Mitigation Measures

Initial Study No. 7946

The following mitigation measures have been specifically applied to mitigate potential adverse environmental effects identified in the above environmental document. A change in these provisions may affect the validity of the current environmental document, and a new or amended environmental document may be required. All requirements shall be performed at the developer's expense and prior to issuance of development permits.

1. Prior to construction, the County shall implement the following measures to reduce potential impacts to special-status plant species. Special-status plants are under the jurisdiction of the California Department of Fish and Wildlife (CDFW) and the United States Fish and Wildlife Service (USFWS).
    a. Prior to construction, a qualified botanist shall conduct focused surveys for special-status vascular plants, and a qualified biologist shall conduct focused surveys for special status bryophytes. The surveys shall be conducted during the appropriate flowering or identification period for each species. The surveys will be conducted no more than 1 year prior to onset of construction.

    b. If special-status plants are identified during the surveys, a salvage and relocation plan shall be prepared. At a minimum, the plan shall include the following:

        i. Construction limits in habitats occupied by special-status plant species shall be staked prior to ground-disturbing activities. A preconstruction survey will be conducted during the appropriate identification period of any special-status plant species to determine the location of individuals relative to the limits of the Project in order to evaluate how much of the population will be impacted.

        ii. If special-status plants are identified outside of the proposed disturbance area and will not be directly impacted by the Project, brightly colored Environmentally Sensitive Area (ESA) fencing shall be placed along the limits of the work to protect the adjacent plants. Fencing shall be maintained in good condition for the duration of the construction activities, and entry within these zones shall be prohibited.

        iii. If special-status plants are identified within the proposed disturbance area and will be directly impacted by construction activities, viable seeds shall be salvaged from the affected plants at the appropriate point in the flowering process to be sown within the Project area following construction. Alternatively, the topsoil associated with the existing population(s) shall be salvaged prior to construction and stored in a

weed-free location until construction activities are complete. The topsoil shall consist of the upper 12 inches (approximately) of soil and associated vegetation. Following completion of construction activities, graded areas shall be ripped or otherwise decompacted, if necessary. The salvaged topsoil shall then be spread evenly on the graded areas and lightly compacted (e.g., “track-walked”).

iv. Seed collection and distribution and/or topsoil salvage and replacement shall be performed by a qualified biologist or botanist.

v. Monitoring and reporting requirements shall be established and approved by the CDFW and/or USFWS.

2. Prior to construction, the County of Fresno (County) shall implement the following measures to reduce the spread of invasive species:

    a. All earthmoving equipment to be used during project construction shall be cleaned thoroughly before arrival on the Project site.

    b. All seeding equipment (e.g., hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work.

    c. To avoid spreading any nonnative invasive species already existing on site to off-site areas, all equipment shall be thoroughly cleaned before leaving the site.

3. Prior to construction, the County shall implement the following measure to reduce potential impacts to nesting birds:

    a. If possible, all trees that will be impacted by Project construction shall be removed during the non-nesting season (between September 1 and January 31) unless they are identified as potential bat habitat trees.

    b. If work begins between February 1 and August 31, preconstruction surveys for nesting birds within the BSA and within a 500-ft buffer for nesting raptors shall be conducted by a qualified biologist no more than 14 days prior to tree removal or initiation of any construction activities.

    c. If no nesting activity is observed, work may proceed as planned. If active nests are identified, a qualified biologist shall evaluate the potential for the work activities to disturb typical nesting behavior of the birds and, if needed, establish appropriate buffers to protect nesting activity. The width of the buffer zone shall be based on a site-specific analysis considering the species, nest location, and observed behavior prepared by a Qualified Biologist. Initial buffer standards shall be a minimum of 25 ft for non-raptor bird species and a minimum of 250 ft for raptor species. All construction work shall be conducted outside any designated avoidance zones. Standard buffer zones shorter or larger than minimum buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The biologist shall have full

discretion for establishing a suitable buffer. The buffer area(s) shall be closed to all construction personnel and equipment until the young are no longer reliant on the nest site.

d. The qualified biologist should perform at least two hours of preconstruction monitoring of the nest to characterize “typical” bird behavior. The qualified biologist should monitor the nesting birds and may increase the buffer if the qualified biologist determines the birds are showing signs of unusual or distressed behavior by project activities. Atypical nesting behaviors which may cause reproductive harm include, but are not limited to, defensive flights/vocalizations directed towards project personnel, standing up from a brooding position, and flying away from the nest.

e. The qualified biologist should have authority, through the resident engineer, to order the cessation of all project activities if the nesting birds exhibit atypical behavior that may cause reproductive failure (nest abandonment and loss of eggs and/or young) until an appropriate buffer is established.

f. To prevent encroachment, the established buffer(s) should be clearly marked by high-visibility material. If any work is proposed within this buffer, the CDFW should be notified and should have the authority to reassess protective buffers and/or establish other avoidance and minimization measures.

g. Disturbance of active nests should be avoided until it is determined by a qualified biologist that nesting is complete and either the young have fledged or the nest has failed. If work is allowed to proceed, a qualified biologist should be on site during the start of construction activities to monitor nesting activity. The biologist should have the authority to stop work if it is determined that the Project is adversely affecting nesting activities. Any sign of nest abandonment should be reported to the CDFW within 48 hours.

4. Prior to construction, the County shall implement the following measures to reduce potential impacts to bats:

    a. Work activities shall be limited to daylight hours to avoid potential effects to foraging bats.

    b. Potential bat habitat trees, identified by a qualified bat biologist during a tree habitat assessment conducted several months prior to tree removal, shall be removed only between approximately March 1 and April 15, prior to parturition of pups, and when evening temperatures remain above 45°F and rainfall does not exceed 0.5 inch in 24 hours. The next acceptable period is after pups become self-sufficiently volant between September 1 and about October 15, or prior to evening temperatures dropping below 45°F and onset of rainfall greater than 0.5 inch in 24 hours.

    c. Bat habitat trees should be removed only during seasonal periods of bat activity as described above, and only after:

i. Negative results from a night emergence survey conducted no more than one to two nights prior to tree removal by a qualified bat biologist using night vision and/or infrared sensitive camera equipment and bioacoustic recording equipment, or;

ii. All other vegetation other than trees within the limits of work is removed prior to bat habitat tree removal during seasonal periods of activity and, preferably, within 4 days of commencing a two-step removal of habitat trees in accordance with the following measures:

1. Two-step tree removal over 2 consecutive days (e.g., Tuesday and Wednesday, or Thursday and Friday). With this method, small branches and small limbs containing no cavity, crevice, or exfoliating bark habitat on habitat trees as identified by a qualified bat biologist are removed first on Day 1, using chainsaws only (no dozers, backhoes, etc.). The following day (Day 2), the remainder of the tree is to be removed. The disturbance caused by chainsaw noise and vibration, coupled with the physical alteration of the tree, has the effect of causing colonial bat species to abandon the roost tree after nightly emergence for foraging. Removing the tree the next day prevents re-habituation and re-occupation of the altered tree.

2. Trees containing suitable potential habitat must be trimmed with chainsaws on Day 1 under initial field supervision by a qualified bat biologist to ensure that the tree cutters fully understand the process and avoid incorrectly cutting potential habitat features or trees. After tree cutters have received sufficient instruction, the qualified bat biologist does not need to remain on the site.

d. If non-habitat trees or other vegetation must be removed outside the seasonal periods outlined above, a 100 ft buffer around each habitat tree should be observed to reduce the potential for disturbing non-volant young during maternity season or torpid bats during winter months.

5. Prior to construction, the County shall implement the following measures to reduce potential impacts to western pond turtles, foothill yellow-legged frog (FYLF), and Sierra Nevada yellow-legged frog (SNYLF):

a. Worker environmental awareness training shall be conducted by a qualified biologist for all construction personnel. The training shall instruct workers about the purpose of ESA fencing and the resources being protected.

b. Prior to the start of construction activities within Markwood Creek, the BSA shall be surveyed by a qualified biologist for the presence of special-status amphibians and reptiles. If any special-status species are observed in the BSA, work shall be

stopped and the individual shall be allowed to passively relocate outside of the work area.

c. Any emergent or submergent aquatic vegetation shall be retained as practical within the constraints of the Project. Where vegetation removal is necessary, rapidly sprouting plants, such as willows, shall be cut off at the ground line and the root systems left intact when feasible.

6. Prior to and during construction, the County shall implement the following measures to reduce potential impacts to aquatic resources. These Best Management Practices (BMPs) are intended to prevent erosion and sedimentation outside of work areas, prevent impacts to upland areas outside of designated work zones, control dust, and prevent accidental fuel or oil spills in or near wetlands and other waters.

    a. Brightly colored ESA fencing shall be placed along the limits of work to prevent unnecessary encroachment into seasonal wetlands. Fencing shall be maintained in good condition for the duration of construction activities.

    b. Any emergent or submergent aquatic vegetation shall be retained as practical within the constraints of the Project. Where vegetation removal is necessary, rapidly sprouting plants, such as willows and tule, shall be cut off at the ground line and the root systems left intact.

    c. Designate vehicle and equipment staging areas that are located at least 100 ft from wetlands and other waters. All Project vehicles and equipment shall be stored in these areas overnight or when not in use. Any vehicle fueling or other maintenance shall only occur within designated staging areas.

    d. Stake the boundaries of designated work areas and ensure all vehicles and equipment stay within the designated boundaries.

    e. Clean up accumulated garbage and construction debris on a daily basis.

    f. All personnel involved in the construction activities shall be briefed on water quality and special-status species concerns associated with the Project. All heavy equipment shall be maintained to prevent fluid leaks.

    g. Fueling and maintenance of vehicles shall take place at least 100 ft away from wetlands and other areas where potential leaks could travel into the creek.

    h. The Project will be required to implement a compensatory mitigation plan that identifies mitigation to address permanent loss, including functions and values, of jurisdictional aquatic resources. Compensatory mitigation may involve the restoration, establishment, enhancement, and/or preservation of aquatic resources through one or more of the following methods:

        i. Purchase of credits from an agency-approved mitigation bank.

ii. Preservation of aquatic resource through acquisition of property.

iii. Establishment, restoration, or enhancement of aquatic resources.

7. In the event that cultural resources are unearthed during ground-disturbing activities, all work shall be halted in the area of the find. An Archeologist shall be called to evaluate the findings and make any necessary mitigation recommendations. If human remains are unearthed during ground-disturbing activities, no further disturbance is to occur until the Fresno County Sheriff-Coroner has made the necessary findings as to origin and disposition. All normal evidence procedures should be followed by photos, reports, video, etc. If such remains are determined to be Native American, the Sheriff-Coroner must notify the Native American Commission within 24 hours.

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Mohammad Alimi, Design Division Manager Date

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