

Project Description/Operational Statement CEMEX Rockfield Modification Project

Friant Road, Fresno County, California



Plant Site: 13475 N Friant Road



Quarry Site: 14765 N Friant Road

Prepared For:

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EXHIBITS

(Located in back of Report)

- A Location Map
- B Vicinity Land Use Map
- C Sheet 1: Plant Site and Quarry Site Aerials

- C Sheet 2: Plant Site Existing Conditions
- C Sheet 3: Quarry Site Existing Conditions
- C Sheet 4: Plant Site Project Site Plan
- C Sheet 5: Plant Site Mine Plan
- C Sheet 6: Quarry Site Mine Plan
- C Sheet 7: Plant Site Reclamation Plan
- C Sheet 8: Quarry Site Reclamation Plan

ATTACHMENTS

- A Existing CUPs Conditions of Approval
- B Existing Conditions Photos
- C Elevations of Plant Equipment

PROJECT SPECIFIC STUDIES

Copies on file with the Fresno County Department of Public Works and Planning

Air Quality, Health Risk, and Climate Change Impact Assessment, CEMEX Rockfield Modification Project, Sespe Consulting, December 2019

Blast Impact Analysis CEMEX Rockfield Quarry, Fresno, California, Vibra-Tech Engineers, Inc., September 9, 2019

Environmental Noise and Vibration Assessment, CEMEX Rockfield Modification Project, Fresno County, California, Bollard Acoustical Consultants, November 15, 2019

Geological and Geotechnical Assessment Report CEMEX Rockfield Modification Project, Tetra Tech BAS, April 17, 2019

Hydraulic Analyses for the CEMEX Rockfield Modification Project, Chang Consultants, November 18, 2019

Traffic Impact Study, CEMEX Rockfield Modification Project, Peters Engineering, November 15, 2019

Visual Impact Assessment for CEMEX Rockfield Modification Project, Sespe, November 8, 2019

OTHER REFERENCES

Construction & Aggregates in Fresno County, An Economic Analysis of the Construction and Aggregates Industries in Fresno County, Prepared for the Construction Materials Association of California, Sharon Prager and Randy Evans, October 2003

Map Sheet 52, Aggregate Sustainability in California, Susan Kohler, Department of Conservation, California Geological Survey, 2018

ACRONYMS

bgs.....	below ground surface
CCR .	California Code of Regulations (Title 14)
DMR.....	Division of Mine Reclamation
DOC	California Department of Conservation
DMG.....	Department of Mines and Geology
H:V or h:v	Horizontal to Vertical, or horizontal:vertical
FCZO.....	Fresno County Zoning Ordinance
PRC	California Public Resources Code
SMARA	Surface Mining and Reclamation Act, 1975 (PRC § 2777, et seq.)
SMGB	State Mining and Geology Board
USGS	United States Geological Survey

**PROJECT DESCRIPTION/OPERATIONAL STATEMENT
CEMEX ROCKFIELD MODIFICATION PROJECT**

This Project Description/Operational Statement has been prepared for the CEMEX Rockfield Modification Project in response to the questions posed in the Fresno County Operational Statement Checklist.

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1. Purpose and Scope

CEMEX Construction Materials Pacific, LLC (CEMEX) is proposing the Rockfield Modification Project, (Modification Project) a continuation and modification of its current aggregate (rock, sand and gravel) mining and processing operations located on two properties between North Friant Road and the San Joaquin River in Fresno County (the Project). The Project includes the Plant Site and the Quarry Site as described below (Exhibit A *Location Map*, Exhibit B *Vicinity Land Use*):

- Plant Site: CEMEX's current Plant Site is located on approximately 122 acres on the west side of N. Friant Road (APNs 300-070-56S, 57S, 58S, 59S, & 60S), approximately 1.5 miles north of the City of Fresno and approximately 0.7 mile north of the intersection of N Willow Avenue and N Friant Road (including portions of Section 36 of T11N/R21E MDB&M).
- Quarry Site: CEMEX's current Quarry Site is located on approximately 349 acres on the west side of N. Friant Road (APNs 300-040-19 & 20, 300-080-01S, 300-250-12 & portion of 300-310-01) approximately 2.0 miles north of CEMEX's current Plant Site and approximately 2.0 miles south of the town of Friant (including portions of Sections 24 and 25 of T11N/R20E MDB&M and Sections 19 and 30 of T11N/R21E MDB&M).

Mining first occurred at the Quarry Site in 1913 through the 1920's. Mining and processing operations have been located on the Plant Site since 1924. Together mining and processing operations have been continuous at the two sites for 106 years (1913-2019).

CEMEX's current Plant Site operates under several Conditional Use Permits (CUPs) 367, 3063, and 3093. The CUPs allow aggregate mining of the alluvial deposit; plant operations including an aggregate processing plant, a ready-mix concrete plant, a hot-mix asphalt plant (inactive) and related supportive facilities; and the processing of raw aggregate mined from CEMEX's current Quarry Site. A portable plant is brought in periodically to recycle come-back concrete (unused concrete in mixer truck upon return to plant) into crushed miscellaneous base (CMB). Aggregate from the alluvial deposit has been partially mined from portions of the Plant Site. The entire Plant Site is disturbed by historical and current mining and processing operations with the exception of required setbacks from Friant Road (Exhibit C Sheet 1, *Plant Site and Quarry Site Aerials*).

At the Quarry Site, aggregate mining of the alluvial deposit has been permitted by Fresno County at the Quarry Site since 1960 under CUP 367. There has been active mining at the Quarry Site since the 1980's under several CUPs (367, 2032, 3064, and 3094). Since there are no plant operations permitted at the Quarry Site, the CUPs allow the interplant haul of approximately 1.4 million tons per year (MT/yr) of raw aggregate via Friant Road approximately 2 miles south to the Plant Site for processing. Most of the Quarry Site has been partially mined and is almost entirely disturbed (over 90%) by the current and historical mining operations with the exception of required setbacks from the San Joaquin River and Friant Road (Exhibit C Sheet 1).

The Modification Project would occur in two stages as described below and summarized in Table 1 *Rockfield Modification Project Summary*.

- Stage 1 would continue concurrent operations at both the Quarry Site and the Plant Site for up to 30 years. At the Plant Site, the existing aggregate processing plant would continue to be used to wash, screen, crush and sort aggregate mined from the Plant Site. The existing ready-mix concrete plant would continue to operate and the existing, inactive asphalt plant would be replaced with a modern asphalt plant. Aggregate products from the Plant Site and ready-mix concrete would continue to be sold to customers and asphalt sales would resume. Periodic use of a portable crushing plant to recycle come-back concrete would continue with the addition of asphalt recycling and the import of concrete debris to recycle into CMB and asphalt debris to be recycled asphalt product (RAP). The remaining alluvial deposit would be mined to a depth of approximately 85 feet below ground surface (bgs). The ready-mix concrete plant and the hot-mix asphalt plant may be relocated from the Plant Site to the Quarry Site in less than 30 years in order to recover the remaining alluvial deposit under the plants. Upon completion of mining at the Plant Site, operations at the Plant Site would cease, all equipment would be removed and the site reclaimed as 122 acres of open space, riparian and open water wildlife habitat.

At the Quarry Site mining would be modified to include the hard rock (granite) that lies beneath the alluvial deposit currently being mined. Mining of the hard rock would require drilling and blasting and would occur to a depth of approximately 600 feet bgs. An aggregate processing plant would be added to the Quarry Site to wash, screen, crush and sort the aggregate. A portable aggregate processing plant may be used initially. Those aggregate products produced at the Quarry Site aggregate plant for the asphalt and ready-mix plants would be transported approximately 2 miles south to the Plant Site via an interplant haul on Friant Road in the same manner as raw aggregate is currently being transported from the Quarry Site to the Plant Site for the existing operations. Other aggregate products produced at the Quarry site not used by the asphalt and ready-mix plants at the Plant Site, (e.g. road base, various-sized crushed rock, sand, etc.) would be sold directly from the quarry.

Upon approval of the Modification Project permit, the combined annual sales of aggregate from both sites are estimated to ramp up from the 1.4 MT allowed under the current permits to 2.0 MT in approximately five years and up to 3.0 MT in approximately 10 years.

- Stage 2 would continue hard rock mining and processing operations only at the Quarry Site for approximately 70 more years. The ready-mix concrete plant and the hot-mix asphalt plant would be relocated from the Plant Site to the Quarry Site. The periodic use of a portable plant to recycle concrete and asphalt debris (including imported) into CMB and RAP would be added to the Quarry Site. Stage 2 operations are estimated to have annual aggregate sales of 3.0 MT. The interplant haul would cease. Therefore, there would be less truck traffic than there would be for Stage 1. Upon completion of mining at the Quarry Site, operations at the Quarry Site would cease and all equipment

would be removed. Reclamation of the Quarry Site would create approximately 349 acres of open space, riparian and open water wildlife habitat.

The total Project life of the combined Stages 1 and 2 is estimated to be up to 100 years.

Table 1
Rockfield Modification Project Summary

Item/Activity	Description ¹	
Existing Permits, Acres	Plant Site: CUPs 367, 3063, & 3093, Approximately 122 acres Quarry Site: CUPs 367, 2032, 3064 & 3094, Approximately 349 acres Total Both Sites: Approximately 471 acres	
Mining Acres	Plant Site: Approximately 112 acres Quarry Site: Approximately 282 acres Total Both Sites: Approximately 394 acres	
Mining Method	Plant Site: Topsoil and overburden removal by scrapers. Continuation of dry mining of alluvial deposit by excavator. Explosives will not be used. Quarry Site: Modification of current dry mining of alluvial deposit by excavator to include dry mining of hard rock by drilling and blasting.	
Mining Depth	Plant Site: Approximately 85 feet below ground surface (bgs) Quarry Site: Approximately 600 feet bgs.	
Processing	Plant Site (up to 30 years): Continued use of aggregate processing plant; ready-mix concrete plant; hot-mix asphalt plant; periodic use of portable plant to recycle concrete; and interplant haul via Friant Rd; addition of asphalt recycling & imported concrete and asphalt debris for recycling. Quarry Site (100 years): Upon Project Approval: Addition of aggregate processing plant. Within 30 years: Relocation of hot-mix asphalt plant, ready-mix concrete plant, portable concrete & asphalt recycle plant from Plant Site. Elimination of interplant haul.	
Interplant Haul Via Friant Road	Existing = 1.4 MT/yr; Stage 1 = 0.7 MT/yr; Stage 2 = None	
Estimated Aggregate Reserves Volume	Plant Site: 12 MT Quarry Site: 215 MT	
Estimated Total Sales	195 MT	
Estimated Maximum Annual Processed Aggregate Volume (including waste/fines)	3.3 MT	
Estimated Maximum Annual Aggregate Sales Volume ² (excluding waste/fines)	3.0 MT	
Estimated Annual Sales Per Plant at Total 3.0 MT ³	Stage 1 – Combined from both Sites	Stage 2 – Quarry Site Only
Aggregate ²	3,000,000 Tons	3,000,000 Tons
Hot Mix Asphalt	500,000 Tons	500,000 Tons
Ready-Mix Concrete	300,000 Cubic Yards	300,000 Cubic Yards
Concrete and Asphalt Recycling	200,000 Tons	200,000 Tons
Depth to Groundwater	Plant Site: 21-34 feet bgs (current surface) Quarry Site: 15-36 feet bgs (current surface)	
Reclamation End Uses: Open Space, Riparian and Open Water Habitat ⁴	Plant Site: Approximately 122 acres Quarry Site: Approximately 349 acres	
Project Life	Plant Site: Up to 30 Years Quarry Site: Up to 100 Years	

¹ All values are approximate

² Includes sales to on-site asphalt and ready-mix concrete plants

³ Typical mix of products. Actual sales mix will vary based on demand.

⁴ Actual final reclamation and areal extent at each site will depend on the volume and availability of overburden and process fines suitable for use as fill occurring on site.

2. Objectives of Project

The following are objectives for this Modification Project:

- a. Continue to provide a reliable and sustainable, local source of high quality aggregate to help meet the current and long-term demand (100 years) for construction materials in the Fresno Region;
- b. Continue to utilize aggregate reserves from property designated by the state and county as MRZ-2 (Mineral Resource Zone containing mineral resources of regional significance, i.e. sand and gravel);
- c. Continue to utilize high quality aggregate resources that meet the California Department of Transportation's specifications for use in Portland Cement Concrete (PCC) and Asphaltic Concrete (AC) which aggregate is important for quality infrastructure growth and maintenance because of its versatility, value, and relative scarcity;
- d. Maintain a local source of construction aggregate with enough annual sales capacity (3.0 million tons) to encourage a healthy competitive market;
- e. Continue to provide aggregate resources with access to an efficient local road network;
- f. Continue to provide an environmentally sound project that would balance the recovery of the aggregate resource with the protection of other resources including wildlife habitat, groundwater, surface water, and air quality;
- g. Continue to provide local quality jobs, while also benefiting local downstream businesses and creating an enhanced tax revenue to the county; and
- h. Reclaim both sites consistent with the San Joaquin River Parkway Master Plan.

3. Background

As discussed above, mining operations between the two sites have been continuous for 106 years (1913-2019). Since 1960 various CUPs have been issued by Fresno County for the two sites. Table 2 *Summary of Conditional Use Permits* lists the date the various CUPs were issued and describes the locations and actions approved. Exhibit B shows the locations of the various CUPs. Attachment A contains the Conditions of Approval for the various CUPs.

In 1960, CUP 367 was approved to allow sand and gravel excavation and processing operations including washing, screening, and grading and a batch plant on the two, non-contiguous areas, the Ball Ranch, which included the Plant Site, and the Quarry Site totaling approximately 850 acres. Processing of materials from the Quarry Site was allowed at the processing plant located on the Ball Ranch.

On June 6, 1984, Conditional Use Permit 2032 was approved to allow a rock, sand, and gravel operation on an additional 147 acres, located adjacent to the Quarry Site approved under CUP 367. In 1985, CUP 367 was revised under the terms of a settlement with the County of Fresno, which limited the processing plant, asphalt and concrete batch plant operations, and excavation activities to 20 years (or until the year 2005). Conditions of approval also limited processing of material to that which was extracted from properties permitted under CUP 367 and 2032.

In 1986, Conditional Use Permit 2209 was approved extending the operating hours of the ready-mix concrete plant located on the Ball Ranch.

On July 28, 1987 CUP 2235 was approved to allow the excavation of rock, sand, and gravel with incidental gold recovery on an approximate 251-acre parcel (Beck Ranch) located north of the Quarry Site approved under CUP 367. In addition, CUP 2241 was approved which allowed materials from the Beck Ranch as part of CUP 2235, to be processed at the processing plant located on the Ball Ranch as approved through CUP 367. As part of the approval of CUPs 2235 and 2241 an environmental impact report associated with those permits was certified. Conditions of approval of the permits limited the life of

the mining operation to 18 years from the date of approval (CUPs would expire on July 28, 2005). Conditions of approval also limited the mining and processing to 180 truckloads per day.

CUPs 3063 and 3064 were approved on September 25, 2003, for an 18-year time extension to 2023 for the existing mining and processing operations.

CUPs Nos. 3093 and 3094 were approved on October 21, 2004 increasing the daily limit on mining and processing from 180 truckloads per day to 225 truckloads per day (i.e. 5,625 tons per day or approximately 1.4 million tons (MT) per year based on 250 working days per year).

All operations under CUPs 223, 2241, 3064 and 3094 relating to the 251-acre Beck Ranch, were completed in 2009 and final inspection was completed in 2014.

**Table 2
Summary of Conditional Use Permits**

CUP No.	Approval Date	Acres	Properties	Description
367	9/7/60	850	Ball Ranch & Quarry Site	CUP for existing operations at Ball Ranch (530 ac) + Addition of 320 ac at Quarry Site.
2032	6/7/84	147	Quarry site	Addition to Quarry Site SW of CUP 367
367 & 2032	1/8/85		Ball Ranch & Quarry Site	Settlement Agreement with Fresno County confirming validity of CUP 367.
2209	6/10/86		Plant Site	Extended operating hours.
2235	7/28/87	251	Beck Ranch	Add mining site immediately north of Quarry Site. (Beck Ranch was mined out and reclaimed in 2009.)
2241	7/28/87		Plant Site	Allow rock mined from Beck to be processed at Plant Site. (Beck Ranch was mined out and reclaimed in 2009.)
3063	9/25/03		Quarry & Plant Site	Extend expiration date to 2023 for CUPs 367, 2032 & 2241
3064	9/25/03		Beck Ranch	Extend expiration date to 2023 for CUP 2235. (Beck Ranch was mined out and reclaimed in 2009.)
3093	10/21/04		Quarry & Plant Site	Amend CUPs 367, 2032, 2241 & 3063 to increase loads from 180/da to 225/da.
3094	10/21/04		Beck Ranch	Amend CUPs 2235 & 3064 (Beck) to increase loads from 180/da to 225/da. (Beck Ranch was mined out and reclaimed in 2009.)

In 2000, the California Department of Fish and Game [now California Department of Fish and Wildlife (CDFW)] acquired the south half of the Ball Ranch surrounding the area where the mining and processing operations were located, including property that was part of the on-going processing operations for many decades. The bulk of the mining and processing operations property, 122 acres (the Plant Site), remained under lease by the mining company with the Ball Family. Those processing operations on the property acquired by CDFW along the fringes of the Plant Site to the north and west, approximately 6 acres, are still utilized as part of the operations (Exhibit C Sheet 2). In March 2019, CEMEX acquired the Plant Site from the Ball Family. CEMEX is currently in discussions with CDFW to acquire those portions on CDFW property that are still utilized by CEMEX for its current operations.

4. Project Need and Economic Impact

The Project is in the Fresno Production-Consumption (P-C) Region, which services the needs of portions of Central and Eastern Fresno County, including the Fresno Clovis Metropolitan Area, and portions of Southern Madera County, as defined by the California State Department of Conservation's California Geological Survey (CGS) [*Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region, Special Report 158*, Judy Wiedenheft Cole and David Fuller, California Department of Conservation (DOC) and Division of Mines and Geology (DMG), 1986].

The CEMEX aggregate mining and processing facility is the last remaining such facility on the San Joaquin River that is also in close proximity to the major Fresno Clovis aggregate market. The Vulcan Materials Company's (Vulcan) River Rock facility located along the San Joaquin River on Old Friant Road ceased production in 2017. The other aggregate producers in Fresno County are located along the Kings River, east of Sanger, and near Coalinga in western Fresno County.

Currently there are only three active aggregate mining and processing facilities within the Fresno P-C Region -Vulcan's Sanger plant (2.5 MT/yr permitted), Calaveras' Kings River plant (1.0 MT/yr permitted) and CEMEX's Rockfield plant (1.4 MT/yr permitted) - for a total permitted production capacity of 4.9 MT/yr within the Fresno P-C Region. If Rockfield's current permits are allowed to expire in 2023, there would only be 3.5 MT/yr of permitted, active production capacity remaining within the Fresno P-C Region or 2.6 MT/yr less than the 50-year demand of 6.1 MT/yr.

The distance between aggregate sources and the aggregate market is critical to end-user aggregate cost because transportation is a major component in the cost of aggregate to the consumer. Aggregate is a low-unit-value, high-bulk-weight commodity, and it must be obtained from nearby sources to minimize both the dollar cost to the aggregate consumer and to minimize other environmental and economic costs associated with transportation. If nearby sources do not exist, the transportation costs will significantly increase the cost of the aggregate, and the environmental impacts due to transportation will increase as well. Transporting aggregate from distant sources results in societal impacts from increased fuel consumption, air pollution, traffic congestion, and road maintenance. Moreover, transportation cost is the principal constraint defining the market area for an aggregate mining operation. (Summarized from "*Map Sheet 52, Aggregate Sustainability in California 2018*", California Geological Survey, Department of Conservation).

There are currently 55, well-paid, full-time employees at the Rockfield facility. In addition, there are 15 employees at CEMEX's administrative office in Fresno and 22 employees at CEMEX's concrete plant in South Fresno. Approval of the Project would allow the continued employment of 92 well-paid, full-time employees and an estimated 5 additional employees. The project has a multiplier effect and thereby creates many more local jobs as well.

Sand and gravel commodities support the local building sector as well as provide needed materials for new road construction and reconstruction activities. As noted in the Fresno County General Plan, Fresno County has been a leading producer of minerals because of the abundance and wide variety of mineral resources that are present in the county. Aggregate and petroleum are considered the county's most significant extractive mineral resources and represent a significant economic commodity. The Project is consistent with the economic policies of the General Plan, which place emphasis on coordination of economic development resources and business retention.

5. Zoning and Land Use

In 1986, the State of California included both the Plant Site and Quarry Site in the classification of the aggregate resources in San Joaquin River area as Mineral Resource Zone 2 (MRZ-2) [*Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region, Special Report 158*, Judy Wiedenheft Cole and David Fuller, California Department of Conservation (DOC) and Division of Mines and Geology (DMG), 1986]. Fresno County incorporated the MRZ-2 classification into the Mineral Resources Unit of the Open Space/Conservation Element of the General Plan in 1987.

In 1988, the State included both the Plant Site and Quarry Site as part of the lands designated as having construction grade aggregate deposits that are of regional significance (*Designation of Regionally Significant Construction Aggregate Resources in the Fresno Production Consumption Region, SMARA Designation Report #8*, DOC and DMG, July 1988). SMARA requires that a lead agency's land-use decisions involving the designated area be made in accordance with its mineral resource management policies, and that the lead agency consider the importance of the mineral resource to the region as a whole and not just the lead agency's area of jurisdiction.

The Plant Site and Quarry Site are zoned "AE-20" Exclusive Agriculture, 20-acre minimum parcel size. Surface mining operations and related facilities and activities are permitted in the AE-20 district subject to a CUP and the provisions of Section 858 of the Fresno County Zoning Ordinance (FCZO). The existing surface mining operations and related facilities and activities are subject to existing CUPs, and the proposed Project surface mining operations and related facilities and activities will be subject to a CUP or CUPs and are therefore consistent with the AE-20 zoning.

The Plant Site is bounded on the north, west and south by lands that were part of the former Ball Ranch most of which was previously mined for aggregate. The San Joaquin River is located approximately 0.6 miles west of the Plant Site (Exhibit B). Little Dry Creek, a tributary of the San Joaquin River, is located approximately 500 feet north of the Plant Site.

Most of the property north of the Plant Site and generally north of Little Dry Creek is now the Ball Ranch Nature Reserve owned by the San Joaquin River Conservancy (SJRC). The property north of the Plant Site and generally south of Little Dry Creek and the property west and south of the Plant Site is now the Willow Unit Ecological Reserve owned by California Department of Fish and Wildlife (CDFW). As previously indicated, when CDFW acquired the Willow Unit in the year 2000, the property CDFW acquired included some property that was part of the on-going processing operations for many decades. The bulk of the mining and processing operations property, 122 acres (the Plant Site), remained under lease with the Ball Family. Those processing operations on the property acquired by CDFW along the fringes of the Plant Site to the north and west, consisting of approximately 6 acres, were allowed to continue and are still utilized as part of the operations. In March 2019 CEMEX acquired the Plant Site from the Ball Family. CEMEX is currently in discussions with CDFW to acquire those portions on CDFW property that are still utilized by CEMEX for its current operations.

There are several 20-acre farming parcels and other farmland south of the CDFW property. The land east of Friant Road is primarily open grazing land with several 8 to 10-acre rural residential homesites to the southeast.

The Quarry Site is bounded on the north by Lost Lake County Park, and to the northwest by lands that were previously mined for aggregate between the park and Friant Road (Exhibit B). The property north of the center of the Quarry Site, reclaimed as open space, ponds and riparian habitat, is now the Beck Ranch Natural Reserve owned by the SJRC. The property north of the northeast portion of the Quarry Site was reclaimed as farmland and open space, ponds and riparian habitat. The San Joaquin River flows along the

west side of the Quarry Site. Across the river to the west in Madera County, there is farmland to the northwest and homesites to the southwest on the bluffs overlooking the Quarry Site. The Ledger Island Natural Reserve, land previously mined for aggregate which is now owned by SJRC, is located across the river to the southwest of the Quarry Site. To the south there is a homesite, farmland and a winery/farmers market. East of Friant Road there are rural residential homesites to the northeast overlooking the Quarry Site. Rural residential homesites are located at the base of the foothills southeast of the entrance road to the Quarry Site. All the rest of the area to the east is currently open grazing land.

6. Nature of Operations

As previously discussed, the Modification Project would occur in two stages (see Section 1). Existing conditions at the Plant Site and Quarry Site are shown on Exhibit C Sheet 2, *Plant Site Existing Conditions* and Exhibit C Sheet 3, *Quarry Site Existing Conditions*.

A. Mine Plans

At the Plant Site as previously described, portions of the processing operations, consisting of approximately 6 acres, were included in the property acquired in 2000 by CDFW along the fringes of the Plant Site to the north and west. Processing operations on these properties acquired by CDFW are still utilized as part of the operations. Since CEMEX does not own those portions, those portions are not included in the Plant Site Project boundaries (Exhibit C Sheet 4, *Plant Site Project Site Plan*). CEMEX is currently in discussions with CDFW to acquire those portions that are on CDFW property that are still utilized by CEMEX for its current operations. In the event such properties are acquired by CEMEX, such properties would be subject to the conditions of the approved CUP, mitigation measures and reclamation plan.

The Plant Site Mine Plan (Exhibit C Sheet 5, *Plant Site Mine Plan*) is designed to avoid the existing riparian forest community on the north edge of the Plant Site. The following mining setbacks required under the existing CUPs will remain the same:

1. 50-feet from the public right-of-way;
2. 25-feet from other property lines; and
3. No stockpiled soil or material will be placed closer than 25 feet from any property boundary except visual/sound berms.

The Plant Site will be mined in six (6) phases as shown on the Exhibit 5. The remaining alluvial deposit would be mined vertically to a depth of approximately 85 feet bgs. Mining operations will be initiated by the removal of any vegetation and overburden materials (such as subsoils or clays) that lie above the sand and gravel deposits using conventional mining equipment including, but not limited to scrapers, bulldozers, and excavators/front-end loaders with haul trucks. Topsoil will be removed separately and stored in clearly labeled stockpiles for later use as the final cover in reclamation. The other overlying materials (overburden) and fines recovered from the aggregate processing will either be directly placed to reconstruct slopes or as fill in the bottom of the excavation or stockpiled for later use in reclamation (See Section 6B below).

Aggregate will be excavated using conventional mining equipment such as front-end loaders, excavators, and bulldozers and then loaded onto haul trucks for transport to the processing plant. When groundwater is reached, dewatering will be implemented. Water pumped from pit areas will be pumped into perimeter, groundwater recharge ditches.

The Quarry Site mine plan (Exhibit C Sheet 6, *Quarry Site Mine Plan*) is designed to continue avoidance of the riparian corridor along the San Joaquin River established by the existing CUPs, including the 200-foot setback from the river edge and avoidance of specified native trees. The following mining setbacks required under the existing CUPs will remain the same:

1. 200-foot mining setback from the river edge;
2. Continued avoidance of specified native trees;
3. 250-foot radius mining setback from the residence just south of the southwest corner;
4. 75-foot mining setback from south boundary between the 250 feet from the southwest corner and 350-feet from Friant Road right-of-way;
5. 50-foot mining setback from the Friant Road right-of-way;
6. 25-foot mining setback from other property lines; and
7. No stockpiled soil or material will be placed closer than 25 feet from any property boundary except visual/sound berms.

The Quarry Site will be mined in five (5) phases as shown on the Mine Plan. For any areas not mined under the existing CUPs mining operations will be initiated by the removal of any vegetation and overburden materials (such as subsoils or clays) that lie above the sand and gravel deposits using conventional mining equipment including, but not limited to scrapers, bulldozers, and excavators/front-end loaders with haul trucks. Topsoil will be removed separately and stored in clearly labeled stockpiles for later use as the final cover in reclamation. The overburden and fines recovered from the aggregate processing will either be directly placed to reconstruct slopes or stockpiled for later use in reclamation (See Section 6B below).

Any remaining alluvial aggregate will be excavated using conventional mining equipment such as front-end loaders, excavators, and bulldozers and then loaded onto haul trucks for transport to the processing plant. The hardrock will be mined in approximately 50-foot benches by drilling and blasting of the hardrock material to a depth of approximately 600-feet bgs. If necessary, secondary breakage of oversize material within the quarry will be accomplished by conventional methods including, but not limited to, drop ball or hydraulic breaker.

Initially, the shot quarry rock will be loaded into haul trucks by excavators or front-end loaders and transported to the processing plant where the rock will be further crushed, screened, rinsed and sorted. As mining progresses deeper, a primary crusher will be located in the pit and pit material will be transported to the processing facility by means of a conveyor system.

B. Reclamation Plans

As previously described, the Plant Site will be mined in six (6) phases (Exhibit C Sheet 5) creating a single excavation with an approximately 95-acre pond created from groundwater and rainfall in the reclaimed excavation bottom (Exhibit C Sheet 7, *Plant Site Reclamation Plan*). Upon completion of mining at the Plant Site, operations at the Plant Site would cease, all equipment would be removed, and the site reclaimed as 122 acres of open space, riparian and open water wildlife habitat that complement and enhance goals the San Joaquin River Parkway Master Plan. Slopes surrounding the approximately 95-acre reclaimed pond will be seeded with native grasses and forbs and planted with native plants.

As previously described, the Quarry Site will be mined in five (5) phases (Exhibit C Sheet 6) creating a single excavation with an approximately 110-acre pond created from groundwater and rainfall in the excavation bottom (Exhibit C Sheet 8 *Quarry Site Reclamation Plan*). Upon completion of mining at the Quarry Site, operations would cease, all equipment would be removed, and the site reclaimed to approximately 349 acres of open space, riparian and open water wildlife habitat that complement and

enhance goals the San Joaquin River Parkway Master Plan. Slopes (alluvial and weathered granite) above the hardrock benches will be seeded with native grasses and forbs. .

7. Operational Time Limits

The permitted hours of operation under the existing CUPSs are shown on Table 3.

Table 3
Existing Permitted Hours of Operations

Activity	Typical Hours and Days
Plant Site	
Excavation	6:00 a.m. to 6:00 p.m., Monday through Friday
Asphalt Batch Plant	6:00 a.m. to 6:00 p.m., Monday through Friday
Concrete Batch Plant	4:00 a.m. to 6:00 p.m., Monday through Friday (May through October) 5:30 a.m. to 6:00 p.m., Monday through Friday (November through April) 6:00 a.m. to 1:00 p.m., Saturday (All year)
In the event of any emergency as determined by a governmental body or agency, excavation and processing may proceed as needed notwithstanding the aforesaid.	
Quarry Site	
Excavation	7:00 a.m. to 4:30 p.m., Monday through Friday
Routine maintenance of excavation equipment	7:00 a.m. to 8:00 p.m., Monday through Sunday

The proposed typical hours and days of operation are shown on Table 4.

Table 4
Proposed Typical Hours and Days of Operation

Activity	Typical Hours and Days ^{1,2}
Excavation, Aggregate & Recycle Processing	6:00 am - 7:00 pm, Weekdays
Loading, Unloading & Aggregate Trucking ³	4:00 am - 9:00 pm, Weekdays
Asphalt and Ready-Mixed Concrete Plants ⁴	4:00 am-6:00 pm, Weekdays, May-Oct 5:30 am-6:00 pm, Weekdays, Nov-Apr 6:00 am-2:00 pm, Saturdays

¹ Maintenance of mobile and plant equipment extend beyond these hours.

² Continuous 24 hours a day operations may be required for major public road projects that are required to be completed during night hours or on weekends to avoid traffic conflicts or during periods of public emergency affecting the health and safety of the community.

³ Major public road projects may be required to be completed during night hours or on weekends to avoid traffic conflicts. Such projects may require loading operations beyond the hours and days of operation shown.

⁴ Asphaltic oil, cement, propane and other supplies may be delivered during nighttime hours.

8. Number of Customers or Visitors

The existing CUPs permit an interplant haul of up to 225 truckloads per day (or 450 truck trips per day) of raw mined aggregate weekdays via the approximately two-mile route on Friant Road between the Quarry Site and the Plant Site. The aggregate plant currently sells up to 1.4 million tons of aggregate per year of construction material products to the Fresno P-C Region.

Friant Road has been expanded significantly since modifications to the CUPs were approved in 2004 (increasing truck loads from the quarry from 185 loads /day to 225 loads/day). Expansion of Friant Road

from two lanes to four lanes (two lanes both directions) from the town of Friant on the north to Copper Avenue on the south thereby doubling the capacity of Friant Road was completed in 2008.

A traffic study prepared for the project details existing traffic and projected traffic impacts (*Traffic Impact Study, Proposed CEMEX Rockfield Project, Fresno County, California*, Peters Engineering Group, November 2019). The existing and estimated Project vehicle trips (one-way trips) are shown on Table 5.

Table 5
Existing and Estimated Project Trip¹ Generation

Description	Employees	Interplant Truck Haul	All Other Trucks	Total Annual Average Daily Truck Trips
Existing	110	450	240	690
Project Stage 1 at 2.0 MTY (5 yrs)	114	134	560	694
Project Stage 1 at 3.0 MTY (10-30 yrs)	120	216	860	1,076
Project Stage 2 - 3.0 MTY (30-100 yrs)	120	0	944	944

¹. One-way trips

9. Number of Employees

There are currently 55 employees at the combined operations at the Plant Site and Quarry Site. An estimated 60 employees will be employed at full operation of the Project. In addition, there are 22 employees at CEMEX’s concrete plant in South Fresno which is supplied with aggregate products produced at the Plant Site, and 15 employees at CEMEX’s administrative office in Fresno. Approval of the Project would allow the continued employment of 92 full time employees and an estimated 5 additional employees.

10. Access to the Site

Access to the Plant and Quarry Sites will continue to be from Friant Road designated in the Fresno County General Plan as an expressway. Friant Road is a four lane divided road with a speed limit of 65 mile per hour (mph) in the vicinity of the Project sites. There are existing southbound acceleration lanes and northbound left-hand turn pockets adequate to handle truck traffic at both the Plant Site and Quarry Site access roads.

11. Service and Delivery Vehicles

See Table 5.

12. Parking

At the Plant Site on-site parking exists for employees, customers, service/delivery vehicles and concrete mixers (Exhibit C Sheet 2). The proposed, approximately 42-acre plant site at the Quarry Site will have sufficient on-site parking for employees, customers, service/delivery vehicles and concrete mixers (Exhibit C Sheet 6).

13. Goods Produced or Sold On-Site.

At the Plant Site, construction aggregates (rock, sand and gravel) products produced by the existing aggregate processing plant are stockpiled and sold to the on-site ready-mix concrete plant and asphalt plant or sold to outside customers. Ready-mix concrete and asphalt are then sold to customers from the Plant Site. A portable plant is brought in periodically to recycle come-back concrete (unused concrete in mixer upon return to plant) into CMB which is then sold.

During Stage 1, aggregate mined from the Plant Site will be processed at the existing aggregate plant and sold and ready-mix concrete will continue to be sold. The existing, inactive asphalt plant will be replaced by a modern asphalt plant and asphalt sales will resume. The import of concrete and asphalt debris to recycle into CMB and RAP would be added to the Plant Site. CMB would be sold and RAP would be used in asphalt production.

At the Quarry Site, since there is no processing plant, mined aggregate is currently trucked via an interplant haul to the Plant Site for processing. During Stage 1, an aggregate processing plant would be added to the Quarry Site to wash, screen, crush and sort the aggregate mined from the Quarry Site. Those aggregate products produced at the Quarry Site aggregate plant for the asphalt and ready mix plants would be transported approximately 2 miles south to the Plant Site via an interplant haul on Friant Road in the same manner as raw aggregate is currently being transported from the Quarry Site to the Plant Site for the existing operations. Aggregate products produced at the Quarry site, not used by the asphalt and ready-mix plants at the Plant Site, would be sold directly from the quarry.

During Stage 2, the ready-mix concrete plant and the hot-mix asphalt plant would be relocated from the Plant Site to the Quarry Site and ready-mix concrete and asphalt would be produced and sold. The periodic use of a portable plant to recycle concrete and asphalt debris (including imported) into CMB and RAP would be added to the Quarry Site. CMB would be sold and RAP would be used in asphalt production.

14. Equipment

Plant Site

Existing equipment and supporting facilities for the existing aggregate plant include: front-end loaders; water truck; conveyors; screens; screening towers; crushers; washers; sand cyclones; sand screws; sand/aggregate truck loadout bins; pollution control equipment; dewatering equipment and tanks; recycle water pumps; computer control tower; a maintenance shop; quality control lab; fuel tanks; and other accessory equipment and buildings.

Existing equipment and supporting facilities for the ready-mix concrete plant include: front-end loaders; concrete mixer trucks; ground aggregate storage bins; conveyors; batch plant; cement silos; pollution control equipment; storage buildings; mixer truck maintenance shop; batch office; and other accessory equipment.

Existing equipment and supporting facilities for the inactive, diesel-powered asphalt plant include: aggregate storage bunkers; diesel fuel tanks; conveyors; elevators; burner/dryer; storage silos; dust silo; pollution control equipment; storage tanks; control tower; maintenance shop; and other accessory equipment.

Equipment for the diesel powered, portable recycle plant used periodically includes front-loaders, crushers, screens and conveyors.

Removal of material, including topsoil, overburden and aggregate, is accomplished primarily with scrapers with the use of water trucks to minimize dust. Mining equipment includes an excavator, grader, water truck and periodic use of scrapers. Trucks haul mined material to the aggregate plant.

Aggregate and asphalt products are hauled off-site by trucking firms. In addition to CEMEX's concrete mixer trucks other concrete companies can purchase ready-mix concrete and transport it in their own trucks. Trucking firms import cement, asphaltic oil, fuel and construction materials needed to supply the asphalt and ready-mix concrete plants. Concrete and asphalt pavement from construction demolition or road rebuilding sites will be imported to the site by trucking firms for recycling.

Quarry Site

Existing equipment to mine the alluvial deposit includes an excavator, grader, water truck and periodic use of scrapers. The interplant haul is done by trucking firms.

Mining equipment to mine the hard rock will include a drill rig and truck with blasting supplies. If encountered, secondary breakage of oversize material within the quarry will be accomplished by conventional methods including, but not limited to, drop ball or hydraulic breaker. Initially, the shot quarry rock will be loaded into haul trucks by excavators or front-end loaders and transported to the processing plant where the rock will be further crushed, screened, rinsed and sorted. As mining progresses deeper, a primary crusher will be located in the pit and pit material will be transported to the processing facility by means of a conveyor system.

Equipment and supporting facilities for the new aggregate plant include: front-end loaders; water truck; conveyors; screens; screening towers; crushers; washers; sand cyclones; sand screws; sand/aggregate truck loadout bins; pollution control equipment; dewatering equipment and tanks; recycle water pumps; computer control tower; a maintenance shop; quality control lab; fuel tanks; and other accessory equipment and buildings.

Equipment and supporting facilities for the ready-mix concrete plant when it is relocated to the Quarry Site will include: front-end loaders; concrete mixer trucks; ground aggregate storage bins; conveyors; batch plant; cement silos; pollution control equipment; storage buildings; mixer truck maintenance shop; batch office; and other accessory equipment.

Equipment and supporting facilities for the asphalt plant when it is relocated to the Quarry Site will include: aggregate storage bunkers; conveyors, elevators; burner/dryer; storage silos; dust silo; pollution control equipment; storage tanks; control tower; maintenance shop; and other accessory equipment.

Equipment for the diesel powered, portable recycle plant when periodically used will include, but will not be limited to: front-loaders; crushers; screens; and conveyors.

Equipment for the electric-powered, portable aggregate plant if used initially and when the plant site is mined (Phase 5) will include, but will not be limited to: front-loaders; crushers; screens; sand screws; and conveyors.

During Stage 1, aggregate products for use at the asphalt plant and ready-mix concrete plants will be hauled to the Plant Site by trucking firms. Other aggregate products will be hauled off-site by trucking firms. During Stage 2, when the asphalt plant the ready-mix concrete plant are relocated from the Plant Site, , asphalt products will be hauled off-site by trucking firms and ready-mix concrete will be hauled by CEMEX's mixer trucks. Other concrete firms may also purchase ready-mix concrete and transport it in their own trucks. Trucking firms will import cement, asphaltic oil, fuel and construction materials needed

to supply the asphalt and ready-mix concrete plants. Concrete and asphalt pavement from construction demolition or road rebuilding sites will be imported to the site by trucking firms for recycling.

15. Supplies or Materials Used or Stored

At the Plant Site construction aggregates produced by the aggregate processing plant are stockpiled on-site. Cement for use in producing ready-mix concrete is delivered and stored in cement silos at the concrete plant. Asphaltic oil for use by the currently inactive, diesel-powered asphalt plant and for the new asphalt plant to produce asphalt was and will be delivered and stored in tanks in containment. Diesel fuel for the currently inactive asphalt plant was delivered and stored in tanks in containment. When the asphalt plant is replaced by a modern plant, propane may be used as fuel until natural gas is available. Diesel fuel for use by mobile equipment is delivered and stored in a tank in containment. Gasoline for use by the plant pickup trucks is delivered and stored in a tank in containment. Products needed to service the mobile equipment such as gear and lube oil, transmission fluid and various other products are delivered and stored at or near the maintenance shops. Wastes from the facility are stored in designated containers adjacent to the shop in the containment area and/or within the shops are recycled or disposed of in accordance with local, state and federal safety regulations. All materials are stored in accordance with a Hazardous Materials Business Plan and a Spill Prevention Control and Countermeasure Plan.

At the Quarry Site, since there is currently no processing equipment, no materials are stored on-site. Under the proposed Project, construction aggregates (rock, sand and gravel) produced by the new aggregate processing plant will be stockpiled near the processing plant. When the asphalt plant is relocated from the Plant Site propane may be delivered and used as fuel until natural gas is available. Asphaltic oil for use by the asphalt plant to produce asphalt will be delivered and stored in silos or tanks in containment. When the ready-mix concrete plant is relocated from the Plant Site cement will be delivered and stored in cement silos at the concrete plant. Diesel fuel for use by mobile equipment will be delivered and stored in a tank in containment. Gasoline for use by the plant pickup trucks will be delivered and stored in a tank in containment. Products needed to service the mobile equipment such as gear and lube oil, transmission fluid and various other products will be delivered and stored at or near the maintenance shops. Wastes from the facility will be stored in designated containers adjacent to the shop in the containment area and/or within the shops and disposed of in accordance with local, state and federal safety regulations. All materials will be stored in accordance with a Hazardous Materials Business Plan and a Spill Prevention Control and Countermeasure Plan.

16. Appearance, Noise, Glare, Dust and Air Quality or Odor

A. Appearance

The *Visual Impact Assessment for CEMEX Rockfield Modification Project*, Sespe, dated November 8, 2019, conducted for the Project compared the existing (baseline) visual conditions to the proposed Project visual conditions (Attachment B, Existing Conditions Photos). The study made the following findings with respect to visual impact:

1. The Project would not have a substantial adverse effect on scenic vistas and public viewpoints surrounding the Project site;
2. The Project would not substantially damage scenic resources within a State scenic highway;
3. The Project would not substantially degrade the existing visual character of the Project site or surrounding areas, or conflict with any applicable policies or plans meant to protect scenic resources; and
4. The Project would not substantially degrade the existing visual character of the Project site or surrounding areas.

B. Noise and Vibration

The *Environmental Noise and Vibration Assessment, CEMEX Rockfield Modification Project, Fresno County, California*, Bollard Acoustical Consultants, dated November 15 2019, completed for the Project included an evaluation of existing (baseline) noise and vibration levels at the nearest sensitive receptors to both the Plant and Quarry Sites, as well baseline noise environments at sensitive receptor locations along the roadways to be utilized by project truck traffic. The study then estimated the noise and vibration levels from the increase in activities and equipment proposed by the Project.

For the Plant Site, the results of the noise analysis concluded that the Project's noise generation would be below the applicable noise thresholds at the closest residences.

For Quarry Site the results of the noise analysis concluded that Project noise generated within the Quarry Site could exceed applicable noise standards. Noise mitigation measures were provided where such exceedances were identified which would reduce impacts to less than significant with mitigation.

The noise analysis also concluded that project-generated heavy truck traffic will not result in a substantial increase in traffic noise levels at existing sensitive receptors located adjacent to the roadways which will typically be utilized by project heavy truck traffic.

The results of the vibration analysis concluded that the project's vibration generation would be well below thresholds for annoyance and damage to residential structures at the nearest sensitive receptors. This includes vibration generated by both blasting (*Blast Impact Analysis CEMEX Rockfield Quarry, Fresno, California*, Vibra-Tech, September 2019) and vibration generated by heavy earthmoving equipment.

C. Glare

At the Plant Site, there is existing nighttime lighting required to provide a safe working environment. No new nighttime lighting is anticipated.

At the Quarry Site, new nighttime lighting fixtures would be required. Mining operations would occur primarily during daylight hours, however, some operations may occur during nighttime hours. For operations during the time of year when daylight hours are shorter, or during any nighttime operations, lighting would be required to provide a safe working environment. High pressure sodium and/or cut-off fixtures (or equivalent IDA-approved fixtures) would be used instead of mercury-vapor fixtures for any required nighttime lighting. The lighting has been designed to confine illumination to the Project sites and/or to areas that do not include light-sensitive uses. The *Visual Impact Assessment, Sespe*, determined that by employing minimal nighttime lighting fixtures and utilizing the proposed lighting and design features (i.e., downcast lights, high pressure sodium, etc.), the Project would have a less than significant impact associated with light and glare.

D. Dust and Air Quality

At the Plant Site the aggregate plant and ready-mix plant have current Permits to Operate (PTO) from San Joaquin Valley Air Pollution Control District (SJVAPCD). An Authority to Construct (ATC) for the new modern asphalt plant to replace the existing asphalt plant will be obtained from the SJVAPCD. The portable recycle plant brought in periodically to recycle concrete and asphalt operates under a portable PTO.

The facility complies with the SJVAPCD Regulation VIII, “Fugitive PM10 Prohibition”. A water truck is used to control dust on the facilities unpaved and paved roads. A street sweeper is used to control dust and track out at the plant entrance.

At the Quarry Site, the operation complies with the SJVAPCD Regulation VIII. A water truck is used to control dust on the facilities unpaved and paved roads. A street sweeper is used to control dust and track out at the quarry entrance. An ATC will be obtained from the SJVAPCD for the new aggregate plant. ATCs will be obtained for the ready-mix concrete plant and the asphalt plant when they are relocated from the Plant Site.

The *Air Quality, Health Risk, and Climate Change Impact Assessment* (Sespe, December 2019) conducted for the Project made the following findings with respect to Air Quality and Greenhouse Gasses (GHG):

1. The Project would not conflict with or obstruct implementation of any applicable air quality plan; potential conflicts with applicable air quality plans have been analyzed and ruled out;
2. The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard;
3. The Project would not expose sensitive receptors to substantial pollutant concentrations provided mitigations and refinements are implemented;
4. The Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people;
5. The Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and
6. The Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Potential conflicts with applicable air quality plans have been analyzed and ruled out

E. Odor

Refer to 16.D.4 above.

17. Solid or Liquid Wastes

At the Plant Site, domestic sewage will continue to be handled by conventional septic systems and serviced as necessary by commercial septic services. Solid waste, e.g. parts packaging, paper, etc., will continue to be deposited in dumpsters for pickup and disposal by a licensed solid waste disposal company.

At the Quarry Site, domestic sewage will be handled by conventional septic systems and serviced as necessary by commercial septic services. Solid waste, e.g. parts packaging, paper, etc., will be deposited in dumpsters for pickup and disposal by a licensed solid waste disposal company.

18. Estimated Volume of Water Used

At the Plant Site, there are two (2) groundwater wells. In addition, four (4) groundwater monitoring wells have been installed on the perimeter of the property. Groundwater levels from 2018 to 2019 ranged from 21-34 feet bgs (current surface).

The San Joaquin River is located approximately 0.6 miles to the west of the Plant Site. CEMEX has water rights to use river water for industrial purposes in connection with the processing of rock, sand and gravel. Water is diverted from the river to the Plant Site via a ditch and the water is then used to wash the aggregate. After processing and cleaning the aggregate, water with fines washed from the aggregate is sent to the silt ponds where the silts and fines are settled out. Water from the silt ponds is then recycled back to the plant as process water and water from the river water is added as necessary. The water trucks also use water recycled from the silt ponds to control dust on the haul roads at the plant site. Currently approximately 386 acre-feet per year (af/y) of river water is consumed for aggregate processing. In addition the silt ponds, serve as a source of recharge to the groundwater.

Approximately 36-af/y of groundwater from on-site wells is consumed by the ready-mix concrete operations (35-af/y) and for domestic use (1-af/y), i.e. toilets, washing hands, etc.

Once the aggregate plant at the Quarry Site is in operation aggregate processing at the Plant Site will be reduced by an estimated 80%. Total consumptive use of river water will be reduced to an estimated 102-af/y. The planned increase in concrete production will increase groundwater consumptive use to an estimated 60-af/y.

At the Quarry Site, the San Joaquin River is located along the west side of the site. No surface water from the river is used at the site. There are two (2) groundwater wells on site. In addition, fourteen (14) groundwater monitoring wells have been installed around the property. Groundwater levels from 2017 to 2019 ranged from 15-36 feet bgs.

Groundwater and surface runoff from rainfall accumulates in ponded pits created from historic and current mining and is pumped out to accommodate mining operations. Water is used by water trucks for dust control, and is pumped to the existing groundwater recharge pond in the northeast corner of the site or is pumped to existing groundwater recharge trenches along the western boundary of the site. Existing total consumptive use is estimated to be 185-af/y.

The Project would deepen mining at the existing Quarry Site to include the hardrock and an aggregate processing plant would be added to the Quarry Site. Surface runoff from rainfall and/or groundwater encountered within the excavation will be pumped to the aggregate plant as process water to wash the rock. Approximately 10 % of the process water will be retained by the aggregate products. Residual wash water (approximately 90 %) will be sent to a silt pond to settle out silts. Water from the silt pond will then be recycled back to the plant as process water. Additional water accumulated in the excavation will continue to be used by water trucks for dust control, pumped to the existing groundwater recharge pond in the northeast corner of the site and pumped to groundwater recharge trenches along the western boundaries of the site. Approximately 57-af/y of groundwater from the existing well will be consumed when the ready-mix concrete plant (56-af/y) is added to the site and for domestic use (1-af/y). When sales reach 3.0 MT per year, total consumptive use of surface runoff from rainfall and groundwater encountered within the excavation and groundwater pumped from wells will be an estimated 240-af/y.

19. Flood Potential Assessment

A summary of the results of the *Hydraulic Analyses for the CEMEX Rockfield Modification Project*, Chang Consultants, dated November 18, 2019 is described below.

The San Joaquin River flows in a southerly direction approximately one half mile west of the Plant Site and along the western boundary of the Quarry Site. The river has been mapped on the Federal Emergency Management Agency's (FEMA) *Flood Insurance Rate Maps* (FIRMs). Both a 100-year Zone AE (base

flood elevations determined) floodplain and regulatory floodway for the river are delineated on the FIRMs.

At the Plant Site, the FIRM for the San Joaquin River regulatory floodway does not encroach the Plant Site. Therefore, the Plant Site meets the local and federal floodway regulations. Little Dry Creek flows in a westerly direction north of the Plant Site and confluences with the San Joaquin River approximately one-half mile west of the Plant Site. FEMA's San Joaquin River floodplain and FEMA's Little Dry Creek Zone A (no base flood elevations determined) floodplain encroach into portions of the Plant Site. However, the November 2018 topographic mapping covering the Plant Site indicated that the topography has changed in this area. An engineering assessment of the San Joaquin River and Little Dry Creek floodplain impacts was conducted using the effective 100-year water surface elevations plotted on the November 2018 topographic mapping. The updated San Joaquin River floodplain indicates the floodplain does not encroach into the Plant Site.

At the Quarry Site, the FIRM for the San Joaquin River regulatory floodway does not encroach into the Quarry Site. FEMA's San Joaquin River floodplain does encroach into portions of the Quarry Site. However, the November 2018 topographic mapping covering the Quarry Site indicated that the topography has changed in this area. An updated existing condition 100-year HEC-RAS analysis was prepared along the Quarry Site and was used to define the current floodplain and identify potential impacts on the quarry. The existing condition analysis indicates that the current floodplain is significantly different than FEMA's FIRM floodplain in several areas. The analysis determined the existing condition floodplain does not encroach the Quarry Site.

20. Slope Stability

For the Plant Site vertical cut slopes, to be reconstructed to 2:1 (h:v) fill, will be subject to a slope stability study to confirm the final slope configurations will meet the minimum factor of safety.

For the Quarry Site Tetra Tech prepared the *Geological and Geotechnical Assessment Report CEMEX Rockfield Modification Project*, dated April 2019. The study concluded that proposed mining slopes as well as the final slopes are greater than the calculated static factors of safety and the proposed slopes are therefore considered statically stable. Under the assumed groundwater conditions the pseudo-static factors of safety are greater than the calculated pseudo-static factors of safety and the proposed slope configurations are therefore the are considered seismically stable. The slope stability analyses were performed based on "backcalculated" groundwater regime/pore pressure distribution within the slopes. This "back-calculated" groundwater regime/pore pressure distribution will need to be verified either by focused field investigations consisting of installation of piezometers and permeability packer tests prior to the commencement of the mining operations, or by development of a mitigation plan combined with implementation of a monitoring program during mining.

A slope stability analysis of the river embankment relating to potential blasting effects was also conducted as described in Section 21 below.

21. Blasting

As previously discussed, mining the hardrock at the Quarry Site would require drilling and blasting. The *Blast Impact Analysis CEMEX Rockfield Quarry*, dated April 2019, prepared by Vibra Tech, determined that several different blast designs can be utilized, and based on the distance to the closest receptors, the applicable vibration and/or air overpressure criteria will not be exceeded. The study concluded that blasting at the Quarry Site can be utilized with no adverse effect on surrounding structures and residents from ground or air vibrations. The study also included a slope stability analysis of the river embankment

and determined that the recommended vibration limit will result in no effects on the structural integrity of the river embankment due to blast induced ground vibration. The study recommends ground vibration be monitored with digital seismographs at the closest residential/commercial structures, the closest wells, and at several locations along the crest of the East side of San Joaquin River embankment and that necessary adjustments be made to the blast plan as blasting progresses.

22. Existing and Proposed Advertising

Existing company identification signs are located at the entrance roads to both the Plant Site and the Quarry Site in accordance with County signage regulations.

23. Existing or New Buildings

At the Plant Site existing buildings include an aggregate processing plant, a ready-mix concrete plant, a hot-mix asphalt plant and related supportive facilities. The existing asphalt plant would be replaced with a modern plant.

At the Quarry Site an aggregate processing plant will be added (Attachment C, Elevations and Photos of Proposed Plant Equipment). The plant will utilize crushing, screening and washing equipment to create different construction grade products. Finished products will be stockpiled for later sale. Operation of the plant will be controlled from a control room. A portable aggregate processing plant may be used initially until the permanent plant is constructed and when the plant site (Phase 5) is mined as the last phase of the project.

When the hot-mix asphalt plant is relocated from the Plant Site, it will utilize aggregate products from the aggregate processing plant in a natural gas or propane-fired dryer/burner and will be mixed with liquid asphaltic cement to produce asphalt. The hot mixed asphalt concrete may be discharged directly into trucks from the mixer or conveyed to storage silos for discharge into trucks at a later time. Operation of the plant will be operated from a control room.

When the ready-mix concrete plant is relocated from the Plant Site, aggregate products from the aggregate plant and cement (imported by truck and stored in silos) will be weighed and deposited directly into the mixer truck drum. Water will be added to the truck and the concrete will be mixed during transportation to the job site. Return concrete (concrete which is unused at the jobsite and returned to the site in the ready-mix trucks) will be stockpiled for later recycling into miscellaneous road base (CMB). Operation of the plant will be operated from a control room.

A portable recycle plant (operating under a portable air permit) will be periodically brought in to recycle excess asphalt produced and stockpiled at the asphalt plant and stockpiled return concrete. The recycle plant will also recycle concrete and asphalt pavement imported to the site from construction demolition or road rebuilding sites. Asphalt or concrete to be recycled will be fed through a crusher(s), screens and conveyors and then stockpiled. The recycled concrete will be sold as CMB. The crushed asphalt debris and stockpiled, unsold asphalt will be recycled as RAP and later blended with fresh asphalt concrete. Recycling of old concrete and asphalt reduces the volume of fill in local landfills and helps extend the available aggregate reserves in Fresno County.

24. Buildings or Portion of Buildings Used in the Operation

Please refer to Item 23 above

25. Outdoor Lighting or Outdoor Sound Amplification System

At the Plant Site as described in Section 7 above, operations will occur primarily during daylight hours. No changes are proposed to the existing outdoor lighting required to provide a safe operating environment during the time of year when daylight hours are shorter or for any nighttime operations (refer to Section 16C). No changes are proposed to the existing safety alarms on the moving equipment such as conveyors on the plants. All mobile equipment is equipped with backup alarms. The *Environmental Noise and Vibration Assessment*, (Bollard), determined the project's noise generation would be below the applicable noise thresholds at the residences located closest to the existing Plant Site.

At the Quarry Site, as described in Section 7 above, operations will occur primarily during daylight hours. Operations during the time of year when daylight hours are shorter or for any nighttime operations will require lighting to provide a safe operating environment. Shielded lighting utilizing high pressure sodium and/or cut-off fixtures (or equivalent IDA-approved fixtures) instead of mercury-vapor fixtures will be used for any required nighttime lighting of the processing facilities. The lighting will also be designed to confine illumination to the Project Site, and/or to areas that do not include light-sensitive uses (refer to Section 16C).

Moving equipment on the plants, such as conveyors, will be equipped with safety alarms and all mobile equipment will be equipped with backup alarms. The *Environmental Noise and Vibration Assessment*, (Bollard), proposed noise mitigation measures, such as acoustic growler-type backup warning systems rather than conventional beepers, which would reduce impacts to less than significant with mitigation.

26. Landscaping or Fencing

At the Plant Site, there is an existing landscaped screen along the Friant Road frontage in accordance with the current CUP conditions and which will remain for the Project. The perimeter of the property along Friant Road is fenced with four (4) foot high, barbed wire ranch fencing. The chain link entrance gate is at least twenty-four (24) feet wide.

At the Quarry Site, there is an existing, minimum five (5) foot high screening berm along the Friant Road frontage and a minimum fifteen (15) screening berm along the south property line extending from the southwest corner of the site to approximately 475 feet from the Friant Road right-of way in accordance with the current CUP conditions. The berms will remain in place for the Project. The perimeter of the property along Friant Road and the south property line is fenced with four (4) foot high, barbed wire ranch fencing. The property line between Lost Lake Park and the project is fenced with six (6) high chain-link fencing. The entrance gate is at least twenty-four (24) feet wide.