INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

FOR THE

MINERS RANCH WATER TREATMENT PLANT IMPROVEMENT PROJECT

SCH# _____

DECEMBER 2013

Prepared for:

South Feather Water and Power Agency
2310 Oro-Quincy Highway
Oroville, CA 95966

Prepared by:

De Novo Planning Group
2778 17th Street
Sacramento, CA 95818
(916) 949-3231

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A Land Use Planning, Design, and Environmental Firm

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INITIAL STUDY CHECKLIST

PROJECT TITLE

Miners Ranch Water Treatment Plant Improvement Project

LEAD AGENCY NAME AND ADDRESS

South Feather Water and Power Agency
2310 Oro-Quincy Highway
Oroville, CA 95966

CONTACT PERSON AND PHONE NUMBER

Michael Glaze, General Manager
South Feather Water and Power Agency
2310 Oro-Quincy Highway
Oroville, CA 95966
(530) 533-4624

PROJECT SPONSOR'S NAME AND ADDRESS

South Feather Water and Power Agency
2310 Oro-Quincy Highway
Oroville, CA 95966

PURPOSE OF THE INITIAL STUDY

An Initial Study (IS) is a preliminary analysis which is prepared to determine the relative environmental impacts associated with a proposed project. It is designed as a measuring mechanism to determine if a project will have a significant adverse effect on the environment, thereby triggering the need to prepare a full environmental Impact Report (EIR). It also functions as an evidentiary document containing information which supports conclusions that the project will not have a significant environmental impact or that the impacts can be mitigated to a "Less Than Significant" or "No Impact" level. If there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, the lead agency shall prepare a Negative Declaration (ND). If the IS identifies potentially significant effects, but (1) revisions in the project plans or proposals would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and (2) there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment, then a Mitigated Negative Declaration (MND) shall be prepared.

This Initial Study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the proposed Miners Ranch Water Treatment Plant Improvement Project (project) may have a significant effect upon the environment. Based upon the findings and mitigation measures contained within this report, a Mitigated Negative Declaration (MND) will be prepared.

PROJECT LOCATION AND SETTING

PROJECT LOCATION

The project site is located at 234 Kelly Ridge Road in the unincorporated area of Butte County, near Oroville, California. The proposed project includes expansions to the existing Miners Ranch Water Treatment Plant (MRWTP), currently located on the subject property. The Assessor's Parcel Number (APN) for the project site is 072-020-002. The proposed improvements would occur immediately adjacent to the existing Miners Ranch Water Treatment Plant facilities, which are located on the northwest corner of a 77.75-acre parcel. The 77.75-acre parcel (APN 072-020-002) includes the Miners Ranch Reservoir, which has a surface area of approximately 48 acres at "full pool."

The project's regional location is shown in Figure 1 and the project area and site boundary are shown in Figure 2.

EXISTING SITE USES

The project site is currently used as the Miners Ranch Water Treatment Plant.

SURROUNDING LAND USES

The lands to the north of the project site are designated Public by the Butte County General Plan. Lake Oroville is located north of the project site. Lands to the west and south of the site are designated Medium Density Residential, and lands to the east of the site, east of Miners Ranch Reservoir, are designated Foothill Residential.

GENERAL PLAN AND ZONING DESIGNATIONS

The project site is designated and zoned Public by the Butte County General Plan and Butte County Zoning Ordinance.

PROJECT DESCRIPTION

OVERVIEW

The proposed project is planned by the South Feather Water and Power Agency (Agency) to expand and upgrade the MRWTP to address system demands for the next 30 years and anticipated regulatory requirements. The proposed plant improvements include enhanced mixing, clarification, filtration, disinfection and residuals handling facilities and practices. The system's current maximum-day demand is 11 million gallons per day (mgd). In the direct filtration mode, the plant's current treatment (design) capacity is 14.5 mgd, or 10.8 mgd firm capacity (with one filter out of service).

The proposed plant expansion would increase treatment (design) capacity to 21 million gallons per day (mgd); this corresponds to 18 mgd firm capacity with one filter out of service. The proposed site plan is shown on Figure 3, and the proposed improvements are described in greater detail below.

The proposed improvements would include the following:

- Provide 21 mgd of direct filtration pretreatment capacity including:
    - Convert existing sedimentation basin to flocculation basin
    - Construct two new flocculation basins
    - Install variable speed vertical mixers for flocculation
    - Install new 36-inch raw water pipeline
    - Install pumped rapid mix system
- Expand Raw Water Pump Station by:
    - Replacing existing variable speed 6 mgd pump with a variable speed 8.5 mgd pump for 14.5 mgd firm capacity.
    - Relocating the pump station electrical to the existing Lime Building.
- Construct two new settling basins using plate settlers to provide 6 mgd of conventional pretreatment (clarification) capacity.
- Construct two new filters and extend the filter gallery building.
- Modify existing filters with new underdrains, air scour, and new media.
- Resurface concrete in filter boxes where aggregate is exposed.
- Construct new High Service Pump Station on clearwell outlet.
- Provide new chemical storage and feed equipment for coagulants, polymers, and chlorination.
- Provide secondary containment for coagulant system and scrubber for chlorine system.
- Construct new 21 mgd capacity UV disinfection system in conjunction with the new High Service Pump Station.
- Construct a second washwater basin and recycle decanted washwater to head of plant.

The proposed project would not involve changes to the Agency's service area, nor would it involve changes to existing water rights permits. The project would assist the Agency in meeting its current and projected water supply demands, would assist in meeting current and future drinking water regulations under changing water quality and flow conditions, and would increase operational redundancy, safety, and flexibility.

BACKGROUND

The Agency service area is located 70 miles north of Sacramento on the east side of California's Sacramento Valley in the Sierra foothills of southeast Butte County.

The Oroville Area Land Use Plan of the Butte County General Plan designates much of the service area of South Feather Water and Power Agency (SFWPA) as Agricultural-Residential. The purpose of the Agricultural-Residential designation is to provide areas for agricultural uses and single-family dwellings at rural densities.

Although the primary water supplier for the City of Oroville is California Water Company, SFWPA provides treated water to approximately 2,000 residences in the northeast quadrant of the city. SFWPA provides treated water to approximately 4,700 residences outside the southern and eastern boundaries of the City of Oroville.

South Feather Water and Power Agency – originally named Oroville-Wyandotte Irrigation District ("OWID" or "District") – has roots extending back to the California gold rush. The ditch system utilized by the Agency today to distribute its irrigation water is a modification and expansion of the ditch network constructed by early miners who diverted water from tributaries of the Feather River to their mining claims.

In 1852, a small ditch company was organized to construct a ditch from the South Fork of the Feather River to the mining sites at Forbestown, Wyandotte, Honcut, Ophir, and Bangor. The Palermo Ditch, completed in 1856 by the Feather River and Ophir Water Company, was a major impetus to the growth of gold mining within the area occupied by the present City of Oroville where rich gold deposits were discovered in 1849.

OWID was organized on November 17, 1919, and included 16,800 acres of land. The District was formed by assuming the old water rights from the South Feather Land and Water Company and the Palermo Land and Water Company. In July 1944, OWID initiated plans to sell water for domestic use, and between 1944 and 1967, approximately 80 miles of coal tar-lined and tar paper-wrapped steel pipe was installed.

The residential growth rate within the District was greatly accelerated by the housing demands associated with the construction of Oroville Dam in the early 1960's. The irrigation system in the northern part of the District was slowly abandoned as the domestic pipeline system was expanded to meet the growing residential demand. By 1962, OWID served approximately 4,800 acres of agricultural land, with 8,000 AF of irrigation water delivered by the Agency. In addition to irrigation service, the District furnished water to approximately 2,500 residences.

As a result of the concern for an adequate water supply and for a revenue source to fund the District's expanding infrastructure, the District's Board of Directors proposed the construction of the South Feather Power Project (FERC License No. 2088, originally named South Fork Project). The South Feather Power Project, covering 82 square miles in three counties, consisted of eight dams, nine tunnels, 21 miles of canals and conduits, three hydroelectric power plants and 21 miles of road. The project was completed in 1963 at a cost of $62 million,

and was financed through the sale of revenue bonds secured by the projected revenues from power generation. Those bonds were defeased in 2009.

In 1975, Congress passed the Clean Water Act that enacted sweeping changes in domestic drinking water standards. No longer would unfiltered surface water be acceptable for drinking water. Faced with a building moratorium, OWID voters passed a revenue bond in 1978 that allowed for the construction of Miners Ranch Treatment Plant.

Today, SFWPA has grown to provide water to approximately 6,700 households, maintains a service area of over 31,000 acres supplied by 141 miles of pipeline, and delivers irrigation water seasonally to over 500 customers by way of approximately 100 miles of primarily open earthen canals.

To accommodate anticipated growth within the Agency's service area over the next 30 years, the Agency has undertaken a project to expand and upgrade its Miners Ranch Water Treatment Plant (MRWTP) to address system demands and anticipated regulatory requirements. In preparation for this improvement project, the Agency has already accomplished two preliminary phases of work:

Facilities Review – defined the regulatory and operations requirements for the treatment plant expansion, evaluated the current condition of the various process units at MRWTP, and identified treatment and expansion alternatives; and,

Alternatives Analysis – analyzed and selected improvements and expansion alternatives which include enhanced mixing, clarification, filtration, disinfection and residuals handling facilities and practices.

PROJECT OBJECTIVES

An important objective for the MRWTP Improvement Project is to reliably meet current water demands and the projected increased water demands anticipated with population growth over the next 30 years (based on an annual growth rate of 1.5%). Redundancy, safety and operational flexibility are also important considerations for the project. The expanded plant must meet current and anticipated future drinking water regulations under changing water quality and flow conditions – challenges that limit the existing plant's capacity.

WATER RIGHTS PERMITS AND PREVIOUS ENVIRONMENTAL ANALYSES

The water supply that would be treated at the Miners Ranch Water Treatment Plant after the Improvement Project would come from existing Agency water permits. The Agency filed petitions with the State Water Resources Control Board (State Water Board) Division of Water Rights requesting extensions of the time to place water to full beneficial use under water-right Permits 1267, 1268, 1271, 2492, 11516, and 11518. The petitions were filed in late November 2004.

The Division of Water Rights issued notice of these petitions on April 22, 2005. These petitions often are referred to as "petitions for extensions of time." SFWPA holds Permits 1267, 1268,

1271 and 2492. SFWPA and the Yuba County Water District (YCWD) have jointly held Permits 11516 and 11518. SFWPA has filed petitions for 45-year extensions of time, until 2049, for Permits 1267, 1268, 1271 and 2492 and has agreed to assign its interests in Permits 11516 and 11518 to YCWD. YCWD has filed petitions for 36-year extensions of time, until 2040, for Permits 11516 and 11518.

All of the potential environmental impacts associated with these water rights permits were addressed in the April 2006 Mitigated Negative Declaration prepared on behalf of the Agency (State Clearinghouse Number 2006042117).

The proposed Miners Ranch Water Treatment Plant Improvement Project would not utilize sources of water not already covered under these permits, which have already received thorough and complete review under CEQA.

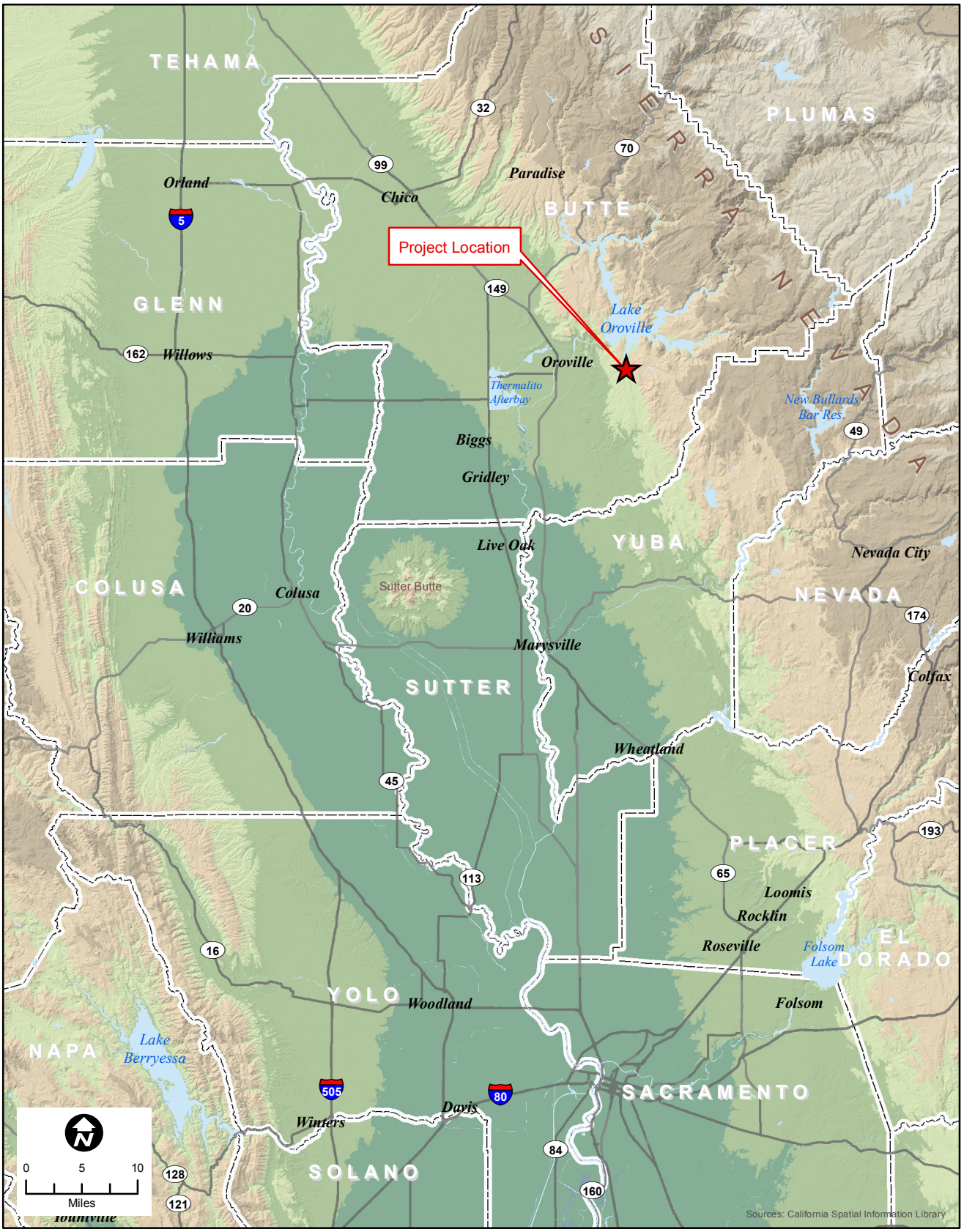
The proposed project would serve existing and projected population growth within the Agency's service area. Population growth is based primarily on market conditions and the General Plan Land Use Maps of Butte County and the nearby cities. Butte County recently completed a comprehensive update to their General Plan, which included the preparation and certification of the General Plan EIR (State Clearinghouse Number 2008092062). Environmental impacts associated with population growth in the County are addressed in the General Plan EIR, and the implementation of the Agency's proposed project would not lead to population growth beyond the levels contemplated in the Butte County General Plan EIR.

REQUESTED ENTITLEMENTS AND OTHER APPROVALS

The South Feather Water and Power Agency will be the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of the California Environmental Quality Act (CEQA), Section 15050.

This document will be used by the Agency to take the following actions:

- Adoption of the Mitigated Negative Declaration (MND)
- Adoption of the Mitigation Monitoring and Reporting Program (MMRP)



MINERS RANCH WATER TREATMENT PLANT EXPANSION

Figure 1: Regional Location Map

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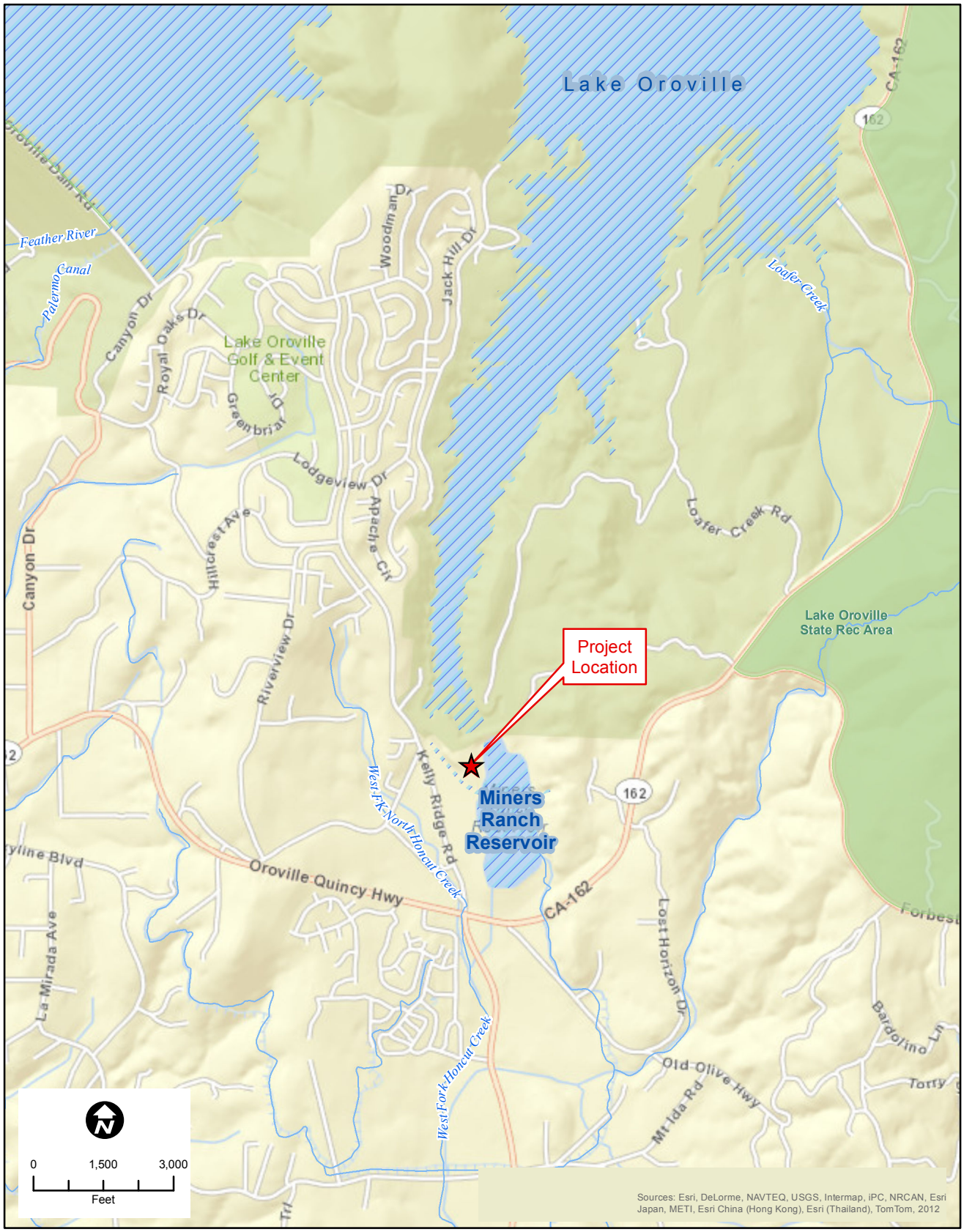

MINERS RANCH WATER TREATMENT PLANT EXPANSION

Figure 2: Project Vicinity

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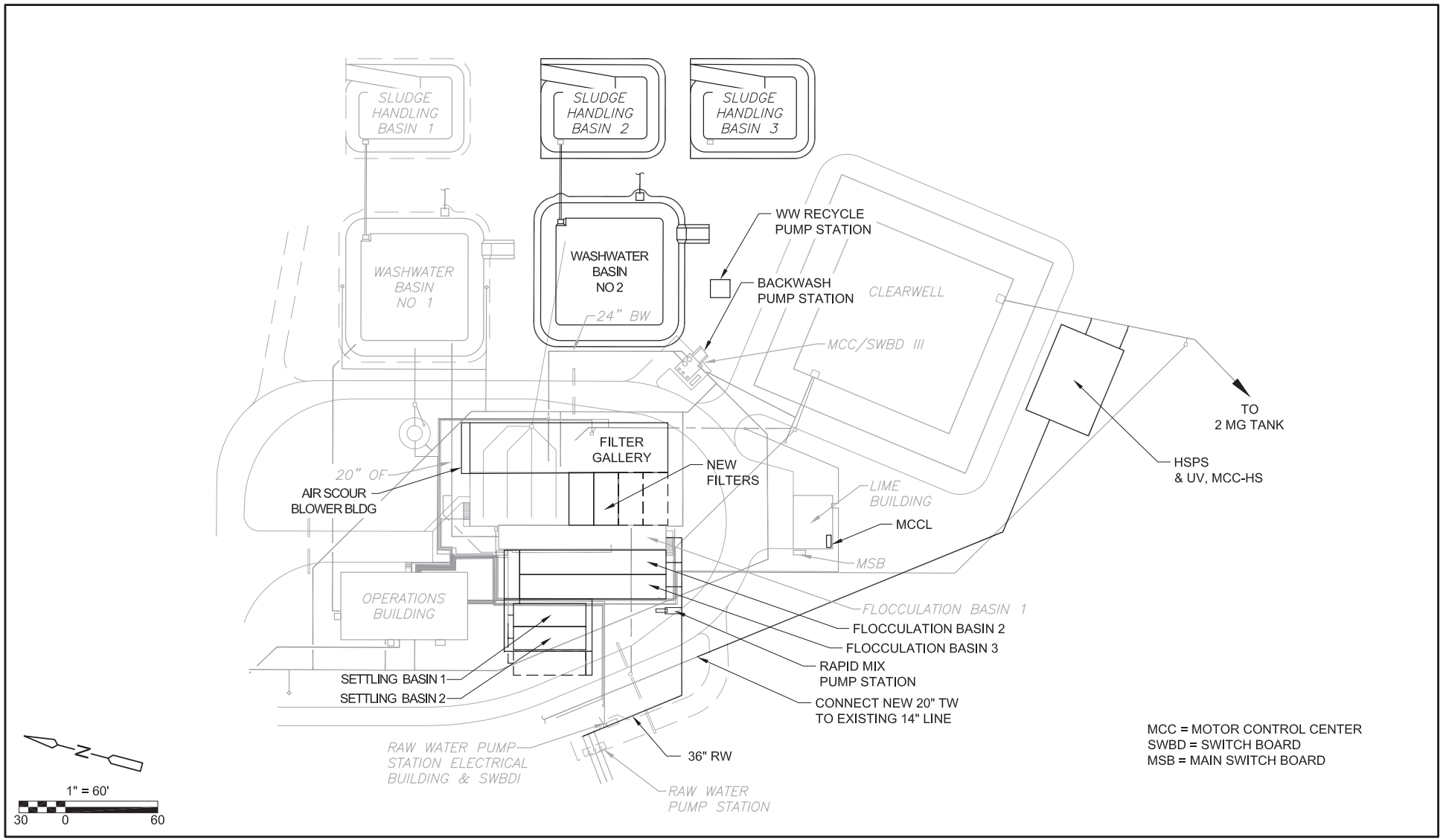

MINERS RANCH WATER TREATMENT PLANT EXPANSION

Figure 3: Site Plan

CDM
consulting • engineering • construction • operations

October 16, 2013

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture and Forest Resources		Air Quality
	Biological Resources		Cultural Resources		Geology/Soils
	Greenhouse Gasses		Hazards and Hazardous Materials		Hydrology/Water Quality
	Land Use/Planning		Mineral Resources		Noise
	Population/Housing		Public Services		Recreation
	Transportation/Traffic		Utilities/Service Systems		Mandatory Findings of Significance

DETERMINATION:

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date

EVALUATION INSTRUCTIONS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances).

Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) The significance criteria or threshold, if any, used to evaluate each question; and
   b) The mitigation measure identified, if any, to reduce the impact to less than significance

EVALUATION OF ENVIRONMENTAL IMPACTS:

In each area of potential impact listed in this section, there are one or more questions which assess the degree of potential environmental effect. A response is provided to each question using one of the four impact evaluation criteria described below. A discussion of the response is also included.

- Potentially Significant Impact. This response is appropriate when there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries, upon completion of the Initial Study, an EIR is required.
- Less than Significant With Mitigation Incorporated. This response applies when the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- Less than Significant Impact. A less than significant impact is one which is deemed to have little or no adverse effect on the environment. Mitigation measures are, therefore, not necessary, although they may be recommended to further reduce a minor impact.
- No Impact. These issues were either identified as having no impact on the environment, or they are not relevant to the Project.

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ENVIRONMENTAL CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form, contained in the CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the 18 environmental topic areas.

I. AESTHETICS -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Have a substantial adverse effect on a scenic vista?			*X*	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				*X*
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			*X*	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			*X*	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less Than Significant. The proposed project improvements would occur at the existing Miners Ranch Water Treatment Plant site. The site is located at the northwest corner of Miners Ranch Reservoir. The project site is essentially flat, and currently contains a variety of buildings and basins associated with the water treatment process. The project site is not considered a scenic vista. There are no unique natural features on the project site. There are a limited number of trees along the northeastern corner of the project site, most of which will be retained following construction of the proposed improvements. Given that the project site does not include unique visual features and is not highly visible from the surrounding area, implementation of the proposed project would not have a substantial adverse effect on a scenic vista. This impact is considered **less than significant**.

Response b): No Impact. A scenic highway is generally defined by Caltrans as a public highway that traverses an area of outstanding scenic quality, containing striking views, flora, geology, or other unique natural attributes. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

The status of a proposed state scenic highway changes from eligible to officially designated when the local governing body applies to Caltrans for scenic highway approval, adopts a

Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway.

There are no officially designated State Scenic Highways in Butte County. Only one highway section in Butte County is currently listed as an "Eligible State Scenic Highway"—State Route 70 north of State Route 149.

State Route 70 through the Feather River Canyon and a portion of State Route 32 north of Forest Ranch are recognized as County Scenic Highways.

As described above under Response a), there are no scenic resources located on the project site. Additionally, the project site is not visible from a designated State Scenic Highway. As such, there is **no impact** related to this environmental topic.

Response c): Less than Significant. As described under Response a), above, the proposed project would add additional water treatment infrastructure to a site that is currently developed with a water treatment plant. The proposed project would be visually compatible with the existing uses on the project site, would not significantly change the existing visual character and quality of the site, and would not significantly degrade the existing visual quality of the site or the surrounding area. This is a **less than significant** impact.

Response d): Less than Significant. Daytime glare can occur when the sunlight strikes reflective surfaces such as windows, vehicle windshields and shiny reflective building materials. The proposed project would introduce new structures into the project site, however, reflective building materials are not proposed for use in the project, and as such, the project would not result in increases in daytime glare.

The existing water treatment plant facilities on the project site include exterior lighting for worker safety and site security. A limited number of new exterior lights would be added to the project site upon completion of the proposed infrastructure improvements. These exterior lights would be similar to the existing exterior lighting currently on the project site, and would be shielded and directed downward in order to eliminate potential light spillage onto adjacent properties. The proposed site improvements would not result in a noticeable increase in nighttime lighting on the project site. As such, this is considered a **less than significant** impact.

II. AGRICULTURE AND FOREST RESOURCES: WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526)?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): No Impact. The project site is designated and zoned Public by the Butte County General Plan and Butte County Zoning Ordinance. There are no Prime Farmlands, Unique Farmlands, or Farmland of Statewide Importance located on, or immediately adjacent to, the project site. There are no farming or agricultural activities occurring on, or immediately adjacent to, the project site. Implementation of the proposed project would have **no impact** on farmlands or agricultural activities.

Response b): No Impact. The project site is not under a Williamson Act Contract, nor are any of the parcels immediately adjacent to the project site under a Williamson Act Contract. The project site is zoned Public by the Butte County General Plan. There are no agriculturally zoned parcels immediately adjacent to the project site. As such, the proposed project would not conflict with any agricultural zoning. There is **no impact** with respect to this environmental topic.

Response c) and d): No Impact. The project site is currently developed with a water treatment plant and associated support infrastructure. There are no forest lands or forest resources on the project site, and the project site is not zoned for forest lands. Therefore, there is **no impact**.

Response e): No Impact. The proposed project involves the installation and operation of additional support infrastructure to improve the existing Miners Ranch Water Treatment Plant. The proposed project would not result in any construction activities or physical environmental changes beyond the immediate boundaries of the improvement areas identified on Figure 3. There are no forest or agricultural lands or resources located on the project site. There is no impact with respect to this environmental topic.

III. AIR QUALITY -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Conflict with or obstruct implementation of the applicable air quality plan?		X		
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a-b): Less than Significant with Mitigation.

Operational Emissions

Air emissions associated with operation of the proposed project would come exclusively from emissions associated with electricity use. As described in greater detail under the Transportation and Circulation Section of this Initial Study, the proposed project would not result in increased vehicle trips to and from the project site. As such, there would be no increase in mobile source (vehicle) air emissions from project implementation. Additionally, the process of treating drinking water at the Miners Ranch Water Treatment Plant does not result in the direct generation of air emissions. Air emissions attributable to the proposed project would be related to emissions associated with the generation and consumption of electricity to power plant operations.

The California Emission Estimator Model (CalEEMod)™ (v.2011.1.14) is typically used to estimate annual emissions projects within Butte County. However, the modeling of emissions from energy use within the model is limited to natural gas consumption because it is assumed that criteria pollutant emissions from the electricity occurs at the site of the power plant where the power is generated. As such, criteria pollutants from electrical energy use are not modeled for this project. The following provides a discussion of the electrical energy usage for the proposed project.

The estimate of electrical demands starts with the current electrical demand for the plant at a current capacity of about 14.5 mgd. To estimate the overall additional electrical demands at 18 and 25.4 mgd, the current power use is simply scaled up from the current kWh/year/mgd. In addition, the power demand of adding UV treatment is conservatively estimated to be 1 kW/mgd at 18 and 25.4 mgd. UV vendors Trojan and Calgon were contacted for an estimated power demand for equipment conceptually designed to treat the plant effluent at these two rates and power demands were slightly less than 1 kW/mgd for all the alternatives considered. The conservative estimate of the additional power demands for the MRWTP improvements is 1,200,000 kWh/year.

The proposed project does not conflict with the local land use plans or air quality plans. There would be no increase in mobile source emissions associated with the proposed project. Implementation of the proposed project would have a **less than significant** impact relative to this project.

Construction Emissions

Construction activities would result in temporary short-term emissions associated with vehicle trips from construction workers, operation of construction equipment, and the dust generated during construction activities. These temporary and short-term emissions would generate additional ozone precursors (ROG and NOx) as well as PM_{10} and $PM_{2.5}$, which could exacerbate the County's existing non-attainment status for these criteria pollutants.

CalEEMod (v.2013.2) was used to estimate emissions for the proposed project. Table 1 shows the construction emissions of criteria pollutants that would result from the proposed project.

Table 1: Total Construction Generated Emissions

Year	*ROG*	*NOx*	*PM_{10}*	*$PM_{2.5}$*
Threshold (Level A)	**≤ 25 lbs/day**	**≤ 25 lbs/day**	**≤ 80 lbs/day**	**N/A**
Threshold (Level B)	**> 25 lbs/day**	**> 25 lbs/day**	**> 80 lbs/day**	**N/A**
Threshold (Level C)	**> 137 lbs/day**	**> 137 lbs/day**	**> 137 lbs/day**	**N/A**
2014(winter)	3.9077	27.2537	6.9359	4.2936
2014 (summer)	3.9077	27.2364	6.9359	4.2936

SOURCES: CALEEMOD (V.2013.2) AND BUTTE COUNTY AIR QUALITY MANAGEMENT DISTRICT'S CEQA AIR QUALITY HANDBOOK GUIDELINES FOR ASSESSING AIR QUALITY IMPACTS FOR PROJECTS SUBJECT TO CEQA REVIEW (BCAQMD 2008)

The Butte County Air Quality Management District (BCAQMD) has established three threshold levels for ozone precursors (ROG and NO_X), and PM_{10}. As shown in the table above, ROG and PM_{10} emissions are below all thresholds of significance throughout the project construction phase. However, project generated emissions are above the Level A threshold of ≤25 pounds per day for NOx in 2014. The exceedance is 2 pounds per day. The NOx levels are within the Level B threshold. The BCAQMD requires the use of specific mitigation measures that are intended to mitigate combustion emissions from heavy-duty construction equipment, which effectively reduce NOx emissions. Implementation of the BCAQMD construction mitigation measures would reduce project-related construction emissions. This is considered a **less than significant** impact after implementation of the following measures.

Mitigation Measures

Mitigation Measure 1*: The Agency, or the contractor(s) hired to complete construction of the proposed project, shall implement the following specific mitigation measures to ensure adequate dust control during project construction activities. Compliance with the mitigation measures should minimize the potential for violations of District Rule 200, Nuisance and Rule 205 Fugitive Dust.*

Land Clearing/Earth Moving:

- *Water shall be applied by means of truck(s), hoses and/or sprinklers as needed prior to any land clearing or earth movement to minimize dust emission.*
- *Haul vehicles transporting soil into or out of the property shall be covered. A water truck shall be on site at all times. Water shall be applied to disturbed areas a minimum of 2 times per day or more as necessary.*
- *On-site vehicles limited to a speed which minimizes dust emissions on unpaved roads.*
- *Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours.*
- *The telephone number of the Agency shall also be visible to ensure compliance with District Rule 200 & 205 (Nuisance and Fugitive Dust Emissions).*

Visibly Dry Disturbed Soil Surface Areas:

- *All visibly dry disturbed soil surface areas of operation shall be watered to minimize dust emission.*

Paved Road Track-Out:

- *Existing roads and streets adjacent to the project will be cleaned at least once per day unless conditions warrant a greater frequency.*

Visibly Dry Disturbed Unpaved Roads:

- *All visibly dry disturbed unpaved roads surface areas of operation shall be watered to minimize dust emission.*
- *Unpaved roads may be graveled to reduce dust emissions.*
- *A water truck shall be on site at all times. Water shall be applied to disturbed areas a minimum of 2 times per day or more as necessary.*
- *On-site vehicles limited to a speed which minimizes dust emissions on unpaved roads.*
- *Haul roads shall be sprayed down at the end of the work shift to form a thin crust. This application of water shall be in addition to the minimum rate of application.*

Vehicles Entering/Exiting Construction Area:

- *Vehicles entering or exiting construction area shall travel at a speed which minimizes dust emissions.*

Employee Vehicles:

- *Construction workers shall park in designated parking areas(s) to help reduce dust emissions.*

Soil Piles:

- *Soil pile surfaces shall be moistened if dust is being emitted from the pile(s). Adequately secured tarps, plastic or other material may be required to further reduce dust emissions.*

Mitigation Measure 2*: The Agency, or the contractor(s) hired to complete construction of the proposed project, shall implement the following mitigation measures to mitigate combustion emissions from heavy-duty construction equipment.*

- *Maintain all construction equipment in proper tune according to manufacturer's specifications.*
- *Maximize to the extent feasible, the use of diesel construction equipment meeting the CARB's 1996 or newer certification standard for off-road heavy-duty diesel engines.*
- *Electrify equipment where feasible.*
- *Substitute gasoline-powered for diesel-powered equipment, where feasible.*
- *Use alternatively fueled construction equipment on site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.*
- *Use equipment that has Caterpillar pre-chamber diesel engines, where feasible.*

Response c): Less than Significant. A cumulative impact is defined as two or more individual effects which, when considered together, are either significant or "cumulatively considerable," meaning they add considerably to a significant environmental impact. A cumulative impact is considered over time and in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed. A proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative impact.

The region is designated nonattainment for ROG and NOx (Ozone precursors), PM_{10}, and $PM_{2.5}$. Operational and construction activities would increase emissions of ROG and NOx (Ozone precursors), PM_{10}, and $PM_{2.5}$.

The proposed project has incorporated BCAQMD construction mitigation measures including measures that are intended to minimize emissions from equipment combustion and fugitive dust. There are no mobile source emissions generated by the proposed project. Individually, the proposed project would have a less than significant impact on air quality. Cumulatively, the proposed project would also have a **less than significant** impact on air quality.

Response d): Less than Significant. Implementation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations. There are no persons residing in the immediate vicinity of proposed improvements. Employees of the water treatment plant may be subject to temporary air pollution concentrations typically associated with construction activities. However, any air pollution generated by construction activities would be minor and would be short and temporary in duration. This is considered a **less than significant** impact.

Response e): Less than Significant. Implementation of the proposed project would not directly create or generate objectionable odors. There are no persons residing in the immediate vicinity of proposed improvements. Employees of the water treatment plant may be subject to temporary odors typically associated with construction activities (diesel exhaust, etc.). However, any odors generated by construction activities would be minor and would be short and temporary in duration. This is considered a **less than significant** impact.

IV. BIOLOGICAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant with Mitigation.

The proposed improvements are in an upland area adjacent to existing water treatment facilities composed mostly of star thistle (*Centaurea solstitialis*) and coyote bush (*Baccharis pilularis)*. The existing facilities consist of employee occupied buildings and numerous water treatment and water processing facilities which are concrete or rock lined and are regularly maintained as part of the ongoing operations of the existing plant. This area does not provide quality habitat for wildlife.

Botanical Resources

The project site is located in the foothill zone at elevations of less than 1,000 ft. The vegetation in the vicinity is generally dominated by *Quercus douglasii* (Blue Oak), often with *Pinus sabiniana* (gray pine) as a sub or co-dominant, and an understory of various grasses, forbs, and shrubs such as *Ceanothus* spp., *Manzanita* spp., and *Rhamus californica* var. *tomentalla*. In addition, a few *Sambucus* spp. (elderberry) shrubs occur in the vicinity of Miners Ranch Reservoir, however, the elderberry shrubs are not located within or adjacent to the project area, and would not be disturbed by project activities. Miners Ranch Reservoir also contains Annual Grassland and Fresh Emergent Wetland habitats. The only substantial acreage of wetlands along Miners Ranch Reservoir is one herbaceous fringe wetland and an associated, small zone of scrub-shrub wetland on the northeast side of the reservoir (SFWPA 2007 vol IIC)[1]. The overall size of this area is about 1 acre, all of which is outside the project site.

The proposed improvements are located in an area of the existing water treatment plant that is already developed with numerous existing facilities. The area to be disturbed is composed of gravel areas with no vegetation, and upland areas largely infested with yellow star thistle (*Centaurea solstitialis*). There are a few scattered coyote bush (*Baccharis pilularis)*.

Fish Populations

Fish surveys have not been completed within Miners Ranch Reservoir, however it is assumed that fish populations would be similar to those in Ponderosa Reservoir because of the hydrologic connection between the two reservoirs via Miners Ranch Conduit. Fish species expected to occur in Miners Ranch Reservoir include rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta)*, channel catfish (*Ictalurus punctatus)*, hardhead (*Mylopharodon conocephalus, SCS)*,[2] Sacramento pikeminnow (*Ptychocheilus grandis*, Sacramento sucker (*Catostomus occidentalis)*, and smallmouth bass (*Micropterus dolomieu Lacepede)*. Abundant larval cyprinids (minnows), gambusia (mosquitofish), and centrarchids (bass) were observed during the reptile and amphibian surveys (SFWPA 2007). Because the reservoir provides a domestic water supply, it is closed to fishing.

The proposed project would have no direct impact on fisheries or fish resources. None of the proposed water treatment plant infrastructure improvements would directly impact Miners

[1] SFWPA (South Feather Water and Power Agency). 2007. Final License Application Volume IIC Botanical and Wildlife Resources to the Federal Energy Regulatory Commission. Project No. P-2088. Filed: March 26.

[2] FE = Listed as endangered under the federal Endangered Species Act.
FT = Listed as threatened under the federal Endangered Species Act.
FTPD = Listed as threatened under the federal Endangered Species Act but currently proposed for de-listing.
FP = Proposed for listing under the federal Endangered Species Act.
FC = Federal candidate species.
FSC = Federal species of concern (former Category 2 candidate for listing under the ESA).
CE = Listed as endangered under the California Endangered Species Act.
CT = Listed as threatened under the California Endangered Species Act.
SC = Candidate for listing under the California Endangered Species Act.
CFP = Fully protected by the State of California.
CSC = Considered a species of special concern by the State of California.
MIS = Considered a Management Indicator Species by USFS under the National Forestry Management Act.
FSS = Considered a Sensitive Species by USFS under the National Forestry Management Act.
WBWG-H = Considered imperiled or are at high risk of imperilment by the WBWG (see Section 5.2.19).

Ranch Reservoir or involve construction activities below the waterline of the reservoir that could result in direct impacts to fish. The water supply that would be treated at the Miners Ranch Water Treatment Plant Improvement Project would come from existing Agency water permits. The Agency filed petitions with the State Water Resources Control Board (State Water Board) Division of Water Rights requesting extensions of the time to place water to full beneficial use under water-right Permits 1267, 1268, 1271, 2492, 11516, and 11518. The petitions were filed in late November 2004.

The Division of Water Rights issued notice of these petitions on April 22, 2005. These petitions often are referred to as "petitions for extensions of time." SFWPA holds Permits 1267, 1268, 1271 and 2492. SFWPA and the Yuba County Water District (YCWD) have jointly held Permits 11516 and 11518. SFWPA has filed petitions for 45-year extensions of time, until 2049, for Permits 1267, 1268, 1271 and 2492 and has agreed to assign its interests in Permits 11516 and 11518 to YCWD. YCWD has filed petitions for 36-year extensions of time, until 2040, for Permits 11516 and 11518.

All of the potential environmental impacts associated with these water rights permits were addressed in the April 2006 Mitigated Negative Declaration prepared on behalf of the Agency (State Clearinghouse Number 2006042117).

The proposed Miners Ranch Water Treatment Plant Improvement Project would not utilize sources of water not already covered under these permits, which have already received thorough and complete review under CEQA. Implementation of the proposed project would not result in changes in water levels, water flow, water temperature, or water diversions that were not adequately addressed in the previous environmental documentation identified above.

Reptiles and Amphibians

The Agency conduced habitat evaluations and site surveys for reptiles and amphibians in 2004 (SFWPA 2007). Based on habitat evaluation, biologists surveyed one site for California red-legged frog in Miners Ranch Reservoir. California red-legged frog (*Rana draytonii*, Federal Threatened) were not found anywhere in the Project area and habitat quality was poor at Miners Ranch Reservoir. Based on elevation, Foothill yellow-legged frogs (*Rana boylii*, FSC, CP & CSC) could occur in Miners Ranch Reservoir, however they were not detected during the surveys. Bullfrogs and Pacific treefrog (Pseudacris regilla) were the only reptiles and amphibians observed in Miners Ranch Reservoir. California Red-Legged Frog and Western Pond Turtle (Clemmys marmorata) potentially suitable habitat was located on the northwest corner of the reservoir (SFWPA 2007); although deep, sheltered habitat was not abundant. Margin habitat with vegetation and sheltered shoreline was present and small pockets of rushes and reeds were present along the margin of the reservoir with grasses and forbs. However, abundant larval cyprinids (minnows), centrarchids (bass), and bullfrogs (including adults) were observed throughout the project area (predators to frog tadpols).

The proposed improvements are in an upland area adjacent to existing water treatment facilities composed mostly of star thistle (*Centaurea solstitialis*), which is a highly invasive weed, and coyote bush (*Baccharis pilularis)*. The existing facilities consist of employee occupied

buildings and numerous water treatment and water processing facilities which are concrete or rock lined and are regularly maintained as part of the ongoing operations of the existing plant. This area is not considered ideal upland habitat for special status reptiles or amphibians and none are believed to be present.

There is a small intermittent discharge channel that connects the treatment plant waste effluent to Miners Ranch Reservoir. Water flow in the discharge channel is NPDES regulated/permitted and occurs at intervals determined by plant operations. The vegetation in the discharge channel is maintained for weed abatement at intervals determined by the plant operations. The maintenance and weed abatement activities make this small discharge channel less than ideal habitat. The proposed project would eliminate discharge flows to the channel. The elimination of the flows would ultimately result in the channel returning to an upland habitat condition. The proposed improvements would not disturb the shore of Miner's Reservoir.

Wildlife

Bald eagle (*Haliaeetus leucocephalus*, FTPD, CE, CFP, MIS), osprey (*Pandion haliaetus*, CSC), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*) have been observed near the Miners Ranch conduit (at least 4.5 miles east from the Project site, along Lake Oroville) (Stillwater Sciences staff observations, 2003). Bald eagle habitat was identified along Miners Ranch Conduit, but nesting has not been documented in the vicinity of the conduit or the Miners Ranch Reservoir. Deer, waterfowl, and turkey occur in the fenced-off area around Miners Ranch Reservoir (SFWP staff observations) and beavers have been active at the base of Miners Ranch Dam (Stillwater and SFWP staff observations). Protected Activity Centers for California spotted owls (*Strix occidentalis occidentalis*) have been established on Plumas National Forest System Lands within one mile of Miners Ranch Conduit and greater than six miles from the Project site .

Conclusion

The area to be disturbed is composed of gravel areas with no vegetation, and upland areas infested with dense yellow star thistle (*Centaurea solstitialis*). This area is already developed as a water treatment plant with numerous existing facilities and the proposed improvements are not anticipated to adversely affect special status species. However, there are areas adjacent to the proposed facilities that are sensitive areas, including protected wetlands (i.e. Miner's Reservoir shoreline). These areas must be avoided during construction activities. Implementation of the following mitigation measure will ensure that the proposed project would have a **less than significant** impact relative to this issue.

Mitigation Measures

Mitigation Measure 3*: Prior to construction, the Agency shall take steps to identify and protect environmentally sensitive areas adjacent to the proposed improvements. Avoidance areas should be determined by a qualified professional. All stabilization efforts should use accepted best practices and materials. Construction specification should include the following wording:*

> *"The Contractor's attention is directed to the areas designated as "environmental sensitive areas." These areas are protected, and no entry by the Contractor for any purpose will be*

allowed unless specifically authorized in writing by the Contracting Agency. The Contractor will take measures to ensure that Contractor's forces do not enter or disturb these areas, including giving written notice to employees and subcontractors."

Response b-c): Less than Significant.

The proposed improvements are in an upland area adjacent to existing water treatment facilities composed mostly of star thistle (*Centaurea solstitialis*), which is a highly invasive weed, and coyote bush (*Baccharis pilularis)*. The existing facilities consist of employee occupied buildings and numerous water treatment and water processing facilities which are concrete or rock lined and are regularly maintained as part of the ongoing operations of the existing plant. There is an intermittent discharge channel that connects the plant to Miner's Reservoir. Water flow in the discharge channel is NPDES regulated/permitted and occurs at intervals determined by plant operations. The vegetation in the discharge channel is maintained for weed abatement at intervals determined by the plant operations. The existing facilities, including the discharge channel are not jurisdictional. The proposed project would eliminate hydrologic flows, which is a requirement of the new NPDES requirements. The proposed improvements would not disturb the shore of Miner's Reservoir, which is jurisdictional and protected.

There are no California Department of Fish and Wildlife (CDFW) designated sensitive natural communities within the project site that will be disturbed. Additionally, there are no federally protected wetlands or jurisdictional waters located within the project area, and the project would not impact these resources. The area to be disturbed is composed of gravel areas with no vegetation, and upland areas with yellow star thistle (*Centaurea solstitialis*) and coyote bush (*Baccharis pilularis)*.

The proposed improvements are located in an area that is already developed as a water treatment plant with numerous existing facilities. However, there are areas adjacent to the proposed facilities that are sensitive areas, including protected wetlands (i.e. Miner's Reservoir shoreline). These areas must be avoided during construction activities. Implementation of the above mitigation measure will ensure that the proposed project would have a **less than significant** impact relative to this issue.

Response d): Less than Significant. The proposed improvements are located in an area that is already developed as a water treatment plant with numerous existing facilities. The area proposed for improvements is not considered a wildlife corridor or nursery site and the proposed improvements are not expected to cause an adverse impact. Implementation of the proposed project would have a **less than significant** impact relative to this issue.

Response e): No Impact. The proposed project does not conflict with local policies or ordinances protecting biological resources. Implementation of the proposed project would have **no impact** relative to this environmental topic.

Response f): No Impact. The Butte Regional Conservation Plan (BRCP) is a joint Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP) that is currently being prepared for the western half of Butte County. The BRCP is a voluntary resources protection

and management tool that balances the needs of endangered and threatened species with the needs of landowners, land developers, and local and state public agencies. The BRCP is being prepared by BCAG under the guidance of local citizens (the Stakeholder Committee) and government officials. Participating agencies include: Butte County, Chico, Oroville, Gridley, Biggs, Western Canal Water District, Biggs West Gridley Water District, Butte Water District, Richvale Irrigation District, and Caltrans. The SFPWA is not a participating agency.

The BRCP has been considerably delayed and won't be completed until late 2014 or beyond. The project site is located within the BRCP planning area, however, it is anticipated that proposed improvements will be constructed prior to adoption of the BRCP. While the BRCP is not yet adopted and enforceable, the proposed project does not conflict with the draft BRCP. Implementation of the proposed project would have a **no impact** relative to this environmental topic.

V. CULTURAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

RESPONSES TO CHECKLIST QUESTIONS

Response a), b), c), d): Less than Significant with Mitigation. A review of literature maintained by the Central California Information Center of the California Historical Resources Information System at California State University, Chico identified that no previously identified prehistoric period cultural resources are known within the area proposed for improvement on the project site. Additionally, there are no known unique paleontological or archeological resources known to occur on, or within the immediate vicinity of the project site. Therefore, it is not anticipated that site grading and preparation activities would result in impacts to cultural, historical, archaeological or paleontological resources. There are no known human remains located on the project site, nor is there evidence to suggest that human remains may be present on the project site.

The majority of the project site is developed with the existing Miners Ranch Water Treatment Plant infrastructure and facilities, and the potential for previously undiscovered cultural resources to be present on the project site is considered low.

However, as with most projects in California that involve ground-disturbing activities, there is the potential for discovery of a previously unknown cultural and historical resource or human remains. This is considered a **potentially significant** impact.

The implementation of Mitigation Measure 4 would require appropriate steps to preserve and/or document any previously undiscovered resources that may be encountered during construction activities, including human remains. Implementation of this measure would reduce this impact to a **less than significant** level.

Mitigation Measures

Mitigation Measure 4: *If any prehistoric or historic artifacts, human remains or other indications of archaeological resources are found during grading and construction activities, an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be consulted to evaluate the finds and recommend appropriate mitigation measures.*

- *If cultural resources or Native American resources are identified, every effort shall be made to avoid significant cultural resources, with preservation an important goal. If significant sites cannot feasibly be avoided, appropriate mitigation measures, such as data recovery excavations or photographic documentation of buildings, shall be undertaken consistent with applicable state and federal regulations.*
  - *If human remains are discovered, all work shall be halted immediately within 50 meters (165 feet) of the discovery, the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.*
  - *If any fossils are encountered, there shall be no further disturbance of the area surrounding this find until the materials have been evaluated by a qualified paleontologist, and appropriate treatment measures have been identified.*

VI. GEOLOGY AND SOILS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation*	*Less Than Significant Impact*	*No Impact*
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?		X		
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

RESPONSES TO CHECKLIST QUESTIONS

Responses a.i), a.ii): Less than Significant. In accordance with the Alquist-Priolo Earthquake Fault Zoning Act of 1972 (A-P EFZ), only faults with evidence of historic or Holocene surface fault rupture are considered "active" earthquake faults and zoned on the A-P EFZ maps. Faults with evidence of surface fault rupture within the past 1.6 million years are considered potentially or conditionally active.

The A-P EFZ maps show faults considered active by the California Geological Survey. The only fault in Butte County considered active and subject to the A-P EFZ is the Cleveland Hills fault, which is shown on the Bangor 7.5 Minute Quadrangle Earthquake Fault Zones Map (1977). The fault runs in a nearly north-south orientation directly south of Lake Oroville and approximately

4 miles east-southeast of Oroville. This fault last ruptured in 1975 and resulted in the Oroville earthquake. This earthquake had a Richter magnitude of 5.7 and resulted in approximately 2.2 miles of ground rupture along the western flank of Cleveland Hill. Figure 4.6-1 in the Butte County General Plan Draft EIR maps the Cleveland Hills fault, as well as inactive faults in Butte County. Some geologists consider the Big Bend fault zone to be potentially active, but it is not subject to the requirements of the Alquist-Priolo Earthquake Fault Zoning Act.

The Cleveland Hills fault is located in close proximity to the project site. As described in the Geologic and Seismic Investigations for Little Grass Valley Dam and Miners Ranch Dam (Christensen Associates, November 2010) the Paynes Peak fault intersects and underlies the Miners Ranch dam and reservoir, and is the controlling earthquake source. The project site is located immediately south of the Lake Oroville Bidwell Canyon Saddle Dam, on the northwest shore of Miners Ranch Reservoir. The Cleveland Hill fault is located approximately 500 feet west of the dam and reservoir. The Paynes Peak and Cleveland Hill faults are each estimated to be capable of producing a Richter magnitude 6.5 earthquake.

As such, the project site may be subject to strong seismic ground shaking as a result of fault rupture.

According to the California Geological Survey's Probabilistic Seismic Hazard Assessment Program, Butte County is considered to be within an area that is predicted to have a 10 percent probability that a seismic event would produce horizontal ground shaking of 10 to 20 percent within a 50-year period. This level of ground shaking correlates to a Modified Mercalli intensity of V to VII, light to strong. As a result of these factors the California Geological Survey has defined the entire county as a seismic hazard zone. The International Building Code places all of California in the zone of greatest earthquake severity because recent studies indicate high potential for severe ground shaking.

There will always be a potential for ground shaking caused by seismic activity anywhere in California, including the project site. Seismic activity could come from a known active fault such as the Cleveland fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code.

All of the proposed infrastructure improvements to the Miners Ranch Water Treatment Plant must be designed and constructed to meet all applicable requirements of the California Building Code. Design in accordance with these standards would reduce any potential impact to a **less than significant** level.

Responses a.iii), c), d): Less than Significant with Mitigation. Liquefaction normally occurs when sites underlain by saturated, loose to medium dense, granular soils are subjected to relatively high ground shaking. During an earthquake, ground shaking may cause certain types of soil deposits to lose shear strength, resulting in ground settlement, oscillation, loss of bearing capacity, landsliding, and the buoyant rise of buried structures. The majority of liquefaction

hazards are associated with sandy soils, silty soils of low plasticity, and some gravelly soils. Cohesive soils are generally not considered to be susceptible to liquefaction. In general, liquefaction hazards are most severe within the upper 50 feet of the surface, except where slope faces or deep foundations are present (CDMG Special Publication 117, 1997). Mapping developed by Butte County for its 2006 Flood Mitigation Plan indicates as you move to the foothills and into the mountainous areas of the eastern part of the county the potential for liquefaction is very low. The project site is in the foothill region which is considered to have a very low potential for liquefaction during seismic shaking.

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. Soil expansion can damage structures by cracking foundations, causing settlement and distorting structural elements. Expansion is a typical characteristic of clay-type soils. Expansive soils shrink and swell in volume during changes in moisture content, such as a result of seasonal rain events, and can cause damage to foundations, concrete slabs, roadway improvements, and pavement sections. Expansion potential in the foothill and mountainous region of Butte County are generally low due to the geology of the region. This area generally contains shallow well-drained soils that are underlain by rock or weathered rock. The Butte County General Plan identifies the project site as having a "low" potential for expansive soils.

Overall, there is no evidence that the project site is unsuitable for development, but a final geotechnical evaluation should be performed at a design-level to ensure that the foundations, structures, and other improvements can accommodate the specific soils at those locations.

Mitigation Measure 5 provides the requirement for a final geotechnical evaluation. With the implementation of the following mitigation measure the proposed project would have a **less than significant** impact relative to this topic.

Mitigation Measures

Mitigation Measure 5: *Prior to grading, a certified geotechnical engineer shall be retained to perform a final geotechnical evaluation of the soils at a design-level. The grading and improvement plans, as well as the building plans shall be designed in accordance with the recommendations provided in the final geotechnical evaluation. Final geotechnical design shall be developed by a geotechnical engineer in accordance with the California Building Code.*

Responses a.iv): Less than Significant. The project site is relatively flat and there are no slopes in the vicinity of the project site. As such, the project site is exposed to little or no risk associated with landslides. This is a **less than significant** impact and no mitigation is required.

Response b): Less than Significant with Mitigation. Construction and site preparation activities associated with development of the project site include clearing existing ground cover prior to site grading for the installation of the proposed treatment plant infrastructure improvements. During the construction preparation process, existing vegetation would be removed to grade and compact the project site, as necessary. As construction occurs, these exposed surfaces could be susceptible to erosion from wind and water. Effects from erosion

include impacts on water quality and air quality. Exposed soils that are not properly contained or capped increase the potential for increased airborne dust and increased discharge of sediment and other pollutants into nearby surface water sources. Risks associated with erosive surface soils can be reduced by using appropriate controls during construction and properly revegetating exposed areas. Air quality Mitigation Measures 1 and 2 require the implementation of various dust control measures during site preparation and construction activities that would reduce the potential for soil erosion and the loss of topsoil. Additionally, hydrology and water quality Mitigation Measure 6 would require the implementation of various best management practices (BMPs) that would reduce the potential for disturbed soils and ground surfaces to result in erosion and sediment discharge into adjacent surface waters during construction activities. The implementation of these required mitigation measures would reduce these impacts to a **less than significant** level and no additional mitigation is required.

Response e): No Impact. The project site is already served by public wastewater facilities and does not require an alternative wastewater system such as septic tanks. Implementation of the proposed project would have **no impact** on this environmental issue.

XII. GREENHOUSE GAS EMISSIONS – WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. A greenhouse gas (GHG) emissions analysis was prepared for the proposed project by CDM (September 2009) as an appendix to the Miners Ranch Water Treatment Plant Expansion Project Preliminary Engineering and Feasibility Study Report.

The purpose of preparing a preliminary estimate of GHG impacts for the proposed project is to quantify GHG production and determine if the GHG emissions approach or exceed 7,000 metric tons of carbon dioxide (CO_2)/year, the interim significance threshold set by the California Air Resources Board (CARB) for compliance with CEQA for stationary industrial projects in California. This interim threshold is the most applicable threshold available to analyze potential impacts associated with operation of the proposed project. GHG emissions above this threshold will be considered a "significant" environmental effect and will need to be mitigated. At the time of preparation of this environmental document, the Butte County Air Quality Management District had not adopted numerical thresholds of significance for GHG emissions.

GHG emissions associated with operation of the proposed project would come exclusively from emissions associated with electricity use. As described in greater detail under the Transportation and Circulation Section of this Initial Study, the proposed project would not result in increased vehicle trips to and from the project site. As such, there would be no increase in mobile source (vehicle) GHG emissions from project implementation. Additionally, the process of treating drinking water at the Miners Ranch Water Treatment Plant does not result in the direct generation of GHG emissions. GHG emissions attributable to the proposed project would be related to emissions associated with the generation and consumption of electricity to power plant operations.

To estimate the CO_2 emissions for the proposed project, CDM first estimated the electrical demands of the recommended improvements described in the Project Description section of this Initial Study. The GHG analysis prepared by CDM also included an analysis of Phase 2 plant improvements, which would eventually increase the plant's treatment capacity to 25.4 mgd. While the potential future Phase 2 plant improvements are not the subject of the analysis in this Initial Study, these Phase 2 improvements were assumed in the GHG analysis prepared for the project.

The estimate of electrical demands starts with the current electrical demand for the plant at a current capacity of about 14.5 mgd. To estimate the overall additional electrical demands at 18 and 25.4 mgd, the current power use is simply scaled up from the current kWh/year/mgd. In addition, the power demand of adding UV treatment is conservatively estimated to be 1 kW/mgd at 18 and 25.4 mgd. UV vendors Trojan and Calgon were contacted for an estimated power demand for equipment conceptually designed to treat the plant effluent at these two rates and power demands were slightly less than 1 kW/mgd for all the alternatives considered

Next, an estimate of GHG emissions was calculated. The emissions of the three primary GHGs- CO_2, CH_4 (methane) and N_2O (nitrous oxide), averaged for all California utility power sources are documented and reported in pounds emitted per kWh of power generated by the utility. These values, along with factors for how CH_4 and N_2O behave in the atmosphere as compared to CO_2 (known as Global Warming Potentials), allow the total CO_2 equivalent emissions to be calculated for the power demand of the MRWTP improvements project.

The conservative estimate of the additional power demands for the MRWTP improvements is 1,200,000 kWh/year and corresponds to an estimate of 395 metric tons of CO_2 equivalents emitted per year to the atmosphere. The GHG estimate for the MRWTP project is well below the interim significance threshold of 7,000 metric tons/year of CO_2 set by CARB for compliance with CEQA. As such, this is a **less than significant** impact.

Response b): No Impact. There are numerous local and state-level programs and plans in place that aim to reduce GHG levels in California and Butte County. State-level programs include, but are not limited to:

California Executive Orders S-3-05 and S-20-06, and Assembly Bill 32

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by 2020 and 3) 80% below the 1990 levels by 2050.

In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that ARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team (CAT). Each CAT working group will develop a Near-term Implementation Plan (CATNIPs) for the specific climate change mitigation measures and adaptation strategies being addressed by the working group. The CATNIP will include a brief description of the measures and strategies, the steps to be taken in implementation, the agency/department responsible, and the timeline for completion. The Energy Working Group of the Climate Action Team focuses its efforts on both green house gas emission reduction and adaptation actions affecting the energy sector.

CARB, which is part of Cal-EPA, develops air quality regulations at the state level. The state regulations mirror federal regulations by establishing industry-specific pollution controls for

criteria, toxic, and nuisance pollutants. California also requires areas to develop plans and strategies for attaining state ambient air quality standards as set forth in the California Clean Air Act of 1988. In addition to developing regulations, CARB develops motor vehicle emission standards for California vehicles.

Assembly Bill 32- Climate Change Scoping Plan

On December 11, 2008 ARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of ARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce CO_2e emissions by 169 million metric tons (MMT), or approximately 30%, from the state's projected 2020 emissions level of 596 MMT of CO_2e under a business-as-usual scenario. (This is a reduction of 42 MMT CO_2e, or almost 10%, from 2002–2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.) The Scoping Plan also breaks down the amount of GHG emissions reductions ARB recommends for each emissions sector of the state's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e),
- the Low-Carbon Fuel Standard (15.0 MMT CO_2e),
- energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e), and
- a renewable portfolio standard for electricity production (21.3 MMT CO_2e).

Senate Bill 1368

SB 1368 requires the California Energy Commission (CEC) and the California Public Utilities Commission (CPUC) to set a global warming emissions standard for electricity used in California — regardless of whether it's generated in-state or purchased from plants in other states. The new standard applies to any new long-term financial contracts for base load electricity, and applies both to investor-owned utilities and municipal utilities. The standard for baseload generation owned by, or under long-term contract to publicly owned utilities, is an emissions performance standard (EPS) of 1,100 lbs CO_2 per megawatt-hour (MWh).

Senate Bills 1078 and 107 and Executive Order S-14-08

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20% of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33% renewable power by 2020.

The proposed project would not conflict with any of the Statewide programs to reduce GHGs described above.

Additionally, the Butte County Department of Development Services is coordinating the preparation of the community-wide Climate Action Plan (CAP) for the unincorporated area of Butte County. The CAP implements the County's recently adopted General Plan by providing goals, measures, and actions to improve quality of life in the County. The CAP will contain programs and actions that are designed to help the County sustain its natural resources, grow efficiently, ensure long-term resiliency to a changing environmental and economic climate, and improve transportation. The CAP also supports statewide greenhouse gas emissions reduction goals identified in Assembly Bill (AB) 32 and Senate Bill (SB) 375. Greenhouse gasses trap heat in the atmosphere; the buildup of greenhouse gasses from human sources is warming the planet and changing the climate (State of California, Governors Office of Planning and Research 2011). The CAP will reduce the local contribution of greenhouse gas emissions to the atmosphere by targeting both community-wide activities and County government operations.

The County has completed a community-wide greenhouse gas emissions inventory, an important first step in completing the CAP. The inventory was prepared as part of the County's General Plan update. The CAP will use the existing inventory to set reduction targets and identify appropriate strategies. The County is also undertaking an inventory of local government actions to assess how Butte County can become more efficient and reduce the generation of greenhouse gas emissions. The CAP will build on existing efforts of County departments, businesses, and community groups to reduce greenhouse gas emissions and identify future efforts needed to be consistent with statewide targets identified in AB 32. The CAP will include performance metrics and tracking tools to monitor future progress.

A Draft Climate Action Plan for Butte County was released for public review in October 2013. None of the proposed GHG reduction measures contained in the Draft CAP are directly applicable to the proposed project.

The proposed project would continue to provide a reliable and safe long-term water supply within the Agency's service area in order to meet projected quality and quantity demands that would occur as the Butte County General Plan is implemented. As described under Response a), the proposed project would generate only 395 tons/year of GHG emissions, which is significantly below the CARB interim threshold of 7,000 tons/year for industrial sources. Implementation of the proposed project would not conflict with any adopted State-level plans for the reduction of GHG emissions, nor would it conflict with the Draft Butte County CAP. For these reasons, the project would have **no impact** with respect to this environmental topic.

VIII. HAZARDS AND HAZARDOUS MATERIALS -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			X	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. Implementation of the proposed plant improvements would not result in any new chemicals or hazardous materials being used or stored onsite, nor would it result in the increase in volume of frequency of delivery of chemicals or hazardous materials to the project site.

Currently, the plant utilizes five chemicals in the water treatment process – liquid aluminum sulfate, chlorine, cationic polymer, nonionic polymer, and sodium bisulfite. These chemicals are summarized below:

Aluminum Sulfate (alum) is fed into the conventional treatment train as a coagulant. The alum is stored at 48.8% solution in a 7,000 gallon fiberglass tank located near the sludge lagoons. A 500 gallon day tank and a pair of metering pumps feed the alum from the Chemical Feed and Storage Room, with one pump as the primary pump and the second as a redundant standby. Dosage rates range from 6 to 20 mg/L of alum. Dosage of the coagulant is monitored by a Milton Roy streaming current analyzer.

Chlorine is fed for primary disinfection into the filter discharge line prior to the storage clearwell. Two other intermittent chlorination points are located at the inlet to the flocculation chamber and prior to the filters. The chlorine is fed from two one-ton cylinders located in the Chlorine Storage Room. The system operates as a vacuum system with vacuum regulators located on the ton cylinders, one 500 pound per day (ppd) chlorinator and one automatic 200 ppd chlorinator to regulate the chlorine flow, injectors, and chlorine solution rotameters to meter the chlorine solution flow. Dosage of the chlorine is flow paced. The chlorinators, injectors and rotameters are located in the Chlorine Feed Room.

Cationic polymer is used as a coagulant aid and backup to the alum system. As a backup system, the plant has not used it for several years. The feed system is a batch system, with a metering pump capable of feeding up to 3 gallons per hours. The plant keeps a five gallon drum of the polymer available for emergency use, and has a larger supply at the Agency's other treatment plant, which does use the polymer.

Nonionic polymer is used as a coagulant aid and a filter aid. The polymer is stored in dry 40 pound bags, and mixed in a batch system. The polymer is continuously fed into the raw water pipeline just before entry into the flocculation basin (conventional mode) or the mixing basin just after entry of the raw water pipeline (in-line mode). The polymer is also used as a filter aid and is fed in the last phase of filter backwashing. The feed system is located in chemical building and consists of a metering pump with capacity up to 3 gallons per hour. The feed rate is flow paced from the filtered water flow meters.

Sodium Bisulfite is used for dechlorination of wash water prior to discharge back to the Miners Ranch Reservoir. The feed equipment is located in the filter gallery and consists of two metering pumps drawing from a 53 gallon barrel of solution.

The use, storage, and transport of these chemicals is part of existing plant operations, and constitute the existing environmental baseline condition. Implementation of the proposed project would not increase the use, storage, or transport of these chemicals. As such, this impact would be **less than significant**. It is also noted that the proposed project includes a component that would increase the Agency's ability to apply UV treatment to the water supply, which would eventually lead to the decreased use of chlorine and sodium bisulfite.

Response c): Less than Significant. The project site is not located within ¼ mile of an existing or proposed school, and would therefore, not result in the exposure of any school site to any hazardous materials that may be used or stored at the project site. As described under Response a), above, the project is subject to measures that would reduce potential impacts

associated with the use or storage of hazardous materials on the project site that would reduce this impact to a less than significant level. However, since there are no schools in the immediate vicinity of the project site, this impact is considered **less than significant** and no additional mitigation is required.

Response d): Less than Significant. According the California Department of Toxic Substances Control (DTSC) there are no Federal Superfund Sites, State Response Sites, or Voluntary Cleanup Sites on, or in the vicinity of the project site. The DTSC Envirostor Database does not identify any cleanup sites in the vicinity of the project site. The project site does not contain any known hazardous materials, and this is a **less than significant** impact.

Responses e), f): Less than Significant. The Federal Aviation Administration (FAA) establishes distances of ground clearance for take-off and landing safety based on such items as the type of aircraft using the airport. The Butte County Airport Land Use Commission (ALUC) is an advisory body that assists local agencies with ensuring the compatibility of land uses in the vicinity of airports. The Butte County Airport Land Use Commission is responsible for protecting public health, safety and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public exposure to excessive notice and safety hazards within areas around airports to the extent that such areas are not already devoted to incompatible uses.

The Oroville Municipal Airport is the closest airport to the project site, located approximately 8.5 miles west of the site. The Airport is a general aviation airport owned by the City of Oroville and managed by the Public Works Department. The Oroville Municipal Airport Master Plan shows that the project site is not located within a flight zone and the proposed project is not considered an incompatible land use. Additionally, there are no private airstrips in the vicinity of the project site. Implementation of the proposed project would have a **less than significant** impact with regards to this environmental issue.

Response g): No Impact. The proposed project does not include any actions that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. Furthermore, the proposed project would not result in population growth that would increase the demand for emergency services during disasters. Implementation of the proposed project would result in **no impact** on this environmental topic.

Response h): Less than Significant. The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

The Butte County General Plan identifies the project site as being located within a “High” Fire Hazard Severity Zone. The project site has minimal amounts of flammable vegetation and is

currently developed with the Miners Ranch Water Treatment Plant. Implementation of the proposed infrastructure improvements on the project site would not increase the risk of exposure to wildland fires above the existing baseline environmental condition. The number of employees on the project site during a given day would not change as a result of project operations, and there would not be any full time residents on the project site as a result of project implementation. The proposed facilities include water settling ponds and water treatment infrastructure, which are not at significant risk from wildlife fire. This risk of wildland fires at the project site is considered a **less than significant** impact.

IX. HYDROLOGY AND WATER QUALITY -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?		X		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?		X		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		X		
f) Otherwise substantially degrade water quality?		X		
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j) Inundation by seiche, tsunami, or mudflow?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), c), d), e), f): Less than Significant with Mitigation. Operation of the proposed project would involve treating surface water from Miners Ranch Reservoir to potable standards, in compliance with all applicable water quality standards. The primary purpose of the proposed project is to generate a reliable supply of potable water for the Agency's service area. The site is currently developed with the Miners Ranch Water Treatment Plant, and the proposed improvements would have a minimal impact on the drainage conditions of the project site when compared to the existing baseline environmental condition. As such, the potential for the project to adversely impact water quality and drainage in the project area is limited.

Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation.

As required by the Clean Water Act, construction of the proposed improvements will require an approved Stormwater Pollution Prevention Plan (SWPPP) that includes best management practices for grading, and preservation of topsoil. The Agency or contractor is required to submit the SWPPP with a Notice of Intent to the Regional Water Quality Control Board (RWQCB) to obtain a General Permit. The RWQCB is the agency responsible for reviewing the SWPPP with the Notice of Intent, prior to issuance of a General Permit for the discharge of stormwater during construction activities. Implementation of the following mitigation measure would ensure consistency with the regulatory requirements and ensure that the proposed project would have a **less than significant** impact on construction related water quality.

Mitigation Measures

Mitigation Measure 6: *Prior to the commencement of grading activities the project Agency or Agency's contract shall submit a NOI and SWPPP to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall utilize BMPs and technology to reduce erosion and sediments to meet water quality standards. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The SWPPP shall be kept on site and implemented during construction activities.*

Responses b): Less than Significant. The proposed project would treat surface water extracted from the Miners Ranch Reservoir. No groundwater would be used by the proposed project, and the project would not increase existing levels of groundwater pumping. Groundwater recharge occurs primarily through percolation of surface waters through the soil and into the groundwater basin. The addition of significant areas of impervious surfaces (such as roads, parking lots, buildings, etc) can interfere with this natural groundwater recharge process. The project will include very limited new areas of impervious surfaces. However, given the relatively large size of the groundwater basin in the project area, the areas of impervious surfaces added as a result of project implementation will not adversely affect the recharge capabilities of the local groundwater basin. This is a **less than significant** impact and no mitigation is required.

Responses g), h): Less than Significant. The 100-year floodplain denotes an area that has a one percent chance of being inundated during any particular 12-month period. The risk of this area being flooded in any century is one percent but statistically the risk is almost 40 percent in any 50-year period.

Floodplain zones are determined by the Federal Emergency Management Agency (FEMA) and used to create Flood Insurance Rate Maps (FIRMs). These tools assist cities in mitigating flooding hazards through land use planning. FEMA also outlines specific regulations for any construction, whether residential, commercial, or industrial within 100-year floodplains.

The project site is not located within a FEMA-designated 100-year flood zone. There are no residences or residential structures proposed as part of the project. The project would place non-residential structures within the 100-year flood zone, as mapped by FEMA. As such, the proposed project would not impact or impede the flow of any surface water resources (rivers or streams) during a flood event. There is **no impact**, and no mitigation is required.

Response i): Less than Significant. The project site is located immediately north of the Miners Ranch Dam. The Miners Ranch Dam is regularly inspected by the California Department of Water Resources Division of Dam Safety. Additionally, recent seismic safety studies have been performed to assess the safety of the dam, as part of the South Feather Power Project (FERC Project No. 2088) in the *Geologic and Seismic Investigations for Little Grass Valley and Miners Ranch Dams* (Christensen Associates, November 2010). Ongoing dam monitoring and recently completed seismic investigations indicate that Miners Ranch Dam remains safe, and is not considered to have a significant risk of dam failure. The proposed project would not place any residences in the vicinity of the dam, and all new infrastructure improvements associated of the project would be located upstream of the dam inundation area. This is a **less than significant** impact and no mitigation is required.

Response j): Less than Significant. There are no significant bodies of water near the project site that could result in the occurrence of a seiche or tsunami. Miners Ranch Reservoir is not of sufficient size to cause a damaging seiche or tsumani during a seismic event. Additionally, the project site and the surrounding areas are essentially flat, which precludes the possibility of mudflows occurring on the project site. This is a **less than significant** impact and no mitigation is required.

X. LAND USE AND PLANNING - Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

RESPONSES TO CHECKLIST QUESTIONS

Responses a): No Impact. The project site is currently used as the Miners Ranch Water Treatment Plant. The proposed project would add infrastructure and improvements to continue the use of the site as a water treatment plant. The project would not physically divide an established community. There is **no impact**.

Responses b): No Impact. The project site is designated and zoned Public by the Butte County General Plan and Butte County Zoning Ordinance. The proposed improvements are consistent with the existing uses of the project site as a water treatment plant, and are consistent with the County's designation and zoning of the site for Public land uses. As described throughout this Initial Study, the proposed project would not result in any significant environmental impacts for which a plan or policy has been adopted for the purpose of avoiding or mitigating an environmental impact. There is no impact related to this environmental topic.

Response c): No Impact. The Butte Regional Conservation Plan (BRCP) is a joint Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP) that is currently being prepared for the western half of Butte County. The BRCP is a voluntary resources protection and management tool that balances the needs of endangered and threatened species with the needs of landowners, land developers, and local and state public agencies. The BRCP is being prepared by BCAG under the guidance of local citizens (the Stakeholder Committee) and government officials. Participating agencies include: Butte County, Chico, Oroville, Gridley, Biggs, Western Canal Water District, Biggs West Gridley Water District, Butte Water District, Richvale Irrigation District, and Caltrans. The SFPWA is not a participating agency.

The BRCP has been considerably delayed and won't be completed until late 2014 or beyond. The project site is located within the BRCP planning area, however, it is anticipated that proposed improvements will be constructed prior to adoption of the BRCP. While the BRCP is not yet adopted and enforceable, the proposed project does not conflict with the draft BRCP. Implementation of the proposed project would have a **no impact** relative to this environmental topic.

XI. MINERAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. There are no known mineral resources located on the project site. The project site is currently developed as the Miners Ranch Water Treatment Plant. Implementation of the proposed project would add additional water treatment infrastructure to a site that is currently developed with water treatment infrastructure. Therefore, the project would not result in the loss of availability of a known mineral resource. In the event that mineral resources were determined in the future to be present on the project site, implementation of the project would not preclude the ability to extract these resources in the future. Therefore, this impact is considered **less than significant**

XII. NOISE -- WOULD THE PROJECT RESULT IN:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

RESPONSES TO CHECKLIST QUESTIONS

Responses a), c): Less than Significant. Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels at noise-sensitive land uses.

Implementation of the proposed project would not result in an increase in ambient noise levels on or near the project site. The proposed infrastructure improvements will not involve an increase in traffic to and from the project site after construction activities have been completed. The Agency will maintain current staffing levels at the plant, and as such, there will be no noise increases associated with vehicle trips. Existing ambient noise levels at the project site are relatively low, given that most of the mechanical equipment at the site is housed within enclosed buildings and structures. The proposed improvements will not result in a noticeable increase in operational plant noise at the project site. As such, this is a less than significant impact.

Responses b), d): Less than Significant. Operation of the proposed project would not result in groundborne vibrations. Construction of the project may result in temporary increases in ambient noise levels from the use of heavy machinery and equipment used during construction. Pile driving or blasting would not be required for project construction, and therefore, groundborne vibration would not occur during construction activities. Additionally, the project site is not located immediately adjacent to any sensitive noise receptors. Construction activities associated with the project are required to occur during the daytime hours between 7:00 a.m. and 7:00 p.m., which would ensure that construction noise does not increase ambient nighttime noise levels in the project vicinity. Additionally, construction noise would be temporary, and limited to the time needed to complete site improvement activities. This is considered a **less than significant** impact and no mitigation is required.

Responses e) and f): No Impact. The project site is not located within two miles of a public airport or a private airstrip. There is **no impact**.

XIII. POPULATION AND HOUSING -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. Implementation of the project would not directly result in population growth, nor would it convert any land use designations to a use that would allow for the construction of housing. The proposed project will not generate a significant number of new jobs which could lead indirectly to population growth.

The project would not extend water services or other infrastructure to an area that is not currently served by such infrastructure. Implementation of the proposed project would not result in any changes to the Agency's service area boundary. As such, the proposed project would not make water available to areas within Oroville or Butte County that are not already served by the Agency. Potential future growth in the Agency's service area is dictated by the Oroville General Plan and the Butte County General Plan. These General Plans identify the location and intensity of land uses that may occur within their jurisdictional boundaries. The project would assist the Agency in meeting its current and projected water supply demands, would assist in meeting current and future drinking water regulations under changing water quality and flow conditions, and would increase operational redundancy, safety, and flexibility. The project would not lead to direct or indirect population growth, and this is considered a **less than significant** impact.

Responses b) and c): No Impact. There are no homes or residents located on the project site, and therefore, no homes or people would be displaced as a result of project implementation. There is **no impact**.

XIV. PUBLIC SERVICES

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?				X
ii) Police protection?				X
iii) Schools?				X
iv) Parks?				X
v) Other public facilities?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): No Impact. The proposed project consists of minor infrastructure improvements to the Miners Ranch Treatment Plant. As described previously in this Initial Study, the proposed project would not increase employment at the plant, nor would it result in population growth within the Agency's service area. The existing use of the project site as a water treatment plant would continue, and the project would not result in any increased demand for police and fire protection, schools, parks, or other public facilities. As such, the project would not result in the construction or expansion of any public facilities, beyond the proposed site improvements described in this environmental document. There is **no impact**.

XV. RECREATION

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): No Impact. The proposed project would not increase the use of existing recreational facilities, nor would it include the construction of new recreational facilities. There is **no impact**.

XVI. TRANSPORTATION/TRAFFIC -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a), b): No Impact. The proposed project would not result in any traffic increases following the completion of construction activities. During construction, minor and temporary increases in traffic may occur on roadways in the vicinity of the site. However, these temporary construction traffic increases would be short-term and would not adversely impact roadway operations or levels of service in the project area. Operation of the proposed project would not result in any traffic increases. The number of employees at the Miners Ranch Water Treatment Plant would not change following implementation of the proposed project, and there are no other aspects of project operations that would result in traffic increases. There is **no impact**.

Response c): No Impact. The project site is not located in the vicinity of a public airport or private airstrip. Project implementation would have **no impact** on air traffic patterns.

Responses d) and e): **No Impact.** There are no roadway design improvements proposed as part of the project, and therefore, no changes to the area roadways would occur. Emergency access to the project site would continue to be provided to the project site from Kelly Ridge

Road. As described above, the project would result in no traffic impacts, and would not increase area traffic or impede emergency access. There is **no impact**.

Response f): No Impact. Implementation of the proposed project would not result in an increased demand for parking at the project site. There is currently adequate onsite parking at the project site to accommodate employees, and as previously described, the number of employees at the project site would not change as a result of project implementation. There is **no impact**.

Response g): No Impact. The project would have no impact on any existing plans or policies related to alternative transportation. There is **no impact**.

XVII. UTILITIES AND SERVICE SYSTEMS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

RESPONSES TO CHECKLIST QUESTIONS

Responses a) and e): No Impact. The primary objective and purpose of the proposed project is to assist the Agency in meeting its current and projected water supply demands, assist in meeting current and future drinking water regulations under changing water quality and flow conditions, and increase operational redundancy, safety, and flexibility. Implementation of the proposed project would not result in any increase in wastewater generation or wastewater conveyance or treatment infrastructure. As such, the project would not exceed the wastewater treatment standards of the RWQCB or require the construction of any wastewater treatment facilities or infrastructure. There is **no impact**.

Responses b): Less than Significant. As described throughout this document, the proposed project would be constructed and operated to further treat water supplies used within the Agency's service area. The potential environmental impacts associated with the construction of new water treatment infrastructure on the project site has been addressed throughout this

document, and mitigation measures have been included that would reduce all potential project impacts to a **less than significant** level. No additional mitigation is required.

Responses c): Less than Significant. The proposed project would result in the limited increase of impervious surfaces on the project site, and would not require the construction of stormwater or drainage infrastructure beyond the project site boundaries. Potential impacts associated with construction activities on the project site have been addressed throughout this document, and mitigation measures to protect water quality and reduce environmental impacts have been required. This is a **less than significant** impact and no additional mitigation is required.

Responses d): No Impact. The water supply that would be treated at the Miners Ranch Water Treatment Plant Improvement Project would come from existing Agency water permits. The Agency recently filed petitions with the State Water Resources Control Board (State Water Board) Division of Water Rights requesting extensions of the time to place water to full beneficial use under water-right Permits 1267, 1268, 1271, 2492, 11516, and 11518. The petitions were filed in late November 2004.

The Division of Water Rights issued notice of these petitions on April 22, 2005. These petitions often are referred to as "petitions for extensions of time." SFWPA holds Permits 1267, 1268, 1271 and 2492. SFWPA and the Yuba County Water District (YCWD) have jointly held Permits 11516 and 11518. SFWPA has filed petitions for 45-year extensions of time, until 2049, for Permits 1267, 1268, 1271 and 2492 and has agreed to assign its interests in Permits 11516 and 11518 to YCWD. YCWD has filed petitions for 36-year extensions of time, until 2040, for Permits 11516 and 11518.

All of the potential environmental impacts associated with these water rights permits were addressed in the April 2006 Mitigated Negative Declaration prepared on behalf of the Agency (State Clearinghouse Number 2006042117).

The proposed Miners Ranch Water Treatment Plant Improvement Project would not utilize sources of water not already covered under these permits, which have already received thorough and complete review under CEQA. No new water permits, new water entitlements, or expanded water entitlements are needed or sought as a result of the proposed project. There is **no impact**.

Responses f), g): No impact. The proposed project would not generate significant volumes of solid waste. There is an extremely limited amount of solid waste generated at the project site currently, which consists primarily of common office trash generated by the onsite employees. The number of onsite employees will not change as a result of project implementation, and as such, there would be no increase in solid waste generation from the proposed project. The water treatment process results in the generation of sludge that settles out of the water supply during the treatment process. Approximately 35 dry tons of sludge are generated per year. This sludge is periodically removed from the site for land application and landfill disposal. The disposal of sludge from the project site would result in the violation of any waste discharge

requirements, and would not exceed the capacity of any landfill. As such, there is **no impact** related to this environmental topic.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE --

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b), c): Less than Significant. As described throughout the analysis above, the proposed project would not result in any significant impacts to the environment. The proposed project is required to implement mitigation measures that would reduce any potentially significant impacts to a less than significant level. The project would not result in any cumulative impacts, impacts to biological resources or impacts to cultural and/or historical resources. These are **less than significant** impacts.