

9.0 INVENTORY OF MITIGATION MEASURES

AESTHETICS

No mitigation measures are required.

AGRICULTURAL RESOURCES

MM 5.2-1: Upon subsequent sale or lease of all or part of the affected property, including the sale of individual lots following subdivision of the property, a real estate transfer disclosure statement shall be provided to the purchaser or lessee and shall include the following language:

It is the policy of the County of Shasta to protect, promote and encourage properly conducted agricultural operations within the County. You are hereby notified that the property you are purchasing is located near agricultural lands or operations, or is included within or adjacent to an area where agricultural operations are or may be permitted. You may be subject to inconveniences or discomfort arising from such operations.

Such discomfort or inconveniences may include noise, odors, fumes, dust, smoke, insects, operation of machinery (including aircraft), during any 24-hour period. Also, discomfort or inconvenience may result from the storage or disposal of manure; the application, by spraying or otherwise, of fertilizers, soil amendments, herbicides, and pesticides; and grazing of livestock on open range. One or more of the inconveniences described may occur as a result of any agricultural operation that is in conformance with existing laws and regulations and accepted customs and standards. If you live near an agricultural area, you should be prepared to accept such inconveniences or discomfort as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector.

MM 5.2-2: The loss of agricultural (grazing) lands on the subject property shall be offset through establishment of a conservation easement providing for agricultural use of offsite lands in perpetuity. Shasta County or a qualified land conservation organization shall facilitate the establishment of the conservation easement. The conservation easement shall be held by a conservation-oriented third party acceptable to Shasta County. The offsite agricultural lands shall be located in Shasta County and shall provide a grazing capacity of at least 1,044 Animal-Unit Months (AUMs). An Operation and Management Plan identifying the land to be protected, acceptable land uses, management practices, and a reporting program shall be provided for Shasta County review and acceptance prior to establishment of the easement. All costs associated with establishing the conservation easement shall be the responsibility of the project applicant.

AIR QUALITY

MM 5.3-1: Prior to issuance of a grading permit, the project applicant shall submit a grading plan for review and approval by the Shasta County Building Department. The following specifications shall be included to reduce short-term air quality impacts attributable to the proposed project:

- During all construction activities, all diesel-fueled construction equipment, including but not limited to rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors, shall be California Air Resources Board (CARB) Tier 3 Certified or better as set forth

in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. Equipment maintenance records shall be kept onsite and made available upon request by the County of Shasta.
- All material excavated, stockpiled, or graded shall be sufficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering shall occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day.
- All areas (including unpaved roads) with vehicle traffic shall be watered periodically or have dust palliatives applied for stabilization of dust emissions.
- All onsite vehicles shall be limited to a speed of 15 miles per hour on unpaved roads.
- All land clearing, grading, earth-moving, or excavation activities on the project site shall be suspended when sustained winds are expected to exceed 20 miles per hour.
- All portions of the development site which have been stripped of vegetation by construction activities and left inactive for more than ten days shall be seeded and/or watered until a suitable grass cover is established.
- All trucks hauling dirt, sand, soil, or loose material shall be covered or shall maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and the trailer) in accordance with the requirements of California Vehicle Code Section 23114. This provision will be enforced by local law enforcement agencies.
- All material transported offsite shall be either sufficiently watered or securely covered to prevent a public nuisance.
- Wheel washers shall be installed where project vehicles and/or equipment enter and/or exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed prior to each trip.
- Prior to final occupancy, the applicant shall re-establish ground cover on the construction site through seeding and watering.
- Off-road construction equipment shall not be left idling for periods longer than 5 minutes when not in use.

MM 5.3-2: Prior to the issuance of individual building permits, the Shasta County Building Department shall confirm that all construction documents and specifications stipulate that the installation of wood-burning fireplaces is prohibited. Natural gas fireplaces are acceptable.

MM 5.3-3: Prior to the issuance of individual building permits, the Shasta County Building Department shall confirm that all project plans and specifications include all feasible Standard Mitigation Measures and Level A Measures as defined by the SCAQMD including:

- The project shall provide for the use of energy-efficient lighting (includes controls) and process systems such as water heaters, furnaces, and boiler units.
- The project shall utilize energy-efficient and automated controls for air conditioning.
- Residential structures shall include exterior electric outlets in the front and rear.
- Streets shall be designed to maximize pedestrian access to transit stops where feasible.

BIOLOGICAL RESOURCES

MM 5.4-1a: Subject to review and approval by the Shasta County Resource Management Department Director, the applicant shall establish an offsite conservation easement covering a minimum of 137.8 acres of blue oak woodland in Shasta County. A detailed management plan guiding long-term preservation of the oak woodland, which may include a regulated intensity of grazing on the site, shall be provided for Shasta County review and acceptance prior to establishment of the easement. The management plan shall identify monitoring and maintenance activities, conservation easement and deed restriction terms, the easement holder, and remedial actions to be taken if the management plan objectives are not met.

A conservation-oriented third-party entity acceptable to Shasta County shall hold the conservation easement and shall be responsible for ongoing monitoring and management of the site in accordance with the management plan.

Monitoring reports shall be submitted to Shasta County at least once every three years; if management problems are identified or other concerns arise, the County may require submittal of more frequent reports (up to two per year) until the concerns are adequately addressed. Management activities shall be funded through an endowment account established by the project applicant or through fees collected by the Tierra Robles Community Services District.

MM 5.4-1b: Oak woodlands within designated open spaces on the development site shall be maintained in perpetuity. The open spaces shall be protected through establishment of conservation easements and deed restrictions. The five small open spaces shall be managed for their oak woodland values. The large eastern open space shall be managed for both oak woodland and seasonal grazing values. A management plan shall be provided for Shasta County review and acceptance prior to establishment of the easements and deed restrictions. The plan shall be consistent with the Oak Management Plan and shall identify monitoring and maintenance activities, conservation easement and deed restriction terms, the easement holder, and remedial actions to be taken if the management plan objectives are not met. The deed restrictions shall include a provision prohibiting dogs in the designated open space areas.

Should the Tierra Robles Community Services District ultimately own and maintain the onsite conservation easements, monitoring reports shall be submitted to Shasta County at least once every three years. If management problems are identified or other concerns arise, the County may require submittal of more frequent reports (up to two per year) until the concerns are adequately addressed.

Should the onsite conservation easements be held by a conservation-oriented third-party entity (acceptable to Shasta County), the third-party entity shall be responsible for ongoing monitoring and management of the onsite conservation easements in accordance with the Oak Management Plan. Monitoring and maintenance of the open spaces, in perpetuity, shall be funded through an endowment

account established by the project applicant or through fees collected by the Tierra Robles Community Services District.

MM 5.4-1c: Resource Management Areas (RMAs) shall be maintained in perpetuity for their wildlife habitat values and for fire hazard reduction. The RMAs shall be protected through establishment of conservation easements and deed restrictions. Each RMA shall be managed by the Tierra Robles Community Services District as specified in the Final Tierra Robles Wildland Fuel/Vegetation Management Plan, which shall be provided for Shasta County review and acceptance prior to establishment of the easements and deed restrictions. The plan shall identify monitoring and maintenance activities, conservation easement and deed restriction terms, the easement holder, and remedial actions to be taken if the management plan objectives are not met. The deed restrictions shall include a provision prohibiting dogs within the RMAs. As required by the Tierra Robles *Design Guidelines*, a licensed land surveyor shall identify limits of the building envelope on each lot for easier identification of RMA boundaries.

MM 5.4-1d: Grading plans prepared by the project applicant shall note the following construction specifications designed to avoid the introduction and spread of weeds:

- Using only certified weed-free erosion control materials, mulch, and seed.
- Precluding the use of rice straw in riparian areas.
- Limiting any import or export of fill material to material known to be weed free.
- Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering the County. If the equipment has most recently been used within the County, cleaning is not required.
- Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility immediately upon termination of its use at the project site.
- The project contractor shall continuously comply with the above stated measures throughout the duration of onsite and offsite construction activities.

MM 5.4-1e: Potential impacts to Red Bluff dwarf rush shall be avoided and minimized with implementation of the following:

- The areal extent and density of the Red Bluff dwarf rush population shall be documented by a qualified botanist through at least two years of baseline monitoring in non-drought years. Monitoring shall be completed prior to final design of Lots 60-69 and 77-79, as well as the roads bordering these lots.
- Upon establishment of the baseline Red Bluff dwarf rush population boundary, the adjoining building envelopes, RMAs, and roads shall be redesigned to provide a minimum 100-foot buffer between the plant population and all roads and building envelopes.
- Low (± 24 -inch tall) post-and-cable fencing shall be constructed around the Red Bluff dwarf rush population prior to construction on any of Lots 60-69 or 77-79. The fencing shall be a minimum of 100 feet from the outer edge of the plant population. A conservation-oriented third-party entity acceptable to Shasta County shall be responsible for annual monitoring of the fence in perpetuity, and for ensuring that the fence is maintained in good condition at all times.
- Treated effluent from the onsite wastewater treatment plant shall not be disposed within 200 feet of the Red Bluff dwarf rush population.

- The project applicant shall preserve an offsite population of Red Bluff dwarf rush in perpetuity. The offsite preserve shall support an areal extent and density of Red Bluff dwarf rush equal to or greater than that of the onsite population. The mitigation site and a surrounding upland buffer shall be protected through implementation of deed restrictions or a conservation easement, and implementation of a management plan approved by Shasta County and CDFW. A third-party conservation-oriented entity acceptable to Shasta County shall hold the conservation easement and be responsible for monitoring and maintenance of the mitigation site in perpetuity, with the Tierra Robles Community Services District funding implementation of the management plan in perpetuity.

MM 5.4-1f: As part of the on-going vegetation management activities conducted by the Tierra Robles Community Services District, individual trees in the RMAs and open spaces that provide suitable bat roosting habitat (trees ≥ 12 " dbh; trees with cavities, crevices, or exfoliating bark; and standing snags) shall be identified and retained. Removal of trees providing bat roosting habitat may be authorized by the Shasta County Resource Management Department Director if the Director determines that the tree(s) pose a significant hazard to the public due to their location and condition.

MM 5.4-1g: For all activities requiring a grading permit, conduct tree removal outside of the bat maternity season (i.e., remove trees between September 1 and February 28) if possible. If trees must be removed during the maternity season (March 1 through August 31), the following measures shall be implemented:

- Within two weeks prior to tree removal, daytime habitat assessments and/or nighttime emergence surveys shall be conducted to identify potential roost trees.
- Potential roost trees shall be removed using a two-step process to provide humane eviction of the bats. On Day 1, the non-habitat features on the trees shall be removed using chain saws for cutting and, as feasible, using chippers for disposal, with the objective being to create sufficient noise and vibration to cause the bats to choose not to return to the tree after they emerge to forage. On Day 2, the remainder of the tree shall be removed, with no restrictions on removal methods.

MM 5.4-1h: Install three four-chamber bat houses within the Clough Creek open space and three four-chamber bat houses within the eastern open space parcel. The bat houses shall be located a minimum of 10 feet above ground in open areas oriented south-southeast, where they receive at least seven hours of direct sun daily. The bat houses shall be located in areas with high habitat diversity (e.g., near riparian, woodland, and grassland/open woodland habitats). The bat houses shall be annually inspected and maintained between November 1-February 1 (when bats are unlikely to be present), and shall be replaced as needed, by the Tierra Robles Community Services District.

MM 5.4-1i: Prior to conducting any vegetation removal in the eastern open space or on lots that are adjacent to the eastern open space, a qualified biologist shall conduct a thorough survey of the brush-removal area to identify all elderberry shrubs within the proposed work area. The survey should occur during the elderberry flowering period (generally late April to late June, depending on weather conditions) to ensure that the elderberries are visible. The location of all elderberries shall be accurately recorded and the elderberries shall be permanently marked in the field (e.g., through placement of T-posts at a distance of 20 feet outside of the elderberry dripline). No elderberries shall be pruned or removed, and no brush removal shall occur within 20 feet of the dripline of any elderberry with a basal diameter of one inch or greater.

MM 5.4-1j: Prior to each brush-removal operation in the general vicinity of the elderberries, the following actions shall be undertaken:

- High-visibility protective fencing or flagging shall be installed at a distance of 20 feet outside the driplines of elderberry shrubs; the fencing/flagging shall be maintained for the duration of each brush-removal operation.
- Environmental awareness training for all vegetation management personnel shall be provided by a qualified biologist. The objective of the training shall be to ensure that the vegetation management personnel can recognize habitats capable of supporting elderberries, identify elderberry plants of all sizes and conditions, understand the need for protection of the plants, and can properly implement protective measures. Confirmation of such training shall be maintained by the Tierra Robles Community Services District.

MM 5.4-1k: The following measure applies to any vegetation removal activities undertaken by the project developer or the Tierra Robles Community Services District for the purposes of fire-hazard reduction or oak woodland management, as well as to any onsite action by any entity that triggers the need for a grading permit (e.g., road construction, multi-lot developments, wastewater collection and treatment system construction, etc.). The measure does not apply to individual lot owners proposing activities that do not require a grading permit; it is the responsibility of individual lot owners to ensure that their actions comply with the Migratory Bird Treaty Act.

- If feasible, vegetation removal and construction shall be conducted between September 1 and January 31. If vegetation removal or construction must occur between February 1 and August 31, a nesting bird survey shall be conducted by a qualified biologist within one week prior to initiation of work; if active nests are present, work within 500 feet of the nest(s) shall be postponed until the young have fledged, unless a smaller nest buffer zone is authorized by the CDFW and USFWS. If a lapse in construction lasting two weeks or more occurs during the nesting season, an additional nesting bird survey shall be undertaken to ensure that no new nests have been constructed during the lapse. All nesting bird survey reports shall be kept on file with the Tierra Robles Community Services District and shall be provided to the California Department of Fish and Wildlife within one week following completion of each survey.

CULTURAL RESOURCES

MM 5.5-1a: Should any additional archaeological discoveries (human skeletal remains, culturally modified lithic materials, structural features or historic artifacts) or paleontological resources be encountered during ground disturbing activities, all such activities shall halt within a 100-foot radius of the discovery, and a qualified archaeologist shall be contacted to determine the nature of the find, evaluate its significance, and if necessary, suggest preservation or mitigation measures.

MM 5.5-1b: If human remains are discovered during development of the project, all activity shall cease immediately, the Contractor shall notify the Shasta County Coroner's Office immediately under State law, and a qualified archaeologist and Native American monitor shall be contacted. Should the Coroner determine the human remains to be Native American, the Native American Heritage Commission shall be contacted pursuant to Public Resources Code Section 5097.98 and the remains interred as provided for by law.

GEOLOGY AND SOILS

Refer to *Hydrology and Water Quality*, below.

GREENHOUSE GASES AND CLIMATE CHANGE

MM 5.7-1: The project shall include, but not be limited to, the following improvements, which shall be incorporated into the project site plans to ensure consistency with adopted statewide plans and programs. The project applicant shall demonstrate compliance with this measure, prior to issuance of Building Permits:

Transportation

- Pedestrian connections to the offsite circulation network shall be provided on improvement/grading plans and implemented concurrent with subdivision backbone infrastructure improvements (Building Permit).

Area Sources

- Install natural gas hearths. Wood burning hearths are prohibited (Building Permit).
- Use low VOC paint. Requirements for low VOC interior and exterior paints shall be included in the project Covenants, Conditions, and Restrictions (CC&Rs) (Building Permit).

Energy Efficiency

- Exceed Title 24 energy efficiency standards by 15 percent (Building Permit).
- Install high efficiency lighting. High efficiency lighting shall achieve at least a 20 percent reduction in power rating by using either high efficiency fixtures and/or bulbs (Building Permit).
- Install Energy efficient appliances. Appliances shall comply with EPA Energy Star requirements (Occupancy Permit).
- Use Smart Grid Technology. Install PG&E Smart Meters in all lots/dwelling units (Occupancy Permit).
- Include onsite renewable energy (photovoltaic cells, solar water heating, or other design techniques) to reduce energy use by 15 percent, in addition to State required reductions (Building Permit).

Water Conservation and Efficiency

- Individual homes shall be constructed with an engineered grey water system that complies with Chapter 16 of the California Plumbing Code (Building Permit).
- Install water-efficient irrigation systems (Building Permit).
- Install water-efficient fixtures (e.g., low-flow faucets, toilets, showers) (Building Permit).

Solid Waste

- Divert at least 65 percent of solid waste to be recycled. Requirements for recycling shall be included in the project Covenants, Conditions, and Restrictions (CC&Rs) to ensure the project's solid waste collection contractor provides containers for recyclables (Building Permit).

HAZARDS AND HAZARDOUS MATERIALS

MM 5.8-1: Prior to the issuance of a building permit, all required fuel-reduction work associated with construction of the onsite roadway network, the wastewater treatment plant and associated infrastructure facilities shall be completed by the project applicant to the satisfaction of the Shasta County Fire Department. Monitoring of fire prescription activities within Resource Management Areas 1 through 4 shall be the sole responsibility of the Tierra Robles Community Services District (TRCSD) and shall occur as each private residential lot is developed and monitored to ensure substantial compliance with fire fuel management prescriptions and site development guidelines as identified in the *Tierra Robles Wildland Fuel/Vegetation Management Plan*, Shasta County Fire Safety Standards, and California Public Resources Code Section 4291, *Defensible Space*. Ongoing maintenance activities within Resource Management Area 5 shall be the sole responsibility of the TRCSD. The TRCSD shall provide annual fire fuel monitoring and compliance reports to the Shasta County Fire Department documenting conformity with fire fuel prescription activities and methods, including reporting of any enforcement actions taken to fulfill the requirements of the above referenced guidelines and standards. The specific reporting methods to be used to ensure compliance shall be determined by the TRCSD and approved by the Shasta County Fire Department prior to issuance of a building permit that would allow construction of the first onsite residence.

HYDROLOGY AND WATER QUALITY

MM 5.9-4: A requirement shall be placed on Lot #140 that any structure finish floor elevation will be one foot minimum above the 100-year floodplain elevation at that location of the Clough Creek drainage. At Lot #140, the floodplain is approximately 607.1 feet and therefore any structure finish floor elevation shall be required to be at or above 608.1 feet. Verification is subject to County Building Division at plan check.

LAND USE AND PLANNING

No mitigation measures are required.

NOISE

MM 5.11-1: In addition to permitted hours of operation, project grading and construction plans shall note the following noise control measures to be implemented by the project contractor throughout the duration of onsite construction activities. The plans shall be subject to the review and concurrence of the Shasta County Department of Resource Management that the project complies with the following:

- Fixed construction equipment such as compressors and generators shall be placed the greatest possible distance from sensitive receptors, but no closer than 200 feet from residential structures.

- All impact tools shall be shrouded or shielded, and all intake and exhaust ports on power construction equipment shall be muffled or shielded.

POPULATION AND HOUSING

No mitigation measures are required.

PUBLIC SERVICES AND FISCAL IMPACTS

No mitigation measures are required.

RECREATION

No mitigation measures are required.

TRIBAL CULTURAL RESOURCES

Refer to *Cultural Resources*, above.

TRAFFIC AND CIRCULATION

MM 5.16-1: In accordance with the City of Redding *Traffic Impact Analysis Guidelines* (January 2009), the project applicant shall construct the following improvements in the corporate limits of the City of Redding prior to issuance of a building permit that would allow construction of the first residence:

- *Airport Road & SR-44 WB Ramps (Intersection #10)*. Construct traffic signal or a modern roundabout. Traffic signal construction at this location shall also be coordinated with existing traffic signals at *Old Oregon Trail & Old 44 Drive (Intersection #9)* and *Airport Road & SR-44 EB Ramps (Intersection #11)*.

MM 5.16-2: Prior to issuance of a building permit that would allow construction of the first residence, the project applicant shall install the following intersection warning signs to the satisfaction of the Shasta County Public Works Department:

- Install Caltrans standard W2 intersection warning signs with W16-8P advance street name plaques at Lassen View Drive, Beryl Drive, Sunny Oaks Drive, Wesley Drive, Robledo Road, Oak Meadow Road, Oak Tree Lane, and Coloma Drive.

MM 5.16-3: *Old Alturas Road & Old Oregon Trail (Intersection #8)*. Prior to recordation of a final map or issuance of a building permit (whichever occurs first), the project applicant shall pay the pro-rated cost share representing 13 percent of the cost of constructing a single/multi-lane roundabout. The fee shall be established based on an engineer's cost estimate of the improvements prepared by the project applicant and approved by the Shasta County Public Works Department.

MM 5.16-4: *Boyle Road & Deschutes Road (Intersection #13)*. Prior to recordation of a final map or issuance of a building permit (whichever occurs first), the project applicant shall pay the pro-rated cost share representing 11 percent of the cost of upgrading the existing two-way-stop-controlled intersection to all-way-stop-controlled intersection. The fee shall be established based on an engineer's cost estimate of the improvements prepared by the project applicant and approved by the Shasta County Public Works Department.

UTILITIES AND SERVICE SYSTEMS

MM 5.17-4a: Prior to issuance of a building permit, the project applicant shall provide written verification to the Shasta County Department of Resource Management of facility compliance with applicable water efficiency design standards required by the California Uniform Building Code.

MM 5.17-4b: Concurrent with the establishment of the Tierra Robles Community Services District, the project applicant shall provide to the Shasta County Department of Resource Management documentation demonstrating that the applicant has secured an Agreement with BVWD to provide BVWD with adequate water supplies on an annual basis during identified shortage conditions in a quantity that represents a minimum of 90 percent of the project's prior year water usage. Shortage conditions shall be defined to exist when BVWD has been notified by the USBR that it will receive less than a 100 percent (full) allocation of its CVP water supplies for the coming delivery season, as that determination has been announced by USBR as of April 15th of each year. The augmenting water supplies shall be made available to BVWD through the Agreement until such time as BVWD has completed three years of full CVP water allocation after commencement of operations at the project site. For any shortage condition that occurs after three years of full CVP allocation, the project applicant shall no longer be required to provide BVWD with augmenting water supplies, but the project applicant shall then be fully subjected to the shortage provisions administered by BVWD to all its customers. The project applicant shall demonstrate that any water supply provided to BVWD under the Agreement satisfies all CEQA and NEPA compliance requirements, as well as any other permitting or regulatory approvals, as may be associated with a water supply identified in the Agreement.

ENERGY CONSUMPTION

Refer to *Air Quality and Greenhouse Gases and Climate Change*, above.