

APPENDIX D
DRAFT BIOLOGICAL RESOURCES
MITIGATION IMPLEMENTATION
MONITORING PLAN
(BRMIMP)

MITIGATION MONITORING COMPLIANCE REPORTING

DRAFT

Biological Resources Mitigation Implementation Monitoring Plan (BRMIMP)

INTRODUCTION

This Draft Biological Resources Mitigation Implementation Monitoring Plan (BRMIMP) has been developed for the Gill Ranch Natural Gas Storage Project (Project) in order to define the approach for achieving environmental compliance and to outline methods for implementation of mitigation developed in the Proponent's Environmental Assessment (PEA) (ENTRIX 2008). For the purposes of this report, the Project applicants (Applicants) include Gill Ranch Gas Storage, LLC (GRS) and Pacific Gas and Electric Company (PG&E). The Applicants have requested the California Public Utilities Commission (CPUC) for Certificates of Public Convenience and Necessity (CPCN) authorizing the development, construction, and operation of the Project. The CPUC will also act as California Environmental Quality Act (CEQA) lead agency.

As the lead agency under CEQA, the CPUC is required to adopt a program for monitoring and reporting the implementation of mitigation measures for the Project, if it is approved, to ensure that the adopted mitigation measures are implemented as approved.

Purpose of the BRMIMP

The BRMIMP establishes a series of protocols that are designed to avoid potential impacts to biological resources by a standardized process of planning, onsite analysis and implementation. This would be accomplished through identification of the schedule and location of proposed construction activities, anticipation of conflicts between construction activities and environmental resource areas, and implementation of corrective actions before conflicts occur. The procedures described in the BRMIMP would:

- provide a list of sensitive species including biological resource areas,
- provide an immediate response to emergencies,
- establish an agreed-upon chain of command with efficient lines of communication for timely resolution to issues arising in the field,

- establish a protocol to anticipate and respond to Project variance requests, and
- document compliance with the entire mitigation package.

As stated in Mitigation Measure BIO-1 of the Applicants' PEA, the Applicants will develop a BRMIMP in advance of any Project related ground disturbance activities, to fully disclose the required mitigation measures with which the Project must comply during Project construction and operation. The BRMIMP will be developed in consultation with the CPUC and other resource agencies.

The BRMIMP will include, but not be limited to, species impact avoidance and minimization measures, a habitat compensation strategy, environmental compliance reporting requirements, pre-construction survey methods, construction monitoring procedures, a Worker Environmental Awareness Program, frac-out contingency plan and post-construction clean-up and restoration plans.

Monitoring Authority

The purpose of a Biological Resources Mitigation Implementation Monitoring Plan (BRMIMP) is to ensure that measures adopted to avoid or mitigate significant impacts are implemented. A BRMIMP is a working guide to facilitate not only the implementation of mitigation measures by the Project proponent, but also the monitoring, compliance and reporting activities of the CPUC, and any monitors they may designate.

The CPUC may delegate duties and responsibilities for monitoring to environmental monitors or consultants as deemed necessary, and some monitoring responsibilities may be assumed by responsible agencies, such as affected jurisdictions and cities, and the California Department of Fish and Game (CDFG). The number of construction monitors assigned to the Project would depend on the number of concurrent construction activities and their locations. The CPUC or designee(s), however, would ensure that each person delegated any duties or responsibilities is qualified to monitor compliance.

Preparation of any mitigation measure study or environmental compliance plan that requires CPUC approval must allow for at least 60 days review time. When a mitigation measure requires that a mitigation program be developed during the design phase of the Project, the Applicants must submit the final program to the CPUC for review and approval at least 60 days before construction is scheduled to begin. Other agencies and jurisdictions may require additional review time. It is the responsibility of the environmental monitor assigned to each spread to ensure that appropriate agency reviews and approvals are obtained.

The CPUC or its designee would also ensure that any deviation from the procedures identified under the monitoring program is approved by the CPUC. Any deviation and

its correction would be reported immediately to the CPUC or its designee by the environmental monitor assigned to the construction spread.

Documentation of mitigation compliance would be conducted daily via a web site hosted by the CPUC or its designee, using a standardized data sheet. The daily reports would document mitigation compliance and work progress. Monthly reports would also be completed to document actual Project impacts that occurred during the month, the effectiveness of mitigation measures violations, and monthly construction progress. Close coordination between agency monitors, environmental inspectors, and construction management would be required to effectively comply with the adopted mitigation measures.

ENFORCEMENT RESPONSIBILITY

THIS SECTION OUTLINES THE VARIOUS RESPONSIBILITIES OF THE CPUC MONITORING TEAM INCLUDING THE LEAD FIELD MONITOR AND OTHER FIELD MONITORS. ALSO SUMMARIZED ARE REGULATORY APPROVALS AND ASSOCIATED AGENCIES, GENERAL REPORTING REQUIREMENTS AND INFORMATION RELATED TO PUBLIC ACCESS TO RECORDS.

The CPUC is responsible for enforcing the procedures adopted for monitoring through the environmental monitor assigned to each construction spread. Any assigned environmental monitor would note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to the CPUC or its designee.

The CPUC would rely upon the following monitors for ensuring compliance with this PEA.

CPUC Lead Field Monitor. The CPUC lead field monitor (LFM) would be the primary contact for the Applicants' monitors. The LFM would oversee the monitors, monitoring program, and reporting program on a daily basis. The LFM would also meet on a weekly basis with the Applicants lead monitor to plan upcoming personnel and monitoring requirements, by evaluating the level of construction activity and proximity and number of sensitive resources. The LFM would also communicate with the CPUC project managers on a daily basis to ensure that the CPUC has the most current information regarding field activities. The primary responsibilities of the LFM include:

- patrolling all construction spreads at least once per week;
- meeting with spread monitors at least once per week and communicating by phone once daily;
- meeting with the Applicants' monitor at least twice per week and communicating by phone once daily;
- meeting or communicating by phone with the CPUC project manager at least once per week;
- entering and reviewing daily reports, and reviewing weekly and monthly reports;
- maintaining up-to-date field variance forms and route books; and
- reviewing construction plans daily and arranging for strategically placed resource specialists in required locations.

CPUC Field Monitors. The field monitors would conduct daily oversight of their assigned spread. Oversight of the spread includes meeting with the Applicants' monitors, patrolling the entire spread each day, and inspecting each construction site to ensure compliance with the BRMIMP. Field monitors would also be responsible for visually inspecting the sensitive areas that would undergo construction in the near future. The monitors would compare the visual inspection of the area to the BRMIMP, any applicable permits, and other documents such as Biological Opinions, Etc. The field monitors would complete an inspection report for each construction site visited each day. As part of ongoing communication, the field monitors would also talk to the LFM daily to provide construction and compliance updates. Specific responsibilities of the field monitors include:

- patrolling the entire spread each day;
- meeting with the Applicants' monitors each day and working continuously on building working rapport and trust;
- spending as much time as needed at each construction site (time required could be as short as 5 minutes for a small, reduced-activity, routine site to over 1 hour at a large, high-activity, complex site);
- observing construction practices at each site to ensure that the BRMIMP is being followed (e.g., silt fences, signs, all activity within the ROW);
- meeting with the Applicants' monitors and resource specialists as needed for field variances;
- visually inspecting critical areas where construction is planned in the near future (within 1 to 2 weeks); comparing the visual inspection to the BRMIMP, Biological Opinion, and permits; and ensuring that adequate and proper fencing, signage, and similar requirements are installed;
- completing inspections at each construction site and submitting for review daily; and
- communicating by phone or in person with the LFM at least daily.

The CPUC agency Project Manager and other appropriate permitting agencies would be consulted if conditions outside the scope of the approval arise. Potential agencies and respective approvals are listed in Table 1. Permit revocation is the ultimate enforcement mechanism. To evaluate compliance, resource agencies review reports and records generated by third-party Environmental Monitors (EM), and by the Applicants and their contractors; and field monitors directly observe the Project.

Table 1: Potential Required Agency Approvals

Other Project Approvals	Issuing Agency	Purpose/ Covered Activity
1. Federal		
a. Clean Water Act Section 404/Rivers and Harbors Act Section 10: Nationwide Permit (NWP) 12	U.S. Army Corps of Engineers	Utility line activities in waters of the U.S.
b. Section 7 Consultation (in connection with NWP 12); Incidental Take Permit	U.S. Fish and Wildlife Service	Endangered Species Act compliance
d. NHPA Section 106 Consultation (in connection with NWP 12); Memorandum of Agreement	State Historic Preservation Officer	Compliance with National Historic Preservation Act.
2. State		
a. Water Quality Certification (required as condition of NWP 12)	Central Valley Regional Water Quality Control Board	Compliance with water quality standards and plans
b. Notice of Intent to Comply with General Order No. 5-00-175 (or its replacement) for Dewatering and Other Low Threat Discharges	State Water Resources Control Board	Construction activities and discharge of hydrotest water
c. General Lease/Right of Way Use	State Lands Commission	Pipeline river crossing
d. Permits to Conduct Well Operations	Division of Oil and Gas	Well drilling and operation
e. Authorization to Inject Produced Water	Division of Oil and Gas	Injection well drilling and operation
f. Encroachment Permits	Department of Transportation	Pipeline highway crossings
g. PRC Section 1601 Streambed Alteration Agreement	Department of Fish and Game	Pipeline river crossing
i. Authority to Construct/Permit to Operate	San Joaquin Valley Air Pollution Control District	Compressor emissions
j. National Pollutant Discharge Elimination System General Permit for Discharge of Construction Related Storm Water ¹	State Water Resources Control Board	Management of storm water during construction
3. Local (Ministerial)		
a. Building and Occupancy Permits	Madera County	Compressor site facilities
b. Grading Permit	Madera County	Compressor site improvement
d. Well Permits	Madera County / Fresno County	Injection and withdrawal wells, observation wells, injection well
e. Encroachment/Other Permits	Madera County / Fresno County	Road crossings
g. Domestic Well Permit	Madera County	Compressor site domestic water supply

¹Under a rule issued in 2006, the U.S. Environmental Protection Agency (USEPA) exempted most oil and gas activities from the requirement to obtain a construction stormwater permit. In May 2008, the Ninth Circuit invalidated USEPA's rule.

General Reporting Procedures. Site visits and specified monitoring procedures performed by other individuals would be reported to the environmental monitor assigned to the relevant construction spread. A monitoring record form would be submitted to the environmental monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the environmental monitor. A checklist would be developed and maintained by the environmental monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The environmental monitor would note any problems that may occur and take appropriate action to rectify the problems.

Public Access to Records. The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports would be made available for public inspection by the CPUC or its designee on request.

MITIGATION COMPLIANCE RESPONSIBILITY

THIS SECTION SUMMARIZES THE RESPONSIBILITIES APPLICANT'S MONITORING TEAM INCLUDING THE APPLICANT'S ENVIRONMENTAL MANAGER, ENVIRONMENTAL INSPECTORS, QUALIFICATIONS OF RESOURCE SPECIALISTS, AND NECESSARY QUALIFICATIONS OF CONSTRUCTION PERSONNEL

The Applicants are responsible for successfully implementing all the mitigation measures in the BRMIMP, and are responsible for assuring that these requirements are met by all of its construction contractors and field personnel. Some mitigation measures include detailed success criteria, while others include such requirements as obtaining permits or avoiding a specific impact entirely. Additional mitigation success thresholds could be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of mitigation measures. Any additional mitigation measures would be incorporated into the BRMIMP.

The Applicants have indicated that they would organize their environmental inspection effort as described in the following.

The Applicants' Environmental Manager (EM). The EM has primary management responsibility for successful implementation of the Applicants' various environmental compliance plans, the BRMIMP and all environmental conditions of the Project. The EM reports directly to the Applicants' project manager (PM) and is responsible for environmental planning, permitting, and compliance activities. Additional responsibilities include, but are not limited to:

- coordinating regularly with the Project's lead agencies to address regulatory issues and concerns;
- communicating frequently with the environmental coordinator (EC), environmental compliance supervisor (ECS), and the Applicants' management staff regarding environmental inspection and compliance activities;
- developing and refining Project environmental procedures;
- coordinating with the PM to obtain information necessary to resolve environmental issues and acquire new permits or permit revisions;
- providing guidance on the interpretation of environmental compliance requirements;
- conducting periodic quality assurance field reviews;

- ensuring that agency notifications are made in cases of emergencies or serious non-compliance situations with the environmental requirements of the Project.
- ensuring all regulatory clearances are obtained prior to construction;
- maintaining and distributing all regulatory/permitting documentation to the appropriate Project staff;
- coordinating qualified resource specialty monitors (biological, cultural), as required;
- compiling and submitting summary status reports (with input from the Environmental Compliance Supervisor), as required to meet regulatory reporting requirements.
- acting as a key coordinator to resolve compliance issues;
- obtain necessary variances, complete notifications, coordinate resource surveys, and undertake other inter-project environmental issues during construction;

Environmental Inspectors (EI). EIs would be third-party environmental specialists hired by the Applicants, with the objective of ensuring that the construction crews comply with all aspects of the BRMIMP. EIs would evaluate, document, and verify that pipeline construction activities comply with all applicable mitigation requirements contained in any Federal, State, and local permit requirements. EIs would share peer status with other Project construction inspection staff.

The inspection teams would be composed of professionals with the appropriate technical training and experience relevant to district resources and anticipated concerns. Each EI would maintain copies of all permits, resource information, agreements, line lists, and other Project specifications required for the Project in their vehicle.

EIs represent the Applicants and would have the authority to enforce the environmental requirements of Project permits and plans. If a situation arises that could result in a violation of Federal, State, or local environmental permits or requirements—or cause undue harm to environmental resources, the EI would have the authority and obligation to directly halt or re-direct the activities to ensure that the Project remains in compliance. Whenever possible, however, the EI would make every effort to notify and coordinate with the EM prior to halting contractor activities.

EIs would also play a large role in reviewing Project changes. They would assist the EM in field verification of variance requests. Other responsibilities of the EIs include, but are not limited to:

- verifying that the limits of authorized work areas and locations of access roads are properly marked and maintained;

- ensuring that appropriate environmental permit conditions have been met prior to conducting work in individual locations;
- acting as a liaison between construction personnel and agency field representatives;
- informing CIs and contractor personnel of the status of environmental issues in their respective areas;
- documenting contractor compliance with Project mitigation requirements, permit conditions, and environmental specifications on a daily basis;
- working with the contractor and CIs to coordinate the approval of notifications; and
- conducting environmental training sessions.

Working under the direction of the EM, the EI would also assess work area conditions ahead of construction, being sure to note concerns, site-specific requirements, and potential variance situations prior to construction activities. In every instance possible, the EI would provide advance notice to the CIs and the contractor of conditions and situations that require specific awareness and planning.

Resource Specialist Qualifications. The Applicants would hire third-party resource specialists to help prevent undue harm to environmental resources within and around the Project area. The Applicants would submit to the CPUC the qualifications of their resource specialists within 30 days of starting pre-construction surveys. Minimum qualifications for third-party resource specialists include:

- a bachelor's degree in biological sciences, anthropology, archeology, paleontology, or other closely related fields suitable to the specific mitigation or permit condition;
- 3 years of experience with resources found in or near the Project area;
- thorough familiarity with Federal and State environmental laws and regulations;
- biologists must have a thorough familiarity with the biology, current recovery strategies, and current handling techniques for species occurring in the Project area;
- experience in conducting biological or cultural surveys; and
- thorough familiarity with the conditions of any required sensitive species permits.

Construction Personnel. A key feature contributing to the success of mitigation monitoring would be obtaining the full cooperation of construction personnel and supervisors. Many of the mitigation measures require action on the part of the construction supervisors or crews for successful implementation.

One or more preconstruction meetings would be held to inform all and train construction personnel about the requirements of the monitoring program.

A written summary of mitigation monitoring procedures would be provided to construction supervisors for all mitigation measures requiring their attention. The Applicants would have the following construction positions, any of which may interact with the EM or EI:

- The Project Manager (PM) is the ultimate authority for Project environmental compliance and successful implementation of the Applicants' environmental compliance plans.
- The Project Engineer (PE) reports directly to the PM and provides the overall direction, management, leadership, and corporate coordination for construction and engineering of the Project.
- The Chief Construction Manager (CCM) reports directly to the PE and oversees the construction inspectors.
- The Construction Inspectors (CIs) on each spread are expected to work closely with EIs to ensure compliance with all construction and environmental requirements. The Applicants are committed to training the CIs to identify key environmental requirements associated with every construction operation.

The Project Engineer (PE) reports directly to the PM and provides the overall direction, management, leadership, and corporate coordination for construction and engineering of the Project.

Right of way (ROW) personnel would report directly to the PM to implement land acquisition and landowner communication programs. ROW agents would coordinate frequently with construction and environmental staff on each construction spread, and would be available to resolve landowner issues and concerns throughout Project construction.

GENERAL CONSTRUCTION MONITORING PROCEDURES

THIS SECTION DESCRIBES THE GENERAL PROCEDURES FOR CONSTRUCTION MONITORING INCLUDING COMPLIANCE LEVELS (ACCEPTABLE, MINOR, VIOLATION, REPETED VIOLATION, SERIOUS VIOLATION, EMERGENCY).

The Applicants' environmental and construction teams would be in the field inspecting for compliance with environmental requirements throughout the construction phase of the Project. Compliance levels would be assigned during every inspection and would be documented by the Applicants' environmental inspection staff on a daily basis. CPUC Environmental Monitors would conduct daily field inspections that would be documented and placed on the Project website.

This section of the BRMIMP describes the environmental inspection field team's responsibility and approach to assessing environmental compliance during construction. The program emphasizes the need for ongoing communication between the Applicants' environmental compliance team, the engineering contractor, and the environmental monitors to encourage the best possible implementation of mitigation measures and the protection of environmental resources. Overall, the goal is to resolve compliance issues as soon as possible and at the lowest appropriate level.

During construction, the Applicants' EIs would work to ensure compliance with all environmental requirements and permit specifications. To achieve this goal, the environmental inspection staff would:

- take a proactive and practical approach to inspection,
- maintain effective communications and working relationships with the CIs and contractor staff,
- communicate regularly with agency representatives,
- cooperate in the resolution of environmental issues that arise during construction,
- provide effective follow-up to non-compliance issues, and
- implement appropriate measures to prevent additional non-compliance situations from occurring.

Compliance Levels

Compliance documentation and reporting would be an integral tool in implementing the Applicants' environmental compliance plans. The reporting system allows the Project to monitor the compliance of its contractors, to detect compliance trends and issues early on, and to prevent problems from developing into more significant

violations of permit conditions. Designations for levels of compliance are an internal management tool and, importantly, not all of the non-compliance reports issued by CPUC field monitors would represent a violation of Project permits or agreements.

The BRMIMP uses a tiered approach to document environmental compliance. Six levels of compliance have been identified and would be assigned to construction inspection events, including:

- acceptable
- minor problem
- violation
- repeated violation
- serious violation
- emergency

The CPUC environmental monitors would consider the following three primary factors in determining compliance levels:

- the level of resource damage,
- the intent behind the action, and
- the history of occurrence.

These factors would be considered in concert to provide guidance in determining compliance. For example, if an unintentional activity was found to have little or no resource damage and was addressed immediately, the activity would be documented as a minor problem. If there was significant repetition of the activity, with an increasing potential for resource damage, the activity may be documented as a non-compliance situation. If any one of the three determining factors is considered significant, this alone can constitute a non-compliance or serious non-compliance event, regardless of the severity of the other two factors.

The six compliance levels and guidelines for assigning them are described below.

Acceptable. Activities that are in compliance with the Project's environmental requirements are documented as acceptable inspection events.

Minor Problem. A minor problem is any deviation from the environmental requirements, with little or no impact on sensitive environmental resources. In addition,

a minor problem may be issued if repeated incidents that, as a group, are not mitigated or addressed in the proper timeframe and show an undesirable compliance trend. Some examples of a minor problem are:

- failure to remove trash from the ROW,
- a small leak or spill that is cleaned up immediately, and
- improperly installed erosion control devices.

Project personnel should address minor problems immediately, if possible. Although minor problems tend to have little or no resource impact, immediate action to correct the problem would minimize the possibility that the problem would escalate. If the contractor does not address a minor problem immediately, or conditions worsen due to a lack of response, the minor problem would be elevated to a non-compliance situation.

Violation. Non-compliance activities violate the Project's environmental requirements and place environmental resources at risk. In addition, a non-compliance situation may occur when minor problems are repeated and show a trend toward placing resources at unnecessary risk. Some examples of a non-compliance event include:

- slash, soil, or construction material or equipment outside the ROW in an environmentally sensitive area;
- travel outside designated ROWs or approved access roads;
- disturbance of an unapproved access road by Project-related personnel;
- refueling closer than 100 feet from a waterbody or wetland; and
- dewatering the trench near a sensitive resource without appropriate sediment control devices in place.

In the event of a violation, The Applicants' EI would take immediate action in the field to resolve the non-compliance activity. This could include requiring corrective actions by the contractor or temporarily halting the offending activity that has the potential to cause damage to sensitive environmental resources.

Non-compliance events would be documented in the daily environmental inspection reports. Appropriate corrective actions to resolve non-compliance events must be taken immediately; if the issue is not resolved immediately, the EI would set a date for resolution.

Repeated Violation. The repeated violation designation represents repeated non-compliance activities that occur following resolution measures drafted after the initial

violation and that place resources at an unnecessary risk. These repeat violations typically occur when there is a lack of understanding regarding the violation and a lack of communication between the violator and the EI.

In the event of a repeated violation a mandatory tailgate training session would be scheduled the following morning, which would be attended by crew involved in the non-compliance situation, the EI, and CPUC field monitor. If the non-compliance issue is not remedied, a serious violation would be issued.

Serious Violation. Serious non-compliance situations are considered to be actions that cause harm or pose immediate and serious threat to sensitive environmental resources. In addition, serious non-compliance events may be identified if there are repeated non-compliance events. Some examples of serious non-compliance events are:

- disturbance or placement of spoil or construction materials in a work exclusion zone;
- harm or harassment of a protected species;
- failure to clean up a spill located near a sensitive resource;
- non-resolution of a repeated violation;
- failure to temporarily stop work at the request of the EI; and
- willful impact on cultural resources.

Immediate corrective actions would be implemented (including cessation of construction activities in the area, as appropriate) if a serious non-compliance situation is identified. For example, an excavation crew placing spoil in an exclusion area (threatened and endangered species area) that is clearly marked with fencing and flagging would constitute a serious non-compliance situation. Upon discovery of this activity, the EI would halt work (as described in the stop work process below) in this area, make the appropriate notifications, and issue a serious non-compliance report. Immediate notification to the CPUC environmental monitor is required.

Corrective actions would be discussed and acted upon immediately. Corrective actions could include immediate correction of the non-compliance (if possible), field training (tailgate training session), temporary work suspension or, if necessary, disciplinary measures or dismissal of the individuals involved in the non-compliance actions. In addition, the contractor and/or individuals may be held responsible for consequences due to environmental violations, including potential fines.

Emergency. In addition to the above compliance levels, the Project has designated a category to document emergency situations, such as fires or accidents (e.g., a fuel truck accident or a significant hazardous material spill). Emergency events would be

communicated immediately to the appropriate jurisdictional agency and/or landowner. An emergency event may or may not result in a non-compliance situation. For example, if a brush fire started adjacent to the ROW, this emergency would not necessarily be considered a non-compliance situation. If, the fire started due to the contractor's negligence, it would be reported as a serious non-compliance event.

ENVIRONMENTAL COMPLIANCE REPORTING REQUIREMENTS

THIS SECTION SUMMARIZES THE COMPLIANCE REPORTING RESPONSIBILITIES OF THE APPLICANT INCLUDING: DAILY ENVIRONMENTAL COMPLIANCE REPORTING, GROUNDS FOR IMMEDIATE NOTIFICATION, PRE-CONSTRUCTION AGENCY NOTIFICATIONS. REPORTING RESPONSIBILITIES OF THE CPUC ARE ALSO SUMMARIZED INCLUDING DAILY ENVIRONMENTAL COMPLIANCE REPORTING AND DIGITAL PHOTO DOCUMENTATION

Applicant Compliance Reporting Responsibilities

The Applicants would establish an internal Environmental Compliance Reporting System to communicate compliance issues within throughout the entire compliance team.

Daily Environmental Compliance Reporting. Each EI would complete and submit (electronically) environmental inspection reports to the Project's Environmental Compliance Reporting System each day. The following day, the reports would be processed electronically and distributed (by e-mail, web-site, or fax) to Project staff, agency representatives, and other personnel, as appropriate. A number of other reports would be produced and distributed to field and management staff (e.g., a contractor punch list), as appropriate.

Grounds for Immediate Notification. To make proper agency notifications, the EI must notify the CPUC environmental monitor immediately if the situations listed below are identified:

- hazardous materials spill into a waterbody or wetland,
- adverse impact to an archaeological site,
- direct dewatering or discharge into a waterbody,
- noticeable sedimentation into a waterbody, or
- take of threatened or endangered species.

Pre-Construction Agency Notifications. The EM, with assistance from the EI, would be responsible for ensuring that all pre-construction agency notifications are made in the required timeframes. Once construction begins, the EI would be responsible for ensuring that all verbal agency notifications are made from the field regarding work in and around identified resources requiring prior notification. During construction, the EI would also be responsible for notifying the EM of the need for written notifications and providing the field information necessary to prepare these notifications.

CPUC Compliance Reporting Responsibilities

The CPUC would design a web site to establish an electronic record of monitoring activities and report compliance reports and issues on a daily basis. This site would be hosted by CPUC or its designee.

Daily Environmental Compliance Reporting. Each CPUC environmental monitor would complete and submit daily environmental monitoring reports via the agency web site. These reports would immediately be available for agency review.

Digital Photo Documentation. Digital photographs would be taken during construction to document compliance levels; establish an electronic record of construction practices; and better describe non-compliance, serious non-compliance, and emergency situations when they occur. Digital photos would be forwarded to Project and appropriate agency personnel as necessary to assist in resolving non-compliance, serious non-compliance, and emergency situations. Electronic copies of the photos would be archived by the Project for general reference and to document non-compliance resolutions. The photos would be included in the daily environmental monitoring reports.

PROJECT CHANGE REQUESTS AND VARIANCES

THIS SECTION COVERS THE VARIOUS LEVELS OF PROJECT CHANGE REQUESTS AND VARIANCES INCLUDING: MINOR FIELD ADJUSTMENTS, MINOR VARIANCES, AND VARIANCES. EACH LEVEL OF ADJUSTMENT AND VARIANCE IS DESCRIBED AND THE PROPER PROTOCOL FOR VARIANCE APPROVAL IS OUTLINED.

At various times throughout the construction phase of the Project, the need for extra work space, additional access roads, or a change in dig site locations or length may be identified. Similarly, changes to the Project requirements (e.g., mitigation measures or specifications) may be desirable to facilitate construction or to provide more effective protection of the resources associated with the Project.

All Project changes would require some level of regulatory approval by the CPUC monitoring team, the CPUC, or other agencies. As described below, changes may include minor adjustments to work areas within previously surveyed and "cleared" areas, as well as more significant changes that may involve additional resource surveys, landowner permissions, and regulatory approval. Procedures for each type of situation are outlined below.

Level 1 Minor Field Adjustments within the Pre-Construction Survey Area

The EI, with approval by the CPUC Lead Field Monitor, may approve certain field adjustments and/or modifications if specific conditions exist and can be documented. Agency approval would be conducted in the field when the CPUC Lead Field Monitor signs a minor field variance request form submitted by the EI. To obtain approval for a minor field adjustment, the change must:

- be located wholly within an area previously surveyed for cultural resources and addressed in a Cultural Resource Survey Report previously submitted to and reviewed by the appropriate SHPO, and that avoids potentially eligible cultural sites;
- be located wholly within an area evaluated and documented by a resource specialist as not containing sensitive biological resources, wetlands, or wooded riparian areas; and
- have received landowner approval for work outside the established ROW.

The EI would be responsible for ensuring field surveys are complete and fully documented. All field adjustments would be fully documented (and photographed as appropriate) in the EIs daily report. The EIs would be directed to err on the side of

caution, and refer interpretation of surveyed area and/or results to the EM for confirmation. A summary of minor field adjustments approved in the field would be included in the CPUC Lead Field Monitor's daily report and would include a Minor Variance Field Authorization Form.

Level 2 Minor Variances

Minor variances include Project changes in location, approach, or implementation that are minor but require regulatory approval. Examples include:

- Project use areas just outside the previously surveyed ROW that are similar in dimension, landscape, land use, and habitat type as the authorized ROW; and
- minor field adjustments that yield different survey results from the pre-project survey.

The initial variance review would be conducted in the field by construction and environmental personnel. If it is determined that an agency-approved variance is required, the following procedure would be used:

- The EI would initiate the variance request process by completing a hard copy of the Applicants' Project Change/Variance Request Form. The EI would be required to provide supporting maps, drawings, and photographs to accompany the variance request.
- The variance request would then be submitted to the appropriate ROW personnel and CPUC Lead Field Monitor for review. Any significant landowner or environmental issues associated with the variance would be addressed, and any conditions or requirements would be clearly identified on the variance form. The EI would submit the variance request to the CPUC Agency Project Manager.
- If it is determined that the variance is warranted and obtainable, the EI would coordinate with the CPUC Lead Field Monitor to complete any required resource surveys. After the surveys are conducted and any additional resource information is obtained, the variance would be finalized and forwarded to the CPUC and appropriate agencies.

Once all documents are reviewed, each agency may provide notification by electronic means or a fax, followed by written communication. Prior to starting work within the area described in the approved variance, the Applicants would submit agency-requested approvals to the CPUC Agency Project Manager.

Level 3 Variances

Level 3 variances include Project changes in location, approach, or implementation that are outside the scope of the PEA and require regulatory approval. Examples include:

- Project use of areas (including construction, storage, laydown, disposal, and access) not previously identified, evaluated, or surveyed in the PEA; and
- a change in the application of mitigation previously agreed to and specified in the PEA, Project authorizations, or permits.

The initial variance review would be conducted in the field by construction and environmental personnel. If it is determined that an agency-approved variance is required, the following procedure would be used:

The EI would initiate the variance request process by completing a hard copy of the Project Change/Variance Request Form. The EI would be required to provide supporting maps, drawings, and photographs to accompany the variance request.

The variance request would then be submitted to the appropriate ROW personnel and CPUC Lead Field Monitor for review. Significant landowner or environmental issues associated with the variance would be addressed, and any conditions or requirements would be clearly identified on the variance form. The EI would submit the variance request to the CPUC Agency Project Manager.

If it is determined that the variance is warranted and obtainable, the EI would coordinate with the CPUC Lead Monitor to complete any required resource surveys. After the surveys are conducted by the Applicants and any additional resource information is obtained, the variance would be finalized and forwarded to the CPUC, and appropriate agencies.

It is understood that agency approval time would vary, depending on the complexity of the variance request submitted. If the variance request is minor and does not affect sensitive resources or new landowners, approval may be possible within a few days. For more complex variances, approval may take longer, and could include supplemental review under CEQA.

Once all documents are reviewed, each agency may provide notification by electronic means or a fax, followed by written communication as appropriate, to the Applicants' EI, approving or denying the request, or requesting additional information. If the variance request is approved, the EI would notify the CPUC Agency Project Manager. The EI would inform the contractor of any specific mitigation measures associated with the approved variance.

WORK AREA ENFORCEMENT

DETAILS OF HOW THE WORK AREA WILL BE ENFORCED ARE SUMMARIZED HERE INCLUDING DESCRIPTIONS OF SIGNAGE AND BOUNDARY MARKERS FOR: APPROVED ACCESS ROADS, NO REFUELING ZONES, WETLAND BOUNDARIES, STREAM BUFFER ZONES, WORK AREA LIMITS, EXCLUSION AREAS, SENSITIVE WILDLIFE AREAS, AND CULTURAL AND PALEONTOLOGICAL RESOURCE SITES.

After the resource surveys are conducted and sensitive resource areas are identified, a team of resource specialists, environmental inspection personnel, and surveyors would properly flag and sign the construction ROW so that construction personnel would be able to identify resource areas to be protected or avoided during construction. Examples of the flagging and signage for the Project are included below.

Approved Access Roads

All Project-approved access roads would be delineated on construction alignment drawings. Green signs entitled "Approved Access Road" and bearing the Applicants' logo would be installed at the entrance to the access road both from the edge of the ROW and off main arterial roads.

No Refueling Zones

Red "No Refueling Zone" signs with the Applicants' logo would be installed 100 feet from each boundary of stream and wetland crossings. These signs would also be installed at periodic locations within large wetlands (greater than 100 feet in length), and in areas where the ROW closely parallels streams and wetlands.

Wetland Boundaries

Blue signs entitled "Wetland Boundary" and bearing the Applicants' logo would be installed at the edge of all wetlands crossed by the Project. At times, the wetland boundary would meander across the ROW. In this case, the signs would be posted where it would provide the most protection to the resource.

Stream Buffer Zones

Blue "Stream Buffer Zone" signs that bear the Applicants' logo would be installed as required by the Project permits. In the case of streams meandering across the ROW, the buffer zone would be signed to provide the greatest protection to the resource.

Work Area Limits

Extra work spaces and edge of ROW limits would be clearly marked with a combination of lath and high-visibility flagging. In areas where lath and flagging are difficult to see

due to excessive vegetation or hilly terrain, the frequency of flagging would be increased.

Exclusion Areas

Special areas within the ROW and/or extra work space limits that would be saved per agreements made with landowners would be flagged or fenced for protection with highly visible flagging for the duration of construction. Additional yellow signage with the Applicants' logo, entitled "Sensitive Resource Area - Keep Out" would be installed, as necessary, to ensure protection of the resource.

Sensitive Wildlife Areas

Areas on or adjacent to the ROW designated as sensitive wildlife areas (e.g., buffer zones around streams and endangered species habitat) would be marked and fenced with highly visible flagging or fencing, as required. Yellow signs bearing the Applicants' logo, entitled "Sensitive Resource Area - Keep Out" would be installed at conspicuous locations to ensure protection of the resource.

Cultural and Paleontological Resource Sites

Fencing or flagging may be installed around cultural resources, as required, to protect sites that are located within or adjacent to the ROW. Similar to biological resources, yellow signs bearing the Applicants' logo, entitled "Sensitive Resource Area - Keep Out" would be installed at conspicuous locations to ensure protection of cultural and paleontological resources. The signs and fencing would not indicate what type of resource is being protected to ensure the anonymity of the resource and decrease the potential for disturbance to or collection of artifacts.

Other specialty signs would be installed, as appropriate, along the ROW. The EI would install these signs to identify any additional areas or resources in need of protection during construction (e.g., in topsoil salvage areas).

WORKER ENVIRONMENTAL AWARENESS PROGRAM - ORIENTATION AND TRAINING

TRAINING OF VARIOUS MEMBERS OF THE BIOLOGICAL MONITORING TEAM IS SUMMARIZED IN THIS SECTION INCLUDING TRAINING OF THE ENVIRONMENTAL INSPECTOR, MANAGEMENT, CONSTRUCTION INSPECTOR AND CREW. TAILGATE TRAINING AND TRAINING AIDS ARE ALSO DESCRIBED HERE.

The Applicants' inspection team would be thoroughly familiar with the Project area and requirements prior to the start of construction. Environmental personnel would be mobilized to the Project at least 2 weeks prior to the start of construction. During this period, the environmental staff would complete pre-training activities under the direction of the EM. The pre-training work assignments would focus on Project-specific resources, Project specifications, construction work area staking and routes, and ROW familiarization. In addition, the pre-training assignments would encourage team-building and field logistics preparation.

The environmental training program for the Project would be developed to target every level of the organization (management and workforce) and would be customized to fit the job responsibilities of the Project participants. All program materials would be developed based on Project-specific environmental requirements as described in Federal, State, and local permits and other environmental documents. The Applicants' environmental staff and consultants would conduct the environmental training with input from agency representatives and resource specialists, as appropriate.

Environmental Inspector Training

The Applicants would conduct a formal classroom training program for the Applicants' environmental inspection staff after the initial orientation activities have been completed. The EI training program would take approximately 8 hours to complete. The training program would focus on providing in-depth instruction on Project-specific procedures, resource issues, and construction specifications—with an overall focus on establishing the consistent application of environmental policies and procedures across the Project. All EIs would be trained on how to conduct crew training so that consistent delivery of the training program is maintained. This training program would be coordinated and facilitated by a designated training team, with contributions provided by Project staff, agency representatives, and resource specialists, as appropriate. The program would introduce the following:

- the overall approach and implementation of the Applicants' ECP;
- key staff roles and responsibilities and expectations;

- key Project issues and environmental concerns; and
- Project procedures and protocols.

Management and Inspector Training

A series of management and inspector environmental training programs (or kickoffs) would be held as each phase of construction is initiated. The Applicants' spread management staff and CIs would attend up to an 8-hour training session, while the contractor's supervisors and key foremen would be required to attend a minimum 4-hour program. The environmental inspection staff would play an active role in the training by providing area-specific information and participating in activities and discussions. Agency representatives would also be invited to attend and speak, as appropriate. Each program would address spread-specific resources, compliance issues, and regulatory requirements.

Crew Training

As the final element of the Applicants' environmental training program, general crew training sessions would be held at the contractors' yards for all Project personnel involved with field activities on the Project. The first component of the program, a 30- to 45-minute environmental briefing, would be required for all crew personnel, survey staff, field monitors, and visitors to the Project. Tailored to the needs of this audience, the general crew training would highlight key environmental obligations on the Project. The general crew training would be conducted daily, or as needed, by the environmental inspection staff. All personnel would be required to attend this training before they are allowed to begin work. All trained personnel would be required to sign an agreement that states they would comply with all environmental requirements on the Project.

Tailgate Training

Where appropriate, the EI would also deliver brief tailgate training sessions throughout construction to select crews prior to starting work in sensitive areas, or where specialized construction techniques are required (e.g., presence of endangered species habitat or cultural resources, or residential construction). This brief tailgate training would highlight site-specific applications of the protection measures and critical compliance activities described in the general personnel training. Agency monitors may request a tailgate meeting when compliance issues arise to resolve these issues immediately. Agency monitors may attend these requested tailgate meetings to help resolve any issues and answer questions.

Training Aids

The EI training program, as well as the management and inspector trainings, would consist of interactive slide-based lectures with supporting presentation materials. The program facilitator would use photographs, demonstrations, and interactive scenario exercises to enhance audience participation and promote learning. The following training materials would be used during the crew training sessions:

- Training Brochure: A handbook or brochure would be developed to highlight Project-wide and spread-specific environmental requirements and procedures.
- Wallet Card/Vehicle Sticker: A wallet card and/or vehicle sticker would be used to highlight basic environmental responsibilities.
- Hard Hat Decal: A hard hat decal with the Applicants' Project logo would be given to individuals that complete the crew-training program. The decal would be used to identify trained individuals.

MITIGATION MONITORING CONDITIONS

THIS SECTION OUTLINES VARIOUS CONDITIONS SET FORTH DURING THE ENVIRONMENTAL ASSESSMENT, PERMITTING AND AGENCY CONSULTATION FOR THE PROJECT. OUTLINED ARE COMPLIANCE CONDITIONS INCLUDING: PRE-CONSTRUCTION SURVEYS, IMPACT AVOIDANCE AND MINIMIZATION MEASURES, ENVIRONMENTAL COMPLIANCE PLANS AND OTHER GUIDANCE DOCUMENTS PROVIDED BY PERMITTING AND CONSULTING AGENCIES. THE HABITAT COMPENSATION STRATEGY (AS DEVELOPED DURING AGENCY CONSULTATION) IS ALSO SUMMARIZED]

Pre-Construction Surveys

This section will include details on the proposed methods for pre-construction surveys for species of concern as determined during ESA consultation.

Impact Avoidance and Minimization Measures

Following is a summary of design, construction, and operations compliance measures proposed by the Applicants' in order to avoid and/or minimize impacts. Listed are several main elements of the Project compliance program, including specific design features, construction methods, and operations procedures that will be implemented for the Project. These measures are presented in the PEA, Project Description (Section 3.9) and are referenced in the various impact assessments in Section 4, Environmental Assessment and summarized below.

- Seismic-Resistant Design Measures
- Construction Staging and Designated Work Zones
- Management of trench dewatering and Hydrostatic Test Water
- Fire Management Measures
- Agricultural and Land Conservation
- Air Quality Protection Measures
- Aesthetics/Visual Resources Measures

Impact avoidance and minimization measures have been developed by NW Natural Environmental Department in their Environmental Operating Requirements. Applicable modules include Module 9: Vegetation Control and Management, Module 13: Identifying and Working in Wetlands, Module 18: endangered Species (NW Natural 2003), and Module 21 Wetlands and Stream Crossings (NW Natural 2007).

Environmental Compliance Plans and Other Guidance Documents

This section provides a summary of Applicant Developed Environmental Compliance Plans, as well as a summary of agency developed plans and permit conditions that were developed during the permitting and consultation process.

Applicant Developed Compliance Plans. Following is a partial list of plans and procedures that might be developed as a part of the comprehensive compliance program for construction and operations:

- Emergency Response Plan
- Site Security Plan
- Hazardous Material Plan
- Traffic Control Plan
- Grading and Drainage Plan
- Underground Utility Plan
- Injection Plan
- Water Conservation Measures and Solid Waste Minimization Measures
- Storm Water Permits
- Frac-Out Contingency Plan
- Cultural Resources Discovery and Management Plan
- Paleontological Resources Discovery and Management Plan
- Agricultural Impact Mitigation Plan
- Post Construction Crop Maintenance Plan
- Erosion and Sediment Control Plan
- Noise Control Plan

Permit Conditions. This section will summarize any permit conditions required by the agencies as developed during the permitting process. This may include but is not limited to Regional Water Quality Control Board Section 401 Water Quality Certification, US Army Corps of Engineers Section 404 Dredge and Fill Permit, California Department of Fish and Game Section 1600 Streambed Alteration Agreement.

Species Specific Guidance Documents. This section will summarize any species specific surveying, handling or reporting requirements as developed by the US Fish and Wildlife Service and the California Department of Fish and Game.

Habitat Compensation Strategy

This section will detail the habitat compensation strategy developed during the environmental review and permit approval process.

Final Approved Project Mitigation Measures would be attached here upon Project approval.