Teichert Shifler Mining and Reclamation Project

SCH# 2019089053

Draft Environmental Impact Report

Volume II of III (Appendices A-C)

Prepared for
Yolo County

December 2020

Prepared by

RANEY PLANNING & MANAGEMENT, INC. 20 years
1501 Sports Drive, Suite A, Sacramento, CA 95834

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Taro Echiburú, DIRECTOR

County of Yolo

DEPARTMENT OF COMMUNITY SERVICES

Planning, Building & Public Works
292 West Beamer Street
Woodland, CA 95695-2598
(530) 666-8775
FAX (530) 666-8156
www.yolocounty.org

Environmental Health
292 West Beamer Street
Woodland, CA 95695-2598
(530) 666-8646
FAX (530) 669-1448
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Integrated Waste Management
44090 CR 28 H
Woodland, CA 95776
(530) 666-8852
FAX (530) 666-8853
www.yolocounty.org

DATE: August 16, 2019

TO: California State Clearinghouse, Responsible Agencies, Trustee Agencies, Interested Parties and Organizations

SUBJECT: **Notice of Preparation and Notice of Scoping Meeting for the Draft Environmental Impact Report (EIR) for the proposed Teichert Shifler Mining and Reclamation Project.**

PROJECT TITLE: Teichert Shifler Mining and Reclamation Project (ZF2018-0078)

COMMENT PERIOD: August 16, 2019 to September 16, 2019

SCOPING MEETING: September 12, 2019

Yolo County is the lead agency for the preparation of an Environmental Impact Report (EIR) for the proposed Teichert Shifler Mining and Reclamation Project (proposed project) in accordance with the California Environmental Quality Act (CEQA), Section 15082. The purpose of the Notice of Preparation (NOP) is to solicit the views of your agency as to the scope and content of the EIR based on your agency's area of statutory responsibility, as related to the project. Your agency will need to use this EIR when considering relevant permits or other approvals for the project. The County is also seeking the views of residents, property owners, and concerned citizens regarding issues that should be addressed in the EIR. The project description is summarized below. A meeting to discuss the appropriate scope of the EIR has been scheduled, as indicated below.

COMMENT PERIOD: Comments can be sent anytime during the 30-day NOP comment period. **The comment period begins August 16, 2019 and ends September 16, 2019 at 5:00 pm.** All comments must be directed to the following contact/address:

Stephanie Cormier, Principal Planner
Yolo County Department of Community Services
292 West Beamer Street
Woodland, CA 95695
stephanie.cormier@yolocounty.org

SCOPING MEETING: A public scoping meeting will be held by the County to inform interested parties about the proposed project, and to provide agencies and the public with an opportunity to provide comments on the scope and content of the EIR. The meeting will be held on September 12, 2019, at 8:30am before the Yolo County Planning Commission at the County Board of Supervisors Chambers in the Yolo County Administration Building at 625 Court Street in Woodland, CA 95695.

PROJECT LOCATION: The project site consists of approximately 319 acres located north of County Road (CR) 22 and east of CR 94B, southwest of Teichert's existing mining operation three miles west of the City of Woodland in Yolo County, California (see Figure 1 and Figure 2). Mining is proposed on approximately 277 acres. The site contains all or portions of four parcels identified by APNs 025-120-032, 025-120-033, 025-430-001, and 025-430-002.

PROJECT DESCRIPTION: The proposed project is mining of 41.6 million tons (35.25 million tons sold) of aggregate resources (sand and gravel) over a requested 30-year period at an annual rate not to exceed 2.6 million tons mined per year (2.2 million tons sold). Mining is proposed in two phases (see Figure 3). Reclamation is proposed in three phases (see Figure 4) to reclaim 116 acres of agricultural uses and 161 acres of pond and habitat uses. As a component of the project, the applicant proposes relocation of the Moore Canal to the northerly portion of the project site. The project requires the following approvals from Yolo County: general plan amendment; Cache Creek Area Plan (CCAP) amendment; rezoning; mining permit approval; reclamation plan approval; Yolo County Code Section 10.4-405 20% Exceedance approval; streambank stabilization plan; flood hazard development permit (FHDP); and development agreement. If additional approvals are required they will be identified through the environmental impact analysis.

PROBABLE ENVIRONMENTAL EFFECTS OF THE PROJECT: The County has determined that implementation of the proposed project may result in impacts in the following areas: Aesthetics; Agricultural Resources; Air Quality, Greenhouse Gas (GHG) Emissions, and Energy; Biological Resources; Cultural and Tribal Cultural Resources; Geology, Soils, and Mineral Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Noise; Transportation; Public Services (including Recreation), Utilities, and Service Systems; Alternatives Analysis; Other Required Sections. If significant impacts are identified, the EIR will include mitigation measures to reduce these impacts to a less-than-significant level, if feasible.

An Initial Study has been prepared to substantiate this initial determination regarding the scope of the EIR. Comments on this initial determination of the appropriate scope of the EIR are welcomed and should be submitted as directed in this notice. The Initial Study is available online at: https://www.yolocounty.org/community-services/planning-public-works/planning-division/current-projects or by contacting County staff using the contact information provided in this notice. Based on the conclusions reached in the Initial Study, the County has further determined that the project would not result in significant adverse environmental impacts in the following issue areas: impacts along scenic highways; conflicts with agricultural zoning or Williamson Act; impacts to forestry resources; impacts from use of hazardous materials near a school; exposure to noise impacts from air traffic; impacts related to population and housing; increased demand for schools; increased demand for parks and recreation facilities; impacts to waste water treatment plants; impacts to solid waste capacity and regulatory compliance, or wildfire impacts. Therefore, these issue areas will not be analyzed in the EIR.

Stephanie Cormier, Principal Planner
Yolo County Department of Community Services
(530) 666-8041
Stephanie.cormier@yolocounty.org

Signature: _____ Date: August 15, 2019

Attachments – Figures 1 through 4

Figure 1
Regional Project Location

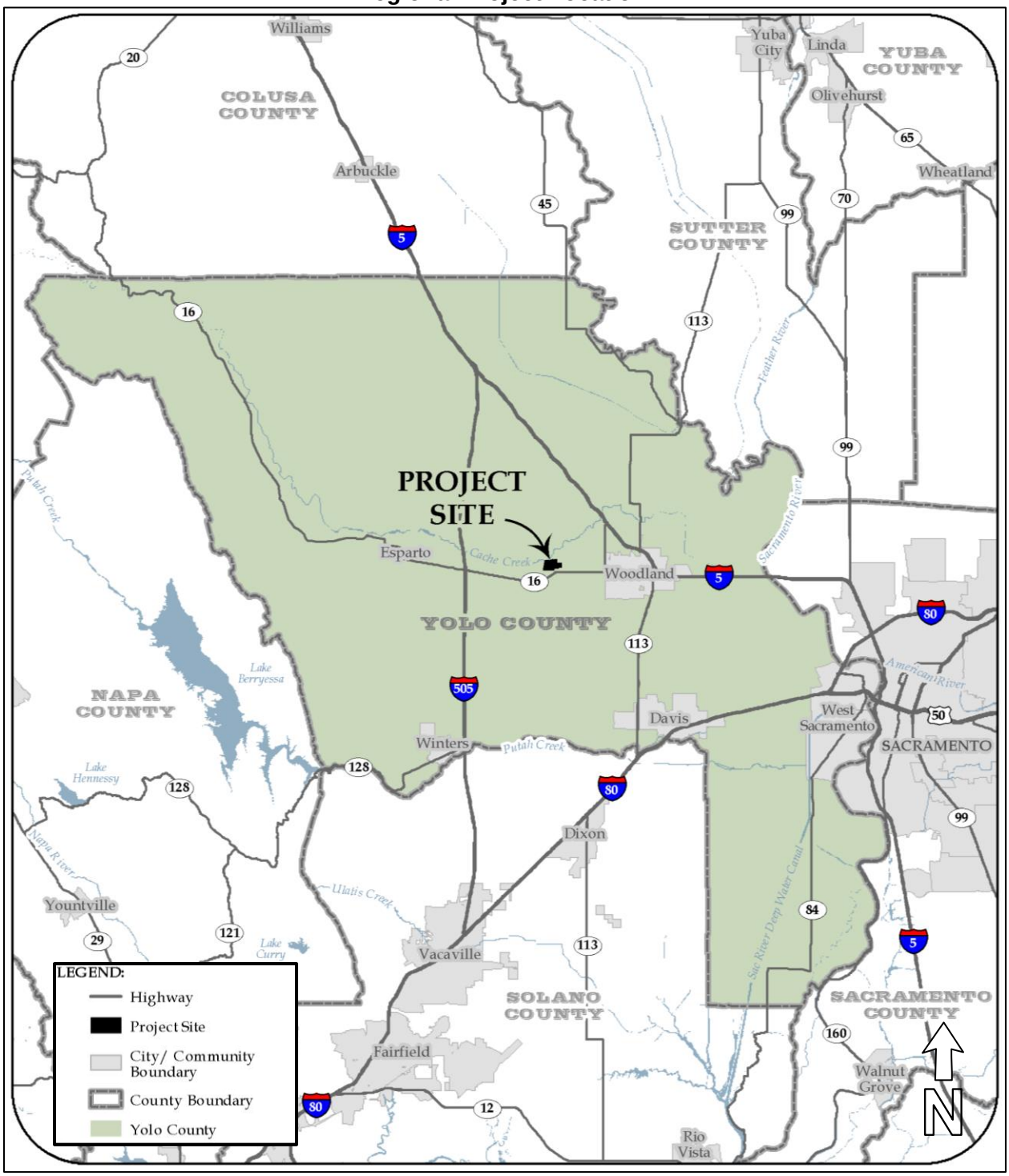


Figure 2
Project Site Boundaries

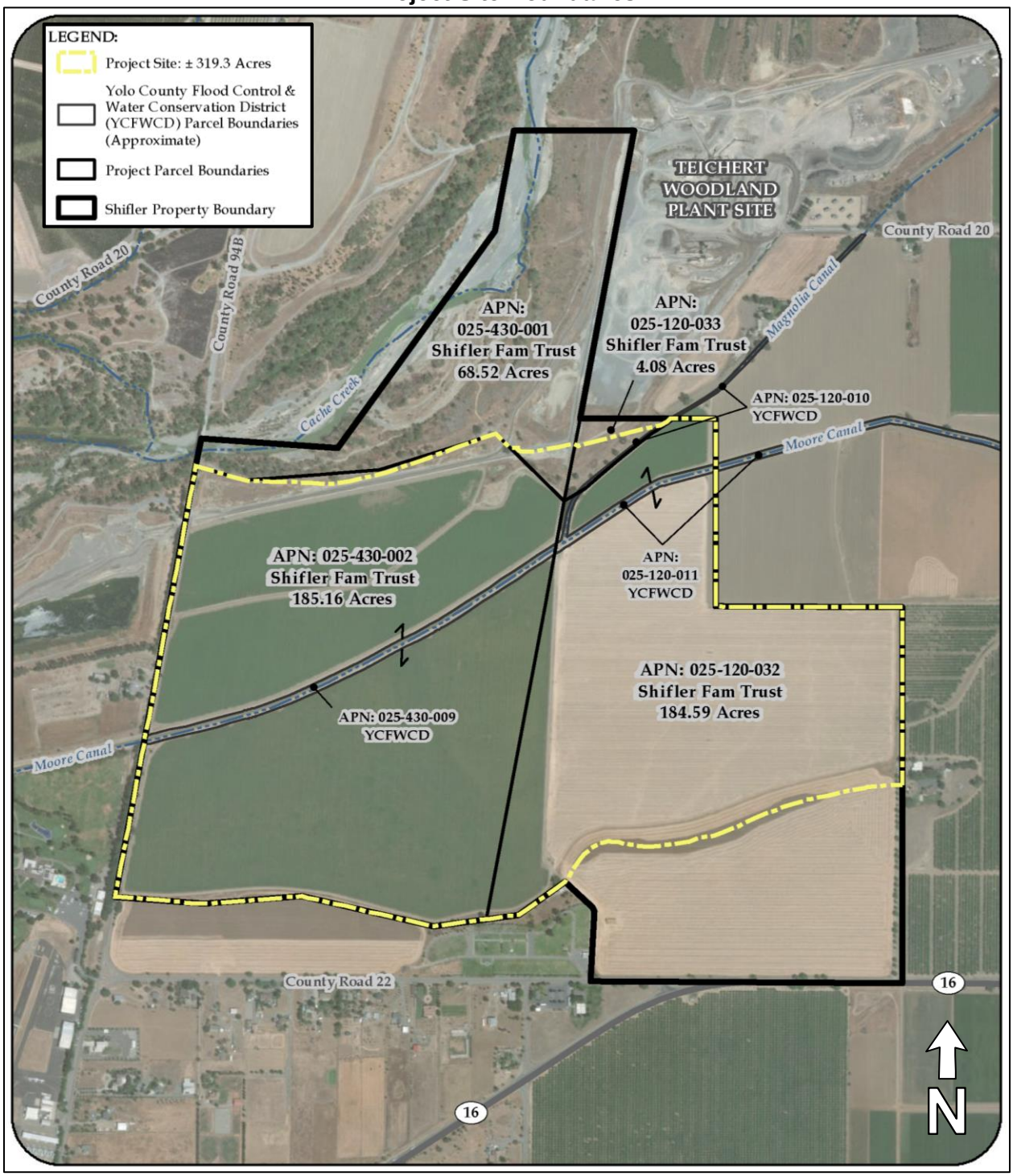


Figure 3
Proposed Mining Plan

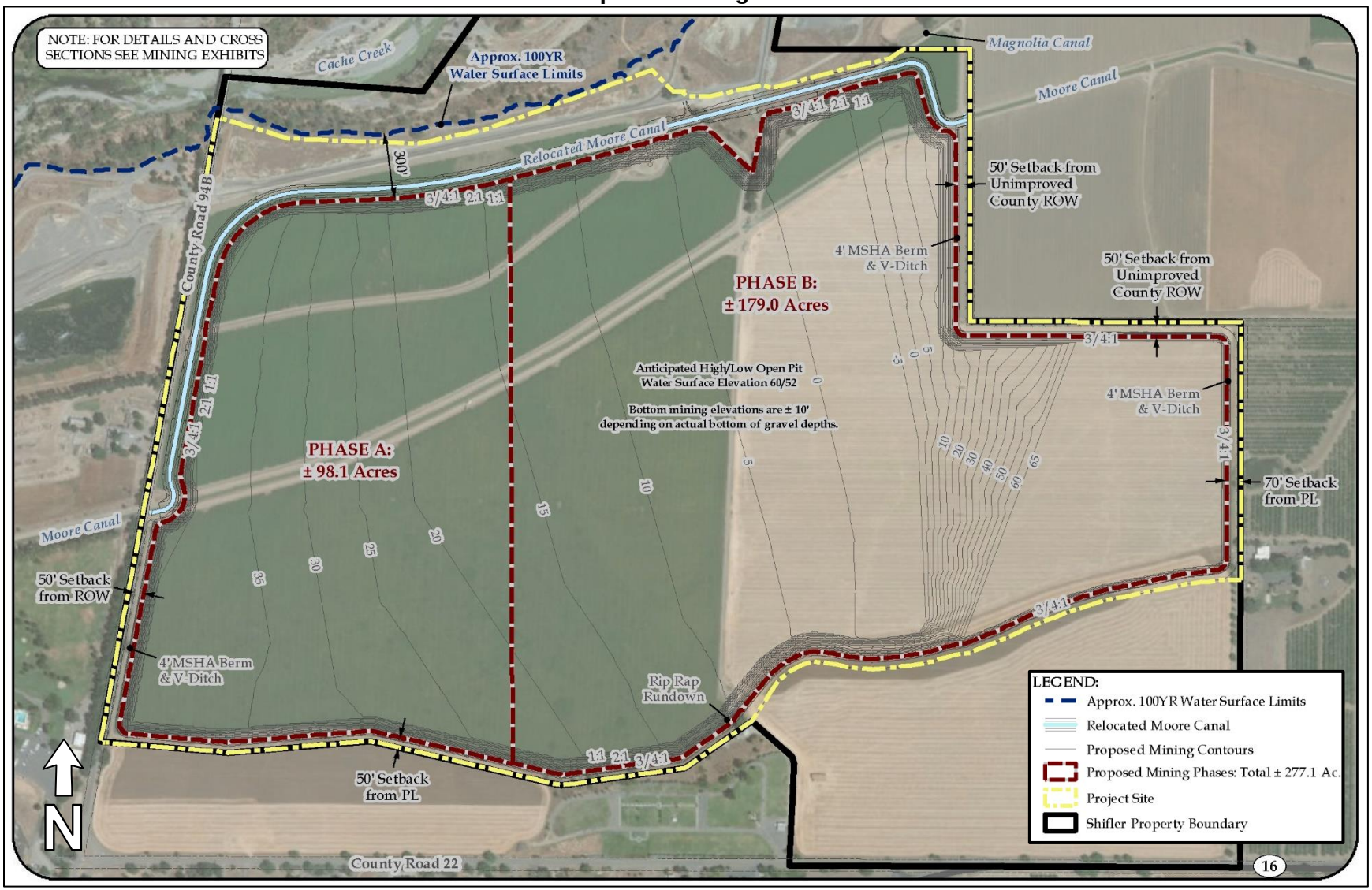
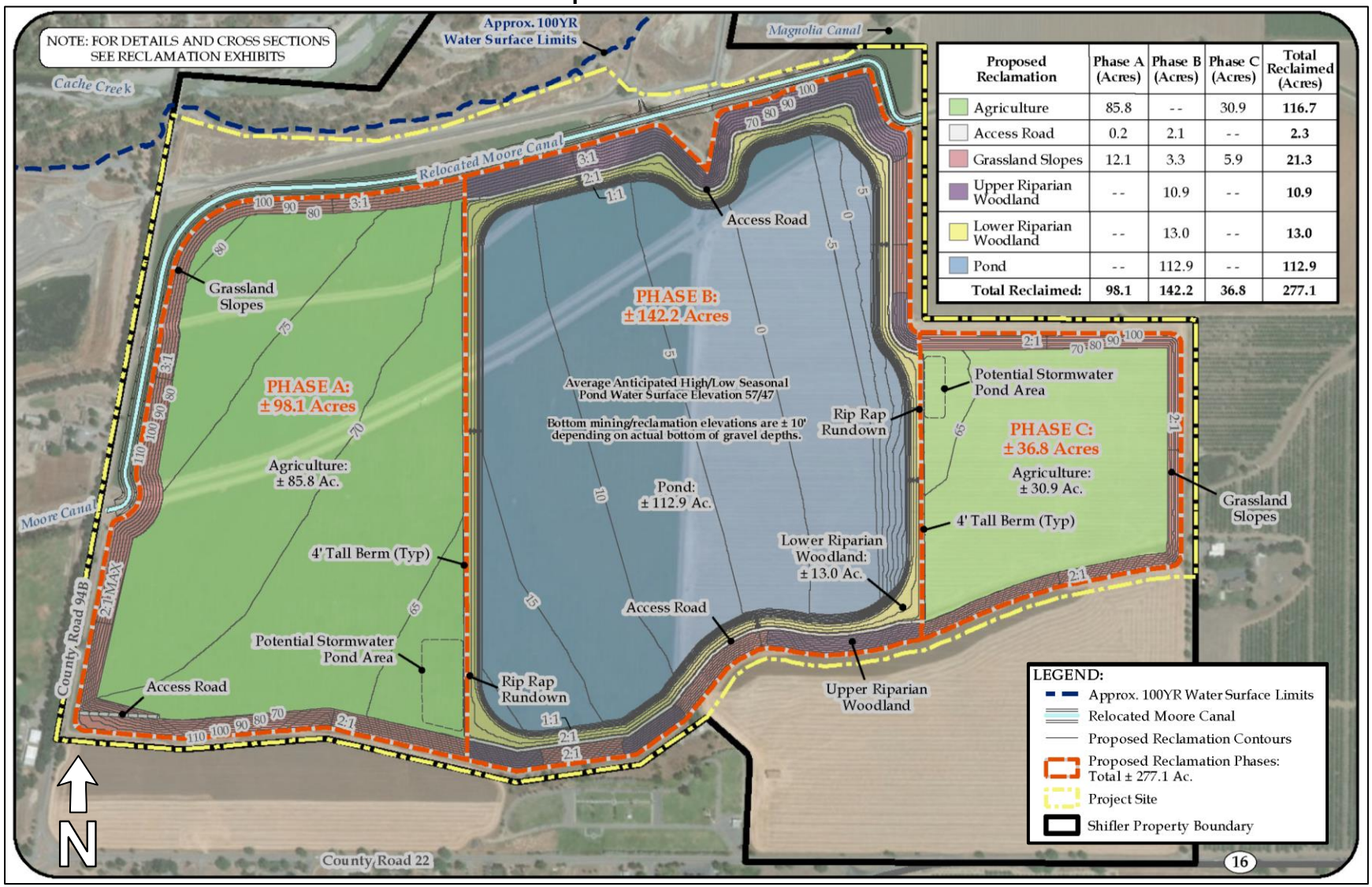


Figure 4
Proposed Reclamation Plan



Proposed Reclamation	Phase A (Acres)	Phase B (Acres)	Phase C (Acres)	Total Reclaimed (Acres)
Agriculture	85.8	--	30.9	**116.7**
Access Road	0.2	2.1	--	**2.3**
Grassland Slopes	12.1	3.3	5.9	**21.3**
Upper Riparian Woodland	--	10.9	--	**10.9**
Lower Riparian Woodland	--	13.0	--	**13.0**
Pond	--	112.9	--	**112.9**
Total Reclaimed:	**98.1**	**142.2**	**36.8**	**277.1**

County of Yolo
Department of Community Services

Teichert Shifler Mining and Reclamation Project

Initial Study

August 2019

RANEY PLANNING & MANAGEMENT, INC. | 20 years
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INITIAL STUDY

August 2019

A. BACKGROUND

1. Project Title: Teichert Shifler Mining and Reclamation Project (Zone File #2018-0078)

2. Lead Agency Name and Address: County of Yolo
Department of Community Services
292 W. Beamer St.
Woodland, CA 95695

3. Contact Person and Phone Number: Stephanie Cormier
Principal Planner
(530) 666-8041

4. Project Location: Northeast of County Road 94B/County Road 22
Yolo County, CA
APNs 025-120-032, 025-120-033,
025-430-001, and 025-430-002

5. Project Sponsor's Name and Address: Teichert Materials
P.O. Box 15002
Sacramento, CA 95815
(916) 484-3317

6. Existing General Plan Designation: Agriculture (AG) and Mineral Resources Overlay

7. Existing Zoning Designation: Agricultural Intensive (A-N)

8. Proposed Zoning Designation: A-N/Sand and Gravel Overlay (SG-O)

9. Required Approvals from
Other Public Agencies: Moore Canal relocation (YCFCWCD Board of Directors)
Section 404 Permit (U.S. Army Corps of Engineers)
Water Quality Certification (Central Valley RWQCB)
Waste Discharge Requirements (Central Valley RWQCB)
SMARA Compliance Review (California Department of Conservation)

10. Surrounding Land Uses and Setting:

The project site consists of approximately 319 acres located three miles west of the City of Woodland in Yolo County, California. Currently, the central and southern portions of the project site consist primarily of actively managed agricultural land. Surrounding land uses include Teichert's Woodland Plant site to the northeast; Teichert's Storz mining site and the Cache Creek Nature Preserve to the northwest; agricultural land to the west; the Yolo Fliers Club golf course, the Watts-Woodland Airport, and Wild Wings residential subdivision

to the southwest; the Monument Hill Memorial Park cemetery and residences to the south; and agricultural lands to the east.

11. Project Description Summary:

The proposed project is mining of 41.6 million tons (35.25 million tons sold) of aggregate resources (sand and gravel) over a requested 30-year period at an annual rate not to exceed 2.6 million tons mined per year (2.2 million tons sold). Mining is proposed in two phases (see Figure 3). Reclamation is proposed in three phases (see Figure 4) to reclaim 116 acres of agricultural uses and provide 161 acres of pond and habitat uses. As a component of the project the applicant proposes relocation of the Moore Canal to the northerly portion of the project site. The project requires the following approvals from Yolo County: general plan amendment; Cache Creek Area Plan (CCAP) amendment; rezoning; mining permit approval; reclamation plan approval; Yolo County Code Section 10.4-405 20% Exceedance approval; streambank stabilization plan; flood hazard development permit (FHDP); and development agreement. If additional approvals are required they will be identified through the environmental impact analysis.

12. Status of Native American Consultation Pursuant to Public Resources Code Section 21080.3.1:

In compliance with California Public Resources Code (PRC) Section 21080.3.1 (also known as Assembly Bill (AB) 52), a project notification letter was distributed on December 18, 2019 to five tribes requesting consultation in Yolo County. On January 10, 2019, the Yocha Dehe Wintun Nation responded with a request to initiate formal consultation on the project. Consultation efforts between the County and the Yocha Dehe Wintun Nation are ongoing.

B. SOURCES

The technical reports referenced in this Initial Study are available upon request and prior arrangement at the public counter at the Yolo County Department of Community Service, Planning Division located at 292 West Beamer Street, Woodland, CA 95695. The following documents are referenced information sources used for the purposes of this Initial Study:

1. California Department of Conservation. *California Important Farmland Finder.* Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed January 2019.
2. California Department of Forestry and Fire Protection. *Yolo County, Fire Hazard Severity Zones in LRA*. October 5, 2007.
3. California Department of Transportation. *California Scenic Highway Mapping System*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed February 2019.
4. County of Yolo. *2018 Yolo Operational Area Multi-Jurisdictional Hazard Mitigation Plan.* December 2018.
5. County of Yolo. *Cache Creek Area Plan*. As amended.
6. County of Yolo. *2030 Countywide General Plan*. As amended.
7. County of Yolo. *Development Impact Fee Annual Report, FY 2016-2017.* December 2017.
8. County of Yolo. *Yolo County 2030 Countywide General Plan EIR*. SCH # 2008102034 certified November 10, 2009.
9. Department of Toxic Substances Control. *EnviroStor.* Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed February 2019.

10. Geocon Consultants, Inc. *Slope Stability Evaluation, Teichert Shifler Mining and Reclamation Project, Yolo County, California.* May 2016.
11. Peak & Associates, Inc. *Cultural Resource Assessment for the Shifler Mining and Reclamation Project, Yolo County, California.* January 2015.
12. Sacramento Area Council of Governments. *Watts-Woodland Airport, Comprehensive Land Use Plan.* Amended March 1993.
13. State Water Resources Control Board. *GeoTracker.* Available at: https://geotracker.waterboards.ca.gov/. Accessed February 2019.
14. Teichert Aggregates. *Wetland Delineation for Shifler Property, Yolo County, California.* May 18, 2012.
15. Teichert Materials. *Biological Resources Assessment, Teichert Shifler Mining Project, Yolo County, California.* June 2018.
16. U.S. Army Corps of Engineers. *Preliminary Jurisdictional Determination Form.* July 2, 2012.
17. Yolo-Solano Air Quality Management District. *Handbook for Assessing and Mitigating Air Quality Impacts*. July 11, 2007. Available at: http://www.ysaqmd.org/documents/CEQAHandbook2007.pdf. Accessed April 2019.

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or as indicated by the checklist on the following pages.

☒ **Aesthetics**	☒ **Agriculture and Forest Resources**	☒ **Air Quality**
☒ **Biological Resources**	☒ **Cultural Resources**	☒ **Energy**
☒ **Geology and Soils**	☒ **Greenhouse Gas Emissions**	☒ **Hazards and Hazardous Materials**
☒ **Hydrology and Water Quality**	☒ **Land Use and Planning**	☒ **Mineral Resources**
☒ **Noise**	☐ **Population and Housing**	☒ **Public Services**
☒ **Recreation**	☒ **Transportation**	☒ **Tribal Cultural Resources**
☒ **Utilities and Service Systems**	☐ **Wildfire**	☒ **Mandatory Findings of Significance**

D. DETERMINATION

On the basis of this initial study:

☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

August 15, 2019
Date

Stephanie Cormier, Principal Planner
Printed Name

County of Yolo
For

E. REGULATORY FRAMEWORK

The following sections describe the regulatory framework applicable to the proposed project, including relevant plans and ordinances, as well as previous approvals associated with operations at the nearby Teichert Woodland Plant.

Relevant Plans and Ordinances

The Surface Mining and Reclamation Act (SMARA) was enacted by the State legislature in 1975 as a means of minimizing adverse environmental effects of surface mining, ensuring that mined lands are reclaimed to a usable condition and that the production and conservation of mineral resources are encouraged. Among other provisions, SMARA establishes State policy regarding reclamation of mined lands and minerals management practices. The proposed project would be subject to the requirements of SMARA.

In June 1996, Yolo County adopted the Cache Creek Area Plan (CCAP). The CCAP consists of two distinct complementary plans governing different areas of the overall plan area: The Cache Creek Resources Management Plan (CCRMP) and the Off-Channel Mining Plan (OCMP). In 2015, the County initiated an update to the CCAP to reflect changes in creek conditions, analysis of collected data, and new regulatory requirements. The update is underway and is expected to be complete prior to release of the Draft EIR for this project.

The OCMP represents an integrated planning framework for regulating off-channel gravel mining operations in the Cache Creek area. The ordinances that implement the OCMP include the Off-Channel Surface Mining Ordinance (OCSMO) and the Surface Mining Reclamation Ordinance (SMRO). These ordinances contain mining and reclamation requirements designed to protect public safety and the environment, protect water resources, conduct monitoring, and establish financial assurances. The proposed project would be subject to the provisions of the CCAP and all relevant implementing ordinances.

F. BACKGROUND AND INTRODUCTION

Teichert has been operating along Cache Creek near the City of Woodland since the 1950s. Teichert was one of the original participants in the CCAP. In 1996, Teichert received approvals for two long-term channel operations: Teichert Esparto and Teichert Woodland. Teichert Woodland included the Woodland Plant, as well as the Muller and Storz Properties. Subsequently Teichert received approval in 2012 for the Teichert Schwarzgruber operation, which amended the 1996 Teichert Woodland approval.

Currently, the Teichert Woodland, Esparto, and Schwarzgruber operations are permitted to mine a combined annual maximum of 2.6 million tons of aggregate (2.2 million tons sold). Teichert proposes to complete mining and reclamation at these sites and transfer the total combined annual tonnage to the Shifler site as part of a new proposed 30-year mining permit.

Mining on the Muller and Storz properties is complete. Reclamation activities on the Muller property are complete, and reclamation of the Storz property is currently underway. Mining on the Schwarzgruber property will be commencing at any time, and the applicant expects mining to conclude within approximately two years. The proposed project will entitle new land within the CCAP planning area for mining and provide an uninterrupted supply of material to the Teichert-Woodland plant following completion of mining at the Schwarzgruber site.

Section 8-2.233(d) of the Yolo County Code requires that any general plan amendments proposed by a private party must first be authorized for further study by the Board of Supervisors. On December 16, 2014, the County Board of Supervisors held a public hearing and authorized processing of the Teichert Shifler application.[1]

Approach to CEQA Analysis

This Initial Study identifies and analyzes the potential environmental impacts of the proposed project. The information and analysis presented in this document are organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. Where the analysis provided in this document identifies potentially significant environmental effects of the project, further evaluation of such effects will be provided in the EIR to be prepared for the project.

G. PROJECT DESCRIPTION

The following provides a description of the project site location and setting, as well as the proposed project components and the discretionary actions required for the project.

Project Location and Setting

The project site consists of approximately 319 acres located three miles west of the City of Woodland in Yolo County, California (see Figure 1 and Figure 2).

The site contains all or portions of four parcels identified by Assessor's Parcel Numbers (APNs) 025-120-032, 025-120-033, 025-430-001, and 025-430-002. Currently, the central and southern portions of the project site consist primarily of actively managed agricultural land. The northern portion of the site consists of scattered oak trees and ruderal grassland vegetation, as well as an electric conveyor and associated gravel road formerly used to transport mined aggregate from Teichert's Storz mining site to the Woodland Plant located north of the project site. The Moore Canal, a concrete-lined water conveyance structure owned and operated by the Yolo County Flood Control and Water Conservation District (YCFCWCD), bisects the central portion of the site from west to east. The Yolo County General Plan designates the site as Agriculture (AG) and a portion of the site has the Mineral Resource Overlay (MRO) designation. The site is zoned Agricultural Intensive (A-N).

The project site is bounded by Cache Creek to the north, County Road (CR) 94B to the west, CR 22 to the south, and unpaved dirt access roads to the east. Surrounding land uses include Teichert's Woodland Plant site to the northeast; Teichert's Storz mining site and the Cache Creek Nature Preserve to the northwest; agricultural land and two single-family residences to the west; the Yolo Fliers Club golf course, the Watts-Woodland Airport, and Wild Wings residential subdivision to the southwest; the Monument Hill Memorial Park cemetery and residences to the south; and agricultural lands to the east (see Figure 3).

[1] Yolo County Board of Supervisors. *Minutes & Supporting Materials.* December 16, 2014.

Figure 1
Regional Project Location

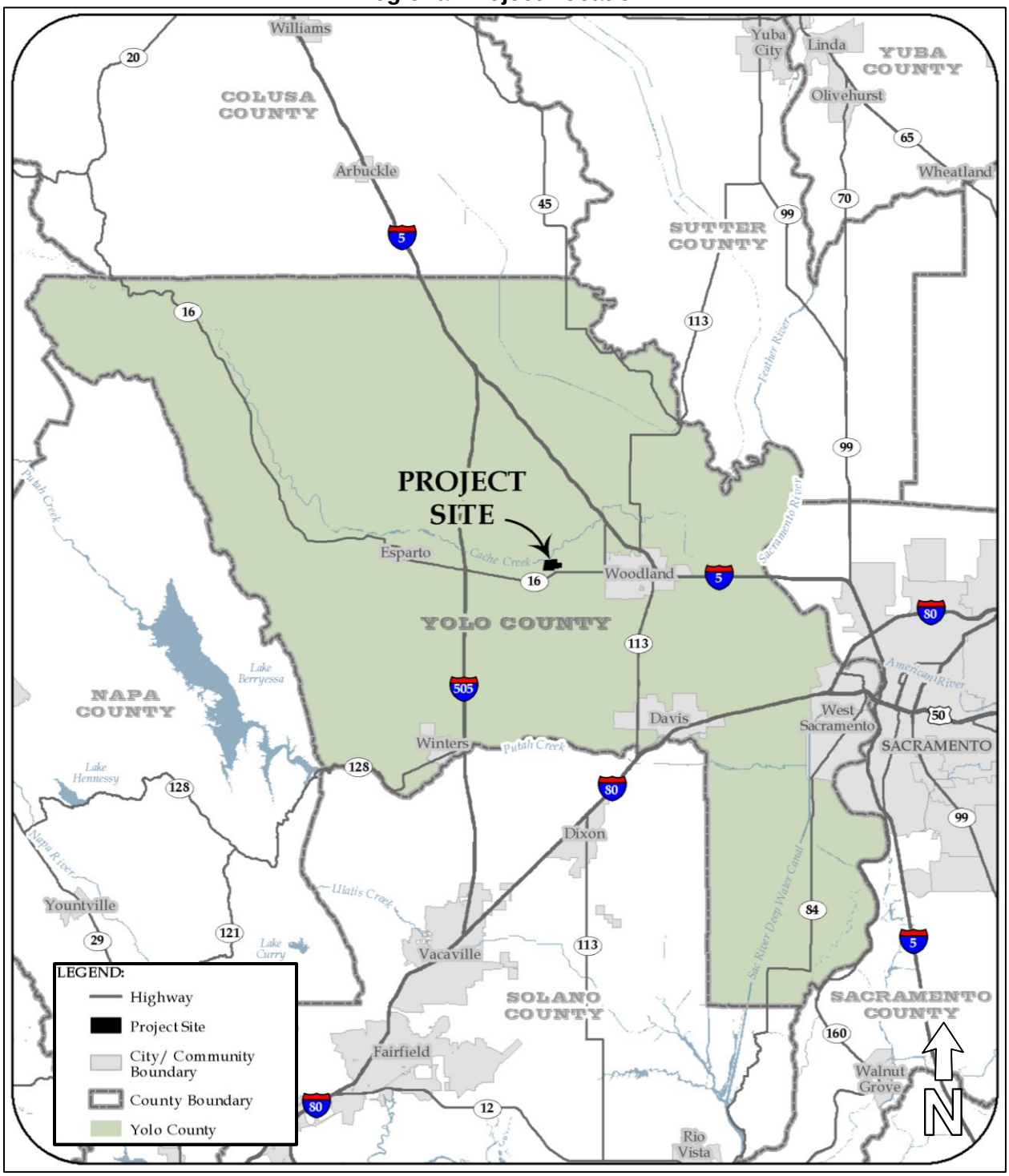


Figure 2
Project Site Boundaries

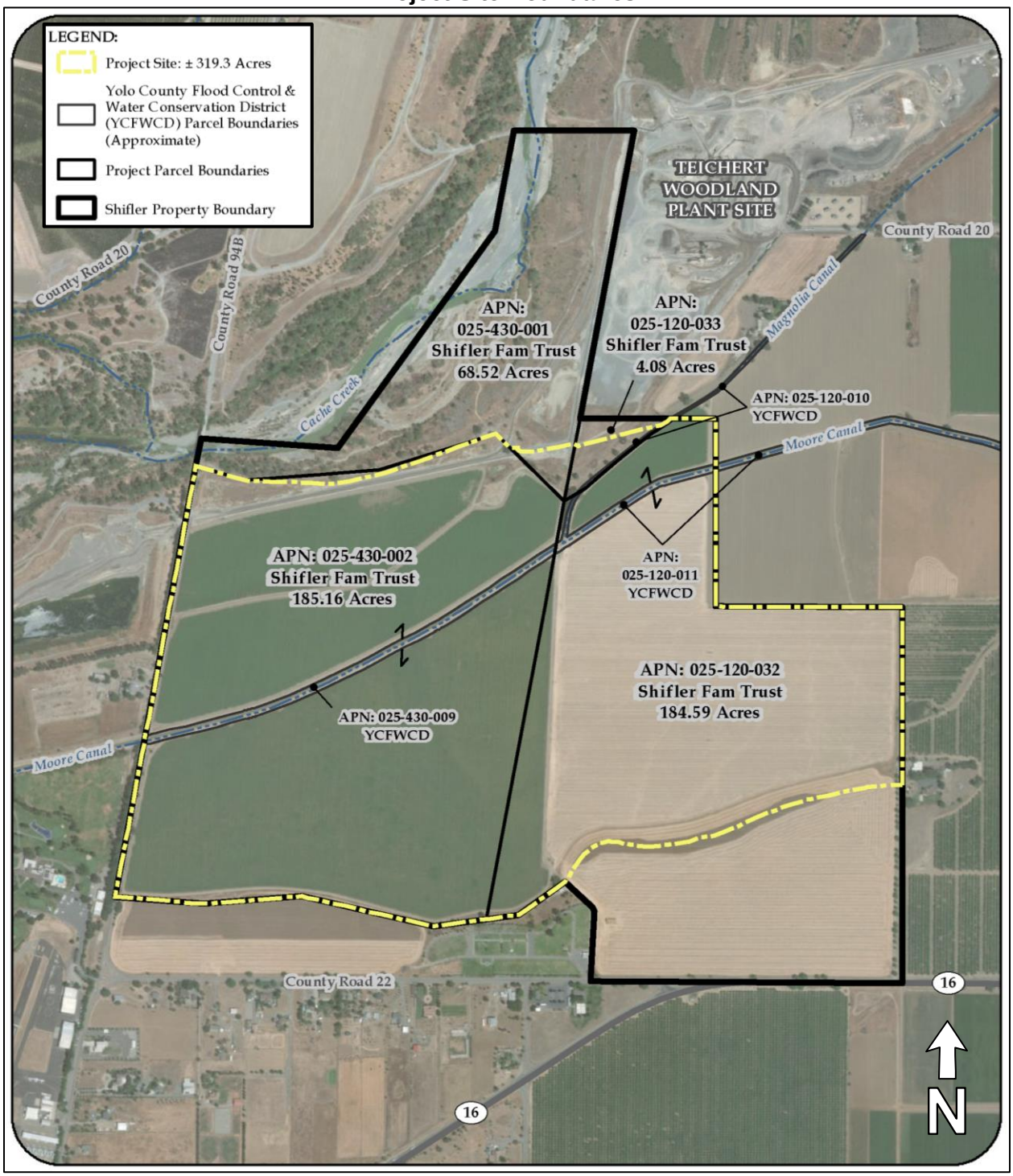
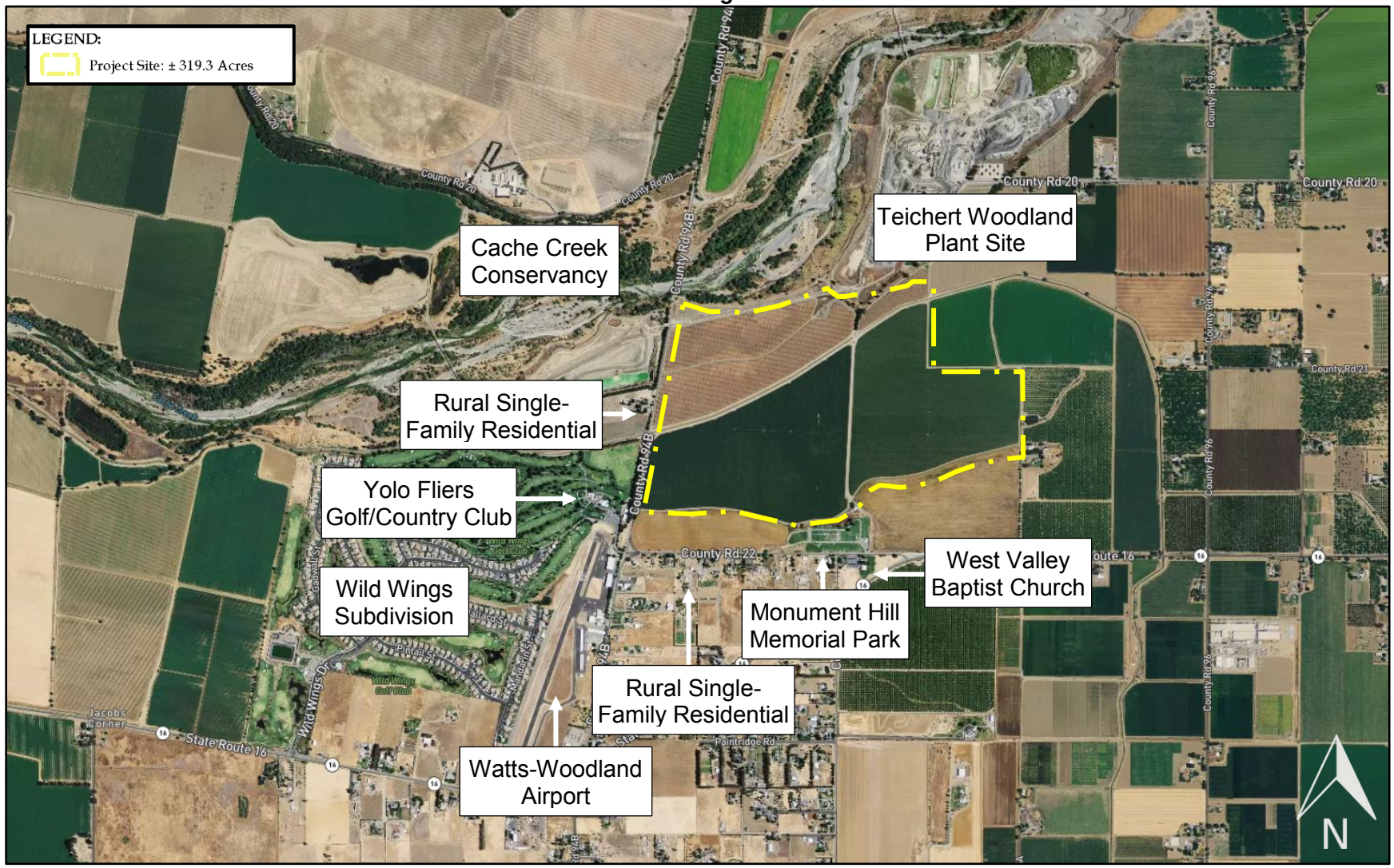


Figure 3
Surrounding Uses



Project Components

The proposed project would include permitting of the project site as an aggregate mining site that would supply the existing Teichert Woodland Plant facility to the northeast of the site. The project components, including requested entitlements, are discussed in greater detail below.

Mining Area, Depth, and Anticipated Reserves

The proposed project would allow for mining of approximately 277 acres of the 319-acre project site (see Figure 4). All of the proposed mining area would be off-channel and set back more than 200-feet from Cache Creek. Depth of mining would vary depending on the location, quality, and quantity of aggregate reserves present. Mining would occur in two phases: Phase A (98.1 acres) and Phase B (179.0 acres).

The proposed depths of mining would be approximately 40-feet below the existing ground surface in the southeastern portion of the mining area, approximately 65-feet below existing ground surface in the northwestern corner of the mining area, and approximately 70-feet below the existing ground surface in the southwestern corner of the mining area. The total amount of aggregate (sand and gravel) proposed to be mined would vary depending upon the quality, quantity, and location of aggregate onsite, but will not exceed 35.25 million tons (approximately 23.5 million cubic yards) sold (41.6 million tons mined). As discussed in greater detail below, the project applicant is seeking a 30-year off-channel mining permit that would allow for maximum aggregate sales of up to 2.6 million tons in a given year. The proposed mining activities would comply with the following minimum slopes, as described as a ratio of horizontal to vertical:

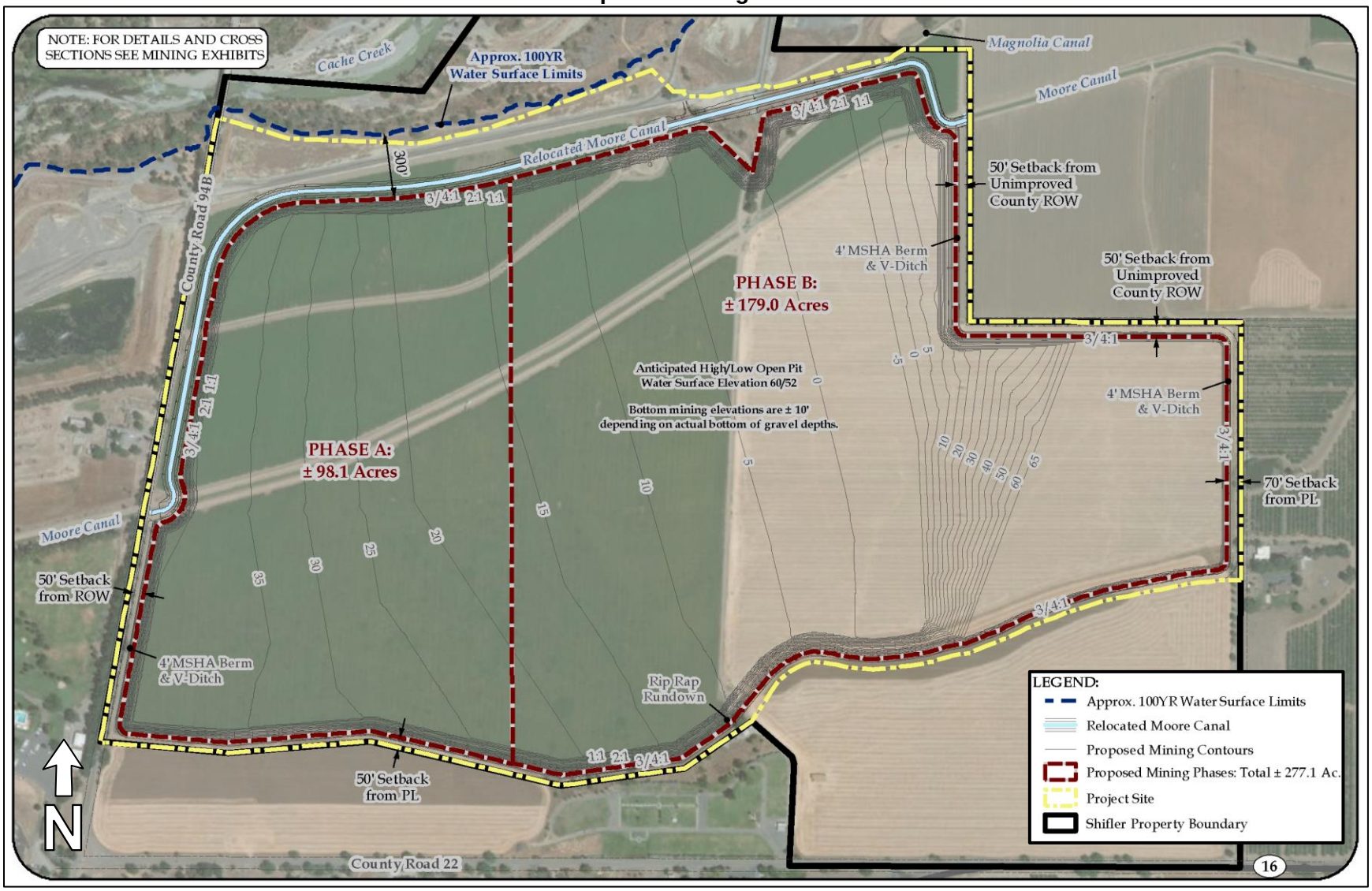
- 0.75:1 down to average low groundwater level during mining (52 feet above mean sea level [MSL]);
- 2:1 between average low groundwater level during mining (52 feet MSL) and five feet below average low groundwater level during mining (47 feet MSL); and
- 1:1 five feet or greater below average low groundwater level during mining (47 feet MSL).

Moore Canal Relocation

The proposed project would include relocation of Moore Canal to the western and northern boundaries of the proposed project site (see Figure 4). The relocated canal would be located a minimum of 200-feet from the existing top bank of Cache Creek, and the reclaimed mining slopes within 50-feet of the relocated canal would have 3:1 slopes.

The relocated Moore Canal would be concrete-lined and have an access road on each side for periodic maintenance by the YCFCWCD. Two over-crossings of the relocated Moore Canal would be constructed to facilitate the transport of aggregate by conveyor to the Woodland Plant site and to allow mining equipment to access the project site from the Woodland Plant site. Such over-crossings would remain after completion of mining and reclamation to allow vehicular access across the relocated Moore Canal.

Figure 4
Proposed Mining Plan



Setbacks and Landscaping

The proposed mining activities on the project site would comply with the following minimum setback requirements: 200 feet from existing channel bank of Cache Creek; 50 feet from the CR 94B right-of-way on west side of project site; and 50 feet from Woodland Plant site to the northeast. Berms and stockpiles could be located within mining setbacks; however, berms or stockpiles would not be located within 100 feet of the top of bank of Cache Creek.

Currently, various landscaping elements are located along the southern portion of the western perimeter of the project site along CR 94B. In addition, a landscape buffer is provided along a portion of the southern site boundary near CR 22. As part of the proposed project, the northern section of the western perimeter would be planted with native tree and shrub species prior to commencement of mining activities. The landscape buffer would extend along the north side of the relocated Moore Canal, eventually connecting with the existing Cache Creek riparian corridor.

In addition, the proposed project would include landscape screening to screen views of the proposed mining operations from the Monument Hill Memorial Park cemetery to the south of the project site. If agreed upon by the cemetery, the applicant is proposing that the visual screening would be planted on the cemetery property prior to commencement of mining activities on the project site.

Operational Characteristics

The following sections summarize the proposed aggregate processing, mining characteristics, hours of operation, employment, site access, and stormwater, water supply, and wastewater associated with the proposed project.

Aggregate Processing

Aggregate mined from the project site would be processed at the existing Woodland Plant located northeast of the site. In order to transfer mined aggregate from the project site to the Woodland Plant, a conveyor over-crossing of the Moore Canal would be constructed on-site.

Aggregate trucks going to and from the Woodland Plant currently access the plant from its entrance on CR 20. These trucks are required to use designated haul routes of CR 20, CR 96, and State Route (SR) 16 to and from Interstates 5 and 505. Local deliveries are allowed to use roads other than SR 16, CR 20, or CR 96. The proposed project would not include changes to the designated haul routes.

Mining Characteristics

The applicant would remove and stockpile overburden on the mining site, by proposed phasing. Overburden is the soil that overlays the sand and gravel material proposed to be mined. Removal of overburden would be accomplished using scrapers, motor graders and bull dozers. Overburden would be progressively removed ahead of mining, and stockpiled in setback areas and internal storage locations until retrieved for reclamation. The top layers of topsoil would be placed in temporary berms and/or stockpiles and seeded with naturalized annual grasses and forbs. As required by Section 10-4.433 of the County's Off-Channel Surface Mining Ordinance (OCSMO), berms or stockpiles would not exceed 40 feet in height with slopes no steeper than 2:1 horizontal to vertical. Berms and/or stockpiles would potentially be located along the perimeter of mining areas, including within mining setbacks, to provide noise shielding of mining activities from nearby

noise-sensitive uses and to allow mining to occur without the need to relocate berms and/or stockpiles before reclamation occurs. However, as noted previously, the stockpiles would remain a minimum of 100 feet from the top of bank of Cache Creek.

Aggregate above the groundwater level would be harvested by scrapers and dozers. Aggregate mined below the water table would be extracted by a combination of equipment such as excavators, draglines, and potentially a floating dredge. Water trucks would be used to control dust. The proposed mining process would be the same as processes currently employed at other sites supplying the Woodland Plant.

Schedule and Employees

Existing operations at the Woodland Plant and the associated Schwarzgruber mining site are governed by Condition 38 of the Schwarzgruber Use Permit, which states the following:

> The hours of operation for the mining site are 6:00am to 6:00pm Monday through Saturday. Occasional 24-hour operations to fulfill contract requirements are allowed within the regulations established in Section 10-4.421 of the mining ordinance. The hours of operation for the Teichert-Woodland plant are 6:00am to 6:00pm Monday through Friday. For the months of August, September, and October, hours may be extended to 10:00pm (Monday through Friday) and 6:00am to 6:00pm Saturday and/or Sunday subject to compliance with Section 10-4.421 of the Mining Ordinance.

Operations at the project site would be consistent with the existing hours of operation for the Woodland Plant and the Schwarzgruber mining site.

The Woodland operation currently has 28 employees, including 22 operating engineers, one teamster, one laborer, and four clerical staff. The proposed project would maintain similar levels of employment. Employment at Teichert's Esparto operation has varied historically depending on production. While the Esparto operation is currently idle, it was operating at peak production as recently as April 2017. At peak production, the Esparto operation employed 24 people, including 18 operating engineers, one teamster, one laborer, and four clerical staff.

The applicant has indicated that once the Teichert Esparto operations cease, employees would be transferred over to the Teichert Woodland operation to accommodate the requested production increase. This would result in total employment for the Teichert Woodland operation, under peak production, of 52 people, including 40 operating engineers, two teamsters, two laborers, and eight clerical staff.

Site Access

In order to allow mining equipment to move between the Woodland Plant and the Shifler mining site, an over-crossing of the relocated Moore Canal would be constructed as part of the proposed project. Aggregate trucks would continue to access the Woodland Plant site by way of the existing entrance on CR 20, using the existing haul routes discussed previously.

Stormwater, Water Supply, and Wastewater

The project site would be graded to allow stormwater runoff to collect in the proposed mining pit, where the runoff would gradually percolate or evaporate. At the conclusion of mining, the site

would remain contoured such that stormwater runoff would be directed to the reclaimed mining area. New stormwater detention basins would be provided within the western and eastern reclaimed agricultural areas of the site. Based on the above, stormwater runoff would not leave the site during, or after completion of, the proposed mining activities.

The project site is currently provided with agricultural water from the YCFCWCD by way of the Moore Canal, which would continue to supply on-site agricultural activities during mining and after reclamation. The project site contains two abandoned wells: one agricultural well located near the western boundary of the site, and a domestic well located near the northern boundary of the site. The unused agricultural well would potentially be retained as a monitoring well, while the domestic well would be removed.

As occurs with existing mining operations, water for aggregate processing and dust suppression at the project site would be supplied by two wells at the Woodland Plant site. Processing water would be recycled through the use of settling ponds located at the Woodland Plant site. The discharge of aggregate wash water to the settling ponds at the Woodland Plant site would continue to be regulated through Waste Discharge Requirements (WDRs) issued by the Central Valley Regional Water Quality Control Board (RWQCB). The project would include modifications to the existing WDRs to allow for the use of fine sediment from aggregate processing (i.e., “fines”) in the eventual reclamation of the project site. The processing fines would be pumped from the Woodland Plant site as a slurry (mix of water and fines) and discharged into the mining area/pond in accordance with the requirements of the revised WDRs.

Potable water demand would be met through bottled drinking water, which would be provided at the adjacent Woodland Plant. Portable toilet facilities would be provided on the Shifler site and existing portable toilet facilities would continue to be used at the adjacent Woodland Plant site.

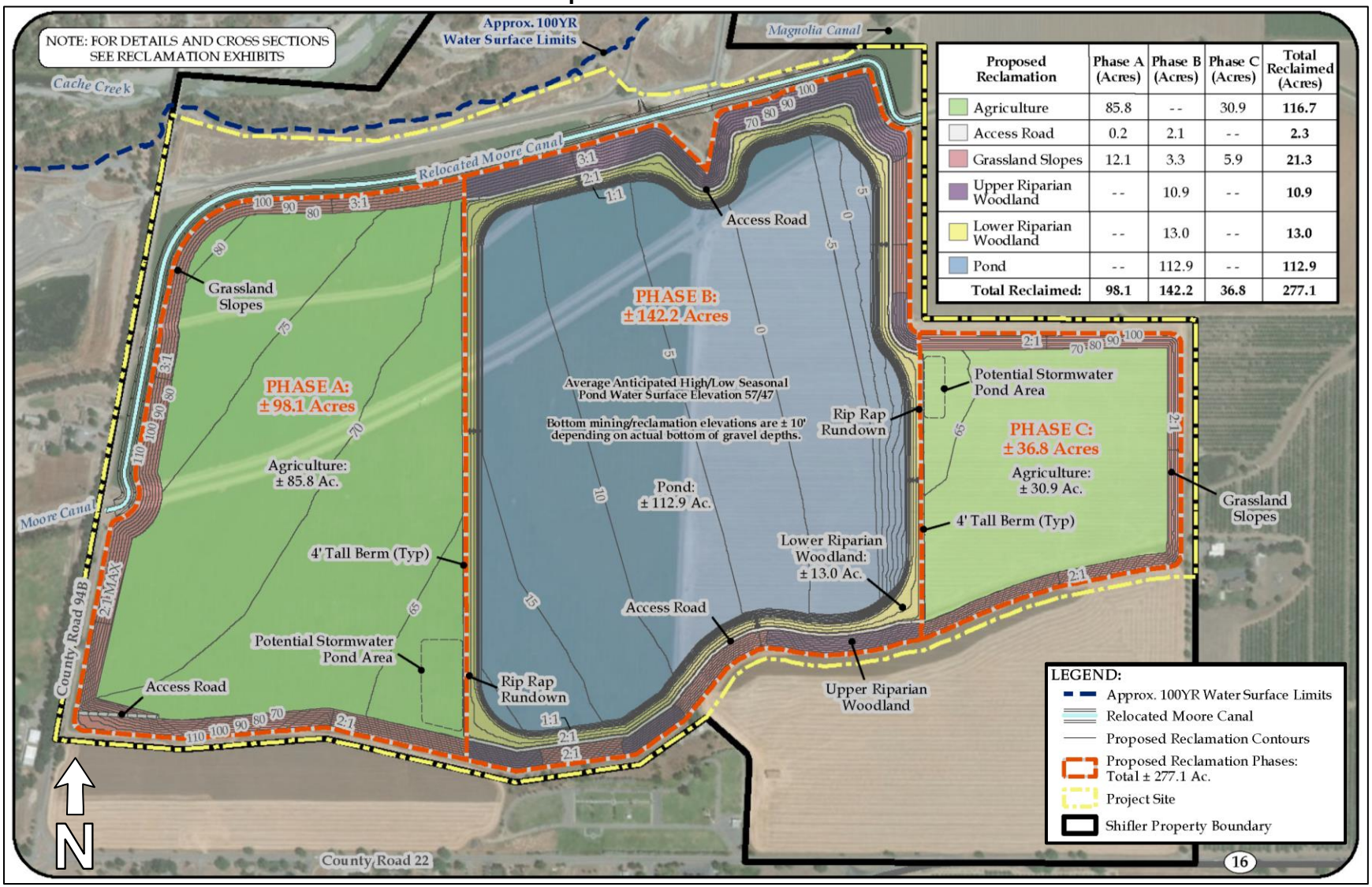
Reclamation Plan

The applicant proposes to reclaim the 277 acre mining area to agriculture and habitat uses following mining (see Figure 5). Approximately 116 acres of the mining area would be reclaimed to agricultural use, while the remainder of the mining area would be reclaimed to a pond with riparian woodland along the fringes/shoreline. Slopes would be reclaimed to grassland. The amount of each habitat type could vary depending on actual mining depths and groundwater elevations.

After mining has ceased on the project site, all mining equipment would be removed. Reclamation of the project site would begin after mining ends. Once groundwater elevations have reached equilibrium, reclamation of the pit floor would occur. Overburden and processing fines generated from the Woodland Plant would be used to create any remaining slopes and benches within the mining area. Reclamation to habitat uses (pond, riparian wetland, riparian oak woodland, and grassland/slopes) would include a minimum of 12 inches of soil (topsoil/overburden/silt) to be placed on all surfaces.

Agricultural reclamation would require the use of overburden and processing fines to raise the pit floor elevation above the average high groundwater level followed by the placement of a minimum of four feet of salvaged reclamation soils (stockpiled topsoil and upper layers of overburden) on the created land. As required by Section 10-5.516 of the SMRO, the Reclamation Plan proposes reclaimed agricultural field elevations of a minimum of five feet above the average high groundwater elevations.

Figure 5
Proposed Reclamation Plan



Proposed Reclamation	Phase A (Acres)	Phase B (Acres)	Phase C (Acres)	Total Reclaimed (Acres)
Agriculture	85.8	--	30.9	**116.7**
Access Road	0.2	2.1	--	**2.3**
Grassland Slopes	12.1	3.3	5.9	**21.3**
Upper Riparian Woodland	--	10.9	--	**10.9**
Lower Riparian Woodland	--	13.0	--	**13.0**
Pond	--	112.9	--	**112.9**
Total Reclaimed:	**98.1**	**142.2**	**36.8**	**277.1**

Average high groundwater levels would range from 75 feet MSL in the northwestern corner to 57 feet MSL in the southeastern corner of the western agricultural field, and from 57 feet MSL in the northwestern corner to 47 feet MSL in the southeastern corner of the eastern agricultural field.

Reclamation Phasing

Section 10-5.522 of the SMRO requires that all proposed mining and reclamation plans include a phasing plan. The purpose of the phasing plan is to minimize the area of disturbed agricultural lands during each mining phase and to encourage the early completion of agricultural reclamation.

Under the proposed Reclamation Plan, mining and reclamation activities within the project site would be phased generally from west to east. Agricultural reclamation of the western portion of the project site would occur concurrently with mining activities within the eastern portion of the project site. As noted previously, mining would occur in two phases: Phase A (98.1 acres) and Phase B (179.0 acres). Reclamation would occur in three phases: Phase A (98.1 acres), Phase B (142.2 acres), and Phase C (36.8 acres).

Reclamation Slopes

Reclamation of the project site would comply with the following minimum slopes, as described as a ratio of horizontal to vertical:

- 2:1 above average high reclaimed groundwater level (57 feet MSL at the reclaimed pond), except for reclaimed mining slopes that are within 50 feet of the relocated Moore Canal, which will have a minimum slope of 3:1;
- 4:1 between average high reclaimed groundwater level (57 feet MSL) and five feet below average high reclaimed groundwater level (52 feet MSL);
- 2:1 between 5 feet below average high reclaimed groundwater level (52 feet MSL) and five feet below average low reclaimed groundwater level (42 feet MSL); and
- 1:1 five feet or greater below average low reclaimed groundwater level (42 feet MSL).

Net Gains

The project would include the preparation of a development agreement between the applicant and the County, which would include certain net public benefits, (referred to as “net gains”) such as land dedications and reclamation enhancements agreed to among the parties that will be analyzed in the EIR.

Required Discretionary Approvals

The proposed project requires approval of the following discretionary entitlements.

Lead Agency Approvals – Yolo County
The proposed project would require the following approvals from Yolo County:

- Amendment of the General Plan to extend the Mineral Resource Overlay over the entire project site;
- Amendment of the Cache Creek Area Plan to include the project site in the Off-Channel Mining Plan (OCMP) boundary;
- Rezoning to add a Sand and Gravel Overlay (SG-O) to the site;

- Approval of a 30-year Off-Channel Mining Permit;
- Approval of a Reclamation Plan;
- Approval of a request for 20 percent exceedance of annual production limits pursuant to Section 10.4-405 of the County Code;
- Approval of a Streambank Stabilization Plan;
- Approval of a Flood Hazard Development Permit;
- Authorization to execute a Development Agreement.

If additional approvals are determined to be necessary, they will be identified in the environmental impact report.

General Plan/CCAP Amendments

Per the Yolo County General Plan, the project site is designated AG, and a portion of the site is covered by the General Plan Mineral Resource Overlay (MRO) designation. The proposed project would include a GPA to extend the Mineral Resource Overlay designation to cover the entirety of the project site. In addition, the project would include an amendment to the Cache Creek Area Plan to include the project site in the OCMP boundary.

Rezone

As noted previously, the project site is currently zoned A-N. The proposed project would include a rezone to add an SG-O overlay to the site, resulting in a zoning designation of A-N/SGO Surface mining operations are conditionally allowed in the A-N/SGO zone with the approval of a Use Permit (Yolo County Code sections 8-2.304, 8-2.906[g][3], and 10-4-501).

Mining Permit/Use Permit

The proposed project would require approval of a Mining Permit to allow surface mining on the project site for a 30-year period, allow processing of aggregate from the project site at the Woodland Plant, and increase the maximum permitted production at the Woodland Plant upon cessation of mining activities at the Esparto and Schwarzgruber sites. The duration of mining activities at the project site would vary depending on market demand and the quality and quantity of aggregate present on-site.

Reclamation Plan

Details related to the proposed Reclamation Plan are provided above under the “Project Components” section.

Exceedance of Annual Production Limits

Per Section 10-4.405 of the OCSMO, surface mines must operate within the limits of the annual production level established in the applicable use permit. Annual aggregate production may not exceed the established annual level, except to meet temporary market demand. Individual producers may exceed their maximum annual allocation by up to 20 percent in any one calendar year, so long as their running 10-year average does not exceed the maximum level. Aggregate sold in excess of the established annual level shall be subject to a $0.10/ton surcharge. Consistent with Section 10-4.405, under the proposed project, production at the Woodland Plant may exceed

the Plant's production limitation by up to 20 percent (200,000 tons sold) in any year, provided that production over a consecutive 10-year period does not exceed 10 million tons sold.

Streambank Stabilization Plan

In support of a request to mine within 700 feet of the existing Cache Creek channel bank and within the streamway influence boundary (Section 10-4.429 of the OCSMO), the proposed project requires approval and implementation of a Streambank Stabilization Plan for the south bank of Cache Creek adjacent to the northern margin of the proposed mining area.

Flood Hazard Development Permit

According to Section 8-4.403 of the Yolo County Code of Ordinances, a Flood Hazard Development Permit (FHDP) shall be obtained before any construction or other development begins within any area of special flood hazards established in Section 8-4.302. "Development" includes "any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials." According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map numbers 06113C0430H and 06113C0440G, the northern portion of the project site is located within a Special Flood Hazard Area subject to a 100-year flooding. Thus, the proposed project would require issuance of a Flood Hazard Development Permit from the County. A FHDP is also triggered by the request to mine closer than 700 feet from the banks of Cache Creek.

Exceptions to Various Ordinance Sections

Additional project approvals may be required. This will be concluded after the County analyzes the project for regulatory consistency and completes the Draft EIR.

Development Agreement

As discussed previously, the proposed project would include negotiation and execution of a development agreement between the applicant and the County.

Responsible Agency Approvals

The proposed project would require the following approvals from the responsible agencies listed:

- Approval of the proposed Moore Canal relocation (YCFCWCD Board of Directors);
- Clean Water Act Section 404 Permit (U.S. Army Corps of Engineers);
- Clean Water Act Section 401 Water Quality Certification (Central Valley RWQCB);
- Waste Discharge Requirements (WDRs) for use of sediment fines from the Woodland Plant site for reclamation of the project site (Central Valley RWQCB); and
- SMARA Compliance Review (California Department of Conservation).

H. ENVIRONMENTAL CHECKLIST

The following Checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to evaluate the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less Than Significant with Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The project would not have any impact.

I. AESTHETICS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	✖	☐	☐	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	✖	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	✖	☐	☐	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	✖	☐	☐	☐

Discussion

a. Examples of typical scenic vistas include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. In general, a project's impact to a scenic vista would occur if development of the project would substantially change or remove a scenic vista. While the General Plan does not identify specific scenic vistas within the County, it does identify scenic values and character of the rural environmental as important. Also as noted in the General Plan EIR, the County has designated the following as local scenic roadways:[2]

- SR 16: Colusa County line to Capay;
- SR 128: Winters to the Napa County line;
- CR 116 and CR 116B: Knights Landing to the eastern terminus of CR 16;
- CR 16 and CR 117 and Old River Road: CR 107 to West Sacramento; and
- South River Road: West Sacramento city limits to Sacramento County line.

The project site is not located within the vicinity of any of the scenic roadways listed above. However, the existing on-site agricultural use of the site and the surrounding area is considered a scenic vista per the County. With implementation of the proposed project, the project site would be converted for the period of the permit, from agricultural uses to aggregate mining uses.

Based on the above, development of the proposed project could have a substantial adverse effect on a scenic vista, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Aesthetics chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

[2] County of Yolo. *Yolo County 2030 Countywide General Plan EIR* [pg. 754]. April 2009.

b. According to the California Scenic Highway Mapping System, the proposed project site is not located within the vicinity of an officially designated State Scenic Highway.[3] Thus, the project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway, and a ***less-than-significant*** impact would occur.

c. Public views of the project site include views from CR 22 to the south of the site and CR 94B to the west of the site. Currently, views of the site are primarily characterized by rural agricultural landscapes. With implementation of the proposed project, the project site would be converted for the period of the permit, from agricultural uses to aggregate mining uses. While the project would include landscaping and earthwork elements to help screen views of the site, the potential exists for the project to substantially degrade the existing visual character or quality of public views of the site and its surroundings. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Aesthetics chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

d. The project site is located in a rural agricultural area. As such, relatively few sources of light and glare occur in the project vicinity. Existing sources of light and glare are primarily limited to headlights from vehicles travelling on CR 22 and CR 94B in the project area.

With implementation of the proposed project, mining operations on the project site would typically be limited to 6:00 AM to 6:00 PM, Monday through Saturday per the proposed Use Permit. However, limited nighttime mining activities may be required in specific situations. Specifically, for the months of August, September, and October, hours may be extended to 10:00 PM (Monday through Friday) and 6:00 AM to 6:00 PM Saturday and/or Sunday subject to compliance with Section 10-4.421 of the County's OCSMO.

Nighttime mining activities would require illumination of select areas of the project site. All lighting would be arranged and controlled so as to limit light illumination of adjacent properties or public rights-of-way, consistent with Section 10-4.420 of the OCSMO. Nonetheless, given that the exact location and type of lighting fixtures required on-site is not currently known, the potential exists for the project to create a new source of substantial light or glare which could adversely affect nighttime views in the area, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Aesthetics chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

[3] California Department of Transportation. *California Scenic Highway Mapping System*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed February 2019.

II. AGRICULTURE AND FOREST RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	✖	☐	☐	☐
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	✖	☐
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	✖
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	✖
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	✖	☐	☐	☐

Discussion

a,e. Per the Department of Conservation Farmland Mapping and Monitoring Program (FMMP), the project site is currently classified as Prime Farmland.[4] In addition, the site is currently designated Agriculture per the County General Plan. Mining activities would result in the loss of up to 277 acres of Prime Farmland over the requested 30-year permit period. Upon completion of mining activities, approximately 116 acres of Prime Farmland would be created as part of the proposed reclamation plan. However, the project could result in the permanent net loss of approximately 161 acres of Prime Farmland.

Thus, the proposed project could directly convert Prime Farmland to a non-agricultural use, and a ***potentially significant*** impact could occur.

Further analysis of the above impact, including the location and type of agricultural land to be created as part of the proposed reclamation plan, will be included in the Agricultural Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

b. The project site is zoned A-N. Per Section 8-2.604.5(e) of the County Code of Ordinances, surface mining operations are conditionally allowed in the A-N zone with a Special Sand and Gravel Overlay Zone (-SGO) zone and a Use Permit. The proposed project includes a request for a Rezone to add the –SGO zone to the project site and an application for a Mining Permit to allow for mining of the site. With approval of both entitlements, the project would not conflict with the site's existing agricultural zoning. In addition, while the project

[4] California Department of Conservation. *California Important Farmland Finder.* Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed January 2019.

site was previously covered by a Williamson Act Contract, the contract expired in January 2016. Thus, a ***less-than-significant*** impact would occur related to conflicting with existing zoning for agricultural use or a Williamson Act contract.

c,d. The project area is not considered forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), and is not zoned Timberland Production (as defined by Government Code section 51104[g]). Therefore, the proposed project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

III. AIR QUALITY. *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	✖	☐	☐	☐
b. 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?	✖	☐	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	✖	☐	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	✖	☐	☐	☐

a,b. Yolo County is located within the Sacramento Valley Air Basin (SVAB) and under the jurisdiction of the Yolo-Solano Air Quality Management District (YSAQMD). The federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) require that federal and State ambient air quality standards (AAQS) be established, respectively, for six common air pollutants, known as criteria pollutants. The SVAB is designated nonattainment for the federal particulate matter 2.5 microns in diameter ($PM_{2.5}$) and the State particulate matter 10 microns in diameter (PM_{10}) standards, as well as for both the federal and State ozone standards.

The CAA requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. Due to the nonattainment designations, YSAQMD, along with the other air districts in the SVAB region, periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the federal AAQS, including control strategies to reduce air pollutant emissions via regulations, incentive programs, public education, and partnerships with other agencies.

General conformity requirements of the SIP include whether a project would cause or contribute to new violations of any federal AAQS, increase the frequency or severity of an existing violation of any federal AAQS, or delay timely attainment of any federal AAQS. In addition, a project would be considered to conflict with, or obstruct implementation of, an applicable air quality plan if the project would be inconsistent with the emissions inventories contained in the air quality plan. Emission inventories are developed based on projected increases in population, employment, regional vehicle miles traveled (VMT), and associated area sources within the region, which are based on regional projections that are, in turn, based on General Plans and zoning designations for the region.

Due to the nonattainment designations of the area, YSAQMD has developed plans to attain the State and federal standards for ozone and particulate matter. The plans include the 2013 Ozone Attainment Plan, the $PM_{2.5}$ Implementation/Maintenance Plan, and the 2012 Triennial Assessment and Plan Update. Adopted YSAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. Thus, by exceeding the YSAQMD's mass emission thresholds for operational or construction

emissions of ROG, NO_X, or PM_{10}, a project would be considered to conflict with or obstruct implementation of the YSAQMD's air quality planning efforts.

The proposed project would involve operation of heavy-duty mining equipment on the project site. Exhaust emissions would be generated by mining equipment, as well as equipment used for vegetation clearing and earth movement activities. Project mining activities also represent sources of fugitive dust, which includes PM emissions. Additional criteria pollutant emissions would be generated workers commuting to and from the project site. The aforementioned activities could result in increases in criteria pollutant emissions in the project vicinity above thresholds established by the YSAQMD. In addition, additional analysis is required to ensure that dust associated with the proposed project would not adversely affect nearby agricultural operations.

Construction and operational emissions associated with the proposed project, in combination with other past, present, and reasonably foreseeable projects within the project region could either delay attainment of the standards or require the adoption of additional controls on existing and future air pollution sources to offset emission increases. Thus, the project could cumulatively contribute to regional air quality health effects through emissions of criteria and mobile source air pollutants. Based on the above, the proposed project could result in a ***potentially significant*** impact with regard to air quality

Further analysis of the above impact will be included in the Air Quality and Greenhouse Gas Emissions chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

c. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptors would be the single-family residences located south and west of the site.

The major pollutants of concern are localized carbon monoxide (CO) emissions and toxic air contaminant (TAC) emissions. Implementation of the proposed project would involve operation of heavy-duty mining and construction equipment on the project site throughout the duration of the proposed mining activities. Given that exhaust from such equipment would result in localized CO and TAC emissions, further analysis of such emission sources is required.

Because the proposed project could involve CO and TAC emissions associated with construction and mining equipment, the project could expose existing sensitive receptors to substantial pollutant concentrations. Accordingly, impacts related to exposure of sensitive receptors to substantial pollutant concentrations could be ***potentially significant***.

Further analysis of the above impact will be included in the Air Quality and Greenhouse Gas Emissions chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

d. Emissions such as those leading to odors have the potential to adversely affect sensitive receptors within the project area. Pollutants of principal concern include emissions leading to odors, emission of dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in section "a" through "c" above. Therefore, the following discussion focuses on emissions of odors and dust.

According to the YSAQMD, common types of facilities that are known to produce odors include, but are not limited to, wastewater treatment facilities, chemical or fiberglass manufacturing, landfills, composting facilities, food processing facilities, refineries, dairies, and asphalt or rending plants.[5] Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The presence of an odor impact is dependent on a number of variables including: the nature of the odor source; the frequency of odor generation; the intensity of odor; the distance of odor source to sensitive receptors; wind direction; and sensitivity of the receptor.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative analysis to determine the presence of a significant odor impact is difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses and is not located in the vicinity of any such existing or planned land uses. However, existing operations at the nearby Woodland Plant include processing of hot asphalt, which may be considered an odor-generating use. Given that the proposed project would indirectly enable such operations to continue, further analysis of asphalt processing odors is required.

Earthmoving activities and mining operations involve the use of diesel fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, project operations would be required to comply with all applicable YSAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize emissions, including emissions leading to odors. Accordingly, substantial objectionable odors would not be expected to occur associated with the proposed mining activities.

It should be noted that YSAQMD regulates objectionable odors through Rule 2.5 (Nuisance), which prohibits any person or source from emitting air contaminants or other material that result in any of the following: cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or have a natural tendency to cause injury or damage to business or property. Rule 2.5 is enforced based on complaints. If complaints are received, the YSAQMD is required to investigate the complaint, as well as determine and ensure a solution for the source of the complaint, which could include operational modifications. Thus, although not anticipated, if odor complaints are made

[5] Yolo-Solano Air Quality Management District. *Handbook for Assessing and Mitigating Air Quality Impacts* [pg. 14]. July 11, 2007. Available at: http://www.ysaqmd.org/documents/CEQAHandbook2007.pdf. Accessed April 2019.

during the proposed mining operations, the YSAQMD would ensure that such odors are addressed and any potential odor effects reduced to less than significant levels.

Nonetheless, given that the proposed project would allow for existing asphalt processing operations at the Woodland Plant to continue, potentially resulting in emissions (such as those leading to odors) adversely affecting a substantial number of people, a ***potentially significant*** impact could result.

Further analysis of the above impact will be included in the Air Quality and Greenhouse Gas Emissions chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

IV. BIOLOGICAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	✖	☐	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	✖	☐	☐	☐
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	✖	☐	☐	☐
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	✖	☐	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	✖	☐	☐	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	✖	☐	☐	☐

Discussion

a. According to a Biological Resources Assessment prepared for the proposed project by Teichert Materials, the project site provides habitat for a Sanford's arrowhead, a special-status plant species.[6] In addition, the potential exists for the following special-status wildlife species to occur on-site: valley elderberry longhorn beetle, western pond turtle, white-tailed kite, Swainson's hawk, northern harrier, short-eared owl, loggerhead shrike, yellow-billed magpie, tricolored blackbird, special-status bats, and other migratory birds and nesting raptors protected by the Migratory Bird Treaty Act. Therefore, the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife, or U.S. Fish & Wildlife Service. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Biological Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

[6] Teichert Materials. *Biological Resources Assessment, Teichert Shifler Mining Project, Yolo County, California.* June 2018

b,c. Per a Wetland Delineation prepared for the project site by Teichert Aggregates and subsequently verified by the U.S. Army Corps of Engineers,[7] the project site contains potential wetlands and waters of the U.S., including seasonal wetlands, marsh habitat, a pond, an irrigation canal, and a drainage ditch. Thus, the project could have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, and could have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Biological Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

d. Wildlife movement corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or by areas of human disturbance or urban development. Topography and other natural factors in combination with urbanization can fragment or separate large open-space areas. The fragmentation of natural habitat can create isolated "islands" of vegetation and habitat that may not provide sufficient area to accommodate sustainable populations and can adversely impact genetic and species diversity.

The project site is bounded by CR 94B to the west Cache Creek to the north, and CR 22 to the south. Such features currently limit the movement of wildlife through the project area. In addition, the ongoing disturbances associated with agricultural production uses on-site preclude the use of the site as a wildlife nursery site. However, given that Cache Creek within the vicinity of the project currently acts as a wildlife corridor, the project could potentially interfere with the movement of resident or migratory fish or wildlife species, or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Biological Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

e. Per the Biological Resources Assessment, the project site contains a total of 52 native valley oaks located along the northern site boundary, north of the Moore Canal. With implementation of the proposed project, a portion of the existing trees would require removal to accommodate the proposed mining operation. While the County does not have any ordinances or other mandatory standards related to tree preservation, the proposed tree removal could conflict with County policies related to protection of oak trees. Thus, the project could result in a ***potentially significant*** impact related to conflicting with local policies or ordinances protecting biological resources, including local tree preservation policies.

Further analysis of the above impact will be included in the Biological Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

[7] Teichert Aggregates. *Wetland Delineation for Shifler Property, Yolo County, California.* May 18, 2012. U.S. Army Corps of Engineers. *Preliminary Jurisdictional Determination Form.* July 2, 2012.

f. The Yolo Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) was recently adopted by the Yolo Habitat Conservancy. Yolo County is a member agency and joint permit holder. The project site is located within the boundaries of the Yolo HCP/NCCP. The project will be required to be consistent with, and mitigate impacts to certain species through, the HCP/NCCP. The potential exists for the proposed project to conflict with applicable standards within the HCP/NCCP, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Biological Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

V. CULTURAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	✖	☐	☐	☐
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	✖	☐	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries.	✖	☐	☐	☐

Discussion

a. Historical resources are features that are associated with the lives of historically important persons and/or historically significant events, that embody the distinctive characteristics of a type, period, region or method of construction, or that have yielded, or may be likely to yield, information important to the pre-history or history of the local area, California, or the nation. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics. Per a Cultural Resource Assessment prepared for the proposed project by Peak & Associates, Inc., the existing on-site Moore Canal, which would be relocated as part of the project, could be eligible for inclusion in the California Register of Historic Places (CRHP).[8] Therefore, the project could cause a substantial adverse change in the significance of a historical resource, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Cultural Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

b,c. The Cultural Resource Assessment prepared for the proposed project included the results of a record search of the California Historical Resources Information System (CHRIS) for potential historic and prehistoric resources within the project area. Based on the results of the record search, the site does not contain any recorded prehistoric cultural resources. Furthermore, the site has been subject to continual disturbance associated with ongoing agricultural uses.

Nonetheless, the potential exists that unknown archeological resources could occur within the project area. Considering that unknown archaeological resources, including human remains, have the potential to exist on-site, ground-disturbing activity related to the proposed mining activities could encounter such resources. Therefore, the proposed project could cause a substantial adverse change in the significance of a archaeological resource pursuant to CEQA Guidelines Section 15064.5 and/or disturb human remains, including those interred outside of formal cemeteries. Consequently, impacts could be considered ***potentially significant***.

Further analysis of the above impact will be included in the Cultural Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

[8] Peak & Associates, Inc. *Cultural Resource Assessment for the Shifler Mining and Reclamation Project, Yolo County, California.* January 2015.

VI. ENERGY. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	✖	☐	☐	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	✖	☐	☐	☐

Discussion

a,b. The proposed mining operations, as well as earthmoving activities associated with future reclamation of the site, would involve use of heavy-duty diesel equipment over an extended period of time. In addition, the project would involve electricity use associated with operation of mechanical equipment, including a conveyor system that would be used to transfer mined aggregate to the nearby Woodland Plant site. Overall, electricity demand associated with the project would be approximately 28,634 peak kilowatt hours per day. As such, further analysis is necessary to ensure that the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Air Quality and Greenhouse Gas Emissions chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

VII. GEOLOGY AND SOILS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	✖	☐	☐	☐
ii. Strong seismic ground shaking?	✖	☐	☐	☐
iii. Seismic-related ground failure, including liquefaction?	✖	☐	☐	☐
iv. Landslides?	✖	☐	☐	☐
b. Result in substantial soil erosion or the loss of topsoil?	✖	☐	☐	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	✖	☐	☐	☐
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	✖	☐	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	✖
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	✖	☐	☐	☐

Discussion

The following discussion is based on a Slope Stability Evaluation prepared for the proposed project by Geocon Consultants, Inc.[9]

ai-ii. According to the Slope Stability Evaluation, the Great Valley Fault System and a segment of the Dunnigan Hills Fault, located eight miles to the west and northwest of the site, respectively, are the closest known active faults relative to the site. Given that known surface expressions of fault traces do not exist within the site, fault rupture hazard is not a significant geologic hazard at the site. Furthermore, the site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone. Nonetheless, due to the site's proximity to nearby active faults, the project site could be subject to earthquakes and associated

[9] Geocon Consultants, Inc. *Slope Stability Evaluation, Teichert Shifler Mining and Reclamation Project, Yolo County, California.* May 2016.

seismic ground shaking. Further analysis is necessary to ensure that such seismic shaking would not adversely affect slopes created by the proposed mining operations. Therefore, a ***potentially significant*** impact could occur related to substantial adverse effects, including risk, injury, or death, associated with strong seismic ground shaking.

Further analysis of the above impact will be included in the Geology, Soils, and Mineral Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

aiii,aiv,
c. The proposed project's potential effects related to liquefaction, landslides, lateral spreading, and subsidence/settlement are discussed in detail below.

Liquefaction

Liquefaction is the temporary transformation of loose, saturated granular sediments from a solid state to a liquefied state as a result of seismic ground shaking. In the process, the soil undergoes transient loss of strength, which commonly causes ground displacement or ground failure to occur. Because saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have higher liquefaction potential than those in which the water table is located at greater depths. As noted in the General Plan EIR, liquefaction risk is generally anticipated to be higher within the Great Valley portion of the County, particularly, along the floodplains of streams, where sediments are sandier than other areas. Given that the project site is located adjacent to Cache Creek, the potential exists for the proposed project to be subject to liquefaction risks.

Landslides

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. The proposed project would involve the temporary creation of substantial slopes associated with mining operations. In addition, the proposed reclamation plan would include creation of permanent slopes within the project site. Therefore, further study is necessary to ensure the proposed project would not result in adverse effects related to landslides.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. Given that the project would include the creation of exposed slopes, risks related to lateral spreading could potentially occur.

Subsidence/Settlement

Loose unsaturated sandy soils can settle during strong seismic shaking. As noted in the Slope Stability Evaluation, the project site is underlain by layers of layers of poorly graded sand and gravel. Therefore, further study is required to ensure that the proposed project would not result in substantial adverse effects related to subsidence or settlement of on-site soils.

Conclusion

Based on the above discussion, further analysis of on-site soil conditions is necessary to ensure that the proposed project would not result in adverse effects related to liquefaction, landslides, lateral spreading, or subsidence/settlement. Thus, a ***potentially significant*** impact could occur related to directly or indirectly causing substantial adverse effects, including the risk of loss, injury, or death, involving liquefaction or landslides and being located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, potentially resulting in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Further analysis of the above impact will be included in the Geology, Soils, and Mineral Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

b. Issues related to erosion and degradation of water quality during construction are discussed in Section X, Hydrology and Water Quality, of this Initial Study, under question 'a'. As noted therein, the project site would be graded to allow stormwater runoff to collect in the proposed mining pit, where the runoff would gradually percolate or evaporate. At the conclusion of mining, the site would remain contoured such that stormwater runoff would be directed to the reclaimed mining area. New stormwater detention basins would be provided within the western and eastern reclaimed agricultural areas of the site.

Nonetheless, during removal of overburden and subsequent mining activities, the potential exists for wind and water erosion to discharge sediment and/or pollutants into stormwater runoff, which could adversely affect water quality within Cache Creek. In addition, the project would include modifications to the existing RWQCB WDRs for the Woodland Plant facility to allow for the use of fine sediment from aggregate processing (i.e., "fines") in the eventual reclamation of the project site. Thus, the project could result in substantial soil erosion or the loss of topsoil, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Hydrology and Water Quality chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

d. The proposed project would not include construction of foundations or development of habitable structures that could be subject to potential risks related to expansive soils. The only permanent structures associated with the proposed project are the Moore Canal, which would be relocated as part of the project, and the proposed conveyor system that would be used to transfer mined aggregate to the Woodland Plant facility. Nonetheless, expansive soils, if present on-site, could pose a potential risk to the slopes of the proposed mining pit, as well as the success of the proposed reclamation plan. Therefore, the proposed project would result in a ***potentially significant*** impact related to being located on expansive soil, as defined in Table 18-1B of the Uniform Building Code, thereby creating substantial direct or indirect risks to life or property.

Further analysis of the above impact will be included in the Geology, Soils, and Mineral Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

e. The construction or operation of septic tanks or other alternative wastewater disposal systems is not included as part of the project. Portable toilet facilities would be provided at the project site and existing portable toilet facilities would continue to be used at the adjacent Woodland Plant. Therefore, ***no impact*** regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems would occur.

f. Per the County's General Plan EIR, unique geologic features are not common in Yolo County.[10] The General Plan does not identify any such features in the project area. Given that the project site consists primarily of agricultural land, the proposed project would not result in the destruction of unique geologic features.

However, the potential exists for paleontological resources to occur within the project site. Should previously unknown paleontological resources exist within the project site, ground-disturbing activity such as grading and excavating associated with implementation of the proposed project would have the potential to disturb or destroy such resources. Therefore, the proposed project could result in the direct or indirect destruction of a unique paleontological resource, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Geology, Soils, and Mineral Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

[10] County of Yolo. *Yolo County 2030 Countywide General Plan EIR*. April 2009.

VIII. GREENHOUSE GAS EMISSIONS. *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	✖	☐	☐	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	✖	☐	☐	☐

a,b. Emissions of greenhouse gases (GHGs) contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to the project would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, and electricity use. As such, the proposed project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Specifically, project compliance with the requirements of the County's adopted Climate Action Plan[11] will be examined. Therefore, impacts related to GHG emissions and global climate change could be cumulatively considerable and considered ***potentially significant***.

Further analysis of the above impact, including consistency with the County's Climate Action Plan, will be included in the Air Quality and Greenhouse Gas Emissions chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

[11] Yolo County. *Climate Action Plan: A Strategy for Smart Growth Implementation, Greenhouse Gas Reduction, and Adaptation to Global Climate Change.* Adopted March 15, 2011.

IX. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	✖	☐	☐	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	✖	☐	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	✖	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	✖
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	✖	☐	☐	☐
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	✖	☐	☐	☐
g. Expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires?	☐	☐	✖	☐

Discussion

a. Proposed mining, processing, and reclamation activities associated with the proposed project could require the use of hazardous materials, primarily fuels and oils for operation and maintenance of equipment, similar to what is used for the existing agricultural activities on the project site and the aggregate processing activities on the adjacent Woodland Plant site. The rate of such usage would not result in a net increase from existing conditions, because existing production at Teichert's Esparto mining site would be transferred to the Woodland Plant once operations on that site are completed. In addition, hazardous materials storage associated with the project would be required to comply with the applicable regulations included in Section 10-4.419.1 of the OCSMO. Nonetheless, given that the proposed project would involve the routine transport, use, or disposal of hazardous materials, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Hazards and Hazardous Materials chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

b. Given that the project site is subject to ongoing agricultural production uses, the potential exists for on-site soils to be contaminated with herbicides and/or pesticides. If present in sufficient concentrations, such chemicals could pose a risk to workers involved in earth-moving activities at the project site. In addition, the project site contains two existing abandoned wells that would require removal as part of the proposed project. Therefore, the proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Hazards and Hazardous Materials chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

c. The nearest school relative to the project site is Willow Oak School, located approximately 1.5 miles east of the site. Therefore, the proposed project would result in a ***less-than-significant*** impact related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. Per the SWRCB GeoTracker database and the Department of Toxic Substances Control EnviroStor data management system, the project site is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.[12] Therefore, the project would not create a significant hazard to the public or the environment associated with such, and ***no impact*** would occur.

e. The nearest airport to the project site is the privately-owned Watts-Woodland Airport, located southwest of the site across CR 94B. The project site is lies within airport safety zones identified in the Watts-Woodland Airport Comprehensive Land Use Plan (CLUP).[13] As shown in Figure 10 of the CLUP, the northwestern portion of the project site north of the Moore Canal lies within Safety Area 2 (Approach-Departure Zone), while the remainder of the project site lies within Safety Area 3 (Overflight Zone). The CLUP lists incompatible land uses within Safety Area 2 as residential development greater than five acres per residence and uses that would attract people, such as shopping centers, restaurants, schools, factories, hospitals, office complexes, stadiums, auditoriums, arenas, recreation facilities, or churches. For Safety Area 3, incompatible uses include any use that would result in large assemblies of people, such as hospitals, stadiums and arenas, auditoriums and concert halls, regional shopping centers, and jails and detention centers. The proposed project would not include any of the types of incompatible uses listed in the CLUP. However, given that the proposed project would include future reclamation of a portion of the project site with a pond, the potential exists that increased bird activity at the project site could result in safety hazards related to bird strikes at the Watts-Woodland Airport. Therefore, the project could result in a ***potentially significant*** impact related to creating a safety hazard for people working in the project area.

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[12] State Water Resources Control Board. *GeoTracker.* Available at: https://geotracker.waterboards.ca.gov/. Accessed February 2019.
Department of Toxic Substances Control. *EnviroStor.* Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed February 2019.

[13] Sacramento Area Council of Governments. *Watts-Woodland Airport, Comprehensive Land Use Plan.* Amended March 1993.

Further analysis of the above impact will be included in the Hazards and Hazardous Materials chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

f. Emergency planning within the County is guided by the *2018 Yolo Operational Area Multi-Jurisdictional Hazard Mitigation Plan*.[14] The proposed project would not include substantial modifications to the existing roadway system in the project area. Consistent with Section 10-4.419 of the OCSMO, all haul truck traffic associated with the project would be limited to approved haul routes. However, given that the proposed project would generate truck traffic on local roadways, further analysis is required to ensure that such traffic would not conflict with established evacuation routes. Therefore, the proposed project could interfere with an emergency evacuation or response plan, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Hazards and Hazardous Materials chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

g. Issues related to wildfire hazards are discussed in Section XX, Wildfire, of this Initial Study. As noted therein, the project site is not located within a Very High or High Fire Hazard Severity Zone (FHSZ).[15] In addition, the site is bordered by actively managed agricultural land to the east, CR 22 to the south, and CR 94B to the west. Such features would reduce the potential for wildfire to spread to the project site. Furthermore, the project would not include the development of housing or habitable structures within the project site. The proposed mining activities would reduce total amount of on-site combustible vegetation, thereby preventing fire risks at the nearby residential developments. Upon completion of mining operations, approximately 116 acres of the mining area would be reclaimed to agricultural use, while the remainder of the mining area would be reclaimed to a pond with riparian woodland along the fringes/shoreline.

Therefore, the proposed project would not expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, and a ***less-than-significant*** impact would occur.

[14] County of Yolo. *2018 Yolo Operational Area Multi-Jurisdictional Hazard Mitigation Plan.* December 2018.
[15] California Department of Forestry and Fire Protection. *Yolo County, Fire Hazard Severity Zones in LRA*. October 5, 2007.

X. HYDROLOGY AND WATER QUALITY. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	✖	☐	☐	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	✖	☐	☐	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	✖	☐	☐	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	✖	☐	☐	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	✖	☐	☐	☐
iv. Impede or redirect flood flows?	✖	☐	☐	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	✖	☐	☐	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	✖	☐	☐	☐

Discussion

a. Mining and reclamation activities associated with the proposed project would involve the exposure of topsoil due to grading and excavation of the site. During the early phases of mining, the overburden on the site would be removed using scrapers, motor graders and bull dozers. Overburden would be progressively removed ahead of mining and stockpiled in setback areas and internal storage locations until retrieved for reclamation. The top layers of topsoil would be placed in temporary berms and/or stockpiles and seeded with naturalized annual grasses and forbs. As required by Section 10-4.433 of the OCSMO, berms or stockpiles would not exceed 40 feet in height with slopes no steeper than 2:1 horizontal to vertical. The stockpiles would remain a minimum of 100 feet from the top of bank of Cache Creek.

During removal of overburden and subsequent mining activities, the potential exists for wind and water erosion to discharge sediment and/or pollutants into stormwater runoff, which could adversely affect water quality within Cache Creek. In addition, the project would include modifications to the existing RWQCB WDRs for the Woodland Plant facility to allow for the use of fine sediment from aggregate processing (i.e., “fines”) in the eventual reclamation of the project site. The processing fines would be pumped from the Woodland

Plant facility as a slurry (mix of water and fines) and discharged into the mining area/pond in accordance with the requirements of the revised WDRs.

Based on the above, the proposed project could result in the violation of water quality standards and degradation of water quality, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Hydrology and Water Quality chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

b,e. The proposed project would rely on groundwater supplies to provide dust suppression at the project site and for aggregate processing at the Woodland Plant site. Groundwater would be supplied by two existing wells located at the Woodland Plant site. In addition, the proposed project would result in the exposure of groundwater during creation of the mining pit. Further analysis is required to ensure that such activities would not degrade groundwater quality and would not conflict with Section 10-4.417, Groundwater Monitoring Programs, of the OCSMO. Thus, the proposed project could result in a ***potentially significant*** impact related to impacts to groundwater.

Further analysis of the above impact will be included in the Hydrology and Water Quality chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

ci-iii. Mining and reclamation activities associated with the proposed project would alter the existing drainage patterns within the project site. Specifically, the project site would be graded to allow stormwater runoff to collect in the proposed mining pit, where the runoff would gradually percolate or evaporate. At the conclusion of mining, the site would remain contoured such that stormwater runoff would be directed to the reclaimed mining area. New stormwater detention basins would be provided within the western and eastern reclaimed agricultural areas of the site. Thus, stormwater runoff would not leave the site during, or after completion of, the proposed mining activities.

Given the substantial drainage modifications that would occur with the proposed project, further study is required to ensure that such modifications would not result in substantial erosion, siltation, or flooding on- or off-site, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Hydrology and Water Quality chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

civ,d. The project site is not located near the ocean and, thus, would not be subject to tsunami hazards. In addition, the site is not located within the vicinity of a large closed body of water such as a lake or reservoir that could be subject to risks from seiches. However, according to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map numbers 06113C0430H and 06113C0440G, the northern portion of the project site is located within a Special Flood Hazard Area subject to a 100-year flooding. In addition, per Figure HS-5 in the General Plan, the project site is located within a Dam Inundation Zone associated with the Indian Valley Reservoir dam. Therefore, the proposed project could result in a ***potentially significant*** impact related to impeding or redirecting flood

flows, and could pose a risk related to the release of pollutants due to project inundation due to flooding.

Further analysis of the above impact will be included in the Hydrology and Water Quality chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

XI. LAND USE AND PLANNING. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Physically divide an established community?	✖	☐	☐	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	✖	☐	☐	☐

Discussion

a. A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community, or isolate an existing land use. Currently, two existing single-family homes are located to the west of the site, and additional single-family development is located to the south and southwest of the site. Given that the proposed project has the potential to alter land use conditions within the project area, a **potentially significant** impact could occur related to physically dividing an established community.

Further analysis of the above impact will be included in the Land Use and Planning chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

b. Per the Yolo County General Plan, the project site is designated AG, and a portion of the site is included in in the Mineral Resource Overlay designation. The site is zoned A-N. The proposed project would include a GPA to extend the Mineral Resource Overlay (MRO) designation to cover the entirety of the project site, and a Rezone to add an SGO to the site, resulting in a zoning designation of A-N/SGO. In addition, the project would include an amendment to the Cache Creek Area Plan to include the project site in the OCMP boundary. Surface mining operations are conditionally allowed in the A-N/SG-O zone with the approval of a Use Permit.

Given that the proposed project would require a GPA and Rezone, further analysis of the project's consistency with applicable land use policies, plans, and regulations is required to ensure that the project would not cause a significant environmental impact due to conflicts with such standards. Potential inconsistencies to be evaluated in the EIR include, but are not limited to, conflicts with the buffer standards included in the OCSMO, consistency with the CCAP (including planned revisions as part of the ongoing CCAP update), conflicts with the Yolo Fliers Club golf course, and conflicts with the Monument Hill Memorial Park cemetery. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Land Use and Planning chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

XII. MINERAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	✖	☐	☐	☐
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	✖	☐	☐	☐

Discussion

a,b. Per the Department of Conservation, the project site is located within Mineral Resource Zone 2 (MRZ-2) and Mineral Resource Zone 3 (MRZ-3), which signifies that the site contains both known significant mineral resources and known mineral deposits that could qualify as mineral resources.[16] Given that the proposed project would including mining of the project site to extract such resources, the proposed project could result in the loss of availability of known mineral resources. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Geology, Soils, and Mineral Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

[16] County of Yolo. *2030 Countywide General Plan* [pg. CO-43 to -36]. Amended May 8, 2018.

XIII. NOISE. *Would the project result in:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	✖	☐	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	✖	☐	☐	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	✖	☐

Discussion

a. The proposed project would include mining of the project site and subsequent reclamation of the site for agriculture and open space uses. Operations associated with the project could potentially increase ambient noise levels due to operation of the proposed electrical conveyor, excavation activities, increased truck traffic on local roadways, and extension of the operational lifetime of the existing Woodland Plant. Noise levels generated by the project may result in exposure of persons to or generation of noise levels in excess of established thresholds in the Yolo County General Plan and the County Code of Ordinances, which include noise standards for mining operations in Section 10-4.421 of the OCSMO. The project could cause a substantial permanent, temporary, or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Therefore, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Noise chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

b. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. The proposed project could cause elevated vibration due to operation of heavy-duty equipment on the site during earthmoving and mining operations. In the event that such groundborne vibration occurs within the vicinity of the existing sensitive receptors to the west and south of the project site, the project could expose people to or generate excessive groundborne vibration or groundborne noise levels, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Noise chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

c. The nearest airport to the project site is the privately-owned Watts-Woodland Airport, located southwest of the site across CR 94B. As noted previously, per the Watts-Woodland Airport CLUP, the northwestern portion of the project site north of the Moore Canal lies within Safety Area 2 (Approach-Departure Zone), while the remainder of the

project site lies within Safety Area 3 (Overflight Zone). The proposed project would not include the construction of housing or habitable structures within the site. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels related to air traffic, and a ***less-than-significant*** impact would occur.

XIV.POPULATION AND HOUSING. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	✖	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	✖	☐

Discussion

a,b. The proposed project would not include the development of new housing. In addition, employees required for the proposed mining operations would be transferred from the existing Esparto Plant. Thus, while the project would employ approximately 24 workers, such employees would not result in an increase of the overall workforce associated with aggregate mining and processing in the project area. With the proposed transfer of the Esparto production allotment to the Woodland Plant, total employment at the Woodland Plant under peak production would consist of 52 people, including 40 operating engineers, two teamsters, two laborers, and eight clerical staff.

In addition, the project site is located adjacent to the existing Woodland Plant facility, and other approved mining sites are located within close proximity to the site (see Figure 3). Thus, the project would not be located within an undeveloped area. The project would not require the extension of major infrastructure; as discussed previously, water supplies required for project operations would be provided by existing wells at the Woodland Plant, and the project would not require connections to public wastewater or stormwater infrastructure. Furthermore, given that the project site is currently used for agricultural production and does not contain any existing habitable structures, the project would not displace existing people housing.

Therefore, the proposed project would not induce substantial unplanned population growth in the project area, either directly or indirectly, and would not displace substantial numbers of existing housing or people such that replacement housing would be required elsewhere in the County. Thus, a ***less-than-significant*** impact would occur.

XV. PUBLIC SERVICES. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	✖	☐	☐	☐
b. Police protection?	✖	☐	☐	☐
c. Schools?	☐	☐	✖	☐
d. Parks?	✖	☐	☐	☐
e. Other Public Facilities?	✖	☐	☐	☐

Discussion

a,b. Fire protection services within the project area are provided by the Willow Oak Fire Protection District. The nearest fire station is located directly south of the project site at 18111 CR 94B. Police protection services in the project area are provided by the Yolo County Sheriff's Office, headquartered at 140 Tony Diaz Drive in the City of Woodland, approximately 8.5 miles east of the project site.

The proposed project would consist of mining and subsequent reclamation activities at the project site. Further analysis is required to determine whether the operations associated with the project would increase demand for fire or police protection services. Therefore, in the absence of further analysis, the proposed project could have a ***potentially significant*** impact related to the need for new or physically altered fire or police protection facilities, the construction of which could cause significant environmental impacts.

Further analysis of the above impact will be included in the Public Services, Utilities, and Service Systems chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

c The proposed project would not include the construction of new homes and, thus, would not introduce new residents to the project area. As such, the project would not result in increased demand for schools. Therefore, the proposed project would have a ***less-than-significant*** impact related to the need for new or physically altered schools, the construction of which could cause significant environmental impacts.

d.e. The project would include the preparation of a development agreement between the applicant and the County, which would include certain net public benefits, (referred to as "net gains") such as land dedications and reclamation enhancements agreed to among the parties that will be analyzed in the EIR. The County typically seeks to achieve net gains in the following categories: dedication of property; construction of open space improvements (such as trails, staging areas, habitat restoration, etc.); commitments to provide additional program funding; sales tax place of sale agreements; and other public benefits. Given that the proposed project could potentially include the construction of recreation facilities, further analysis is required to ensure that adverse effects to the environment would not occur. Thus, the proposed project could result in a ***potentially***

significant impact related to the need for new or physically altered parks and other public facilities, the construction of which could cause significant environmental impacts.

Further analysis of the above impact will be included in the Public Services, Utilities, and Service Systems chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

XVI.RECREATION. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	✖	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	✖	☐	☐	☐

Discussion

a. Given that the proposed project would not include residential development and would not induce population growth within the project area, the project would not result in increased demand for park and recreation facilities. Therefore, the project would not result in substantial physical deterioration of any existing neighborhood or regional parks or other recreational facilities. Consequently, a ***less-than-significant*** impact would occur.

b. As discussed under Section XV, Public Services, the development agreement to be prepared between the project applicant and the County may include construction of recreation facilities. Thus, the proposed project could result in a ***potentially significant*** impact related to construction or expansion of recreational facilities.

Further analysis of the above impact will be included in the Public Services, Utilities, and Service Systems chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

XVII. TRANSPORTATION. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	✖	☐	☐	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	✖	☐	☐	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	✖	☐	☐	☐
d. Result in inadequate emergency access?	✖	☐	☐	☐

Discussion

a. The proposed project would result in vehicle traffic on local roadways in the project area associated with worker and haul truck trips. Vehicle trip generation associated with the project would essentially replace trip generation associated with the existing Esparto Plant and, thus, the project is not expected to result in a substantial net increase in traffic volumes at area roadway segments and intersections. Nonetheless, further study is required to ensure that project traffic would not be substantial in relation to the existing and/or planned future year traffic load and capacity of the roadway system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections). In addition, the project could exceed, either individually or cumulatively, a level of service (LOS) standard established by the County General Plan for roads affected by project traffic. Therefore, the project could result in a ***potentially significant*** impact related to conflicting with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Further analysis of the above impact will be included in the Transportation chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

b. Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Per Section 15064.3, analysis of vehicle miles travelled (VMT) attributable to a project is the most appropriate measure of transportation impacts. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in Section 15064.3(b)(2) regarding roadway capacity, a project's effect on automobile delay does not constitute a significant transportation impact under CEQA. However, as noted under question 'a' above, evaluation of LOS will be provided in the Shifler Mining & Reclamation Project EIR in order to ensure consistency with the County's General Plan.

Given that the proposed project would result in increased vehicle trip generation on local roadways, further analysis of VMT attributable to the project is required to ensure that the project would not conflict with Section 15064.3(b) of the CEQA Guidelines. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Transportation chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

c,d. In order to allow mining equipment to move between the Woodland Plant site and the project site, an over-crossing of the relocated Moore Canal would be constructed as part of the proposed project. Aggregate trucks would continue to access the Woodland Plant site by way of the existing entrance on CR 20. Given that the project would not alter access along the existing roadways in the site vicinity, the project would not substantially increase hazards due to introduction of a geometric design feature. In addition, aggregate truck traffic to and from the Woodland Plant site would continue to be required to use designated haul routes of CR 20, CR 96, and SR 16 to and from Interstates 5 and 505. Local deliveries would continue to use other local roadways. Thus, the project would not introduce a new incompatible use to local roadways. Furthermore, the proposed over-crossing connecting to the Woodland Plant site would provide adequate emergency access to the project site.

Nonetheless, project truck traffic on local County roads could result in potential safety impacts, as well as degradation of existing roadway surfaces due to increased wear and tear. Therefore, the proposed project could substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), and could result in inadequate emergency access. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Transportation chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

XVIII. TRIBAL CULTURAL RESOURCES. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	✖	☐	☐	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	✖	☐	☐	☐

Discussion

a,b. As part of the Cultural Resource Assessment prepared for the proposed project, a search of the Native American Heritage Commission (NAHC) Sacred Lands File was prepared for the project site.[17] The search of the Sacred Lands File did not yield any information regarding the presence of Tribal Cultural Resources within the project site or the immediate area. In addition, as discussed in Section V of this Initial Study, the project site has been subject to continual disturbance associated with ongoing agricultural activities.

In compliance with California Public Resources Code (PRC) Section 21080.3.1(also known as Assembly Bill (AB) 52), a project notification letter was distributed on December 18, 2019 to various tribes that have requested such notification. On January 10, 2019, the Yocha Dehe Yintun Nation responded with a request to initiate formal consultation on the project. Consultation efforts between the County and the Yoche Dehe Wintun Nation are ongoing.

Based on the history of disturbance at the project site and the lack of identified cultural resources at the site, known Tribal Cultural Resources do not likely exist within the proposed project site. Nevertheless, the possibility exists that construction of the proposed project could result in a substantial adverse change in the significance of a Tribal Cultural Resource if previously unknown cultural resources are uncovered during grading or other ground-disturbing activities. Thus, a ***potentially significant*** impact to tribal cultural resources could occur.

Further analysis of the above impact will be included in the Cultural Resources chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

[17] Peak & Associates, Inc. *Cultural Resource Assessment for the Shifler Mining and Reclamation Project, Yolo County, California.* January 2015.

XIX.UTILITIES AND SERVICE SYSTEMS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	✖	☐	☐	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	✖	☐	☐	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	✖	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	✖	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	✖	☐

Discussion

a. Currently, water for ongoing agricultural activities at the project site is provided by the YCFCWCD by way of the Moore Canal, which would continue to supply agricultural water to the site during the proposed mining activities and after reclamation of the site. As part of the proposed project the Moore Canal would be relocated to follow the western and northern boundary of the proposed project site. The applicant is proposing that the relocated canal be located a minimum of 200-feet from the existing top bank of Cache Creek, and the reclaimed mining slopes within 50-feet of the relocated canal will have 3:1 slopes. The relocated Moore Canal would be concrete-lined and have an access road on each side for periodic maintenance by the YCFCWCD. In addition to the relocation of Moore Canal, the project would include construction of on-site stormwater management facilities and connection to existing electrical infrastructure in the project area.

The project would not require the relocation or construction of new wastewater treatment infrastructure, as portable toilet facilities would be provided at the project site and existing portable toilet facilities would continue to be used at the adjacent Woodland Plant. In addition, connection to existing natural gas or telecommunications infrastructure would not be required for the proposed mining and reclamation activities.

Based on the above, the proposed project would not require the relocation or construction of new wastewater treatment, natural gas, or telecommunications facilities. However, the project could result in a ***potentially significant*** impact related to requiring or resulting in the relocation or construction of new or expanded water, storm water drainage, or electric

power facilities, the construction or relocation of which could cause significant environmental effects.

Further analysis of the above impact will be included in the Public Services, Utilities, and Service Systems chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

b. As discussed in Section X, Hydrology and Water Quality, of this Initial Study, the proposed project would rely on groundwater supplies to provide dust suppression at the project site and for aggregate processing at the Woodland Plant site. Groundwater would be supplied by two existing wells located at the Woodland Plant site. Further analysis is necessary to ensure that adequate groundwater supplies would be available to serve the project. Therefore, the proposed project could result in a ***potentially significant*** impact related to having sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

Further analysis of the above impact will be included in the Public Services, Utilities, and Service Systems chapter of the Shifler Mining & Reclamation Project EIR being prepared for the project.

c. As noted above, portable toilet facilities would be provided at the project site and existing portable toilet facilities would continue to be used at the adjacent Woodland Plant. The project would not require connection to public wastewater conveyance and treatment infrastructure. On-site portable toilets would be maintained by a private third-party servicer under contract with the project applicant. Wastewater generated by the project would be hauled to a wastewater treatment plant with adequate capacity and disposed of in accordance with all applicable federal, State, and local regulations. Given that the proposed project would include approximately 28 employees and would not be accessible to the general public, the total quantity of wastewater generated by the project would not be substantial. Furthermore, any increase in wastewater generation occurring as a result of the project would be offset by equivalent reductions in wastewater generation due to planned closure of the nearby Schwarzgruber mining site.

Based on the above, the proposed project would not be served by a wastewater treatment provider, and a ***less-than-significant*** impact would occur related to wastewater treatment capacity.

d,e. The proposed mining and reclamation activities would not generate a substantial quantity of solid waste. In addition, any minor increases in solid waste generation occurring as a result of the proposed project would be offset by equivalent reductions in solid waste generation due to planned closure of the nearby Schwarzgruber mining site.

Based on the above, the proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, a ***less-than-significant*** impact related to solid waste would occur as a result of the proposed project.

XX. WILDFIRE. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	✖	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	✖	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	✖	☐
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	✖	☐

Discussion

a-d. According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the project site is not located within or near a Very High or High FHSZ.[18] Only the northernmost portion of the site adjacent to Cache Creek is mapped as a Moderate FHSZ, while the remainder of the site is not located within a FHSZ. In addition, the site is bordered by actively managed agricultural land to the east, CR 22 to the south, and CR 94B to the west. Such features would reduce the potential for wildfire to spread to the project site. Furthermore, the project would not include the development of housing or habitable structures within the project site. Thus, the proposed project would not be expected to be subject to or result in substantial adverse effects related to wildfires, and a ***less-than-significant*** impact would occur.

[18] California Department of Forestry and Fire Protection. *Yolo County, Fire Hazard Severity Zones in LRA*. October 5, 2007.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Does the project have the potential to substantially 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, substantially 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 impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a 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)?	✖	☐	☐	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	✖	☐	☐	☐

Discussion

a. As discussed in Section IV, Biological Resources, of this Initial Study, the proposed project could potentially result in impacts to special-status plant and wildlife species and other biological resources. Thus, implementation of the proposed project could have the potential to degrade the quality of the environment by potentially reducing the habitat for special-status plant and animal species. In addition, the project could have a substantial adverse effect on riparian habitat or other sensitive natural communities, including oak woodlands. Furthermore, as noted in Section V, the existing on-site Moore Canal, which would be relocated as part of the project, could be eligible for inclusion in the CRHP. As such, and in the absence of further study, the project could eliminate important examples of the major periods of California history or prehistory. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impacts will be included in the Shifler Mining & Reclamation Project EIR being prepared for the project.

b. The proposed project in conjunction with other development within Yolo County could incrementally contribute to cumulative impacts in the project area. In particular, as discussed in Section III, Air Quality, of this Initial Study, the proposed project could cumulatively contribute to regional air quality health effects through emissions of criteria and mobile source air pollutants. Per Section VIII, Greenhouse Gas Emissions, mining and reclamation activities associated with proposed project would contribute to increases of GHG emissions that are associated with global climate change, and impacts related to GHG emissions and global climate change could be cumulatively considerable. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impacts will be included in the Shifler Mining & Reclamation Project EIR being prepared for the project.

c. As described in this Initial Study, implementation of the proposed project could result in impacts related to air quality, hazardous materials, and excess noise levels. As such, in the absence of further study, the project could cause substantial adverse effects on human beings, and a ***potentially significant*** impact could occur.

Further analysis of the above impacts will be included in the Shifler Mining & Reclamation Project EIR being prepared for the project.

Teichert Shifler Mining and Reclamation Project

NOP Public Commenters

1. Rigo Torres 8.18.19
2. Matthew Pirtle 8.18.19
3. Lisa Nicholas 8.18.19
4. Pacific Gas and Electric Company 8.19.19
5. Elise Brandwajn 8.19.19
6. Gregory Ramirez 8.19.19
7. Jon Huffine 8.21.19
8. California Department of Conservation – Division of Oil, Gas, and Geothermal Resources 8.22.19
9. California Department of Conservation – Division of Land Resource Protection 8.26.19
10. Julie Frommelt Payne 8.26.19
11. Aaron Johnson 8.27.19
12. Pamela Van Brocklin 8.29.19
13. Rudy Lopez 8.29.19
14. Joyce and Ranse Reynolds 8.29.19
15. Eric Dowdy 8.29.19
16. Mark and Katherine Stinson 8.30.19
17. Yolo-Solano Air Quality Management District 9.3.19
18. Tim and Barbara Sharp 9.4.19
19. Annette Davis 9.4.19
20. Dale Sumersille and Dawne Koranda 9.4.19
21. Northwest Information Center 9.5.19
22. California Department of Fish and Wildlife 9.6.19
23. Heidi Frommelt Potter 9.6.19
24. Bea Leonardi 9.6.19
25. Cathy Stamey 9.6.19
26. Julie Payne 9.8.19
27. Native American Heritage Commission 9.10.19
28. Margaret Kronenberg 9.10.19
29. Ruth Schreiber (verbal comment) 9.10.19
30. Monique Marin 9.11.19
31. NOP Public Scoping Meeting 9.12.19
32. Dayle Murray 9.12.19
33. Joyce and Ranse Reynolds 9.13.19
34. Diane Tauzer 9.13.19
35. Jerry and Stacy Beckwith 9.14.19
36. Lynn Shaw Reynolds 9.14.19
37. Thomas Wilkop 9.15.19
38. Keila Golden 9.15.19
39. Sergio Hernandez 9.15.19
40. Amanda Jarose 9.15.19
41. Georgia Cochran 9.16.19

42. Daren Robbins 9.16.19
43. Barbara Koerber 9.16.19
44. George Lu 9.16.19
45. Ryan Payne 9.16.19
46. Janet Levers 9.16.19
47. Phil and Mary Beck 9.16.19
48. Joyce Reynolds 9.16.19
49. Alan Koerber 9.16.19
50. Lori Sinor 9.16.19
51. Cynthia Johe 9.16.19
52. Paul Sinor 9.16.19
53. Ryan Hall 9.16.19

Letters Received After Close of the Comment Period

54. Monique Marin 9.16.19
55. Rick and Janet Sitts 9.16.19
56. Ruth Schreiber 9.17.19
57. Laura Smyth – Wild Wings HOA, Community Association Manager 9.18.19
58. Paul Crist 9.19.19
59. California State Clearinghouse 8.16.19

-

From: rigo torres [mailto:elmosquitocinco@yahoo.com]
Sent: Sunday, August 18, 2019 1:09 PM
To: Stephanie Cormier <https://urldefense.proofpoint.com/v2/url?u=http-3A__Stephanie.Cormier-40yolocounty.org&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=kdtPCKeqKIngwAPH6qvp5f_ExA_ifBGx-p-DA3WNK-M&m=fznAY7Rwbq1il5vb2dFCP3c2TGe5M9z_Y4jzWpnF_1c&s=FfgMt5fP8BytEgROdNjp2OGyG74JMUpdzwhthhe9Gl4&e=>
Subject: Teichert

My name is RIgo Torres I live at 18170 mandarin street in wildwings if you guys approve these permits to go through it will be devastating to the ground water aqua fifers once gone it's for ever gone it's not always about the money please do the right thing and don't approve it stand up to the mighty big gravel kings

Sent from my iPhone

Letter 2

From: Matthew Pirtle [mailto:dancingbear302@gmail.com]
Sent: Sunday, August 18, 2019 4:12 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Mining project adjacent to Yolo Flyers Club

Stephanie, I live in the Wild Wings community that is directly across from the area that is being consider for mining.
There is a high concern that the ground water table that we use in Wild Wings(2 wells) could be affected by this mining operation. The possible exavated ground in this mining operation could seriously affect the cleanliness of the ground water that the Wild Wings community draws from. We already have issues with our water supply from a volume issue and excessive boron and arsenic concentrations. Removing the natural filtering system of topsoil and naturals rocks and minerals may produce more problems.
Has there been an independent environmental investigation and report that addresses there concerns? Will Teigart provide a remedy for problems with our water systems that would effect over 300 homes in Wild Wings?
Concerned, Matt Pirtle, 18171 Mallard Street, Wild Wings.

From: Lisa Nicholas [mailto:lisanicholas@sbcglobal.net]
Sent: Sunday, August 18, 2019 5:12 PM
To: Stephanie Cormier <https://urldefense.proofpoint.com/v2/url?u=http-3A__Stephanie.Cormier-40yolocounty.org&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=kdtPCKeqKIngwAPH6qvp5f_ExA_ifBGx-p-DA3WNK-M&m=-SVD0mlw_3HgAjOextpnQtifV7ruMMR7tVC6i1Hdmxg&s=AIt0jdim2hMf6B3gKSe0ySSy_dVX0El4gqmJBebzOnA&e=>
Subject: Mining
I understand that there is a consideration for a mining company to do business adjacent to our homes. I live out in wild wings with a disabled teenager. We moved out here to get away from many of the problems that heavy construction and urban living can bring. Please don't allow this project to go forward. Not only will it adversely affect our home values, but will also affect the quality of life and the quality of our water and soil. Please don't allow this!

Sincerely
Lisa Nicholas
Wildwing D
Sent from my iPad

August 19, 2019

Stephanie Cormier
County of Yolo
292 W Beamer St
Woodland, CA 95695

Ref: Gas and Electric Transmission and Distribution

Dear Ms. Cormier,

Thank you for submitting the Teichert Shifler Mining & Reclamation Project plans for our review. PG&E will review the submitted plans in relationship to any existing Gas and Electric facilities within the project area. If the proposed project is adjacent/or within PG&E owned property and/or easements, we will be working with you to ensure compatible uses and activities near our facilities.

Attached you will find information and requirements as it relates to Gas facilities (Attachment 1) and Electric facilities (Attachment 2). Please review these in detail, as it is critical to ensure your safety and to protect PG&E's facilities and its existing rights.

Below is additional information for your review:

1. This plan review process does not replace the application process for PG&E gas or electric service your project may require. For these requests, please continue to work with PG&E Service Planning: https://www.pge.com/en_US/business/services/building-and-renovation/overview/overview.page.

2. If the project being submitted is part of a larger project, please include the entire scope of your project, and not just a portion of it. PG&E's facilities are to be incorporated within any CEQA document. PG&E needs to verify that the CEQA document will identify any required future PG&E services.

3. An engineering deposit may be required to review plans for a project depending on the size, scope, and location of the project and as it relates to any rearrangement or new installation of PG&E facilities.

Any proposed uses within the PG&E fee strip and/or easement, may include a California Public Utility Commission (CPUC) Section 851 filing. This requires the CPUC to render approval for a conveyance of rights for specific uses on PG&E's fee strip or easement. PG&E will advise if the necessity to incorporate a CPUC Section 851filing is required.

This letter does not constitute PG&E's consent to use any portion of its easement for any purpose not previously conveyed. PG&E will provide a project specific response as required.

Sincerely,

Plan Review Team
Land Management

Attachment 1 – Gas Facilities

There could be gas transmission pipelines in this area which would be considered critical facilities for PG&E and a high priority subsurface installation under California law. Care must be taken to ensure safety and accessibility. So, please ensure that if PG&E approves work near gas transmission pipelines it is done in adherence with the below stipulations. Additionally, the following link provides additional information regarding legal requirements under California excavation laws: http://usanorth811.org/wp-content/uploads/2017/05/CA-LAW-English.pdf

1. Standby Inspection: A PG&E Gas Transmission Standby Inspector must be present during any demolition or construction activity that comes within 10 feet of the gas pipeline. This includes all grading, trenching, substructure depth verifications (potholes), asphalt or concrete demolition/removal, removal of trees, signs, light poles, etc. This inspection can be coordinated through the Underground Service Alert (USA) service at 811. A minimum notice of 48 hours is required. Ensure the USA markings and notifications are maintained throughout the duration of your work.

2. Access: At any time, PG&E may need to access, excavate, and perform work on the gas pipeline. Any construction equipment, materials, or spoils may need to be removed upon notice. Any temporary construction fencing installed within PG&E's easement would also need to be capable of being removed at any time upon notice. Any plans to cut temporary slopes exceeding a 1:4 grade within 10 feet of a gas transmission pipeline need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.

3. Wheel Loads: To prevent damage to the buried gas pipeline, there are weight limits that must be enforced whenever any equipment gets within 10 feet of traversing the pipe.

Ensure a list of the axle weights of all equipment being used is available for PG&E's Standby Inspector. To confirm the depth of cover, the pipeline may need to be potholed by hand in a few areas.

Due to the complex variability of tracked equipment, vibratory compaction equipment, and cranes, PG&E must evaluate those items on a case-by-case basis prior to use over the gas pipeline (provide a list of any proposed equipment of this type noting model numbers and specific attachments).

No equipment may be set up over the gas pipeline while operating. Ensure crane outriggers are at least 10 feet from the centerline of the gas pipeline. Transport trucks must not be parked over the gas pipeline while being loaded or unloaded.

4. Grading: PG&E requires a minimum of 36 inches of cover over gas pipelines (or existing grade if less) and a maximum of 7 feet of cover at all locations. The graded surface cannot exceed a cross slope of 1:4.

5. Excavating: Any digging within 2 feet of a gas pipeline must be dug by hand. Note that while the minimum clearance is only 12 inches, any excavation work within 24 inches of the edge of a pipeline must be done with hand tools. So to avoid having to dig a trench entirely with hand tools, the edge of the trench must be over 24 inches away. (Doing the math for a 24 inch wide trench being dug along a 36 inch pipeline, the centerline of the trench would need to be at least 54 inches [24/2 + 24 + 36/2 = 54] away, or be entirely dug by hand.)

Water jetting to assist vacuum excavating must be limited to 1000 psig and directed at a 40° angle to the pipe. All pile driving must be kept a minimum of 3 feet away.

Any plans to expose and support a PG&E gas transmission pipeline across an open excavation need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.

6. Boring/Trenchless Installations: PG&E Pipeline Services must review and approve all plans to bore across or parallel to (within 10 feet) a gas transmission pipeline. There are stringent criteria to pothole the gas transmission facility at regular intervals for all parallel bore installations.

For bore paths that cross gas transmission pipelines perpendicularly, the pipeline must be potholed a minimum of 2 feet in the horizontal direction of the bore path and a minimum of 12 inches in the vertical direction from the bottom of the pipe with minimum clearances measured from the edge of the pipe in both directions. Standby personnel must watch the locator trace (and every ream pass) the path of the bore as it approaches the pipeline and visually monitor the pothole (with the exposed transmission pipe) as the bore traverses the pipeline to ensure adequate clearance with the pipeline. The pothole width must account for the inaccuracy of the locating equipment.

7. Substructures: All utility crossings of a gas pipeline should be made as close to perpendicular as feasible (90° +/- 15°). All utility lines crossing the gas pipeline must have a minimum of 12 inches of separation from the gas pipeline. Parallel utilities, pole bases, water line 'kicker blocks', storm drain inlets, water meters, valves, back pressure devices or other utility substructures are not allowed in the PG&E gas pipeline easement.

If previously retired PG&E facilities are in conflict with proposed substructures, PG&E must verify they are safe prior to removal. This includes verification testing of the contents of the facilities, as well as environmental testing of the coating and internal surfaces. Timelines for PG&E completion of this verification will vary depending on the type and location of facilities in conflict.

8. Structures: No structures are to be built within the PG&E gas pipeline easement. This includes buildings, retaining walls, fences, decks, patios, carports, septic tanks, storage sheds, tanks, loading ramps, or any structure that could limit PG&E's ability to access its facilities.

9. Fencing: Permanent fencing is not allowed within PG&E easements except for perpendicular crossings which must include a 16 foot wide gate for vehicular access. Gates will be secured with PG&E corporation locks.

10. Landscaping: Landscaping must be designed to allow PG&E to access the pipeline for maintenance and not interfere with pipeline coatings or other cathodic protection systems. No trees, shrubs, brush, vines, and other vegetation may be planted within the easement area. Only those plants, ground covers, grasses, flowers, and low-growing plants that grow unsupported to a maximum of four feet (4') in height at maturity may be planted within the easement area.

11. Cathodic Protection: PG&E pipelines are protected from corrosion with an "Impressed Current" cathodic protection system. Any proposed facilities, such as metal conduit, pipes,

service lines, ground rods, anodes, wires, etc. that might affect the pipeline cathodic protection system must be reviewed and approved by PG&E Corrosion Engineering.

12. Pipeline Marker Signs: PG&E needs to maintain pipeline marker signs for gas transmission pipelines in order to ensure public awareness of the presence of the pipelines. With prior written approval from PG&E Pipeline Services, an existing PG&E pipeline marker sign that is in direct conflict with proposed developments may be temporarily relocated to accommodate construction work. The pipeline marker must be moved back once construction is complete.

13. PG&E is also the provider of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E's facilities must be reviewed and approved by PG&E to ensure that no impact occurs which may endanger the safe operation of its facilities.

Attachment 2 – Electric Facilities

It is PG&E's policy to permit certain uses on a case by case basis within its electric transmission fee strip(s) and/or easement(s) provided such uses and manner in which they are exercised, will not interfere with PG&E's rights or endanger its facilities. Some examples/restrictions are as follows:

1. Buildings and Other Structures: No buildings or other structures including the foot print and eave of any buildings, swimming pools, wells or similar structures will be permitted within fee strip(s) and/or easement(s) areas. PG&E's transmission easement shall be designated on subdivision/parcel maps as "**RESTRICTED USE AREA – NO BUILDING."**

2. Grading: Cuts, trenches or excavations may not be made within 25 feet of our towers. Developers must submit grading plans and site development plans (including geotechnical reports if applicable), signed and dated, for PG&E's review. PG&E engineers must review grade changes in the vicinity of our towers. No fills will be allowed which would impair ground-to-conductor clearances. Towers shall not be left on mounds without adequate road access to base of tower or structure.

3. Fences: Walls, fences, and other structures must be installed at locations that do not affect the safe operation of PG&'s facilities. Heavy equipment access to our facilities must be maintained at all times. Metal fences are to be grounded to PG&E specifications. No wall, fence or other like structure is to be installed within 10 feet of tower footings and unrestricted access must be maintained from a tower structure to the nearest street. Walls, fences and other structures proposed along or within the fee strip(s) and/or easement(s) will require PG&E review; submit plans to PG&E Centralized Review Team for review and comment.

4. Landscaping: Vegetation may be allowed; subject to review of plans. On overhead electric transmission fee strip(s) and/or easement(s), trees and shrubs are limited to those varieties that do not exceed 15 feet in height at maturity. PG&E must have access to its facilities at all times, including access by heavy equipment. No planting is to occur within the footprint of the tower legs. Greenbelts are encouraged.

5. Reservoirs, Sumps, Drainage Basins, and Ponds: Prohibited within PG&E's fee strip(s) and/or easement(s) for electric transmission lines.

6. Automobile Parking: Short term parking of movable passenger vehicles and light trucks (pickups, vans, etc.) is allowed. The lighting within these parking areas will need to be reviewed by PG&E; approval will be on a case by case basis. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications. Blocked-up vehicles are not allowed. Carports, canopies, or awnings are not allowed.

7. Storage of Flammable, Explosive or Corrosive Materials: There shall be no storage of fuel or combustibles and no fueling of vehicles within PG&E's easement. No trash bins or incinerators are allowed.

8. Streets and Roads: Access to facilities must be maintained at all times. Street lights may be allowed in the fee strip(s) and/or easement(s) but in all cases must be reviewed by PG&E for

proper clearance. Roads and utilities should cross the transmission easement as nearly at right angles as possible. Road intersections will not be allowed within the transmission easement.

9. Pipelines: Pipelines may be allowed provided crossings are held to a minimum and to be as nearly perpendicular as possible. Pipelines within 25 feet of PG&E structures require review by PG&E. Sprinklers systems may be allowed; subject to review. Leach fields and septic tanks are not allowed. Construction plans must be submitted to PG&E for review and approval prior to the commencement of any construction.

10. Signs: Signs are not allowed except in rare cases subject to individual review by PG&E.

11. Recreation Areas: Playgrounds, parks, tennis courts, basketball courts, barbecue and light trucks (pickups, vans, etc.) may be allowed; subject to review of plans. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications.

12. Construction Activity: Since construction activity will take place near PG&E's overhead electric lines, please be advised it is the contractor's responsibility to be aware of, and observe the minimum clearances for both workers and equipment operating near high voltage electric lines set out in the High-Voltage Electrical Safety Orders of the California Division of Industrial Safety (https://www.dir.ca.gov/Title8/sb5g2.html), as well as any other safety regulations. Contractors shall comply with California Public Utilities Commission General Order 95 (http://www.cpuc.ca.gov/gos/GO95/go_95_startup_page.html) and all other safety rules. No construction may occur within 25 feet of PG&E's towers. All excavation activities may only commence after 811 protocols has been followed.

Contractor shall ensure the protection of PG&E's towers and poles from vehicular damage by (installing protective barriers) Plans for protection barriers must be approved by PG&E prior to construction.

13. PG&E is also the owner of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E's facilities must be reviewed and approved by PG&E to ensure that no impact occurs that may endanger the safe and reliable operation of its facilities.

From: elise brandwajn [mailto:elisedvm@yahoo.com]

Sent: Monday, August 19, 2019 7:08 AM

To: Stephanie Cormier <https://urldefense.proofpoint.com/v2/url?u=http-3A__Stephanie.Cormier-40yolocounty.org&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=kdtPCKeqKIngwAPH6qvp5f_ExA_ifBGx-p-DA3WNK-M&m=Gi2TY8kzUJ3sr4fqgDtjOckfV6J6Xc3hgFDYjN-bSl4&s=dCvsXr-JUariSyUC3HSz0s40Tq9j6F5CUtIcE1ErDgM&e=>

Subject: Strongly AGAINST teichert expansion

Hello

I am wishing to strongly oppose the expansion of mining operations. What is the process for the development of the moving operations there?

We are facing another recession with plummeting home values in wild wings.

The last thing wild wings needs is something new to impact the community we pay $1200 a month on top of our mortgage to live in.

We oppose mining, noise. Environmental impact and Granite runoff into our wells.

All of these things will severely negatively impact our home resale values.

Please let me know what next steps are.

Thank you

Elise Brandwajn dvm

“We only see well from the heart. What is essential is invisible to the eyes”—

From: Gregory Ramirez
To: Stephanie Cormier
Subject: Proposed Teichert Mining Operation
Date: Monday, August 19, 2019 3:58:43 PM

I am opposed to the proposal out of concern that the proposal would negatively impact:

The environment.
Wild Wings and local area water table and access to potable water.
Peaceful enjoyment of my home and community.
Local and through traffic.
Air quality.
Property values.

Please add me to all notification lists concerning this project.

Thank you,

Gregory Ramirez
18041 Blue Winged Court
Woodland, CA. 95695

Sent from my iPhone

From: Jon Huffine [mailto:jonhuffine@me.com]
Sent: Wednesday, August 21, 2019 4:17 PM
To: Stephanie Cormier <https://urldefense.proofpoint.com/v2/url?u=http-3A__Stephanie.Cormier-40yolocounty.org&d=DwIFAg&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=kdtPCKeqKIngwAPH6qvp5f_ExA_ifBGx-p-DA3WNK-M&m=nPlOiSoZ_kOrPivfdiMNVa8MJBEiMoaNHPpO_-G6DIE&s=8--KDsN-p52we5gPkO9eapjNEuwwd72Aj7h3Kd6nrp4&e=>
Subject: Gravel Mining Report
Stephanie,
We have already lost one well of our three.
During the summer we run short of water. Wild Wings is nice family community. We try to make it a nice place to live. This is Not a mining community. The sound coming from mining along with the trucks and dust is not what we expected when we moved into our community.
This would have a devastating effect on our lives and property values.
Sincerely

Jon Huffine
Sent from my iPhone

August 22, 2019

Stephanie Cormier
stephanie.cormier@yolocounty.org
Yolo County Department of Community Services
292 West Beamer Street
Woodland, CA 95695-2598

CEQA Project: **SCH # 20190089053**
Lead Agency: **Yolo County Department of Community Services**
Project Title: **Teichert Shifler Mining and Reclamation Project**

The Division of Oil, Gas, and Geothermal Resources (DOGGR) oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal wells. Our regulatory program emphasizes the wise development of oil, natural gas, and geothermal resources in the state through sound engineering practices that protect the environment, prevent pollution, and ensure public safety. Northern California is known for its rich gas fields. Division staff have reviewed the documents depicting the proposed project. The Teichert Shifler Mining and Reclamation Project includes gravel mining and subsequent reclamation of an area three miles west of Woodland.

The attached map shows locations of one known abandoned dry hole within the project area. Based on the Project map submitted by Yolo County, this is the only well known to be within the proposed mining area. That well, the Capitol Oil Corporation Torrence-Claar 28-1, was drilled to a depth of 4,913 ft and abandoned as a dry hole in 1994. Cement plugs were placed from 2,658 to 2,408 ft (base of fresh water plug), from 823 to 634 ft (shoe plug), and from 25 ft below grade to the surface. The well was cut off 5 ft below grade. The well is near the west edge of Phase A of the proposed mining program. Based on the maps provided, the immediate vicinity of the well would be excavated to a depth of 35 to 40 ft.

Note that DOGGR has not verified the actual location of the well nor does it make specific statements regarding the adequacy of abandonment procedures with respect to current standards. The developer is advised to verify the locations of all wells where development is expected to disturb the soil around the wells.

DOGGR regulations require that abandoned wells have "***the hole and all annuli shall be plugged at the surface with at least a 25-foot cement plug. The district deputy may require that inner strings of uncemented casing be removed to at least the base of the surface plug prior to placement of the plug. All well casing shall be cut off at least 5 feet but no more than 10 feet below the surface of the ground. The district***

deputy may approve a different cut-off depth, as conditions warrant, including but not limited to excavation or grading operations for construction purposes. As defined in Section 1760(j), a steel plate at least as thick as the outer well casing shall be welded around the circumference of the casing at the top of the casing, after Division approval of the surface plug. The steel plate shall show the well's identification, indicated by the last five digits of the API well number. Authority: Sections 3013 and 3106, Public Resources Code. Reference: Section 3106, Public Resources Code. § 1723.5.

In light of that requirement, DOGGR would require that a permit be obtained, that the well be cut off at the maximum depth of proposed excavation, and that a cement plug be placed at least 25 ft below that elevation. Subsequently the casing should be cut off 5 to 10 ft below that point and a steel pate affixed to the top of the casing with the well identifier number welded onto it. The location should also be surveyed for future reference.

For future reference, you can review wells located on private and public land at DOGGR's website: https://maps.conservation.ca.gov/doggr/wellfinder/#close. The local permitting agencies and property owner should be aware of, and fully understand, that significant and potentially dangerous issues may be associated with development near oil and gas wells. These issues are non-exhaustively identified in the following comments and are provided by DOGGR for consideration by the local permitting agency, in conjunction with the property owner and/or developer, on a parcel-by-parcel or well-by-well basis. As stated above, DOGGR provides the above well review information solely to facilitate decisions made by the local permitting agency regarding potential development near a gas well.

1. It is recommended that access to a well located on the property be maintained in the event re-abandonment of the well becomes necessary in the future. Impeding access to a well could result in the need to remove any structure or obstacle that prevents or impedes access. This includes, but is not limited to, buildings, housing, fencing, landscaping, trees, pools, patios, sidewalks, and decking.
2. Nothing guarantees that a well abandoned to current standards will not start leaking oil, gas, and/or water in the future. It always remains a possibility that any well may start to leak oil, gas, and/or water after abandonment, no matter how thoroughly the well was plugged and abandoned. DOGGR acknowledges that wells abandoned to current standards have a lower probability of leaking oil, gas, and/or water in the future, but makes no guarantees as to the adequacy of this well's abandonment or the potential need for future re-abandonment.
3. Based on comments **1** and **2** above, DOGGR makes the following general recommendations:
    - **a.** Maintain physical access to any gas well encountered.
    - **b.** Ensure that the abandonment of gas wells is to current standards.

    If the local permitting agency, property owner, and/or developer chooses not to follow recommendation "**b**" for a well located on the development site property, the Division believes that the importance of following recommendation "**a**" for the well located on the subject property increases. If recommendation "**a**" cannot be followed for the well located on the subject

property, then the Division advises the local permitting agency, property owner, and/or developer to consider any and all alternatives to proposed construction or development on the site (see comment **4** below).

4. Sections 3208 and 3255(a)(3) of the Public Resources Code give DOGGR the authority to order the re-abandonment of any well that is hazardous, or that poses a danger to life, health, or natural resources. Responsibility for re-abandonment costs for any well may be affected by the choices made by the local permitting agency, property owner, and/or developer in considering the general recommendations set forth in this letter. (Cal. Public Res. Code, § 3208.1.)

5. Maintaining sufficient access to a gas well may be generally described as maintaining "rig access" to the well. Rig access allows a well servicing rig and associated necessary equipment to reach the well from a public street or access way, solely over the parcel on which the well is located. A well servicing rig, and any necessary equipment, should be able to pass unimpeded along and over the route, and should be able to access the well without disturbing the integrity of surrounding infrastructure.

6. If, during the course of development of this proposed project, any unknown well(s) is/are discovered, DOGGR should be notified immediately so that the newly-discovered well(s) can be incorporated into the records and investigated. DOGGR recommends that any wells found in the course of this project, and any pertinent information obtained after the issuance of this letter, be communicated to the appropriate county recorder for inclusion in the title information of the subject real property. This is to ensure that present and future property owners are aware of (1) the wells located on the property, and (2) potentially significant issues associated with any improvements near oil or gas wells.

No well work may be performed on any oil or gas well without written approval from DOGGR in the form of an appropriate permit. This includes, but is not limited to, mitigating leaking fluids or gas from abandoned wells, modifications to well casings, and/or any other re-abandonment work. (NOTE: DOGGR regulates the depth of any well below final grade (depth below the surface of the ground). Title 14, Section 1723.5 of the California Code of Regulations states that all well casings shall be cut off at least 5 feet but no more than 10 feet below grade. If any well needs to be lowered or raised (i.e. casing cut down or casing riser added) to meet this grade regulation, a permit from DOGGR is required before work can start.)

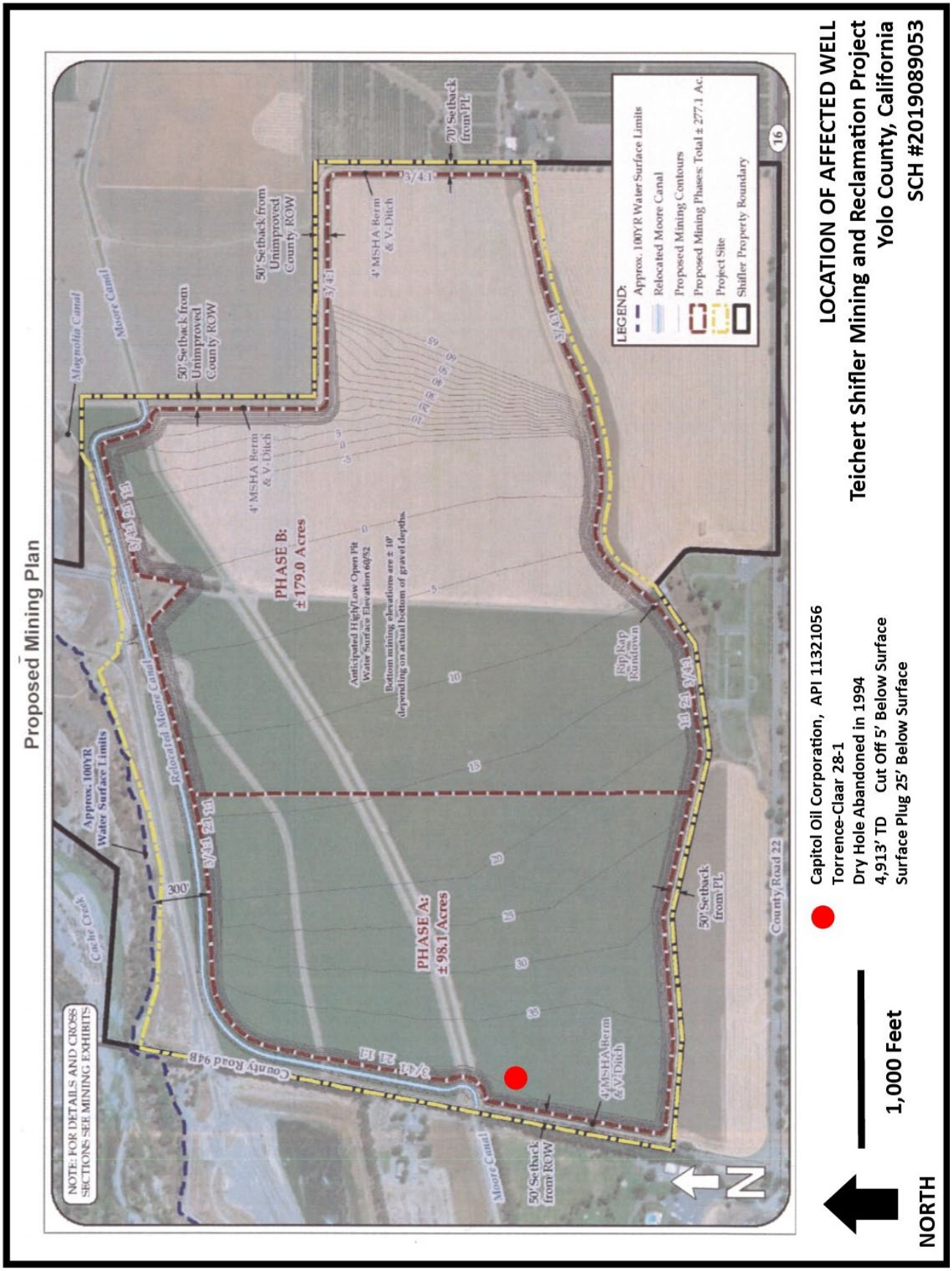
Sincerely,

DocuSigned by:
Charlene L Wardlow
087E7BD5EA114A7...

Charlene L Wardlow
Northern District Deputy

Attachments: Map

Teichert Shifler Mining and Reclamation Project Map



August 26, 2019

VIA EMAIL: STEPHANIE.CORMIER@YOLOCOUNTY.ORG
Stephanie Cormier, Principal Planner
Yolo County Department of Community Services
292 West Beamer Street
Woodland, CA 95695

Dear Ms. Cormier:

INITIAL STUDY/NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED TEICHERT SHIFLER MINING AND RECLAMATION PROJECT, SCH# 2019089053

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Initial Study/Notice of Preparation of a Draft Environmental Impact Report for the proposed Teichert Shifler Mining and Reclamation Project (Project). The Division monitors farmland conversion on a statewide basis and administers the Williamson Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the proposed project's potential impacts on agricultural land and resources.

Project Description

The project proposes the mining of 41.6 million tons of aggregate resources (sand and gravel) over a requested 30-year period at an annual rate not to exceed 2.6 million tons mined per year. Mining is proposed in two phases, and reclamation is proposed in three phases to reclaim 116 acres of agricultural uses and provide 161 acres of pond and habitat uses.

Department Comments

According to the Department of Conservation's Farmland Mapping and Monitoring Program the project site contains Prime Farmland, Unique Farmland, and Farmland of Statewide Importance[1]. The site is also enrolled in the Williamson Act program.

The conversion of agricultural land represents a permanent reduction and significant impact to California's agricultural land resources. Under CEQA, a lead agency should not approve a project if there are feasible alternatives or feasible mitigation measures

[1] Department of Conservation, Farmland Mapping and Monitoring Program, California Important Farmland Finder, 2019, https://maps.conservation.ca.gov/DLRP/CIFF/

available that would lessen the significant effects of the project.[2] All mitigation measures that are potentially feasible should be included in the Draft Environmental Impact Report (DEIR). A measure brought to the attention of the lead agency should not be left out unless it is infeasible based on its elements.

Agricultural conservation easements on land of at least equal quality and size can mitigate the project impacts in accordance with CEQA Guideline § 15370. The Department highlights agricultural conservation easements because of their acceptance and use by lead agencies as an appropriate mitigation measure under CEQA. Agricultural conservation easements are an available mitigation tool and should always be considered; however, any other feasible mitigation measures should also be considered.

Conclusion

The Department recommends the following discussion under the Agricultural Resources section of the DEIR:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project.
- Impacts on any current and future agricultural operations in the vicinity; e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.
- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed project, as well as impacts from past, current, and likely future projects.
- Proposed mitigation measures for all impacted agricultural lands within the proposed project area.
- Potential impacts to any project site parcel/s under Williamson Act contract.

Thank you for giving us the opportunity to comment on the Initial Study/Notice of Preparation of a Environmental Impact Report for the Teichert Shifler Mining and Reclamation Project. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Environmental Planner at (916) 324-7347 or via email at Farl.Grundy@conservation.ca.gov.

Sincerely,

Monique Wilber
Conservation Program Support Supervisor

[2] Public Resources Code section 21002.

From:	Julie Payne
To:	Stephanie Cormier
Cc:	Ronald Miller; jsmith@teichert.com
Subject:	Teichert Shifler Mining and Reclamation Project
Date:	Monday, August 26, 2019 7:23:13 PM

This email is regarding the Shifler Mining and Reclamation Project. My 81 year old mother lives adjacent to this land; consequently I have a few questions regarding this project.

- When is this project proposed to be started? How long will it take to complete Phase A? How long after Phase A is completed will they begin Phase B?
- Will the topsoil from Phase B be removed before Phase A is completed? or will Phase A be completed before anything is done with Phase B?
- Where will the topsoil be stored?
- During the mining of this farmland, what are the hours Teichert is able to mine? Will they work nights and/or weekends?
- Who will be responsible for the property when Teichert is finished mining and has completed the Reclamation? Who do we call if there are any problems?
- The South East corner of the Shifler property, bordering Hwy 16, will it continue to be farmed? If not, who will maintain this part of the property?

I am also concerned about the increased production at the Woodland Plant. Our family trust owns 2 rental houses adjacent to this plant. During the summer they often run the plant 24 hours a day. When they are processing asphalt, the small is so bad that you can't even open the windows at night. The noise, smell and dirt will be even more of an issue with an increase in production.

Teichert states that the closing of the Esparto plant and the consequent increase in production at the Woodland plant "will result in some increase in traffic, all of which has been thoroughly analyzed in the traffic study submitted as part of our application." However, recently there have been occasions where the traffic has been so intense on Road 20 that it has made access to our property extremely difficult and hazardous. These occasional traffic congestion events bring up the question of whether there would be a significant delay to first responders if there was an emergency event on our property. Nobody is looking forward to an increase in traffic when the current traffic from the plant is an issue for the neighborhood.

Thank you for addressing our concerns.

Sincerely,

Julie Frommelt Payne
Partner, Winkenhofer Family Trust

From: Aaron Johnson <apjohn64@verizon.net>
Sent: Tuesday, February 19, 2019 2:38 PM
To: Jason Smith <JSmith@teichert.com>
Cc: Ronald.Miller@yolocounty.org
Subject: Shifler property proposal

Jason,

Thank you for releasing an update on plans for the expansion of your operations.

There is a gathering of a considerable amount of locals planned that I believe will be to consolidate their concerns. The following does contain some of the chatter I've been hearing.

My guess would be that one of the priorities will be to petition for a lower speed limit on 96 (ie 45 vs. 50). The mile of crowned and narrow road is causing 90% of the trucks to ride the middle across the yellow divide at speeds well over 50. It seems logical that the speed limit on a residential county road at least be consistent with Hwy 16 in the Willow Oaks area.

Another issue that may come up is one that you've considered awhile back and that is to construct an access road directly to Hwy 16 using a part of 94B from the site.

I'd be happy to talk to you after the meeting about any relevant issues regarding forward plans. I feel that communication is the key to a reasonable and agreeable outcome.

Thank you for your time!

Respectfully, Aaron Johnson
County Road 96

2019 EIR CONCERNS and QUESTIONS – TEICHERT SHIFTLER MINING PROPOSAL

1. Effects on water strata, aquifers and wells *in and around the proposed site. Has Yolo Co. Flood Control surveyed the possible interruption of strata and ground water flow for 2019? Will there be active test wells in the vicinity due to the acreage and depth involved? What are the effects if Yolo Co. has consecutive drought years? Most wells in this area are approximately 150 ft. deep, some properties have two wells because strata decline.*
2. *Contamination of land and ground water due to the length, size and depth of the mining dig. How will this be monitored and corrected in the event of contamination due to minerals, etc? Will there be yearly reports made available to the public or notices sent out?*
3. *Destruction of 320 acres of CLASS 1 PRIME Agricultural ground. A report was provided by NRCS, custom soil resource report for Yolo County as to the classification of said properties. The Williamson Act and the State Reclamation Regulations require that surface mining operations on prime ag land must return the land to the level of agricultural productivity it was before the mining started. Is this land still in the Williamson Act or did Teichert wait until the time had lapsed? The Shiftler property will NEVER be a productive or yielding piece of land after mining. . The ground might provide a dry crop of wheat on whatever land can be farmed, probably low profit and yield.*
4. *Double the amount of sand and gravel removal at this site due to the closure of the Esparto plant. Asphalt production has also been added to the Woodland site. How will this affect surrounding resident and business wells in respect to strata? How is asphalt sludge disposed of and where? Ground water problems, traffic congestions and noise. Will the plant be allowed to mine 24/7?*
5. *Increased traffic on roads leading to and from the plant on Co. Rd 20. Affected roads are Rd 20, Rd 96, Rd 98, Hwy 16, Rd 22, Rd 95, Rd 94B and Wild Wings. The rural roads are narrow and frequented by farm equipment, along with commuter and resident traffic. Will the county provide traffic lights to control certain areas? There must be traffic enforcement. The residents are requesting a slower speed posting and stop lights at the corner of Rd 96 and Rd 20 and Hwy 16 and Wild Wings. How will Teichert control their sub haulers to abide by the speed limit and other traffic violations like running stop signs? Will Teichert be penalized when they deliberately send trucks out the back of the plant because the front entrance is too congested? That happened on Oct 28, 2014. Over 80 trucks. A total and deliberate breach of their word. The company was contacted with each truck that exited on Rd 94B! Names of sub haulers provided.*
6. *Noise, emission, pollutants and air quality from large equipment and conveyor belts on a daily basis. How will these emissions and pollutants affect the ground water and air quality? How will leaching be controlled and monitored? What are the health issues?*
7. ***Destruction of plant and animal habitat. Has an endangered species study been taken for the area?***
8. *Affect on property value. How will the area be compensated if our values decrease? Will the county lower our property taxes or will Teichert pay to replace a well gone dry? Estimated decrease in value was quoted as 20% in 2014. What would it amount to in 2020, once the project is under way?*

9. *Time span of this project- over 30 plus years. How will this long term mining project affect homes, businesses and ranches in the area? This project will disrupt the daily activities of the cemetery, golf course and the church/school, along with each resident in the area.. Most of us will never see the end but we will be forced to deal with the ramifications and disruption for decades. The Shiftler property was not originally included in the mining overlay; now the county has to rezone prime ag land and amend the off channel mining to include the 400 acre Shiftler property. What does the county get paid for each ton of gravel?*
10. Relocation of the Moore Canal; a historical monument since the late 1800's, untouched for decades until now. How will this affect the canals natural flow? What are the specifications on this project? Cost absorbed by Teicherts?
11. Agricultural yields after reclamation. Removal of the grounds natural filtration, mixture of low nutrient dirt with topsoil, irregular air temperature in the pits, dry farming and weather all negatively affect crop production. Contact the farmers that have farmed the land before reclamation to prove yields and profit are equal to that after mining ceases. Where are those reports?
12. Beautification and satisfaction with reclaimed mining sites in the area. Are the land owners completely satisfied with their properties? Are there any factors in Teicherts reclamation that are disappointing or not in agreement with what was promised vs. what was done? Has the county talked to each owner of reclaimed property? Let's hear from Reiff's and Muller's and the others. Are there any properties that have not been reclaimed or are still in the process? Why does it take so long? Do all the properties meet the same criteria? What do neighboring land owners north and south of Cache Creek think about reclamation properties? Are the properties reclaimed for public use or just to accommodate an alga, mosquito infested 100 ft. deep pond with no fresh water access. Also presenting public safety concerns! Please list the beautifully maintained reclamations in this area besides Cache Creek Conservancy which is run by tax payer's donations and funding thru businesses. Who is responsible for maintaining the other properties – Teichert or Yolo County? Does the county have the manpower? Are the taxpayers flipping the bill? How often are these areas refurbished? What about fire hazards? Trespassing?
13. Provide the public with alternative sites – we know there are some. Move mining away from communities and businesses. Save the prime agricultural ground.

Thank you

Pam Van Brocklen
34629 Co. Rd. 22
Wdl, CA 95695

August 29, 2019

To Mrs. Stephanie Cormier, Principal Planner

I am writing to express my views on the proposed Teichert Shifler Mining and Reclamation Project.

It saddens me to see the condition of the Cache Creek Basin. The creek bed has gotten wider and wider. In spots, it is over a quarter of a mile wide. The creek bed looks like a barren wasteland not suitable for wildlife. I predict this new project will have a similar impact.

I recall swimming in Cache Creek as a youth. It was so pristine and beautiful. Have you seen the creek near Road 94 lately? I have warned my grandkids and their families not to swim there. Also, I do not believe that the 100 year old water surface limits are an accurate assessment of today's world. I forsee the water rising much higher and causing great harm in and around mining areas.

Finally,I would also like to express my concern for the local roads and bridges. On the regularly traveled routes from my home on highway 16, near the airport, to Woodland locations, I encounter several potholes and rough patches. I can't help but wonder is the Teichert Trucks (they must be really heavy when loaded) have not contributed significantly to the condition of the damaged roads. I worry about the stability of the Road 94 Bridge, will the mining near the bridge affect its stability?

Thank you for considering my concerns,

Rudy Lopez

Rudy Lopez

From: Joycemreyn [mailto:joycemreyn@aol.com]
Sent: Thursday, August 29, 2019 11:49 AM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Mining Project

Dear Stephanie,

Thank you so much for taking time to talk on the phone with me the other day. My husband and I, along with our daughter and grandkids live on County Road 96 between County Rd. 20 and Hwy 16. We have experienced several issues associated with the existing truck traffic due to the close proximity to Teichert's Woodland Plant. One of the proposals in the Shifler Mining Project is to shift Teichert's tonnage allowance from their Esparto plant to the Woodland plant, virtually doubling the truck traffic in our neighborhood. While there may have been a traffic study done in 2015, there have already been significant changes in the amount of traffic on County Roads 96 and 20, increases due to the expansion of Cache Creek Casino, commuters from Wild Wings, and the increase of truck traffic already. Doubling the Teichert truck traffic will have a significant impact on the safety of those of us who live and work in the area.

While the increase in the tonnage being allowed at the Teichert Woodland Plant did not show on the abbreviated "Project Description" in your August 16, 2019 letter, it is something that has to be addressed. The impact of mining a Class A ag zoned parcel of land is obviously going to impact all of the surrounding properties, but the proposal is not limited to only those living around the Shifler Property. The inclusion of the substantial increase in Teichert's operations at the Woodland Plant expands the number of impacted citizens significantly.

Thank you again for your time.

Joyce/Ranse Reynolds

From: Eric Dowdy [mailto:cedowdy@alumni.ucdavis.edu]
Sent: Thursday, August 29, 2019 6:42 PM
To: Stephanie Cormier <https://urldefense.proofpoint.com/v2/url?u=http-3A__Stephanie.Cormier-40yolocounty.org&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=kdtPCKeqKIngwAPH6qvp5f_ExA_ifBGx-p-DA3WNK-M&m=mfpMDbag7knIlECJuPPYUM8suaVkuv_VnQKnElYihsM&s=qsqlCe0Lz8t91mmmTrTdxe3kfuV6zDs3B-RgjkXELjk&e=>
Subject: Teichert Mining Expansion

Stephanie,

I am writing to state my strong opposition to Teichert's proposal to expand its mining operations into agricultural land directly across from the Yolo Fliers Club. As noted in the draft environmental impact report documents, this expansion would significantly impact my quality of life as a resident of Wild Wings. I am deeply concerned about the noise and the traffic impacts in my community as well is the potential drop and property values.

While I understand Teichert has claim to this property, the impact on the eastern portion of wild wings appears to be significant and unacceptable.

Thank you for your consideration of my viewpoint.

Eric Dowdy, MPPA
34953 Canvas Back Street
Woodland, CA 95695
(530) 400-1978

Sent from my iPhone

From: Mark Stinson [mailto:mpstinson@mac.com]
Sent: Friday, August 30, 2019 2:23 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Cc: Mark Stinson <mpstinson@mac.com>; Kitty Stinson <kitty.stinson@icloud.com>
Subject: Proposed Teichert Shifler Mining and Reclamation Project

Stephanie Cormier, Principal Planner
Yolo County Department of Community Services
292 West Beamer Street
Woodland, CA 95695

Mark & Katherine (Kitty) Stinson
33378 Mallard Street
Woodland, CA 95695

Re: Proposed Teichert Shifler Mining and Reclamation Project

Dear Ms. Cormier,

Our home is located in Wild Wings. In general, we support projects like this if the environmental impact isn't significant to people and wildlife. As we understand the impact of this particular project, we think that the noise, dust, and traffic generated by this project would be detrimental to our community. It's simply too big of an operation for its proximity to our community. Therefore, we strongly oppose it.

Regards,
Mark & Kitty Stinson

--
Mark and Kitty Stinson
33378 Mallard Street
Woodland, CA 95695
mpstinson@mac.com
kitty.stinson@icloud.com
--

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

September 3, 2019

Stephanie Cormier
Yolo County Department of Community Service
292 West Beamer Street
Woodland, CA 95695

Re: **Teichert Shifler Mining and Reclamation Project Environmental Impact Report**

Dear Ms. Cormier:

The Yolo-Solano Air Quality Management District (District) has received the Notice of Preparation for the above referenced Environmental Impact Report (EIR). The District has reviewed the Notice of Preparation and is providing the following comments.

The project description includes the mining of 41.6 million tons of aggregate resources over a 30-year period, with a maximum of 2.6 million tons mined in any given year. The project also includes reclamation of the mined areas occurring in three phases. The EIR should include the following, at a minimum, in the air quality analysis:

1. The EIR should include calculations of the annual emissions of all criteria pollutants that would result from the operations of the project. In addition to the emissions from the on-site equipment, the analysis should include emissions from all employee commute trips as well as truck trips that would be generated as aggregate product is moved offsite. For ozone precursor emissions, all emissions within the Sacramento Federal Nonattainment Area should be included in the analysis. Total emissions should be compared to the District's appropriate thresholds of significance.

2. The analysis should include a discussion of nearby sensitive receptors that could be impacted by project operations. This should include not only receptors near the project site itself, but also receptors along truck routes that may experience impacts as the new area is mined and aggregate is transported offsite.

3. If any significant impacts to air quality are identified, the project should incorporate all feasible mitigation to either eliminate the significant impact or else minimize the impact to the greatest extent possible.

Letter 17
Cont'd

4. Prior to any work being conducted on the project site, the project proponent should contact the District's permitting department to discuss the necessary modifications to the source's existing permit.

The District appreciates receiving this Notice of Preparation for review. If you require additional information or would like to discuss the comments contained in this letter, please feel free to contact me at (530) 757-3668.

Sincerely,

Matthew R Jones

Matthew R. Jones
Supervising Air Quality Planner

From: 5309085322@vzwpix.com [mailto:5309085322@vzwpix.com]
Sent: Wednesday, September 4, 2019 9:45 AM
To: Stephanie Cormier <https://urldefense.proofpoint.com/v2/url?u=http-3A__Stephanie.Cormier-40yolocounty.org&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=kdtPCKeqKIngwAPH6qvp5f_ExA_ifBGx-p-DA3WNK-M&m=i40sCNCdJjEDvAxD0W6jqPYhNWyx5jhRtXxH8XYW7E8&s=6V22Loum_ywlFssZi-_MwvaZqzTXUvB-iL7ZpjhvHGU&e=>
Subject:

To Yolo County Supervisors.
We are not in agreement with the proposed Teichert project. This family has a picnic regularly on baby hill at monument hill cemetary to visit their son that passed. As you can see the Beauty behind them. Can you imagine if this project is allowed what kind of impact this would create on the peacefulness of the cemetary. That solemn environment will no longer be available to visit our loved ones. Noise, machines, dust.
We live South of the cemetary and indeed worried about our well. Is Teichert going to test our wells for contamination? Put on sand filters? Pay if our pump goes out or we have to drill deeper? Digging a deep hole allows sepage and sand to drain into the under ground water.
It is a great concern about our water being affected.
We oppose this site for so many reasons. Grade A soil is being destroyed because of gravel greed. This site is Ludacris. Homes across the street. A cemetary next door. The Fliers club across the street. The environmental impact report is not taking human lives in effect. Our environment is in danger.
This project scheduled work from 6am. Til 10pm. 6 days a week for projected 30 years!! Would you like this in your backyard?? I think not! What happened to protecting our beautiful county! We are in total opposition of this project.
Thankyou. Tim and Barbara Sharp

From: Annette Davis [mailto:net_nettie@yahoo.com]
Sent: Wednesday, September 4, 2019 3:49 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Mining Project

Hi Stephanie,

As a resident of Yolo County for 32 years, and Woodland for 22 years, I strongly oppose the Teichert Shifler Mining proposal. I own property on County Road 24 near 94B, near where the mining is going to start, and do not want this valuable agricultural land destroyed for Teichert's profit. The project will be destructive, an eyesore, and most likely will lower property values.

Please let me know what I can do to stop this project.

Thank you for your consideration.

Annette Davis
33680 County Road 24
Woodland, CA 95695
530-383-5369

From: Dale Sumersille
To: Stephanie Cormier
Subject: Teichert Mining Proposal
Date: Wednesday, September 4, 2019 9:56:20 PM

Ms. Cormier:

My wife and I live on Mandarin Street in the Wild Wings area. We love the quiet neighborhood, farming rea and natural lands that are close by. We have lived here for just over 2 years and heard about the proposed plans for Teichert mining project.

We are both adamantly opposed to this project as is our neighbors. This project will have significant negative impacts and quality of life issues to this lovely rural area: devalue our property, consistent noise and vibration, traffic impacts, consistent debris on the highway - thus resulting in more accidents with cars and trucks (which is already bad as is), constant vibrating, poor air-quality, water issues (which we already have in the Wild Wings development), destroying farming land, negative impacts to migrating species and wildlife, further negative impacts to the Cache Creek and conservancy (which the company has damaged years ago and has never mitigated nor attempted to repair after the flooding over the last few years).

I have conducted noise tests, and the noise and vibration created by the mining exceed the daytime ordinance. There are also long terms effects (such as consistent road repair and traffic) that have not been addressed for travel on Hwy 16, Kentucky Ave, Road 96, Road 95B, Road 98 and Road 97. This project could be a potential issue if the residents that live nearby the project ever have to be evacuated, as the travel for the mine is on the same route as the evacuation route that Yolo County OES has identified, further endangering lives.

The Wild Wings development was supported by the County with the main selling points: beautiful homes in a peaceful,rural setting, surroundings including 2 golf courses and airport. If we new about this project prior to purchasing our home, we would have never moved here.

The County Board of Supervisors should listen to their constituents; residents in Wild Wings and surrounding area, Willow Oak, Willow Cemetery, the Baptist Church and local businesses to preserve this prime agricultural land and not allow this project to move forward.

Dale Sumersille
Dawne Koranda
18285 Mandarin St.
Woodland, CA 95695

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE
HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLATA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

September 5, 2019 File No.: 19-0324

Stephanie Cormier, Project Planner
Yolo County
Planning & Public Works Department
292 West Beamer Street
Woodland, CA 95695

re: County File Number ZF2018-0078 / Portions of APNs 025-120-032, 025-120-033, 025-430-001, and 025-430-002 / Teichert Shifler Mining and Reclamation

Dear Ms. Cormier:

Records at this office were reviewed to determine if this project could adversely affect cultural resources. **Please note that use of the term cultural resources includes both archaeological sites and historical buildings and/or structures. The review for possible historic-era building/structures, however, was limited to references currently in our office and should not be considered comprehensive.**

Project Description: The proposed project entails the mining of 41.6 million tons of aggregate resources (sand and gravel) over a requested 30-year period at an annual rate not to exceed 2.6 million tons mined per year. Mining is proposed in two phases. Reclamation is proposed in three phases to reclaim 116 acres of agricultural uses and 161 acres of pond and habitat uses. As a component of the project, the applicant proposes relocation of the Moore Canal to the northerly portion of the project site.

Previous Studies:

XX Studies S-02955 (Archaeological Consulting and Research Services 1978) and S-33071 (Peak 2005), collectively covering approximately 10% of the proposed project area, identified no cultural resources within those portions of the project area (see recommendations below).

Archaeological and Native American Resources Recommendations:

XX Based on an evaluation of the environmental setting and features associated with known sites, Native American resources in this part of Yolo County have been found near areas populated by oak, buckeye, pine, juniper, and manzanita, as well as near a variety of plant and animal resources.

Sites are also found near watercourses and bodies of water, particularly where there is access to fishing spots. The proposed project area encompasses an open area with flat terraces adjacent to a small ridge to the south and adjacent to Cache Creek to the north. The project area is in proximity to wooded areas. In addition, multiple 19th and early 20th century maps depict historic-period activity within and adjacent to the project area. Given the similarity of one or more of these environmental factors, there is a moderate potential for unrecorded Native American archaeological resources and a high potential for historic-period archaeological resources in the proposed project area.

We therefore recommend that a qualified archaeologist conduct further archival and field study to identify cultural resources. Field study may include, but is not limited to, hand auger sampling, shovel test units, or geoarchaeological analyses as well as other common methods used to identify the presence of archaeological resources. Please refer to the list of consultants who meet the Secretary of Interior's Standards at http://www.chrisinfo.org.

XX We recommend that the lead agency contact the local Native American tribe(s) regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at (916) 373-3710.

Built Environment Recommendations:

XX The proposed project area contains two previously recorded historic properties (Table 1). Prior to commencement of project activities, it is recommended that these resources be assessed by a qualified professional familiar with the architecture and history of Yolo County.

Table 1. Historic properties within or adjacent to the proposed project area.

Primary Number	OHP Property Number	Name	Address	Status Code	Status Code Meaning
P-57-000132	[none]	Valley Oak Groves & Valley Oak Trees and Mixed Vegetation	[none]	[none]	[none]
P-57-000605	047422	Moore Ditch	County Road 94B	3S	Appears eligible for the National Register of Historic Places as an individual property through survey evaluation.
P-57-001015	047421	Monument Hill Cemetery (c.1950s-Present)	County Road 95	3D	Appears eligible for the National Register as a contributor to a National Register-eligible district through survey evaluation.
P-57-001063	[none]	James Moore's Irrigation Canal System historic district (1850-present)	[none]	[none]	[none]

XX The 1907 and 1953 USGS Woodland 15' quads depict a building in the proposed project area. Since the Office of Historic Preservation has determined that any building or structure 45 years or older may be of historical value, it is recommended that prior to commencement of project activities, a qualified professional familiar with the architecture and history of Yolo County conduct a formal CEQA evaluation.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native

American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

For your reference, a list of qualified professionals in California that meet the Secretary of the Interior's Standards can be found at http://www.chrisinfo.org. If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation. If you have any questions, please contact our office at nwic@sonoma.edu or at (707) 588-8455.

Sincerely,

Jessika Akmenkalns, Ph.D.
Researcher

From: Boyd, Ian@Wildlife [mailto:Ian.Boyd@Wildlife.ca.gov]
Sent: Friday, September 6, 2019 12:00 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Cc: state.clearinghouse@opr.ca.gov; Wildlife R2 CEQA <R2CEQA@wildlife.ca.gov>
Subject: CDFW comments on the NOP of a DEIR for the Teichert Shifter Mining and Reclamation Project (ZF2018-00780) [SCH# 2019089053]

Dear Ms. Cormier:

The California Department of Fish and Wildlife (CDFW) received and reviewed the Notice of Preparation of an Environmental Impact Report (EIR) from the Yolo County Department of Community Services for the Teichert Shifter Mining and Reclamation Project (project) [State Clearinghouse No. 2019089053] in Yolo County pursuant the California Environmental Quality Act (CEQA) statute and guidelines.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the project that may affect California fish, wildlife, plants and their habitats. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the project that CDFW, by law, may need to exercise its own regulatory authority under the Fish and Game Code (Fish & G. Code).

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW provides, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW may also act as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) The project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the project as proposed may result in "take" as defined by State law (Fish & G. Code, § 86) of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.),

related authorization as provided by the Fish and Game Code will be required. CDFW also administers the Native Plant Protection Act, Natural Community Conservation Program, and other provisions of the Fish and Game Code that afford protection to California's fish and wildlife resources.

PROJECT DESCRIPTION SUMMARY

The project proposes to the mining of approximately 41.6 million tons of aggregate resources over a 30-year period at an annual rate not to exceed 2.6 million tons mined per year. Mining is proposed in two phases, whereas, reclamation is proposed in three phases to reclaim 116 acres of agricultural uses and 161 acres of pond and habitat uses. The project also proposes the relocation of the Moore canal to the northerly portion of the project site. The project site consists of 319 acres and is located north of County Road 22 and east of County Road 94B, southwest of Teichert\'s existing mining operation three miles west of the City of Woodland in Yolo County, California. Mining is proposed on approximately 277 acres.

The project description should include the whole action as defined in the CEQA Guidelines § 15378 and should include appropriate detailed exhibits disclosing the project area including temporary impacted areas such as equipment stage area, spoils areas, adjacent infrastructure development, staging areas and access and haul roads if applicable.

As required by § 15126.6 of the CEQA Guidelines, the EIR should include appropriate range of reasonable and feasible alternatives that would attain most of the basic project objectives and avoid or minimize significant effects of the project.

ENVIRONMENTAL SETTING

CDFW recommends three progressive steps in project impact evaluations: habitat assessment, detection surveys and impact assessment in evaluating whether projects will have impacts to special-status species. The information gained from these steps will inform any subsequent avoidance, minimization and mitigation measures. The steps for project impact evaluations are: 1) habitat assessment, 2) surveys, and 3) impact assessment. Habitat assessments are conducted to evaluate the likelihood that a site supports wildlife species and their habitats. Detection surveys provide information needed to determine the potential effects of proposed projects and activities on those species and habitats, Impact assessments evaluate the extent to which wildlife species and their habitat may be impacted directly or indirectly, on and within a reasonable distance of proposed CEQA project activities. CDFW recommends that the EIR include a complete environmental assessment of the existing biological conditions within the project area including but not limited to the type, quantity and locations of the habitats, flora and fauna. Maps and information regarding the habitat assessment and survey efforts should be included within the EIR. Any surveys of the biological conditions and related environmental analysis should be completed by qualified personnel with sufficient experience in the wildlife and habitats associated with the project.

To identify a correct environmental baseline, the EIR should include a complete and current analysis of endangered, threatened, candidate, and locally unique species with potential to be impacted by

the project. CEQA guidelines § 15125, subdivision (c) requires lead agencies to provide special emphasis to sensitive habitats and any biological resources that are rare or unique to the area. This includes, but is not limited to vernal pools, streambeds, riparian habitats, and open grasslands that are known to be present within the project boundaries or its vicinity. CDFW recommends that the environmental documentation identify natural habitats and provide a discussion of how the proposed project will affect their function and value.

CDFW recommends that the California Natural Diversity Database (CNDDB), as well as previous studies performed in the area, be consulted to assess the potential presence of sensitive species and habitats. Although the CNDDB is one tool that may identify potential sensitive resources in the area, the dataset should not be regarded as complete for the elements or areas with the potential to be impacted. Other sources for identification of species and habitats near or adjacent to the project area should include, but may not be limited to, State and federal resource agency lists, California Wildlife Habitat Relationship (CWHR) System, California Native Plant Society (CNPS) Inventory, agency contacts, environmental documents for other projects in the vicinity, academics, and professional or scientific organizations. In addition, CNDDB is not a comprehensive database. It is a positive detection database. Records in the database exist only where species were detected and reported. This means there is a bias in the database towards locations that have had more development pressures, and thus more survey work. Places that are empty or have limited information in the database often signify that little survey work has been done there. A nine United States Geologic Survey (USGS) 7.5-minute quadrangle search is recommended to determine what may occur in the region (see Data Use Guidelines on the Department webpage https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data).

Recent surveys for the different species that have the potential to be present within the project limits and its vicinity shall be included within the EIR. Additional information regarding survey protocols can be found on our website here https://www.wildlife.ca.gov/Conservation/Survey-Protocols or by contacting CDFW.

Species-specific surveys should be conducted in order to ascertain the presence of species with the potential to be directly, indirectly, on or within a reasonable distance of the project activities. CDFW recommends the lead agency rely on survey and monitoring protocols and guidelines available at: https://www.wildlife.ca.gov/Conservation/Survey-Protocols and that any assessments for rare plants and rare natural communities follow CDFW's 2018 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. Alternative survey protocols may be warranted; justification should be provided to substantiate why an alternative protocol is necessary.

IMPACT ASSESSMENT AND MITIGATION MEASURES

Based on habitat assessments and survey results, the EIR should clearly identify and describe all short-term, long-term, permanent, or temporary impacts to biological resources, including all direct and foreseeable indirect impacts caused by the proposed project.

The EIR should define the threshold of significance for each impact and describe the criteria used to

determine whether the impacts are significant (CEQA Guidelines, § 15064, subd. (f).) The EIR must demonstrate that the significant environmental impacts of the project were adequately investigated and discussed, and it must permit the significant effects of the project to be considered in the full environmental context. CDFW also recommends that the environmental documentation provide scientifically supported discussion regarding adequate avoidance, minimization, and/or mitigation measures to address the project's significant impacts upon fish and wildlife and their habitat. For individual projects, mitigation must be roughly proportional to the level of impacts, including cumulative impacts, in accordance with the provisions of CEQA (Guidelines Section 15126.4(a)(4)(B), 15064, 15065, and 16355). In order for mitigation measures to be effective, they must be specific, enforceable, and feasible actions that will improve environmental conditions.

The EIR should discuss the project's cumulative impacts to natural resources and determine if that contribution would result in a significant impact. The EIR should include a list of present, past, and probable future projects producing related impacts to resources under CDFW's jurisdiction or shall include a summary of the projections contained in an adopted local, regional, or statewide plan, that consider conditions contributing to a cumulative effect. The cumulative analysis shall include impact analysis of vegetation and habitat reductions within the area and their potential cumulative effects.

The EIR should incorporate mitigation performance standards that would ensure that significant impacts are reduced as expected. Mitigation measures proposed in the EIR should be made a condition of approval of the project. Please note that obtaining a permit from CDFW by itself with no other mitigation proposal may constitute mitigation deferral.

Threatened, Endangered, Candidate Species

The project area as shown in the NOP includes habitat for State and/or federally listed species. If during the environmental analysis for the project, it is determined that the project may have the potential to result in "take", as defined in the Fish & G. Code, section 86, of a State-listed species, the EIR shall disclose an Incidental Take Permit (ITP), consistency determination (Fish & G. Code, §§ 2080.1 & 2081) or coverage under the Yolo HCP/NCCP may be required prior to starting construction activities. In order to receive authorization for “take”, the EIR must include all avoidance and minimization measures to reduce the impacts to a less than significant level. If impacts to listed species are expected to occur even with the implementation of these measures, mitigation measures shall be proposed to fully mitigate the impacts to State-listed species (Cal. Code Regs., tit. 14, § 783.2, subd.(a)(8)). CDFW encourages early consultation with staff to determine appropriate measures to offset project impacts, facilitate future permitting processes and to coordinate with the U.S. Fish and Wildlife Service to coordinate specific measures if both State and federally listed species may be present within the project vicinity.

Lake and Streambed Alteration Agreement Program

The EIR shall identify all perennial, intermittent, and ephemeral rivers, streams, lakes, other features, and any associated biological resources/habitats present within the entire project footprint (including access and staging areas). The environmental document should analyze all potential temporary, permanent, direct, indirect and/or cumulative impacts to the above-mentioned features

and associated biological resources/habitats that may occur because of the project. If it is determined that the project will result in significant impacts to these resources the EIR shall propose appropriate avoidance, minimization and/or mitigation measures.

Notification to CDFW is required, pursuant to Fish and Game Code section 1602 if the project proposes activities that will substantially divert or obstruct the natural flow of water; substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. CDFW approval of projects subject to Notification under Fish and Game Code section 1602, is facilitated when the EIR discloses the impacts to and proposes measures to avoid, minimize, and mitigate impacts to perennial, intermittent, and ephemeral rivers, streams, and lakes, other features, and any associated biological resources/habitats present within the vicinity of the project.

Please note that other agencies may use specific methods and definitions to determine impacts to areas subject to their authorities. These methods and definitions often do not include all needed information for the CDFW to determine the extent of fish and wildlife resources affected by activities subject to Notification under Fish and Game Code section1602.

CDFW recommends lead agencies to coordinate with us as early as possible, since potential modification of the proposed project may avoid or reduce impacts to fish and wildlife resources and expedite the project approval process.

CDFW relies on the lead agency environmental document analysis when acting as a responsible agency issuing a Lake or Streambed Alteration Agreement. Addressing CDFW's comments ensures that the EIR appropriately addresses project impacts facilitating the issuance of an Agreement.

Migratory Birds and Birds of Prey

Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C., §§ 703-712). CDFW implemented the MBTA by adopting the Fish and Game Code section 3513. Fish and Game Code sections 3503, 3503.5 and 3800 provide additional protection to nongame birds, birds of prey, their nests and eggs. Potential habitat for nesting birds and birds of prey is present within the project area. The proposed project should disclose all potential activities that may incur a direct or indirect take to nongame nesting birds within the project footprint and its close vicinity. Appropriate avoidance, minimization, and/or mitigation measures to avoid take must be included in the EIR. Measures to avoid the impacts should include species specific work windows, biological monitoring, installation of noise attenuation barriers, etc.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly,

please report any special-status species and natural communities detected during project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be submitted online or mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov.

FILING FEES

The project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

Pursuant to Public Resources Code §21092 and §21092.2, the Department requests written notification of proposed actions and pending decisions regarding the proposed project. Written notifications shall be directed to: California Department of Fish and Wildlife North Central Region, 1701 Nimbus Road Suite A, Rancho Cordova, CA 95670.

CDFW appreciates the opportunity to comment on the NOP for the EIR to assist in identifying and mitigating project impacts on biological resources. CDFW personnel are available for consultation regarding biological resources and strategies to minimize impacts. Questions regarding this letter or further coordination should be directed to Ian Boyd, Environmental Scientist at (916) 358-1134 or ian.boyd@wildlife.ca.gov.

Sincerely,

Ian Boyd
Environmental Scientist
Habitat Conservation Program
North Central Region (Region 2)
1701 Nimbus Rd., Suite A
Rancho Cordova, CA 95670
P: 916-358-1134
ian.boyd@wildlife.ca.gov

From: Neal and Heidi Potter <nhpotter@msn.com>
Date: September 6, 2019 at 8:38:12 AM PDT
To: Don Saylor <Don.Saylor@yolocounty.org>
Cc: Elisa Sabatini <Elisa.Sabatini@yolocounty.org>, Tara Thronson <Tara.Thronson@yolocounty.org>, Taro Echiburu <Taro.Echiburu@yolocounty.org>, Patrick Blacklock <Patrick.Blacklock@yolocounty.org>, Julie Payne <payne1109@sbcglobal.net>
Subject: Re: Teichert Shifler Mining Project

It is currently before the planning commission, with a scoping meeting slated for the 12th of September.

I don't live in the area, but my mom lives in the house on the east side of the project. She is 82 years old and in failing health. My grandmother's house is at the end of Road 20, next to the plant. (My nephew is currently living on the property.) We have been told by a Teichert representative that they plan on starting the Shifler project in early Spring 2020 and make it sound as if it is a done deal.

My nephew who lives next to Teicherts has to deal with excessive truck traffic, trucks constantly blocking his driveway, the smell from the asphalt plant and the noise at night when the plant runs 24 hours a day!!! This will all be amplified when they close the Esparto plant and move that production to Woodland, and begin mining the Shifler farmland. I'm concerned about the increased traffic on Road 20, Road 96 and State Hwy 16. The project will continue on for THIRTY years, directly behind Memorial Hill Cemetery and adjacent to the Flyer's Club. I don't know if Woodland residents realize the level of noise they'll have to endure while visiting their loved ones at the cemetery.

I'm also very concerned that no one will maintain the property once Teicherts has completed mining the property.

I'm reaching out to the supervisors, since you are the elected official that nominates the planning commission board. Also, when my sister asked questions regarding the project to Stephanie Cormier, Principal Planner, she forwarded the questions to Teicherts. I have to admit my confusion, because none of the supervisors seem to know anything about the project, yet Teicherts is telling us it IS happening in Spring!

Heidi Frommelt Potter

From: Don Saylor <Don.Saylor@yolocounty.org>
Sent: Thursday, September 5, 2019 10:38 PM
To: Neal and Heidi Potter <nhpotter@msn.com>
Cc: Elisa Sabatini <Elisa.Sabatini@yolocounty.org>; Tara Thronson <Tara.Thronson@yolocounty.org>; Taro Echiburu <Taro.Echiburu@yolocounty.org>; Patrick Blacklock <Patrick.Blacklock@yolocounty.org>
Subject: Re: Teichert Shifler Mining Project

I typically do not address issues until I hear all the background from staff and the community.

Is this topic before us at the moment? What is your perspective and where do you live?

Sent from my iPhone
Don Saylor
(530) 848-3220

On Sep 5, 2019, at 6:01 PM, Neal and Heidi Potter <nhpotter@msn.com> wrote:

Hi,

I'm reaching out to the County Supervisors to find out where you stand on the Teichert Shifler Mining Project. I realize that your district isn't near this project, but any of your constituents that have loved buried at Memorial Hill or golf at the Flyer's Club will be impacted by this project.

I look forward to hearing from you,

Heidi Frommelt Potter

From: Bea Leonardi [mailto:bealeonardi@aol.com]
Sent: Friday, September 6, 2019 4:38 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teachers Shifler Mining Proposal

Dear Mrs Cormier,

I would like to express my concerns about this project .- Virtually destroying some of the best farming acreage in Yolo county - potential significant well water issues for residential and commercial properties in the surrounding area - Substantial increased noise and traffic , this will decrease our properties value. I totally opposed to it !!

Sincerely
Bea Leonardi

From: Cathy stamey [mailto:cathystamey@aol.com]
Sent: Friday, September 6, 2019 9:56 PM
To: Stephanie Cormier <https://urldefense.proofpoint.com/v2/url?u=http-3A__Stephanie.Cormier-40yolocounty.org&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=kdtPCKeqKIngwAPH6qvp5f_ExA_ifBGx-p-DA3WNK-M&m=0AErj-ceDh9A-SkCvknngTFCeQeDNU92xuGhceMLimI&s=AdowiUhcybNvisgUdyGJ725leFvFLnWvvEqGwsepalo&e=>
Cc: cathystamey@aol.com
Subject: Teichert project behind Yolo Fliers

Stephanie,
I live on Canvas Back St. I back up to the Fliers 11th fairway. My husband and I are very concerned about the purposed Teichert project behind the Fliers club. I read some of the impact report and found it unbelievable that it said we would not be affected by the noise. We already hear the noise from the other Teichert sites. I can't even imagine what the noise would be like if it was right behind us. Not to mention the extra dirt and dust in the air. We would be breathing all that into our lungs. I would bet the impact report said that there would not be an increase in dirt and dust in the air.
I am also concerned about the water. We already have many issues with our water here. Please have the council members reconsider this project. Not only will it affect our quality of life with much more noise, dirt, dust and even worse water than we have now, it will depreciate the value of our house. Would Teichert make up the difference for the 25% decline in the price of our house due to the project behind us?
Cathy Stamey
Sent from my iPhone

From: Julie Payne [mailto:payne1109@sbcglobal.net]
Sent: Sunday, September 8, 2019 9:28 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Mining and Reclamation Project

Hi Stephanie,

It was nice of Jason to respond so quickly to my questions, unfortunately he only answered half of the email. This is what Jason did not respond to:

I am also concerned about the increased production at the Woodland Plant. Our family trust owns 2 rental houses adjacent to this plant. During the summer they often run the plant 24 hours a day. When they are processing asphalt, the small is so bad that you can't even open the windows at night. The noise, smell and dirt will be even more of an issue with an increase in production.

Teichert states that the closing of the Esparto plant and the consequent increase in production at the Woodland plant "will result in some increase in traffic, all of which has been thoroughly analyzed in the traffic study submitted as part of our application." However, recently there have been occasions where the traffic has been so intense on Road 20 that it has made access to our property extremely difficult and hazardous. These occasional traffic congestion events bring up the question of whether there would be a significant delay to first responders if there was an emergency event on our property. Nobody is looking forward to an increase in traffic when the current traffic from the plant is an issue for the neighborhood.

Will Teichert address these concerns?

I'm also concerned with some of his responses.

- I am not aware that the EIR has been completed, but Teichert already has a start date? If it hasn't been completed, when do you estimate the EIR will be done?
- In 30 years, after destroying prime farmland, Teichert will walk away. There will be a 100+acre hole in the ground that should be taken care of by the Shiffler family. They don't live here, they will have no stake in making sure it is maintained. What recourse will we have if there are problems? Will the County take any responsibility for this land?
- At times, they will mine 24 hours a day. This is not Ok. The noise, dirt and smell will not be tolerable. What is this doing to our property values?

I'm sure you can tell that this is a personal issue for me. I grew up with Cache Creek as my playground, with Teichert (at the time) giving us their blessing. My 4-H leader had a key to the main gate so the 4-H horse group could all go ride in the creek for our meetings. Now there is security making sure no one gets near the creek. The creek is not even recognizable from what it was when we were kids, and now we will have another gravel pit behind my moms house. Currently we can walk our dogs, ride our horses and quads on the

roads around the fields of this property. I'm sure this is going to be another 200 acres Teichert is going to fence off and not allow us on.

Thank you for your time, I appreciate your help with this matter.

Julie Payne

STATE OF CALIFORNIA GAVIN NEWSOM, Governor

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

September 10, 2019

Stephanie Cormier
Yolo County
292 W. Beamer St.
Woodland, CA 95695

RE: SCH# 2019089053, Teichert Shifler Mining and Reclamation Project, Yolo County

Dear Ms. Cormier:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   - **a.** A brief description of the project.
   - **b.** The lead agency contact information.
   - **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
   - **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
   - **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   - **a.** Alternatives to the project.
   - **b.** Recommended mitigation measures.
   - **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   - **a.** Type of environmental review necessary.
   - **b.** Significance of the tribal cultural resources.
   - **c.** Significance of the project's impacts on tribal cultural resources.
   - **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   - **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
   - **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
    a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
    b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
        i. Planning and construction to avoid the resources and protect the cultural and natural context.
        ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        i. Protecting the cultural character and integrity of the resource.
        ii. Protecting the traditional use of the resource.
        iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Staff Services Analyst

cc: State Clearinghouse

From: Margaret K [mailto:margaret.kronenberg@gmail.com]
Sent: Tuesday, September 10, 2019 5:30 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Fwd: Yolo County: Notice of Preparation and Notice of Scoping Meeting for the Draft Environmental Impact Report for the Proposed Teichert Shifler Mining and Reclamation Project

I am a Wild Wings resident since 2008 and I oppose this plan.

Margaret Kronenberg

"Logic will get you from A to B. Imagination will take you everywhere." - Albert Einstein

---------- Forwarded message ---------
From: **Yolo County** <YoloCSA@yolocounty.org>
Date: Thu, Aug 29, 2019 at 2:27 PM
Subject: Yolo County: Notice of Preparation and Notice of Scoping Meeting for the Draft Environmental Impact Report for the Proposed Teichert Shifler Mining and Reclamation Project
To: <margaret.kronenberg@gmail.com>

Notice of Preparation and Notice of Scoping Meeting for the Draft Environmental Impact Report for the Proposed Teichert Shifler Mining and Reclamation Project

Date: 08/29/2019 2:24 PM

Yolo County is the lead agency for the preparation of an Environmental Impact Report (EIR) for the proposed Teichert Shifler Mining and Reclamation Project in accordance with the California Environmental Quality Act (CEQUA), Section 15082. The project site consists of approximately 319 acres located north of Country Road 22 and east of County Road 94B. The proposed project is mining 41.6 million tons of aggregate resources over a requested 30-year period at an annual rate not to exceed 2.6 million tons mined per year. Mining is proposed in two phases and reclamation is proposed in three phases to reclaim 116 acres of agricultural uses and 11 acres of pond and habitat uses.

An Initial Study has been prepared to substantiate this initial determination regarding the scope of the EIR. The Initial Study is available online at:

http://www.yolocounty.org/community-services/planning-public-works/planning-division/current-projects. Comments on this initial determination of the appropriate scope of the EIR are welcome and can be sent anytime before September 16, 2019 at 5:00 pm. All comments and questions should be directed to the following address:

Stephanie Cormier, Principal Planner

Yolo County Department of Community Services

292 West Beamer Street

Woodland, CA 95695

Stephanie.Cormier@yolocounty.org

A public scoping meeting will be held by the County to inform interested parties about the proposed project, and to provide agencies and the public with an opportunity to provide comments on the scope and content of the EIR. The meeting will be held on September 12, 2010, at 8:30 before the Yolo County Planning Commission at the County Board of Supervisors Chambers in the Yolo County Administration Building at 625 Court Street in Woodland, CA 95695

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Ruth Schreiber Verbal Comment Summary

Date: September 10, 2019

The following is a summary of the verbal comments left by phone on the proposed project. The verbal comments include concerns related to:

- Impacts to water quality.
- Increased vehicle volumes on roadways and the safety of such roadways.
- Site access contributing to increased traffic volumes in the City of Woodland.
- Impacts to air quality in the project area.
- Devaluation of local properties.
- Vibration impacts from mining operations.

From: Ser Gio [mailto:sgio2014@yahoo.com]
Sent: Wednesday, September 11, 2019 8:24 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert

Dear Stephanie,

My family is not in favor of Teichert increasing their production. We live on County Road 96. The plan by Teichert to increase their production exponentially is not in agreement with the current Woodland residents near the site. To implement such a plan as it is being proposed is in total favor of Teichert and in disregard of those living close by.

Natural resources: As voiced by many, the concerns include the use of prime ag land that would be destroyed. The concerns for our water sources, there's no guarantee that the wells in the surrounding area will not be affected. How is Teichert going to be held responsible for that? Of course they will have the lawyers to say they are not responsible.

The traffic: The traffic is already constant and highly disturbing. Drivers speed by and the gravel trucks just join the crowd. Check out the telephone posts that have been grazed by these trucks. There are two still standing splintered as they are right now. My husband heard when one gravel truck had just hit one of these posts and witnessed the driver stop to check his truck and then move on. Our mailbox has been hit three times. The last time, my husband chased down the gravel truck driver (to Teichert) to have him pay for the damages. The driver tried to deny he had even hit our mailbox, but in the end admitted he had. We have had near misses from the trucks as well as other drivers just on County Road 96. Years ago, Teichert stated they were not responsible for the gravel trucks---well they are the cause for the gravel truck being on these roads, so yes they are responsible. On top of that our house shakes with these trucks going by, so again no, we are not in favor of increasing mining.

The noise: The noise of the trucks, the digging, the beeping vehicles, and the conveyor belt----they are LOUD. We are 2 miles from the current site, why do these beeping vehicles (forklifts?) need to be that loud? Oh yes, because the work they are doing is loud and the workers wouldn't be able to hear vehicles backing up that are just a few feet away.

Thank you for reviewing this limited information.

Sincerely,

Monique Marin

Shifler Mining and Reclamation Project
NOP Public Scoping Meeting: Comment Summary

Date: September 12, 2019
Time: 8:00 AM to 10:00 PM

Staff Presentation (Heidi Tschudin)

Applicant Presentation (Jason Smith)

Planning Commission Questions

Public Comments

Commenter 1 (Kevin Lewis)

- Traffic impacts along Highway 16, including the intersection at Highway 16 and Wild Wings Drive.
- Potential for safety hazard at the intersection.
- Highway 16 should be widened to minimize congestion.
- Water quality impacts to their wells.
- Wells are already experiencing low water levels.
- Potential for aquifer to be damaged resulting in long term impacts.

Commenter 2 (Donna Murray)

- Noise from the existing mining operations in the area is already loud and the operations continue to move closer to the Wild Wings residences.
- Potential impacts to water supply.
- Compatibility with nearby cemetery due to the noise associated with operations.
- Aggregate resources should be preserved.

Commenter 3 (Monique Marin)

- Noise associated with on-site vehicles and back-up beepers; noise from gravel mining operations two miles away can be heard where she lives on CR 96.
- Potential for safety hazard due to the increased vehicles on local roadways.
- Potential for vehicle accidents due to speeding gravel trucks.
- Potential impacts to local wells and domestic water supply.

Commenter 4 (Joyce Reynolds)

- Increase in traffic on local roadways.
- Traffic would be double the traffic volumes of the Woodland plant.
- The roadways do not have the capacity for increased traffic volumes (specifically CR 20 and CR 96).
- Project would double tonnage mined and double traffic on haul routes.

- CR 96 is a narrow road (23'-7") with existing farming operations and no shoulder or turn outs.
- Impacts to residents along CR 96/20/94B/22.
- Increased emissions from truck trips.
- Provide count of number of trucks on roadways.

Commenter 5 (Pamela Van Brocklin) – lives on CR22 between cemetery and Wild Wings.

- 320 acres of prime farmland will be converted.
- Increase in vehicles on haul routes.
- Baptist Church near the project site has a daycare/school.
- The Moore Canal is considered a historical resource.
- Potential impacts associated with relocation of the Canal.
- Reclamation takes too long.
- Reclamation to agriculture is not productive; only winter wheat can be grown; mining removes gravel filtration and topsoil.
- What other potential mining sites are there?

Commenter 6 (Steven Pierce)

- Well monitoring to the south is needed to monitor impacts to residents.
- Potential for impacts to property values. Potential property tax loss to County.
- Noise and traffic impacts should be taken into consideration despite what actual numbers or levels might reveal.

Commenter 7 (Jon Huffine)

- A well in the area was abandoned due to arsenic levels. Water levels of other wells in the area are declining.
- The mining operation will use water that belongs to the residents.
- Reclaimed lake would drop groundwater levels.
- Noise impacts not expected when he purchased or when subdivision was approved.
- Impacts to 337 homes.
- Impacts of noise on golf course operations.

Commenter 8 (Paul Lopez)

- Dust from the west is high.
- Air quality impacts from existing mining.
- Continued health effects associated with dust from mining operations.

Planning Commission Comments:

- Requested NOP comments after close of comment period.
- The Baptist Church should be included in the EIR analysis as a nearby sensitive receptor.
- The timing of mitigation should be as soon as possible and should be monitored.

- Mitigation for agriculture should consider enhancing the land to make the agricultural land better than it was before mining operations.
- Suggest using the updated Cache Creek Area Plan when incorporating mitigation measures.
- Recommend the Biological Resources report be peer reviewed.
- The EIR should include a Smaller Footprint Alternative which provides additional setback from sensitive habitats and preserves the oak woodland habitat.
- Explain tribal coordination.
- Consider noise from back-up beepers and how it can be reduced.
- Consider restrictions on amount of noise and hours of operation.
- Examine options for loss of agricultural land, and, in particular, prime farmland.
- Examine potential impacts to biological resources and options for mitigation.
- The EIR should include a Reduce Footprint/Aggregate Tonnage Alternative.
- Consider options for moving Moore canal to the south rather than north; consider piping Moore canal versus relocation.
- Requested that all community comments be taken into consideration, particularly the water and traffic concerns expressed during public comment.
- Overall, recommended that the EIR be a robust document that considers all concerns, including a close look at Alternatives and mitigation.

Prepared by County Staff and Raney Planning and Management, October 1, 2019.

From: Dayle Murray [mailto:drdayledds@gmail.com]
Sent: Thursday, September 12, 2019 4:11 PM
To: Dayle Murray <drdayledds@gmail.com>; Donna Murray <dmurray777@gmail.com>; Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler mining project

Stephanie, For the record I am going to have to undermine the mining project. Here is my list of problems: destruction of good farmland, mosquitoes from the pond, dust in the air for us @ Wild wings & the kids @ West Valley Baptist Church, & all other neighbors, more noise setting off more neighborhood dog barking all day long, potential ground water issues, more road congestion, faster road deterioration with twice the truck traffic, plus more sandblasting of passing cars which happens now & will be much worse with the finer cement sand they will be mining, and the future lawsuits over all these issues. This is just too close to 337 homes & the negative effect on our property values this will cause. They have other areas further away that can be explored first. This is just to big of an environmental impact on our lives. Dayle Murray @ 18021 Ruddy Street @ Wildwings.

From: Joycemreyn [mailto:joycemreyn@aol.com]
Sent: Friday, September 13, 2019 2:28 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Additional Comments

Dear Stephanie,

I was a bit surprised at yesterday's Planning Commission Meeting about the Scoping for the Teichert Shifler Mining Proposal. Your employee's presentation included County income from Teichert's operations, their mining history, etc. When I talked to her about one of the audience member's concerns about **property values** if the mining is granted, I was told that it wasn't a concern for the Environmental Impact report. Then why did she bring up and gush about the revenue and her take on the advantages of allowing Teichert to mine along Cache Creek? I sensed that there is some bias and I was very disappointed.

With that being said, I want to repeat my concerns that there is not much information about the amount of traffic Teichert's operations generates because apparently nobody keeps records of it. If Teichert does keep a record, they do not share it with the County and they are not required to do so. If the Environmental Impact Study includes putting out counters of the traffic, it will be at the quietest time of the year (winter) and will not realistically represent the **overall annual traffic** between the gravel hauls combined with farming activity. Some residents have observed gravel trucks arriving as early as 4 a.m. and lined up for nearly a mile waiting for the gates to open. Then the haul begins - but the timing of the study for this proposal will not be conducted when this is the norm.

When one of the members of the Board brought up the audience member's concern about the back-up beepers, your presenter talked about the advances that have been made and maybe the trucks could use something other than back-up beepers. I have been told by Teichert multiple times when I have complained about drivers speeding (65 plus MPH) and running stop signs (County Road 96 and 20), that Teichert does not employ the drivers or own the trucks and have no control over them. So **Teichert cannot require those trucking companies to use something other than the back-up beepers**, right? Also, we live about a mile from the Teichert operations. We hear the conveyor belts. We smell the asphalt. We hear the back up beepers. We hear what sounds like authentic law enforcement sirens and signals (it isn't legit - it has something to do with

starting up belts). We hear what sounds like burglar alarms. All of this over a mile away starting before 6 in the morning.

The County says there are rules that Teichert must comply with, but **who monitors** their compliance? Who monitors their start up time? The hours they operate? And if you do call and question it, they can say it is an emergency or a high priority job and that's okay with you. Pam Van Brocklin presented evidence from previous observations - Teichert's deviation from the haul road rules was observed and recorded. Teichert denied it.

Also, the County has somewhere in it's backlog of proposals a request from a marijuana farm to rezone their ag land on County Road 21 to include a **marijuana processing and distribution plant**. When this is approved, the ingress and egress for approximately 50 employees and multiple daily delivery trucks will be from County Roads 20 and 96. Will the potential of this traffic be considered when the Environmental Impact Report is prepared?

I also want the following information to be made available to the Planning Commission and the Environmental Impact preparers regarding the **dangers of the traffic** on Road 96. As I mentioned when I spoke during the public comment time, Rd. 96 in the vicinity of Rd. 21 is approximately 12 feet narrower than College Street near Cross Street in Woodland. There is no shoulder, there is a 5" difference between the asphalt and road level, and then it abruptly drops off a couple of feet to the property lines. In the past 5 years I know of a car pole accident at Rd. 96 and Rd. 21, a car going off the road just north of the intersection, barely missing the front bedroom of a house (their teenage daughter had just got up and was not in the room), and ending up hitting a tree stump in front of our pasture, two mail boxes being completely destroyed (ours was one of them), and 2 County Road signs being demolished (one was the 50 MPH speed limit sign, the other was the sign showing the upcoming intersection with County Road 21). For several months a phone company pole on the east side of Rd. 96 has been damaged but not enough to sever it. Obviously it has been sideswiped. Drivers constantly pass at high rates of speed (over the speed limit), ignoring the no passing double lines at intersections. The morning of the Planning Commission meeting, our neighbor was awakened by the sound of screeching tires. When we all looked out, we saw a car had left the road and somehow managed to avoid some trees, ending up in a recently harvested tomato field. Several people stopped to offer assistance, the CHP showed up and completed paperwork and a tow truck was called. These incidents are the ones I know about because they have happened within 1/4 mile of our place.

I realize there is no section for the Environmental Impact Study to specifically address the quality of life for the people living around the future mining site. That's sad because there are so many issues that will impact the residences, the golf courses, the farmers, the Church, the cemetery, the communities - **water**

quality, noise, air quality, traffic, property value, destroying ag farm land - and that is just when the mining starts.

Please forward this email to the members of the Planning Commission. Thank you very much.

Joyce/Ranse Reynolds
17355 County Road 96
Woodland, CA 95695

From: mrsjeem [mailto:mrsjeem@aol.com]
Sent: Friday, September 13, 2019 2:39 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Tiechert mining project

I am writing this in regard to the proposed Tiechert mining project. My husband and I are property owners on County Road 96 and have many concerns about this as do our neighbors. We are concerned mainly about:

1. Water and how this will affect/deplete our well
2. Air quality
3. Noise from the plant as well as from increased truck traffic
4. Increased truck traffic, we already experience high volumes of truck traffic to increase it would be very difficult to live with
5. Decreasing property values.

We purchased our home out of the city and in a country setting for the peace and quiet of that lifestyle not to live along side of a main truck route or to lose money on our home.
Thank you for taking time to read this and please add me to the email list for future information.

Thank you,
Diane M. Tauzer

Sent from my Verizon, Samsung Galaxy smartphone

From: jerrbeck@hughes.net [mailto:jerrbeck@hughes.net]
Sent: Saturday, September 14, 2019 2:38 AM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Cc: sbeck@hughes.net
Subject: Teichert Shifler Mining

To the leaders of Yolo County

We have two main concerns about the Teichert Shifler Mining Project.

1. Water - I was at the meeting 9/12/19. It was stated that the ground water level is approx. 65 ft.

They are going to be mining up to 110 ft down. This could have a major impact on the ground water and surrounding water wells. What are the chances of contaminating the ground water, and what are the possible effects on the ground water levels. Teichert showed a map of existing monitoring wells, most were to the north east of the project, not many to the south east. What happens when our well water is contaminated or water levels change, is Teichert going to be

responsible? Will experts on this subject be involved in the EIR? I feel the ground water levels are already being stressed with all the new ag wells being drilled in this area. Does the county monitor water levels?

2. Traffic. We have lived on Highway 16 between the airport and Wild Wings for 17 years, the traffic has greatly increased in this time. The highway is narrow and dangerous as it is. I would like to know just how many more trucks this project will add to this busy highway. Remember, each load of gravel is 2 trucks passing by our house, one empty and one full!

The intersection of 16 and 94B is dangerous now and has frequent accidents, should there be a stop light installed there?

How many fatal accidents will be involved with gravel trucks on Highway 16 in the next 30 years ???

Please add my email to the list of future meetings and communications on this project. jerrbeck@hughes.net

Jerry and Stacy Beckwith

From: LynnReyn [mailto:lynnshaw@pacbell.net]
Sent: Saturday, September 14, 2019 8:10 AM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Proposal

In the late 1980's the depth of Cache Creek at the edge of our property was 50 feet; in 2019 the depth is now 80 feet and our property line is now on the other side of the stream bed. That 30 feet change in depth at a rate of 1 foot per year is a direct result of what is going on upstream, namely gravel mining and bank disturbances, have caused massive erosion to the properties downstream. Who pays for that? The county? The gravel harvesting industries? Individual property owners have experienced extreme loss without consideration or compensation. We have lost outbuildings and other structures, a road, an agricultural well, and the underlying property (class 1 soil). Sally Oliver is absolutely correct when she stated that this is a direct taking of property without compensation by Yolo county. My illustration is only a small part of the damage created by the management policies of Yolo county. If the county is intent on the gravel industry as a financial resource for the county, then the affected property owners and other county residents should be compensated for this taking. If the county wants a strip of Cache creek to be donated to the mining industry, then take the property by Eminent Domain and pay fair market value for the taking.

Lynn Shaw Reynolds of 15390 County Road 97 A, the Poster Property of destructive erosion caused by upstream gravel mining.

please put me on your mailing list.

Mailing address:

PO box 737, Woodland, CA 95776

(530) 662-7749

lynnshaw@PacBell.net

From: Thomas Wilkop [mailto:twilkop42@gmail.com]
Sent: Sunday, September 15, 2019 8:36 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Concers about Teichert Shifler Mining operation extension

Dear Stephanie Cormier

I writing to you to express my grave concerns about the proposed massive and decade long expansion of the mining operations of Teichert Shifler along Cache Creek.

The operations will adversely affect the quality of life of at least ca. 400 households or ca 1200 people directly through strong environmental impact from noise, changing water levels, increased pollution and increased traffic in the neighborhood.

Running mile long conveyor belts, is a very noisy operation and monster mining machines are making monster noises.

Why should Yolo County put the interest of Teichert Shifler above that of so many citizens that bought residences with existing zoning laws.

With relation to the claims by Teichert Shifler that " the mined land will be reclaimed to agriculture and a mix of habitat uses", this is wishful thinking. A current assessment on the devastation caused by their current operations and feeble reclamation efforts gives this no credibility. Mining is just simply not gentle to the environment and the neighborhood. Why extend this?

I feel very strongly that there should be no change to the status of the agriculturally-zoned property, it violates so many peoples life and has manifold adverse affects on the local ecosystem and environment.

If there exists an option to be placed on the notification list for future communications from the County regarding the proposal, any planning commission meetings, hearings or community outreach, please let me know how to do it.

Thanks for noting my concerns.

Thomas Wilkop

18199 Gadwall Street
95695 Woodland CA

From: Keila Golden [mailto:keila@woodlandstallion.com]
Sent: Sunday, September 15, 2019 3:39 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Mining and Reclamation Project (ZF2018-0078).

VIA EMAIL

Stephanie Cormier

Principal Planner Yolo County Department of Community Services

292 West Beamer Street Woodland, CA 95695

stephanie.cormier@yolocounty.org

Dear Ms. Cormier:

I am writing to discuss my concerns with the proposed Teichert Shifler Mining and Reclamation Project (ZF2018-0078). I live at 34270 County Road 20 and conduct my business at that address; I am self-employed as a breeder and caretaker of horses. My concerns with the project center around noise and air pollution and the change in the local aesthetic:

Currently, the areas around road 20 are largely farms. The unique beauty of Yolo County lies in its farms – the iconic views of sunflowers, tomatoes, and nut trees are beautiful and emblematic of California's bounty. Replacing a farm with views of mining equipment would be the visual equivalent of pollution; it would be tragic.

Teichert's current properties are rife with petty crime, primarily vandalism. Because Teichert has been unable to curb this activity, I am concerned that an expansion of their operation would equal an expansion in crime.

The air quality in our area is presently good; suitable for neonatal horses, equestrian athletes, and children alike. The horses that I raise, as well as my guests, spend long periods of time outdoors engaged in strenuous activity and additional air particulates or equipment emissions could jeopardize their safety.

The noise generated by a mining operation could be a significant nuisance to both humans and horses alike. Yolo County's farmland is unique and peaceful – it should remain so.

I am opposed to the proposal. Please leave rural Yolo County rural.

Thank you for your attention.

Keila Golden

Woodland Stallion Station

From: Sergio Hernandez [mailto:hsergio.530@gmail.com]
Sent: Sunday, September 15, 2019 4:05 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert

Dear Stephanie Cormier,
My name is Sergio. I have lived on County Road 96 for almost 6 years and I am writing this email to ask you to please consider seriously modifying or rejecting Teichert's project. The traffic and noise created by the gravel trucks is terrible practically all day long. There are periods of time that the roads are full of trucks in all directions. You can feel my house shake. A few months ago one of my windows broke. On top of that you can hear the gravel machinery going at 5am and at times doesn't stop. In the time that I've lived here my mailbox has been hit 3 times. On one occasion, I was reimbursed by the gravel truck owner only after I told him I was planning to call the sheriff. Driving on these roads is already dangerous and I worry since I take my son to and from school. I also worry about how our house will lose even more value with the increased danger and traffic. I also worry about how our water quality will be affected with Teichert's project since we have a well. I am asking you to greatly consider all points stated and those of my neighbors before such a huge damaging project is approved.
Thank you.

From: Amanda Jarose [mailto:jarosetraining@gmail.com]
Sent: Sunday, September 15, 2019 9:14 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler mining Reclamation project (ZF2018-0078)

Dear Ms.Stephanie Cormier,

I am writing to express my concerns about the proposed Teichert Shifler Mining Reclamation project. I live in Woodland and am a Horse Trainer at 34270 County road 20. My concerns are the noise, excess dust, truck traffic, and aesthetic change. Horses are very sensitive to noise and I am concerned for their well being as well as the safety of those that are riding. A large percentage of my students are young children that are just learning to ride so safety is of the highest priority for them. For the last few years I have been working out of the facility it has been quiet and very peaceful, a great place everyone to learn, grow and enjoy quality time outdoors.

The air quality around 34270 County road 20 has been good with little pollution so far and I am concerned if the expansion does take place it will increase the pollution in the area. My concern is for the children that attend my riding program and their health. These children and adults are equestrian athletes and need clean air.

The area currently surrounding 34270 County road 20 is all beautiful rural farmland. The rolling hills covered in olives trees and the seasonal sunflower and tomato rotation is extremely peaceful and eye pleasing. Most of my clients are hobby horse owners that use the barn as an escape from their 9-5 day jobs in the city. The beauty of being able come to a facility nestled in rural Yolo is almost as special as the horse experience itself. Please consider some of these concerns in regards to the Teichert Shifler mining reclamation project.

Thank you for your time.

Best regards,

Amanda Jarose

Stephanie,
I am writing to express my family's concern for the proposed expansion of Teichert's gravel mining. After reading some (admittedly, not all of the materials, I am seriously concerned.

I've heard all the concerns about traffic, noise, etc.

While certainly the additional noise, dust, traffic and damage to the habitat concern my family, the most concerning area is the groundwater situation.

We are long time residents of Wildwings which has born a brunt of changes due to decisions made by the County with what appears to be little thought to the impacts. We experienced the negative (and costly) impacts of a insufficient developer agreement as well as the costs to redesign and engineer a wastewater system that was not built to specification (yet inspected and accepted as complete by the County).

Currently, my concern is the negative impacts to the water table. This community is still struggling with the costs/impacts of the EPA's lowered arsenic levels as well as concern over the groundwater table changes. It has already been identified that this project will result in impacts to groundwater.

I would urge the County to exercise extreme caution before approving such an expansion of operations. I would hope that the County will not again sell this community down the river to 'big business'. My family and my neighbors will be appreciative of your exercising an abundance of caution in moving forward.

If you have questions, please do not hesitate to contact me. My information is below.

Georgia Cochran
18198 Mallard St.
Woodland, CA
530-383-2833

VIA EMAIL

Stephanie Cormier
Principal Planner Yolo County Department of Community Services
292 West Beamer Street Woodland, CA 95695
stephanie.cormier@yolocounty.org

Dear Ms. Stephanie Cormier:

This letter is to provide written comments on my concerns regarding the Teichert Shifler Mining and Reclamation Project (ZF2018-0078).

I own two parcels totaling 101 acres at 34270 County Road 20, north of County Road 20 and west of Road 94B, near the proposed project. My property is home to two residences and a large horse ranch, Woodland Stallion Station, which has been in operation since 1983. It was omitted in the labeled map on page 9 of the Initial Study but can be seen in the upper left-hand corner of the map (immediately north of Cache Creek Nature Conservancy).

I have these concerns about the project's potential to negatively impact the environment at my property and surrounding areas:

- Aesthetics. Yolo County is uniquely beautiful; photographs of the sunflowers, almond orchards, and vineyards farmed on Roads 19 and 20 have been shared around the world. The scenery of our agricultural "neighborhood" is symbolic of the abundance of farming. Additional mining facilities would replace verdant farmland with unattractive views of equipment and fences.
- Noise. In addition to the residences, my property houses approximately 100 horses which are ridden on the property and surrounding private trails. Horses are subject to being "spooked" by loud noises creating substantial risk to the animals and their handlers. Consistent noise pollution can create a stressful environment for the horses, which are especially prone to gastric ulcers and other digestive problems when subjected to stress. The property also hosts outdoor recreational activities and events which depend on the quiet, serene outdoor environment provided by the surrounding farmland and would be severely impacted by ongoing industrial noise.
- Air quality. Equestrians, from children to elite athletes, spend a large amount of time exercising outdoors and rely on the safe quality of rural Yolo County air. During the recent series of fires, we have frequently hosted large groups of horses evacuated from areas of poor air quality who sought relief from the smoke; this highlights the importance of clean air to the animals we house and raise.
- Security and crime. The existing reclaimed mining sites attracts a criminal element. Vandalism and graffiti is rampant across the existing reclaimed mining areas bordering road 94B, particularly by people breaking through private property to access Cache Creek. Attempts at mitigating these risks for example with an unmanned police video station to the south of Cache Creek have not stopped this from continuing. Additional mining sites throughout this area will create further opportunities for this criminal activity to occur without stronger mitigation steps. This impacts the aesthetic of the area.

Sincerely,

Daren Robbins

From: Barbara J D Koerber [mailto:bjdkoerber@hotmail.com]
Sent: Monday, September 16, 2019 8:24 AM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Proposal

Dear Stephanie.
This message is to express my concern about the great increase in activity where I live as a result of the Teichert Shifler business.
The seemingly endless string of doubles gravel trucks is, first and foremost, a traffic issue as regards large equipment on little 2-lane Highway 16 and the number of damaged windshields and car paint of late. Both of our vehicles and at least one of each of our friends has had to be replaced in the past few months. This is absolutely due to the current increase in gravel truck activity on our roads. They end up not having any responsibility for the financial implications nor the disruption to individuals' lives as a result. Yet the responsibility is 100% theirs.

The traffic increase on Hwy 16 and surrounding access to interstate highways has added bottlenecks to the flow of traffic and the impatience of some drivers, which results in risky driving to get around the bottlenecks.
The lack of a traffic light on Hwy 16 outside of Wild Wings' neighborhood has also resulted in strings of vehicles waiting to turn on to Hwy 16 and - again - risky behaviors when becoming impatient. We need a light there! For a 2-lane highway, the volume of traffic is too great now for safety.

Another concern is the obvious decrease in our neighborhood's property values because of the gravel industry being so close and using our ***only*** access to public roads. We're already dealing with the sewer/water issues as a result of the county's actions 15 years ago (maybe more). Don't even get me started on the shady dealings that had to have happened back then!

Since Kentucky Street in Woodland continues in to the country and dead-ends at Teichert's plant, **I believe strongly that they should be required to build a road from that plant to the west to access I-505.** They could use then use the interstate system more effectively rather than the small 2-lane roads they currently monopolize. This would eliminate their large equipment on the little farm roads and other public roads that we citizens have no choice but to use for our daily activities, including work commutes, shopping for basic necessities and enjoying leisure time in Woodland, Winters, the Capay Valley, Sacramento or elsewhere.

The activity of mining Teichert conducts has obvious consequences to the land, water

and air quality of the surrounding area - MY home and those homes of my neighbors. Obviously, with the increased activity and volume of large trucks, the noise problem is negatively impacted also.

And what about the Monument Hills cemetery?..... ***Something*** must be done. During the solemn services when laying someone to their final rest will it be the sound of bulldozers and rock smashers that is actually memorialized? At minimum, a sound wall and tall plantings should be implemented and allowed to mature before mining activity dominates this place of reverence.

Certainly it's not a far reach to imagine the years of litigation possible against the county for shameless and impudent permission for this project. Litigation from residents, religious groups, environmental groups, and the list goes on of those who have organizations and politicians behind them not afraid to fight for what's right. And litigation against what serves the financial gain of just a few at the expense of many.

The county needs to slow down - even better, reject - the approval of this project to allow consideration and really hear and consider the true impact of this industry that is so close to and that will negatively impact so many people.

Barbara Koerber
18222 Gadwall Street
Woodland, CA

From: George Lu [mailto:georgeclu48@gmail.com]
Sent: Monday, September 16, 2019 9:00 AM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: RE: Comments about EIR for the Aggregate mine

Dear Stephanie,

I learned of the public comment period for the proposed aggregate mine in Yolo County in the September 13 edition of the Davis Enterprise. I have multiple comments that can help the environmental review process.

The project will generate a substantial quantity of GHG emissions. Operation of the project will also involve the operation of diesel engines on and off the project site that emit air toxics.

The County shall develop a project-specific threshold of significance to evaluate the project's GHG emissions. The most logical threshold is net zero. No air district in California has developed a threshold for analyzing a project's greenhouse gas emissions that is aligned with the statewide GHG targets mandated by Senate Bill 32 of 2016.

To reduce its GHG emissions, the applicant should include a solar array to help power the energy-intensive conveyor belt that will be part of the project. The panels should be affixed to a wheeled structure so they can be shifted to areas on the project site that are not being actively minded. Panels should also be affixed on the roofs of all on-site buildings and on canopies that cover all parking areas.

If the applicant also needs to purchase supplemental electricity from the grid the applicant shall participate in a program offered an electric utility that only provides electricity generated from solar, wind, geothermal, or small-scale hydroelectric generation sources.

Mining equipment and vehicles should be electric, if electric versions of the equipment are available from equipment providers. Otherwise, all heavy-duty diesel equipment used for construction and operation of the project shall meet EPA's Tier 4 emission standards and be powered by renewable diesel fuel, such as the products offered by Propel Fuels and possible Ramos Oil. Tier 4 engines are more fuel efficient and, therefore, more GHG efficient. This measure has been required of construction equipment in other EIRs throughout California.

GHGs and energy consumption should also be reduced by hauling mined products to the nearby railroad to be shipped by rail.

All new buildings should be designed to meet the Tier 1 or Tier 2 energy efficiency standards of the 2016 California Green Building Standards Code. This includes having Cool Roofs.

Multiple rows of fine-needle conifer trees shall be planted around the entire project boundary to mitigate the diesel particulate matter emitted by mining equipment. This measure would be similar to the mitigation measure required in the City of Davis Nishi Project EIR.

A least 10 percent of the parking spaces for passenger vehicles driven by workers and visitors shall include charging stations for electric vehicles.

Any truck rest areas, or parking areas designed to allow drivers to sleep or rest inside their trucks shall provide clean electric power for on-board lighting and electrical equipment, as well as an airway connection for heating and cooling.

The applicant shall fund and build a Class 1 bike route that connects the project site to downtown Woodland to support bicycle commuting by its workers.

The applicant shall purchase and retire carbon credits to offset any GHG emission that would remain after the implementation of all feasible on-site GHG reduction measures.

All of these GHG reduction measures align with at least one of the measures listed in Appendix B of CARB's 2017 Scoping Plan.

The air quality analysis shall quantitatively address the increase in exposure to diesel exhaust, and related health risk, associated with all the diesel trucks that will pass by residences (and possibly schools) when travelling along local roads to and from the project site.

Thanks,

George Lu

From: Ryan Payne [mailto:rpayne7890@gmail.com]
Sent: Monday, September 16, 2019 10:02 AM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Comments for the Proposed Teichert Shifler Mining and Reclamation Project

Hi Stephanie,

My name is Ryan Payne. Just as a preface I am a recent graduate from California Polytechnic University of San Luis Obispo with a degree in Agriculture & Environmental Plant Sciences, a farmer, and a licensed Pest Control Advisor with the Department of Pesticide Resources that is under jurisdiction of the EPA.
I have a few concerns regarding the proposed site of the Teichert Shifler Mining Project. This mostly has to do with what would be the removal of Prime A1 AG land that has continually become more of a finite resource with a quickly rising global population that is ever more so dependent of a stable food supply. I read that they do plan on returning some of the land once finished with the mining operations to be ag land that is in a dug out pit far below ground level. My concerns with this practice has to do with what would be an ultimate decline in the overall health of that soil matrix complex. Studies have shown that removal of topsoil has lead to a 88-94% reduction in carbon storage, vast reduction in macro and micro nutritional elements leaving a nutrient deprived soil, death and inability of re-colonization for earthworm populations, decrease in microbial activity, and an increase in soil compaction (2012, Geissen et al.).
From a more personal standpoint, I would prefer to not be antagonized by the eye sore and noise pollution that would be emitted from an active mining site when I visit the resting place of my grandfather at the Memorial Hill Cemetery, and I believe it goes without saying that all other individual who visit the resting place of their loved ones would share the same opinion.
Anyways I would like for you to take into consideration the heritage and history of this county and how agriculture has played a role here. Some of the utmost leading innovation in agriculture technology is taking place right here in our backyard. This land and soil that farms are working to keep healthy and utilize to feed the global population is limited by the finite space of mediterranean weather that we have here in California and Yolo County where mining for mineral aggregate can take place just about anywhere and is nowhere limited to the environmental constraints that agriculture is. Thank you for your time and I really appreciate you for receiving comments from the public on this matter of discussion.

All the best,
Ryan Payne, PCA #152995

Citation:
Geissen, V., Wang, S., Oostindie, K., Huerta, E., Zwart, K. B., Smit, A., … Moore, D. (2012, October 25). Effects of topsoil removal as a nature management technique on soil functions. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0341816212002081

From: Janet Levers [mailto:jlevers105@gmail.com]
Sent: Monday, September 16, 2019 10:54 AM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert/Shifler Draft EIR

Please include these comments/questions in the preparation of the EIR:

How can "conflicts with agricultural zoning or the Williamson Act" be 'scoped out' (in the words of Heidi Tschudin) when this proposal will result in the loss of 100's of acres of farmland that is currently zoned Ag and in the Williamson Act? Yolo County professes to have a commitment to preserving farmland; this flies in the face of that commitment.

As a part of the EIR, please delineate the properties "reclaimed to farmland" under the 1996 Ordinance (Muller, Hollar & Coors-Fong by Teichert); those done by Granite and Syar; also Cemex (Solano Concrete) under previous test-ordinance. Indicate the percentage of cropland in relation to total gravel acreage for each, as well as crops planted and yields thereof. Provide a timeline of the Storz property project reclamation: when it began, (was it as soon as mining ended?), depth of water during the drought years and after the heavy rains of 2019, planting plans and amount of time anticipated until revegetation begins so the public is provided with information on the impacts and outcomes of the "lake" that will result from the Shifler proposal. Provide details from Yolo County Mosquito Abatement on results of their surveys for West Nile Virus and other vector-borne diseases tested in the Storz pit. Will the Shifler lake be likewise off-limits to the public and have surveillance cameras? Do groundwater models indicate that there will be connectivity to the active creek channel from this lake?

I appreciate the inclusion of these issues in this study.

Janet Levers
36750 CR20
Woodland, CA 95695

From: Mary Beck [mailto:marybeck42@yahoo.com]
Sent: Monday, September 16, 2019 11:13 AM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>; Barbara Koerber <bjdkoerber@hotmail.com>
Subject: Teichert/Shiffler Proposal

Dear Stephanie:

This message is to express my concern about the great increase in activity where we live as a result of the Teichert Shifler business.

The seemingly endless string of doubles gravel trucks is a serious traffic issue on our little 2-lane Highway 16 which also results is a multitude of damaged windshields and car paint of late. Both of our vehicles and several of our friends have had to be replaced in the past few months. This is absolutely due to the current increase in gravel truck activity on our roads. They end up not having any responsibility for the financial implications nor the disruption to individuals' lives as a result. Yet the responsibility is 100% theirs.

A more serious problem is the traffic increase on Hwy 16 and surrounding access to interstate highways which result in bottlenecks to the flow of traffic and the impatience of some drivers to pass creating additional risky driving to get around the bottlenecks.

The lack of a traffic light on Hwy 16 outside of Wild Wings' neighborhood has also resulted in strings of vehicles waiting to turn on to Hwy 16 and - again - risky behaviors when becoming impatient. We need a light there! For a 2-lane highway, the volume of traffic is far too great now for safety.

Another concern is the obvious decrease in our neighborhood's property values caused by the gravel industry being so close and using our ***only*** access to public roads. We're already dealing with the sewer/water issues as a result of the county's actions 15 years ago (maybe more). Don't even get me started on the shady dealings that happened back then!

Since Kentucky Street in Woodland continues in to the country and dead-ends at Teichert's plant, **I believe strongly that they should be required to build a road from that plant to the west to access I-505.** They could use then use the interstate system more effectively rather than the small 2-lane roads they currently monopolize. This would eliminate their large equipment on the little farm roads and other public roads that we citizens have no choice but to use for our daily activities, including work commutes, shopping for basic necessities and enjoying leisure time in Woodland, Winters, the Capay Valley, Sacramento or elsewhere.

The activity of mining Teichert conducts has obvious consequences to the land, water and air quality of the surrounding area – our home and those homes of my neighbors. Obviously, with the increased activity and volume of large trucks, the noise problem will negatively impact our property values as well.

And what about the Monument Hills cemetery?..... ***Something*** must be done. During the solemn services when laying someone to their final rest will it be the sound of bulldozers and rock smashers that is

actually memorialized? At minimum, a sound wall and tall plantings should be implemented and allowed to mature before mining activity dominates this place of reverence.

Certainly it's not a far reach to imagine the years of litigation possible against the county for shameless and impudent permission for this project. Litigation from residents, religious groups, environmental groups, and the list goes on of those who have organizations and politicians behind them not afraid to fight for what's right. And litigation against what serves the financial gain of just a few at the expense of many.

The county needs to slow down - even better, reject - the approval of this project to allow consideration and really hear and consider the true impact of this industry that is so close to and that will negatively impact so many people.

It is our understanding that Teichert has more options of land available to them. Why not use land which is not near a development such as ours.

Thank you very much for your consideration. We appreciate anything you can do to help us with this problem!!

Phil and Mary Beck

18485 Mandarin Street

Woodland, CA

From: Joycemreyn [mailto:joycemreyn@aol.com]
Sent: Monday, September 16, 2019 11:26 AM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Proposed Project

Dear Ms. Cormier:

Below is a post my sister-in-law shared on Nextdoor over the weekend. She is out of town and I have not been able to confirm with her if she submitted the information via email to you or not. This historic data is important to provide to the Environmental Impact Study group as it discloses scientific data that clearly states the damage caused by Teichert's mining practices. Nextdoor has estimated the number of residents in the Wild Wings vicinity as 1608. The Willow Oak neighborhood population is shown as 2891. Do you really want to negatively impact the health and well being of that many people?

Sincerely,

Joyce Reynolds
17355 County Road 96
Woodland. CA. 95695

In the late 1980's the depth of Cache Creek at the edge of our property was 50 feet; in 2019 the depth is now 80 feet and our property line is now on the other side of the stream bed. That 30 feet change in depth at a rate of 1 foot per year is a direct result of what is going on upstream, namely gravel mining and bank disturbances, have caused massive erosion to the properties downstream. Who pays for that? The county? The gravel harvesting industries? Individual property owners have experienced extreme loss without consideration or compensation. We have lost outbuildings and other structures, a road, an agricultural well, and the underlying property (class 1 soil). Sally Oliver is absolutely correct when she stated that this is a direct taking of property without compensation by Yolo county. My illustration is only a small part of the damage created by the management policies of Yolo county. If the county is intent on the gravel industry as a financial resource for the county, then the affected property owners and other county residents should be compensated for this taking. If the county wants a strip of Cache creek to be donated to the mining industry, then take the property by Eminent Domain and pay fair market value for the taking. Lynn Shaw Reynolds of 15389 County Road 97 A, the Poster Property of destructive erosion caused by upstream gravel mining.

Sent from AOL Mobile Mail

Letter 49

From: Alan Koerber [mailto:koerber@sbcglobal.net]
Sent: Monday, September 16, 2019 1:51 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Proposal

Teichert Shifler proposal approval would expose Yolo county to years of litigation from opposing groups; religious, environmental, safety, neighborhood housing, to name a few. Investigations into any type of collusion in determining approval is a possibility. I don't see any great benefit to Yolo aside the tax.

The promise from Teichert of a beautiful restoration park 30 years down the road is naive, if not laughable.

Excavators building a berm next to a burial service at Monument Hills does not pass the common sense test.

The broken windshields and paint chips on Hwy 16 from the gravel trucks are already a problem. Hwy 16 already has bottlenecks from the tractor trailer ingress and egress. I witness risky driving behavior daily when 2 or 3 gravel trucks elephant walk down 16 and someone is in a hurry.

Housing values would be impacted negatively.

The impact on Yolo water is immeasurable.

Alan Koerber
18222 Gadwall St.
Woodland, Ca.
95695
707 280-1690

From: lori sinor [mailto:lorisinor@sbcglobal.net]
Sent: Monday, September 16, 2019 1:17 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Proposal

Hello,

I'm a resident within the Wild Wing community and have several concerns with Teicherts proposed new site for drilling. We moved here to get out of the City for the peace and quite. There is nature all around us, let's not destroy this beautiful area. Why not farther away where there is less impact to not only people but land and nature?

My concerns:

The noise and dust this will cause with potential health impacts.

The increased truck traffic this will cause on an already busy and dangerous highway 16. It's the residences that will have pay for cracked windshields at $1,000 an incident. The road is already not in great condition.

The land they would be destroying is some of the best farming acreage in the county; doubling the tonnage allowed to be processed annually at the Teichert Woodland Plant - which means doubling the gravel truck traffic on Highway 16, Rd. 96, Rd. 20, and Rd. 98;

potential significant well water issues for the surrounding residential and commercial properties;

impacts on property value (previous studies have shown that homes within a mile of a mining project may see up to a 25% decrease in property value).

Thank you for your consideration.

Lori Sinor

Sent from my iPhone

From: cjohe@att.net [mailto:cjohe@att.net]
Sent: Monday, September 16, 2019 3:54 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Re: Scoping Requirements Teichert Shifler Mining and Reclamation Project Environmental Impact Report (EIR)

Dear Ms. Cormier

I am a resident of Wild Wings, and I am requesting that the Planning Commission carefully study the impacts and mitigation responses of several items in the EIR for the proposed Teichert Shifler mining and reclamation project as it relates to our community:

1. Water use and quality – Currently Wild Wings utilizes one of two wells in the development. The second well can only be used only for certain purposes and as backup due to the water quality exceeding the State of California levels for arsenic. As I understand it, Teichert will be tying into the same aquifer that serves Wild Wings. California has and continues to experience abnormally dry seasons; the last few years the Wild Wings community was asked to conserve water during summer months when our Pintail well was at critical low levels. The Commission should be certain that the water usage proposed by Teichert does not impact water quality or compete for water use with Wild Wings, its neighboring communities and current agriculture use.
2. Traffic – The Teichert Shifler project is proposed to double the Woodland plant operation. The proposal is to continue to use existing transportation routes CR 20, CR 96, and SR 16. My observation in the past two years is that traffic along SR 16 has increased, perhaps given its convenience as an alternate to using I-80 between Sacramento and the Bay Area and as a throughway to the Cache Creek casino. I have witnessed a number of near miss accidents between CA 98 and I-505 when vehicles turn onto and off of SR 16; there are no traffic lights and few turnouts. I am concerned that doubling the amount of mining operations traffic will increase the likelihood of additional accidents on SR 16 and the nearby county roads especially during the fall and winter non-daylight hours. I am also concerned that additional heavy equipment could compromise the structural integrity of smaller and narrower county roads creating potholes and other damage that can lead to additional difficult driving conditions.
3. Air Quality – I understand that Teichert plans to begin mining operations on the west side of the property which is the nearest location to Wild Wings. Due to its close proximity, there is a concern that the operation will have an impact on the air quality of the neighborhood from additional dust and debris from the mining activities as well as emissions from the additional mining equipment required for its increased operations.

4. Noise – Similarly, due to the planned operation to begin nearest to the Wild Wings community, noise is of concern especially when operations are allowed to exceed the regular schedule.

Also, I would ask that the Commission reconsider the response to the initial study that indicates the project's operations will have no impact on schools in the area. While they may not meet the exact criteria, I believe it was stated at the September 12th meeting that West Valley Baptist Church runs a school. Also the Yolo Fliers Club has swimming and golf lessons, and other activities for children throughout the summer that may be impacted, at least initially, based on the close proximity to the proposed operations.

I appreciate the Committee's attention to the impacts this project may have on our community and our neighbors, and I ask that I please be included on email updates for the project.

Sincerely,

Cynthia Johe
33250 Pintail Street
Woodland, CA

From: Paul Sinor [mailto:sinorsalons@aol.com]
Sent: Monday, September 16, 2019 4:53 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Mining project

10/15/19

Stephanie Cormier,

This letter is for my concern of the Teichert Shifler project. I am a resident in the Wild Wings community. I have concerns for the quality of our water in our wells. We have two wells in Wild Wings and currently can only use one because of the high levels of arsenic. Teichert is planning on digging 10'+ deeper than the current water table. I worry about the water in our water table being contaminated during the mining process. I'm concerned with Teichert taking the rock from our soil that is used to filter the surface water and rainwater down to the water table and to the aquifers. I feel if Teichert wants to dig anymore in this area the County should mandate that they run a water pipe line from the city of Woodland out to all the residents in this area.

I also have a concern for the amount of gravel trucks that will be traveling Highway 16. At this current time there is a lot of traffic with the trucks. I was told that the amount of trucks will double. As of now it is hard to get out of Wild Wings on to highway 16 because of all the traffic. A signal light may have to be placed on Highway 16 at Wild Wings Drive for the amount of added traffic. I feel the traffic on Highway 16 is dangerous as it is. Maybe Teichert should be required to add two more lanes to Highway 16 between I-505 and Woodland.

Thank you for your time,

Paul Sinor

From: Ryan Hall [mailto:hall.ryan_william@gene.com]
Sent: Monday, September 16, 2019 4:28 PM
To: Stephanie Cormier <https://urldefense.proofpoint.com/v2/url?u=http-3A__Stephanie.Cormier-40yolocounty.org&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=kdtPCKeqKIngwAPH6qvp5f_ExA_ifBGx-p-DA3WNK-M&m=PPrE7YFuqr7gD-x6wRqpkRquG9r3_xxQxNiOrZCw_JE&s=G8V7l7Y8CweJrydFlZFf0XVRZlB6WwJMaX4l9mfd8P4&e=>
Subject: Teichert Mining Proposal in Woodland CA.

Hello,
I live in the Wild Wings Housing Development which is off Highway 16 in Woodland and I am deeply concerned with the detrimental impact that Teichert's mining proposal presents to the immediate and surrounding area. Many things would be adversely affected including the traffic, outdoor recreation, school safety, solitude at the cemetery, property values, and the overall quality of life for the hundreds if not thousands of nearby residents. Please place me on the notification list for future communications from the County - Planning Commission meetings, hearings or community work shops.
Regards,
Ryan Hall

Sent from my iPhone

From: Ser Gio [mailto:sgio2014@yahoo.com]
Sent: Monday, September 16, 2019 6:41 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject:

Dear Stephanie,

In regards to the Teichert project, I want to add that due to the concerns for the quality of water, I would request that Teichert state in writing that the water quality of the residents around the mining will not be affected. That they also guarantee that the amount of water will not be affected. I understand that they have studies of wells in the area, therefore if they feel so sure of their information, I am requesting that they put it in writing to every resident guaranteeing that there will not be any affect on our water. And that they be held responsible if this turns out not to be true.

I forgot to mention in my first email that the housing value is definitely affected by Teichert's mining, the noise, and the gravel trucks. There are also some houses in the area that have struggled to get sold, they get taken off the market, only to be up for sale months later. Due to this trick it may seem that a house sold sooner rather than knowing how long it really took. The individuals who buy these houses eventually, do so, not truly realizing the substantial traffic and noise from the mining.

Sincerely,

Monique Marin

From: Rick and Janet Sitts [mailto:jrsitts@gmail.com]
Sent: Monday, September 16, 2019 8:14 PM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Teichert Shifler Mining Project Concerns

Ms. Cormier,

I live in the nearby Wild Wings area. I have several environmental concerns that were identified for further analysis in the EIR in the Teichert Shifler Mining Project Initial Study. I hope they are addressed in the EIR for this project.

I also have a concern is the climate change impact of converting ag land to a huge pond. Will this pond capture or increase emissions of greenhouse gases relative to the area being reclaimed as ag land?

Rick Sitts

To; Yolo County Board of Supervisors.

Re; TEICHERT SHIFLER MINING AND RECLAMATION PROJECT

Dear Board Members;

As you know; The Teichert Company is a multifaceted multi-million dollar company that has been in business for many years all over California. They give employment and grants and have many large-scale, long-term mining projects currently active. Some with a project scale of 100 years.
See Below;
https://www.teichert.com/materials/teichert-aggregates/
https://www.teichert.com/locations/

Teichert desires this property due to the proximity to their processing plant. Transporting the Aggregate is a costly aspect of production. Therefore, granting them the rights to mine this site would allow them to reap a considerably higher margin of profit.

While this project offers the potential for many jobs, coupled with a huge tax boon for the county, one must ask; At what cost? This proposed project will impact everything that draws residents to this quiet, rural, farming, and family community; putting public health, well-being and natural resources at risk.

What does this mean for the residents in" The line of fire?"
1}Peace and Quiet? There will be none! Mining requires the extensive use of Explosives. The current proposal is for; 6 days a week from 6 am to 7 pm.. with the allowance to continue up to 10 pm at night in case of emergency. What type of emergency could need such late hours? Not meeting a quota, perhaps? Employees/Trucks/Supplies etc will be driving in as early as 4-5 am. and leaving as late as 8 pm to midnight. Equipment will be started up as early to warm it up. Mining requires the use of explosives, as well as loud heavy equipment operating. All of which will create loud-concussive vibrations which will cause chronic disruption to all of the families and residents that live in close proximity.

See attached;
https://www.yolocounty.org/home/showdocument?id=20481
https://www.yolocounty.org/home/showdocument?id=4495

Water Impact;

The largest and most potentially damaging effect will be on the watershed. Aggregate mining requires millions of gallons of water to mitigate and suppress dust and particulates generated which can have an extremely deleterious impact on the aquifer upon which most residents and businesses in the county rely. It is our duty {and yours as elected officials} to protect our aquifers for future generations.
i.e.4-person single house dwelling: 146,003-200,000 gallons/year
vs.. 1 800 ton-per-hour crusher*: 280,320,000 gallons/year
*This water usage estimate excludes water necessary to suppress dust on conveyor belts, stock piles, internal quarry roads, trucks, etc.

2nd}Air-Quality.
I suffer from Asthma as do many people.
Many families have someone who is extremely sensitive to dust/pollen and other particulates in the air…Limestone quarrying, crushing, and cement manufacturing creates air pollution such as particulate matter. The process of crushing and processing of this material releases particulate matter called, "Crystalline Silica", which can cause silicosis and other health risks.

3: Property values;
Statistics show that Property values decrease. on average of 20% or more in property valuation, within a 1-mile radius extending to a 5-mile radius and an a15%-18% in sale price.

4} Traffic; the ingress and egress to the proposed site is problematic and will create serious traffic congestion, and will add to the noise and exhaust levels the local residents will have to contend with. We already have many semis transporting Tomatoes and other crops in the summer season. The roads are simply not designed or built to sustain a large-scale mining project.

The Proposed project represents 30 years of significant disruption to the residents of this community.
I ask you to consider this;
Would any of you choose to live or raise your families next-door to a large Aggregate mine? How about directly across the street or downwind? Additionally; Who among you would choose to buy a home or property next to a project of this scope? A number of families live almost across the street from it. The Wildwings community of 329 homes is less 1/2 mile from the proposed site.

In closing;
To put an industrial mining business's interests before private home and property owner's property rights, health, wellness, and enjoyment of property, and to allow such a company to prevail is unacceptable and simply wrong.

I am including an article on a study done by the Minnesota Department of Natural Resources, Division of Waters for the Legislative Commission on Minnesota Resources. It documents the effects on aquifers and watersheds of 8 Aggregate Gravel Mining pits in Minnesota. It's definitely worth the read.
https://files.dnr.state.mn.us/publications/waters/hdraulic-impacts-of-quarries.pdf

Thank you for your time and thoughtful consideration of the concerns I have brought to your attention.

Sincerely,
Ruth Schreiber
Wildwings.

From: Laura Smyth [mailto:Laura.Smyth@managementtrust.com]
Sent: Wednesday, September 18, 2019 10:25 AM
To: Stephanie Cormier <Stephanie.Cormier@yolocounty.org>
Subject: Wild Wings HOA // Teichert Mining

Good Morning Ms. Cormier,

The on behalf of the Wild Wings HOA Board of Directors, I wanted to take a moment to present you with a brief list of concerns about the proposed Teichert mining project.

The Association holds 337 separate special interests, and the Board has received feedback and concerns regarding the following:

- Traffic impacts and lack of signals in the area.
- Noise. Including extended hours of operation and neighborhood quite times.
- Airborne dust/debris/containments.
- Impact to property values.
- Water contamination and ground water supplies.

Please let me know if there is a schedule of meeting/hearing dates where the Board can provide additional feedback.

Laura Smyth | Community Association Manager
Champion Employee Owner

PO BOX 1459 • Folsom, California 95763
P: (916) 985-3633 x5144 **| F:** (916) 256-4326

HOW DID WE DO?
My goal as an employee-owner is to create a wonderful customer experience. Please let me know how I am doing by taking this brief survey.
If I exceeded your expectations, or you have other feedback about your experience, please let my supervisor ***Andrea Dunifon*** *know at* ***(916) 985-3633 x5150*** *or by email at* ***andrea.dunifon@managementtrust.com***

From: Paul Crist
To: Stephanie Cormier
Subject: FW: Shifler Mining Project
Date: Thursday, September 19, 2019 7:55:18 AM

Stephanie
I live at 34771 County Road 22. Our coalition of neighbors has asked me to forward the below comments

Thank You

Paul Crist, President
Crist Group Inc.
1324 East Beamer St
Woodland, CA 95776
530-661-0700 Phone
530-661-0707 Fax
pcrist@cristgroup.com

WE'VE MOVED!! PLEASE UPDATE ALL OF YOUR RECORDS WITH OUR NEW ADDRESS AS SOON AS POSSIBLE.*
1324 EAST BEAMER STREET
WOODLAND, CA 95776

From: Pam VanBrocklin [mailto:pvanbroc@yolo.net]
Sent: Wednesday, September 18, 2019 9:34 AM
To: Paul Crist
Subject: Re: Shifler Mining Project

Hope you sent these to Stephanie at the county.

On 9/10/2019 4:28 PM, Paul Crist wrote:

> Hi All
>
> My largest customer is showing up for a quality audit Thursday at 8:00AM (how fun NOT!). Needless to say, I won't be a the chamber meeting. Here are some questions or concerns I have come up with so far. I will try to amend the list tomorrow (time allowing). I have been through approximately half of the 60 page Initial Study Report.
>
> 1) If they can relocate Moore canal. Why can't they cut a new ingress/egress gravel road through Phase B 179 acres directly from the process plant out to Hwy 16?. This would eliminate the noise and danger of trucks running on Road 20 & 96 & 94B past residential housing. The folks on road 20 & 96 particularly, have suffered enough over all these years. This gets Teichert a more direct route to and from the plant and relief to our neighbors.

2) On page 10 they discuss proposed digging depths in different quadrants of the project. The deepest is "approximately 70-feet". Our well is typically at 90 feet and I think others said theirs was about the same. ON page 13 second paragraph it states "Aggregate mined below the water table…." My understanding was they were not going to impact our water table? Is that correct?
3) Page 5 talks about history in section F. "Currently, the Teichert Woodland, Esparto and Schwarzgruber operations are permitted to mine a combined annual maximum of 2.6 million tons of aggregate..." They are completing mining ops and reclamation ops and transferring total combined tonnage to Shifler. On page 10 it states a maximum of 2.6 million tons per year. So they say they are not doubling output but only replacing exhausted inventory. If that's the case why do they need (page 13) double the employees??
4) Page 5 section E calls for Teichert to adhere to OCMP/OCSMO which requires monitoring wells. Will we have free access to those reports?? Establish financial assurances… What level of finances and in what type of instrument an escrow? an insurance policy? Who is responsible for finding Teichert in violation and accessing those resources to correct the condition?

In summary, I think pushing hard to get them to provide a new access road benefits the most people impacted. I believe the grass berms (rolling hills) at 40 feet or less will be similar to the ones we see currently on road 22. Also the site perimeter and setbacks would minimize the impact on road 22. Yes, I would rather they go north and not impact us, at all. But I don't think that's going to happen!

I'll try to add more questions/ comments tomorrow.

Paul Crist, President

Crist Group Inc.

1324 East Beamer St
Woodland, CA 95776
530-661-0700 Phone
530-661-0707 Fax
pcrist@cristgroup.com

WE'VE MOVED!! PLEASE UPDATE ALL OF YOUR RECORDS WITH OUR NEW ADDRESS AS SOON AS POSSIBLE.*
1324 EAST BEAMER STREET
WOODLAND, CA 95776

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Gavin Newsom
Governor

Kate Gordon
Director

Notice of Preparation

August 16, 2019

To: Reviewing Agencies

Re: Teichert Shifter Mining and Reclamation Project
SCH# 2019089053

Attached for your review and comment is the Notice of Preparation (NOP) for the Teichert Shifter Mining and Reclamation Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

STEPHANIE CORMIER
Yolo County
292 W. Beamer St.
Woodland, CA 95695

with a copy to the State Clearinghouse in the Office of Planning and Research at state.clearinghouse@opr.ca.gov . Please refer to the SCH number noted above in all correspondence concerning this project on our website: https://ceqanet.opr.ca.gov/2019089053/2.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Notice of Completion & Environmental Document Transmittal

2019089053

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # _____

Project Title: Teichert Shifler Mining and Reclamation Project

Lead Agency: County of Yolo Department of Community Services
Contact Person: Stephanie Cormier, Principal Planner
Street Address: 292 W. Beamer Street
Phone: (530) 666-8041
City: Woodland Zip: 95695
County: Yolo

Project Location: County: Yolo
City/Nearest Community: Woodland
Cross Streets: Northeast of County Road 94B/County Road 22
Zip Code: 95695
Lat./Long/: 38 ° 40 ' 44.15 " N / 121 ° 51 ' 52.72 " W
Total Acres: 319
Assessor's Parcel No.: 025-120-032 and -033; 025-430-001 and -002
Section: 28 Twp: 10N Range: 1E Base: MDBM
Within 2 miles: State Hwy#: State Route 16
Waterways: Cache Creek; Magnolia Canal; Moore Canal
Airports: Watts-Woodland Airport
Railways: None
Schools: None

Governor's Office of Planning & Research
AFTER 12 PM
AUG 15 2019
STATE CLEARINGHOUSE

Document Type:

CEQA: ☒ NOP ☐ Draft EIR ☐ Early Cons ☐ Supplement/Subsequent EIR ☐ Neg Dec (Prior SCH No.) _____ ☐ Mit Neg Dec ☐ Other: _____

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other: _____

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☒ Rezone ☐ Annexation
☒ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☒ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other: Reclamation Plan; Development Agreement

Development Type:

☐ Residential: *Units* _____ *Acres* _____
☐ Office: *Sq.ft.* _____ *Acres* _____ *Employees* _____
☐ Commercial: *Sq.ft.* _____ *Acres* _____ *Employees* _____
☐ Industrial: *Sq.ft.* _____ *Acres* _____ *Employees* _____
☐ Educational _____
☐ Recreational _____

☐ Water Facilities: *Type* _____ *MGD* _____
☐ Transportation: *Type* _____
☒ Mining: *Mineral* Aggregate
☐ Power: *Type* _____ *MW* _____
☐ Waste Treatment: *Type* _____ *MGD* _____
☐ Hazardous Waste: *Type* _____
☒ Other: Canal Relocation

Project Issues That May Have A Significant Or Potentially Significant Impact:

☒ Aesthetic/Visual ☐ Fiscal ☒ Public Services/Facilities ☒ Traffic/Circulation
☒ Agricultural Land/Forest ☒ Flood Plain/Flooding ☒ Recreation/Parks ☒ Vegetation
☒ Air Quality ☐ Forest Land/Fire Hazard ☐ Schools/Universities ☒ Water Quality
☒ Archeological/Historical ☒ Geologic/Seismic ☐ Septic Systems ☒ Water Supply/Groundwater
☒ Biological Resources ☒ Greenhouse Gas Emissions ☐ Sewer Capacity ☒ Wetland/Riparian
☐ Coastal Zone ☒ Minerals ☒ Soil Erosion/Compaction/Grading ☒ Growth Inducement
☒ Drainage/Absorption ☒ Noise ☐ Solid Waste ☒ Land Use
☐ Economic/Jobs ☐ Population/Housing Balance ☒ Toxic/Hazardous ☒ Cumulative Effects
☒ Other: Energy

Present Land Use/Zoning/General Plan Designation: The central and southern portions of the site are actively managed for agricultural use. The project site is designated Agriculture (AG) and zoned Agriculture Intensive (A-N), while a portion of the site is covered by the General Plan Mineral Resource Overlay (MRO) designation.

Project Description: The proposed project is mining 41.6 million tons (35.25 million tons sold) of aggregate resources (sand and gravel) over a requested 30-year period at an annual rate not to exceed 2.6 million tons mined per year (2.2 million tons sold). Mining is proposed in two phases. Reclamation is proposed in three phases to reclaim 116 acres of agricultural uses and provide 161 acres of pond and habitat uses. Relocation of the Moore Canal to the northerly portion of the project site is proposed. The project would also require a General Plan Amendment to extend the Mineral Resource Overlay over the entire project site and a rezone to add a Sand and Gravel Overlay (SG-O) to the existing A-N zoning.

NOP Distribution List

County: Yolo SCH# 2019089053

Resources Agency

Resources Agency
Nadell Gayou

- ☐ **Dept. of Boating & Waterways**
  Denise Peterson
- ☐ **California Coastal Commission**
  Allyson Hitt
- ☐ **Colorado River Board**
  Elsa Contreras
- ■ **Dept. of Conservation**
  Crina Chan
- ■ **Cal Fire**
  Dan Foster
- ■ **Central Valley Flood Protection Board**
  James Herota
- ■ **Office of Historic Preservation**
  Ron Parsons

Dept. of Parks & Recreation
Environmental Stewardship Section

- ☐ **S.F. Bay Conservation & Dev't. Comm.**
  Steve Goldbeck
- ☐ **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Wildlife

- ☐ **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- ☐ **Fish & Wildlife Region 1**
  Curt Babcock
- ☐ **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- ■ **Fish & Wildlife Region 2**
  Jeff Drongesen
- ☐ **Fish & Wildlife Region 3**
  Craig Weightman
- ☐ **Fish & Wildlife Region 4**
  Julie Vance
- ☐ **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- ☐ **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- ☐ **Fish & Wildlife Region 6 I/M**
  Heidi Calvert
  Inyo/Mono, Habitat Conservation Program
- ☐ **Dept. of Fish & Wildlife M**
  William Paznokas
  Marine Region

Other Departments

- ☐ **California Department of Education**
  Lesley Taylor
- ■ **OES (Office of Emergency Services)**
  Monique Wilber
- ☐ **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- ☐ **Dept. of General Services**
  Cathy Buck
  Environmental Services Section
- ☐ **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- ☐ **Delta Protection Commission**
  Erik Vink
- ☐ **Delta Stewardship Council**
  Anthony Navasero
- ☐ **California Energy Commission**
  Eric Knight
- ■ **Native American Heritage Comm.**
  Debbie Treadway
- ☐ **Public Utilities Commission**
  Supervisor
- ☐ **Santa Monica Bay Restoration**
  Guangyu Wang
- ☐ **State Lands Commission**
  Jennifer Deleong
- ☐ **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- ■ **Caltrans - Division of Aeronautics**
  Philip Crimmins
- ☐ **Caltrans – Planning HQ LD-IGR**
  Christian Bushong
- ■ **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- ☐ **Caltrans, District 1**
  Rex Jackman
- ☐ **Caltrans, District 2**
  Marcelino Gonzalez
- ■ **Caltrans, District 3**
  Susan Zanchi
- ☐ **Caltrans, District 4**
  Patricia Maurice
- ☐ **Caltrans, District 5**
  Larry Newland
- ☐ **Caltrans, District 6**
  Michael Navarro
- ☐ **Caltrans, District 7**
  Dianna Watson
- ☐ **Caltrans, District 8**
  Mark Roberts
- ☐ **Caltrans, District 9**
  Gayle Rosander
- ☐ **Caltrans, District 10**
  Tom Dumas
- ☐ **Caltrans, District 11**
  Jacob Armstrong
- ☐ **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- ☐ **Airport & Freight**
  Jack Wursten
  - ☐ **Transportation Projects**
    Nesamani Kalandiyur
  - ☐ **Industrial/Energy Projects**
    Mike Tollstrup
- ☐ **California Department of Resources, Recycling & Recovery**
  Kevin Taylor/Jeff Esquivel
- ☐ **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- ☐ **State Water Resources Control Board**
  Cindy Forbes – Asst Deputy
  Division of Drinking Water
- ☐ **State Water Resources Control Board**
  Div. Drinking Water #_____
- ☐ **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- ■ **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- ☐ **Dept. of Toxic Substances Control Reg. #_____**
  CEQA Tracking Center
- ☐ **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- ☐ **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- ☐ **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- ☐ **RWQCB 3**
  Central Coast Region (3)
- ☐ **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- ■ **RWQCB 5S**
  Central Valley Region (5)
  - ☐ **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - ☐ **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- ☐ **RWQCB 6**
  Lahontan Region (6)
  - ☐ **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- ☐ **RWQCB 7**
  Colorado River Basin Region (7)
- ☐ **RWQCB 8**
  Santa Ana Region (8)
- ☐ **RWQCB 9**
  San Diego Region (9)

- ☐ **Other** _____
  _____
  _____
- ☐ _____
  Conservancy

Last Updated 5/22/18

NOP Comment Letter 2
Page 1 of 1

SHIFLER

Mining and Reclamation Plan

Yolo County, California

Prepared For:

County of Yolo
Planning and Public Works Department
292 West Beamer Street
Woodland, CA 95695-2598

Prepared By:

Teichert Materials
Contact: Barry Baba
(916) 480-5505
bbaba@teichert.com

Date:

June 2018

TEICHERT

TEICHERT AGGREGATES

Shifler
Mining and Reclamation Plan
Yolo County, California

SUMMARY

Teichert Materials (Teichert) proposes to mine a portion of the Shifler Property for sand and gravel resources in order to continue supplying aggregate materials to the existing Teichert Woodland Plant processing facility ('Project'). The Shifler Property, located southwest of the Woodland Plant in Yolo County, is privately-owned and farmed for row and field crops, such as tomatoes, safflower, and wheat. In order to return the land to beneficial use, a reclamation plan has been prepared for the proposed mining project. This document presents Teichert's Reclamation Plan (Plan) for the Shifler Property, prepared pursuant to the State Surface Mining and Reclamation Act (SMARA) of 1975 and associated regulations (updated January 2012) and the Yolo County Cache Creek Area Plan (CCAP), which includes the Off-Channel Surface Mining Ordinance (OCSMO), Title 10 (Chapters 5 and 8) of the County Code Surface Mining Reclamation Ordinance (SMRO) and Agricultural Surface Mining and Reclamation Ordinance (ASMRO), and the Yolo County Off-Channel Mining Plan (OCMP). SMARA policies were prepared in accordance with the Administrative Procedures Act, (Government Code) and are found in California Code of Regulations (CCR), Title 14, Division 2, Chapter 8, Subchapter 1. This document consists of text and graphic descriptions of the mine plan and procedures necessary for the final reclamation of the Shifler Property, which is expected to be in operation for 30-50 years following the commencement of mining.

In preparation of this document, information was collected from onsite field surveys, visits to nearby reclamation areas, and from Teichert's previous reclamation projects. The Reclamation Plan embraces the Legislative intent that mined land is returned to a valid, quantifiable, and desirable post-mining use. Reclamation of the Shifler Property will include the restoration of approximately 116 acres of agriculture. The remainder of the site will be reclaimed to a combination of open space and wildlife habitat. The primary goal of the reclamation effort is to restore the agricultural use of the land, as well as provide quality wildlife habitat in proximity to the Cache Creek corridor.

This Reclamation Plan has been divided into nine general sections by discipline:

1) Mine Operation and Closure
2) End Land Use
3) Geotechnical Requirements
4) Hydrology and Water Quality
5) Environmental Setting and Protection of Fish and Wildlife Habitat

6) Revegetation, Resoiling and General Reclamation Requirements

7) Agricultural Soils Evaluation and Reclamation Plan

8) Open Space Habitat Revegetation and Establishment

9) Open Space Habitat Monitoring and Performance Standards

10) Administrative Requirements

CONTENTS

Shifler Mining and Reclamation Plan

Yolo County, California

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1 MINE OPERATION AND CLOSURE

Aggregate material (sand and gravel) mined at the Shifler Project Site ('Project Site') will be processed at Teichert's existing Woodland Plant, located adjacent to and north/northeast of the Project Site (Figure 1). The Woodland Plant is currently regulated by conditional use permit (CUP ZF #2011-0035) and development agreement (DA #12-152) for the nearby Schwarzgruber Property. These entitlements require that the Woodland Plant cease operation upon expiration of permits on 01 January 2028, unless additional mining sites, such as the Project Site, are permitted to continue supplying the Woodland Plant. The Project includes a request for a mining permit, reclamation plan, and development agreement for the Project Site. If the Project were approved, the Woodland Plant would then be regulated by the terms of the mining permit requested for the Project Site once mining on the Schwarzgruber site has been completed.

The mining process proposed for the Project will be the same as currently employed by Teichert at the Schwarzgruber mining site. Teichert proposes to mine/disturb approximately 277.1 acres of the 319.3-acre Project Site (Figure 2). In addition to mining, Teichert proposes to relocate and improve the Moore Canal, which currently traverses the Shifler Property. Following canal relocation, mining will begin at the northwestern portion of the site and proceed eastward, in two proposed phases. Mining requires overburden (i.e., materials overlying sand and gravel) to be removed using scrapers, motor graders and bull dozers. Salvaged soils will be progressively removed ahead of mining and stockpiled in setback areas, berms, and internal storage locations until retrieved for reclamation. Aggregate located above the groundwater level will be harvested by scrapers and dozers, while that mined below the water table will be extracted by a combination of equipment such as excavators and draglines. An electric-powered conveyor will be used to transport mined aggregate from the Project Site to the Woodland Plant. Mining and processing details of the Project are provided in the mine plan drawings prepared by Cunningham Engineering (2016). Additional details of the mine preparation, operation, and final reclamation are presented in subsequent sections of this document.

1.1 Name and Address of Operator – *SMARA 2772(c)(1)*

Operator Name:	A. Teichert & Son, Inc. (Teichert Materials)
Operator Physical Address:	Woodland Plant 35030 County Road 20 Woodland, CA 95695
Operator Mailing Address:	3500 American River Drive Sacramento, CA 95864

1.2 Type and Quantity of Materials to be Mined – *SMARA 2772(c)(2)*

Approximately 23.5 million cubic yards of Portland Cement Concrete (PCC) grade aggregate (sand and gravel) material will be removed from the site.

1.3 Initiation and Termination Dates – *SMARA 2772(c)(3)*

Mining is anticipated to commence as early as January 2020 and will continue for up to 30 years from the commencement of mining. The Shifler Mining Project will have an estimated termination date of 31 January 2050, depending on actual start date and market conditions.

1.4 Maximum Anticipated Depth of Mining – *SMARA 2772(c)(4)*

The maximum anticipated depth of mining is approximately 110 feet below existing grade, in the north-central section of the site. Final elevations are anticipated to range from approximately 5 feet below mean sea level (MSL) at the reclaimed pond bottom, to 80 feet above MSL in the northwestern portion of the reclaimed agricultural fields.

1.5 Project Site Description – *SMARA 2772(c)(5)*

The Project is located approximately 3 miles west of the City of Woodland, in unincorporated Yolo County and consists of seven parcels, four of which are owned by the Shifler Family Trust (Assessor Parcel Numbers [APNs] 025-120-032, 025-120-033, 025-430-001, and 025-430-002) and three that are owned by the Yolo County Flood Control and Water Conservation District (YCFCWCD) (APNs 025-430-009, 025-120-010, and 025-120-011) totaling approximately 319 acres (Figure 2). The Project is located within a portion of Sections 27 and 28, Township 10 North, and Range 1 East (MDBM) of the "Woodland, California" 7.5-minute quadrangle. Current surface elevations on the Project Site range from approximately 98 to 112 feet above mean sea level (MSL).

The vast majority of the site is in agricultural production and is classified as prime agricultural land. A concrete-lined canal (Moore Canal) traverses the Project Site from west to east, and an unlined canal (Magnolia Canal) conveys water northeast from the Moore Canal (Figure 2). Both canals are owned and operated by the Yolo County Flood Control and Water Conservation District (YCFCWCD). The Project is generally bounded by County Road 94B to the west, Cache Creek to the north, and County Road 22 to the south.

Surrounding land uses include Teichert's Woodland Plant site to the northeast; agricultural land to the east; the Monument Hill Memorial Park cemetery and rural residential uses to the south; the Yolo Fliers Club golf course, Watts-Woodland Airport, and Monument Hills community to the southwest; and Teichert's existing Storz mining site and the Cache Creek Nature Preserve to the northwest. Access to the site is available from paved County Road 94B.

1.6 Mine Plan and Phasing – *SMARA 2772(c)(6); SMRO §10-5.522; ASMRO §10-8.422*

A timetable of 30 years is proposed to complete mining in two phases (Figure 3). The phasing plan has been structured to minimize the area of disturbed agricultural lands during each mining phase, and to encourage the timely completion of the reclamation of agricultural land.

1.7 Public Health and Safety – CCR 3502(b)(2), CCR 3713(b); ASMRO §10-8.427

All equipment associated with mining of aggregate material at the Shifler Project Site will be stored in a designated area, and then removed from the Site upon completion of all mining and reclamation activities. During operations, the site shall be kept free of debris and maintained in a neat and orderly manner so as not to create any hazardous or unsightly conditions.

At the completion of operations, appropriate measures will be taken to return the Site to a safe condition that is free of all material and equipment associated with aggregate mining. Applicable portals, shafts, tunnels, or openings will be gated or protected from public entry, but in such a way as to preserve access for wildlife. Drill holes and water wells will be completed or abandoned in accordance with laws. Structures and equipment will be dismantled and removed, and any waste produced through mining activities will be disposed of off-site according to all state and local health and safety ordinances.

1.7.1 Fencing – *SMRO §10-5.510*

Fencing may enclose the property of which mining is a part, the mining site, or both. In addition, signs shall be installed along fence lines and access roads, indicating that the excavation area is restricted. Additional security (e.g. gates with protected locks and wing fences to prevent drive-arounds) shall be provided at all vehicular routes. All fencing and gates shall be maintained throughout the mining and reclamation period.

2 END LAND USE – SMARA 2772(C)(7), SMARA 2772(C)(8)

The proposed end use for the Shifler Project Site is agriculture (± 116.7 acres) and open space/wildlife habitat (± 158.1 acres) (Figure 4). The reclaimed habitat areas include grassland, pond, upper riparian woodland, and lower riparian woodland communities. Reclamation of the site will occur concurrently with and following the cessation of mining operations.

Reclamation has been separated into three primary phases (Figure 4). Final reclamation will be characterized by one large pond with associated shoreline habitat, bounded to the east and west by two agricultural fields and perimeter grassland slopes. Reclamation may also include permanent access roads as needed for agricultural use of the site. Table 1 below summarizes the quantity and types of reclamation features to be created.

TABLE 1. SHIFLER MINING PROJECT – PROPOSED RECLAMATION FEATURES

Reclamation Feature	Acres
Agriculture	± 116.7
Grassland Slopes	± 21.3
Pond	± 112.9
Lower Riparian Woodland	± 13.0
Upper Riparian Woodland	± 10.9
Access Road	± 2.3
Total Reclaimed	**277.1**

The particular timing for the completion of Project Site preparation and reclamation may vary depending on market conditions, quality of mineable materials and ultimate mining depth, acquisition and coordination with additional mineable areas, and availability of salvaged material and processed fines as backfill.

3 GEOTECHNICAL REQUIREMENTS

3.1 Bank Stabilization Maintenance – *SMRO §10-5.506*

The proposed mining falls within 700 feet of the active channel of Cache Creek. The condition of flood protection structures and the integrity of the land within the approved setback zone separating the mining areas and the creek channel shall be inspected annually by a Registered Civil Engineer and reported to the Yolo County Community Development Agency (YCCDA). An annual report shall be prepared each year and include any recommendations for remedial action for identified erosion problems. All maintenance of bank stabilization features during the mining and reclamation period will be the responsibility of the mining operator.

3.2 Final Slopes - *CCR 3704(d); CCR 3704(e); SMRO §10-5.530 and §10-5.502; ASMRO §10-8.428*

A slope stability analysis was prepared for the Project in 2014 by Geocon Consultants (Geocon 2014). In order to provide for safety and to conform to surrounding topography, all final reclamation fill slopes will not exceed 2:1 (horizontal [H]: vertical [V]). Those slopes within 50 feet of the Moore Canal will be graded to no steeper than 3:1. Rounded edges and benches will be created in order to mimic natural landforms of the neighboring Cache Creek channel.

3.3 Disposition of Fill Materials - *CCR 3502(b)(4), CCR 3704(b)*

The Project Site contains soils at depths of 5 to 10+ feet, which will be stockpiled for future replacement on slopes and as salvaged soil for agricultural reclamation (Figure 3). Results of laboratory analysis indicate that there was generally no significant differentiation between 'topsoil' and 'subsoil' (upper and lower soil horizons) for the purposes of agricultural reclamation, and therefore may be mixed and stockpiled as one salvageable stockpile (EcoAnalysts 2017). As mining depth increases, some interbedded clays may be present as additional overburden material, which in these instances shall be stockpiled separately and used only in reclamation as a substrate material at least 5 feet below the final reclamation surface.

At the commencement of mining operations, reclamation soils will be first placed within the 50 foot-wide property setbacks surrounding the mine perimeter in the form of Mine Safety and Health Administration (MSHA) and noise buffer berms. These berms will be constructed in accordance with MSHA and County requirements and be seeded to prevent erosion, and will remain in place until all mining is complete. Remaining soils will be placed in one or more stockpile(s), each no greater than 40 feet in height and with side slopes of at least 2:1 (H:V) and seeded to prevent erosion, in accordance with OCSMO §10-4.433. Stockpiled soils will likely shift as mining and reclamation proceed from one area to the next. Thus, soil stockpiles may be placed within the Project boundary during the course of operations in previously-mined areas, the locations of which may change according to field conditions. A map illustrating the locations of all stockpiles to be used for final reclamation shall be prepared prior to

mining and updated as stockpiles are relocated. Signs shall also be place at these locations indicating salvaged stockpile soils to be used for final reclamation.

In order to build back to at least 5 feet above the average high groundwater level in proposed agricultural reclamation areas, waste fines generated from the Woodland Plant may be pumped in slurry form onto the pit floor as substrate material. These waste fines may also be used to create peninsulas and other shoreline habitats surrounding the perimeter of the lake. Only suitable soils salvaged from stockpiles will be used as a final layer on top of any fines or overburden used for agricultural, slope, or habitat reclamation.

For a detailed description of soil removal, handling procedures, and placement refer to Sections 6 (Resoiling and General Reclamation Requirements) and 7 (Agricultural Soils Evaluation and Reclamation Plan) of this document.

4 SOILS, HYDROLOGY AND WATER QUALITY

The Natural Resources Conservation Service (NRCS) has mapped 5 soil units on the site (Figure 5). The most predominant soil component is mapped as Yolo Series, a fine silty series of Mollic Xerofluvents (NRCS 2015), which is distributed across approximately 94.5% of the Project Site, and classified as prime farmland by the NRCS if irrigated. After Yolo Silt Loam, Loamy Alluvial Land, which is classified as non-prime farmland, comprises 4.3% of the property. Other soil types, each comprising less than 1% of the property, include Brentwood Silty Clay Loam, 0 to 2 percent slopes; Sehorn-Balcom Complex, 2 to 15 percent slopes; and Sehorn-Balcom Complex, 30 to 50 percent slopes eroded.

Wetland features identified and mapped within the Project Site include seasonal marsh, seasonal wetland, drainage ditch, irrigation canal, and pond (ECORP 2012) (Figure 6). The hydrologic regime of the Project Site is dominated by summer irrigation (May through October) and seasonal precipitation (primarily between November and March). Annual average precipitation is 16-20 inches. Summer irrigation is supplied by the Moore Canal, which traverses the site. The amount of water applied to the site during the growing season depends upon the crop: tomatoes and cucumbers, which are planted in the two fields south of the canal and receive supplemental drip irrigation, are supplied approximately 2.0-2.5 acre feet of water; for sunflowers and canola, approximately 1.5 acre feet of water are applied; and for winter wheat, which is typically planted in the field north of the canal, no supplemental irrigation is applied. Much of the agricultural and stormwater surface runoff from the Shifler Property appears to drain into Cache Creek via roadside ditches situated throughout the site.

The northernmost portion of the Project Site is bordered by Cache Creek. All of the proposed mining area would be off-channel and located a minimum of 200 feet from the creek bank. Section 10-4.429(d) of the Yolo County OCSMO requires a minimum setback of 700 feet from the existing channel bank, but allows for that setback to be reduced to a minimum of 200 feet of unexcavated area with a demonstration that such a setback would not adversely affect channel stability. Consistent with this requirement, the project application includes a hydrological analysis that demonstrates that that the proposed 200-foot mining setback meets the required factors of safety and would not adversely affect the stability of the Cache Creek channel (Cunningham 2014).

Moore Canal currently traverses the Shifler property and will be realigned to the north of the proposed mining area in coordination with the YCFCWCD. Reclaimed mining slopes within 50 feet of the relocated canal will include at least 3:1 (H:V) slopes, as requested by the YCFCWCD.

One groundwater monitoring well (known as the “Stephens” well) exists within the Project boundary, adjacent to County Road 94B near the northwest corner of the proposed mining area. This well exhibits annual groundwater elevation ranges that typically fluctuate between an average fall low of 49.5 feet AMSL to an average spring high of 57.5 AMSL (above mean sea level) (Luhdorff & Scalmanini 2014). During wetter hydrologic periods, spring groundwater levels may reach 67.5 feet AMSL, and during drier hydrologic periods, fall season levels may decline to as low as 42.5 feet AMSL.

4.1 Wet-Pit Mining - *SMRO §10-5.510, §10-5.524, and §10-5.528; ASMRO §10-8.409*

Wet-pit mining is proposed for part of the site where aggregate resources are deepest (Figure 3). Wet pits will not be used for the storage and treatment of sewage, nor for landfill purposes. Fueling and maintenance activities of heavy equipment are prohibited within one-hundred feet of open bodies of water during mining and reclamation.

Open wet pits will be fenced with a minimum 42-inch high, 4-strand barbed wire fence (bottom wire barbless and 18 inches above ground), prior to the commencement of excavation, during excavation, and during reclamation.

Groundwater monitoring will be ongoing throughout the mining and reclamation period. Following the completion of reclamation, groundwater monitoring of wet-pit mining areas will continue for 10 years.

4.2 Site Specific Sediment and Erosion Control - *CCR 3503(e); CCR 3706(c); CCR 3706(e); CCR 3710(a); OCSMO §10-4.413; SMRO §10-5.507 & §10-5.508; ASMRO §10-8.408*

A number of erosion and sedimentation controls will be implemented during the Project's life. A slope stability analysis has been conducted by a Registered Civil Engineer documenting that the proposed mining slopes will exhibit adequate static and seismic factors of safety (Geocon 2014). Inactive soil stockpiles will be vegetated to create an erosion-resistant outer layer. During operating hours, all disturbed soil and unpaved roads shall be adequately watered to keep soil moist. All disturbed but inactive portions of the site shall be either seeded or watered until vegetation is grown or shall be stabilized using jute netting or other soil binders.

Upon the completion of mining operations, grading and revegetation will minimize erosion and convey storm water runoff from reclaimed areas. During reclamation, the land surface will be graded so as to create broad gentle slopes that will allow sufficient drainage to prevent water pockets or undue erosion.

Various grading and revegetation activities associated with reclamation will be carried out to minimize erosion. All erosion and sedimentation will be controlled during all phases of reclamation to minimize siltation of nearby water courses per the Central Valley Regional Water Quality Control Board and the State Water Resources Control Board. To minimize erosion, the finish grading of pit slopes will be performed as soon as practical after the completion of mining activities. The grading of final slopes, the replacement of soil, and associated erosion control measures shall take place prior to November 1. Furthermore, all slopes shall be seeded prior to November 1.

Retention basins will be created to collect surface runoff and protect surrounding land and water resources. Surrounding topography graded gently such that runoff will flow naturally to retention basins and not rely solely on ditches and berms to direct runoff.

4.2.1 Site Specific Erosion Control Monitoring Plan – *SMARA 2773(a)*

Slopes will be observed regularly throughout the reclamation monitoring period. All observed erosion in excess of 6 square inches in cross-section and 6 feet in length will be backfilled with additional soils, reseeded, and mulch applied if necessary. Adjacent roads will also be re-graded as needed to minimize any focal areas of erosion. Long-term erosion control will be achieved through revegetation. Additional soil or supplemental materials (i.e., mulch, straw bales, or fiber blankets) will be applied around plantings if erosion continues in revegetated areas. All erosion control treatments will be monitored by Teichert and corrective measures will be employed throughout the reclamation monitoring period.

5 ENVIRONMENTAL SETTING & PROTECTION OF FISH AND WILDLIFE HABITAT

Details of the plant communities and potential wildlife that are present within the Project Site are described in the *Biological Resources Assessment – Teichert Woodland Shifler Project* (BRA) prepared by Teichert Materials (2018) and *Wetland Delineation for Shifler Property* prepared by ECORP Consulting, Inc. (2012). The reports assess the potential for occurrence of special-status species and identify jurisdictional waters of the United States. .

5.1 Existing Vegetation Communities – *CCR 3502(b)(1)*

The majority of the Project study area consists of agriculture (row crops). Other habitats at the site include small sections of annual grassland/ruderal vegetation, oak woodland, canals, and other small wetlands.

5.1.1 Agriculture (Row and Field Crops)

The majority of the Project Site consists of agricultural land, totaling 285.6 acres (Figure 3). Crops planted at the site over the past decade have included wheat, alfalfa, tomatoes, cucumbers, canola, sunflower, and safflower. Selection of crop is made on the basis of various factors, but most notably the availability of irrigation water. Ruderal plants are common along agricultural borders and roads, including pigweed (*Amaranthus albus*, *A. blitoides*, and *A. retroflexus*), lamb's quarters (*Chenopodium album*), mallow (*Malva parviflora* and *M. leprosa*), bindweed (*Convolvulus arvensis*), devil's claw (*Proboscidea louisianica* and *P. lutea*), puncture vine (*Tribulus terrestris*), common knotweed (*Polygonum aviculare* subsp. *depressum*), bermuda grass (*Cynodon dactylon*), and Johnson grass (*Sorghum halepense*).

5.1.2 Annual Grassland/Ruderal

The northern portion of the Project Site paralleling Cache Creek supports approximately 19.2 acres of annual grassland and ruderal vegetation (Figure 3). This area is separated from the agricultural area by a conveyor system and access/maintenance road. Common grassland species include filaree (*Erodium botrys*, *E. cicutarium*, and *E. moschatum*), common fiddleneck (*Amsinckia intermedia*), ripgut brome (*Bromus diandrus*), soft-chess (*Bromus hordeaceus*), wild oat (*Avena barbata* and *A. fatua*), hare wall barley (*Hordeum murinum*), and six-weeks fescue (*Festuca myuros*). Disturbed areas also support dense stands of ruderal vegetation, including milk thistle (*Silybum marianum*), Italian thistle (*Carduus pycnocephalus*), yellow star-thistle (*Centaurea solstitialis*), mallow, and perennial mustard (*Hirschfeldia incana*). Also scattered throughout the northern portion of the site are isolated trees and shrubs, including valley oak, Northern California black walnut (*Juglans hindsii*), tree of heaven (*Ailanthus altissima*), almond (*Prunus dulcis*), Fremont cottonwood (*Populus fremontii*), blue elderberry (*Sambucus nigra* subsp. *caerulea*), and poison oak (*Toxicodendron diversilobum*).

5.1.3 Oak Woodland

A small area (approximately 1.7 acres) projecting south from the northeastern portion of the Project Site supports a valley oak woodland stand. Most of these oaks are associated with a segment of the earthen-lined Magnolia Canal just north of the Moore Canal. Common understory vegetation include poison oak, horehound (*Marrubium vulgare*), Italian thistle, and ripgut brome.

5.1.4 Moore Canal and Magnolia Canal

Both the Moore Canal and Magnolia Canal (collectively totaling 1.738 acres) appear on the USGS 7.5-minute series "Woodland, California" quadrangle as a dashed blue line feature. The Moore Canal is an approximately 15-foot wide concrete-lined irrigation water conveyance system operated by the YCFCWCD. The Moore Canal enters the Project Site from underneath County Road 94B and flows in a west to east direction (Figure 3). A gate structure exists near the northeastern portion of the Project Site, which allows water from the Moore Canal to be diverted into the Magnolia Canal. The Magnolia Canal is an approximately 7-foot wide earthen-lined canal that starts at this gate structure and flows in a northeasterly direction (Figure 3). Both canals are continuously maintained, and vegetation is frequently absent. The earthen-lined Magnolia Canal supports some vegetation, which can vary between years depending on the availability of water allocations. When the canal is operating and flowing, predominant vegetation include nutsedge (*Cyperus esculentus* var. *leptostachyus* and *C. eragrostis*), bermuda grass, rye grass (*Festuca perennis*), bearded sprangletop (*Leptochloa fusca* subsp. *fascicularis*), common barnyard grass (*Echinochloa crus-galli*), and Johnson grass (*Sorghum halepense*). In drought years when the canal is not operating, vegetation generally consists of ruderal plants including milk thistle, perennial mustard, orach (*Atriplex* sp.), bermuda grass, and rye grass.

5.1.5 *Pond*

One excavated pond (0.098 acre) was mapped near the northern portion of the site, and appears to be used to temporarily store runoff from agricultural fields (Figure 3). The pond is surrounded by a dense stand of milk thistle and Italian thistle along the perimeter. The bottom and edges of the pond are almost exclusively vegetated with perennial pepperweed (*Lepidium latifolium*).

5.1.6 Other Wetlands (Marsh, Seasonal Wetland, and Drainage Ditch)

Other wetlands at the Project Site include a seasonal wetland (0.014 acre), a marsh (0.009 acre) and a drainage ditch (0.006 acre) (Figure 3). These wetlands are interconnected with each other near the south-central portion of the Project Site. The source of hydrology appears to be a leak from an existing well on the adjacent property (Monument Hill Memorial Park) to the south. The seasonal wetland receives the majority of its hydrology from runoff from the abutting marsh. The drainage ditch appears to convey water from one agricultural field to another, as well as collect runoff from the marsh and seasonal wetland. Vegetation within this wetland complex is dominated by black willow (*Salix gooddingii*), southern cattail (*Typha domingensis*), prickly lettuce (*Lactuca serriola*), dock (*Rumex crispus* and *R. stenophyllus*), bermuda grass, and rye grass.

5.1.7 Other Areas

Other areas include an existing conveyor system and associated graveled maintenance road along the northern portion of the Project Site, which transports aggregate material from Teichert's adjacent Storz site to the west to the Woodland Processing Plant to the northeast (Figure 3). A maintenance road for the Moore Canal also parallels both sides of the canal throughout its entire length within the Project Site (Figure 3). Landscape plantings consisting of oleanders (*Nerium oleander*) are present along County Road 94B and the southeastern portion of the Project Site (Figure 3).

5.2 Sensitive Species and Wildlife Habitat – *CCR 3502(b)(1)*

Based upon a general review of the California Natural Diversity Database (CNDDB) (Rarefind Version 5), U.S. Fish and Wildlife Service (USFWS) (Sacramento Field Office website), California Native Plant Society's Online Inventory of Rare and Endangered Plants of California, and numerous field surveys, it was determined that several sensitive species have the potential to occur at the Project site. Teichert has prepared a BRA, which shall be used to facilitate the CEQA process for biological resources. This BRA provides a more detailed discussion of special-status species and sensitive habitats occurring or with the potential to occur on the Site, and associated mitigation measures where avoidance is not practicable (Teichert 2018).

5.3 Protection of Vegetation and Fish and Wildlife Habitat - *CCR 3503(c), CCR 3703(a), 3703(b), and 3703(c); ASMRO §10-8.433 & §10-8.435*

Disturbance to important wildlife habitat features (e.g., agricultural fields, grasslands, and trees) shall be avoided during the nesting season (e.g., between February and August). If disturbance activities are proposed during the nesting season, pre-construction surveys shall be performed to ensure no impacts to nesting birds will occur.

A minimum 200-foot mining setback has been established from the Cache Creek channel in order to protect fish and riparian habitat. All impacts to wetlands within the Project Site shall be mitigated through compliance with mitigation requirements established by the Corps.

A total of 32 elderberry shrubs were encountered outside of the project area within the Cache Creek riparian zone, proximal to the northern boundary of the project site (Teichert 2018). Elderberry shrubs are considered the sole host plant for the federally-threatened valley elderberry long horn beetle (*Desmocerus californicus dimorphus*) (VELB). No direct or indirect effects to these elderberry shrubs are anticipated as a result of the proposed action, as all shrubs exist at least 50 meters outside of the Project's limits of disturbance. According to United States Fish and Wildlife Service (Service) Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (May 2017), for elderberry shrubs that exist within a riparian area, no adverse effects may be assumed when a 50-meter (or wider) buffer is established and maintained around the elderberry shrubs. This buffer will be established and maintained for all mining and construction activities associated with the Shifler project and relocation of the Moore Canal.

5.4 Sensitive Natural Communities – *ASMRO §10-8.434*

Due to the highly disturbed nature of the Project Site, there is a virtual absence of sensitive natural communities within the Site's boundaries. In addition, the Project will maintain a minimum 200-foot setback from Cache Creek and its associated riparian habitat.

6 RESOILING AND GENERAL RECLAMATION REQUIREMENTS

One of the important concepts underlying the development of a revegetation plan is the necessity to determine future use of the site subsequent to mining. Post-mining use at the Shifler property centers primarily on agricultural production, in conjunction with an open space component, including habitat for wildlife. This reclamation plan is based upon the nature of the surrounding areas and characteristics of the property, salvaged reclamation soils, available overburden, waste fines, and site topography and hydrology. The agriculture and habitat zones, together with their respective revegetation designs, are detailed in subsequent sections and shown on Figure 5.

The reclamation plan is intended to maximize agricultural use of the property while also enhancing the wildlife habitat quality of the open space component of the site. The agricultural component (Section 7) of the reclamation plan is based on existing and final expected soil quality and depth, historic and current crop rotations and production rates, and current and expected average groundwater levels. For the habitat component (Section 8), planting densities of native species were determined based on several factors, including expected success, ultimate plant size, natural recruitment potential, and desired level of habitat types.

6.1 Resoiling - *CCR 3503(f); SMRO §10-5.511, §10-5.512, §10-5.516, §10-5.530, §10-5.531, and §10-5.532; ASMRO §10-8.412, §10-8.413, §10-8.428 and §10-8.430*

Agricultural areas will follow soil handling and replacement methods recommended in the *Teichert Shifler Project – Agricultural Reclamation Feasibility Study* (EcoSynthesis 2017, Appendix A) and as described in the Agricultural Soils Evaluation and Reclamation Plan (Section 7). In order to minimize compaction of the reclaimed agricultural fields, each 2-foot layer of soil laid down will be ripped to a depth of at least 3 feet. Final reclaimed agricultural surfaces shall be of sufficient depth to prevent the formation of anaerobic conditions in the crop rooting zone, suggested as at least 5 feet above the average high groundwater level. Post-reclamation groundwater models indicate that the average high groundwater level (spring high) for the Shifler property will be 75-80 feet AMSL in the west, and 45-50 feet AMSL in the east (Luhdorff & Scalmanini 2015). Final reclaimed agricultural surfaces will be graded to provide suitable field gradients to allow surface/furrow irrigation of crops and allow for adequate storm water drainage.

A cover crop will be seeded on the reclaimed fields following soil replacement on the pit floor, and then disked to incorporate this green manure organic matter as a soil amendment. Agricultural fields will be revegetated in accordance with the recommendations outlined in Section 7. After the first two crop seasons have been completed on the reclaimed agricultural fields, Teichert shall retain a Licensed Land Surveyor or Registered Civil Engineer to resurvey the fields; any areas where settling has occurred shall be releveled to the field grade specified in the approved reclamation plan.

Slopes and other non-agricultural areas (open space habitat) will be ripped/disked to a minimum depth of 6 inches to de-compact surfaces compressed by various equipment operations. Slopes that are less than 5 feet below the average summer low groundwater level will be reclaimed to no steeper than 2:1

(H:V). These slopes will be dressed with a minimum one-foot layer of salvaged reclamation soils that will be track-walked and immediately seeded to prevent erosion and provide for grassland habitat. Reclaimed slopes within the wet-pit areas (pond) located 5 feet or more below the reclaimed average summer low groundwater level will not be steeper than 1:1 in order to minimize the effects of sedimentation and biological clogging on groundwater flow, to prevent stagnation, and to protect the public health. According to Luhdorff & Scalmanini (2015), the seasonal low (summer/fall) pond elevation is expected to be approximately 47 feet AMSL.

Overburden material and processing fines will be used whenever possible to build elevations for proposed agricultural areas and as a subsoil layer. Salvaged reclamation soils formerly in agricultural areas will be prioritized for the reclamation of agricultural fields. Farming shall commence in agricultural areas once an entire field is reclaimed. As constructed slopes and habitat areas are completed, revegetation as described in Section 8 will be initiated the following fall and winter.

6.2 Soils Handling and Stockpiling - *CCR 3704(c), CCR 3705(e), CCR 3707(b), CCR 3707(d), CCR 3711(a), CCR 3711(b), CCR 3711(c), CCR 3711(d), CCR 3711(e)*

Preserving soil productivity and minimizing soil compaction are key components during the removal (mining) and replacement (reclamation) process. This reclamation plan identifies the surface 10 feet of soil to be of sufficient texture and quality for separation as salvaged reclamation soil suitable for agricultural use. In order to minimize soil compaction, all handling of soils (soil stripping, stockpiling, and reconstruction) will occur when soil moisture is low.

Article 9 Reclamation Standards section 3711(a) requires all vegetation and salvageable soil not be removed more than one year preceding surface mining activities. Before soil removing operations are initiated in each phase, stockpile sites will be identified on plan maps and clearly marked in the field. Initial stockpile areas will be located along perimeter berms around the mine pit. Some stockpiles will remain longer than others, and some soil may be used immediately after stripping to reclaim portions of a preceding phase.

Salvaged reclamation soil stockpiles that are not used for reclamation within one mining season will be planted with an annual grassland seed mix similar to that identified in Table 2 below to minimize soil erosion, maintain microbial activity, and discourage noxious weed establishment.

TABLE 2. SEEDING SPECIFICATIONS FOR SOIL STOCKPILE EROSION CONTROL – SHIFLER PROJECT

Common Name	Botanical Name	Seed Rate (lbs/acre)
Soft chess	*Bromus hordeaceus*	20.0
Six-weeks fescue	*Festuca myuros*	12.0
Ryegrass	*Festuca perennis*	6.0
Rose clover	*Trifolium hirtum*	7.0
Crimson clover	*Trifolium incarnatum*	3.0
Total		**48 lbs**

Seeding will occur prior to the end of October in each season soil stockpiling is completed. Seeding methods may include either hydro-seeding or broadcast seeding. In addition, erosion control materials (e.g., wattles, coconut fabric rolls, etc.) or retarding basins/ditches shall be installed surrounding the base of all soil stockpiles to prevent soil runoff. Future management of soil stockpiles and MSHA berms will also include removing invasive or noxious species (e.g., yellow star-thistle, Italian thistle, etc.) and re-seeding as necessary.

All soil management (handling, stockpiling, maintaining, and reconstructing) objectives are intended to limit impact on the soils while maintaining the function and productivity of soils for future reclamation purposes.

7 AGRICULTURAL SOILS EVALUATION AND RECLAMATION PLAN

Per Article 4 (Agricultural Mining and Reclamation Standards) of the Yolo County ASMRO (§10-8.401), the general standard for agricultural reclamation is to ensure that the agricultural productivity of reclaimed lands either meets or exceeds farm production levels established prior to mining. An Agricultural Reclamation Feasibility Study (EcoAnalysts 2017) is attached as Appendix A of this document. Appendix A details existing agricultural conditions, including soil type as well as crop productivity, in addition to proposed reclamation procedures for the agricultural component of the site, including that for handling and redistribution of salvaged soils, planting specifications, and minimum reclamation success criteria.

As per §10-5.525 of the Yolo County SMRO, for each acre of prime farmland that would be converted to non-agricultural use, the reclamation plan shall present provisions to offset (at a 1:1 ratio) the conversion of these lands. Teichert proposes to offset the permanent loss of approximately 161 acres of prime farmland by placing permanent conservation easements on land meeting the Williamson Act definition of "prime farmland."

7.1 Agricultural Reclamation Plan

7.1.1 Salvage – *ASMRO §10-8.429*

The results of the present soil analysis indicate that the material available for salvage, down to a depth of at least 10 feet, is all suitable for use as the uppermost layer of soil to support growth of agricultural crops common to the region (Appendix A). Accordingly, the recommended soil salvage procedure is for the entire 10 foot depth of the soil profile to be salvaged as one supply of agricultural reclamation soil.

After the initial recovery of a volume of soil sufficient to reclaim the final intended phase of operations, including construction of slopes and resoiling of areas to be future agricultural land, the remainder of the salvaged soil can be placed directly for reclamation. However, at any point where the active mining area exceeds the area that can be reclaimed with the stockpiled soil volume, then additional stockpiles shall be created to make up the potential future shortfall.

Soil shall be cut in maximum depths in order to minimize traffic and limit compaction. The handling and transport of soil shall be minimized, and all handling of salvaged reclamation soils should be accomplished when the soil is dry to avoid undue compaction.

7.1.2 Stockpiling - *ASMRO §10-8.431*

Soil stockpiles shall be constructed to a maximum height of 40 feet or less, with slopes of 2:1 (H:V) or gentler, to minimize erosion and discourage use by bank swallows. The top of the soil stockpile shall be graded to drain, at a slope of at least two percent, so as to minimize the infiltration of rain water into the interior of the stockpile. Soil stockpiles shall be seeded and vegetated to prevent wind and rain erosion. Salvaged soil may not be used for purposes other than reclamation without prior County approval.

7.1.3 Reclamation Soil Profile - *ASMRO §10-8.432*

Once mining operations have attained the lowest depth from which useful aggregate material can be removed, a slurry of fines that are separated from the commercial aggregate during processing will be discharged onto the bottom of the mined area where agricultural fields are proposed. The discharge/placement of fines is expected to create a desirable, uneven or sloping layer. This sloping subgrade surface will naturally create a gradient that enhances lateral flow of subsurface water, thus minimizing the mounding of percolating water on top of the low-permeability fines.

A minimum thickness of 4 feet of salvaged reclamation soil (that is, soil recovered from the uppermost 10-foot depth of the existing soil and overburden profile) shall be placed directly, or from a stockpile, to create the final agricultural soil profile on top of the subgrade layer (Appendix A). Soils classified as prime agricultural land shall be reserved for on-site crop reclamation.

In order to facilitate irrigation, the final surface of the areas intended to be used as agricultural land shall be leveled such that irrigation ditches may be created. In accordance with the Yolo County SMRO, broad gentle slopes that will allow sufficient drainage to prevent water pockets or undue erosion will be created to allow for site irrigation management. An approximately 1% grade is proposed for agricultural fields, sloping toward the reclaimed pond area.

7.1.4 Agricultural Reclamation Monitoring and Minimum Performance Standards

According to SMARA Performance Standards for Prime Agricultural Land Reclamation (§3707), reclamation shall be deemed complete when productive capability of the affected land is equivalent to or exceeds, for 2 consecutive crop years, that of the pre-mining condition or similar crop production in the area. Detailed information regarding current agricultural production and minimum reclamation standards is available in Appendix A.

8 OPEN SPACE HABITAT REVEGETATION AND ESTABLISHMENT

The Shifler Property will be reclaimed to a combination of agriculture and open space/habitat. A detailed soils analysis and agricultural reclamation feasibility study has been developed separately and has been included as Section 7 of this document. This section of the reclamation plan is specifically designed to provide for the development of the remainder of the Site, which will be reclaimed to open space wildlife habitat featuring open water, grassland slopes, and riparian shoreline/woodland vegetation communities. The habitat communities and their respective revegetation designs are detailed in the sections below and shown on Figure 4. Included in the plan are the habitat types to be created, methods of establishment, general planting locations relative to final elevations and groundwater levels, species types, and densities. The general plan is intended to improve the wildlife habitat quality of the open space component of the site. Planting densities were determined based on several factors, including expected success, ultimate plant size, and potential of natural recruitment.

8.1 Open Space/Habitat Revegetation Description - *SMRO §10-5.502; SMRO §10-5.523; ASMRO §10-8.423 and §10-8.426*

Teichert's reclamation plan for the open space component of the Project has been developed based on information from existing site conditions, available soils for reclamation, and extensive experience with the creation and monitoring of other reclamation sites throughout central and northern California. Final vegetative types and acres will depend upon conditions of the reclaimed land, including availability of overburden and processed fines, access to groundwater, and depth of silts in ponds.

The Shifler Property has been in agricultural production since the late 1800s; therefore, natural preexisting conditions of the Project Site are virtually unknown. However, the floodplain terrace geomorphology of the site indicates that, prior to agricultural production, the Shifler Property likely consisted of various stages of wetland, riparian, and oak woodland habitats that changed in accordance with creek flows and migration patterns. Table 3 summarizes the quantity of habitat types proposed to be created by the Project.

TABLE 3. OPEN SPACE RECLAMATION PHASES AND HABITAT TYPES (ACRES)

Reclamation Phase	Reclamation Feature	Acres
PHASE A	Agriculture	± 85.8
	Access Roads	± 0.2
	Grassland Slopes	± 12.1
PHASE B	Access Road	± 2.1
	Grassland Slopes	± 3.3
	Upper Riparian Woodland	± 10.9
	Lower Riparian Woodland	± 13.0
	Pond	± 112.9
PHASE C	Agriculture	30.9
	Grassland Slopes	5.9
Total Reclaimed Acreage		**± 277.1**

8.2 Habitat Communities

In addition to agriculture and associated access roads, a total of four reclaimed habitat communities are proposed. These include grassland slopes, pond, upper riparian woodland, and lower riparian woodland. Some of these communities may overlap or transition into one another. Grassland and woodland communities shall be established surrounding a reclaimed pond in order to enhance habitat values and protect neighboring agricultural fields (SMRO §10-5.533). These vegetation communities and their associated microhabitats are typical of naturally-occurring ones in the area. Each habitat community is designed to have a diversity of plants and conditions that will complement each other and provide a diverse habitat for wildlife. As a general rule, depth to groundwater will be a primary determinant of which plant associations or communities are appropriate for a given area. Ultimate mining depth and availability of fines and other materials for resoiling of slopes will largely determine the riparian features and are expected to adjust over time in response to changing site conditions.

8.2.1 Grassland Slopes

A total of ± 21.3 acres of slopes are proposed to be created surrounding the perimeter of the mined areas (Figure 4). All slopes will be reclaimed to no steeper than 2:1 (H:V), and 3:1 (H:V) within 50 feet of the relocated Moore Canal. Slopes will be revegetated by broadcast seeding with an appropriate grassland seed mix selected for its erosion control and habitat value. Typical species in the seed mix shall include drought-tolerant native species, such as blue wildrye (*Elymus glaucus*), California brome (*Bromus carinatus*), annual fescue (*Festuca microstachys*), California poppy (*Eschscholzia californica*), and arroyo lupine (*Lupinus succulentus*). Additional naturalized, annual plants will likely colonize these areas, , including soft chess brome (*Bromus hordeaceus*), wild oat (*Avena fatua*), six-weeks fescue (*Festuca myuros*), and filaree (*Erodium botrys*, *E. cicutarium*, and *E. moschatum*). Table 4 below shows seed mixes and seeding rates for the slopes following construction. All seeding rates are specified in terms of pounds of pure live seed (PLS).

Table 4. SEEDING SPECIFICATIONS FOR GRASSLAND SLOPES

Common Name	Botanical Name	Seed Rate (lbs/acre)
Blue wild rye	*Elymus glaucus*	8.0
California brome	*Bromus carinatus*	12.0
Annual fescue	*Festuca microstachys*	6.0
California poppy	*Eschscholzia californica*	1.0
Arroyo Lupine	*Lupinus succulentus*	5.0
TOTAL		**32.0**

8.2.2 Pond

Approximately 112.9 acres of the Project Site are proposed to be reclaimed to pond (open water), which is expected to experience seasonal and annual fluctuations in water level as dictated by changes in precipitation patterns, creek flows, and the groundwater table. The pond will be separated from the

surrounding agricultural land by vegetated slopes and berms. The use of motorized watercraft will be prohibited on this reclamation feature.

The open water habitat occurs within the deepest mined areas of the site and will be entirely dependent upon groundwater elevations, making it a dynamic zone. Seasonal variations in groundwater levels, and variations in the maximum mining depth, will dictate which areas remain seasonally or permanently inundated. Regardless, it can be expected that during portions of the year (typically winter and spring) open water will be present. The depth, slope, and size of the pond will vary, and in some cases, undergo a seasonal succession ranging from open water to mudflats in winter and spring to vegetated or parched areas in summer and fall. The distribution of each of these specific communities may also vary spatially each year. Rainfall patterns and creek flows affecting groundwater levels will dictate the specific arrangement of wetland-related communities by season and year.

In general, deeper areas with longer hydroperiods will remain open water and lack vegetation, or consist of submerged and floating-leaved herbaceous plants. Other areas may eventually dry and become mudflats until re-submerged when groundwater elevations rise. Although no wetland habitats are proposed as part of this reclamation plan, other areas within the reclaimed wet pit may become intermittently established with various wetland species, such as cattail (*Typha* spp.), smartweed (*Polygonum* spp.), spikerush (*Eleocharis macrostachya*), rush (*Juncus* sp.), loosestrife (*Lythrum* spp.), Texas bergia (*Bergia texana*), beard grass (*Polypogon* spp.), and Mediterranean barley (*Hordeum marinum*). If successive drought years persist and groundwater levels remain low, some areas may also become vegetated with woody riparian vegetation, including willows (*Salix* spp.), mule fat (*Baccharis salicifolia*), and Fremont cottonwood (*Populus fremontii*).

8.2.3 Lower Riparian Woodland

The proposed lower riparian woodland community will consist of approximately 13.0 acres surrounding the reclaimed pond. In general, the lower riparian woodland community represents a transition area between the pond and upper riparian slopes. The ultimate acres of lower riparian woodland habitat to be created within the proposed mining area will be dependent upon final reclaimed slopes, availability of soil harvested from the settling ponds/berms, groundwater elevations, and seasonal hydrological conditions.

Plants tolerant of saturated soils and occasional inundation are characteristic of this community. Willows (*Salix gooddingii*, *S. laevigata*, and *S. exigua*), cottonwood (*Populus fremontii*), and mulefat (*Baccharis salicifolia*) are expected volunteers where hydrological conditions and soil moisture is favorable during establishment. Other species, including California box elder (*Acer negundo* var. *californicum*), Oregon ash (*Fraxinus latifolia*), California sycamore (*Platanus racemosa*), and button willow (*Cephalanthus occidentalis*) will be planted to supplement natural colonization and increase species diversity and wildlife habitat value. Table 5 shows planting specifications and minimum planting densities for the riparian wetland community.

TABLE 5. PLANTING SPECIFICATIONS FOR THE LOWER RIPARIAN WOODLAND

Common Name	Botanical Name	Planting Density (seedlings/acre)
California Box Elder	*Acer negundo* var. *californicum*	30
Oregon Ash	*Fraxinus latifolia*	30
California Sycamore	*Platanus racemosa*	10
California Button Willow	*Cephalanthus occidentalis*	30
	TOTAL	**100**

Planting ratios of species may be modified due to existing site conditions, relative proximity to groundwater elevations, and availability at the time of planting. Should additional natural colonization of willows, cottonwoods, or mulefat not be evident, additional plantings of these species shall be included within this community. The total initial target density of woody riparian plants (combination of planted and volunteers) shall be at least 250 plants per acre. In general, seedlings will be planted from Deepot™ 40[1] size containers. Alternative container size seedlings or methods, including direct seeding or installation of pole cuttings, may be substituted if monitoring suggests adequate survival and success rate.

8.2.4 Upper Riparian Woodland

Approximately 10.9 acres of the slopes surrounding the pond, in areas above the lower riparian woodland that demonstrate adequate soil depths, are proposed to be reclaimed to upper riparian woodland habitat. This habitat will consist of several discontinuous stands separated by grassland slopes to provide for habitat diversity. Final locations and sizes of the upper riparian woodland areas will be determined by site conditions at the time of final reclamation. In order to facilitate the successful establishment of woody species, designated upper riparian woodland areas will require at least 3 feet of soil and good drainage. Initially, these areas will predominantly resemble an open grassland community, but eventually grow into a woodland habitat as the plantings develop. Vegetation in this community is typically represented by relatively drought-tolerant riparian species, including valley oak (*Quercus lobata*), elderberry (*Sambucus mexicana*), coyote brush (*Baccharis pilularis*), California wild rose (*Rosa californica*) and California blackberry (*Rubus ursinus*). Table 6 shows the planting specifications and minimum densities for the upper riparian woodland community.

TABLE 6. PLANTING SPECIFICATIONS FOR UPPER RIPARIAN WOODLAND

Common Name	Botanical Name	Planting Density (seedlings/acre)
Valley oak	*Quercus lobata*	50
Blue elderberry	*Sambucus mexicana*	55
Coyote brush	*Baccharis pilularis*	20
California wild rose	*Rosa californica*	35
California blackberry	*Rubus ursinus*	30
	TOTAL	**190**

[1] Seedlings grown in plant containers measuring 2.5” diameter x 10” deep, or 40 cubic inches.

Planting ratios of species may be modified due to existing site conditions and availability of plants at the time of planting. In general, seedlings will be planted from Deepot^{TM}-40 size containers. Alternative container size seedlings or methods, including direct seeding (i.e., oak acorns), may be substituted if monitoring suggests adequate survival and success rates.

8.3 Revegetation Test Plot

Article 9 Reclamation Standards section 3705(b), requires revegetation test plots to be implemented concurrent with mining to determine the most appropriate revegetation procedures to be followed to ensure successful establishment of the proposed reclamation plan. The primary objective of a test plot is to document the success or failure in attaining designated objectives and performance standards. For Teichert's Shifler open space reclamation features, these objectives relate to success in slope, grassland, riparian upland, riparian wetland, and pond habitat.

Teichert's mining and reclamation plan for the Shifler Project was developed on information from existing site conditions, available soils for reclamation, and extensive experience with the creation and monitoring of other reclamation sites throughout central and northern California. Specific reclamation features described in this plan have already been successfully created at several sites in the Woodland area. Teichert's Muller Reclamation Site (Figure 7), located just northwest and across Cache Creek, demonstrates similar reclamation features as those described for the Shifler Project and, therefore, shall be referenced as the revegetation test plot for the Schwarzgruber Project.

Teichert's Muller Reclamation Site is an approximately 135-acre site located just northwest of Cache Creek and the Schwarzgruber Property. It is one of several properties comprising Teichert's Woodland aggregate mine operation. The Muller Property was mined for sand and gravel from the late-1990's to 2008. Reclamation of the Muller Property includes reestablishment of both agricultural and natural habitat lands in areas previously disturbed by mining (Figure 8). An approximately 32-acre portion of the site (also known as Muller 30-Acre) was reclaimed to agriculture in 2006. Seven acres of slopes also surround the northern, western, and southern portion of the reclaimed agricultural field. The remaining 86 acre portion of the site (also known as Muller 90-Acre) was completed from 2008 and 2009 and includes similar reclamation features as those proposed for the Shifler Project. These include slopes, grasslands, oak riparian woodland, riparian wetland, and pond habitats. The first monitoring report for the Muller 90-Acre Reclamation Project was prepared in October 2010, with the final report submitted in November 2014.

8.4 Plant Procurement and Installation

A variety of different plant materials may be used in the restoration planting of the various communities. These include seeds, container-grown plants, and cuttings. The specific planting methods will depend upon which habitats and what materials are available at the time of planting. Plants collected and grown locally will always be given priority in the selection process. All seeding for grassland cover and erosion control will occur before the end of October, prior to the first major rains.

Planting of trees and shrub seedlings will generally occur between November and January, ideally after winter storms have moistened the ground. Plants will not be installed in linear rows or of equal spacing, but randomly placed as individuals or in clusters intermixed with other species. Clumping of some species will also emphasize the variety of plant associations. Natural colonization by additional plants is expected to further enrich the site along various zones.

8.4.1 Direct Planting

The following are various technical specifications regarding plant materials, seeding or planting densities, and their installation. Often site requirements, timing, species, and availability will dictate the method of planting. Contingent upon the results of monitoring, amendments to the soil prior to or during the time of planting may be required. All seeding for grassland cover and erosion control will occur before the end of October, prior to the first major rains. Planting of trees and shrub seedlings will generally occur between November and January, ideally after winter storms have moistened the ground. Plants will not be installed in linear rows or of equal spacing, but randomly placed as individuals or in clusters intermixed with other species. Clumping of some species will also emphasize the variety of plant associations. Natural colonization by additional plants is expected to further enrich the site along various zones.

8.4.1.1 Seeding for Erosion Control/Grassland Cover

Seeding areas and techniques to establish vegetative cover on slopes and grassland communities will depend on a number of factors, especially hydrology, soils, existing terrain, and size of the area. Annual grasses and broadleaf weeds are likely to invade much of the area. However, native grasses will be planted at the site to increase native plant diversity.

Prior to seeding, all slopes will be track-walked with imprints perpendicular to the direction of the slope. Slope will be broadcast seeded using a belly grinder, or spreader mounted on a tractor if slopes are gentle enough.

8.4.1.2 Container/Seedling Installation

Seedlings will be grown out in containers from locally collected seeds or purchased from a local nursery shortly before installation. Planting holes for seedlings will be dug at least twice as deep and twice as wide as the seedling root wad. A slow-release fertilizer (11-17-9) will be placed in each planting hole, with one teaspoon at the bottom of the hole and another teaspoon with the backfill material. Holes shall be backfilled such that when the seedling is in place, the top of the root wad is level with or slightly above the grade of the surrounding ground. A shallow trench will be created surrounding each seedling for a watering basin. All plantings will be carried out during the dormant season, following seasonal rains.

8.4.1.3 Collection and Planting of Acorns

Depending on oak acorn production years and timing of restoration planting, oaks may be directly planted in the field from acorns. Acorns will be collected in the fall, inspected for viability, and stored in refrigeration until the ground is moistened by rains. Viable acorns will be separated from damaged ones by placing acorns in a bucket of water and discarding those that float to the top. Acorns may be stored in refrigeration for up to 2 months, but may begin to lose viability soon after. Prior to planting acorns, the existing ground will be prepped by loosening the first 12 inches. This may be done by equipment (i.e., auger) or by hand (i.e., shovel). At each planting spot, two or three acorns will be placed about ½ inch below the surface. Plant protector tubes will be installed to identify planting locations and protect young shoots from animal damage.

8.4.2 Natural Colonization

Natural colonization, or regeneration, is the process where existing conditions (i.e., topography, soils, hydrology, weather, etc.) are favorable and plant species adapted to those specific conditions are able to grow and establish on their own. Although this process is difficult in some areas and may be extremely slow for some species, it is often the most appropriate and efficient form of restoring sites. Natural colonization of desired or target vegetation is expected to some degree, but will most likely be dependent upon hydrological conditions. Willows, cottonwood, and mule fat are expected to colonize along riparian wetland zones (i.e., pond shorelines) where fine sediment is available to initiate seed germination.

8.5 Maintenance and Follow-Up of Restoration Plantings

In design and development of a restoration site such as this, there are numerous conditions and elements that may interfere with the accomplishment of the original goals and objectives. Some of the most critical factors affecting restoration are water availability, invasive species and weed competition, herbivory, and human vandalism. Each of these issues is addressed separately and a maintenance plan is included below. Acts of God, such as fires and flood events, could alter reclamation deliverables if areas are burned, washed away or depositional areas are created.

8.5.1 Irrigation

A temporary drip irrigation system will be used for installed plants in the lower and upper riparian woodland communities during the first 2 to 3 years of establishment. The length of supplemental irrigation will depend on soils and seasonal rainfall patterns. Irrigation will be installed prior to the arrival of the dry season so that water can be provided to individual plantings before water stress becomes a problem. All irrigation systems will be installed to a portable water pump that will pump water from the created pond. A screen will be installed on the intake hose of the pump to minimize debris entering the irrigation system and clogging emitters.

Individual seedlings will be irrigated with two drip emitters, spaced to provide water to the entire root zone, each applying water at a rate of 2 to 4 gallons per hour. A minimum of 8 gallons of water will be

applied to each planting once a week during the first year. Irrigation will be monitored and adjusted as necessary to ensure plants are properly watered. Future irrigation will be applied for the following one to two seasons, as necessary. The frequency of irrigation will be reduced gradually over the 2 to 3 year period (depending upon species), and the effects will be monitored to ensure successful weaning of the plants from artificial watering.

8.5.2 Weed Maintenance/Control of Invasive Plants

Another critical factor potentially affecting young plants and overall reclamation objectives is competing vegetation. The amount of competition will vary depending on the species present, the existing seed bank in the soil material used for reclamation, hydrological conditions, and a number of other factors.

For individual tree and shrub plantings, a 3 to 4 foot circular area around each seedling will be cleared of weeds. Herbicides (i.e., Roundup®) may be applied around individual plantings as needed for the first 3 years. The use of any chemical herbicide, however, must be coordinated with a qualified biologist to ensure that the most effective methods are applied and damage to non-target vegetation is minimized. If weeds are minimal, a weed maintenance program around individual plants may not be necessary, or weeds can simply be mechanically removed by hand.

The Shifler Site is potentially subject to a number of invasive or noxious plants, particularly during the reclamation process as new areas are disturbed. A number of invasive plants have been identified within the lower Cache Creek watershed and could potentially threaten reclamation success of a project. Table 7 below is a partial list of invasive or noxious weed species recorded from the site or from nearby areas. The list includes those species categorized as "noxious" by the California Department of Food and Agriculture (CDFA) and "invasive (High)" by the California Invasive Plant Council (Cal-IPC).

TABLE 7. PARTIAL LIST OF INVASIVE/NOXIOUS WEEDS ALONG THE LOWER CACHE CREEK WATERSHED

Common Name	Scientific Name	Cal-IPC Rating	CDFA Rating
Barbed goatgrass	*Aegilops triuncialis*	High	B
Giant reed	*Arundo donax*	High	B
Red brome	*Bromus madritensis ssp. rubens*	High	----
Italian thistle	*Carduus pycnocephalus*	Moderate	C
Purple star-thistle	*Centaurea calcitrapa*	Moderate	B
Yellow star-thistle	*Centaurea solstitialis*	High	C
Bull thistle	*Cirsium vulgare*	Moderate	C
Pampas grass	*Cortaderia selloana*	High	----
Medusahead	*Elymus caput-medusae*	High	C
Hydrilla	*Hydrilla verticillata*	High	A
Perennial pepperweed	*Lepidium latifolium*	High	C
Creeping water-primrose	*Ludwigia peploides ssp. montevidensis*	High	----
Purple loosestrife	*Lythrum salicaria*	High	B
Parrot's feather	*Myriophyllum aquaticum*	High	----
Eurasian watermilfoil	*Myriophyllum spicatum*	High	C
Himalayan blackberry	*Rubus armeniacus*	High	----
Smallflower tamarisk	*Tamarix parviflora*	High	B
Saltcedar	*Tamarix ramosissima*	High	B

Reclamation standards require that all Cal-IPC rated "invasive (High)" and CDFA rated "noxious" plants be managed such that they do not threaten the success of the proposed revegetation. While the list only includes those species listed by the CDFA or ranked "High" by the Cal-IPC, other species should also be considered for management in reclamation of the site, including milk thistle (*Silybum marianum*), field mustard (*Hirschfeldia incana*), tree tobacco (*Nicotiana glauca*), poison hemlock (*Conium maculatum*), stinkwort (*Dittrichia graveolens*), and Ravenna grass (*Saccharum ravennae*). Adjustments shall be made to ensure that all of the most invasive and undesirable species are included within the management plan for the site.

Invasive/noxious weeds shall be managed annually as necessary throughout each of the reclamation areas in which monitoring is required. A list of target species will be updated each year and those found at the site will be identified for removal. Management of invasive weeds will include both mechanical and approved chemical methods, carried out on an annual basis and any time the observed component of invasive species exceeds 5%. Methods based on the latest scientific research at the time of reclamation shall be applied to all management actions. Adjacent areas within the property boundaries will also be managed to minimize future spreading into reclaimed areas. The use of any chemical herbicide will be coordinated with a qualified biologist with an applicator license to ensure that the most effective methods are applied and damage to non-target vegetation is minimized. Monitoring and management of invasive weeds will continue to occur in the reclaimed areas throughout the end of the monitoring period.

8.5.3 Herbivory Control

To protect planted seedlings from deer, small rodents, rabbits, and beavers, it may be necessary to implement various measures that will reduce herbivory. If present, herbivory may be minimized through several approaches. First, plant protector tubes, or tree shelters, will be placed around seedlings if herbivory from voles or rabbits are evident. Tubes will be inserted approximately 4 inches into the ground to minimize voles from tunneling under them and left in place until they become of sufficient size to tolerate occasional browsing, usually after the first year or two. Tree shelters may be left around some tree seedlings indefinitely (or until they naturally degrade) if monitoring suggests.

Additionally, oaks and other tree seedlings may be protected from larger animals (i.e., deer or beaver) by installing wire cylinder cages around individual seedlings. Cages shall be large enough (i.e., 2' wide and 4' tall) to allow for some new plant growth before they can be browsed.

8.5.4 Vandalism

Visitors to the Project Site are required to register and receive safety orientation at the Woodland Plant. Any vandalism would most likely occur from trespassers along Cache Creek or adjacent County roads. Fencing, as required by SMRO § 10-5.510, will be the primary deterrent to trespassing/vandalism (Section 1.7.1). Trespassing is also expected to be discouraged by no trespassing signs along fences and weekly visits by Teichert staff to the site during the reclamation establishment period.

9 OPEN SPACE HABITAT MONITORING AND PERFORMANCE STANDARDS

The primary objective of a monitoring program is to document the success or failure in attaining designated objectives and performance standards. For the open space habitat features, these objectives relate to plant establishment and the general conditions of revegetated areas. Monitoring is also designed to provide sufficient data to identify and evaluate the cause of problems in attaining success should they occur, and assist in devising appropriate corrective measures. A biologist or revegetation specialist with qualifications acceptable to the County of Yolo and State Mining and Geology Board will conduct all monitoring and reporting requirements for the habitat features.

9.1 Monitoring Time Period

Habitat reclamation will be monitored annually for a minimum of 5 years following implementation. Because reclamation will occur in phases, monitoring may represent various stages in vegetation and reclamation development. As reclamation areas are completed and all success criteria are met, monitoring and reporting for that particular area will end. If success criteria are not met, further monitoring and/or corrective measures will be required until such time that success criteria have been achieved.

9.1.1 Photo Monitoring

Photographs will be taken in late-spring or early summer while vegetative conditions are at their peak. A minimum of four permanent photo stations will be selected to qualitatively document changes in habitat development, types, and distribution over successive monitoring periods. Each photo station will be staked and mapped in the field with a GPS (global positioning system) unit with sub-meter accuracy and its direction of view recorded for future monitoring. Fixed features (i.e., mature trees, slope features, etc.) will be included in photos to provide a consistent reference and background against which yearly comparisons can be made. Representative photos during construction and revegetation will also be taken and included in monitoring reports.

9.1.2 Vegetation Monitoring

Vegetation monitoring will be conducted for each of the habitat types proposed. Vegetation data will be collected using randomly placed 10 meter (m) long transects and using a point-line intercept method. Each transect will be treated as a sampling unit to calculate total absolute plant cover[1] for each unit and each species. Starting points for each transect will be randomly generated using ArcGIS software (i.e., tool in Data Management Tools/Feature Class called Create Random Points) or any other scientifically justified method for generating random points. In addition, a random degree of direction between 0 and 360 degrees for each point will be produced.

Once random points are created and a degree of direction for each point assigned, the information will be saved and uploaded into a GPS unit. Each point will be identified in the field using the GPS unit, and a transect will be established by laying a 10-m tape in the direction randomly assigned for that particular

point. At every 0.1-m interval along each transect, all vegetation intercepted by a vertical pointed will be recorded. Sample sizes for all monitoring efforts will be sufficient to produce at least an 80 percent confidence level with a confidence interval width within 20 percent of the mean. Total absolute cover of each transect will be calculated using the data collected at each transect.

$$\text{Total Cover of Transect X} = \frac{\text{Total \# of points where vegetation is recorded}}{\text{Total \# of points along each transect}}$$

Species richness data will be calculated by using 10-m^2 plots and the same transects as those established for collecting cover data. All species encountered within 0.5 meter of each transect will be recorded, and the data for the plots will be averaged to determine the number of species per 10-m^2 area. Noxious or invasive weeds will be recorded separately from total plant cover and species richness data.

9.1.2.1 Grassland Slopes

Revegetation efforts on slopes will be evaluated based on total plant cover, species richness, and minimization of invasive/noxious weeds. Floristic surveys of reclaimed slopes will be conducted each spring when the majority of species are easily identifiable.

9.1.2.2 Lower and Upper Riparian Woodland

Plantings within the lower and upper riparian woodland will be monitored for an evaluation of native woody (trees and shrubs) species, including plant survival, total absolute cover, density, and species richness. A census of all plantings installed and those naturally recruited will be conducted each summer in which monitoring is required. At the time of installation, all plantings will be recorded with a GPS unit with sub-meter accuracy. Field maps of planting locations will then be generated to confirm the presence or absence (death) of plantings in the field. In addition, individual plantings will be assigned a vigor (health) ranking between 0 and 4 where: 0 = dead or missing, 1 = severe decline to nearly dead, 2 = possible decline or moderate defects, 3 = stable to fairly healthy and 4 = healthy with good growth. The amount of new growth, growth patterns, and foliage color will be considered when visually rating the health of each planting. Factors affecting these measurements may include weed competition, water, herbivory, soil characteristics, or disease. Only plantings with a vigor rating of 2 or high will be considered surviving plants.

Cover data for the riparian woodland habitats will focus on evaluating native woody vegetation and invasive species. Understory vegetation (herbaceous layer) would not be appropriate early in the restoration process as certain maintenance measures (i.e., weed removal around seedlings) would affect cover values.

Density and species richness of native woody vegetation can be calculated using the GPS information of individual plantings, or in the case of extensive natural recruitment, using similar plots established for calculating species richness. Densities for riparian woody species will be calculated to represent numbers per acre.

9.1.3 Wildlife Monitoring

Observations of wildlife (birds, amphibians, reptiles, or mammals) or their signs (i.e., tracks or scats) will be recorded whenever encountered, and a species list will be created for the site.

9.2 Performance Standards

In order to determine whether the goals of the habitat reclamation objectives have been met, a set of final performance standards have been developed. These success criteria for the different types of habitats created are provided in Table 8. All established criteria must be met and present at the end of the 5-year monitoring period.

TABLE 8. MINIMUM SUCCESS CRITERIA FOR HABITAT RECLAMATION

Habitat Type	Minimum Performance Standards
Grassland Slope	• Total absolute vegetative cover must be at least 70%. • Total absolute cover of noxious or invasive weeds must be less than 5%.* • Species richness must average at least 4 species per 10-m^2, excluding noxious or invasive.
Upper Riparian Woodland	• Survivorship of installed plantings will be at least 80% (health/vigor rating of 2 or higher). Natural recruitment of native woody species may be counted toward replacement seedlings. • Total absolute cover of native woody species must be at least 10%. • Density of native woody species must be at least 150 trees/shrubs per acre. • Species richness must average at least 4 native woody species. • Total absolute cover of invasive/noxious weeds must be less than 5%. • The total amount of Upper Riparian Woodland habitat established must be equal to or greater than 10.9 acres.
Lower Riparian Woodland	• Survivorship of installed plantings will be at least 80% (health/vigor rating of 2 or higher). Natural recruitment of native woody species may be counted toward replacement seedlings. • Total absolute cover of native woody species must be at least 10%. • Density of native woody species must be at least 250 plants per acre. • Species richness must average at least 4 native woody species per acre. Total absolute cover of invasive/noxious weeds must be less than 5%.* • Total amount of Lower Riparian Woodland established must be equal to or greater than 13.0 acres.

* Invasive/noxious weeds are those species listed by the CDFA or ranked 'High' by the Cal-IPC.

An aerial photo of the site and constructed reclamation features shall be taken within the first year following completion, or the boundaries of each feature shall be mapped using a GPS unit with sub-meter accuracy, to report "as-built" conditions. In addition, constructed slopes shall be surveyed to verify grade. All information shall be provided in the first monitoring report and updated once again in the final monitoring report.

If a reclaimed area has been adversely affected by a natural disaster (i.e. flood, earthquake, fire, or other natural occurrence beyond the operator's control), contingency measures will be implemented to the extent feasible. Teichert shall meet with regulatory personnel to evaluate and agree upon the feasibility of such corrective actions, taking into account the extent to what areas have been previously reclaimed and destroyed prior to the natural occurrence, the effect of the natural occurrence on public health and safety, the site characteristics and proposed end use, etc.

9.3 Annual Monitoring Reports

Monitoring reports will summarize the reclamation responsibilities, construction and revegetation completed, monitoring implemented, and results compared to established success criteria. Photo documentation and field data will also be provided in appendices to the monitoring reports. If it is apparent that some reclamation features may not achieve intended success criteria, potential remediation opportunities will be evaluated or suggested and provided in the report.

Monitoring reports will be prepared and submitted annually to the Yolo County Natural Resources Division and Department of Conservation, Division of Mine Reclamation. Monitoring reports shall be due on August 31st of each year. This allows time for remedial actions, if necessary, or enhancement opportunities to be discussed and implemented prior to the end of the construction season.

At the end of the 5-year monitoring period, monitoring will cease, provided all the reclamation features are determined by the agencies to be in substantial compliance with the established success criteria. Reclamation monitoring and annual reporting will be extended beyond the 5-year period only if success criteria have not been met.

Upon review of the final monitoring report, the County or State may require a site visit to confirm the completion of the reclamation requirements. Once it is deemed that all success criteria have been met for the site, the performance bond will be released and the site will be allowed to continue to develop under natural processes.

10 ADMINISTRATIVE REQUIREMENTS

10.1 Performance (Financial) Assurances – *SMARA 2773.1(a)*

A Performance Bond payable to the "County of Yolo or the Department of Conservation" shall be provided to the County of Yolo in the amount for the estimated cost of reclamation. The financial assurances shall remain in effect for the duration of the surface mining operation and any additional period until reclamation is completed. The amount of financial assurances required for any one year shall be adjusted annually to account for new lands disturbed, inflation, and reclamation of lands accomplished in accordance with the approved Reclamation Plan. As items of reclamation work are accomplished to the standards set forth in the approved Reclamation Plan and are acceptable to the County, the operator may retrieve the existing assurance and submit a new one with the face value reduced accordingly.

Upon review of the final monitoring report, the County or State may require a site visit to confirm the completion of the reclamation requirements. Once it is deemed that all success criteria have been met for the site, the performance bond shall be released and the site shall be allowed to continue to develop under natural processes. An amended reclamation plan shall be required prior to substantial deviation to approved plans (PRC 2777).

10.2 Reclamation Cost Estimate – *SMARA 2773.1; SMRO §10-5.601(g)*

Reclamation is phased to be concurrent with mining so that costs can be distributed over the life of the operation. Reclamation tasks are shown with the various costs and summarized in Appendix B, Financial Assurance Cost Estimate (FACE). Costs are based on work being performed by outside contractors. The FACE is intended to be adjusted annually as mining begins and reclamation areas are completed.

10.3 Reclamation Responsibility Designee – SMARA 2772(c)(10)

STATEMENT OF RESPONSIBILITIES

Submittal of this Shifler Mining and Reclamation Plan represents a commitment by Teichert Materials, a division of A. Teichert & Son, Inc., to reclaim the Shifler Property per the approved entitlement granted by Yolo County. Teichert accepts responsibility for reclaiming the mined lands in accordance with the attached reclamation plan. Assuring this obligation will be a surety bond to be held by the lead agency and the Department of Conservation, Office of Mine Reclamation.

Signed this _____ day of, _____2018

By _____
Dana Davis, President of Teichert Materials

By _____
Paul Mercurio, Production Manager

11 REFERENCES

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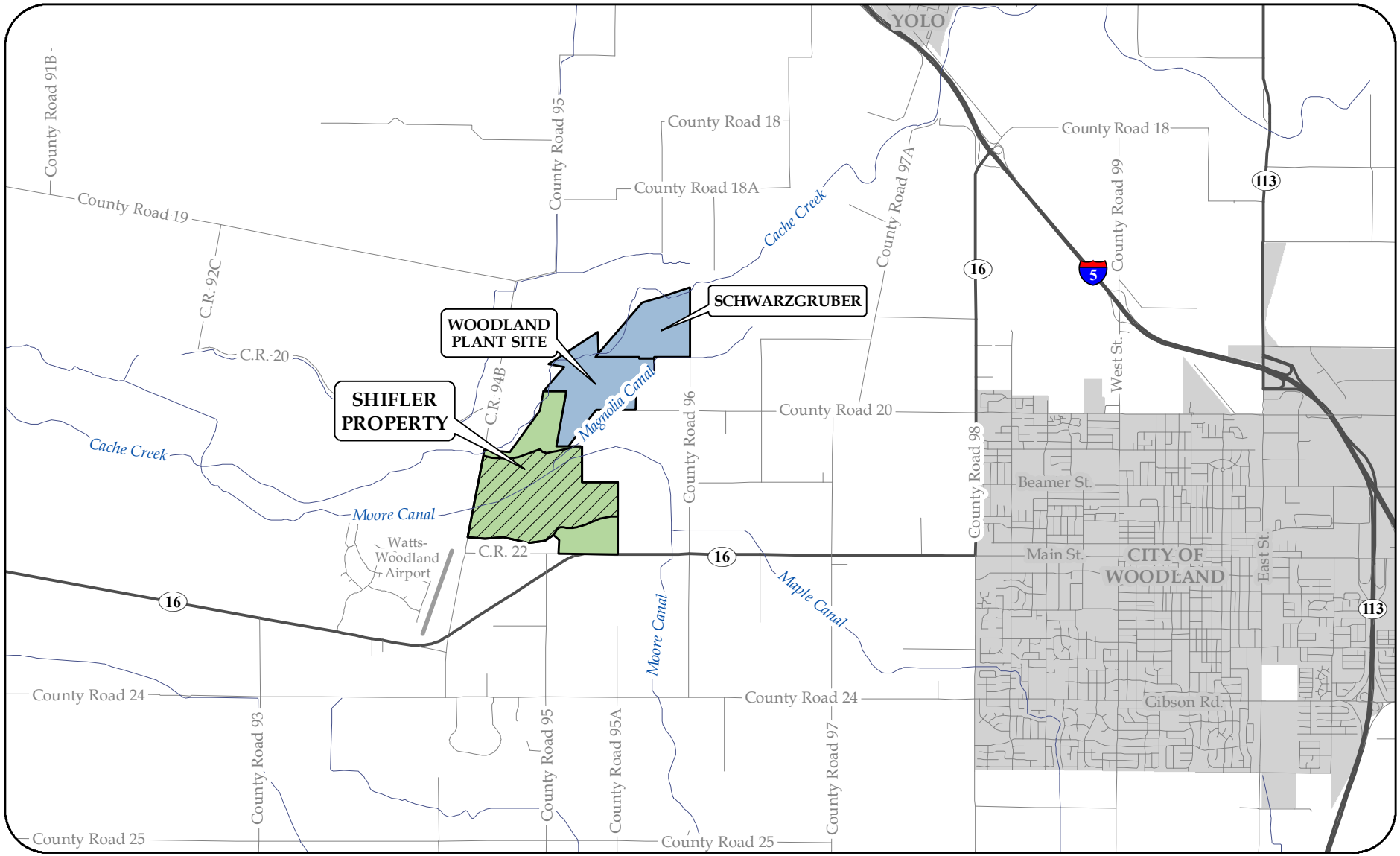
LIST OF FIGURES



TEICHERT MATERIALS

LEGEND:

- Project Site
- Shifler Property Boundary
- Teichert Woodland Plant Site & Schwarzgruber Property

DISCLAIMER:

The data was mapped for planning purposes only. No liability is assumed for the accuracy of the data shown.

0 0.5 1 Miles

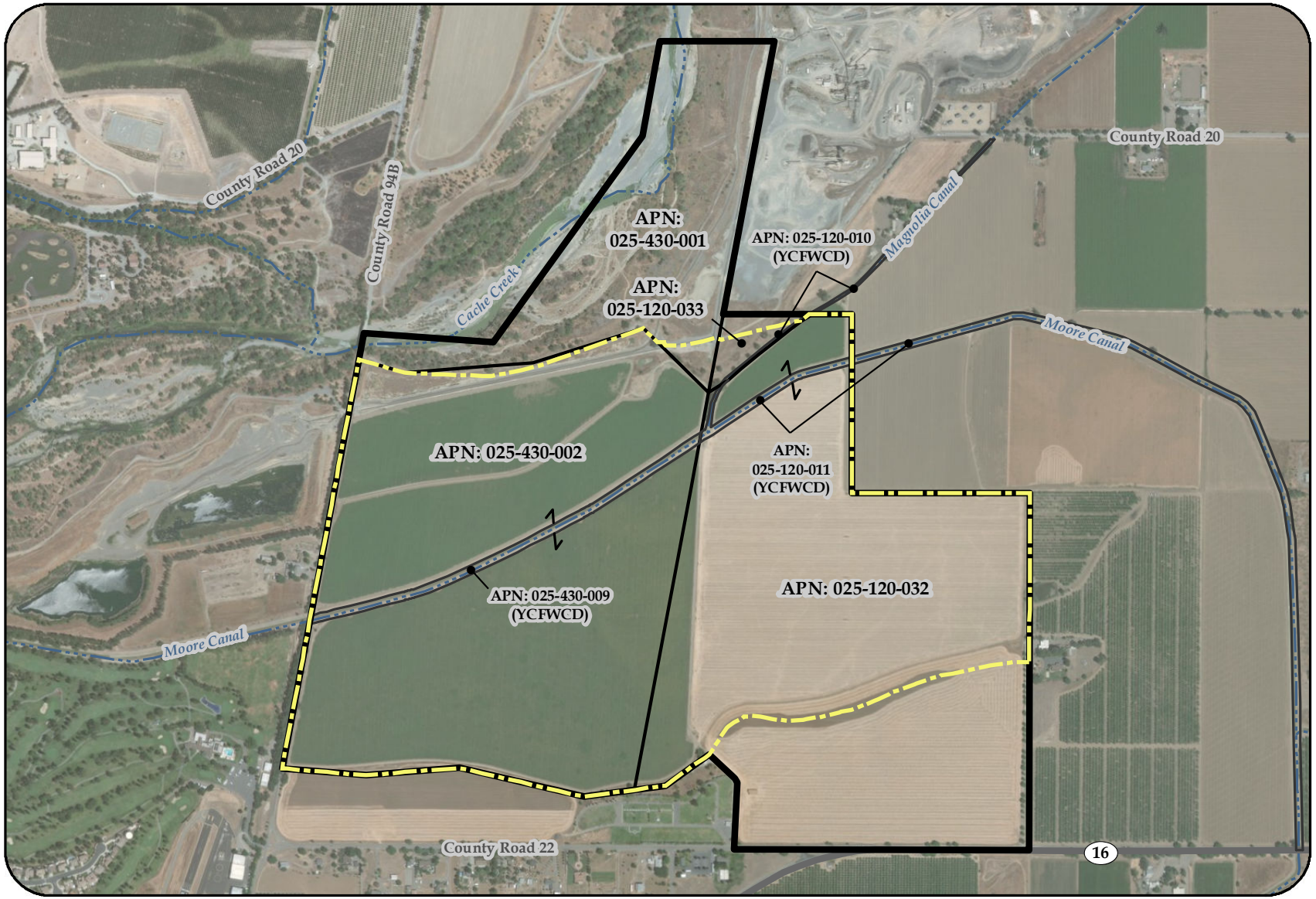
FIGURE 1

SITE VICINITY MAP

RECLAMATION PLAN
SHIFLER PROPERTY
TEICHERT MATERIALS

YOLO COUNTY, CALIFORNIA

C. Cornejo 6/15/2018 SHF_RecPlan_Fig1_Vicinity_201806.mxd



TEICHERT MATERIALS

LEGEND:

- Project Site
- Yolo County Flood Control & Water Conservation District (YCFWCD) Parcel Boundaries (Approximate)
- Project Parcel Boundaries
- Shifler Property Boundary

SOURCE:

- Aerial Photography Provided by ESRI Basemaps & Affiliates (DigitalGlobe: July 08, 2016)

0 550 1,100 Feet

DISCLAIMER:

The data was mapped for planning purposes only. No liability is assumed for the accuracy of the data shown.

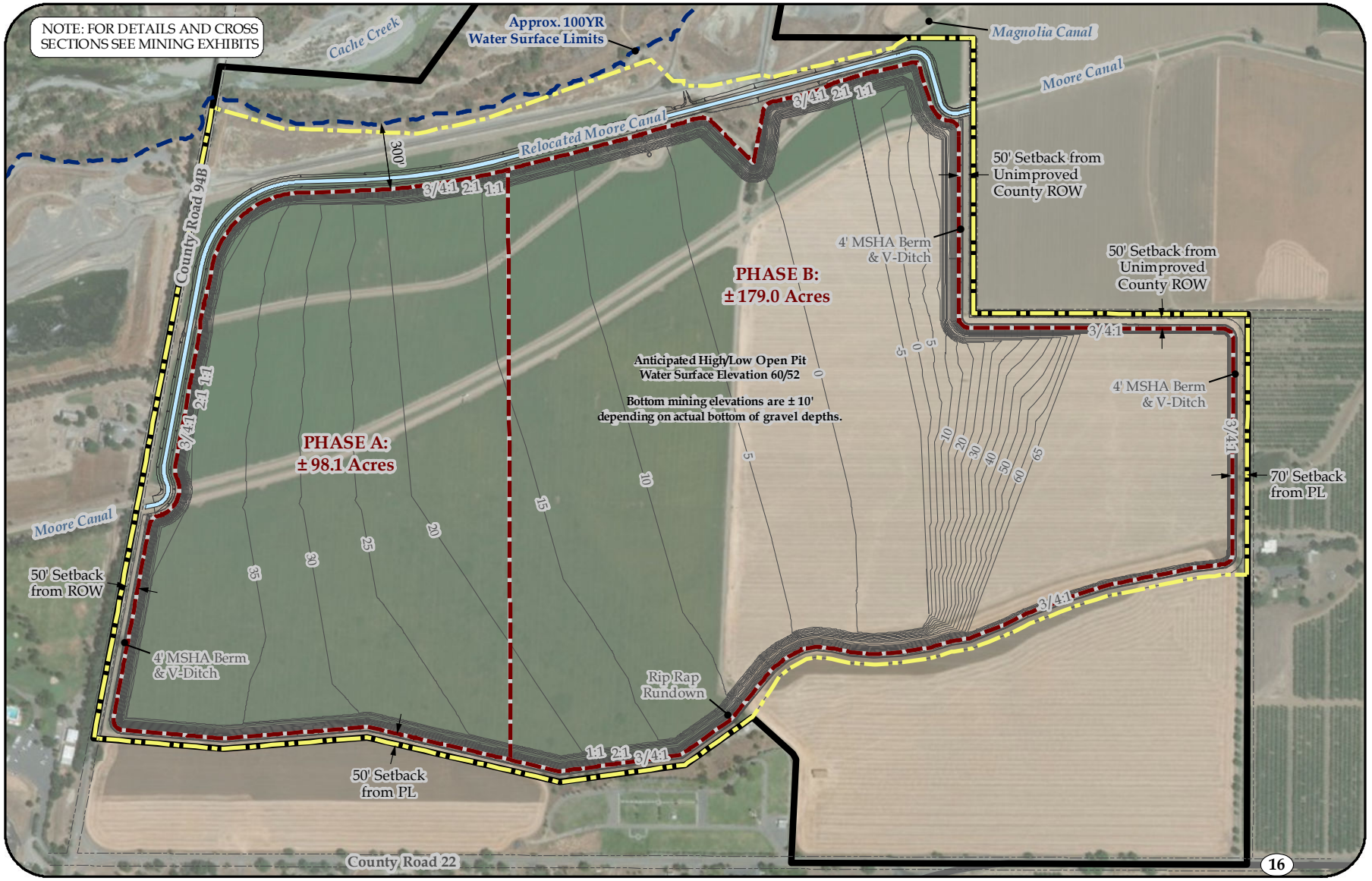
FIGURE 2

SITE MAP

RECLAMATION PLAN
SHIFLER PROPERTY
TEICHERT MATERIALS

YOLO COUNTY, CALIFORNIA

C. Cornejo 6/15/2018 SHF_RecPlan_Fig2_Site_201806.mxd



TEICHERT MATERIALS

LEGEND:

- Approx. 100YR Water Surface Limits
- Relocated Moore Canal
- Proposed Mining Contours
- Proposed Mining Phases: Total ± 277.1 Ac.
- Project Site
- Shifler Property Boundary

SOURCE:

- Approx. 100YR Water Surface Limits Per Separate Hydraulic Report by Cunningham Engineering (Jan. 26, 2016)
- Mining/ Relocated Moore Canal Provided by Cunningham Engineering (Feb. 2016)
- Aerial Photography Provided by ESRI Basemaps & Affiliates (DigitalGlobe: July 08, 2016)

0 350 700 Feet

DISCLAIMER:

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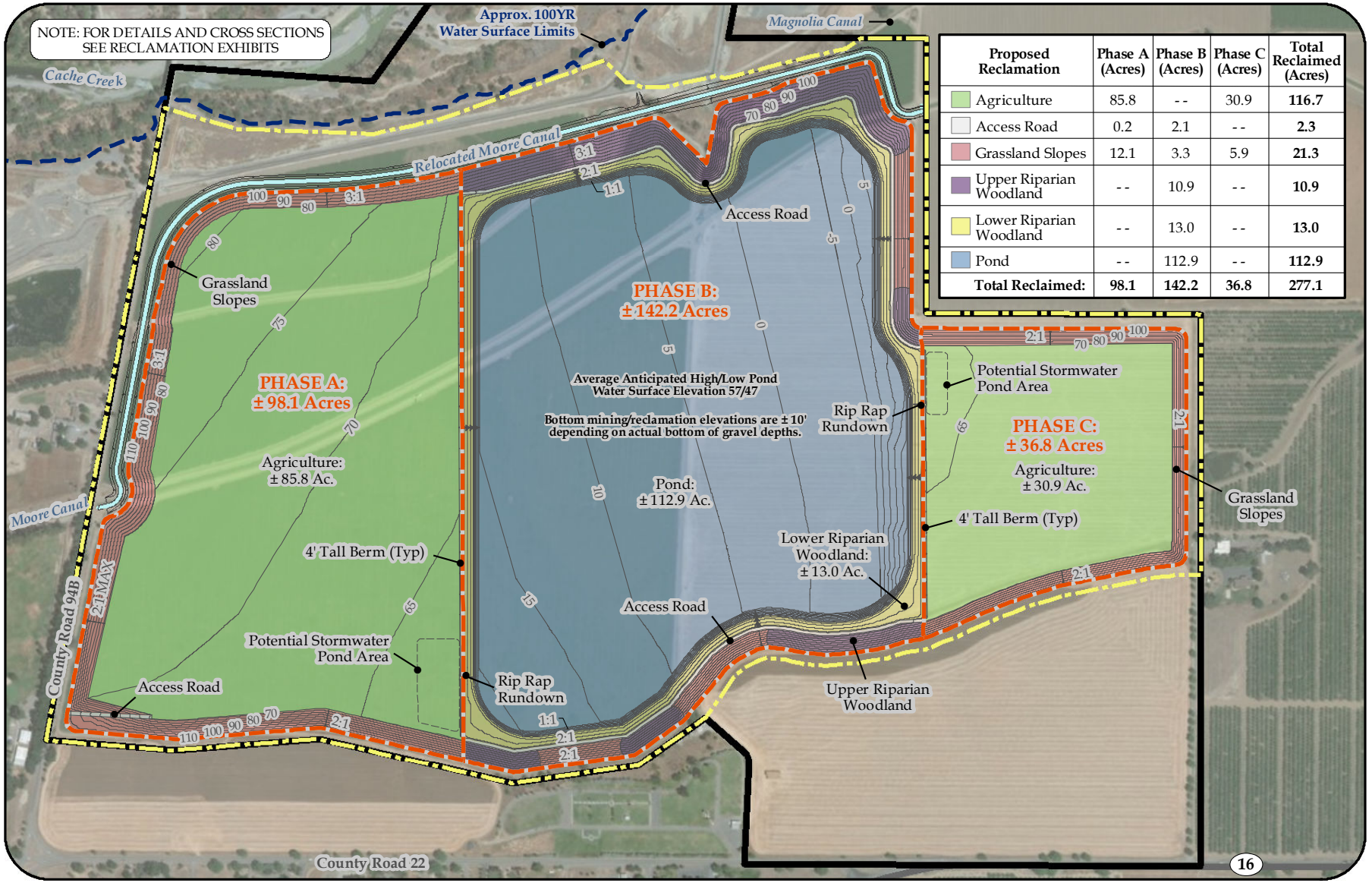
FIGURE 3

PROPOSED MINING AREA

RECLAMATION PLAN SHIFLER PROPERTY TEICHERT MATERIALS

YOLO COUNTY, CALIFORNIA

C. Cornejo 6/15/2018 SHF_RecPlan_Fig3_Mining_201806.mxd



Proposed Reclamation	Phase A (Acres)	Phase B (Acres)	Phase C (Acres)	Total Reclaimed (Acres)
Agriculture	85.8	--	30.9	**116.7**
Access Road	0.2	2.1	--	**2.3**
Grassland Slopes	12.1	3.3	5.9	**21.3**
Upper Riparian Woodland	--	10.9	--	**10.9**
Lower Riparian Woodland	--	13.0	--	**13.0**
Pond	--	112.9	--	**112.9**
Total Reclaimed:	**98.1**	**142.2**	**36.8**	**277.1**

TEICHERT MATERIALS

LEGEND:

- Approx. 100YR Water Surface Limits
- Relocated Moore Canal
- Proposed Reclamation Contours
- Proposed Reclamation Phases: Total ± 277.1 Ac.
- Project Site
- Shifler Property Boundary

SOURCE:

- Approx. 100YR Water Surface Limits Per Separate Hydraulic Report by Cunningham Engineering (Jan. 26, 2016)
- Reclamation/ Relocated Moore Canal Provided by Cunningham Engineering (Feb. 2016)
- Aerial Photography Provided by ESRI Basemaps & Affiliates (DigitalGlobe: July 08, 2016)

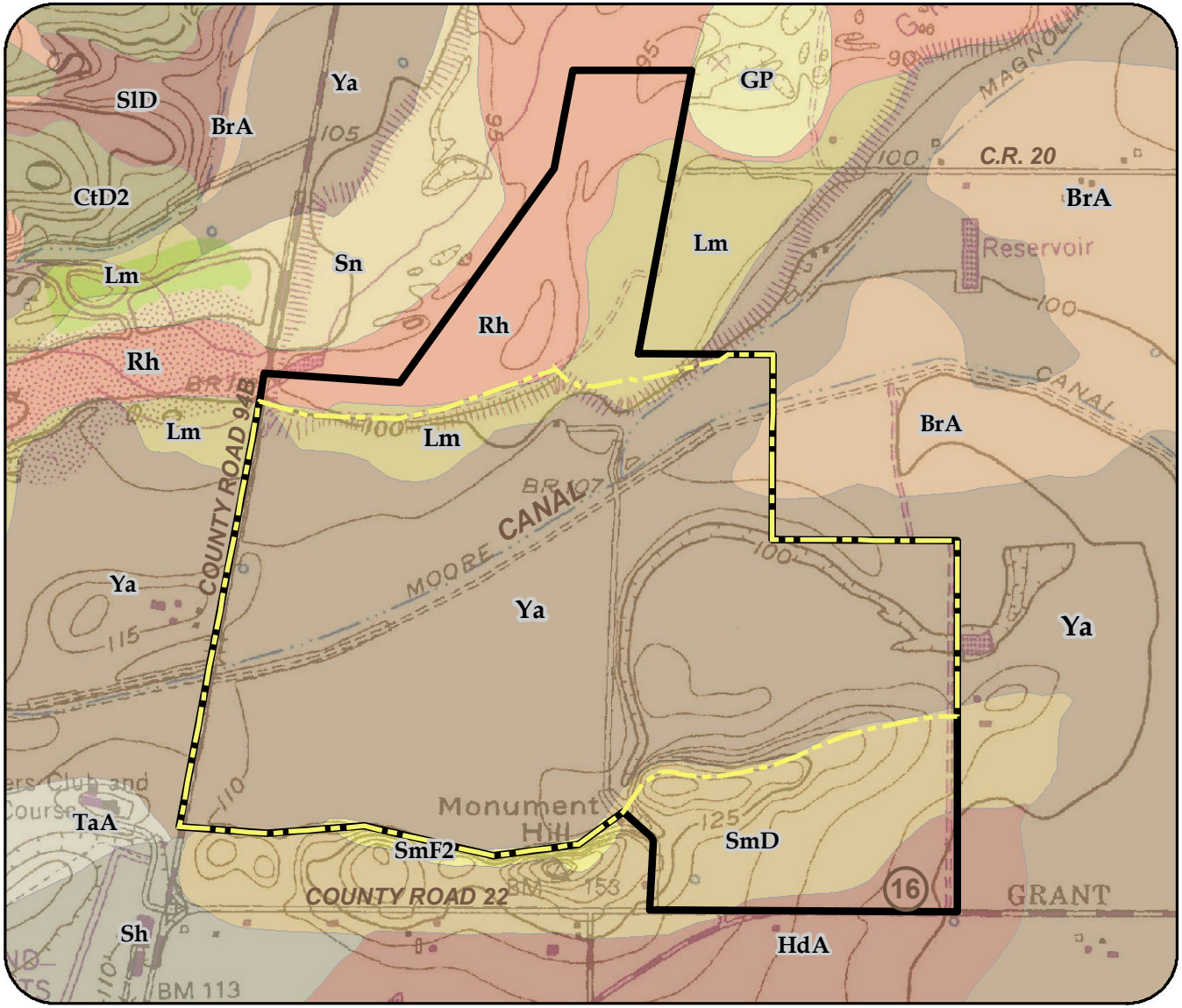
0 350 700 Feet

DISCLAIMER:

The data was mapped for planning purposes only. No liability is assumed for the accuracy of the data shown.

FIGURE 4
PROPOSED RECLAMATION-AGRICULTURE & HABITAT COMMUNITIES
RECLAMATION PLAN
SHIFLER PROPERTY
TEICHERT MATERIALS
YOLO COUNTY, CALIFORNIA

C:\Cornejo 6/15/2018 SHF_RecPlan_Fig4_Rec_201806.mxd



NATURAL RESOURCES CONSERVATION SERVICE SOIL TYPES:

- BrA- Brentwood silty clay loam, 0 to 2 percent slopes
- CtD2- Corning gravelly loam, 0 to 12 percent slopes, MLRA 17
- GP- Gravel pits
- HdA- Hillgate loam, moderately deep, 0 to 2 percent slopes
- Lm- Loamy alluvial land
- Rh- Riverwash
- Sh- San Ysidro loam, 0 to 5 percent slopes, dry, MLRA 17
- SlD- Sehorn cobbly clay, 2 to 15 percent slopes
- SmD- Sehorn-Balcom complex, 2 to 15 percent slopes
- SmF2- Sehorn-Balcom complex, 30 to 50 percent slopes, eroded
- Sn- Soboba gravelly sandy loam
- TaA- Tehama loam, 0 to 2 percent slopes, loamy substratum, MLRA 17
- Ya- Yolo silt loam, 0 to 2 percent slopes, MLRA 17
- Project Site
- Shifler Property Boundary

TEICHERT MATERIALS

SOURCE:

Soil Survey Provided by NRCS
(Version 13, Sept. 13, 2017)

USGS 7.5' Quad: Woodland

0 600 1,200 Feet

DISCLAIMER:

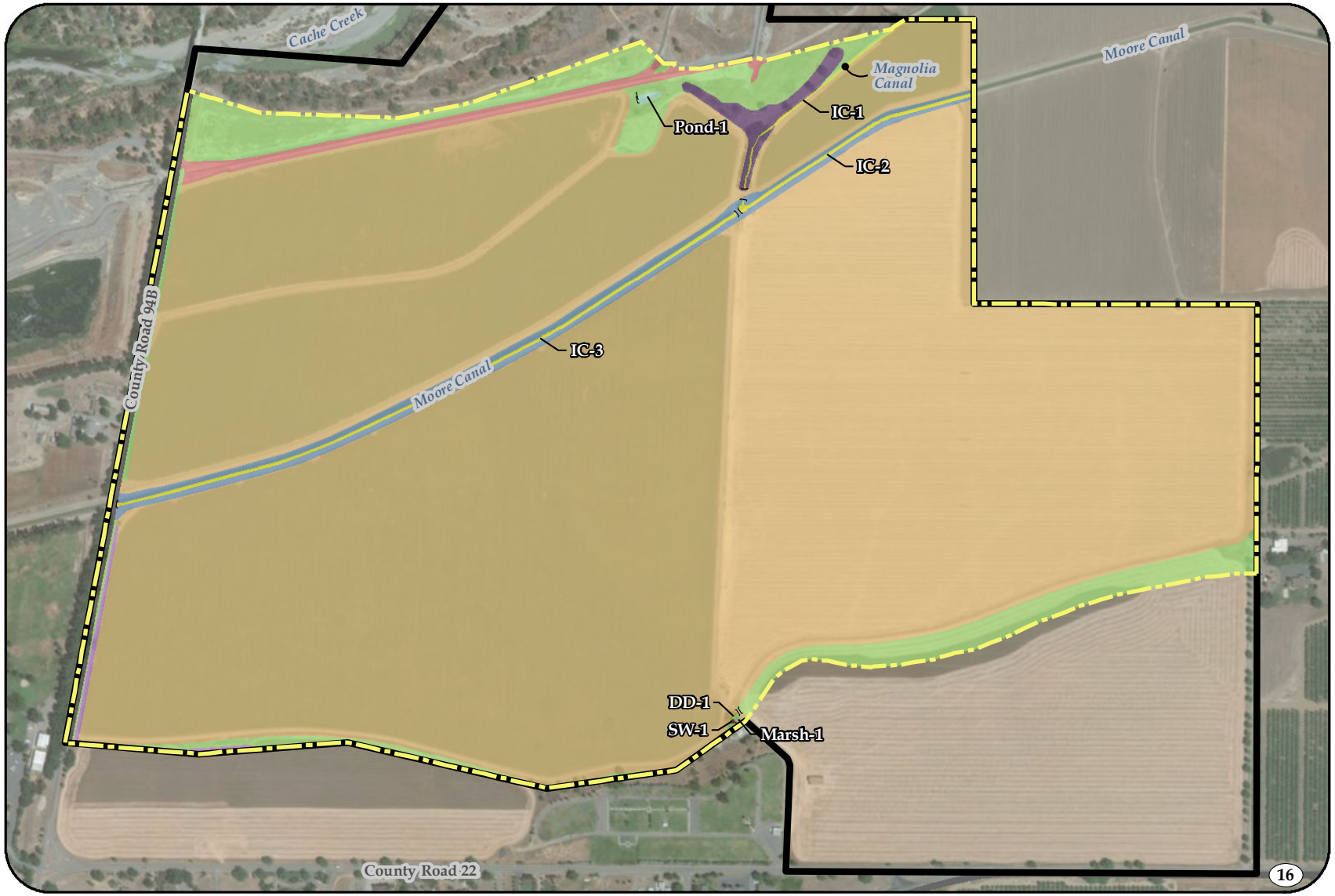
The data was mapped for planning purposes only.
No liability is assumed for the accuracy of the data shown.

FIGURE 5

NATURAL RESOURCES CONSERVATION SERVICE SOIL TYPES

RECLAMATION PLAN
SHIFLER PROPERTY
TEICHERT MATERIALS
YOLO COUNTY, CALIFORNIA

C. Cornejo 6/15/2018 SHF_RecPlan_Fig5_Soils_201806.mxd



TEICHERT MATERIALS

LEGEND:

- Culvert

WETLANDS:

- Seasonal Wetland
- Seasonal Marsh

OTHER WATERS:

- Pond
- Irrigation Canal
- Drainage Ditch
- Agriculture
- Annual Grassland/ Ruderal
- Canal/ Maintenance Road
- Conveyor/ Gravel Road
- Existing Landscaping
- Oak Woodland
- Paved Road
- Project Site
- Shifler Property Boundary

0 350 700 Feet

SOURCE:

- Existing Features Provided by Teichert (April 2016)
- Wetland Features Provided by ECORP (Sept. 2010)
- Aerial Provided by ESRI Basemaps (DG: July 8, 2016)

DISCLAIMER:

The data was mapped for planning purposes only.
No liability is assumed for the accuracy of the data shown.

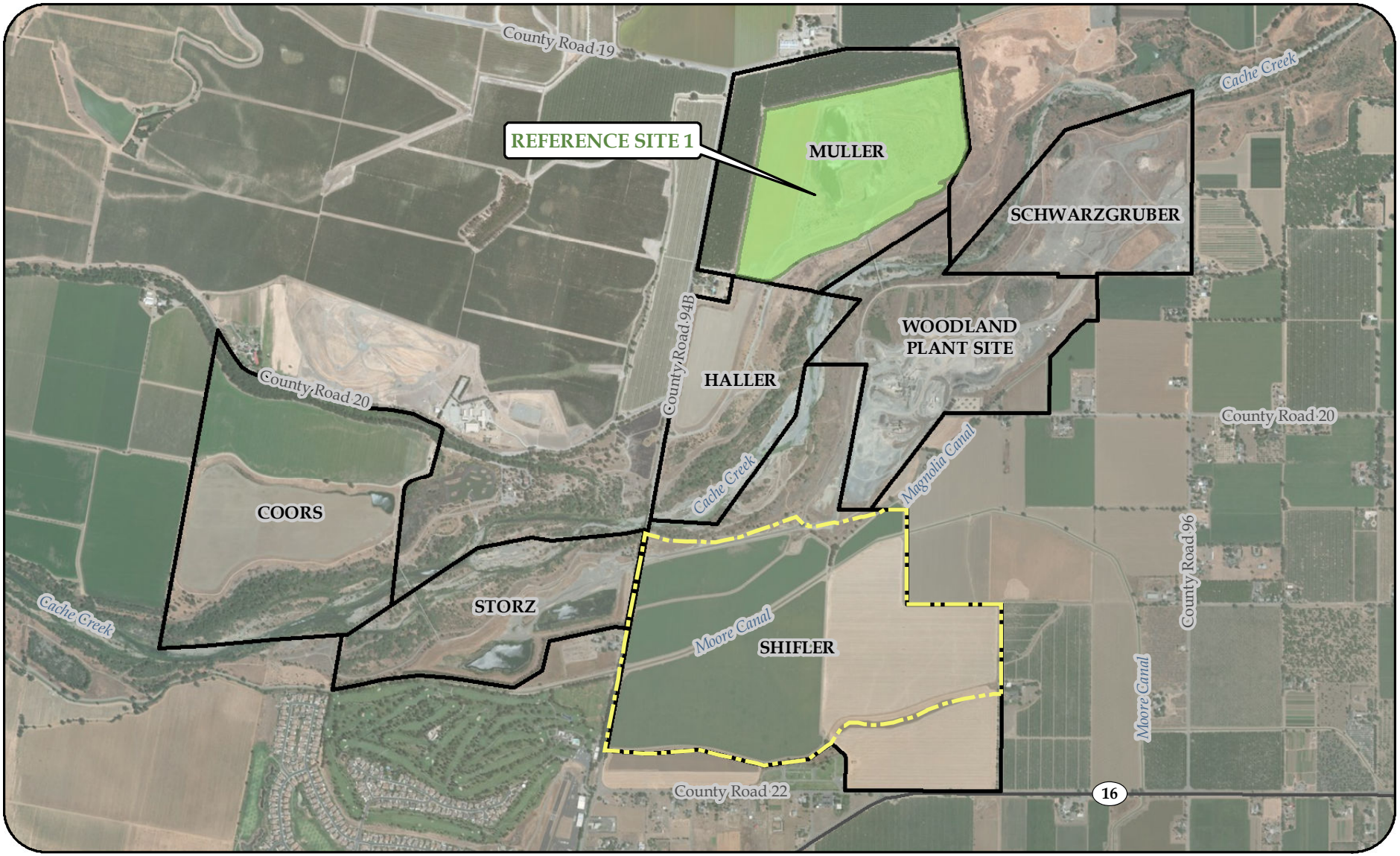
FIGURE 6

EXISTING HABITATS, WETLANDS AND FEATURES

RECLAMATION PLAN
SHIFLER PROPERTY
TEICHERT MATERIALS

YOLO COUNTY, CALIFORNIA

C. Cornejo 6/15/2018 SHF_RecPlan_Fig6_Bio_201806.mxd



TEICHERT MATERIALS

LEGEND:

- Reference Site 1: Muller
- Project Site
- Property Boundaries

SOURCE:

Aerial Photography Provided by ESRI Basemaps & Affiliates (Digital Globe: July 08, 2016)

0 1,000 2,000 Feet

DISCLAIMER:

The data was mapped for planning purposes only. No liability is assumed for the accuracy of the data shown.

FIGURE 7

REFERENCE SITE

RECLAMATION PLAN
SHIFLER PROPERTY
TEICHERT MATERIALS

YOLO COUNTY, CALIFORNIA

C. Cornejo 6/26/2018 SHF_RecPlan_Fig7_RefSites_201806.mxd

FIGURE 8

REFERENCE SITE 1: MULLER RECLAMATION PLAN AND HABITAT COMMUNITIES

RECLAMATION PLAN
SHIFLER PROPERTY
TEICHERT MATERIALS

YOLO COUNTY, CALIFORNIA

LEGEND

- Access Road
- Agriculture: ± 32 Acres
- Grassland Slopes: ± 18 Acres
- Low Density Oak Woodland/ Grassland: ± 11 Acres
- Native Hedgerow Planting: ± 1 Acre
- Open Water/ Seasonal Marsh: ± 27 Acres
- Riparian Upland: ± 40 Acres
- Riparian Wetland: ± 6 Acres
- Property Boundary

N W E S

0 250 500 Feet

SOURCE:

- Updated Reclamation GPS (May 2012)
- Aerial Photography Provided by ESRI Basemaps & Affiliates (DigitalGlobe: July 08, 2016)

DISCLAIMER:

The data was mapped for assessment purposes only. No liability is assumed for the accuracy of the data shown.

TEICHERT MATERIALS

C. Cornejo 6/26/2018 SHF_RecPlan_Fig8_Muller_201806.mxd

APPENDIX A

Teichert Shifler Project
Agricultural Feasibility Study

Eco Synthesis
SCIENTIFIC & REGULATORY SERVICES, INC.

Teichert Shifler Project

Agricultural Reclamation Feasibility Study

Prepared by:

Adrian Juncosa, PhD

Prepared for:

Teichert Aggregates
3500 American River Drive
Sacramento, CA 95864

September 16, 2017

16173 Lancaster Place, Truckee, CA 96161 · Telephone: 530.412.1601 · E-mail: ajuncosa@ecosynthesis.com

SUMMARY

This report discusses the feasibility of reclamation of a portion of the Shifler project site into prime agricultural land, and provides recommendations for soil salvage and placement to achieve that goal.

Soils of the mining area are mapped by the USDA Natural Resources Conservation Service entirely as Yolo loam, which is a very deep silt loam classified as a Mollic Xerofluvent, having only a very slight horizonation between the A and C horizons. There is a subtle color change, but no consistent and substantial change in texture or nutrient content.

Soil test pits were studied at 19 locations, and samples obtained and analyzed for nutrient content and texture. Results of laboratory analysis indicate that there is generally no significant differentiation between "topsoil" and subsoil for the purposes of agricultural reclamation, and that almost all of the material studied, down to a depth of at least 10 feet in most pits, was suitable for placement as the agricultural soil surface layer. Based upon laboratory results, all soils that are salvaged from a depth of up to 10 feet and stockpiled for the purposes of resoiling of the agricultural field would be expected to have sufficiently similar nutrient content that they may be mixed and stockpiled as one salvage stockpile, without separation of material to be placed as subsoil and topsoil. With the application of irrigation and fertilization practices that are commonly utilized in the region, yields from the reclaimed agricultural land could reasonably be expected to meet mining ordinance performance criteria.

Wet mining areas will be backfilled with waste fines up to at least five feet higher than the level of average annual high groundwater; at a minimum, the uppermost four feet of the backfill will be salvaged Yolo loam and sloped to drain (similar surface topography to the present fields).

Analysis of temperature data from June 2015 to February 2016 indicates that the below-grade agricultural field will have a suitable temperature range for agricultural production. Temperature differences between a present day field at grade and a reclaimed field 40 feet below grade were slight, and if anything were more favorable for agriculture in the below-grade field than the control site: nighttime temperatures during cold periods of the year were not as low, and daytime temperatures during warm months were not quite as high as the control site. The presence of an even lower pond level next to the below-grade field (as will be the case at Shifler) explains this result.

Soil and temperature studies demonstrate that post-mining reclamation to prime agricultural land is feasible.

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Appendix

1 INTRODUCTION

1.1 Site Description and Project Summary

This report discusses the feasibility of, and procedures for, reclamation of the majority of the Teichert Shifler Project (Project) into prime agricultural land by the time of project closure.

The Project site is located a short distance to the south of Cache Creek in Yolo County, west of the City of Woodland. The majority, but not the entirety, of the site is proposed to be mined (the "Mining Area") and is currently used for agriculture and is classified as prime agricultural land; portions of the site outside the mining area are in ruderal native and non-native vegetation.

The Mining Area will be mined to levels below the groundwater elevation ("wet mining"), and commercial aggregate will be separated from waste fines. These waste fines will be used to bring a portion of the Mining Area up to the average annual groundwater elevation, or higher, then salvaged soil will be placed to achieve reclamation into prime agricultural land. A portion of the Mining Area will remain as a pond at closure.

Mining will create steep slopes near the Mining Area limits, which will be backfilled to establish slopes of 2:1 gradient or gentler in all areas above the average high groundwater level.

1.2 Agricultural Reclamation Overview and Objectives

The essence of all planned disturbed-land rehabilitation is to establish soil conditions that support the desired post-project vegetation. Ideally, this is achieved by salvaging and stockpiling appropriate soils, perhaps supplementing them with other growth media or amendments, and reestablishing the desired soil profile as disturbance is completed.

In order to determine what those supportive soil conditions are, one must understand how the desired post-project ecosystem functions. Agricultural systems may be highly managed, but they are fundamentally simply non-native vegetation types that produce plant parts that we find useful. The Yolo County Off Channel Surface Mining Ordinance and Yolo County Surface Mining Reclamation Ordinance (collectively, "Ordinance") specify that the applicable definition is that of the Williamson Act (sections 51200-51207 of the California Government Code). The present report discusses both the Williamson Act definition of prime agricultural land, and the definition of prime farmland provided by the California Department of Conservation (DOC), which are neither equivalent nor interchangeable. However, the latter definition includes details about soil characteristics that are relevant to the feasibility and methods of reclamation into prime agricultural land use as well. We are confident that the reclamation approach that is analyzed and recommended in the present feasibility report will achieve both the Williamson Act and DOC definitions and thus meet the Ordinance requirements with respect to reclamation of productive agricultural land.

1.2.1 DEFINITION AND DESCRIPTION OF AGRICULTURAL LANDS

Prime Agricultural Land (Williamson Act)

Section 10-4.220 of the Ordinance cites the Williamson Act, specifically California Government Code Section 51201, for the definition of prime agricultural land. This section reads as follows:

51201 (c). "Prime agricultural land" means any of the following:

1. All land that qualifies for rating as class I or class II in the Natural Resource Conservation Service land use capability classifications.
2. Land which qualifies for rating 80 through 100 in the Storie Index Rating.
3. Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture.
4. Land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars ($200) per acre.
5. Land which has returned from the production of unprocessed agricultural plant products an annual gross value of not less than two hundred dollars ($200) per acre for three of the previous five years.

Prime Farmland (DOC)

Prime farmland is defined by the DOC primarily on the basis of soil profile characteristics, with the additional requirement of irrigation. The details of the soil profile provided in the DOC definition are discussed in Section 2.4, along with information from the soil survey data and from site observations that are pertinent to it.

Functional Overview of Agricultural Reclamation

Agriculture, and specifically prime agricultural land or prime farmland, is a distinctive ecosystem in two ways: 1) plant growth is largely dependent on irrigation (which is a key element in the DOC definition of the term); and 2) the species grown may change from time to time, and even from season to season. The present agricultural use of the Shifler site is for annual crops rather than trees, so the present discussion is directed primarily at that use, though reclamation to annual crop use, as described here, does not preclude future conversion to tree crops.

This latter characteristic (variable species composition) may result from variation in climate, availability and amount of water for irrigation, other inputs, market factors, desire to maintain long-term soil fertility, and/or avoidance of plant pests of one or another phylogenetic type. Since the "revegetation" is variable, soil studies and specifications are not tailored to the ecology of a specific desired community, but rather merely to be generally suitable for major crops that are commonly grown in the Woodland area (irrigated row crops and orchards).

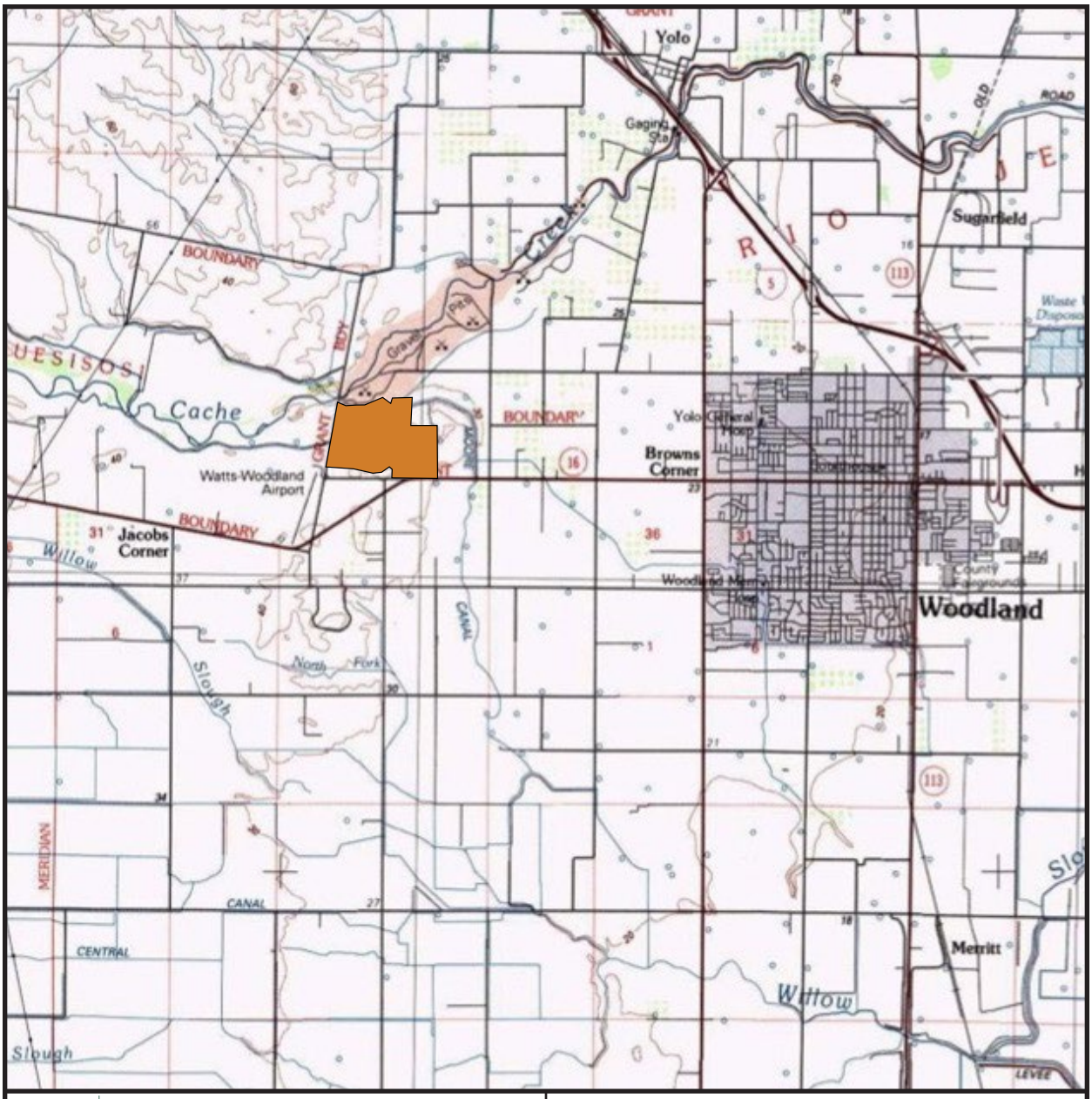
Agricultural Reclamation Objectives

Considering the additional requirements established by the Ordinance, the following objectives have been established for Project reclamation:

- Salvage and stockpiling of a sufficient amount of soil to provide the slope backfill and the prime agricultural land soil profile;
- Placement of a post-reclamation agricultural soil profile that will support production that meets the definition of prime agricultural land, relying in part upon the DOC description of prime farmland for guidance with respect to the characteristics of the soil profile;
- Establishment of a reclamation surface at least five feet higher than average annual high groundwater elevation at the Project site;

The present feasibility study also addresses several additional subjects:

- Determination of whether the soils of the upper pre-project soil profile differ sufficiently from the lower profile to merit segregation of "topsoil" and "subsoil" during salvage and stockpiling;
- Determination of the minimum thickness of salvaged soil that must be placed to achieve reclamation objectives; and
- Evaluation of possible concerns related to differences in temperature regime between the current elevation of agricultural fields and the post-reclamation topography.



Eco Synthesis

SCIENTIFIC & REGULATORY SERVICES INC

Teichert Shifler Project

Agricultural Reclamation Feasibility Study

Figure 1. Location Map

Project site (approximate)

Scale: Approximately 1:100,000 (1"=8,333')

North

1.3 Current Prime Agricultural Land Use

Data in this section was provided by the farming operation that leases the land that includes the project site. Crops planted on the Shifler site in 2009-2014 have included wheat, canola, tomatoes, and cucumbers. Selection of crop is made on the basis of various factors, but most notably the availability of irrigation water. Not only the amount but the mode of application of irrigation affects yields. For example, two large fields that had previously been planted with tomatoes and irrigated with surface water was subsequently equipped with subterranean drip irrigation, increasing the commercial yield by almost 25 percent. In 2013-2014, however, it was known early in the season that irrigation water would be in short supply or entirely unavailable, consequently, the same field was planted with wheat.

The present and recent agricultural use of the Shifler site is for annual row crops rather than trees, so the present discussion is directed primarily at that use, though reclamation to annual crop use does not preclude future conversion to tree crops, which are also commonly grown in the region and provide higher commercial yields than do row crops.

1.3.1 RECENT PRODUCTION

A summary of minimum and average yields for the crops that have been grown in the Project site from 2009 to 2014 are provided in Table 1-1 (following page). Some subareas of the site are consistently more productive than others, irrespective of irrigation, but for the purposes of evaluating agricultural reclamation, which will entail salvage, mixing, and replacement of soils, it is reasonable to present averages. Minimum yields for the least productive fields, and average acreage-weighted yields for all fields where a particular crop was grown, are provided.

See Section 5 for additional discussion of crop production.

Table 1-1. Summary of recent yields from agricultural fields within the proposed mining area (in tons/acre [t/ac] unless otherwise noted). Wheat yields are tons of grain.

Year	Wheat Minimum	Wheat Average	Tomatoes	Sunflower Seed
2009	2.1	2.10		
2010	3.65	3.79	41.81	
2011	3.06	3.06		
2012			52.43*	
2013	2.64	2.64	52.93*	
2014	1.01	2.23		1414 lbs/acre
2015	1.53	1.53		1523 lbs/acre
2016	2.78	2.78	55*	
Other				
canola	Yield is $1,350/acre (sold by acre, not by weight of harvest).			
cucumbers	12.64 t/ac	Only grown once.		
safflower	1.66 t/ac	Only grown in 2015		

* With subterranean drip irrigation system in use. 2010 irrigation had been via ditches.

2 SOIL STUDIES

2.1 Soil Survey

Virtually the entirety of the proposed mining area is mapped as Yolo series, a fine-silty series of Mollic Xerofluvents (NRCS, 2015). Yolo loam is a very fine textured loam with almost no textural differentiation (most layers of the typical pedon are silt loam, to a depth of 65 inches; only the [buried] Ab is silty clay loam), and only minor color difference, between the A horizon (10YR 3/2 and 3/3 moist) and the C horizon (2.5Y 4/4 and darker). There is no B horizon in Entisols. Though these colors are on different hue pages in the Munsell color book, examination of the relevant chips shows that the color difference is subtle. The A horizon is neutral (pH 6.7 to 7.3 in the reference pedon) and the C horizon is mildly alkaline (pH 7.4).

Yolo silt loam is well drained and, despite the fine texture (silty rather than particularly clayey), has moderate permeability. However, tillage pans that reduce permeability have developed over large areas of the series' extensive geographic occurrence. Uses identified in the official series description include row, field, and orchard crops. No cemented or strongly compacted tillage pan was observed in the test pits (see below).

Notably, the pedon description cites the presence of many to common very fine roots to significant depth (33 inches; fewer such roots at greater depths), and the presence of many very fine tubular pores all the way to the maximum observed depth (65 inches). Although the plow layer (Ap horizon, normally no more than 8-12 inches thick) is the most important soil layer for agriculture, lower soil layers are also important to productivity, especially in a water-limited environment such as California.

2.2 Soil Test Pits

In addition to the original exploratory borings, 19 soil pits (at locations shown in Figure 2) were excavated by hand, backhoe, and excavator to examine the soil profile and obtain samples for laboratory analysis, determine the rooting behavior of the current year's crops (wheat), and to record details that could be of importance in determining the approach to soil management. Sites for the test pits were scattered across the proposed mining area, with representation of the whole range of depth to commercial aggregate as revealed by test drilling. Observations were logged by strata that were recognizable visually or by texture, but laboratory samples were collected by one foot increments (or thicker in the case of deep samples obtained with an excavator or backhoe bucket). This sampling approach would be unconventional in a standard pedological soil study, where soil samples are analyzed by observed horizons. However, it is more useful for assessment of soil salvage and application for mine reclamation, because it is typically infeasible to adjust soil recovery depth at a resolution of fractions of a foot (or inches). If soil lifts are to be recovered and stockpiled separately, the practical increment thickness is one foot or more.

Sampling of the shallower pits (up to seven feet deep) was in increments of one foot. Sampling of the deepest pits (up to 14 feet deep) was in increments of greater thickness and was approximate. A total of 91 separate soil samples were sent for laboratory analysis of nutrient content and other parameters.

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Legend

✶TWSx Test Pit Location (approx.)

Teichert Shifler Project

Figure 2. Soils Test Pit Locations

Scale approximately 1:7,800 (1″=650′)

2.3 Results

The 22 exploratory boreholes within the Mining Area had an average overburden/topsoil depth of 10.9 feet (median 10.5 feet). All 27 boreholes (including five outside the Mining Area footprint) had an average overburden/topsoil depth of 12.5 feet (median 12.0 feet). The nature of this layer was elucidated by the laboratory results from the 19 additional soils test pits, which are summarized in Table 2-1 by depth increments. The complete set of all soil data is provided in Appendix A.

The test pits substantially confirmed the mapping of Yolo series loam throughout the proposed mining area, with some minor textural variations from the typical pedon that is described in the official series description. Most particularly, the observed soil texture based on actual particle size analysis (percent sand, silt, and clay per USDA definitions) was generally silty clay or silty clay loam rather than silt loam. Although some slight compaction below the plow depth was observed in some pits, there is no development of a pronounced tillage pan despite the clayey texture. This is a sign of good agricultural soil management.

With the exception of some slightly higher, but still quite moderate, results for nutrients that are best interpreted as being associated with normal agricultural applications of nitrogen, phosphorus, and potassium compounds in fertilizers, the laboratory results are remarkably consistent throughout the entire depth of soil and overburden that was studied for this soils analysis: essentially, it is all suitable for use as reclamation topsoil for the purpose of reclamation into prime agricultural land use. The five-to-six- foot depth increment for the first round of sampling shows notably lower nutrient values, however, this is the average of only two samples, one of which (TW12F) was 88 percent medium sand and therefore would be expected to have exceptionally low nutrient content. The other sample from this depth range (TWS4F) had similar values to samples from higher levels.

Laboratory results for pH consistently show a lower, but still nearly neutral, pH near the surface (mostly 6.5 to 7.0, with outliers as low as 5.9) and a slightly more alkaline pH lower in the soil profile. This is exactly as noted in the official soil description for Yolo soil.

Organic content of the soils is relatively low (average of less than 1.7 percent, even in the uppermost layer), but decreases only very slowly with increase in depth. Notwithstanding the low organic content, cation exchange capacity throughout the sampled depth is perfectly suitable for use as agricultural soil.

Finally, no redoximorphic features or other features (such as gley colors, depletion, and so on) suggestive of anaerobic conditions were encountered in soils at any depth in any of the soil test pits. This suggests that the present soil profile is not subject to prolonged seasonal saturation.

Table 2-1. Summary of laboratory analysis of soil samples from 19 test pits at the Shifler site (see Appendix A for complete results table). Mean values for cation saturation may not be strictly mathematically valid given the standard methodology used to compute these parameters, but provide a generally useful comparison of the likely results if samples from all test pits had been composited by depth increments. One sample from the entire soil study is not included below, but is present in the full data table in Appendix A. It was a single spuriously very sandy sample from the depth range of 5-6 feet at pit number 12 (88 percent sand). Unsurprisingly, levels of plant-available nutrients in that sample were much lower than in any other samples, including some from depths of up to about 14 or 15 feet.

Depth	Organic (% rating)	Est. N Release (lb/acre)	P (Weak Bray; ppm)[1]	P ($NaHCO_3$; ppm)[2]	K (ppm)	Mg (ppm)	Ca (ppm)	Na (ppm)	pH	CEC (meq/100 g)	Cation Saturation (%, computed)					Nitrate-N (ppm)	Sulfate-S (ppm)	Solube Salts (mmhos/cm)	Sand (%)	Silt (%)	Clay (%)	Texture
											K	Mg	Ca	H	Na							
Summary of samples from pits 1-12 (1-foot increments)																						
0-1′	1.1	52.5	32.6	25.9	218.6	959.3	1491.5	45.7	6.6	17.3	3.2	45.6	43.2	6.2	1.1	46.7	31.3	0.6	25	41	34	clay loam
1-2′	0.9	47.0	13.6	18.7	124.4	973.1	1519.3	54.4	7.1	16.2	1.9	49.3	46.8	0.5	1.4	28.3	15.8	0.4	26	40	34	clay loam
2-3′	0.8	45.2	7.4	11.4	95.1	989.3	1507.3	52.7	7.5	16.1	1.5	50.0	47.1	0.0	1.5	13.4	9.2	0.3	25	41	33	clay loam
3-4′	0.7	44.3	9.4	15.5	87.3	1000.1	1648.3	58.8	7.6	17.0	1.3	48.2	48.9	0.0	1.5	12.3	9.7	0.3	29	39	32	clay loam
4-5′	0.7	43.8	10.6	16.3	88.3	981.1	1778.3	64.5	7.7	17.5	1.3	46.5	50.6	0.0	1.6	16.1	11.8	0.3	33	40	27	(clay) loam
Summary of samples from pits 13 through 19 (2.5-foot increments). The first two rows below correspond approximately to the five rows of the section above.																						
0-2.5 ft	1.7	63	20	18	176	830	1497	30	6.8	13.9	3.0	43.9	47.6	4.7	0.8	20	6	0.3	25	38	37	clay loam
2.5-5 ft	1.6	61	8	14	80	949	1682	34	7.6	14.0	1.2	47.0	50.9	0.0	0.9	10	5	0.3	19	39	42	(silty) clay
5-7.5 ft	1.2	53	7	10	57	900	1548	33	7.9	13.1	1.0	47.9	50.2	0.0	0.9	10	3	0.3	32	34	33	clay loam
7.5-10 ft	1.3	56	6	11	62	986	1613	34	7.8	14.2	1.0	48.8	49.4	0.0	0.9	8	3	0.2	27	38	35	clay loam
>10 ft	1.1	52	7	9	64	939	1648	35	7.8	13.1	1.0	47.5	50.6	0.0	0.9	13	3	0.3	26	40	34	clay loam

[1] Weak Bray method is unreliable at pH >7.5; "n.a." is entered for these samples (values generally varied from 3 to 6: very low for agricultural soil).

[2] Olsen Method (sodium bicarbonate).

** Bicarbonate method is not reliable at pH <6.0, but value is provided anyway for this one sample.

The 2015 crop was winter wheat, which was selected to provide some commercial productivity in light of forecasts that irrigation water would be unavailable during the summer. A more commercially valuable crop such as tomatoes would have required irrigation water during the warmest part of the summer. The test pits confirmed the occurrence of living wheat roots and extensive very fine pores at depths throughout the soil profile, all the way down to five feet below the soil surface. In short, the test pits confirm that even a short-lived annual crop such as wheat utilizes a considerable depth of soil. Orchard crops, which are not currently grown on site, would be expected to utilize this depth of soil also.

Analyses for certain specific nutrients (e.g., nitrogen compounds) did not vary consistently with depth. To some extent, this is not surprising, because nutrient levels in crop fields, especially near the surface, are largely determined by the short-term and cumulative effects of application of fertilizer or other soil amendment (if any). Given that some of the individual fields within the proposed mining area are equipped with subterranean drip irrigation and others are not, and given that the cropping history of the various fields is not identical, variation in the nutrient analysis would be expected.

In general, organic matter content tends to be relatively low at all levels (less than 2.0 percent, often less than 1.0), magnesium content tends to be very high, and calcium and sodium content tends to be low. The levels of the three most important macronutrients (nitrogen, phosphorus, and potassium) are somewhat variable among the test pits and depths, but are customarily adjusted in agricultural practice by means of amendments.

At several of the test pits, a slight break in nutrient content was detected at about 24 inches, although others showed very little change in nutrient content from the surface to the bottom of the pit at a depth of four to six feet.

2.4 Prime Farmland Definition

The Ordinance definition of prime agricultural land is that of the Williamson Act, and is therefore based either upon very general soil characteristics or upon levels of commercial production (in terms of dollar value) or support of livestock. This definition consequently provides little guidance for the study of soil conditions on a particular site prior to mining or for the specification of the post-mining soil profile that would be expected to result in reclamation to prime agricultural land as defined by the Act and Ordinance. Accordingly, in making a reasonable inference as to the feasibility of agricultural reclamation, it is useful to consider a comparison of the characteristics of the soils that were observed in the Shifler test pits with the parameters noted in the DOC definition of Prime Farmland. For some parameters, the characteristics of the site's soils were derived from the NRCS soil survey data; for others, from the laboratory test results provided in Tables 1 and 2.

a. Water. *Definition:* Soils must have a xeric, ustic, or aridic moisture regime with available water capacity of at least 4.0 inches, and a developed irrigation water supply that is dependable and of adequate quality. *Shifler (NRCS):* Yolo series soil is a Xerorthent (xeric moisture regime) and has high available water capacity (about 11 inches). There is a developed irrigation system that is as dependable as the California climate permits, providing high quality irrigation water from the Moore Canal. Surface water allocations are provided by the Yolo County Flood Control and Water Conservation District (YCFCWCD).

b. Soil Temperature Range. *Definition*: Soils must have a frigid, thermic, or hyperthermic temperature regime (pergelic and cryic regimes are excluded). *Shifler* (NRCS): Yolo series has a thermic temperature regime.

c. Acid-Alkali Balance. *Definition*: Soils must have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches. *Shifler* (*laboratory*): Range of pH results for individual soil samples was 5.9 to 8.2.

d. Water Table. *Definition*: Soils have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown. *Shifler*: Yolo soils have a depth to water table of more than 200 cm (78.7 inches), which is sufficient to allow crops common to the area to be grown. In accordance with County ordinance, reclamation soil will be placed so as to maintain a minimum separation of five feet between the reclaimed soil surface and the average high groundwater level.

e. Soil Sodium Content. *Definition:* Soils can be managed so that, in all horizons within a depth of 40 inches, during part of each year the conductivity of the saturation extract is less than 4 mmhos/cm and the exchangeable sodium percentage is less than 15. *Shifler (laboratory):* Total conductivity from all soluble salts was 1.2 mmhos/cm or less in all samples. Exchangeable sodium was 3.2 percent or less in all samples.

f. Flooding. *Definition:* Flooding of the soil during the growing season occurs infrequently (less often than once every two years). *Shifler (NRCS):* Flooding rating for Yolo soil at the Shifler site is "none" meaning that the likelihood of flooding in any particular year is near zero.

g. Erodibility. *Definition:* The product of K (erodibility factor) multiplied by the percent of slope is less than 2.0. *Shifler (NRCS):* Yolo soil has a K factor of 0.43 (same value for whole soil or rock free), and reclaimed soil surface will be at a gradient of less than 4 percent (probably less than 1 percent), therefore the product will be less than 2.0.

h. Permeability. *Definition:* Soils must have a permeability rate of at least 0.15 cm/hour in the upper 20 inches if the mean annual soil temperature at 20 inches depth is less than 59 F. Permeability is not limiting if mean annual soil temperature is higher than 59 F. *Shifler (NRCS):* Yolo loam has a permeability of 3.24 cm/hour (may not be limiting anyway; mean annual temperature could not be ascertained).

i. Rock Fragment Content. *Definition:* In the upper six inches, soils must have less than 10 percent rock fragments coarser than three inches. *Shifler:* No rock fragments coarser than three inches were encountered in any soil test pits.

j. Rooting Depth. *Definition:* Soil has a minimum rooting depth of 40 inches. *Shifler (NRCS):* Soil survey data states that the depth to any type of restrictive layer is more than 200 cm (78.7 inches).

In summary, the soil survey data and laboratory results for general soil physical and hydrologic parameters, texture, organic and mineral nutrient content indicate that the entire sampled profile within the Mining Area, down to a depth of as much as 14 feet (maximum sampling depth), is suitable for use as the uppermost layer of a soil profile for reclamation of the site into prime farmland as defined by the DOC. Laboratory results indicate that it is not necessary to segregate a

"topsoil" and "subsoil" layer for successful reclamation as prime agricultural land. The thickness of the layer of salvaged soil that is placed on the agricultural surfaces must be at least 40 inches to meet the specification in item (j), above. Recommendations are discussed in Section 4.

Sufficient soils are available to recreate a soil profile that meets the DOC definition of prime farmland. As discussed elsewhere in this report, it is reasonable to infer that lands that meet the DOC definition of prime farmland will support the levels of production that meet or exceed those stated in the Williamson Act definition of prime agricultural land. Therefore, it is reasonable to conclude from the soils analysis provided above that reclamation into land meeting the Williamson Act definition of prime agricultural land is feasible.

3 CLIMATIC CONSIDERATIONS

The County received preliminary comments expressing concern about the possibility that cool air might pool in agricultural fields that are located in closed depressions at lower elevation than the pre-mining grades, and that this could adversely affect the feasibility of agricultural reclamation. The general principle that cooler air flows downward and can pool in topographic basins is well known, however, the climatologic literature on the subject generally pertains to large basins of many square miles in area (e.g., Salt Lake City basin). This section discusses results from monitoring of temperature in two experimental control locations and two locations that are topographically analogous to situations that will be created by the proposed Project. The proposed agricultural reclamation would not be located at the bottom of a simple large depression; instead, the agricultural field will be some tens of feet below grade, and a pond will be created at an even lower elevation (average grade separation of about 20 feet).

Temperature loggers were installed in the Shifler site and in three other locations in a parcel about one-half mile north of the Shifler site, where there is an agricultural field at unmodified grade (control), another agricultural field 40 feet below grade, and at an even lower level adjacent to that, where mining has left an area that is subject to ponding during a normal rainy season. This site is referred to as the "below-grade pond" even though it was not actually ponded throughout most of the temperature study; it was merely a basin at an elevation that was even lower than that of the below-grade field. Thus, the temperature study provides a comparison of two at-grade fields, to show what the regional range of variation is without alteration of topography, and temperature data from situations similar to the post-mining condition of the Shifler agricultural reclamation (that is, a below-grade field with an even lower depression adjacent to it).

Temperatures were recorded every 10 minutes from June 16, 2015, through February 3, 2016. This date range includes both the warmest and coldest months of the year, thus also of the growing season which is potentially year-round depending on the crops that are planted. Table 2 summarizes data for the whole period and for specific two-month periods. The full set of 33,383 lines of data is available digitally upon request.

Several relevant data comparisons were made between the temperatures at the at-grade control nearby to the below-grade sites and each other site (Shifler control, below-grade field, below-grade pond). Comparisons were made by subtracting each 10-minute temperature reading from the corresponding reading from the desired comparison site, then by averaging these results over the desired time ranges as shown in the table.

The below-grade field represents the future condition of the reclaimed Shifler prime agricultural land. Extracts from the whole data set were analyzed for daytime and nighttime for the two historically warmest months of the year (July-August) and the two coldest months (December-January). For simplicity of data processing, "daytime" was defined as the period from 6:00 AM to 5:50 PM, and "nighttime" was defined as 6:00 PM to 5:50 AM. We are confident that the results from using these definitions are sufficiently representative of the actual conditions during the sun-up and sun-down periods to support reasonable inferences about agricultural use.

Table 3-1. Summary of pairwise temperature comparisons (degrees Fahrenheit [° F] difference) between the control site and the Shifler present field and two nearby locations representative of proposed future mining topography. A positive number indicates that the site was warmer than the control; negative numbers, colder. Standard deviations are provided in parentheses.

Data range	Shifler	Below-grade field	Below-grade pond
All data (June 2015-February 2016)	1.00 (2.47)	-0.20 (2.15)	-0.67 (2.37)
July-August daytime	0.02 (2.09)	0.01 (2.32)	-0.60 (1.59)
July-August nighttime	1.03 (2.94)	0.25 (1.32)	0.45 (2.33)
December-January daytime	0.55 (1.57)	-1.78 (1.24)	-0.67 (1.87)
December-January nighttime	0.58 (1.17)	-2.14 (1.07)	-1.63 (2.13)

For the entire data set, the present Shifler field is one degree warmer than the control, but this difference is much smaller than the standard deviation, that is, the vast majority of values fall within the same ranges. The below-grade field (representative of the future condition of the reclaimed field) is only 0.2° F cooler than the control site, which is unlikely to be agriculturally important overall.

During the summer months, when the most temperature sensitive crops such as tomatoes or cucumbers are grown, the daytime temperatures of the below-grade field are insignificantly different from the control; likewise, the nighttime temperatures average 0.25° F warmer. Temperatures during the two coldest winter months would be expected to be 1.78° F cooler on average during the day and 2.14° F cooler during the night. While these differences are not statistically insignificant, from an actual agricultural perspective, they are unlikely to be important.

The winter row crop that has been grown in the past on the site is winter wheat, which is resistant to temperatures substantially colder than those observed, and indeed is most resistant to cold temperatures during the coldest part of the winter. Further, there is some reasonable concern that yield of woody crops such as vines and orchard fruits or nuts in California will be impaired due to increasing temperatures and consequent insufficiency of chilling hours. For these plants, the slightly lower winter temperatures of the reclaimed field that are expected on the basis of the current data set would actually be a benefit.

With respect to temperature, the DOC definition of prime farmland requires a frigid, thermic, or hyperthermic soil temperature regime. Though soil temperatures were not monitored, it is nearly certain that the soil temperature regime would remain thermic (and absolutely certain it would not become colder than frigid) even with the air temperature differences discussed here.

4 RECOMMENDATIONS

4.1 Overview

As noted above in Section 2, the nutrient analyses do not provide consistent guidance on the separation of different lifts of soil during pre-mining soil salvage. The test pit visual observations of the boundary between the A and C horizons revealed it to be found at an approximate depth of (18-) 24 inches (there is no B horizon in Entisols, including Xerofluvents). This is consistent with some laboratory analyses that showed a very slight shift in content of some nutrients at about 24 inches; however, others did not.

The test pits and observations of roots at considerable depths support a specification of replacing salvaged soil to a total depth of five feet on top of any other materials that might be applied to attain desired topographic grades. Given that pure sand was encountered in some test pits in highly productive fields at a depth of about five feet, that depth of salvaged soil would appear to be adequate for maintenance of long-term agricultural productivity.

The soils presently occurring on site have significant clay content, although the observations of structure and fine porosity show that there is a desirable degree of secondary aggregation to allow for adequate hydraulic conductivity and avoidance of saturation. Accordingly, to avoid excessive destruction of soil structure, soils should ideally be handled when they are as dry as possible, subject to air quality considerations pertaining to the possible generation of fugitive dust.

4.2 Salvage

The results of the present soil analysis indicate that the material available for salvage, down to a depth of at least ten feet, is all suitable for use as the uppermost layer of soil to support growth of agricultural crops common to the region. In terms of the observed characteristics of the soils and the parameters that were tested in the laboratory, there is no pronounced differentiation between an upper horizon and a lower one (or multiple horizons) for suitability as a prime farmland soil. In short, the laboratory results do not indicate that salvaged material should be segregated and stockpiled by lifts.

Accordingly, the recommended soil salvage procedure is for the entire ten foot depth of the soil profile and overburden to be salvaged as one supply of agricultural reclamation soil. In some portions of the site, the exploratory drilling showed the presence of commercial aggregate at depths of less than ten feet, so equipment operators should be attentive to the appearance and texture of the material as it is being salvaged, in order to avoid mixing any significant quantities of sand or gravel into the soil stockpile.

Yolo series soil has a high clay content, and although the in situ texture is friable, some portions of the Ap and upper C horizons, and the buried A horizon if one were to be present, are massive (not secondarily aggregated) in structure. Therefore, soil handling should take place when the soil is as dry as possible within the constraints of dust control considerations, so as to minimize the loss of soil structure.

After the initial recovery of a volume of soil sufficient to reclaim the final intended phase of operations, including construction of slopes and resoiling of areas to be future agricultural land, the remainder of the soil salvage can be placed directly for reclamation. However, at any point

where the active mining area exceeds the area that can be reclaimed with the stockpiled soil volume, then additional stockpiles shall be created to make up the potential future shortfall.

4.3 Stockpiling

A location where an ample stockpile of soil for reclamation of the final phase of reclamation can be left in place for the duration of the project operations should be selected on the basis of the pre-project exploratory drilling for commercial aggregate. Soil salvaged from the first phase of project operations should be stockpiled in this location and preferably moved a minimum number of times until the final phase of reclamation. Salvaged soil may not be used for purposes other than reclamation without prior County approval.

The soil stockpile should be constructed to meet the specifications provided by the Ordinance (Section 10-4.433): a maximum height of 40 feet or less, with slopes of 2h:1v or gentler, to minimize erosion and discourage use by bank swallows. During the bank swallow breeding season, slopes shall not exceed 1:1 even on a temporary basis: even when stockpiles are being disturbed for any other reason (soil removed or added), slopes shall be graded to a slope of 1:1 or less steep at the end of each work day. The top of the soil stockpile shall be graded to drain, at a slope of at least two percent (preferably three to five percent), so as to minimize the infiltration of rain water into the interior of the stockpile.

Soil stockpiles shall be seeded with cover vegetation to prevent wind and rain erosion. Since the laboratory results for the site showed that the available soils have relatively low organic content (many samples had less than one percent organic content rating), the more cover vegetation that is established, the better for future agricultural production.

4.4 Reclamation Soil Profile

The final depth of mining is currently expected to range from 40 to 110 feet below present grade.

Some mining will extend into groundwater; from this wet mining, fines will be separated from commercial aggregate and concentrated from slurry by settlement and evaporation. These waste fines will be used to backfill a portion of the mining area.

Once mining operations have attained the lowest depth from which useful aggregate material can be removed, a slurry of fines that are separated from the commercial aggregate during processing will be discharged onto the bottom of the mined area, so that the dried fines create a subgrade layer up to a the level where salvaged soil is placed to provide the agricultural soil profile. Although the waste fines are materials of a clayey to loamy texture and would be expected to be suitable for plant root growth, The discharge/placement of fines is expected to create an uneven or sloping upper surface, which should remain sloped but with a generally even surface so that the thickness of salvaged soil is more or less consistent. A sloping subgrade surface is preferable to a level one, because it creates a gradient that enhances lateral flow of subsurface water, thus minimizing the mounding of percolating water on top of the low-permeability fines.

To meet the DOC definition of the rooting zone of prime farmland, a minimum thickness of 40 of salvaged soil material (that is, soil recovered from the uppermost ten foot depth of the existing soil and overburden profile) must be placed directly, or from a stockpile, to create the final agricultural soil profile. This report recommends that this thickness be a minimum of four feet at all points,

which means a somewhat thicker layer of salvaged soil in places where the subgrade level (waste fines) slopes downward more steeply than does the agricultural surface. As always in reclamation, the thicker the placement of the uppermost growth medium, the better.

In order to facilitate irrigation, which is a key element in the DOC definition of prime farmland, the final surface of the areas intended to be used as agricultural land shall be graded to be nearly level, but to drain sufficiently as to prevent local ponding or saturation (for example, at a slope of one percent).

It is reasonable to expect that a reclamation soil profile meeting these recommendations would meet the definition of prime agricultural land (see Section 1.2.1).

4.5 Side Slopes

Mining will proceed to as close to the Mining Area boundary as is feasible, thus creating steep temporary pit side slopes. In all areas above average high groundwater level, these will be backfilled to a 2:1 or gentler slope to result in a permanent side slopes that can be revegetated to resist erosion. These side slope backfills consume considerable quantities of salvaged soil. When soil budgets and stockpile management tracking spreadsheets are established for the salvaged soil, this need should be continually accounted for, and, if necessary, as much non-agricultural fill material should be used to build the interior of the slopes as is feasible. A minimum thickness of one foot of salvaged soil should be placed to support erosion control revegetation.

price/ton in different counties [no price provided for Yolo Co.] but would produce $2,528 to $28,961/acre based on prices provided for other counties).

These figures suggest that it is feasible to reclaim prime agricultural land as defined by the Williamson Act and Ordinance at the Shifler site, by merely growing about one ton/acre of wheat, and that the projected production of 2.1 tons (equal or exceeding average for the lowest production year, 2009) easily meets that standard.

5 PRODUCTION

A summary of minimum and average yields for the crops that have been grown in the Project site from 2009 to 2014 are provided in Table 1-1 (Section 1.3), repeated here for convenience.

Table 1-1. Summary of recent yields from agricultural fields within the proposed mining area (in tons/acre [t/ac] unless otherwise noted).

Year	Wheat Minimum	Wheat Average	Tomatoes	Sunflower Seed
2009	2.1	2.10		
2010	3.65	3.79	41.81	
2011	3.06	3.06		
2012			52.43*	
2013	2.64	2.64	52.93*	
2014	1.01	2.23		
2015	1.53 (grain)	1.53 (grain)		1523 lbs/acre
2016	2.78 (grain)	2.78 (grain)	55*	
Other				
canola	Yield is $1,350/acre (sold by acre, not by weight of harvest).			
cucumbers	12.64 t/ac	Only grown once.		
safflower	1.66 t/ac	Only grown in 2015		

* With subterranean drip irrigation system in use. 2010 irrigation had been via ditches.

Section 10-5.601(c)(2) of the Ordinance requires an estimate of projected production of reclaimed agricultural lands. With the implementation of the reclamation recommendations in Section 4 of this report, along with application of irrigation (if water allocation is available) and fertilizer as is common agricultural practice in the Woodland area, it is reasonable to project that production would equal or exceed the lowest production level, averaged across the present cultivated Shifler land area on an acreage-weighted basis, for any of the five years for which records were available for the present study, namely, 2.1 tons/acre of wheat.

According to the California Department of Food and Agriculture (California County Agricultural Commissioners' Reports, Crop Year 2013-2014; CDFA, 2015), the average dollar value of one ton of wheat harvested in Yolo County in 2013-14 was $216.27, thus, the minimum projected yield would be worth about $432.54/acre, that is, more than twice the threshold to meet the Ordinance definition of prime agricultural land ($200/acre). All other row crops that have been grown on the Shifler site from 2009 to 2014 have much higher commercial yields (e.g., canola, $1,350/acre; tomatoes, minimum production of 41.81 t/ac x $83.59/t = $3,495/acre; cucumbers vary greatly in

6 CONCLUSIONS

This report provides information from the following sources:

- NRCS soil survey and data base;
- studies and laboratory analysis of soils in 19 test pits within the mining area;
- monitoring of temperatures at control sites and at sites that are analogous to the post-mining reclamation topography for the proposed project;
- crop production for five recent years; and
- crop values from the California Department of Agriculture summaries for 2013-2014.

This information supports the following conclusions:

- Ample quantities of soils that have suitable nutrient and textural qualities for use in agricultural reclamation are present and may be salvaged down to a depth of 10 feet without the need to segregate topsoil and subsoil. Average and median overburden depths both exceed 10 feet.
- The amount of available soil is sufficient to recreate a soil profile that meets the DOC definition of prime farmland; and such a soil profile can reasonably be expected to support levels of production that would equal or exceed the levels required to satisfy the Williamson Act definition of prime agricultural land.
- Projected crop production, based upon the average yield for the worst production year during the period 2009-2014, would be 2.1 tons/acre of wheat. This would have a commercial value of more than twice the threshold to meet the Wiliamson Act definition of prime agricultural land.
- The temperature regime of the proposed reclaimed agricultural field will be very similar to that of the present at-grade agricultural fields during the summer and will be slightly cooler during the winter. The latter difference is not expected to be agriculturally important for the common winter row crop (wheat) and may have a slight benefit in terms of chilling hours for wheat and for orchard crops if those are grown in the future.

Accordingly, this report concludes that it is feasible to reclaim prime agricultural land as proposed by the project's reclamation plan.

7 REFERENCES

California Department of Food and Agriculture (CDFA). 2015. California County Agricultural Commissioners' Reports Crop Year 2013-2014. Report dated December 31, 2015, prepared by CDFA, cooperating with the USDA National Agricultural Statistics Service, Pacific Region.

Natural Resources Conservation Service (NRCS). 2015. Custom Soil Resource Report for Yolo County, California. Report and data downloaded from WebSoilSurvey internet application on March 26, 2015 (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx).

Appendix A:

Soils Test Pit Laboratory Results

Appendix A. Laboratory results for soil samples collected within the Mining Area of the Teichert Shifler Project site.

Sample	Organic (% rating)	Est. N Release (lb/acre)	P (Weak Bray; ppm)1	P (NaHCO3; ppm)2	K (ppm)	Mg (ppm)	Ca (ppm)	Na (ppm)	pH	CEC (meq/100g)	Cation saturation computed (%)					Nitrate-N (ppm)	Sulfate-S (ppm)	Solube Salts (mmhos/cm)	Sand (%)	Silt (%)	Clay (%)	
											K	Mg	Ca	H	Na							
TWS1A	2.6	82	16	17	198	1120	1869	31	7.1	19.2	2.6	48	48.6	0	0.7	67	34	1	16	42	42	
TWS1B	2	71	7	13	98	1095	1697	30	7.1	17.9	1.4	50.4	47.4	0	0.7	21	6	0.3	10	44	46	
TWS1C	1.8	67	4	8	43	1063	1522	36	7.5	16.6	0.7	52.6	45.7	0	1	4	2	0.2	10	48	42	
TWS1D	1.3	56	4	6	57	1110	1526	41	7.6	17.1	0.9	53.5	44.6	0	1	2	2	0.2	8	46	46	
TWS2A	1.7	65	17	22	91	871	1370	30	6.7	15	1.5	47.6	45.5	4.5	0.9	58	45	1.2	38	34	28	
TWS2B	0.9	48	4	4	39	661	1032	26	7.4	10.8	0.9	50.3	47.7	0	1	21	10	0.4	56	22	22	
TWS2C	0.7	43	6	5	39	503	1047	31	8	9.6	1	43.1	54.5	0	1.4	3	6	0.3	74	14	12	
TWS2D	0.4	39	5	9	41	521	1910	32	8.2	14.1	0.7	30.5	67.8	0	1	3	8	0.3	82	8	10	
TWS3A	1.6	61	17	12	119	885	1350	30	6.4	15.9	1.9	45.8	42.4	0.9	0.8	32	55	0.7	22	46	32	
TWS3B	1.3	56	9	8	69	881	1586	31	7.3	15.5	1.1	46.8	51.2	0	0.9	34	26	0.6	38	36	26	
TWS3C	1.6	61	3	3	75	1054	1445	43	7.6	16.3	1.2	53.3	44.4	0	1.1	2	8	0.2	18	48	34	
TWS3D	1.2	53	4	61	78	1087	1724	49	8	18	1.1	49.8	47.9	0	1.2	2	6	0.3	18	48	34	
TWS4A	0.8	46	36	47	156	696	1454	33	6.6	14.4	2.8	39.8	50.5	6	1	7	13	0.3	26	42	32	
TWS4B	0.2	33	7	18	82	1144	1759	54	7.2	18.6	1.1	50.5	47.1	0	1.3	17	17	0.4	14	46	40	
TWS4C	0.2	33	5	11	57	1157	1593	58	7.7	17.9	0.8	53.1	44.4	0	1.6	24	15	0.5	8	46	46	
TWS4D	1.3	57	6	28	49	1117	2134	73	7.7	20.3	0.6	45.3	52.5	0	1.6	27	13	0.6	24	42	34	
TWS4E	1.2	54	6	8	45	964	1994	81	8.1	18.3	0.6	43.2	54.2	0	1.9	25	16	0.3	38	38	24	
TWS4F	0.2	33	6	11	31	790	1613	97	8.2	15	0.5	43.2	53.5	0	2.8	14	15	0.4	46	30	24	
TWS5A	0.7	44	80	37	143	864	1435	38	6.7	15.5	2.4	45.9	46.2	4.5	1.1	41	43					
TWS5B	0.7	43	9	7	63	804	1219	36	7.1	13	1.2	50.8	46.7	0	1.2	51	21					
TWS5C	0.5	40	8	25	56	739	1194	37	7.3	12.3	1.2	49.2	48.3	0	1.3	27	9					
TWS5D	0.5	40	11	7	64	758	1179	35	7.4	12.4	1.3	50.1	47.3	0	1.2	21	9					
TWS5E	0.2	33	14	17	73	775	1186	42	7.7	12.7	1.5	50.3	46.7	0	1.4	10	8					
TWS6A	0.7	45	19	12	283	1099	1688	29	6.7	19.2	3.8	47.1	43.9	4.5	0.7	54	9					
TWS6B	0.3	36	7	21	136	1164	1773	34	7.1	18.9	1.8	50.6	46.8	0	0.8	22	5					
TWS6C	0.6	41	5	6	145	1318	1974	38	7.3	21.2	1.7	51.1	46.4	0	0.8	27	5					
TWS6D	0.4	39	5	8	77	1234	1750	40	7.4	19.3	1	52.7	45.4	0	0.9	18	6					
TWS6E	0.4	38	4	18	67	1210	2001	39	7.5	20.3	0.8	49.1	49.2	0	0.8	16	4					
TWS7A	0.8	45	37	32	360	893	1297	41	6.2	16.9	5.4	43.3	38.2	12	1	71	37	0.5	18	48	34	
TWS7B	0.8	46	19	11	169	873	1415	38	7	14.8	2.9	48.4	47.6	0	1.1	40	12	0.4	16	48	36	
TWS7C	0.8	46	14	20	144	982	1588	51	7.4	16.6	2.2	48.7	47.8	0	1.3	18	9	0.3	14	46	40	
TWS7D	0.5	40	12	10	130	995	1541	63	7.4	16.5	2	49.7	46.7	0	1.7	23	11	0.5	14	46	40	
TWS7E	0.5	40	9	19	116	1051	1458	81	7.5	16.6	1.8	52.2	43.9	0	2.1	28	12	0.6	20	48	32	
TWS8A	1	50	53	35	275	924	1388	38	5.9	18.5	3.8	41	37.4	17	0.9	67	41					
TWS8B	1.2	53	30	69	169	902	1422	42	6.7	15.8	2.7	46.8	44.8	4.5	1.1	40	17					
TWS8C	0.6	41	14	13	134	1103	1610	61	7.3	17.7	1.9	51.2	45.4	0	1.5	16	9					
TWS8D	0.8	47	40	10	162	1248	1765	84	7.2	19.9	2.1	51.7	44.4	0	1.8	17	11					
TWS8E	0.5	40	11	14	65	1056	1409	74	7.5	16.2	1	53.6	43.4	0	2	13	8					
TWS9A	0.7	44	38	27	273	1083	1558	76	6.6	18.8	3.7	47.3	41.3	6	1.8	35	36					
TWS9B	0.8	47	11	11	202	1123	1718	110	7.2	18.8	2.7	49.1	45.6	0	2.5	26	13					
TWS9C	0.7	44	4	7	128	1171	1736	85	7.5	19	1.7	50.7	45.6	0	2	9	11					
TWS9D	0.7	43	1	11	77	1119	1510	77	7.6	17.3	1.1	53.3	43.6	0	1.9	4	9					
TW10A	0.6	43	58	42	363	1054	1574	110	6.3	20	4.6	43.3	39.2	10.5	2.4	87	48					
TW10B	0.6	42	49	43	308	979	1613	131	6.9	17.7	4.4	45.4	45.4	1.5	3.2	39	39					
TW10C	0.8	46	18	12	172	659	1272	87	7.4	12.6	3.5	43.1	50.5	0	3	18	19					
TW10D	0.6	42	15	19	195	710	1691	91	7.5	15.2	3.3	38.5	55.6	0	2.6	22	24					
TW10E	1.9	68	29	32	233	827	1882	84	7.2	17.2	3.5	39.6	54.8	0	2.1	28	27					
TW11A	1.2	54	11	13	178	1023	1471	46	6.8	16.9	2.7	49.7	43.4	3	1.2	19	9	0.3	18	44	38	
TW11B	0.7	43	5	8	65	1016	1505	52	7.3	16.3	1	51.4	46.2	0	1.4	12	17	0.2	20	42	38	
TW11C	0.5	39	4	7	68	1056	1564	60	7.4	16.9	1	51.3	46.1	0	1.5	4	10	0.2	18	50	32	
TW11D	0.4	37	4	8	53	1161	1656	73	7.8	18.3	0.7	52.3	45.2	0	1.7	5	12	0.3	18	46	36	
TW11E	0.3	36	7	15	58	1133	2085	68	8	20.2	0.7	46.2	51.6	0	1.5	6	11	0.2	18	46	36	
TW12A	1	51	9	15	184	999	1444	46	6.6	17.1	2.8	48	42.1	6	1.2	22	5	0.3	36	30	34	
TW12B	0.8	46	6	11	93	1035	1493	69	7.1	16.5	1.4	51.6	45.2	0	1.8	17	7	0.4	28	40	32	
TW12C	0.5	41	4	20	80	1066	1542	45	7.3	16.9	1.2	52	45.6	0	1.2	9	7	0.2	36	36	28	
TW12D	0.4	39	6	9	64	941	1394	48	7.6	15.1	1.1	51.4	46.2	0	1.4	4	5	0.2	42	36	22	
TW12E	0.5	41	5	7	49	833	2211	47	8	18.2	0.7	37.6	60.6	0	1.1	3	8	0.2	56	28	16	
TW12F	0.1	33	6	8	27	390	824	24	8	7.5	0.9	42.8	54.9	0	1.4	3	3	0.2	88	6	6	

Test pits S13 through S19: sample A-D is 0 to 10 ft depth in ranges of 2.5 ft. Sample S13E is >10 ft; S14E is about 12-14 ft; S15E is 12-15 ft; S16E is >10 ft; S19E is >10 ft.

S13A	1.7	63	17	15	271	764	1146	23	6.4	14.1	4.9	44.7	40.7	9	0.7	7	3	0.3	24	44	32	clay loam
S13B	1.8	66	10	22	86	1179	1552	19	7.3	17.7	1.2	54.6	43.6	0	0.5	4	3	0.2	12	36	52	clay
S13C	1.4	58	5	9	58	1078	1666	20	7.8	17.4	0.9	50.9	47.7	0	0.5	3	2	0.2	28	38	34	clay loam
S13D	1.4	59	5	8	75	1222	1573	23	7.9	18.2	1.1	55.3	43.2	0	0.5	3	2	0.2	18	44	38	silty clay loam
S13E	1.5	59	5	8	74	1100	1865	29	7.9	18.7	1	48.5	49.9	0	0.7	3	2	0.3	16	42	42	silty clay
S14A	1.6	62	5	11	131	1249	1664	42	6.7	20	1.7	51.4	41.5	4.5	0.9	7	2	0.2	14	34	52	clay
S14B	1.3	55	9	11	103	1071	1324	19	7.7	15.8	1.7	55.9	41.9	0	0.5	6	2	0.2	28	30	42	clay
S14C	0.9	47	9	15	50	808	1238	18	7.9	13	1	51	47.4	0	0.6	2	1	0.1	42	26	32	clay loam
S14D	0.7	44	7	18	38	752	1287	19	7.8	12.8	0.8	48.4	50.2	0	0.6	2	1	0.2	46	26	28	sandy clay loam
S14E	0.5	40	6	8	26	685	1185	17	7.7	11.7	0.6	48.2	50.6	0	0.6	3	2	0.2	48	34	18	loam
S15A	1.6	63	22	20	171	705	1130	14	6	2.1	3.1	41.3	40.2	15	0.4	13	2	0.3	28	40	32	clay loam
S15B	1.9	68	8	12	135	1014	1760	56	7.1	0	1.9	47.1	49.6	0	1.4	31	5	0.3	16	38	46	clay
S15C	1.5	59	8	15	132	1075	1399	57	7.3	0	2.1	53.9	42.6	0	1.5	21	4	0.3	26	32	42	clay
S15D	1.2	55	8	12	125	1036	1389	48	7.3	0	2	53.3	43.4	0	1.3	21	4	0.3	26	38	36	clay loam
S15E	1.2	53	8	11	105	1021	1352	50	7.5	0	1.7	53.7	43.2	0	1.4	23	5	0.2	28	34	38	clay loam
S16A	1.3	55	32	27	170	747	1303	34	6.9	13.4	3.2	45.8	48.4	1.5	1.1	40	14	0.5	38	30	32	clay loam
S16B	1.9	67	9	10	91	770	1609	35	7.4	14.7	1.6	42.9	54.5	0	1	12	8	0.4	22	40	38	clay loam
S16C	1.3	55	5	11	52	776	1941	33	7.9	16.3	0.8	39	59.3	0	0.9	8	4	0.3	22	48	30	clay loam
S15D	1.7	63	5	10	57	811	1960	34	7.8	16.7	0.9	39.8	58.4	0	0.9	12	5	0.3	22	44	34	clay loam
S16E	1.4	58	5	8	54	763	2026	34	7.9	16.7	0.8	37.6	60.6	0	0.9	10	4	0.3	22	50	28	silt loam
S17A	1.4	58	26	21	153	785	1324	29	6.9	13.8	2.8	46.8	47.9	1.5	0.9	11	6	0.3	38	32	30	clay loam
S17B	1	50	7	22	39	832	1822	35	8	16.2	0.6	42.3	56.2	0	0.9	3	8	0.1	24	42	34	clay loam
S17C	0.7	43	6	6	39	628	1272	26	8.1	11.7	0.8	44.1	54.1	0	1	3	3	0.2	64	14	22	sandy clay loam
S17D	0.7	45	6	9	31	663	1643	27	8	13.8	0.6	39.4	59.2	0	0.8	7	4	0.2	44	30	26	loam
S18A	1.9	68	26	21	198	852	1492	35	6.9	15.3	3.3	45.7	48.5	1.5	1	6	5	0.2	18	44	38	silty clay loam
S18B	1.5	61	7	9	61	1070	1768	42	7.8	18	0.9	49	49.1	0	1	2	3	0.2	12	46	42	silty clay
S18C	1.6	62	7	8	39	1058	1543	35	8.1	16.7	0.6	52.2	46.2	0	0.9	2	2	0.2	16	42	42	silty clay
S18D	1.6	62	7	9	34	1160	1622	38	8.2	17.9	0.5	53.3	45.3	0	0.9	2	3	0.2	18	40	42	silty clay
S19A	2.2	73	10	14	135	705	2419	32	7.6	18.4	1.9	31.6	65.8	0	0.8	55	9	0.3	18	40	42	silty clay
S19B	1.5	59	8	9	45	707	1942	33	7.7	15.8	0.7	36.9	61.5	0	0.9	13	7	0.4	16	42	42	silty clay
S19C	1	50	6	9	30	879	1778	40	7.9	16.4	0.5	44.2	54.2	0	1.1	29	6	0.5	28	40	32	clay loam
S19D	1.7	64	7	10	77	1257	1820	52	7.9	19.8	1	52.1	45.8	0	1.1	12	3	0.2	14	42	44	silty clay
S19E	1	51	9	10	63	1124	1814	44	8	18.6	0.9	49.6	48.5	0	1	25	3	0.3	18	40	42	silty clay

APPENDIX B

Teichert Shifler Project
Financial Assurance Cost Estimate

FINANCIAL ASSURANCE COST ESTIMATE FOR

Shifler Application

(Mine Name)

CA Mine ID # 91- N/A

Reclamation Plan #/Name N/A

Prepared by: (Name & Affiliation)	This financial assurance cost estimate prepared and submitted pursuant to (choose one):
Teichert Materials 3500 American River Dr. Sacramento, CA 95864	☐ A new or amended reclamation plan. Approved on (date) _____ ☐ An annual mine inspection performed on Date: _____ ☒ Other: Please Specify: Mining and Reclamation Plan Application
Date June 12th, 2018	

Most Recent Approved Financial Assurance Cost Estimate

Date: N/A

Amount: $ N/A

Amount of existing Financial Assurance Mechansim(s)

Date: N/A

Amount: $ N/A

I. SUPPORTING DOCUMENTS

This estimate represents the cost of conducting and completing reclamation in accordance with the Surface Mining and Reclamation Act (SMARA) and the following supporting documents:

Reclamation Plan Approval Date and Number

Not Applicable. This Financial Assurance Cost Estimate has been prepared as part of the application for the Shiifler Mining and Reclamation Plan Application.

Permits and/or Environmental Documents Approved as, or Conditional upon, the Reclamation Plan

Not Applicable at this time.

Other Agency Financial Assurances Securing Reclamation of Disturbed Lands

None

Wage Rates used in Cost Estimate* *(cost estimates are required to use current 'General prevailing wage determinations made by the director of industrial relations' where applicable (http://www.dir.ca.gov/OPRL/PWD/index.htm) with employer labor burden added, or greater)*

State of California Department of Industrial Relations, 2018-1 Northern California basic trade journeyman rates.

Equipment Rates used in Cost Estimates* *(use current 'Labor Surchage and Equipment Rental Rates (Cost of Equipment Ownership)' equipment rates published by Caltrans (http://www.dot.ca.gov/hq/construc/equipmnt.html) or other publicly available and verifiable local rates)*

State of California Transportation Agency, Department of Transportation Division of Contraction Labor Surcharge and Equipment Rental Rates, Effective April 1, 2018 through March 31, 2019.

Equipment Production Rates used in Cost Estimate *(Use of current Caterpillar Performance Handbook or equivalent published production rates is required)*

Caterpillar Performance Handbook 47

**Many mine sites are remote projects that require hours of travel (to and from) and sometimes require additional time to prepare for even the simplest of tasks. In accordance with labor Code Sections 1773.1 and 1773.9, contractors are required to make travel and/or subsistence (per diem) payments to each worker to execute the work. These arrangements can be quite variable and site specific.*

Attachments:

None

II. Description of Current Site Conditions

(i.e., disturbed acres, slope conditions, excavation depths, topsoil and overburden stockpiles, equipment and facilities, reclamation in progress, erosion control status, required corrective actions, etc.)

The vast majority of the site is in agricultural production and is classified as prime agricultural land. A concrete-lined canal (Moore Canal) traverses the Project Site from west to east, and an unlined canal (Magnolia Canal) conveys water northeast from the Moore Canal. Both canals are owned and operated by the Yolo County Flood Control and Water Conservation District (YCFCWCD). A small oak woodland stand is present just north of where the Moore Canal meets the Magnolia Canal, with additional scattered oaks occurring along the northern portion of the Project Site. Ruderal/annual grassland vegetation is present along agricultural borders and roads, in addition to the northern portion of the Project Site paralleling Cache Creek. A conveyor system and associated graveled road also exists within this portion of the Project Site, which previously transported aggregate material from Teichert's adjacent Storz site on the west to the Woodland Processing Plant at the northeast. Wetlands and other waters are also present on the site, as reported in the wetland delineation report prepared by ECORP Consulting.
Surrounding land uses include Cache Creek to the north; Teichert's Woodland Processing Plant site to the northeast; agricultural land to the east; the Monument Hill Memorial Park cemetery and rural residences to the south; the Yolo Fliers Club golf course, Watts-Woodland Airport, and Monument Hills community to the southwest; Teichert's existing Storz mine site to the west; and the Cache Creek Nature Preserve to the northwest.

III. Description of Anticipated Site Conditions (12 months from date of estimate)

(i.e., increase of disturbed acres, increase of depth, increases in amount of equipment and/or facilities, required corrective actions, etc.)

None

IV. Description/Justification of Cost Increase/Decrease

This is in initial Financial Assurance Cost Estimate require as part of a new mining and reclamation plan persuant to the Yolo County Surface Mining Reclamation Ordiance Section 10-5.601(g).

V. PLANT STRUCTURES AND EQUIPMENT REMOVAL *(use multiple sheets as needed)*

Provide documentation showing that rates, prices, and wages are available locally to all persons, including the lead agency and/or the Department.

Current Site Condition:

The vast majority of the site is in agricultural production and is classified as prime agricultural land. A concrete-lined canal (Moore Canal) traverses the Project Site from west to east, and an unlined canal (Magnolia Canal) conveys water northeast from the Moore Canal. Both canals are owned and operated by the Yolo County Flood Control and Water Conservation District (YCFCWCD). A small oak woodland stand is present just north of where the Moore Canal meets the Magnolia Canal, with additional scattered oaks occurring along the northern portion of the Project Site. Ruderal/annual grassland vegetation is present along agricultural borders and roads, in addition to the northern portion of the Project Site paralleling Cache Creek. A conveyor system and associated graveled road also exists within this portion of the Project Site, which previously transported aggregate material from Teichert's adjacent Storz site on the west to the Woodland Processing Plant at the northeast. Wetlands and other waters are also present on the site, as reported in the wetland delineation report prepared by ECORP Consulting.
Surrounding land uses include Cache Creek to the north; Teichert's Woodland Processing Plant site to the northeast; agricultural land to the east; the Monument Hill Memorial Park cemetery and rural residences to the south; the Yolo Fliers Club golf course, Watts-Woodland Airport, and Monument Hills community to the southwest; Teichert's existing Storz mine site to the west; and the Cache Creek Nature Preserve to the northwest.

Reclamation Plan Performance Standard (End Use):

The proposed end use for the Shifler Project Site is agriculture (approximately 116.7 acres) and open space/wildlife habitat that will transition naturally into nearby topography and surrounding land uses, as well as enhance the adjacent Cache Creek riparian zone. The reclaimed habitat areas include grassland, seasonal pond, upper riparian woodland, and lower riparian woodland types. Final reclamation will be characterized by one large seasonal pond with associated shoreline habitat, bounded to the east and west by two agricultural fields and associated grassland slopes. In addition to habitat, agriculture, and slopes, there may also be permanent access roads as needed for agricultural use of the site.

Describe tasks:

There will be no plant located on the property as part of this Mining and Reclamation Plan. The processing plant is located adjacent to the property and is contained within it's own Reclamation Plan. The plant sturctures to be removed as part of this Reclamation plan will only include the conveyor system. There will be approximatly 2200 feet of conveyor to be removed.

Equipment on site wholly owned by operator?: [X] Yes [ ] No

(if no, please provide the name/s and contact information for any lien holder)

V. PLANT STRUCTURES & EQUIPMENT REMOVAL *(cont.)*

Conveyor Removal for redeployment (completed concurrently with other reclamation work)

(↑ Describe Reclamation Activity Being Estimated)

Methods to be used:

A. Equipment - List equipment required to complete identified task *(for large reclamation jobs separate mine areas)*

Equipment	$/Unit	# of Units	Cost ($)
Gradall G100 Telescopic Forklift (Units=Hours)	$ 93.66	110.0	$ 10,302.60
			$ -
			$ -
			$ -
			$ -
		Total Equipment Cost for this Task	$ 10,302.60

B. Labor - List all labor categories to complete identified task

Labor Category	$/Unit (incl labor burden)	# of Units	Cost ($)
Operating Engineer (Units=Hours)	$ 71.06	110.0	$ 7,816.60
Laborer (Units=Hours)	$ 52.84	220.0	$ 11,624.80
			$ -
			$ -
			$ -
		Total Labor Cost for this Task	$ 19,441.40

C. Demolition - List all structures and equipment to be dismantled or demolished and removed from site

Structure/Equipment to be removed	Type of Material	Volume/ Quantity	Unit Cost Basis	Disposal Cost	Cost ($)
					$ -
					$ -
					$ -
					$ -
					$ -
				Total Materials Cost for this Task	$ -

D. Total Direct Cost of Structure and Equipment Removal (Sum of A+B+C)

Equipment Cost + Labor Cost + Demolition Cost $ 29,744.00

E. Net Salvage Value* (Supported by properly prepared third party estimate, bid, or cost calculation)

Net Salvage Value $ -

F. Total Cost of Structure and Eqjuipment Removal (Subtract Line D from Line E)

Total Cost of Structure and Equipment Removal $ 29,744.00

NOTE: Above Total Cost will display $0.00 if net of entered removal costs and salvage value is negative.

*Note: Salvage value may only be used to offset the direct cost of removing the single item for which salvage value is being claimed. Salvage value shall not be used to offset any other demolition, general cleanup, or reclamation costs.

V. PLANT STRUCTURES AND EQUIPMENT REMOVAL *(use multiple sheets as needed)*

Use multiple sheets as necessary to estimate the cost of each activity required. Provide ocumentation showing that rates, prices, and wages are available locally to the lead agency and/or the Department if necessary.

Current Site Condition:

The vast majority of the site is in agricultural production and is classified as prime agricultural land. A concrete-lined canal (Moore Canal) traverses the Project Site from west to east, and an unlined canal (Magnolia Canal) conveys water northeast from the Moore Canal. Both canals are owned and operated by the Yolo County Flood Control and Water Conservation District (YCFCWCD). A small oak woodland stand is present just north of where the Moore Canal meets the Magnolia Canal, with additional scattered oaks occurring along the northern portion of the Project Site. Ruderal/annual grassland vegetation is present along agricultural borders and roads, in addition to the northern portion of the Project Site paralleling Cache Creek. A conveyor system and associated graveled road also exists within this portion of the Project Site, which previously transported aggregate material from Teichert's adjacent Storz site on the west to the Woodland Processing Plant at the northeast. Wetlands and other waters are also present on the site, as reported in the wetland delineation report prepared by ECORP Consulting.

Surrounding land uses include Cache Creek to the north; Teichert's Woodland Processing Plant site to the northeast; agricultural land to the east; the Monument Hill Memorial Park cemetery and rural residences to the south; the Yolo Fliers Club golf course, Watts-Woodland Airport, and Monument Hills community to the southwest; Teichert's existing Storz mine site to the west; and the Cache Creek Nature Preserve to the northwest.

Reclamation Plan Performance Standard (End Use):

The proposed end use for the Shifler Project Site is agriculture (approximately 116.7 acres) and open space/wildlife habitat that will transition naturally into nearby topography and surrounding land uses, as well as enhance the adjacent Cache Creek riparian zone. The reclaimed habitat areas include grassland, seasonal pond, upper riparian woodland, and lower riparian woodland types. Final reclamation will be characterized by one large seasonal pond with associated shoreline habitat, bounded to the east and west by two agricultural fields and associated grassland slopes. In addition to habitat, agriculture, and slopes, there may also be permanent access roads as needed for agricultural use of the site.

Describe tasks, methods, equipment, etc:

Decompaction, cut, fill, haul, slope reduction, compaction, grading, topsoil placement, drainage work, soil amendment, special requirements, etc. Separate sheets may be used for each task if necessary.

As part of mining in subsequent phases, pond fines and reclamation soils will have been placed in the Reclamation Phase A area. Approxamatly 798,000 cubic yards of Reclamation soils will be spead across the 85.8 acre agricultural field and slopes. The agricultural field will have a minimum 4 feet of reclamation soils placed. The slopes will be graded from the mining grade of 3/4:1 to on average between 2:1 and 3:1 in accordance with the Reclamation Plan using scrapers. Slopes will be track-walked using dozers to prepare the slopes for seeding.

Provide Quantities:

Overbudren and topsoil, cut and fill, import or export (cubic yards), area (acres), haul distance (feet), equipment production rates (cubic yards/hour, or as applicable), etc.

The 85.8 acre agricultural field will receive four feet of reclamation soils and the slopes will be graded from the 3/4:1 mining grade to the 2:1 and 3:1 reclamation grades. Approxamately 798.000 cubic yards of reclamation soils will be graded to complete reclamation in Phase A. The average haul distance will be 1,450 feet. The scrapers cycle time is 2.7 minutes, and the dozer will track walk 78 feet per hour.

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V. PLANT STRUCTURES & EQUIPMENT REMOVAL *(cont.)*

Placement of reclamation soils on slopes and agricultural field in phase 1

(↑ Describe Reclamation Activity Being Estimated)

Acres:	85.8 Ag / .2 road / 12.1 slopes	Reclamation Soils (cy)	798,000
Haul Distance (ft)	1450 average		
Production Rate (cy/hr)	637=247/hr		

Methods to be used:

A. Equipment - List equipment required to complete identified task *(for large reclamation jobs separate mine areas)*

Equipment	$/Unit	# of Units	Cost ($)
Caterpillar 673 Scraper (Units=Hours)(Hours will be divided between 4 scrapers per shift)	$ 223.06	1237.7	$ 276,085.82
Water Truck	$ 58.58	309.4	$ 18,126.41
D10 Dozer (Track Walk, 1 mph, 5800 total slope length)	$ 325.73	75.6	$ 24,625.19
Pick Up Truck	$ 32.48	201.5	$ 6,544.72
			$ -
			$ -
		Total Equipment Cost for this Task	$ 325,382.14

B. Labor - List all labor categories to complete identified task

Labor Category	$/Unit (incl labor burden)	# of Units	Cost ($)
Operating Engineer (1 Dozer, 1 Water Truck, 4 Scraper)	$ 71.06	1622.8	$ 115,312.62
Foreman	$ 75.00	309.4	$ 23,207.25
			$ -
			$ -
			$ -
		Total Labor Cost for this Task	$ 138,519.87

C. Materials - List all materials required to complete identified task

Item	Quantity	$/Unit (incl sales tax)	Cost ($)
			$ -
			$ -
			$ -
			$ -
			$ -
		Total Materials Cost for this Task	$ -

D. Total Direct Cost for this task

Equipment Cost + Labor Cost + Materials Cost	$ 463,902.01

VII. REVEGETATION *(use multiple sheets as needed)*

Provide documentation showing that rates, prices, and wages are available locally to the lead agency and/or the Department.

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Reclamation Plan Performance Standard (End Use):

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Describe tasks:

Phase A revegetation will consist of hydroseeding the previously graded and prepared slopes. The proposed seed mix will contain the following pounds per acre mix. Blue Wild Rye - 8, California Brome - 12, Annual Fescue - 6, California Poppy - 1, Arroyo Lupine - 5. The previously prepared agricultural field will be planted with the crop that is selected at the time reclamation is complete.

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Revegetate Grassland Slopes 12.1 Acres

(↑ Describe Reclamation Activity Being Estimated)

VII. REVEGETATION (cont.)

Methods to be used:

A. Equipment - List equipment required to complete identified task *(for large reclamation jobs separate mine areas)*

Equipment	$/Unit	# of Units	Cost ($)
			$ -
			$ -
			$ -
			$ -
			$ -
			$ -
		Total Equipment Cost for this Task	$ -

B. Labor - List all labor categories to complete identified task

Labor Category	$/Unit (incl labor burden)	# of Units	Cost ($)
Hydroseeding of Slopes (Units = Acres) Third Party	$ 2,450.00	12.1	$ 29,645.00
			$ -
			$ -
			$ -
			$ -
		Total Labor Cost for this Task	$ 29,645.00

C. Materials -List all materials required to complete identified task

Item/Plant Species	Unit of Measure	Quantity	$/Unit (incl sales tax)	Cost ($)
Blue Wild Rye	Lbs Per Acre	8.0		$ -
California Brome	Lbs Per Acre	12.0		$ -
Annual Fescue	Lbs Per Acre	6.0		$ -
California Poppy	Lbs Per Acre	1.0		$ -
Arroyo Lupine	Lbs Per Acre	5.0		$ -
Combined Seed Mix from Above 32 lbs/acre x 12.1 acres	Pounds of Seed	387.2	$ 2.71	$ 1,049.31
				$ -
				$ -
				$ -
				$ -
			Total Materials Cost for this Task	$ 1,049.31

D. Total Direct Cost for this task

Equipment Cost + Labor Cost + Materials Cost	$ 30,694.31

VIII. MISCELLANEOUS COSTS *(use multiple sheets as needed)*

Provide documentation showing that rates, prices, and wages are available locally to all persons, including the lead agency and/or the Department.

Examples of this type of costs may include temporary storage of equipment and materials off site, special one-time permits (i.e. transportation permits for extra wide overweight loads, etc.), decommissioning a process mill (i.e. decontamination of equipment), disposal of warehouse inventories, well abandonnment, remediation of fueling and waste oil storage sites, septic system removal, costs to prepare closure and monitoring reports, site security, preserving potable water and maintaining utilities, etc.

Item / Task	Quantity	$/Unit	Cost ($)
Annual Weed Maintenance	5.0	$ 4,500.00	$ 22,500.00
			$ -
			$ -
			$ -
			$ -
			$ -
			$ -
			$ -
			$ -
			$ -
		Total Miscellaneous Costs	$ 22,500.00

IX. MONITORING COSTS

Monitoring Task	$ / Visit	# Vists / Year	# of Monitoring Years	Cost ($)
Monitoring Visit and Annual Report	$ 3,600.00	1.0	5.0	$ 18,000.00
Closure Report	$ 1,800.00	1.0	1.0	$ 1,800.00
				$ -
				$ -
				$ -
				$ -
				$ -
				$ -
				$ -
				$ -
				$ -
		Total Monitoring Costs		$ 19,800.00

X. SUMMARY OF COSTS

This section shall be used to summarize all the cost sheets in one place.

	Cost ($)
(V) Total of all Plant Structures & Equipment Removal Costs	$ 29,744.00
(VI) Total of all Primary Reclamation Activities Costs	$ 463,902.01
(VII) Total of all Revegetation Costs	$ 30,694.31
(VII) Total of all Miscellaneous Costs	$ 22,500.00
(IX) Total of all Monitoring Costs	$ 19,800.00
Total of Direct Costs	$ 566,640.32

XI. SUPERVISION / PROFIT & OVERHEAD / CONTINGENCIES / MOBILIZATION

(A) Supervision	4.90%	**$**	**27,791.77**
(B) Profit/Overhead	9.83%	**$**	**55,709.72**
(C) Contingencies	7.00%	**$**	**39,664.82**
(D) Mobilization	3.00%	**$**	**16,999.21**
Total of Indirect Costs		**$**	**140,165.52**
Total of Direct and Indirect Costs		**$**	**706,805.84**
(E) Lead Agency and/or Dept. of Conservation Administrative Costs	10%	**$**	**70,680.58**
Total Estimated Cost of Reclamation		**$**	**777,486.43**