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INTRODUCTION

This report includes a biological inventory for the proposed subdivision of the ± 44.31-acre site known as The Grove (original name for the 2010 report: Nevada City Tech Center Housing Project), APN 05-190-45. The property currently is undeveloped. Access to the property is via Providence Mine Road.

The biological inventory includes a description of the plants and wildlife found within the proposed project area and discussions of Waters of the United States, special-status species, sensitive plant communities, and other important biological resources that could potentially occur there. Also, the report discusses in a general fashion the potential impacts to biological resources of the proposed project, as well as mitigation measures to minimize or avoid these potential impacts.

Biological Updates from 2010 Report

All biological resources were considered in the surveys, and updates of these resources are included within this report. Updates include:

- Project Description
- Updated Mitigation
- Updated Wildlife
- Tables for Flora and Wildlife Observed
- Current Photographs of the property (Appendix A)
- Tables for Special Status Plants and Wildlife (Nevada City and 8-adjacent quads) (Appendix B and C, respectively)

SITE DESCRIPTION

The Grove site consists of one parcel situated directly to the east of Providence Mine Road. The entire site including the Tech Center is approximately 44 -acres in size and ranges in elevation from 2,545 feet to 2,775 feet above mean sea level (MSL). Section 13, Township 16 North, Range 8 East, Mdm. Nevada City USGS Quadrangle; no physical address was given.

The area surrounding the site consists of rural housing and open lands. Directly to the east is located the Nevada City Tech Center, the Grass Valley Group and other commercial developments extending east on Providence Mine Road to Zion Street. The site is situated in a coniferous forest with one major ephemeral drainage course bisecting the property from east to west, two smaller ephemeral drainages along the southwest, and a partial roadside ditch (undeveloped) running adjacent to Providence Mine Road. A small seasonal wetland is located at a low point along the west portion of

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44the property where the drainages converge prior to flowing off-site or continuing on in an undeveloped roadside ditch.

Historically, the land was investigated for potential as a hardrock mine.. There is evidence throughout the site of mine exploration and mining swales. The old growth coniferous forest was cleared, most likely for the use of wood as a source of fuel for the operation of mining activities. Today it is composed of second or third successional trees.

PROJECT DESCRIPTION

Application has been made to the Planning Commission for a tentative Final Map to create a 12.9 acre parcel subdivided to create a total of 59 residential lots. The applicant is proposing to subdivide the project in two phases, with Phase 1 encompassing the creation of 15 single-family lots, to be sold as undeveloped lots and suitable for custom homes, along with many supporting infrastructure improvements. Of these 15 lots, 12 are proposed to incorporate a second dwelling in order to comply with the City's adopted Affordable Housing Plan. Phase 2 is proposed to encompass the development of 32 townhouse units along with 12 clustered single-family lots and supporting infrastructure. The clustered housing units and condominium units will be developed by the applicant and will include four floor plan variations and sizes.

The majority of the site, 10.9 acres, is zoned R2, multi-family residential. The standard R2 density limitation is 8-units per acre, but the site was capped at a total of 27-units at the time the property was re-zoned in 2010. A 2-acre portion of the site is zoned R3, high-density residential, and has a density limitation of 16-units per acre. The remaining 6.8-acres is zoned LI, Light Industrial, and is not being considered as part of the development proposal. Due to the unit cap on the R2 zoned portion of the property, the project will result in its maximum density limit and no further subdivision will be permitted within the 12.9-acre project area.

METHODS

Pre-field Survey

The purpose of the pre-field investigation was to review existing information and to prepare a list of special status species with potential to occur in the vicinity of the project area. Sources of information included are as follows:

- *California Natural Diversity Data Base* (CNDDDB April 2016) for the Nevada City and adjacent quads.

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- *Federal Endangered and Threatened Species - IPaC Data in or may be affected by Project in the Nevada City, April 2016.*
- *The Jepson Manual Vascular Plants of California, Thoroughly Revised and Expanded.* January 2012.
- *City of Nevada City General Plan 1980 - 2000 with updates 2014.*
- *Nevada County Natural Resources Report: A Scientific Assessment of Watersheds and Ecosystems (Beedy and Brussard 2002).*

FIELD SURVEYS

Plants

Special-status plant species surveys were performed in April 2016. Surveys were conducted in a manner to identify any rare or endangered species that may be present during the blooming period. Survey protocols that were followed include Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities, Department of Fish and Game, December 9, 1983 (Revised May 8, 2000) and Guidelines for Conduction and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants, USFWS, 1996.

The surveys were conducted when most rare or endangered species that could occur in habitats at the site would be evident and identifiable. The surveys were floristic in nature and not based on the occurrence of habitat or other physical features. The surveys were conducted using systematic field techniques in all habitats of the site to ensure a reasonably thorough coverage of potential impact areas. A meandering pattern was walked through each habitat to ensure that all areas were viewed. All plants at the site were identified to the level necessary to ascertain whether they were special status species.

Wildlife

A wildlife habitat assessment was performed in coordination with the plant surveys. Surveys were conducted to determine if habitats supported special-status animal species and raptor nest searches were performed during these surveys. Protocol level surveys for potentially occurring special-status animals were not conducted. The determination of presence for animal species possibly occurring was based on habitat assessments, literature review, and queries through CNDDDB.

RESULTS

NATURAL COMMUNITIES AND HABITATS

Where possible the vegetation has been classified according to the California Natural Diversity Data Base's Descriptions of the Terrestrial Natural Communities of California (Holland, 1996). The California Natural Diversity Database (CNDDDB) is a computerized inventory of the locations of populations of rare and threatened plants, animals and natural communities in California. These elements of natural diversity are monitored by CNDDDB to assure that California's rich biological heritage is adequately represented in their inventory. A list of the flora observed on site during the special status plant species surveys is included in Appendix C. A list of wildlife observed on site during the surveys is included in Appendix D.

The majority of the site has been subject to modifications from the historical exploration of the site for hardrock mining. The site consists of several ephemeral drainages, a wetland, Western Ponderosa Pine Forest, and Non-Native Annual Grasses and Forbs.

Westside Ponderosa Pine Forest

The Ponderosa Pine Forest historically featured open park-like stands with a scattered and diversified understory of trees and shrubs growing beneath 150' to 200' conifers (Holland 1986 from Beedy and Brussard 2002). Frequent fires cleaned out the needle accumulation that collected under the canopy and eliminated invading seedlings (Holland 1986 from Beedy and Brussard 2002). However today, due to fire suppression and overstory removal, these formerly open stands have been replaced by thickets of early-to-mid successional ponderosa pine forest mixed with oaks, firs, and incense cedars that have become established without occasional fires (Holland 1986 from Beedy and Brussard 2002).

The coniferous trees are approximately $80 \pm$ feet tall; canopy cover varies from 25% to 75%. Tree composition is Pacific Ponderosa pine (*Pinus ponderosa*), with some incense cedar (*Calocedrus decurrens*), Douglas fir (*Pseudotsuga menziesii*), madrone (*Arbutus menziesii*), and California black oak (*Quercus kelloggii*).

The under story is composed of native species poison oak (*Toxicodendron diversilobum*), mountain misery (*Chamaebatia foliolosa*), and deerbrush (*Ceanothus integerrimus*). These native species are often indicators of earlier disturbances, such as fire and logging (Beedy and Brussard 2002). Non-native species found within this community are Himalayan blackberry (*Rubus armaniacus*) and Scotch broom (*Cytisus scoparius*). Scotch broom has formed dense thickets throughout this forested area, and

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is considered a “pest” plant because it often gains a foothold on disturbed soils and spreads quickly into adjacent habitats.

Non-native Annual Grasses and Forbs

Non-native grasses occur throughout the project site. They are not isolated to one specific plant community. Non-native grasses’ phenology is such that they are able to out compete most native grasses and forbs. They are mostly prevalent in the open sunny areas and are dominated by the common non-native species.

Himalayan Blackberry

The Himalayan blackberry is a perennial import from Eurasia that is an aggressive exotic which rapidly overtops the understory vegetation in the riparian/wetland habitats, and spreads by extending long runners which root at the ends. A colony of blackberry can widen by 10 ft. or more a year, smothering every plant in its path. Huge areas of diverse riparian shrubs and forbs have been turned into low productive monocultures by this uninvited plant. The canes are 5-angled, making large, stiff arches which can reach 10 ft. or more in height before bending over and traveling outward toward a new place to put down roots. Himalayan blackberry scrub occurs as a single species, dominating disturbed wetlands or in the transition zone between wetland and upland. These habitats are never inundated, and may be only vernal wet. Himalayan blackberry scrub is very common in the south to north flow drainages at this site. This species is considered a "nonhydrophyte" with an ACOE designation as FAC; it usually occurs in non-wetlands (Lichvar, 2013).

MINE WASTE DISPOSAL SITE

As noted, this property historically was mining activity, so included in the project proposal is a plan for remedial action to reduce to acceptable levels the potential human health risk and water quality impact associated with the naturally mineralized mine waste on the property. KPFF Consulting Engineers estimates that 1,710 cubic yards of soil will be excavated from two specific locations on the property and transported to a mine waste disposal site designated as the New Shaft location. The mine waste disposal site is approximately 1.55 acres, located directly off of Providence Mine Road; it is marked on the site plan map. The area was surveyed in April 2016 and no special status species or other protected resources were observed. In addition, the vegetation is consistent with what has been described elsewhere in this report as a Western Ponderosa Pine forest with even-aged trees and indications of high disturbance during the mining period at this site.

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POTENTIAL WATERS OF THE U.S.

Seasonal wetlands are defined by the ACOE (*Federal Register* 1982 from the Wetland Training Institute, Inc. 2006 ed.) and the Environmental Protection Agency (EPA) (*Federal Register* 1980 from the Wetland Training Institute, Inc. 2006 ed.) as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

An ephemeral drainage (tributary) has water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow (Wetland Training Institute 2006).

The several drainage and wetlands features discussed below were delineated on June 15, 2016. The delineation methodologies employed were developed in conjunction with the Corps and are based on the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987), as supplemented by the *Interim Regional Supplement - Arid West Region* (ACOE Research & Development Center, 2006).

All drainages appear to be ephemeral only and most show indicators of a high disturbance area (e.g. amalgamation of soils and mine waste within the sampling points, crushed gravels within drainages, etc.) due to past mining exploration activities and resultant mine waste found throughout the site. Surface water flow enters the project site via two culverts located along the western boundary of the site. The seasonal flow route is southwest off site; the flow exits at the mid-west portion of the project site via a culvert and enters an open drainage ditch for 0.5 miles before emptying into Deer Creek. Deer Creek eventually empties into the Yuba River, which flows into the Feather River; at this juncture the Feather River is considered Jurisdictional Navigible Waters of the U.S.

Potential Wetland Habitat

An ephemeral drainage flows from the eastern to the western boundaries and supports a willow thicket where the drainages converge in a low point, drainage water collects, then drains off-site to the southwest into Peck Ravine. This low point is dominated by non-native, invasive Himalayan blackberry. Invasive, exotic plants are defined as plants which are able to proliferate and aggressively alter or displace indigenous biological communities (Schwartz, et al. 1996 from Beedy and Brussard 2002). Within Nevada County, Himalayan blackberry is included as one of the most widespread invasive non-native plants. Also present in this area are some

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mature/emerging willow (*Salix lasiolepis*), plus some annual ruderal grasses that were observed.

Ephemeral Drainages

There are three ephemeral drainages located within the project area. The major drainage bisects the property flowing from the east to the west. During storm events this drainage conveys water; however, shortly after such events, the drainage subsides. Most water flows on the site are from roadside ditches situated to the southeast of the property that convey water through a series of roadside ditches and culverts. During the April 2016 surveys, there was no riparian/wetland vegetation present along the embankments of the major drainage. Most of the embankments are either bare or layered with mine waste covered in forest "duff."

The two smaller ephemeral drainages occur on the west side of the property. These two drainages occur where off-site culverts and a small detention pond convey storm water onto the site. Vegetation within these drainages primarily consists of blackberry and emergent willows.

Roadside Ditch

The roadside ditch is not an improved ditch; it consists primarily of bare soil with no identifiable bed and bank. It runs adjacent to Providence Mine Road where rainfall collects along the "shoulder" of the road. The offsite detention pond also drains alongside the roadway, entering the project site via two culverts. Water flow is sufficient along this shoulder to support sparse riparian habitat consisting of immature willow, California sycamore (*Platanus racemosa*), and blackberry.

SPECIAL STATUS SPECIES

Special-status species were considered for this analysis based on field survey results, a review of the California Natural Diversity Database (CNDDDB), CNPS literature, and database information provided by the IPac - U. S. Fish and Wildlife Service (Nevada City 7 ½ Minute Quad and Adjacent Quads of Challenge, Camptonville, Pike, French Corral, North Bloomfield, Rough and Ready, Grass Valley, and Chicago Park, databases April 2016). No special status species were observed during the surveys, either in 2010 or 2016.

SPECIAL STATUS PLANT SPECIES

The following description presents the two special status plant species that have the potential to occur at the site based on observed habitat types. The other species

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considered require special habitats, such as marsh or swamp or specialized soils, which do not occur within the project area.

Brandegee's Clarkia (*Clarkia biloba ssp. brandegeae*) CNPS 1B.2

Brandegee's clarkia is an annual species occurring in chaparral and cismontane woodlands and typically found within roadcuts. It blooms from May to July. Threats to this species are road maintenance and non-native species. Usually it is found in small colonies, and it would have been easily observed, even without flowers, if it had been present when the April 2016 surveys were conducted.

Butte County Fritillary (*Fritillaria eastwoodiae*) CNPS 3.2

A CNDDDB search revealed there is one listed occurrence of Butte County fritillary within the Nevada City quad. This species has marginal potential to occur on site, since there are red clay soils located in the coniferous forest with dry slopes. However, historical site disturbances have degraded this potential natural habitat, and none were observed.

SPECIAL STATUS WILDLIFE

The wildlife species addressed below have a very low to no potential to be present within the study area. The Fish and Wildlife Service (FWS) species listing for this area includes the California Red-legged Frog, and CNDDDB lists the Foothill Yellow-legged Frog. A Cooper's hawk (Species of Concern, CDFW 1998) was seen on the property during the 2016 surveys and so is included here. Specifics on these species are addressed below.

California Red-legged Frog (*Rana aurora draytonii*) – Federal Threatened; State Species of Concern

The current range of the California red-legged frog (CRLF) has been greatly reduced, with most populations occurring along the coast from Marin County to Ventura County, and in several isolated locations in the foothill region of the west slopes of the Sierra Nevada Mountains. Current information suggests that CRLF has been extirpated from most of its range within the Sierra Nevada Mountains.

Adult CRLF prefer dense, shrubby or emergent riparian vegetation near deep (more than 2.3 feet), still or slow moving water, especially where dense stands of overhanging willow and an intermixed fringe of cattail occur. This subspecies breeds from November through April (Jennings and Hayes 1994). Upland areas provide important sheltering habitat during winter when CRLF are known to aestivate in burrows and leaf litter.

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Habitat assessments for CRLF were based on habitat requirements as described in the USFSW, February 18, 1997 document on *California red-legged frog ecology and distribution* (USFWS 1997). The surveys found no suitable CRLF aquatic features within the study area. To be considered as having the primary constituent elements for CRLF, an area must include two or more suitable breeding locations, a permanent water source, associated uplands surrounding these water bodies up to 300' from the water's edge, all within 1.25 miles of one another and connected by barrier-free dispersal habitat that is at least 300' in width (USFWS 2002).

The pattern of disappearance of California red-legged frogs in California is associated with a loss of habitat, construction of roadways and large reservoirs, exotic predators, and stream channelization projects. Habitat loss and alteration, combined with over-exploitation, introduction of exotic predators, urbanization and its associated roadways, large reservoirs, and stream channelization projects were the primary factors causing population declines.

Within the project area there are no suitable aquatic features for the CRLF. All drainages on site support only storm water runoff, meaning that potential for CRLF to occur on site is extremely low to no potential. There is one known occurrence of CRLF within the Nevada County. The occurrence is approximately 6.0 air miles from the project site to the northeast in the North Bloomfield quad and does not occur within the same watershed as the project location.

Foothill Yellow-legged Frog (*Rana boylei*) Federal Candidate; State Species of Concern

The foothill yellow-legged frog (FYLF) is found in streams at low elevations in the Sierra Nevada and coastal mountains. It is found in a variety of habitats including valley-foothill hardwood woodlands, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadows. Typical habitat is fast-moving waterways that decline substantially in midsummer, thereby enabling their tadpoles to develop in the absence of most predatory fish. Foothill habitat for the yellow-legged frog is typically found in well-illuminated sections of creeks in forest or brush land, and with sparse vegetation along the streamside.

Yellow-legged frog requires perennial streams or sufficient water during the dry season months for the tadpoles to develop. FYLF is unlike most other ranid frogs in California, as this species is rarely encountered, even on rainy nights, far from permanent water (*California Wildlife Habitat Relationships System* database version 8.0).

Similar habitat features are required for this species as with the California red-legged frog. Since breeding habitat and associated summer refugia are not present on-site, overall habitat quality for FYLF is marginal at best, and potential to occur on site is extremely low to no potential. There are three occurrences of FYLF within the Nevada City quad. These occurrences are approximately 7.5 air miles from the project site and

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do not occur within the same watershed as the project location. Also, the on-site drainages at best would only provide a temporary transit waterway, since water flows occur only during and temporarily after rain events.

Cooper's Hawk (*Accipter cooperii*) - CDFW Watch List Species

This species is included in this report since a female Cooper's Hawk was observed hunting on site during the April 2016 surveys. This species is considered a breeding resident throughout most of the wooded portion of California. Typically, dense stands of live oak, riparian deciduous, or other forest habitats near water are used most frequently.

Their hunting strategy is focused in broken woodland and habitat edges; they catch prey in the air, on the ground, and in vegetation. They hunt small birds, especially young during nesting season, and small mammals; they can also take reptiles and amphibians. Often they dash suddenly from a perch in dense cover and pursue their prey in air through branches. Sometimes they run prey down in dense thickets. Typically they use cover to hide, attack, and approach prey; they also soar and make low, gliding search flights.

Cooper's Hawk usually nests in deciduous trees in crotches 10 to 80 feet, but usually 20 to 50 feet, above the ground. Also, they will nest in conifers on horizontal branches, in the main crotch, often just below the lowest live limbs. The nest is a stick platform lined with bark. They usually nest in second-growth conifer stands, or in deciduous riparian areas, usually near streams. Nesting and foraging usually occur near open water or riparian vegetation.

Cooper's Hawk breeds March through August; the peak activity is May through July. Single-brooded; clutch size 2-6, usually 4-5. Female incubates 35-65 days (Brown and Amadon 1968); male provides food during this period. Young altricial; yearly fledgling success is about 2 young/ pair. Mostly a yearlong resident. Breeding numbers reduced in recent decades.

REGULATORY CONTEXT

A number of local, state and federal agencies, including the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), U.S. Fish and Wildlife Services (USFWS), and the California Department of Fish and Wildlife (CDFW) have regulatory authority over special status species and sensitive habitats. The regulatory aspects include:

- **Nevada City Ordinances:**

Nevada City Supplement No. 1, 708, Sections 18.01.010 through 18.01.120 Tree Preservation Guidelines for the Basic Standards and Measures for the

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Preservation and Protection of Trees within the City Limits. This supplement includes not only the native trees found in the city but also trees of historical, commemorative, horticulture significance, etc.

Nevada City Ordinance 87-2 § 12.15, 1987, Section 17.80.120 - Stream zone standards. Building closer than one hundred feet from a perennial (runs year round) stream or closer than twenty-five feet from a seasonal swale centerline shall be prohibited, unless a variance is granted under the provisions of Chapter 17.88 of this title. In cases where lot coverage is closer than one hundred feet to a stream or watercourse, a certified statement from a registered engineer or sanitarian attesting that such coverage or use will not pollute the stream or watercourse and that there will not be a hazard to the buildings or improvements due to flooding, may be a condition necessary for permit issuance. Nothing in this title shall waive additional requirements that might be imposed by the California Department of Fish and Game.

- **U.S. Army Corps of Engineers:** Section 404 of the Clean Water Act requires approval prior to discharging dredge or fill material into the waters of the United States. Waters of the United States includes essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. Wetlands are areas characterized by growth of wetland vegetation (bulrush, cattails, rushes, sedges and willows) where the soil is saturated during a portion of the growing season or the surface is flooded during some part of most years. Wetlands generally include swamps, marshes, bogs and similar areas.
- **U.S. Fish and Wildlife Service:** The USFWS has jurisdiction over species that are formally listed as threatened or endangered under the Federal Endangered Species Act (FESA). The Endangered Species Act provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered in the U.S. or elsewhere. Provisions are made for listing species, as well as for recovery plans and the designation of critical habitat for listed species. The Act outlines procedures for federal agencies to follow when taking actions that may jeopardize listed species, and contains exceptions and exemptions.
- **California Department of Fish and Wildlife:** It is state policy to conserve, protect, restore and enhance any endangered or threatened species and its habitat. The CDFW has jurisdiction over species that are formally listed as threatened or endangered under the California Endangered Species Act (CESA). The Endangered Species Act provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered in the state. In addition to CESA, the California Native Plant Protection Act (NPPA) provides

protection to endangered and rare plant species. The CDFW also maintains an informal list of species of special concern to be considered as well.

- **California Native Plant Society:** CNPS is a non-profit group dedicated to preserving the state's native flora. It has developed lists of plants of special concern in California (online version 2005), including List 1A. Presumed Extinct in California (no treat ranks), List 1B. Rare or Endangered in California and Elsewhere, List 2. Rare or Endangered in California. More common Elsewhere, List 3. Need More Information, and List 4. Plants of Limited Distribution. Included within List 1B to List 4 are Threat Ranks which are included with the descriptions in Table 1 of this report.
- **Regional Water Quality Control Board:** Under Section 401 of the Clean Water Act, projects that apply for a Corps permit for discharge of dredge or fill material, and projects that qualify for a Nationwide Permit, must obtain water quality certification from the RWQCB confirming that the project will uphold state water quality standards.

DISCUSSION OF IMPACTS AND RECOMMENDED MITIGATION

Significance Criteria

The determination of significance of impacts to biological resources involves an evaluation of the context in which the impact may occur and the intensity and extent of the impact's effect.

Potential direct and indirect impacts to the biological resources were evaluated with respect to mandatory findings of significance of Section 15065 of CEQA and Appendix G of the State CEQA Guidelines. In accordance with these Guidelines a project's effect on biological resources would be considered significant if the project results in:

- Alteration of unique characteristics of the area, such as sensitive plant communities and habitats (i.e. wetlands, riparian habitats).
- Adverse impacts to special-status species, including species identified as candidate and/or sensitive species.
- Adverse impacts to important or vulnerable resources as determined by scientific opinion or resource agency concerns (i.e. special status habitats, e.g. wetlands).
- Interference with migratory routes.

IMPACTS AND MITIGATION MEASURES

Direct Impacts to Potential Waters of the U.S.

The proposed project will avoid impacts to the main drainage course that bisects the project site as well as the wetlands. The Nevada City ordinance setback for seasonal drainages is a 25 foot non-disturbance buffer, and a 25 foot non-disturbance buffer for wetlands. Construction activities may impact the three drainages and non-improved roadside ditch. Prior to these activities, an ACOE permit and verification will be required, and all impacts will need to be evaluated for mitigation by a qualified wetland specialist and ACOE.

If ACOE determines these drainages are “waters of the United States,” any direct impacts will be coordinated with the United States Army Corps of Engineers (ACOE) through a Nationwide Permit/Individual Permit and a Streambed Alteration Agreement from CDFG. Typically a Nationwide Permit is required for less than one-half acre of impacts to wetland habitats, and an Individual Permit for impacts greater than one-half acre. Usual mitigation funds for Nevada County for the lost functions and values to the ephemeral drainages will be made through an In-Lieu Fee paid to the National Fish and Wildlife Foundation, a non-profit agency that manages mitigation funds. The fees are used to fund local (within the same watershed unless otherwise authorized) wetland and stream creation and restoration projects.



Mitigation for Construction Activities

Prior to construction, the project site contractor will provide a secure development barrier around the protected drainage and wetlands. There are no anticipated changes to surface hydrology from development that would adversely affect these two features.

During construction activities, the drainage way and wetlands will be protected with the installation of storm wattles, silt fencing or other sediment catching materials, along with orange construction fencing to prevent disturbance of these areas. Adequate erosion and sediment controls (i.e. storm wattles) will be installed around the periphery of the drainage and wetlands, and will be routinely managed to prevent disturbances to said areas.

To avoid sediment or other materials from entering these habitats if there is a build-up of soils or other materials along the storm wattles, these materials will be graded away from the protected areas routinely and/or prior to a storm event.

Water Quality Impacts

Sediment transport from construction activities to the drainage way and downstream aquatic habitat, including Deer Creek, can have deleterious effects on

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aquatic organisms in the aquatic habitats and result in violation of State and Federal water quality regulation.

Mitigation measures include assurances that best management practices are adopted in order to minimize the amount of sediment leaving the site during construction activities. In addition, if the installation of a culvert(s) across any of the drainages is required, it should occur during the dry season, typically July through October. If culvert placement is required, this will require State and Corps permitting.

Prior to initial construction activities all barriers, storm wattles, silt fencing or other sediment catching materials should be installed around the drainage course and wetlands. A staging area, upland away from these sensitive resources, should be established for all construction equipment and refueling operations to avoid pollutants from entering any sensitive habitats.

If required, a general permit for storm water discharges from construction activities will be obtained through the RWQCB and a Storm Water Pollution Prevention Plan for Construction Activities will be prepared and implemented.

Impacts to Trees

It should be noted that a certain amount of tree removal had been approved in the previous plan for this site. A timber harvest plan was prepared for this project, but it is assumed that many of trees within the coniferous forest will be removed. If building envelopes cannot be created to avoid impacts to trees, then trees that are to remain, especially native oaks, should be cordoned off well outside of the drip line prior to construction. This will ensure the protection of their root systems from grading and soil compaction. All slash and other debris should be removed in a timely manner from the site.

Impacts To Nesting Raptors And Migratory Birds

The potential exists for impacts to raptors and other migratory birds which are protected under the Migratory Bird Treaty Act and Fish and Game Code of California (FG&C) to occur on, or in the vicinity of the site through the construction activities of tree and vegetation removal, ground disturbances, heavy equipment use, and various other noises that could impact nesting migratory birds.

Mitigation for Nesting Raptors and Migratory Birds

For construction activities between March 1 and August 31, pre-construction surveys for nesting raptors and migratory birds should be conducted pursuant to California and Federal requirements. These surveys should be accomplished within 7 days prior to commencement of grading activities. An approved biologist should

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conduct all surveys and if active raptor nests are found, 500 feet initial temporary nest disturbance buffer shall be established. If project-related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then an on-site biologist/monitor experienced with raptor behavior shall be retained by the project proponent to monitor the nest, and shall along with the project proponent, consult with the CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may be allowed to proceed within the temporary nest disturbance buffer if raptors are not exhibiting agitated behavior such as defensive flights at intruders, getting up from a brooding position, or flying off the nest.

The designated on-site biologist/monitor shall be on-site daily while construction related activities are taking place and shall have the authority to stop work if raptors are exhibiting agitated behavior. In consultation with the CDFW and depending on the behavior of the raptors, over time it may be determined that the on-site biologist/monitor may no longer be necessary due to the raptors' acclimation to construction related activities.

Recommendations for migratory birds are similar, although if active nests are found, the buffer areas can be smaller, since the birds may tolerate disturbance from a closer distance. Buffer areas may start at 75 feet and be reduced according to the guidelines above.

Any trees containing nests that must be removed as a result of project implementation shall be removed during the non-breeding season, however, the project proponent shall be responsible for off-setting the loss of any raptor nesting trees. The extent of any necessary compensatory mitigation shall be determined by the project proponent in consultation with the CDFW. Past recommended mitigation for the loss of nesting trees has been at a ratio of three trees for each nest tree removed during the non-nesting season.

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