

## CACHE CREEK TAC REVIEW OF TEICHERT SHIFLER MINING AND RECLAMATION PROJECT

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### INTRODUCTION

Teichert Aggregates plans to expand off-channel mining at the Shifler site near County Road 94B within 700 feet of Cache Creek and proposes no additional streambank stabilization measures as part of the project. In a technical memorandum prepared by Cunningham Engineering<sup>1</sup> (herein referred to as Cunningham Report), the project proponent documents conditions at the site and reviews available hydraulic modeling to support their position.

This memo provides a response from the TAC regarding the project and our recommendations for approval.

### TAC REVIEW OF CUNNINGHAM REPORT AND SHIFLER PROJECT PROPOSAL

The TAC Hydraulic Engineer and Fluvial Geomorphologist have reviewed the Cunningham Report and have the following comments:

- The Cunningham Report has been revised in line with previous comments and provides the information requested by the TAC.
- The Cunningham report describes that the current mining proposal would place the Moore Canal “approximately 250 feet from the top of the channel bank” and the edge of active mining pit at 350 feet. Teichert should clarify specifically what the setback will be, i.e., whether the proposed setback of Moore Canal from Cache Creek will be 250 feet from the top of bank to the northern edge of the canal. The TAC would prefer setbacks to be described as the distance from the outer (Creek-side) edge of a project component (e.g., the relocated Moore Canal) to the Creek’s active top of bank. We recommend that Teichert/Cunningham revise any documents/exhibits so as to use this measurement style.
- Cunningham Engineers should revise their report so that the 250 foot setback to Moore Canal is consistently referenced. There are occasions where both figures and text reference a 200-foot setback (e.g., pg. 3 “Summary of Leathers 2010,” Drone Photograph 1).
- The TAC recommends that the County of Yolo approve the proposed project pursuant to the following conditions:
  - All components of the project are set back from Cache Creek (top of bank) a minimum of 250 feet and that setback is maintained throughout the duration of activities.

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<sup>1</sup> Shifler Off-Channel Mining and Reclamation Application Cache Creek Channel Stability Analysis, October 30, 2020

- Roles and responsibilities for maintenance of the 250-foot setback are clarified (Yolo County FCWCD vs. Teichert)
- A limited SSP is prepared as described below.

## FOCUSED STREAMBANK STABILIZATION PLAN (SSP)

Significant channel change has occurred in this reach of Cache Creek as recently as January/February 2017 when large, forested “islands” were scoured away from the channel in this area. A northward-turning meander bend runs through this reach and it has moved/adjusted over the course of the last twenty years. For this reason, the TAC recommends a focused SSP be prepared by Teichert as part of the approval of their proposed mining expansion. The recommended SSP has two components – bank reinforcement and revegetation (habitat enhancement) using native riparian species.

### BANK REINFORCEMENT

Figure 1 shows an approximately 600-foot length (in red) of streambank in the path of the theoretical migration of the Creek meander bend. The TAC recommends that Teichert implement a reinforcement project along this alignment generally consisting of soil-backfilled and planted rock revetment. This will help prevent future bank erosion in the area where proximity to Moore Canal is least and there is the highest potential for channel migration.

### HABITAT ENHANCEMENT

There exists an area on the inset terrace below the Shifler property that extends from County Road 94B along the right (south) bank to the Teichert Aggregates Woodland Plant. This terrace has some native woody vegetation along the first ~1000 feet east of 94B but is otherwise predominantly bare or covered with non-native ruderal species. Within the approximately ~6-acre zone shown in green in Figure 1, we recommend that Teichert remove non-native species and plant appropriate native woody (tree and shrub) species (with the species selection informed by which trees and shrubs are already present on the terrace). This action should be undertaken in a manner to not disturb existing native species (especially elderberry) that already exist within this ~6-acre zone. Such an action will help stabilize this terrace in addition to enhancing habitat between the creek channel and the project site, further reducing potential for channel migration. The habitat enhancement project should be implemented, monitored, and maintained to the same revegetation standards as stipulated in the project’s reclamation plan.



FIGURE 1: CACHE CREEK AT SHIFLER SITE WITH PROPOSED SSP COMPONENTS SHOWN.