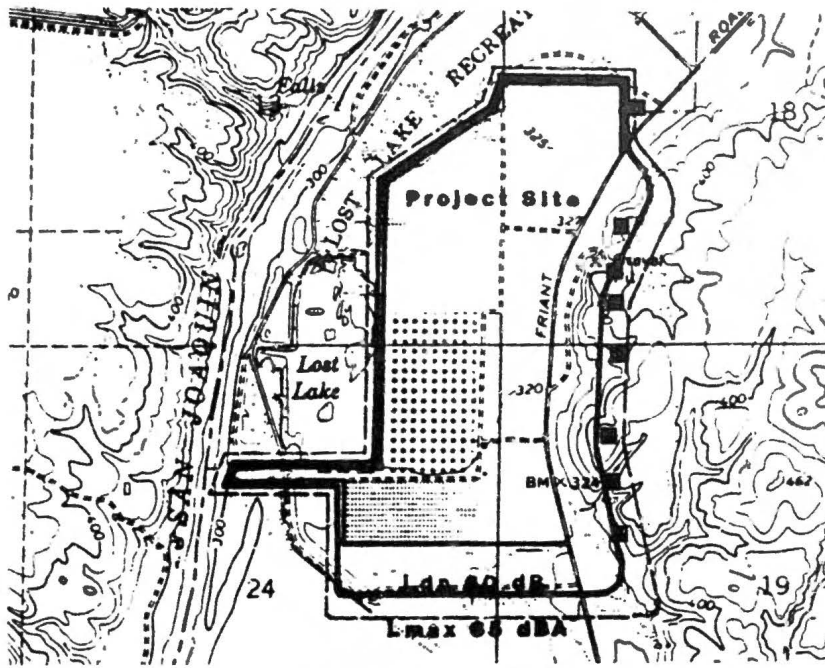
<p>BECK RANCH SAND AND GRAVEL PERMIT ENVIRONMENTAL IMPACT REPORT</p>	<p>LINE-OF-SIGHT FROM EXCAVATION SOURCE</p>	<p>FIG. 7</p>
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area east of Friant Road.

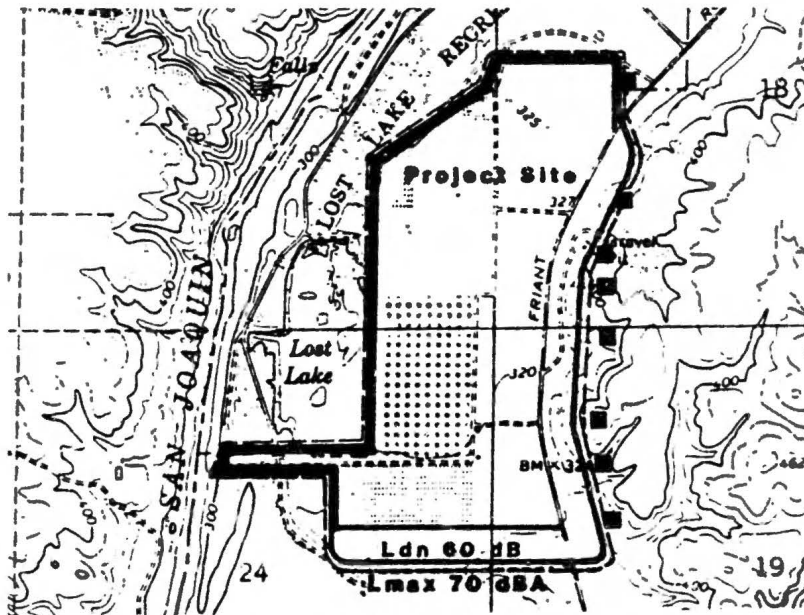
Figure 8 illustrates the extent of worst-case project-related noise impacts with the proposed berms in place, assuming that excavation activities occur between the hours of 6:00 a.m. and 6:00 p.m. and that excavation and loading equipment could operate within 50 feet of the project property line. The L_{dn} 60 dB contour is representative of the extent of land area potentially impacted by noise levels exceeding the land use compatibility criterion of the Fresno County Noise Element for noise-sensitive land uses. The L_{max} 75 dBA contour indicates areas where noise levels from project-related sources could exceed the maximum allowed by the Fresno County Noise Ordinance during the nighttime (10:00 p.m. - 7:00 a.m. hours). Due to shielding by the proposed berms and the topographical relationship between the project site and the area west of the site, project-related noise levels exceeding the County standards would not occur in Lost Lake Regional Park.

- o Based on a worst-case estimate of excavation within 50 feet of the project property line, noise levels may exceed the requirements of the Fresno County Noise Ordinance and Noise Element on a temporary basis at residences located within 500' of the excavation area. This would affect the residence behind the burger stand/bait shop and two of the seven residences on the eastern bluff. The remainder of the residences are more than 500' away from the excavation areas. As the excavation/loading process progresses through the various phases of the project, noise impacts at specific noise sensitive receivers will be reduced.

The noise impacts would only occur for a relatively brief period of time at any one location. The noise level data and distances to noise exposure contours may be used to estimate worst-case noise exposure at a given location after 10-15 dB have been subtracted to account for the presence of a berm if applicable. An example of this is the residence located behind the store near the entrance to Lost Lake Regional Park, which is approximately 175 feet from the center of the closest acre proposed for excavation. Excavation activities on any one acre would occur for approximately 12-13 days. During that time period, typical noise levels as defined by L_{dn} , L_{50} , and L_{max} would be approximately 56 dB, 55 dB and 70 dBA, respectively, after subtracting 15 dB for the presence of the berm. Noise exposure would be less before and after the closest acre is excavated.



**Project-Related Noise
Levels: Hours 6:00 a.m.
to 6:00 p.m.**



**Project-Related Noise
Levels: Hours 7:00 a.m.
to 4:00 p.m.**

LEGEND:
■ RESIDENCES



Source: Brown-Buntin Associates

**BECK RANCH
SAND AND GRAVEL PERMIT
ENVIRONMENTAL IMPACT REPORT**

**PROJECT-RELATED
NOISE LEVELS**

**FIG.
8**

If the affected residence is located behind the edge of the bluff where line-of-sight to the noise source is interrupted, project-related noise levels along the bluffs will be reduced significantly. Also, the existing traffic on Friant Road generates noise levels which are comparable in many instances to project-related noise levels in this area.

Annual average noise levels would not be expected to exceed applicable Fresno County noise standards at any location near the project site.

Mitigation Measures

- o The proposed berms should be constructed as proposed prior to excavation, to assure that the buffer is in place in advance of noise generation.
- o Temporary impacts could be reduced by prohibiting excavation activities within 500 feet of an existing residence between 6 a.m. and 7 a.m., since it is only the closest 500 feet which generate the temporary noise impacts. It is estimated that noise levels would still exceed the ordinance standards in some categories by up to 5 dB (L_{50}) although such a restriction would represent a significant form of mitigation. Figure 8 shows the maximum extent of worst-case noise exposure with excavation activities prohibited within 500 feet of an existing residence between 6 a.m. and 7 a.m.
- o A variance may be obtained from the Fresno County Health Department since the noise levels would exceed the noise standards only periodically and are temporary in nature. While this will not reduce the noise levels, it will bring the project into compliance with the Fresno County Noise Ordinance.

ACOUSTICAL TERMINOLOGY

- AMBIENT NOISE LEVEL: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
- A-WEIGHTED SOUND LEVEL: The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.
- CNEL: Community Noise Equivalent Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
- DECIBEL, dB: A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
- EQUIVALENT ENERGY LEVEL, L_{eq} : The sound level corresponding to a steady state sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.
- L_{dn} : Day/Night Average Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
- NOTE: CNEL and L_{dn} represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the equivalent energy noise exposure for a shorter time period, typically one hour.
- L_{max} : The maximum A-weighted noise level recorded during a noise event.
- L_n : The sound level exceeded x percent of the time during a sample interval. L_{10} equals the level exceeded 10 percent of the time (L_{90} , L_{50} , etc.)
- NOISE EXPOSURE CONTOURS: Lines drawn about a noise source indicating constant energy levels of noise exposure. CNEL and L_{dn} are the descriptors utilized herein to describe community exposure to noise.

IV. CULTURAL ENVIRONMENTAL CONDITIONS, PROJECT IMPACTS AND MITIGATION MEASURES

A. LAND USE

1. Existing Setting

The project site is located along the San Joaquin River just south of the Town of Friant and approximately 4-1/2 miles north of the City of Fresno. The riverbottom area is basically rural in nature. It is a prime source for sand and gravel resources and contains several sand and gravel extraction and processing sites. The other predominate land uses are agriculture and grazing. There are scattered pockets of rural residential along Friant Rd. and on the bluffs east of the road (Figure 9).

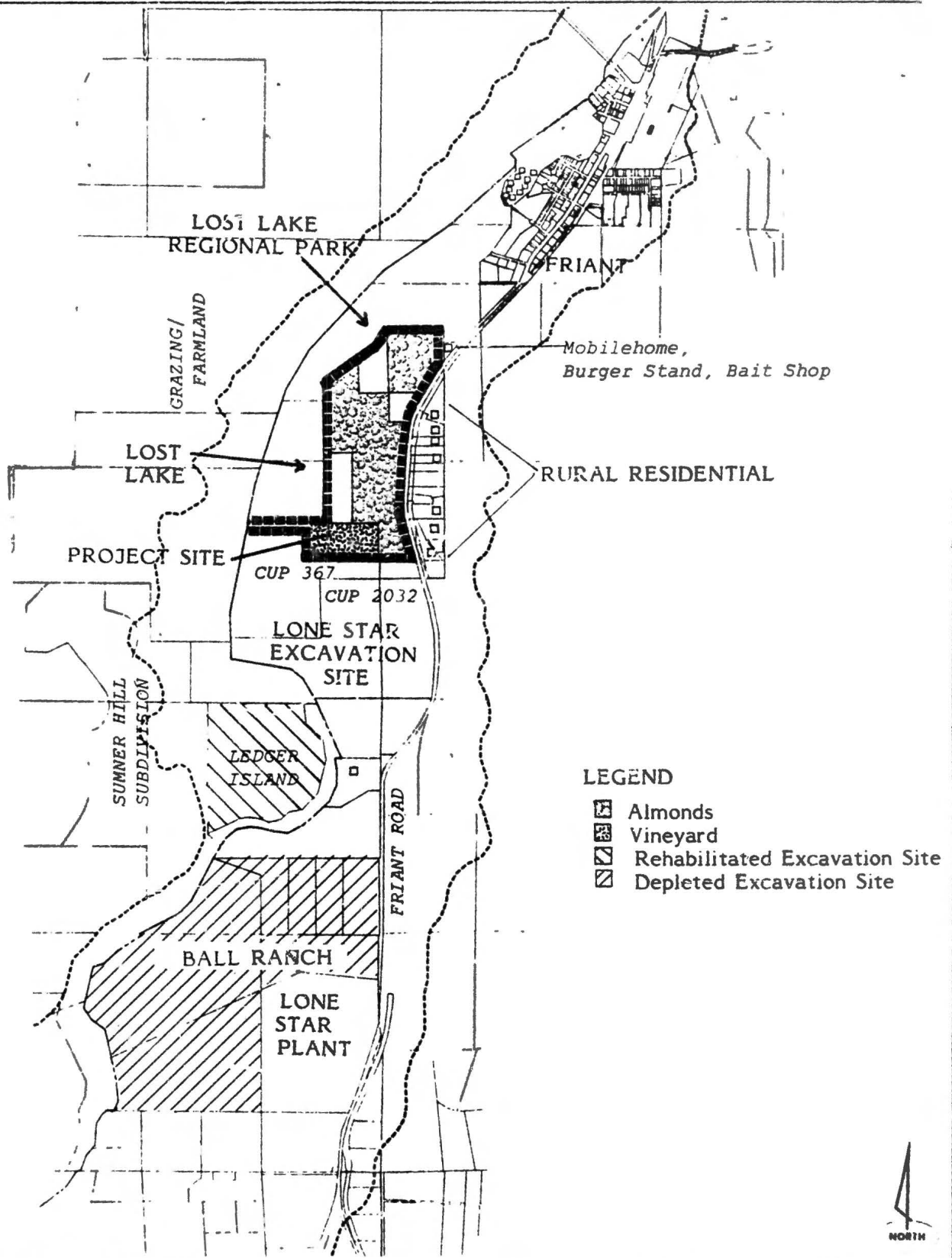
The site contains 251 acres, most of which is currently planted with a grape vineyard and almond orchard. The 356 acre property immediately to the south is an active sand and gravel extraction site operated by Lone Star Industries under Conditional Use Permits (CUP) #367 & 2032. The bluffs immediately to the east have developed to rural residential lots containing seven homes, two of which are owned by the project owner. A hamburger stand and bait shop, together with a mobile home, are located at the northeast corner of the site. Lost Lake Regional Park is located on the west and north sides of the property. The lake itself, which is a flooded sand and gravel site where material was excavated for Friant Dam, is immediately to west of the property. The park is used primarily for fishing and picnicking and as a nature preserve. The park entrance is just north of the site, but is mainly undeveloped in that area. The town of Friant is about 1/4 mile northeast along Friant Road. Friant Dam and the Millerton Lake State Recreation Area are located just northeast of Friant.

Across the River in Madera County, the bluffs have historically been grazing land. To the northwest orchard and vineyards have been developed. A 47-lot residential subdivision known as Sumner Hill is being developed on 200 acres to the southwest of the site.

Future Projects

A specific plan for the planned new community of Millerton, proposed population of 8,000 to 10,000 was approved by the Fresno Board of Supervisors in December 1984. The plan envisions a community located 2 miles east of the town of Friant on 820 acres along both sides of Millerton Road.

A master planned project has been proposed to be located on



557 acres of the Ball Ranch just north of the Lone Star processing plant. It is planned for 721 single family dwelling units, 20 lodge units, and an 18 hole golf course and country club. It would require an amendment for the Fresno County General Plan. An environmental reconnaissance study was completed for the project in October 1985. Project developers are awaiting the outcome of the San Joaquin River Reconnaissance Study (See discussion later in this section.) before continuing further with project processing.

Another project to develop 415 acres for rural residential northwest of the project on the Madera County Bluffs was denied pending the outcome of the San Joaquin River Reconnaissance Study.

Agriculture

The project site is currently in agriculture and has been farmed since 1948 (Figure 9). None of the surrounding river bottom land is in agricultural use. Approximately 33 acres are vacant and are periodically planted to seasonal crops. There are 36.8 acres in grapes, 31.5 acres of Palominos planted in 1948 and 5.3 acres of Thompson planted in 1950. Almond trees originally covered 152.1 acres which were planted in various phases since 1964. Fifteen acres of trees were recently removed in 1985 due to the loss of production caused by the presence of a disease common to almond orchards commonly referred to as "crazy top." Much of the remainder of the orchard is also infected with the disease (Dowler, April 86).

The Soils on site (Figure 10) have been classified by the United Soil Conservation Service as follows:

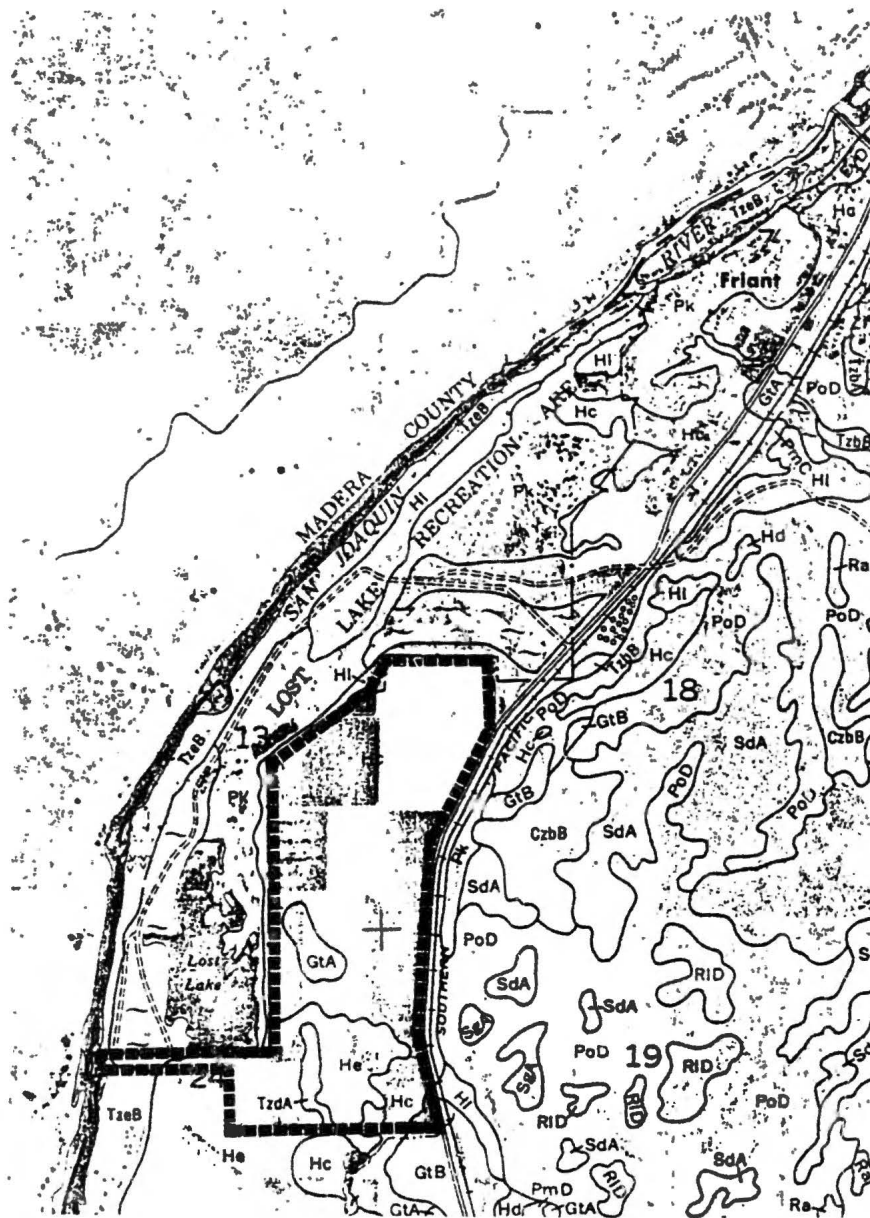
TABLE 6

PROJECT SOILS

<u>Soil Type</u>	<u>Capability Unit</u>
GtA Greenfield sandy loam	Class I
Hc Hanford sandy loam	Class II
He Hanford sandy loam, gravelly substratum	Class II
TzdA Tujunga cobbly loamy sand	Class IV

The capability units basically describe the soils limitations for a range of agricultural uses.

Class I Soils have few limitations that restrict their use.



Source: Soils of Eastern Fresno County

**BECK RANCH
SAND AND GRAVEL PERMIT
ENVIRONMENTAL IMPACT REPORT**

PROJECT SITE SOILS

FIG.
10

- Class II Soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.
- Class IV Soils have severe limitations that reduce the choice of plants, require very careful management or both.

Field observations indicate that on-site circumstances on much of the project dictate that agricultural crops such as seasonal vegetables are more suited to the actual soil condition than trees and vines (Dowler, May 1986). Sand and gravel present at shallow depths limits the water holding capacity for deeper rooted crops such as trees and vines. Cobble is also intermixed with the soil at surface levels often causing damage to farm equipment. Both factors increase production costs.

Recreation

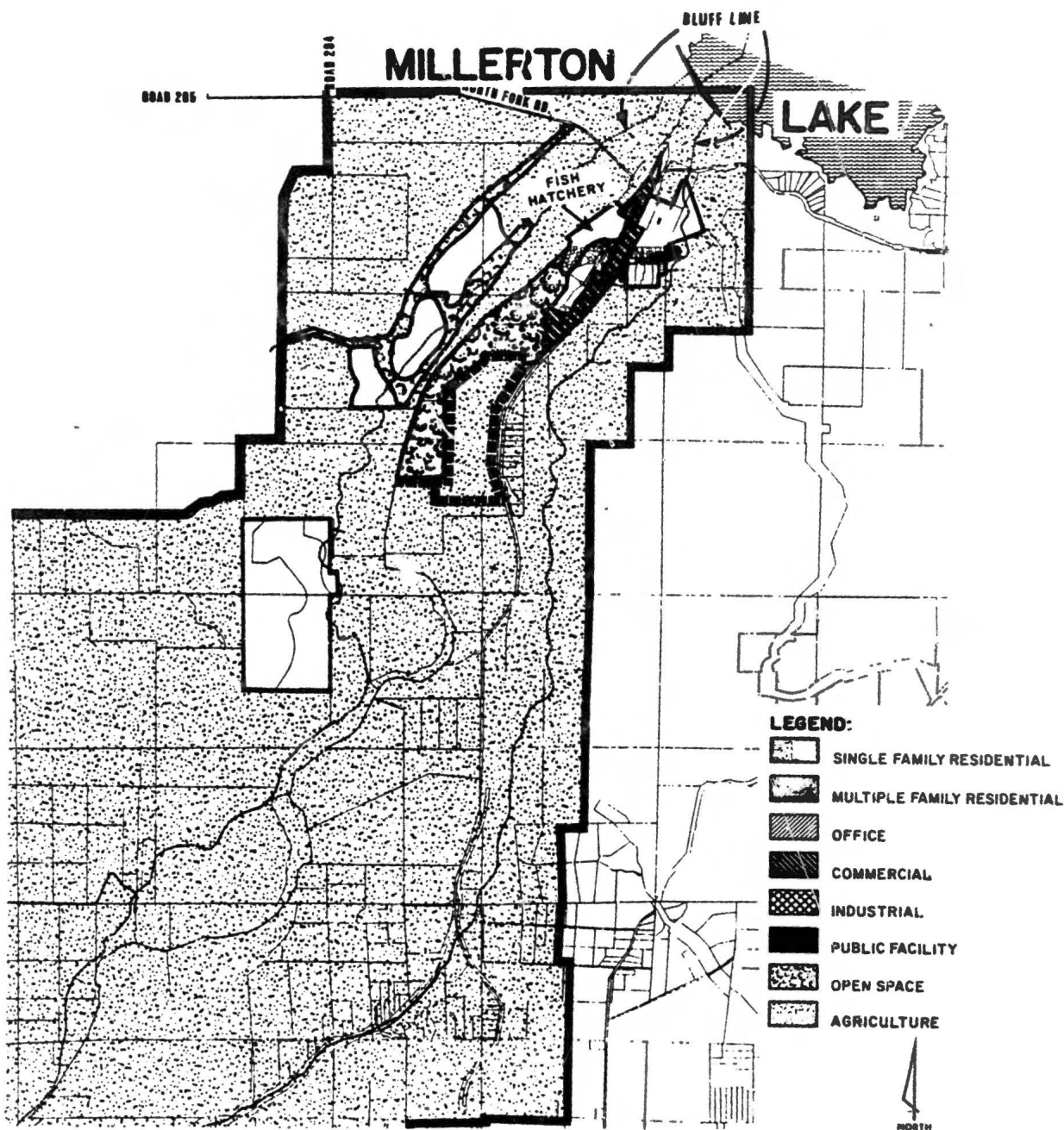
Lost Lake Park, established in 1959, and owned and operated by Fresno County is adjacent to the project site on the north and west. The park property contains 305 acres of which 90 acres are developed for day use, 70 acres are used as a primitive nature study area, and 38 acres encompass Lost Lake itself. The lake is a former quarry site for sand and gravel used in the construction of Friant Dam. In addition, there are 38 overnight camping units. The remainder of the park property remains undeveloped.

Current year projects to be completed in early 1986-87 include remodeling of two restrooms at the campground, construction of a group picnic area, and construction of a fishing facility on the river which is accessible to the handicapped. Planned capital improvement projects for fiscal year 1987-88 include a group reservation picnic area and overnight camping area (Takeuchi, June 1986).

The park is one of the most popular county parks second only to Avocado Lake on the Kings River. The 1985 estimate for users was 150,000 users per year. A 1981 study conducted by Pacific Development Institute of Clovis, indicated that 78% of users were from Fresno and Clovis. The most popular uses of the park include fishing, picnicking, bird watching and nature study activities in that order. Of those surveyed, 19% rated the park as excellent, 56% good and 23% fair (Takeuchi, June 1986)

Land Use Policy

The Fresno County General Plan through its River Influence Policies designates the San Joaquin Riverbottom, including the project site for multiple-use open spaces including; agriculture,



Source: San Joaquin River Reconnaissance Study

**BECK RANCH
SAND AND GRAVEL PERMIT
ENVIRONMENTAL IMPACT REPORT**

GENERAL PLAN
LAND USE DESIGNATIONS

FIG.
11

mineral resource extraction, golf courses, fisheries, stables, parks, recreation and wildlife refuges. Relating to mineral resources, it is a stated objective to "Preserve and enhance areas of significant natural resources, the retention of which is to maintain the environmental quality and economic potential of the area."

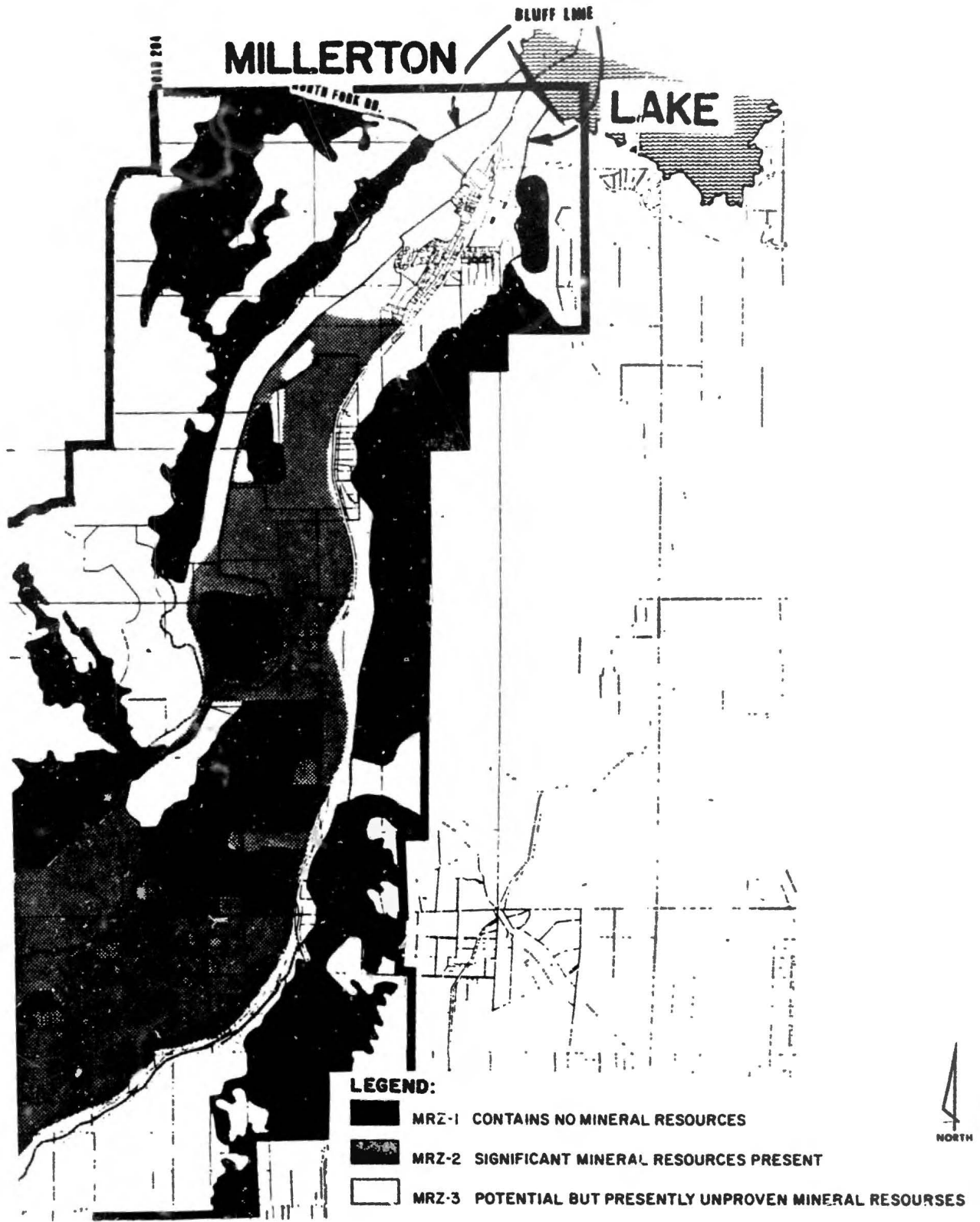
The Mineral Resources Section of the Open Space/Conservation Element of the General Plan identifies sand and gravel as a valuable economic resource to the County and encourages the development of mineral resources when conflict with surrounding land use and the natural environment can be minimized. It further identifies the San Joaquin River bottom area, including the project site, as one of three principal locations for sand and gravel resource extraction. Among its objectives and policies are the conservation of the resource; protection of existing or potential resource sites from incompatible uses in the surrounding area; new operations should be located adjacent to existing or worked out mining operations; and the requirement for the rehabilitation and reuse of the mining site after recovery of the resource.

In addition, the State has just recently completed its Mineral Land Classification of Aggregate Materials in the Fresno Production-Consumption Region as required by the State Mining and Reclamation Act (SMARA) of 1975. That report identifies most of the entire San Joaquin River bottom area including the project site from Highway 99 to the town of Friant as Mineral Resource Zone 2 (MRZ-2) which indicates that significant mineral (sand and gravel) deposits are known to exist (Fig. 12). The report was adopted by the State Mining and Geology Board on July 11, 1986.

The Board will now transmit the classification report to the local lead agencies (i.e. Fresno County, Madera County, City of Fresno). Upon receipt of the classification report, each lead agency must within twelve months thereof, develop and adopt mineral resource management policies to be incorporated in its general plan. These policies will:

- a. Recognize the mineral classification information, including the classification maps, transmitted to it by the Board.
- b. Emphasize the conservation and development of identified mineral deposits.

The State Mining and Geology Board may ...(further)... designate specific geographic areas that contain mineral deposits of regional significance. "Designation is the formal recognition by the State Mining and Geology Board, after consultation with lead agencies and other interested parties, of areas containing mineral deposits of regional or statewide significance that



Source: San Joaquin River Reconnaissance Study

**BECK RANCH
SAND AND GRAVEL PERMIT
ENVIRONMENTAL IMPACT REPORT**

MINERAL RESOURCE ZONES

FIG.
12

should be considered for protection from land uses incompatible with mineral extraction. These deposits are deemed to be of prime importance in meeting the future needs of the region or the state" (Mineral Land Classification, Aggregate Material in the Fresno Production-Consumption Region Special Report 158, 1986). At its hearing on July 11, 1986 the State Mining and Geology Board initiated the designation process and gave it a high priority schedule.

The Scenic Highway Element of the Fresno County General Plan designated Friant Road as a Scenic Highway. One of the objectives of that Element is to preserve the scenic quality of land adjacent to scenic roads.

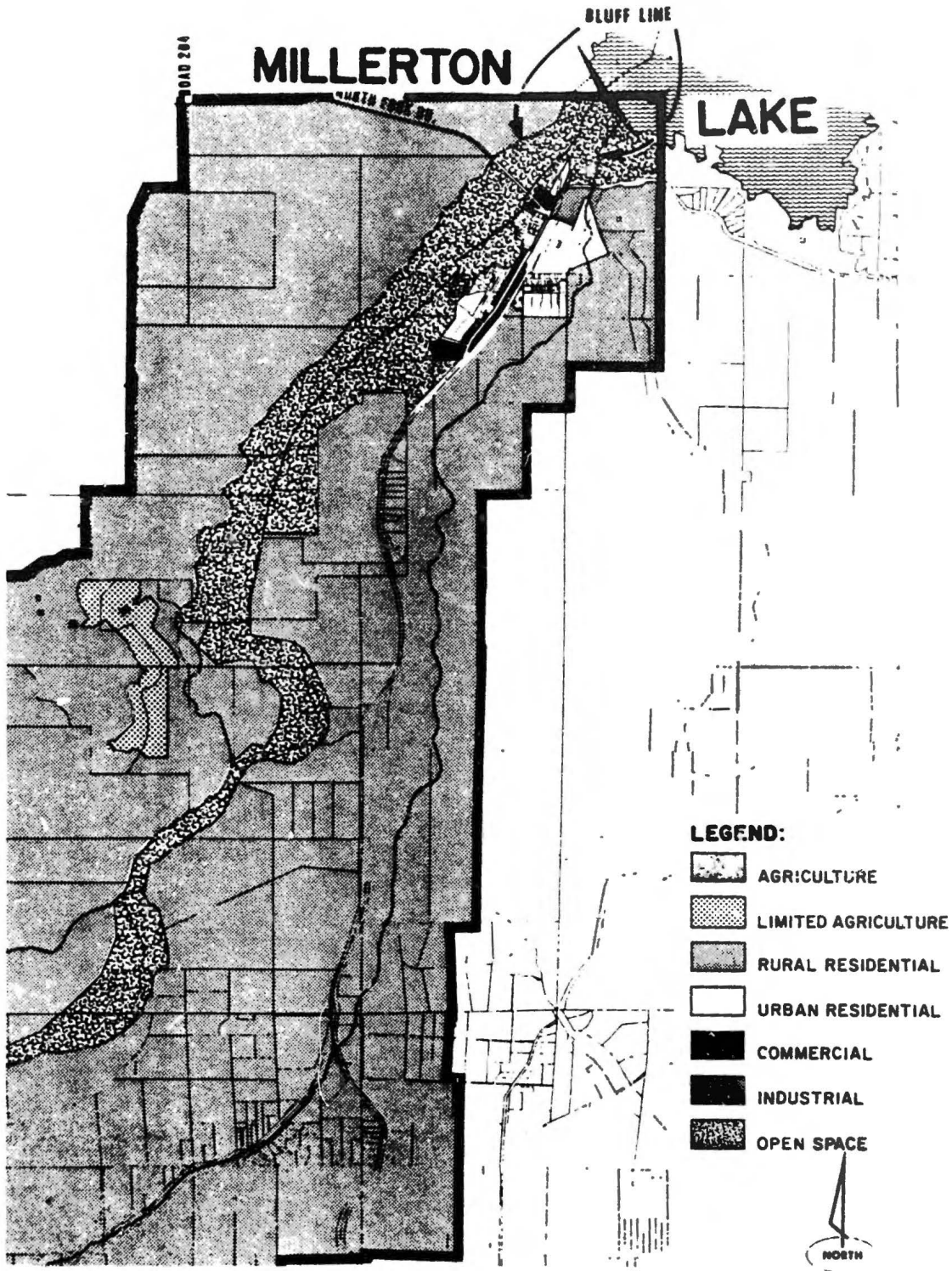
The Madera County General Plan designates the land west of the site across the San Joaquin River primarily for resource conservation and public lands and agriculture. The Sumner Hill residential subdivision and an area to the northwest are designated for rural residential.

A joint study is being conducted of the San Joaquin River bottom and bluffs from Friant Dam to Westlawn Avenue, just west of Freeway 99 by the Counties of Fresno and Madera and the City of Fresno. The study was initiated in response to several river bottom and bluff proposals for residential development in the three given jurisdictions. The initial authorized phase of the study was a Reconnaissance Study to determine existing natural and cultural land use conditions. The preliminary report has been completed and is being considered by the joint entities. It has not been determined if an actual plan will be authorized. Pending completion and public hearings of the Reconnaissance Study, new applications are not being accepted within the study area which are not in compliance with existing plans.

Zoning

The project site and the surrounding areas to the south and east are zoned AE-20, exclusive agriculture, twenty acre minimum parcel size (Figure 12). Although zoned AE-20, the homesites on the bluff just east of the site range from 2.4 acres and 8.5 acres in size (Figure 9). Most of the parcels were created prior to the application of AE-20 zoning in 1977. Variance No. 2862 was approved in 1984 allowing five lots on the bluff ranging in size from 1.81 acres to 4.11 acres. As a condition of approval, a note was required to be placed on the subdivision map (or parcel maps) stating as follows:

"The divided parcels adjoin rock, sand and gravel deposits situated to the west ..." (i.e. Beck property) "... of the subject property and a discretionary permit to excavate such deposits may in the future be approved by the Fresno County Board of Supervisors."



Source: San Joaquin River Reconnaissance Study

**BECK RANCH
SAND AND GRAVEL PERMIT
ENVIRONMENTAL IMPACT REPORT**

EXISTING ZONING

FIG.
13

In addition there was a requirement that "... each parcel shall be landscaped in such a manner as to effectively buffer said sites from future mineral extraction operations to the west of the parcels" (i.e. Beck property).

Lost Lake Park is zoned RE (Recreation). The town of Friant is zoned for a variety of urban residential and commercial uses. In Madera County the zoning is primarily for agriculture, ARF (Agricultural, Rural,) and ARE-160 (Agricultural, Rural, Exclusive, 160 acre minimum) west of the San Joaquin River. The Sumner Hill subdivision is zoned RRS, (Rural, Residential, Single-Family).

Impacts:

- o The proposed use is consistent with the River Influence Policies and Mineral Resources Section of the Conservation Element of the Fresno County General Plan in that it provides for the extraction of a valuable mineral resource; locates the operation adjacent to both an existing mining site and a worked-out site (Lost Lake); and includes a rehabilitation plan conforming to conditions set forth in the General Plan. Compliance with the requirement for minimizing impacts to surrounding uses and the natural environment is dependent on the implementation of effective mitigation measures. If the measures contained in the project design and the appropriate mitigation measures suggested in this EIR are incorporated into the conditions of approval of the project, adverse impacts would be effectively reduced to the maximum extent possible.
- o Approximately 170 acres would be permanently lost to agriculture. This will be an adverse impact adding to loss of agricultural land to urbanization. While this is a conflict with the General Plan, the extraction of mineral resources is identified as a recognized, irreplaceable, exhaustible economic resource to the Fresno-Madera County. No policy clearly establishes priorities when these two policies contradict each other. However, the Agricultural Policies and the AE (Exclusive Agricultural) zone district identify mining as a permitted use.
- o The loss of vineyard will have little if any impact on the grape industry. The Palomino variety is an old variety and there is little market for them today. There are only five acres of Thompsons, which are currently over-produced in the Valley. (Dowler, April 86)
- o The loss of almond orchard will also have little impact

on the almond market. Almonds are also over-produced. This factor together with the disease element which is prevalent in the orchard does not warrant the man-hours needed to show a profit. (Dowler, April 1986)

- o The value of the agricultural production from this property to the community is minimal compared to the value of sand and gravel resources to the community. More people and the community as a whole will benefit many more times from roads, homes, construction projects, etc. which would be built from the resource from this site than there would be from utilizing food products produced on this site (Dowler, April 1986).
- o The present agricultural area would be replaced by valuable wetlands and riparian habitat. Riparian areas along the San Joaquin River and throughout the Valley have been reduced to a fraction of their original size due in a large part to conversion to agriculture, irrigation and flood control projects which have constructed dams and diverted water. Such areas have been reduced in the State of California to only 5% of what was present at the turn of the century (San Joaquin River Reconnaissance Study, 1986) The addition of this site would enhance the reestablishment of riparian sites along the San Joaquin River and expand the wildlife and natural area around Lost Lake Park.
- o The homes on the bluff east of Friant Road would be adversely impacted to various degrees during the life of the project. The most noticeable impacts would be visual and noise. Since the homes on the bluff are located above the site, the active excavation areas will be visible at different times to different homes depending on which phase of the project is active. The residence, hamburger stand and bait shop at the northeast corner of the site would be adversely impacted during excavation at that end of the site. (See Aesthetics Section and Noise Sections)
- o During construction and landscaping of the berms along the lake and park boundaries, users of the park will be temporarily exposed to equipment activity unassociated with park activities. After the berms are in place the only activities visible to park users may be the tops of the larger equipment when they are operating adjacent to the berms. As they move away from the berms, or as soon as excavation reaches 10 feet, they will no longer be visible. Another factor in the effectiveness of the berms is that the majority of park users will be below the level of the project site due to existing topography. Consequently their line of

sight will angle upwards from the peak of the berms. As the landscaping fills in along the top of the berms, no activities should be visible.

- o During construction and landscaping of the berms, park users will be temporarily subjected to equipment noise uncharacteristic of normal park activities. When the berms are in place, projected-related noise levels are not expected to exceed the County Noise Standards in Lost Lake Park (See Noise Section).
- o The nature study area is across Lost Lake and approximately 1000 feet away from the project boundary. It is also separated from the Lake by a rise in topography and vegetation. Since noise levels will be within noise limits for a noise-sensitive receptor (See Noise Section) due to distance, topography, and the proposed berms; and the site is not visible from the Nature Study Area, no impacts to wildlife or nature study observers are expected.
- o Wildlife along the eastern edge of Lost Lake will be temporarily disturbed during construction and landscaping of the berms. Once the berms are in place, noise and activity behind the berms should not affect most wildlife (See Wildlife and Noise Sections).
- o The ultimate conversion of agricultural land on the site to lakes and terrestrial habitat would create more diverse habitat resources in the immediate area. This additional habitat will in the long term, attract wildlife in greater numbers and diversity to Lost Lake due to its proximity (See Wildlife Section).
- o The excavation pits may present a potential safety hazard to users of Lost Lake Park. However, Lost Lake itself is an old quarry site that was not rehabilitated. Nearly vertical slopes exist on the east and south sides of the Lake. Few accidents at the Lake have been reported since the park was established (Takeuchi, May 1986).

Mitigation

- o Those areas not actively under excavation should continue to be farmed until excavation reaches that phase. Topsoil should be saved as excavation occurs and should be placed back as the last covering of final reclamation so that the most productive soil is available to the crops. Rehabilitated farm areas could be planted to a variety of crops. Vegetables which are shallow rooted, would be suitable for areas where the

water table is shallower. In areas where less material was removed and the water table is deeper, trees and vines could be planted. There is a growing market for vegetables in the Valley on a year-around basis (Dowler, April 1986).

- As proposed, rehabilitation should begin within one year of completion of excavation to minimize aesthetic impact to surrounding bluff residences. (See Aesthetics Section).
- The berms should be constructed prior to excavation of each phase to assure that noise levels in the park are not excessive. Landscaping of the berms should take place immediately after the berms are constructed to allow the vegetation to grow as quickly as possible (See Vegetation Section for recommended species). This will also allow the berms to blend in quickly with the park's environment.
- Boundaries of the property adjacent to the park should be fenced and signs posted to discourage trespassers. The steep slopes on the east and south sides of Lost Lake would act as a deterrent since the slopes are nearly vertical and difficult to traverse on foot. Sloping the banks of lakes to 2H to 1V (horizontal to vertical) in accordance with the standards of the Zoning Ordinance will minimize hazards after rehabilitation.

B. TRAFFIC AND CIRCULATION

1. Existing Traffic Network

Friant Road: Friant Road is classified as an expressway and is planned for ultimate construction as a four lane divided highway with six lanes between Shepherd Avenue and Blackstone Avenue. It serves as a major highway link between the project and the Fresno Clovis Metropolitan Area (FCMA) to the south and the unincorporated community of Friant to the north.

Friant Road currently has a travel lane and a bike lane in each direction. Separate left turn lanes have been installed in Friant Road at Willow Avenue, at the entrance to Lone Star's sand and gravel excavation site located immediately south of the project and at Lone Star's sand and gravel plant located south of Ball Ranch. Acceleration and deceleration lanes have also been installed at both sites.

Friant Road between Copper Avenue and Shepherd Avenue along the frontage of the Woodward Lake development was recently widened on the east side and has two lanes in the northbound direction. Friant Road between Copper Avenue and Blackstone Avenue is planned to be widened in the near future to a minimum of four travel lanes by 1990 and to have an interchange with Freeway 41.

Willow Avenue: Willow Avenue is classified as an arterial and is planned for ultimate construction to a four lane divided roadway. It will serve as a major highway link between the community of Friant and the easterly portion of the FCMA. The roadway between Friant Road and Herndon Avenue has a travel lane in each direction and forms a "T" intersection with Friant Road approximately three miles south of the project. Separate left and right turn lanes have been installed in Willow Avenue at the intersection. There is a service road extending westerly from the Friant Road/Willow Avenue intersection. The service road approach and the west bound Willow Avenue left turn movements are controlled by stop signs. All other movements are uncontrolled. Willow Avenue southeasterly of Friant Road is curvilinear with fairly steep grades for about three-quarters of a mile and from that point to Herndon Avenue the road is flat and straight. The planned extension of Willow Avenue between Herndon Avenue and Barstow Avenue has not been constructed.

Millerton Road: Millerton Road is classified as an arterial. It is a two lane east-west roadway connecting to Friant Road and Road 206 on the west and to Auberry Road and State Hwy 168 to the east.

Copper Avenue: Copper Avenue is an east-west roadway classified as a collector. It extends westerly from Friant Road

and will distribute traffic to various parts of the Fresno-Clovis Metropolitan Area (FCMA) via Minnewawa Avenue, and Willow Avenue.

Bikeways: The FCMA bikeway system includes a regional bikeway route along the Friant Corridor from Audubon Drive to the community of Friant. The route has been installed as bike lanes along the Friant Road alignment. The long-range Bicycle Plan would also extend a bicycle path from Lost Lake south and west along the San Joaquin River to Skaggs Bridge on Highway 145. The Fresno County Board of Supervisors has adopted a recreation trail plan which included a multiple purpose trail including bicycles, hiking and equestrian along Friant Road from Woodward Park to the community of Friant. The width and specific location of the multiple purpose trail has not been defined.

2. Existing Traffic Conditions

Friant Road. Friant Road is a 55 mph roadway with a 50 mph posted speed limit in the vicinity of Lost Lake recreational area. The County of Fresno staff indicated that the most recent traffic count was taken from June 24 to 30 of 1985 north of Willow Avenue at the Council of Government's Transportation Modeling Station. The 24 hour and peak hour seven day average count was 5761 and 464 vehicles, respectively. With a seasonal adjustment factor the annual ADT was 4033. The average peak hour percentage of the 24 hour count was 8.0%.

TABLE 7

TRAFFIC COUNT-FRIANT ROAD

<u>Mon./Date/Day</u>	<u>24 Hr Count (Veh)</u>	<u>Peak Hr Count (Veh)</u>	<u>Peak Hr.</u>	<u>%</u>
6/24/M	4632	340	5-6 p.m.	7.0
6/25/T	4928	400	5-6 p.m.	8.0
6/26/W	5748	489	5-6 p.m.	8.5
6/27/T	5193	408	5-6 p.m.	7.9
6/28/F	5485	404	3-4 p.m.	7.4
6/29/S	6235	492	3-4 p.m.	7.9
6/30/S	8105	712	6-7 p.m.	8.8

The average daily traffic (ADT) on Friant Rd. from 1975 to 1985 furnished by the County is shown in Table 8.

TABLE 8

AVERAGE DAILY TRAFFIC (ADT)
FRIANT ROAD

<u>Year</u>	<u>ADT</u>
1975	3600
1976	3000
1977	2900
1978	3800
1979	3100
1980	4200
1982	4800
1985	3700

Approximately 30% of the Friant Rd. traffic volume is made up of trucks. The counts were furnished by the County. Buses and vehicles larger than a pick-up truck were classified as trucks. The truck mix is shown in Table 9.

TABLE 9

TRUCK MIX ON FRIANT ROAD

<u>Axles</u>	<u>%</u>
5	11.8
4	0.3
3	1.3
2	<u>17.2</u>
	30.6

Willow Avenue: Willow Avenue is a 55 mph roadway between Friant Road and Herndon Avenue. The most recent Willow Avenue traffic count furnished by the County was taken in July of 1984 north of Shepherd Ave. and the ADT was 3500 vehicles of which 7.5% were trucks. The peak hour traffic in both directions was 310 vehicles or 8.9% of the ADT and it occurred between 5-6 p.m.

Bus Route: Friant Road and Willow Avenue serve as bus routes for school buses of the Friant Union and Sierra Joint Union School Districts. The Friant Union School District enrolls students from kindergarten to the 8th grade and the Sierra Joint Union School District enrolls students from the 9th grade to the 12th grade. The bus schedule and stop locations of the Friant Union School District are described in Table 10.

TABLE 10

FRIANT SCHOOL BUS STOPS

<u>Time</u>	<u>No. of Students</u>	<u>Road</u>	<u>Description</u>
7:35 a.m.	3	Friant Rd. west side	Approximately 1-3/4 mi. south of entrance to Lost Lake Rec. Area Rd. at Durando Ranch DW.
7:56 a.m.	2	Friant Rd. east side	Approximately 500' north of Willow Ave.
8:00 a.m.	2	Friant Rd. east side	Approximately 750' south of Durando Ranch DW
3:22 p.m.	2	Friant Rd. west side	Approximately 1-3/4 mi. south of entrance to Lost Lake Rec. Area Rd. at Durando Ranch DW
3:26 p.m.	1	Friant Rd. west side	Driver walks student across Friant Rd. to east side
3:35 p.m.	2	Friant Rd. west side	Home of students on west side

The bus schedule and stop locations for the Sierra Joint Union School District are described in Table 11

TABLE 11

SIERRA JOINT UNION SCHOOL DISTRICT BUS STOPS

<u>Time</u> <u>a.m.</u>	<u>Time</u> <u>p.m.</u>	<u>No. of</u> <u>Students</u>	<u>Road</u>	<u>Description</u>
7:00	4:28	1	Friant Rd west side	Approximately 2 mi. south of Lost Lake Recreation Area Rd.
7:04	4:24	1	Friant Rd. west side	Approximately 3/4 mi. north of Dry Creek

The bus route in the afternoon route is reversed and begins from Auberry Rd. and ends on Friant Road.

Impacts

- o No additional truck trips will be generated since the project will be a continuation of Lone Star's existing excavation operations on the adjacent property to the south. The vehicle trips from the project on Friant Road will continue to be 260 truck trips and 12 automobile trips for a total of 272 vehicle trips. All trips will be between the site and the Lone Star plant to the south.
- o The year 2006 traffic projections with the project are 12110 ADT on Friant Road north of Willow Avenue, 9770 ADT on Friant Road southwesterly of Willow Avenue and 6180 ADT on Willow Avenue south of Friant Road. These projections are based on full buildout of other approved projects including Park Fort Washington, Woodward Lake and Millerton New Town. Roadways will not have any capacity problems and the projected ADT will be within the capacity of 10,000 to 13,000 ADT of each of the roadways (Fresno County Public Works, May 1986).
- o There are five school bus stops on Friant Road to pick up and discharge nine students. The bus stops are located where buses can maneuver off the travel lane to board and discharge students. Buses have a problem of accelerating into the main stream of traffic. However, this is an existing problem. The approval of this project will not create new conflicts with truck traffic. However, it will extend the number of years trucks from the area will be using this portion of Friant Road.
- o The presence of Woodward Park to the south and Lost

Lake and Millerton Lake recreational areas to the north suggest that a higher than average bicycle usage may be produced. The separation of bike lanes from the traffic lanes will continue to provide protection. The aggravation of the trucks mixed with the bikes is an existing condition and will remain unless the Multiple Purpose Trail Plan adopted by the Board of Supervisors to remove the bike lanes to a new alignment independent of the roadway.

Mitigation Measures

- o Approval of the project as proposed using the existing access to Friant Road from Lone Star's operation will require no additional roadway improvements.
- o The transport of material should be conducted in a manner to avoid spillage on county roads. The current permits for Lone Star (CUP 367 and 2032) require that should spillage occur from trucks leaving the site, the applicant will provide for removal of the spillage from the roadway at the extraction site access road as frequently as needed. A cash deposit is required to be maintained in an amount of \$1,000.00 to allow the County to remove sand and gravel if corrective action is not taken by the operator within 24 hours of notification by the County. These measures should also be made a condition of this permit.

C. AESTHETICS

There are four major views of the project site; from the eastern bluffs in Fresno County; the western bluffs in Madera (both approximately 80 to 100 feet above the valley floor); from Lost Lake Park; and from Friant Road. A fifth view is from the mobile home and hamburger stand and baitshop located between Friant Road and the northeast corner of the site. Much of the existing vista is an aesthetically pleasing one. The river with its accompanying ribbon of riparian vegetation is in a semi-natural state having been altered to some extent by Friant Dam and agriculture. The remainder of the floodplain has been changed extensively by man with roads, farms, parks and material extraction sites.

The eastern bluffs of the river valley are immediately east of the site across Friant Road and are approximately 80 feet above the site. Several houses look directly down on the property. Two of the houses are owned by the applicant. The view from the top of the eastern bluffs includes: the Friant Expressway directly below the bluffs, the project site with its orchards and vineyards directly in front of them across Friant Road; a portion of Lost Lake (a former gravel extraction site) about 1/2 mile away; the developed picnic and fishing areas in Lost Lake Park along the San Joaquin River directly west approximately 2/3 mile away; Lone Star's current sand and gravel operation just south of the project site; some natural riparian vegetation along the river south of Lost Lake Park; and the western bluffs in Madera County. The homes on the north end of the eastern bluffs also have the town of Friant in their view. The sand and gravel activities include active excavation pits with draglines, scrapers, and front loaders operating and trucks hauling material to the off-site processing plant.

The western bluffs in Madera County are at the same elevation and range from approximately 1/3 of a mile away at their closest point at the northwest end of the site to over a 1/2 mile away at their furthest point at the south end of the site. No homes currently exist on the western bluffs. However, a residential subdivision, Sumner Hill, is developing (roads have been built but no homes have been built yet) approximately 1 mile southwest of the site (Figure 9). The project will be visible from some of the future homes in the subdivision. Another residential subdivision was denied pending the outcome of the San Joaquin River Reconnaissance Study. If approved, it would have been located 1/3 of a mile northwest of the site on property designated by the Madera County General Plan for rural residential (Fig. 11). The viewshed includes the river directly below with its accompanying thread of riparian vegetation; a full view of Lost Lake and the park; the project site approximately 1/3 to 1 mile away; and Lone Star's existing excavation operation. Much of Friant Road is hidden by the project's trees

or by the berms along Friant Road next to Lone Star's operation. The future homes in the Sumner Hill subdivision will also overlook a recently rehabilitated former excavation site known as Ledger Island.

The view from Lost Lake Park includes the western and northern edges of the project site. Much of the park is 20 to 25 feet below the project, especially along the river where the picnic and fishing areas are, with the exception of a few locations along the western edge of Lost Lake and along the entrance road. Park users along the picnic and fishing area next to the river, and on the softball diamond look up to the project site.

The traveler on Friant Road is on an eyelevel with the eastern edge of the site. The view is primarily of the orchard with only 12 acres along the road not planted with trees. The owners and visitors of the hamburger stand and bait shop have an immediate view of the northeast corner of the orchard.

Impacts

- o The proposed project will affect the visual characteristics of the area significantly. Residents of the existing homes on the eastern Fresno County bluffs will see a gradual change as portions of the existing vineyard and orchard are removed for each phase over the life of the project, to be replaced first by active excavation and ultimately by rehabilitated lakes and grazing/agricultural land.

The first changes in the view will be the removal of the vineyard or orchard in the area that is going to be excavated next. This will be followed by removal of the overburden by excavation equipment usually about 5-10 acres at a time, several times a year. The removal of the resource will follow which involves active excavation pits, temporary material and waste stockpiles, and holding ponds for dewatering excavation areas. Twenty - thirty acres per year may be excavated depending on availability of resource in each area and economic conditions. The final step will be the rehabilitation of the completed excavation area, which is required by the Fresno County Zoning Ordinance to take place within one year after the completion of excavation. Rehabilitation, as practiced by Lone Star Industries on their current operation adjacent to the project, is an on-going process. As overburden is removed from the next area due for excavation, it is used to slope the banks of excavated areas behind them. This occurs several times a year. Final grading occurs within one year. As soon as the pumps are turned off

surface and groundwater flows will maintain the excavation as a fresh water lake. Past history of similar excavation operations on the San Joaquin River has shown that a natural revegetation process usually occurs within one year, especially adjacent to lakes. Grasses and forbs along with willows would be the first to become established, followed by larger tree species, such as sycamore, cottonwoods and alders over a longer period of time (Ledger Island EIR).

On an average basis 20 - 40 acres of open ground would be visible at any one point in time as either areas being prepared for excavation, active excavation pits, or excavated areas in the process of being rehabilitated. The remainder of the site will either be orchard or vineyard areas still being farmed or rehabilitated lakes with riparian vegetation and gently sloping, grazing or agricultural areas.

Most of the above activities will be visible by the residents along the central portion of the eastern bluff during the life of the project. The most northern and southern residents will mainly view operations when they occur on the northern or southern end of the site respectively. The activities in the open areas will be unsightly as compared to their present view. The final view of the rehabilitated lakes may be considered more aesthetically pleasing than the existing view. It will be more in keeping with a river environment and will attract a far more diverse variety of wildlife.

- o The future residents of Sumner Hill subdivision on the western bluffs will have a similar view of the above-described activities, although the impact will be masked considerably due to their distance from the site.
- o Dust could be a problem during the dry months if the proposed use of a dust palliative is not adhered to. Certain agricultural operations for the existing vineyard and orchard create considerable amounts of dust periodically throughout the year.
- o Landscaped berms along the western and northern and a portion of the eastern boundary of the site are proposed to screen the site from Lost Lake Park and the hamburger stand/bait shop. Instead of looking at the edge of an orchard, the view will then be a 10 foot high by 50 foot wide berm with groundcover, shrubs and trees. With the landscaping added to the top of the berm a screen will be formed. To the majority of the

park users which are lower than the park site, the screen will in effect even be higher. Most of the equipment is 12-13 feet tall and only a small part of the actual excavation occurs adjacent to the berms. Very little if any of the activity will be seen except when the berms are being erected and landscaped and when they are removed at the end of the project. In addition the majority of the activity occurs below the natural ground level beginning 2-1/2 - 9 feet below the surface to an average depth of 35 feet.

- o A 50 foot setback is proposed along Friant Road with the existing almond trees to remain that are presently within that 50 feet. Additional landscaping is proposed where no almond trees presently exist. While the operation is occurring on the western half of the site the almond orchard will serve as a fairly effective screen for the traveler on Friant Road. However, as the orchard is removed on the eastern half of the site a few rows of almond trees will not form a very effective screen, especially when the trees are bare in the winter.
- o At the completion of the project, the view from all areas of the rehabilitated lakes with riparian vegetation and a more diverse wildlife, together with the grazing/agricultural land may be more aesthetically pleasing than the present vineyard and orchards.

Mitigation Measures

- o No other effective screen measures are available to screen the operation from either of the bluffs. Following the proposed rehabilitation plan on a consistent basis will be the most effective measure.
- o No other reasonable screening methods are available for screening the project from Lost Lake Park and the hamburger stand/baitshop. The proposed landscaped berms will actually be more in keeping with the park-like atmosphere than the existing orchard.
- o Additional landscaping placed between the remaining almond trees along Friant Road would provide a more effective screen for travelers on Friant Rd. A berm could be placed along the roadside similar to the berm recently placed along the Lone Star's current operation on the adjacent property to the south. Although it may effectively screen the excavation activities, it is far less aesthetic than the proposed setback with almond trees and landscaping.

- o A dust pallative should be placed on all haul roads and/or water trucks should be used on a regular basis on both the roads and excavation areas during the dry months as proposed by the operator.

V. EFFECTS FOUND NOT TO BE SIGNIFICANT

The following effects were found not to be significant by the Initial Studies prepared for the project site or by evaluation during the EIR preparation process.

A. Air

The proposed project will not create additional air emissions or deteriorate ambient air quality since it is a continuation of an existing excavation operation.

B. Population

The project will not encourage the development of presently undeveloped areas or alter existing plans affecting the location or distribution of population. It is consistent with the General Plan for the area which designates the site for open space.

C. Public Services

Approval of this project will not have an effect upon or result in the need for additional fire or police protection, schools or other governmental public facilities or services. The project will continue to use existing public services and will not generate substantial numbers of new employees requiring additional public services.

D. Energy

Operation of this project will not generate a need for additional use of fuel or energy since it is a continuation of an existing excavation operation and will utilize an existing processing facility. The project will not increase the amount of material currently being excavated and processed on an annual basis.

E. Utilities

No new utility facility will be needed. Project will utilize existing utilities at processing plant. Extractive operations will not require additional utilities.

F. Archaeological/Historical

The project is above the historic floodway where most archaeological sites in the area have been known to occur. It has also been leveled and farmed since the 1940's which in all probability have destroyed or disturbed any possible sites that may have been present.

VI. CUMULATIVE IMPACTS

The proposed project is the expansion of an existing sand and gravel extractive operation. It will not in itself accelerate the market demand for the product. The existing volume of truck traffic and operational noise will remain the same. It will expand the area to be excavated to the north thereby exposing more of the surrounding area to the existing noise, truck traffic, and visual impacts. The general area will be impacted for a longer period due to the extended length of excavation.

Development of future projects in the area either approved such as the Millerton New Town Specific Plan Area, Park Fort Washington or Woodward Lakes Estates, or proposed such as the Ball Ranch Specific Plan will not be affected by this project since the truck traffic already exists on Friant Road from the Lone Star operation.

VII. UNAVOIDABLE ADVERSE IMPACTS

The project as proposed will result in a number of unavoidable adverse impacts which cannot be completely mitigated. The following is a summary of those unavoidable impacts:

1. Geotechnical
 - a. Erosion: Even though erosion is largely controlled, a certain amount, although insignificant and contained on-site, will inevitably occur some time during the life of the project. The result will be a loss of valuable top soil.
 - b. Sand and Gravel Resources: The project will ultimately remove the sand and gravel resource from the site, thereby reducing the future available resources for the area.
2. Hydrology. There will be a loss of water due to evaporation from the lake surface.
3. Wildlife. Some species of wildlife may be temporarily disturbed during construction of the berms adjacent to Lost Lake.
4. Noise. Project-related noise may periodically exceed noise standards at two of the residences on the bluffs and the residence adjacent to the hamburger stand/bait shop when excavation activities are closest to them.
5. Land-Use.
 - a. Agriculture: There will be a loss of 170 acres of productive agricultural land.
 - b. Recreation: Park users will be temporarily disturbed during construction of the berms.
6. Traffic: The existing intermingling of trucks with autos, school buses and bicycles will be extended for a longer period of time.
7. Aesthetics: Areas of active excavation will be unsightly to bluff residents until rehabilitated. Park areas will be temporarily exposed to construction activity during placement of berms.

VIII. ALTERNATIVES

NO PROJECT

The denial of the application would eliminate all impacts, adverse, mitigated, and positive, relating to this project. It may also lead to the non-utilization of the resource in the future. There are already a number of uses in the area which are inherently incompatible with sand and gravel mining. If the resource is not recovered now while those uses are few, then increased development in the area, both in Fresno and Madera Counties, would likely prohibit excavation in the future. Fresno County policy recognizes mineral deposits as a valuable resource which must be protected from incompatible uses.

"The importance of rock, sand, and gravel aggregate to the Fresno-Clovis building industry cannot be overstated. Aggregate must be mined where suitable deposits are found, and to be most economical, they should be extracted and processed near the consumer. The deposits must be of sufficient quality to meet the specifications of various private and public construction projects and of sufficient quantity to justify the extraction plant investment. The San Joaquin Riverbottom has provided a reasonably cheap source of quality aggregate for many years. The fact that the extracting plants lie in proximity to urbanized areas has helped to keep transfer costs low, ultimately helping to reduce the cost of construction," (San Joaquin River Reconnaissance Study).

In addition to Fresno County policy, the State has identified the project site as containing mineral resources of economic significance and of potential statewide significance. The State Geologist indicates that unless additional reserves (mineral resource land under permit) are found existing reserves will be depleted in only 24 years (Mineral Lands Classification, 1986) It should also be noted that the State assumed that all the available reserves would be used with the Fresno Production-Consumption Region (a circular area extending 25 miles from central Fresno). However, that region excluded the foothill and mountain areas of Fresno and Madera County which consume as much as 10 - 15% of the resource from the region, meaning the available reserves would be depleted much sooner than 24 years (Central Valley Rock Sand and Gravel Association, June 1986)

In calculating existing reserves, the State also assumed that the previously approved permit for the property (CUP 2172) would be exercised. Loss of this site, together with the resource used by the foothill and mountain areas, would subsequently reduce the available reserves to less than 20 years.

REDUCE PROJECT SIZE

The reduction of the size of the project would

correspondingly reduce the amount of land disturbed by the project and shorten the life of the project. Basically the same impacts would occur but for a shorter period of time. Less agricultural land would be lost. This alternative would result in leaving a portion of the resource, which would likely never be recovered, since mining at a later date would be more costly and additional incompatible uses would likely be located nearby. This reduction would not allow full recovery of the resource and consequently allow the loss of a recognized, valuable, irreplaceable economic resource to Fresno County.

ALTERNATIVE REHABILITATION

The entire property could be restored for agricultural use. This would involve removing only a portion of the resource by excavating to shallower depths. This would allow the topsoil to be replaced so that it would be above the groundwater table and useable for agricultural purposes. This alternative would considerably shorten the life of the project and thereby reduce impacts from excavation considerably. It would save 251 acres of valuable agricultural land but result in the loss of at least half of the recoverable resource. No existing County policy establishes priorities between mineral resource extraction and agricultural uses.

EXPAND PROJECT SCOPE

The project could be expanded to include a processing plant, ready-mix-concrete plant, and asphalt batch plant. Conditional Use Permit (CUP 2172) was approved for the site in 1985, which included the above plants. Project impacts would be expanded considerably to include: noise from plant operations; increased truck traffic from two sites operating side by side (Lone Star and Beck Ranch Project); visual impacts from the plant; and increased water usage. While these impacts may be mitigated they would still be greater in scope than the proposed project.

ALTERNATIVE LOCATION

The project could locate in another location in the San Joaquin riverbottom. Although it would remove impacts from this area, it would simply relocate those impacts to other affected uses adjacent to the relocated project. Resource sites large enough to economically recover the resource that are available (willing seller or lessor) or not already preempted by other uses are very few in number. In order for the Fresno-Madera region to continue to have an economical source of this important ingredient to the building industry, all resource sites should be available for recovery. Loss of this site would reduce the available resource.

ALTERNATIVE USES

The site could be considered for uses other than mineral resource excavation. The General Plan currently only allows agriculture and other open space uses. However, there are a number of residential/golf course projects currently in the planning stages within the riverbottom area. Such proposed projects were the main impetus for the initiation of the San Joaquin River Reconnaissance Study. This site could be a potential site for a similar project, although it would require a General Plan amendment.

Impacts from such a project would be considerable. There would be significant impacts to traffic, water usage, agriculture, public recreation and aesthetics. It would create a major change in the character of the area and would result in a permanent loss of the mineral resources.

The County could acquire the site for the future expansion of Lost Lake Regional Park. This would maintain the open space nature of the area and would allow for greater public access to the riverbottom area. However, it would result in a loss of the mineral resources, also a valuable resource to the public.

IX. RELATIONSHIP BETWEEN LONG-TERM AND SHORT TERM IMPACTS

During the life of the project, 15 - 20 years, the surrounding area would be subject to a continuation of the impacts associated with the existing Lone Star sand and gravel extraction site immediately adjacent to the project. Truck traffic would continue for a longer period of time, active excavation areas will remain unsightly until rehabilitation, and ambient noise levels will remain higher. In the long-term, the rehabilitation, as excavation is complete in each area, will create an aesthetically-pleasing environment in keeping with the natural riverbottom area. Lakes with riparian vegetation will create a more diverse habitat and attract wildlife in greater numbers. Potential uses of the site include open space, recreation, fishery, wildlife preserve or water-front home sites.

X. IRREVERSIBLE CHANGES AND COMMITMENT OF RESOURCES

The project would eliminate 170 acres of agricultural land. The remaining agricultural land would likely be used for seasonal agricultural use. Extraction of the resource would result in a permanent loss of the reserve. The resulting lakes would create a more productive riparian/aquatic environment for wildlife, thereby helping to reverse the steady loss of riparian areas to agriculture and development.

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APPENDIX A
INITIAL STUDIES

County of



Public Works & Development Services Department

4499 East Kings Canyon Road/Fresno, California 93702

ENVIRONMENTAL ASSESSMENT/INITIAL STUDY

EA NO. 2984

PROJECT NO(S): CU 2172

APPLICANT: Beck/Warkenline

PROJECT DESCRIPTION: See attached Environmental Assessment Application

POTENTIAL IMPACTS: Identified on the Environmental Impact Checklist

SOURCES CONSULTED: See addressees on attached letter. Comments received are indicated by a check mark and are attached hereto.

ENVIRONMENTAL RECOMMENDATION

- Upon consideration of the evidence, it has been determined that it is not fairly arguable that this project will have a significant impact on the environment, and a Negative Declaration will be recommended.
- The proposed project may or will have a significant adverse impact on the environment and the preparation of an EIR will be recommended.

Performed by Shawn Berg
Staff Analyst III

Reviewed by Kate Boudin
Staff Analyst III

Date 8/2/85

Date Aug. 23, 1985

- 4. Plant Life Will the project result in:
 - a. Change in the diversity of species or number of any species of plants (including trees, shrubs, grass, crops, microflora, and aquatic plants)?
 - b. Reduction of the numbers of any unique, rare or endangered species of plants?
 - c. Introduction of new species of plants into an area or a barrier to the normal replenishment of existing species?
 - d. Loss of any plants, or groups of plants, which are of aesthetic significance to the area?
- 5. Animal Life Will the project result in:
 - a. Change in the diversity of species, or numbers of any species of animals (birds, land animals, including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?
 - b. Reduction of the numbers of any unique, rare or endangered species of animals?
 - c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?
 - d. Deterioration to existing fish or wildlife habitat?
- 6. Noise Will the project result in:
 - a. Significant increases in existing noise levels?
 - b. Exposure of people to severe noise levels?
 - c. Change in noise character?
- 7. Nuisances Will the project produce:
 - a. Substantial increases of light or glare?
 - b. Vibrations, unsightly areas or other nuisances?
- 8. Land Use Will the project result in:
 - a. A substantial alteration of the present or planned land use of an area?
 - b. Substantial changes in surrounding land uses in terms of density, scale, or architectural design?
- 9. Natural Resources Will the project result in:
 - a. Increase in the rate of use of any natural resources?
 - b. Substantial depletion of any nonrenewable natural resource not planned in existing planning documents?
- 10. Agriculture Will the project result in:
 - a. Reduction in acreage of prime farmlands?
 - b. Significant effects to the continued agricultural uses of adjacent properties?

N/A	YES	NO
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	N/A	YES	NO
17. <u>Utilities</u> Will the project result in a need for new systems or substantial alterations to the following utilities:			
a. Power or natural gas?	—	—	✓
b. Communications systems?	—	—	✓
c. Water?	—	—	✓
d. Sewer or septic tanks?	—	—	✓
e. Storm water drainage?	—	—	✓
f. Solid waste and disposal?	—	—	✓
18. <u>Human Health</u> Will the project result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?	—	—	✓
b. Exposure of people to potential health hazards?	—	—	✓
19. <u>Aesthetics</u> Will the project result in:			
a. The obstruction of any scenic vista or view open to the public?	—	—	✓
b. The creation of an aesthetically offensive site open to public view?	—	✓	—
20. <u>Recreation</u> Will the project result in an impact upon the quality or quantity of existing recreational opportunities?	—	✓	—
21. <u>Archaeological/Historical</u> Will the project result in an alteration of a significant archaeological or historical site, structure, object, or building?	—	—	✓
22. <u>Controversy</u> Does the project have the potential to generate serious public controversy concerning environmental effects?	—	✓	—
23. <u>Mandatory Findings of Significance</u>			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	—	—	✓
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future).	—	—	✓
c. The possible effects of a project are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	—	—	✓
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	—	—	✓

DISCUSSION OF POTENTIAL IMPACTS AND THEIR SIGNIFICANCE

The discussion below is a compilation of the environmental comments received on the proposed project. The numbers and letters correlate with the preceding Environmental Checklist.

1. Earth

b., c., and e. - Potential impacts to earth resources that could result from the project are differential settlement of reclaimed land, erosion of stockpiled top-soil and possible difficulty in reclaiming land to productive farmland.

Although differential settlement was identified as a potential impact, the extent or magnitude at the site is unknown. The Geology Section of Development Services has indicated that this is a problem that can be connected by proper engineering and additional backfill, if needed, in areas that might settle.

Top-soil stockpiled on the site is subject to erosion, however, adherence to the Grading and Drainage Ordinance should mitigate this potential impact. Difficulty in reclaiming farmland was identified as a potential problem, however, the Farm and Home Advisors office has indicated that, if the backfill material is relatively small (2"-3" diameter) and if there is 5 feet of top-soil, most crops or orchards would be productive.

3. Water

e., and j. - There are potential adverse impacts to water quality in the San Joaquin River from settling ponds and unauthorized fill material that could be used for backfill in the excavation sites.

These impacts will be mitigated by discharge permits from CRWQCB and approval of the backfill material by Environmental Health Services (EHS).

6. Noise

a., and c. - Noise has been identified as a potential impact resulting from the proposed project.

Several noise studies have been prepared by the applicant and have been reviewed by the Fresno County Environmental Health Services. EHS comments regarding noise impacts are as follows:

1. The consultant has measured existing noise levels from Friant Road which exceed the Noise Elements' Rural Residential Standard of 55 Ldn (Ldn represents day-night average sound level). In fact, the existing levels exceed the Urban Residential standard in most cases. Project related noise will increase the levels an additional three to six decibels during the month of operations conducted closest to individual residences.

2. Annualized Ldn levels based on one to three months operation at the closest location indicate only a slight average increase of from 0.4dB to 1.2dB. Annualized Ldn represents a yearly average for a noise impact which has occurred for a period of less than one year.
3. Compliance with the Noise Ordinance is difficult to judge, however, based upon the indicated L max (maximum noise level) levels and previous analysis there are likely to be violations during periods of operations conducted closest to individual residences.

The project will increase the noise level in the area and impact nearby residences. EHS has not requested any additional information regarding noise but has recommended that mitigation measures be proposed to attenuate the potential noise increases. In addition, the applicant must comply with the Noise Ordinance and the Noise Element of the General Plan.

8. Land Use

- a. There are several potential land use conflicts at this site. The subject property is designated on the General Plan as part of the San Joaquin River Influence Area which recognizes the multiple use values of the river valley area. The subject site also lies within one of three areas in the County identified by the Mineral Resources Section of the Open Space-Conservation Element of the General Plan as a principal location for commercially suitable sand and gravel.

While this site would appear to be a prime location for extraction of sand and gravel there are other considerations that create classic land use conflicts. The site is currently being used for agricultural purposes, is prime farm land and is zoned for agricultural use. An orchard and vineyard are established and are an aesthetic amenity to the area and users of Friant Road.

Friant Road, adjacent to the site, is designated as a scenic highway on the Scenic Highway Element of the Fresno County General Plan. Maintaining the County's scenic resource areas, and more particularly the view along Friant Road, is important to residents of the area and the County.

The site is also adjacent to heavily used and popular Lost Lake Regional Park which could be adversely affected by the development of the site for sand and gravel extraction. The nature of the proposed development will conflict with the type of activity Lost Lake Park supports. The serenity and aesthetic appeal of the park will be affected, as well as a possible decline in the number of park and campground users. Lost Lake Park is a County facility valued by many and should be protected from uses that would diminish its numerous attributes.

The nature of the land use conflicts at the site make it difficult or impossible for suitable mitigation measures to be proposed that would effectively resolve the conflict in all areas.

10. Agriculture

- a. This project will result in the loss of 93 acres of prime farm land. The site is currently being used for agricultural purposes and maintains an established orchard and vineyard. To reclaim the site for farmland after excavation, proper backfill material and techniques will be required to make it productive as farmland (see discussion in earth resources section). Despite efforts to rehabilitate the site to productive agricultural land, high ground water may limit the type of crop and productivity of the reclaimed land for agricultural use.

11. Hazards

- c. The site could become an attractive nuisance and potential hazards could result from water-filled holes or pits on the site if children were to fall in or play near the pits. Fencing, berms and access control at the entrance gate could reduce this risk.

14. Transportation/Circulation

a., and f. - The project will generate approximately 250 truck trips per day. This will increase traffic considerably on Friant Road and cause some disruption to users of Friant Regional Bikeway and Friant Scenic highway. Safety hazards to cyclists on Friant Regional Bikeway would be increased by the addition of 250 truck trips and the spillage of sand and gravel from the trucks on to the bikeway.

The Fresno Cycling Club has expressed concerns about safety to cyclists. Their comments are as follows:

1. There will be greater risk of an accident involving a cyclist simply because of the addition of 250 large, fast-moving vehicles. The danger of a collision is intensified with young riders who often have difficulty maintaining a straight line along the edge of the road. They may inadvertently "weave" into the path of vehicles approaching from the rear especially when they are hit by the blast of air caused by a large truck passing at high speed a few feet away. This concussion of air has also caused cyclists to lose control and run off the road and crash as a result.
2. Debris from the trucks, particularly gravel and sand are hazardous to bicyclists. Large gravel often causes wheel and tire damage to light-weight bicycles while small gravel causes tire punctures. Gravel is frequently thrown back from the tires of passing vehicles striking cyclists with enough force to cause injury. Loose sand causes bicyclists to lose control sometimes resulting in serious falls.
3. Cyclists would be exposed to increased levels of noise and air pollution from which they have no protection.

In a previous similar proposal, (CUP 2019) Staff was unable to develop conditions which, to any significant degree, could address the concerns regarding hazards to cyclists using the Friant bikeway.

19. Aesthetics

- b. The project will be aesthetically unattractive to the residents living along the bluff during the 20-25 years of the proposed project life and to travelers along Friant Scenic Highway. Although berms and landscaping are proposed as mitigation measures, they would not completely screen the project from view of Friant Road and Lost Lake Park, and will do little to reduce the impacts to the bluff residents who are located above the site.

When the operation is completed there is the potential for the ponds to become stagnant, creating possible odor, insect and aesthetic impacts.

The project has the potential to create significant aesthetic impacts, which in the previous application (CUP 2019) the Staff was unable to develop conditions to mitigate visual impacts on the residences located on bluff east of Friant Road.

20. Recreation

The project could adversely impact the County's Lost Lake Park and its users by creating noise, dust, traffic, vibrations, and hazardous areas near the Park. There is a potential adverse impact to bird and wildlife population in the Park and to fishing in Lost Lake. The serenity and aesthetic appeal of the Park could be affected, resulting in a possible decline in the number of park and campground users. The park is a valuable recreational and open space resource available to the public and should be protected so it can continue to function as a passive day use park and campground for County residents.

22. Controversy

The project has the potential to generate public controversy concerning environmental effects. The residents in the immediate area and others in the community have publicly raised concerns regarding noise, traffic and safety hazards, adverse impacts to the aesthetics of the area and impacts to Lost Lake Park.

SMB:eh
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9/5/85

11. Hazards Does the project involve:

- a. Risks of an explosion or the release of hazardous substances... b. Risks from fire, snow, or other natural hazards? c. Risks from man-made hazards such as visual obstructions, lack of traffic control, dangerous materials, hazardous industrial activity, roadway design, etc.?

12. Population Will the project:

- a. Alter an existing plans the location, distribution, density or growth rate of the human population of an area? b. Establish precedents or facilitate any other projects whose impacts could be significant? c. Encourage the development of presently undeveloped areas?

13. Housing Will the proposal affect existing housing, or create a demand for additional housing?

14. Transportation/Circulation Will the project result in:

- a. Generation of substantial additional vehicular movement not planned for the area? b. Effects on existing parking facilities, or demand for new parking? c. Substantial impact upon existing transportation systems? d. Alterations to water-borne, rail, or air traffic? e. Alterations to present patterns of circulation or movement of people and/or goods? f. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians?

15. Public Services Will the project have an effect upon, or result in a need for new or altered governmental services in any of the following areas:

- a. Fire protection? b. Police protection? c. Schools? d. Parks or other recreational facilities? e. Maintenance of public facilities, including roads? f. Other governmental services?

16. Energy Will the project result in:

- a. Use of substantial amounts of fuel or energy? b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?

Table with 3 columns: N/A, YES, NO. Contains handwritten checkmarks and 'K' marks for responses to various project impact questions.

	N/A	YES	NO
17. <u>Utilities</u> Will the project result in a need for new systems or substantial alterations to the following utilities:			
a. Power or natural gas?	---	---	---
b. Communications systems?	---	---	---
c. Water?	---	---	---
d. Sewer or septic tanks?	---	---	---
e. Storm water drainage?	---	---	---
f. Solid waste and disposal?	---	---	---
18. <u>Human Health</u> Will the project result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?	---	---	KK
b. Exposure of people to potential health hazards?	---	---	KK
19. <u>Aesthetics</u> Will the project result in:			
a. The obstruction of any scenic vista or view open to the public?	---	---	KK
b. The creation of an aesthetically offensive site open to public view?	---	---	KK
20. <u>Recreation</u> Will the project result in an impact upon the quality or quantity of existing recreational opportunities?	---	✓	---
21. <u>Archaeological/Historical</u> Will the project result in an alteration of a significant archaeological or historical site, structure, object, or building?	---	---	✓
22. <u>Controversy</u> Does the project have the potential to generate serious public controversy concerning environmental effects?	---	---	✓
23. <u>Mandatory Findings of Significance</u>			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	---	✓	---
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future).	---	---	✓
c. The possible effects of a project are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	---	---	✓
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	---	---	✓

ENVIRONMENTAL IMPACT CHECKLIST

1. Earth (b, c, e)

The project proposal is to excavate to 37 feet. This is significant displacement of the soil, even though a rehabilitation plan is proposed. For design purposes a depth to groundwater of 25 feet should be used, even though the present average depth to water is approximately 30 feet. With this in mind, it may be difficult to reclaim to farmland if the site is excavated to 37 feet as shown in the cross sections. A minimum 5 feet of soil cover above the high water level is recommended for successful farming. If the area to be reclaimed to farmland is excavated to 37 feet, a total backfill of 17 feet will be necessary to create a land surface 5 feet above the expected high groundwater level.

The rehabilitation plan must be approved by E.H.S. for backfill material.

Top-soil that is stockpiled on the site is subject to erosion into the San Joaquin River. All reshaped banks and the stockpiled top soil should be seeded, fertilized and mulched to prevent erosion.

This impact should be explored further in the E.I.R.

3. Water (e) [comments from U.S. Department of the Interior Bureau of Reclamation]

The project appears to propose the construction of facilities on or near, the same area covered by the Bureau's San Joaquin River water rights Holding No. 4. About one-half of the project area is riparian lands. The project area outside the riparian boundary would not be entitled to entail pumping large amounts of water from the river in their processing operation. If the project was approved, we are concerned about possible illegal diversion from the San Joaquin River.

The water impounded in Millerton Lake is delivered by the Bureau of Reclamation to many irrigation districts and water users for agricultural, municipal, and industrial purposes. This includes delivery of water down the San Joaquin River below Friant Dam. The Bureau of Reclamation, in order to protect the interest of its water users, will protest any development that might impair the quality of the water in the San Joaquin.

6. Noise (a,c)

Noise levels will increase as a result of the project. The level or magnitude of noise is not known and this should be addressed in the E.I.R.

8. Land Use (a)

The project site is zoned for agriculture and is prime farm land.

10. Agriculture (a)

This project will result in the reduction of prime farm lands.

