

## EXHIBIT "H"

### HABITAT AND BIOLOGICAL MITIGATION MEASURES ADOPTED BY THE CITY OF FOLSOM

#### **Mitigation Measure 3A.3-2a: Avoid Direct Loss of Swainson's Hawk and Other Raptor Nests.**

To mitigate impacts on Swainson's hawk and other raptors (including burrowing owl), the project applicant(s) of all project phases shall retain a qualified biologist to conduct preconstruction surveys and to identify active nests on and within 0.5 mile of the SPA and active burrows on the SPA. The surveys shall be conducted before the approval of grading and/or improvement plans (as applicable) and no less than 14 days and no more than 30 days before the beginning of construction for all project phases. To the extent feasible, guidelines provided in Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley (Swainson's Hawk Technical Advisory Committee 2000) shall be followed for surveys for Swainson's hawk. If no nests are found, no further mitigation is required.

If active nests are found, impacts on nesting Swainson's hawks and other raptors shall be avoided by establishing appropriate buffers around the nests. No project activity shall commence within the buffer area until the young have fledged, the nest is no longer active, or until a qualified biologist has determined in consultation with DFG that reducing the buffer would not result in nest abandonment. DFG guidelines recommend implementation of 0.25- or 0.5-mile-wide buffers, but the size of the buffer may be adjusted if a qualified biologist and the City, in consultation with DFG, determine that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest.

If active burrows are found, a mitigation plan shall be submitted to the City for review and approval before any ground-disturbing activities. The City shall consult with DFG. The mitigation plan may consist of installation of one-way doors on all burrows to allow owls to exit, but not reenter, and construction of artificial burrows within the project vicinity, as needed; however, burrow owl exclusions may only be used if a qualified biologist verifies that the burrow does not contain eggs or dependent young. If active burrows contain eggs and/or young, no construction shall occur within 50 feet of the burrow until young have fledged. Once it is confirmed that there are no owls inside burrows, these burrows may be collapsed.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be developed by the project applicant(s) of each applicable project phase in consultation with the affected oversight agency(ies) (i.e., El Dorado and/or Sacramento Counties, or Caltrans), such that the performance criteria set forth in DFG's guidelines are determined to be met.

#### **Mitigation Measure 3A.3-2b: Prepare and Implement a Swainson's Hawk Mitigation Plan.**

To mitigate for the loss of Swainson's hawk foraging habitat, the project applicant(s) of all project phases shall prepare and implement a Swainson's hawk mitigation plan including, but not limited to the requirements described below.

Before the approval of grading and improvement plans or before any ground-disturbing activities, whichever occurs first, the project applicant(s) shall preserve, to the satisfaction of the City or Sacramento County, as appropriate depending on agency jurisdiction, suitable Swainson's hawk foraging habitat to ensure 1:1 mitigation of habitat value for Swainson's hawk foraging habitat lost as a result of the project, as determined by the City, or Sacramento County, after consultation with DFG and a qualified biologist.

The 1:1 habitat value shall be based on Swainson's hawk nesting distribution and an assessment of habitat quality, availability, and use within the City's planning area, or Sacramento County jurisdiction. The mitigation ratio shall be consistent with the 1994 DFG *Swainson's Hawk Guidelines included in the Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California*, which call for the following mitigation ratios for loss of foraging habitat in these categories: 1:1 if within 1 mile of an active nest site, 0.75:1 if over 1 mile but less than 5 miles, and 0.5:1 if over 5 miles but less than 10 miles from an active nest site. Such mitigation shall be accomplished through credit purchase from an established mitigation bank approved to sell Swainson's hawk foraging habitat credits to mitigate losses in the SPA, if available, or through the transfer of fee title or perpetual conservation easement. The mitigation land shall be located within the known foraging area and within Sacramento County. The City, or Sacramento County if outside City jurisdiction, after consultation with DFG, will determine the appropriateness of the mitigation land.

Before approval of such proposed mitigation, the City, or Sacramento County for the off-site detention basin, shall consult with DFG regarding the appropriateness of the mitigation. If mitigation is accomplished through conservation easement, then such an easement shall ensure the continued management of the land to maintain Swainson's hawk foraging values, including but not limited to ongoing agricultural uses and the maintenance of all existing water rights associated with the land. The conservation easement shall be recordable and shall prohibit any activity that substantially impairs or diminishes the land's capacity as suitable Swainson's hawk habitat.

The project applicant(s) shall transfer said Swainson's hawk mitigation land, through either conservation easement or fee title, to a third-party, nonprofit conservation organization (Conservation Operator), with the City and DFG named as third-party beneficiaries. The Conservation Operator shall be a qualified conservation easement land manager that manages land as its primary function. Additionally, the Conservation Operator shall be a tax-exempt nonprofit conservation organization that meets the criteria of Civil Code Section 815.3(a) and shall be selected or approved by the City or County, after consultation with DFG. The City, or County, after consultation with DFG and the Conservation Operator, shall approve the content and form of the conservation easement. The City, or County, DFG, and the Conservation Operator shall each have the power to enforce the terms of the conservation easement. The Conservation Operator shall monitor the easement in perpetuity to assure compliance with the terms of the easement.

The project applicant(s), after consultation with the City, or County of jurisdiction, DFG, and the Conservation Operator, shall establish an endowment or some other financial mechanism that is sufficient to fund in perpetuity the operation, maintenance, management, and enforcement of the conservation easement. If an endowment is used, either the endowment funds shall be submitted to the City for impacts on lands within the City's jurisdiction or Sacramento County for the off-site detention basin to be distributed to an appropriate third-party nonprofit conservation agency, or they shall be submitted directly to the third-party nonprofit conservation agency in exchange for an agreement to manage and maintain the lands in perpetuity. The Conservation Operator shall not sell, lease, or transfer any interest of any conservation easement or mitigation land it acquires without prior written approval of the City and DFG. Mitigation lands established or acquired for impacts incurred at the off-site detention basin shall require approval from Sacramento County prior to sale or transfer of mitigation lands or conservation easement.

If the Conservation Operator ceases to exist, the duty to hold, administer, manage, maintain, and enforce the interest shall be transferred to another entity acceptable to the City and DFG, or Sacramento County and DFG depending on jurisdiction of the affected habitat. The City Planning Department shall ensure that mitigation habitat established for impacts on habitat within the City's planning area is properly established and is functioning as habitat by reviewing regular monitoring reports prepared by the Conservation Operator of the mitigation site(s). Monitoring of the mitigation site(s) shall continue for the first 10 years after

establishment of the easement and shall be funded through the endowment, or other appropriate funding mechanism, established by the project applicant(s). Sacramento County shall review the monitoring reports for impacts on habitat at the off-site detention basin.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., Sacramento County and Caltrans).

**Mitigation Measure 3A.3-2c: Avoid and Minimize Impacts to Tricolored Blackbird Nesting Colonies.**

To avoid and minimize impacts to tricolored blackbird, the project applicant(s) of all project phases shall conduct a preconstruction survey for any project activity that would occur during the tricolored blackbird's nesting season (March 1–August 31). The preconstruction survey shall be conducted by a qualified biologist before any activity occurring within 500 feet of suitable nesting habitat, including freshwater marsh and areas of riparian scrub vegetation. The survey shall be conducted within 14 days before project activity begins.

If no tricolored blackbird colony is present, no further mitigation is required. If a colony is found, the qualified biologist shall establish a buffer around the nesting colony. No project activity shall commence within the buffer area until a qualified biologist confirms that the colony is no longer active. The size of the buffer shall be determined in consultation with DFG. Buffer size is anticipated to range from 100 to 500 feet, depending on the nature of the project activity, the extent of existing disturbance in the area, and other relevant circumstances.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries (i.e., U.S. 50 interchange improvements) must be developed by the project applicant(s) of each applicable project phase in consultation with the affected oversight agency(ies) (i.e., Caltrans) and must be sufficient to achieve the performance criteria described above.

**Mitigation Measure 3A.3-2d: Avoid and Minimize Impacts to Special-Status Bat Roosts.**

The project applicant of all project phases containing potential bat roosting habitat shall retain a qualified biologist to conduct surveys for roosting bats. Surveys shall be conducted in the fall to determine if the mine shaft is used as a hibernaculum and in spring and/or summer to determine if it is used as a maternity or day roost. Surveys shall consist of evening emergence surveys to note the presence or absence of bats and could consist of visual surveys at the time of emergence. If evidence of bat use is observed, the number and species of bats using the roost shall be determined. Bat detectors may be used to supplement survey efforts. If no bat roosts are found, then no further study shall be required.

If roosts of pallid bat or Townsend's big-eared bats are determined to be present and must be removed, the bats shall be excluded from the roosting site before the mine shaft is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures shall be developed in consultation with DFG before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) will be replaced in consultation with DFG and may include construction and installation of bat boxes suitable to the bat species and colony size excluded from the original roosting site. Roost replacement will be implemented before bats are excluded from the original roost sites. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site, the mine shaft may be removed.

**Mitigation Measure 3A.3-2e: Obtain an Incidental Take Permit under Section 10(a) of ESA; Develop and Implement a Habitat Conservation Plan to Compensate for the Loss of Vernal Pool Habitat.**

The project applicant(s) for all project phases shall obtain an incidental take permit under Section 10(a) of ESA. No project construction shall proceed in areas supporting potential habitat for Federally listed vernal pool invertebrates, or within adequate buffer areas (250 feet or lesser distance deemed sufficiently protective by a qualified biologist with approval from USFWS), until a BO has been issued by USFWS and the project applicant(s) have abided by conditions in the BO (including all conservation and minimization measures). Conservation and minimization measures are likely to include preparation of supporting documentation describing methods to protect existing vernal pools during and after project construction.

Under the No Federal Action Alternative, interagency consultation under Section 7 of ESA would not occur; therefore, the project applicant(s) would be required to develop a habitat conservation plan to mitigate impacts on Federally listed vernal pool invertebrates. The project applicant(s) shall complete and implement, or participate in, a habitat conservation plan that shall compensate for the loss of acreage, function, and value of affected vernal pool habitat. The habitat conservation plan shall be consistent with the goals of the Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005) and must be approved by USFWS.

The project applicant(s) for all project phases shall ensure that there is sufficient upland habitat within the target areas for creation and restoration of vernal pools and vernal pool complexes to provide ecosystem health. The land used to satisfy this mitigation measure shall be protected through a fee title or conservation easement acceptable to the City and USFWS.

The project applicant(s) for all project phases shall identify the extent of indirectly affected vernal pool and seasonal wetland habitat, either by identifying all such habitat within 250 feet of project construction activities or by providing an alternative technical evaluation in support of a lesser indirect impact distance. If a lesser distance is pursued, this distance shall be approved by USFWS. The project applicant(s) shall preserve 2 wetted acres of vernal pool habitat for each wetted acre of any indirectly affected vernal pool habitat. This mitigation shall occur before the approval of any grading or improvement plans for any project phase that would allow work within 250 feet of such habitat, and before any ground-disturbing activity within 250 feet of the habitat. The project applicant(s) will not be required to complete this mitigation measure for direct or indirect impacts that have already been mitigated to the satisfaction of USFWS through another BO or mitigation plan.

A standard set of BMPs shall be applied to construction occurring in areas within 250 feet of off-site vernal pool habitat, or within any lesser distance deemed adequate by a qualified biologist (with approval from USFWS) to constitute a sufficient buffer from such habitat. Refer to Section 3A.9, "Hydrology and Water Quality - Land" for the details of BMPs to be implemented.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., El Dorado and/or Sacramento Counties or Caltrans).

**Mitigation Measure 3A.3-2f: Obtain an Incidental Take Permit under Section 10(a) of ESA; Develop and Implement a Habitat Conservation Plan to Compensate for the Loss of VELB Habitat.**

As long as valley elderberry longhorn beetle remains a species protected under ESA, the project applicant(s) of all project phases containing elderberry shrubs shall obtain an incidental take permit under Section 10(a) of ESA for valley elderberry longhorn beetle. No project construction shall proceed in areas potentially containing valley elderberry longhorn beetle until a BO has been issued by USFWS, and the project applicant(s) for all project phases have abided by all pertinent conditions in the take permit relating to the proposed construction, including all conservation and minimization measures. Conservation and

minimization measures are likely to include preparation of supporting documentation that describes methods for relocation of existing shrubs and maintaining existing shrubs and other vegetation in a conservation area.

Under the No Federal Action Alternative, interagency consultation under Section 7 of ESA would not occur; therefore, the project applicant(s) would be required to develop a habitat conservation plan to mitigate impacts on valley elderberry longhorn beetle. The project applicant(s) shall complete and implement a habitat conservation plan that will compensate for the loss of valley elderberry longhorn beetle. Relocation of existing elderberry shrubs and planting of new elderberry seedlings shall be implemented on a no-net-loss basis. Detailed information on monitoring success of relocated and planted shrubs and measures to compensate (should success criteria not be met) would also likely be required in the BO. Ratios for mitigation of valley elderberry longhorn beetle habitat will ultimately be determined through the ESA Section 10(a) consultation process with USFWS, but shall be a minimum of "no net loss."

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries (i.e., U.S. 50 interchange improvements) must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., Caltrans).

**Mitigation Measure 3A.3-2g: Secure Take Authorization for Federally Listed Vernal Pool Invertebrates and Implement All Permit Conditions.**

No project construction shall proceed in areas supporting potential habitat for Federally listed vernal pool invertebrates, or within adequate buffer areas (250 feet or lesser distance deemed sufficiently protective by a qualified biologist with approval from USFWS), until a biological opinion (BO) or Not Likely to Adversely Affect (NLAA) letter has been issued by USFWS and the project applicant(s) for any particular discretionary development entitlements affecting such areas have abided by conditions in the BO (including conservation and minimization measures) intended to be completed before on-site construction. Conservation and minimization measures shall include preparation of supporting documentation describing methods to protect existing vernal pools during and after project construction, a detailed monitoring plan, and reporting requirements.

As described under Mitigation Measure 3A.3-1a, an MMP shall be developed that describes details how loss of vernal pool and other wetland habitats shall be offset, including details on creation of habitat, account for the temporal loss of habitat, contain performance standards to ensure success, and outline remedial actions if performance standards are not met.

The project applicant(s) for any particular discretionary development application potentially affecting vernal pool habitat shall complete and implement a habitat MMP that will result in no net loss of acreage, function, and value of affected vernal pool habitat. The final habitat MMP shall be consistent with guidance provided in *Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California* (USFWS 1996) or shall provide an alternative approach that is acceptable to the City, USACE, and USFWS and accomplishes no net loss of habitat acreage, function, and value.

The project applicant(s) for any particular discretionary development application "potentially affecting vernal pool habitat" shall ensure that there is sufficient upland habitat within the target areas for creation and restoration of vernal pools and vernal pool complexes to provide ecosystem health. This standard shall be accomplished by requiring the project applicant(s) for any discretionary development application affecting vernal pool or seasonal wetland habitat to identify the extent of indirectly affected vernal pool and seasonal wetland habitat, either by identifying all such habitat within 250 feet of project construction activities or by providing an alternative technical evaluation. If a lesser distance is pursued, this distance shall be approved by USFWS. The project applicant(s) shall preserve acreage of vernal pool habitat for each wetted acre of any indirectly affected vernal pool habitat at a ratio approved by USFWS at the conclusion of the Section 7 consultation. This mitigation shall occur before the approval of any grading or improvement plans for any project phase that would allow work within 250 feet of such habitat or lesser distance deemed sufficiently protective by a qualified biologist with approval from USFWS, and before any ground-disturbing activity

within 250 feet of the habitat or lesser distance deemed sufficiently protective by a qualified biologist with approval from USFWS. The project applicant(s) will not be required to complete this mitigation measure for direct or indirect impacts that have already been mitigated to the satisfaction of USFWS through another BO or mitigation plan (i.e., if impacts on specific habitat acreage are mitigated by one project phase or element, the project applicant(s) will not be required to mitigate for it again in another phase of the project).

A standard set of BMPs shall be applied to construction occurring in areas within 250 feet of off-site vernal pool habitat, or within any lesser distance deemed adequate by a qualified biologist (with approval from USFWS) to constitute a sufficient buffer from such habitat. Refer to Section 3A.9, "Hydrology and Water Quality - Land" for the details of BMPs to be implemented.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be developed by the project applicant(s) of each applicable project phase in consultation with the affected oversight agency(ies) (i.e., El Dorado and/or Sacramento Counties, or Caltrans).

**Mitigation Measure 3A.3-2h: Obtain Incidental Take Permit for Impacts on Valley Elderberry Longhorn Beetle and Implement All Permit Conditions.**

Before each phase of the project, the project applicant(s) shall have a qualified biologist identify any elderberry shrubs within 100 feet of the project footprint and conduct a survey for valley elderberry longhorn beetle exit holes in stems greater than 1 inch in diameter. If no project activity, including grading or use of herbicides, would occur within 100 feet of an elderberry shrub, then no further mitigation shall be required for valley elderberry longhorn beetle in those areas.

If project activities would occur within 100 feet of any elderberry shrubs, consultation with USFWS under Section 7 will be required. No project construction shall proceed in areas potentially containing valley elderberry longhorn beetle until a BO has been issued by USFWS, and the project applicant(s) of all project phases have abided by all pertinent conditions in the BO relating to the proposed construction, including conservation and minimization measures, intended to be completed before on-site construction. Conservation and minimization measures are likely to include preparation of supporting documentation that describes methods for relocation of existing shrubs and maintaining existing shrubs and other vegetation in a conservation area.

Relocation of existing elderberry shrubs and planting of new elderberry seedlings shall be implemented consistent with the mitigation ratios described in the Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999). The 1999 conservation guidelines mitigation ratios are based on whether the affected shrub is located in riparian or non riparian habitat, the size of stems affected, and the presence of beetle exit holes. Compensatory mitigation for elderberry shrubs that would be removed from their current locations would be developed in consultation with USFWS during the Section 7 consultation process. Compensatory mitigation may include planting replacement elderberry seedlings or cuttings and associated native plants within the open space areas of the SPA, planting replacement elderberry seedlings or cuttings and associated native plants at a suitable off-site location, purchasing credits at an approved mitigation bank, or a combination thereof. Relocated and replacement shrubs and associated native plantings shall be placed in conservation areas providing a minimum of 1,800 square feet per transplanted shrub. These conservation areas shall be preserved in perpetuity as habitat for valley elderberry longhorn beetle. The number of elderberry shrubs that would be affected by implementing the project is expected to be low because there are currently a total of less than 10 shrubs known to be present on the SPA. Ratios for mitigation of valley elderberry longhorn beetle habitat will ultimately be determined through the ESA Section 7 consultation process with USFWS, but shall be a minimum of "no net loss." USFWS uses stem count data, presence or absence of exit holes, and whether the affected elderberry shrubs are located in riparian habitat to determine the number of elderberry seedlings or cuttings and associated riparian vegetation that would need to be planted as compensatory mitigation for affected elderberry longhorn beetle habitat. The final VELB mitigation plan, including transplanting procedures, long-term protection, management of the mitigation areas, and monitoring procedures shall be consistent with the Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999).

The population of valley elderberry longhorn beetles, the general condition of the conservation area, and the condition of the elderberry and associated native plantings in the conservation area must be monitored over a period of either ten consecutive years or for seven years over a 15-year period. A minimum survival rate of at least 60% of the elderberry plants and 60% of the associated native plants must be maintained throughout the monitoring period. Within one year of discovering that survival has dropped below 60%, the project applicant(s) shall replace failed plantings to bring survival above this level. Detailed information on monitoring success of relocated and planted shrubs and measures to compensate (should success criteria not be met) would be required in the BO.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries (i.e., U.S. 50 interchange improvements) must be developed by the project applicant(s) of each applicable project phase in consultation with the affected oversight agency(ies) (i.e., Caltrans) and must be sufficient to achieve the performance criteria described above.

**Mitigation Measure 3A.3-3: Conduct Special-Status Plant Surveys; Implement Avoidance and Mitigation Measures or Compensatory Mitigation.**

To mitigate for the potential loss or degradation of special-status plant species and habitat, the project applicant(s) for any particular discretionary development application shall adhere to the requirements described below.

- ▶ The project applicant(s) for any particular discretionary development application, including the proposed off-site elements, shall retain a qualified botanist to conduct protocol level preconstruction special-status plant surveys for all potentially occurring species. Preconstruction special-status plant surveys shall not be required for those portions of the SPA that have already been surveyed according to DFG and USFWS guidelines. If no special-status plants are found during focused surveys, the botanist shall document the findings in a letter report to USFWS, DFG, the City of Folsom, Caltrans (for interchange improvements to U.S. 50), El Dorado County (for roadway connections in El Dorado County), and Sacramento County (for the off-site detention basin) and no further mitigation shall be required.
- ▶ If special-status plant populations are found, the project applicant(s) of affected developments shall consult with DFG and USFWS, as appropriate depending on species status, to determine the appropriate mitigation measures for direct and indirect impacts on any special-status plant population that could occur as a result of project implementation. Mitigation measures may include preserving and enhancing existing populations, creation of off-site populations on project mitigation sites through seed collection or transplantation, and/or restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat or individuals.
- ▶ If potential impacts on special-status plant species are likely, a mitigation and monitoring plan shall be developed before the approval of grading plans or any ground-breaking activity within 250 feet of a special-status plant population. The mitigation plan shall be submitted to Caltrans (for interchange improvements to U.S. 50), El Dorado County (for impacts in roadway connections in El Dorado County), Sacramento County (for impacts in the off-site detention basin footprint), or the City of Folsom (for on-site impacts and all other off-site elements), for review and approval. It shall be submitted concurrently to DFG or USFWS, as appropriate depending on species status, for review and comment. The plan shall require maintaining viable plant populations on-site and shall identify avoidance measures for any existing population(s) to be retained and compensatory measures for any populations directly affected. Possible avoidance measures include fencing populations before construction and exclusion of project activities from the fenced-off areas, and construction monitoring by a qualified botanist to keep construction crews away from the population. The mitigation plan shall also include monitoring and reporting requirements for populations to be preserved on site or protected or enhanced off site.

- ▶ If relocation efforts are part of the mitigation plan, the plan shall include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements.
- ▶ If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, and other details, as appropriate to target the preservation on long term viable populations.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., Caltrans, El Dorado and/or Sacramento Counties).

**Mitigation Measure 3A.3-4a: Secure and Implement Section 1602 Streambed Alteration Agreement.**

The project applicant(s) for any particular discretionary development application shall obtain a Section 1602 streambed alteration agreement from DFG for all construction activities that would occur in the bed and bank of Alder Creek and other drainage channels and ponds on the SPA. As a condition of issuance of the streambed alteration agreement, the project applicant(s) for any particular discretionary development application affecting riparian habitat shall hire a qualified restoration ecologist to prepare a riparian habitat MMP. The draft MMP shall describe specific method(s) to be implemented to avoid and/or compensate for impacts on the stream channel of Alder Creek and other drainage channels within DFG jurisdiction, and the bed and banks of the on-site ponds. Mitigation measures may include establishment or restoration of riparian habitat within the project's open space areas along preserved stream corridors, riparian habitat restoration off-site, or preservation and enhancement of existing riparian habitat either on or off the SPA. The compensation habitat shall be similar in composition and structure to the habitat to be removed and shall be at ratios adequate to offset the loss of riparian habitat functions and services at the SPA. The riparian habitat compensation section of the habitat MMP shall include the following:

- ▶ compensatory mitigation sites and criteria for selecting these mitigation sites;
- ▶ complete assessment of the existing biological resources in both the on-site and off-site preservation and restoration areas;
- ▶ site-specific management procedures to benefit establishment and maintenance of native riparian plant species, including black willow, arroyo willow, white alder, and Fremont cottonwood;
- ▶ a planting and irrigation program if needed for establishment of native riparian trees and shrubs at strategic locations within each mitigation site (planting and irrigation may not be necessary if preservation of functioning riparian habitat is chosen as mitigation or if restoration can be accomplished without irrigation or planting);
- ▶ in kind reference habitats for comparison with compensatory riparian habitats (using performance and success criteria) to document success;
- ▶ monitoring protocol, including schedule and annual report requirements (compensatory riparian habitats shall be monitored for a minimum period of five years);
- ▶ ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80% survival of planted riparian trees and shrubs by the end of the five-year maintenance and monitoring period or dead and dying trees shall be replaced and monitoring continued until 80% survivorship is achieved;



- ▶ corrective measures if performance standards are not met;
- ▶ responsible parties for monitoring and preparing reports; and
- ▶ responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.

Any conditions of issuance of the Streambed Alteration Agreement shall be implemented as part of project construction activities that adversely affect the bed and bank and riparian habitat associated with Alder Creek and other drainage channels and ponds that are within the project area that is subject to DFG jurisdiction. The agreement shall be executed by the project applicant(s) and DFG before the approval of any grading or improvement plans or any construction activities in any project phase that could potentially affect the bed and bank of Alder Creek and other on-site or off-site drainage channels under DFG jurisdiction and their associated freshwater marsh and riparian habitat.

Mitigation for the U.S. 50 interchange improvements must be coordinated by the project applicant(s) of each applicable project phase with the Caltrans.

**Mitigation Measure 3A.3-4b: Conduct Surveys to Identify and Map Valley Needlegrass Grassland; Implement Avoidance and Minimization Measures or Compensatory Mitigation.**

The project applicant(s) of all project phases shall retain a qualified botanist to conduct preconstruction surveys to determine if valley needlegrass grassland is present on the SPA. This could be done concurrently with any special-status plant surveys conducted on site as special-status plant surveys are floristic in nature, i.e. require that all species encountered be identified, and require preparation of a plant community map. If valley needlegrass grassland is not found on the SPA, the botanist shall document the findings in a letter report to the City of Folsom, and no further mitigation shall be required. Valley needlegrass grassland was not found in any of the off-site project elements.

If valley needlegrass grassland is found on the SPA, the location and extent of the community shall be mapped and the acreage of this community type, if any, that would be removed by project implementation shall be calculated. The project applicant(s) for any particular discretionary development application affecting valley needlegrass grassland shall consult with DFG and the City of Folsom to determine appropriate mitigation for removal of valley needlegrass grassland resulting from project implementation. Mitigation measures shall include one or more of the following components sufficient to achieve no net loss of valley needlegrass grassland acreage: establishment of valley needlegrass grassland within project's open space areas currently characterized by annual grassland, establishment of valley needlegrass grassland off-site, or preservation and enhancement of existing valley needlegrass grassland either on or off the SPA. The applicant(s) shall compensate for any loss of valley needlegrass grassland resulting from project implementation at a minimum 1:1 replacement ratio.

**Mitigation Measure 3A.3-5: Conduct Tree Survey, Prepare and Implement an Oak Woodland Mitigation Plan, Replace Native Oak Trees Removed, and Implement Measures to Avoid and Minimize Indirect Impacts on Oak Trees Retained On Site.**

The project applicant(s) shall prepare an oak woodland mitigation and monitoring plan. The project applicant(s) of all on- and off-site project phases containing oak woodland habitat or individual trees shall adhere to the requirements described below, which are consistent with those outlined in California Public Resources Code 21083.4.

Pursuant to Sacramento County General Plan policy, the acreage of oak woodland habitat for determining impacts and mitigation requirements was calculated as the oak tree canopy area within stands of oak trees having greater than 10% cover plus a 30-foot-radius buffer measured from the outer edge of the tree canopy.

Oak trees located in areas greater than 30 feet from stands meeting the greater than 10% tree canopy cover criterion were considered isolated trees and not part of the blue oak woodland community. Mitigation for impacts on isolated oak trees is discussed separately below.

- ▶ Preserve approximately 399 acres of existing oak woodland habitat in the SPA (this acreage is based on the extent of oak woodland habitat as determined from aerial photograph interpretation; however, following completion of ground verification by a qualified arborist, the actual amount of oak woodland present within impact areas could be slightly greater or lesser than the amount calculated from aerial photograph and, therefore, the amount preserved could also be slightly greater or lesser than 399 acres).
- ▶ Create 243 acres of oak woodland habitat in the SPA by planting a combination of blue oak acorns, seedlings, and trees in the following SPA locations:
  - Non-wooded areas that are adjacent to or contiguous with the existing oak woodland habitat.
  - Preserve and passive open space zones throughout the SPA.
  - Open space areas that are adjacent to existing oak woodlands that will be impacted by project grading (i.e. catch slopes).
  - Other practical locations within the SPA in or adjacent to open space.

#### **Oak Woodlands Mitigation Planting Criteria**

The following oak woodland mitigation planting criteria shall be used to create oak woodland habitat:

- A minimum of 55 planting sites per acre (with a total of 70 units, as defined below) will mitigate for one acre of oak woodland impacts. A combination of acorns, seedlings, and various sizes of container trees (#1 container, #5 container, #15 container) or transplanted trees shall be incorporated into the planting design. Mitigation acreage that is planted solely with larger oak trees (no acorns) shall have a minimum of 35 planting sites per acre. The units are defined as follows:
  - One established acorn equals one unit (acorns will be over planted to maximize potential germination).
  - One oak seedling equals one unit.
  - One #1 container oak tree equals two units.
  - One #5 container oak tree equals three units.
  - One #15 container oak tree equals four units.
  - One 24-inch boxed oak tree equals six units.
  - One transplanted oak tree equals four units per trunk diameter inch (dbh).

Native non oak species characteristic of oak woodlands shall be included in the mitigation planting plan to augment overall habitat values. Each non oak tree species shall represent unit values described above for oak trees, but non oak species shall comprise no more than 10% of the mitigation plantings.

- ▶ Preserve and protect existing off-site oak woodland habitat. Existing, unprotected oak woodland habitat within Sacramento and El Dorado Counties may be secured and placed under conservation easement in lieu of onsite mitigation measures if necessary. The off-site locations would be managed as oak woodland habitat in perpetuity.
- ▶ Create oak woodlands off site. Plant a combination of blue oak acorns, seedlings, and trees at off-site location(s), if needed to achieve the creation goal of 243 acres of new blue oak woodland habitat. This measure would only be needed if 243 acres of blue oak woodland could not be created in the SPA. Off-site creation shall follow the same guidelines as outlined in the Mitigation Planting Criteria for on-site creation. Off-site tree planting shall occur at sites within Sacramento County that should naturally support blue oak woodland and shall be used to restore former blue oak woodland habitat that has been degraded or

removed through human activities. Restoration shall be designed to result in species composition and densities similar to those in the SPA prior to project development. Planted areas shall be placed under conservation easement and managed as oak woodland habitat in perpetuity.

- ▶ The oak woodland mitigation plan prepared by the project applicant(s) shall include a maintenance and monitoring program for any replacement trees. The program shall include monitoring and reporting requirements, schedule, and success criteria. Replacement oak trees shall be maintained and monitored for a minimum of eight years from the date of planting and irrigation shall be provided to planted trees for the first five years after planting. Any replacement trees that die during the monitoring period shall be replaced in sufficient numbers to achieve 80% survival rate for planted trees by the end of the eight-year maintenance and monitoring period. Dead and dying trees shall be replaced and monitoring continued until 80% survivorship is achieved. Security acceptable to the City and sufficient to cover maintenance and monitoring costs for eight years shall be provided to the City Planning Department. The security will be forfeited if the project applicant or designated responsible party fails to provide maintenance and monitoring and meet the success criteria.

### **Isolated Oak Tree Mitigation**

The project applicant(s) of all on-site project phases containing oak woodland habitat or isolated trees and the off-site Prairie City Road and Oak Avenue interchange improvements to U.S. 50; Rowberry Drive Overcrossing; and the underground sewer force main shall develop a map depicting the tree canopy of all oak trees in the survey area and identifying the acreage of tree canopy that would be preserved and the acreage that would be removed. A tree permit for removal of isolated oak trees (those not located within the delineated boundary of oak woodland habitat) shall be obtained from the City Planning Director. As a condition of the tree removal permit, project applicant(s) shall be required to develop a Planting and Maintenance Agreement. The City's Tree Preservation Code requires compensatory mitigation and the City and the project applicants have developed a plan, as set forth Section 10 of the Folsom Plan Area Specific Plan (attached to this EIR/EIS as Appendix N) specifically to avoid and minimize adverse effects on isolated oak trees from project development and to provide compensatory mitigation for removal of protected trees in the SPA. In addition to the language contained in the Folsom Plan Area Specific Plan, the following elements shall be included in a protected tree mitigation plan to be developed by the project applicants and agreed upon by the City:

- ▶ Project applicant(s) of projects containing isolated oak trees shall retain a certified arborist or registered professional forester to perform a determinate survey of tree species, size (dbh), condition, and location for all areas of the project site proposed for tree removal and encroachment of development. The condition of individual trees shall be assessed according to the American Society of Consulting Arborists rating system with the following added explanations:
  - 5 = Excellent; No problems – tree has no structural problems, branches are properly spaced and tree characteristics are nearly perfect for the species.
  - 4 = Good; No apparent problems – tree is in good condition and no apparent problems from visual inspection. If potential structural or health problems are tended at this stage, future hazard can be reduced and more serious health problems can be averted.
  - 3 = Fair; Minor problems – There are some minor structural or health problems that pose no immediate danger. When the recommended actions in an arborist report are completed correctly the defect(s) can be minimized or eliminated.
  - 2 = Poor; Major problems – the tree is in poor condition, but the condition could be improved with correct arboricultural work including, but not limited to: pruning, cabling, bracing, bolting, guying, spraying, mistletoe removal, vertical mulching, and fertilization. If the recommended actions are completed correctly, hazard can be reduced and the rating can be elevated to a 3. If no action is taken the tree is considered a liability and should be removed.
  - 1 = Hazardous or non correctable condition – the tree is in extremely poor condition and in non-reversible decline. This rating is assigned to a tree that has structural and/or health problems that no amount of tree care work or effort can change. The issues may or may not be considered a dangerous situation.

The tree may also be infested with a disease or pest(s) that is non-controllable at this time and is causing an unacceptable risk of spreading the disease or pests(s) to other trees.

- 0 = Dead – the tree has no significant signs of life (dead or very close to being dead).

**Isolated Oak Tree Mitigation Planting Criteria**

- ▶ The determination for whether an isolated tree shall be preserved, removed without compensation, or removed with compensatory mitigation shall be based on the condition and size of the tree as follows:
  - Trees rated 0 or 1 may be removed with no mitigation.
  - Trees rated 2 may be removed at 50% of the normal Folsom Municipal Code mitigation.
  - Trees rated 3, 4, and/or 5 may be removed at the normal Folsom Municipal Code mitigation.
  - Native isolated oaks measuring 24 inches or greater dbh for a single trunk or 40 inches or more for a multi-trunked tree and rated a 3 to 5 shall be retained, unless retaining wall(s) higher than 4 feet tall (from bottom of footing to the top of the wall) would be required to protect the tree(s) from mass grading of the SPA properties.
  - Native oaks measuring between 12 and 24 inches dbh and rated a 4 or 5 shall not be removed or mitigated unless wall(s) higher than 4 feet tall (from bottom of footing to the top of the wall) would be required to protect the tree(s) from mass grading of the SPA properties. Trees in this size class but rated 2 or 3 shall not be removed unless unreasonable costs to save the tree(s) (greater than the cost of implementing the isolated oak tree mitigation planting criteria described here) would result.
  - Native oaks measuring 5 inches or greater dbh but less than 12 inches dbh shall not be removed unless unreasonable costs to save the tree(s) (greater than the cost of implementing the isolated oak tree mitigation planting criteria described here) would result.
  - Native oak trees measuring 1 inch or greater dbh but less than 5 inches dbh may be preserved to receive a Small Tree Preservation Credit (STPC). Any tree that is to be considered for preservation credit shall be evaluated, included in the arborist report, and shall have been found to be rated a 3, 4, or a 5. Credits shall only be accepted if the tree protection zone (TPZ) (i.e., the outer edge of the tree canopy drip line) is protected with fencing in the exact manner that 5 inches dbh and greater trees are protected on a construction site, and the spacing is equal to the proper tree spacing dictated by the Folsom Master Tree List. STPC shall not count if they the tree is in a poor growing space due to its position within the TPZ of another protected tree to be preserved. The City shall accept the preservation of native oak trees in this size class as credit towards the total removed inches based on the following STPC criteria:

Caliper of Tree Preserved	Mitigation Tree Credit Equivalent
1 inch or greater, but less than 2 inches	One #15 container tree or two #5 container trees
2 inches or greater, but less than 3 inches	Two #15 container trees
3 inches or greater, but less than 4 inches	Three #15 container trees
4 inches or greater, but less than 5 inches	Four #15 container trees

- ▶ Folsom Municipal Code requires one of the following be planted as compensation for each diameter inch of protected tree removed:
  - half of a 24-inch box tree;

- one #15 container tree;
  - two #5 container trees; or
  - \$150 in-lieu payment or other fee set by City Council Resolution.
- ▶ The Planting and Maintenance Agreement shall include a planting plan, planting and irrigation design details, and a weaning schedule for the establishment period. The plan shall include a 5-year establishment period for trees and 8 years for planted acorns with an annual monitoring report that includes corrections needed with proposed work plan, and notice of compliance within 90-days of annual monitoring report. Security in a form acceptable to the City and sufficient to cover maintenance and monitoring costs for eight years shall be provided to the City Planning Department. The security will be forfeited if the project applicant or designated responsible party fails to fulfill the Planting and Maintenance Agreement.
- ▶ To avoid and minimize indirect impacts on protected trees to remain on the SPA, the project applicant(s) of all affected project phases shall install high visibility fencing outside the outer edge of the drip lines of all trees to be retained on the SPA during project construction. The fencing may be installed around groups or stands of trees or whole wooded areas but must be installed so that the drip lines of all trees are protected. Grading, trenching, equipment or materials storage, parking, paving, irrigation, and landscaping shall be prohibited within the fenced areas (i.e. drip lines of protected trees). If the activities listed cannot be avoided within the drip line of a particular tree, that tree shall be counted as an affected tree and compensatory mitigation shall be provided, or the tree in question shall be monitored for a period of five years and replaced only if the tree appears to be dead or dying within five years of project implementation.

Through a combination of the mitigation options presented above along with the proposed on-site preservation of blue oak woodland habitat in the open space areas, the project applicant(s) can satisfy the mitigation requirements for removal of trees protected under the Folsom Municipal Code while also mitigating the impacts on oak woodland habitat, as determined through consultation with the Sacramento County Planning Department (for County off-site impacts only) and/or the City of Folsom.

Mitigation for the U.S. 50 interchange improvements must be coordinated by the project applicant(s) of each applicable project phase with Caltrans.

**Mitigation Measure 3B.3-1a: Secure Clean Water Act Section 404 Permit and Implement All Permit Conditions; Ensure No Net Loss of Functions of Wetlands, Other Waters of the U.S., and Waters of the State.**

Before the approval of grading and improvement plans and before any groundbreaking activity associated with the Off-site Water Facilities requiring fill of wetlands or other waters of the U.S. or waters of the state, the City shall obtain all necessary permits under Sections 401 and 404 of the CWA or the state's Porter-Cologne Water Quality Control Act for the respective phase. For each respective Off-site Water Facility component, all permits, regulatory approvals, and permit conditions for effects on wetland habitats shall be secured before implementation of any grading activities within 250 feet of waters of the U.S. or wetland habitats, including waters of the state, that potentially support Federally listed species. The City shall commit to replace, restore, or enhance on a "no net loss" basis (in accordance with USACE and the Central Valley RWQCB) the acreage of all wetlands and other waters of the U.S. that would be removed, lost, and/or degraded with implementation of project plans for that phase. Wetland habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE, the Central Valley RWQCB, and the City, as appropriate, depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes.

As part of the Section 404 permitting process, a draft wetland mitigation and monitoring plan (MMP) shall be developed for the selected Off-site Water Facility Alternative on behalf of the City. Before any ground-disturbing activities that would adversely affect wetlands and before engaging in mitigation activities

associated with each phase of development, the City shall submit the draft wetland MMP to USACE and the Central Valley RWQCB for review and approval of those portions of the plan over which they have jurisdiction. The MMP would have to be approved prior to issuance of a Section 404 permit. Once the final MMP is approved and implemented, mitigation monitoring shall continue for a minimum of 5 years from completion of mitigation, or human intervention (including recontouring and grading), or until the performance standards identified in the approved MMP have been met, whichever is longer.

As part of the MMP, the City shall prepare and submit plans for the creation of aquatic habitat in order to adequately offset and replace the aquatic functions and services that would be lost, account for the temporal loss of habitat, and contain an adequate margin of safety to reflect anticipated success. Restoration of previously altered and degraded wetlands shall be a priority of the MMP for offsetting losses of aquatic functions on the project site because it is typically easier to achieve functional success in restored wetlands than in those created from uplands. The MMP must demonstrate how the aquatic functions and values that would be lost through project implementation will be replaced.

The habitat MMP for jurisdictional wetland features shall be consistent with USACE's and EPA's April 10, 2008 Final Rule for Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332 and 40 CFR Part 230). According to the Final Rule, mitigation banks should be given preference over other types of mitigation because a lot of the risk and uncertainty regarding mitigation success is alleviated by the fact that mitigation bank wetlands must be established and demonstrating functionality before credits can be sold. This also alleviates temporal losses of wetland function while compensatory wetlands are being established. Mitigation banks also tend to be on larger, more ecologically valuable parcels and are subjected to more rigorous scientific study and planning and implementation procedures than typical permittee-responsible mitigation sites (USACE and EPA 2008). It is not likely feasible to provide compensatory mitigation for all aquatic resource impacts on site. Therefore, a combination of on-site and off-site permittee-responsible mitigation and mitigation banking would likely be necessary to achieve the no-net-loss standard.

Compensatory mitigation for losses of stream and intermittent drainage channels shall be achieved through in-kind preservation, restoration, or enhancement, as specified in the Final Rule guidelines. The wetland MMP shall address how to mitigate impacts on all aquatic resource types and shall describe specific method(s) to be implemented to avoid and/or mitigate any Off-site Water Facility-related impacts. The wetland compensation section of the habitat MMP shall include all the contents identified in Mitigation Measure 3A.3-1A.

USACE has determined that the Off-site Water Facilities may require an individual permit. In its final stage and once approved by USACE, the MMP for the Off-site Water Facilities is expected to detail proposed wetland restoration, enhancement, and/or replacement activities that would ensure no net loss of aquatic functions in the project vicinity. Approval and implementation of the wetland MMP shall aim to fully mitigate all unavoidable impacts on jurisdictional waters of the U.S., including jurisdictional wetlands. To satisfy the requirements of the City and the Central Valley RWQCB, mitigation of impacts on the non-jurisdictional wetlands beyond the jurisdiction of USACE shall be included in the same MMP. All mitigation requirements determined through this process shall be implemented before grading plans are approved. The MMP shall be submitted to USACE and approved prior to the issuance of any permits under Section 404 of the CWA.

Water quality certification pursuant to Section 401 of the CWA will be required before issuance of the Section 404 permit. Before construction in any areas containing wetland features, the City shall obtain water quality certification for the Off-site Water Facilities. Any measures required as part of the issuance of water quality certification shall be implemented.

**Mitigation Measure 3A.4-2b: Participate in and Implement an Urban and Community Forestry Program and/or Off-Site Tree Program to Off-Set Loss of On-Site Trees.**

The trees on the project site contain sequestered carbon and would continue to provide future carbon sequestration during their growing life. For all harvestable trees that are subject to removal, the project applicant(s) for any particular discretionary development application shall participate in and provide necessary funding for urban and community forestry program (such as the UrbanWood program managed by the Urban Forest Ecosystems Institute [Urban Forest Ecosystems Institute 2009]) to ensure that wood with an equivalent carbon sequestration value to that of all harvestable removed trees is harvested for an end-use that would retain its carbon sequestration (e.g., furniture building, cabinet making). For all nonharvestable trees that are subject to removal, the project applicant(s) shall develop and fund an off-site tree program that includes a level of tree planting that, at a minimum, increases carbon sequestration by an amount equivalent to what would have been sequestered by the blue oak woodland during its lifetime. This program shall be funded by the project applicant(s) of each development phase and reviewed for comment by an independent Certified Arborist unaffiliated with the project applicant(s) and shall be coordinated with the requirements of Mitigation Measure 3.3-5, as stated in Section 3A.3, "Biological Resources - Land." Final approval of the program shall be provided by the City. Components of the program may include, but not be limited to, providing urban tree canopy in the City of Folsom, or reforestation in suitable areas outside the City. Reforestation in natural habitat areas outside the City of Folsom would simultaneously mitigate the loss of oak woodland habitat while planting trees within the urban forest canopy would not. The California Urban Forestry Greenhouse Gas Reporting Protocol shall be used to assess this mitigation program (CCAR 2008). All unused vegetation and tree material shall be mulched for use in landscaping on the project site, shipped to the nearest composting facility, or shipped to a landfill that is equipped with a methane collection system, or combusted in a biomass power plant. Tree and vegetative material should not be burned on- or off-site unless used as fuel in a biomass power plant.

