



Moraga-Oakland X 115 kV Rebuild Project

Key Staff Environmental Training
September 2026

- Welcome, Introductions, and Safety
- Environmental Commitment
- Environmental Compliance Management Plan
- Project Overview and Regulatory Setting
- Mitigation Monitoring, Compliance, and Reporting Program
- Environmental requirements
- Community relations
- Closing remarks/questions

Ground Rules for Today

- Stay focused
- Ask questions
- Offer experiences
- Think about field situations
- Keep the side discussions outside
- Please turn off cell phones



- Safety for today:
 - Closest Exits
 - Fire extinguisher
 - Who will call 911 and who will meet first responders
 - Emergency meeting place

- Introduce people, roles, and responsibilities
- Understand key environmental compliance commitments
- Review Mitigation Monitoring, Compliance, and Reporting Program
- Understand Applicant Proposed Measures (APMs) and Mitigation Measures (MMs)



Key Environmental Staff

- Behnoud Kermani, Project Manager – PG&E
- Brandon Liddell, Environmental Lead – PG&E
- Tom Naiman, Environmental Field Specialist – PG&E
- Ode Bernstein, Biologist – PG&E
- Christophe Descantes, Cultural Resource Specialist – PG&E
- Jacob Cordova, Public Liaison – PG&E
- Tharon Wright, CPUC Project Manager, CPUC
- Vida Strong, CPUC Third Party Compliance Manager, Aspen Environmental

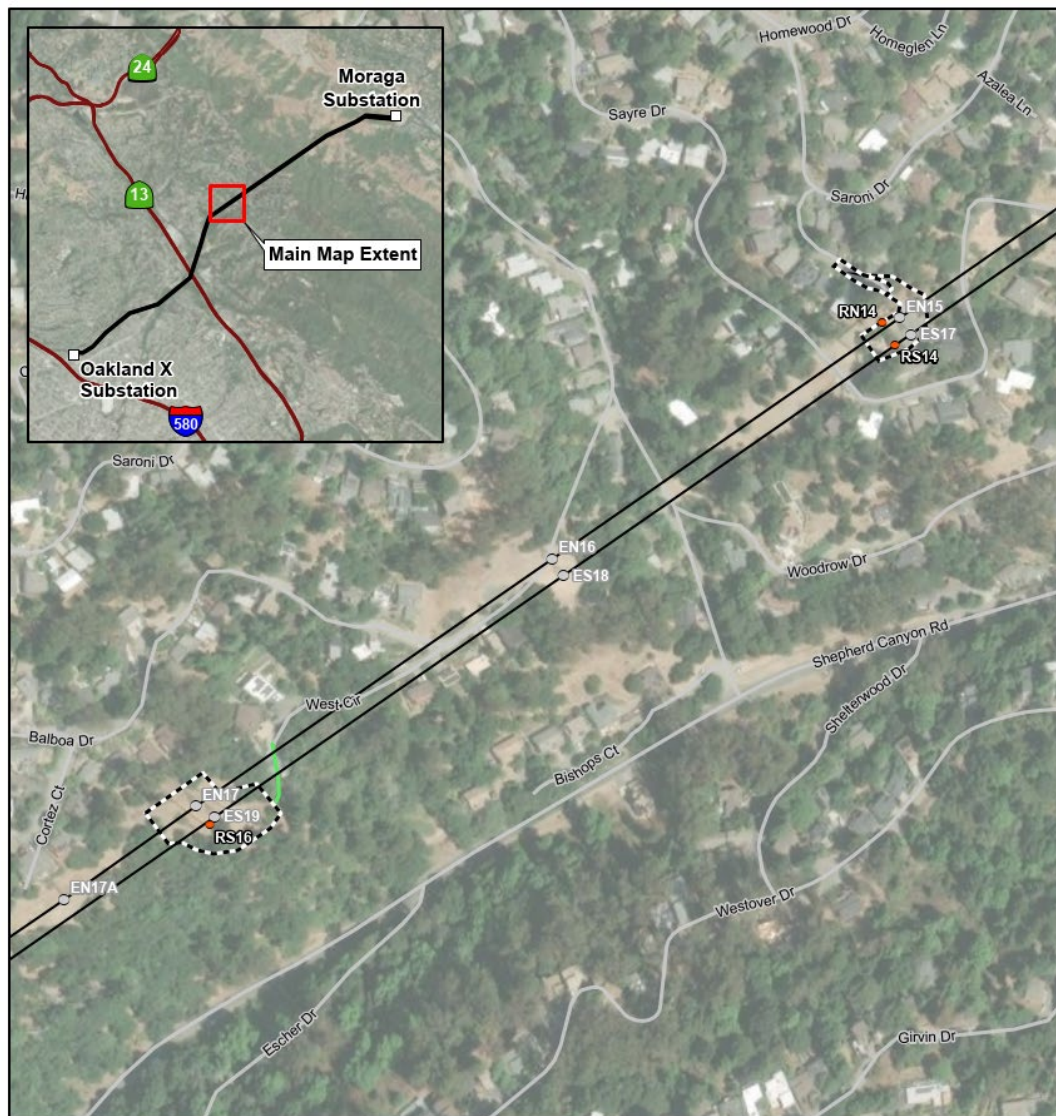


PROJECT OVERVIEW AND REGULATORY SETTING

NTP 1 Project Description

- Moraga-Oakland X 115kV Replacement Project (Project) is anticipated to begin construction in 2028 to rebuild 5 miles of 115 kV power lines.
- This Limited NTP work is near-term maintenance work on the Project lines
- NTP 1: Install the foundations to replace three structures on the Project lines
- NTP 2: Install replacement structures, move conductor to the new structures and retention, replace insulators on adjacent structures, and remove replaced structures

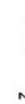
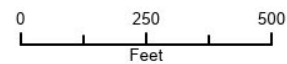
- The NTP 1 work area includes two locations in a neighborhood off of Shepherd Canyon Road in the City of Oakland
- Access to the project work areas is through narrow, windy roads within a steep residential neighborhood



Version: 7/31/2026

Legend

- Existing Structure
- Proposed Structure
- Existing Overhead Line
- Existing Access Road
- Temporary Work Area



Request for Notice to Proceed 1
 Moraga-Oakland X 115 kV Rebuild Project
 Pacific Gas & Electric Company



Regulatory Agencies

- NTP 1 work can only begin once the CPUC has issued the Limited NTP, the ERTC has been developed by PG&E, and the necessary City permits have been issued.

Agency	Permit/Authorization	Purpose/Required Documentation
California Public Utilities Commission	Notice To Proceed (NTP)	NTP must be on site at all times
City of Oakland	Obstruction Permit	Obstruction Permit must be on site at all times
California Department of Fish and Wildlife	Habitat Conservation Plan (HCP); Incidental Take Permit (ITP)	HCP and ITP Measures will be in the ERTC
PG&E	Environmental Release to Construction (ERTC)	ERTC must be on site at all times



Mitigation Monitoring, Compliance, and Reporting Program

“The purpose of this MMCRP is to establish, between the CPUC and PG&E, agreed-upon procedures and protocols for monitoring the construction of the MOX Project to ensure that conditions of project approval, including mitigation measures, are properly implemented. The MMCRP was developed by CPUC in coordination with PG&E and CPUC’s Environmental Monitors (EMs) and defines the reporting relationships, provides information regarding the roles and responsibilities of the Project’s environmental compliance personnel, sets out compliance reporting procedures, and establishes a communication protocol. The communication information provided in the MMCRP will be updated throughout construction.”

❖ Wildfire Prevention Plan

- ❖ Utility Standard EMER-4102S – *Preventing and Mitigating Fires While Performing PG&E Work*, Publication Date: 03/01/2024 Rev: 0
- ❖ Utility Procedure EMER-4102P-01 – *Applying EMER-4102S Work Activities Procedure*, Publication Date: 03/01/2024 Rev: 0
- ❖ Utility Procedure EMER-4102P-02 – *Jobsite Ignition Reporting Procedure*, Publication Date: 03/01/2024 Rev: 0

❖ Soil Management Plan

- ❖ PG&E *Safety and Health Tailboard Topic: Working in Soil That May Be Contaminated*
- ❖ PG&E's *A-ESCP* with BMP fact sheet: *WM-7 Contaminated Soil Management*

❖ Traffic Management

- ❖ City of Oakland Obstruction permit



Worker Environmental Awareness Training

Worker Environmental Awareness Training

- Required for all project personnel prior to beginning work on the project site
- Trained personnel must:
 - Sign acknowledgement of having attended training
 - Display a hard hat decal





Environmental Requirements

General Requirements

- Work only during authorized times as described in permit conditions
- Contact the PG&E for any questions about the environmental requirements
- Notify PG&E if BMPs need to be repaired
- Do not stage personal belongings, construction materials, vehicles or equipment on adjacent private properties
- Avoid unnecessary impacts to city landscaping and vegetation
- No pets or firearms
- No smoking on-site
- Be respectful of the public and residence
- Limit unnecessary idling time – less than five-minute maximum required by law
- Keep jobsite free of trash and construction debris
- Collect all food scraps and dispose of offsite (e.g., apple cores, orange peels, sunflower seeds, bread crusts, etc.)
- Put trash in closed trash containers
- No barbecuing on site
- Obey speed limits

Project Signage



- Do not enter exclusion zones
- Obey all posted speed limits, field signs, flagging, and fencing



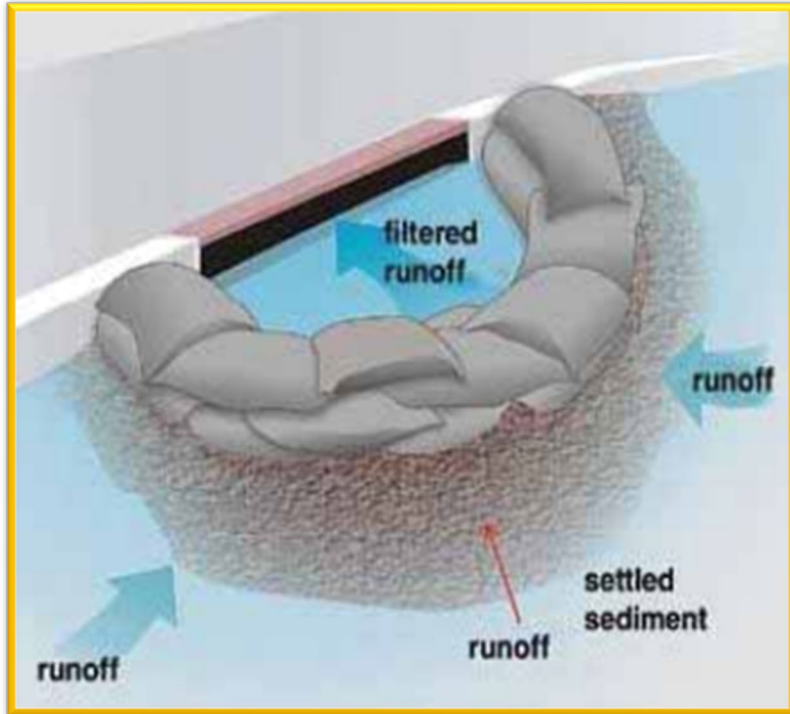
Stormwater Management

(APMs HAZ-1, HAZ-2, HAZ-4, HAZ-5, HYD-2, HYD-3, MM HH-1a)

Erosion and Sediment Control Measures

- Erosion and sediment control measures will be installed prior to the start of construction activities
- Measures may include:
 - ✓ Storm drain protection
 - ✓ Track out control at all entrances and exits
 - ✓ Effective dust control measures
 - ✓ Good housekeeping measures
 - ✓ Stockpile management
- Have BMPs and erosion and sediment control materials on-site and available for use throughout the project
- Follow the BMPs in the MMCRP and install according to standard industry practice

Stormdrain Protection



- Place sediment barriers:
 - Along perimeter of project on downslope side
 - Between project area and sensitive resources
 - Around excavated or disturbed soil piles
 - Where necessary to minimize significant sediment transport out of construction area or into adjacent resource areas

- BMPs will be inspected
 - Weekly during periods without precipitation
 - 48 hours prior to a forecasted storm
 - Within 48 hours after any rain event causing runoff from the construction site
 - At 24-hour intervals during extended rain events
- Notify the daily inspectors or the QSP if you observe a source of pollution or a BMP failure



Biological Resources

(The full list of bio measures applicable to this project can be found in the ERTC)

FEDERAL

- ❖ Requires federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species
- ❖ Prohibits any action that causes a "taking" of any listed species of endangered fish or wildlife

STATE

- ❖ All native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved.
- ❖ Allows for take incidental to otherwise lawful development projects



CDFW Regional Incidental Take Permit

- PG&E has obtained an Incidental Take Permit (ITP) under section 2081 of the California Endangered Species Act with CDFW
- An FEIR was developed as well, which presented additional measures designated to minimize impacts to state listed or other special-status species
- The geographic scope of the ITP encompasses the project area and includes roaming area for Alameda whipsnake, a species covered in the ITP
- During construction, PG&E must implement the measures from the BAHCP, the ITP, and the IRP FEIR APMs



PG&E Bay Area Habitat Conservation Plan (HCP)

- The project is located within PG&E's Multiple Region Operations and Maintenance Habitat Conservation Plan (MRHCP) Area.
- All contractors and subcontractors must complete required HCP training via ENVR-0220WBT to work in the HCP Plan Area.
- Work activities must follow MRHCP Field Protocols (FP) and Avoidance and Minimization Measures (APMs)
 - FP-1 – FP-18
 - APM Wetland 2
 - APM Plant 01-08
- If biological issues or concerns arise during work, please contact the project Biologist

Preconstruction Surveys

- Preconstruction surveys and assessments will be conducted:
 - Sensitive habitat avoidance delineation
 - Wetland avoidance flagging
 - Crotch's Bumblebee habitat assessment, potential focused survey
 - Focused bat survey
 - Rare plant survey
 - Focused Monarch butterfly host plant survey
- Work is scheduled outside of nesting bird season (February 1-August 31), so a nesting bird survey will not be conducted.

Biological Sensitivity at Project Sites

- The work location off Saroni Court is paved and therefore poses no threat to sensitive biological resources
- The work location off West Circle has a higher threat to sensitive biological resources
 - A biologist will place pin flags around the existing access road
 - Crews can mow, touch up, or rock the existing road within the flags

- Crotch's Bumble Bee
- SF Dusky-footed Woodrat
- Foothill Yellow-legged frog
- Northwestern Pond Turtle
- Special status bats
- Monarch Butterfly

Do not harm, harass, pursue, hunt, shoot, wound, trap, kill, capture, or collect any listed or special-status species.

Crotch's Bumble Bee

- ✓ Potential to occur in the project area
- ✓ Nests underground in abandoned rodent burrows
- ✓ Inhabits grassland, meadows, scrublands and shrublands



Image source: c) Daniel, some rights reserved (CC BY)

San Francisco Dusky Footed Woodrat

- No nests were observed in the project areas
- Potential to occur in the project area
- Inhabits woodlands, shrublands, and scrub habitats
- Primarily forages at night



Image source: Friends of Sausal Creek
<https://www.sausalcreek.org/post/whats-in-the-woods>

Foothill Yellow-legged Frog

- Range from 1.5 to 3.2 inches long
- Inhabit creeks and adjacent vegetation as well as beneath stored materials, equipment, or other cover.



Northwestern Pond Turtle

- Inhabits calm waters, such as streams or pools, with vegetated banks and log or rock basking sites.
- Carapaces ranging 4 to 7 inches long. Olive, dark brown, or blackish in color.



- Migratory butterflies with migration patterns through the project area
- Nest and feed on Milkweed species



Image source: National Wildlife Federation Blog
<https://blog.nwf.org/2023/09/monarch-butterfly-identification-guide/>

Special Status Bats

- Bats can be found in a variety of habitats including tree crevices, tree foliage, vines, as well as in crevices located under the deck of low bridges.
- Tree habitat example where roosting habitat is provided by a large crevice indicated by the arrow on a coast live oak.



Special-Status Plants

- Rare plants are not found within 100 feet of the work areas
- If any special-status plants are observed, they will be fenced off and avoided
- All plant material used for erosion control and road maintenance must be weed free
- Seed mixes must be approved by a biologist

General Wildlife Requirements

- Immediately report any live, injured, trapped, or dead wildlife to PG&E
- All food scraps, wrappers, cans, bottles, and other trash will be deposited in closed containers. Containers will be removed from the site at the end of the work day, unless located in a potential staging area or the switching station.

Wetlands and Drainages

A wetland survey will be conducted prior to construction to identify any wetlands, ponds, and riparian areas. Crews will maintain a 50 foot buffer around all identified waterbodies.



Cultural and Paleontological Resources

(APMs CR-1, CR-2, CR-3, CR-4, CR-5, PR-1, PR-2)

Prehistory

- Archaeological evidence indicates that human occupation of the bay began sometime during the Early Holocene (ca. 11,700 to 8,200 years ago)
- The Late Holocene is very well documented in the Bay Area, with more than 200 dated sites occupied by complex hunter-gatherers

Ethnography

- The project area falls within the aboriginal territory of the Ohlone, specifically the Chochenyo-speaking groups such as the Huchiun and Saclan, were living in the East Bay and Oakland Hills
- Prior to European contact, native people of the Bay Area were hunters, gatherers, and fisherfolk
- The Ohlone used a variety of stone tools, including knives, arrow and spear points, handstones and millingslabs, mortars and pestles, net sinkers, anchors, and pipes

History

- The first European expedition into the San Francisco Bay area occurred in 1772 when the Spaniard Pedro Fages and his party explored the eastern shore of San Francisco Bay north to San Pablo Bay
- No archaeological evidence of these explorations has been documented
- Because of introduced European diseases, a declining birth rate, and high infant mortality, the overall Ohlone population decreased from at least 10,000 in pre-contact times to perhaps 2,000 by 1832, and to no more than 1,000 by 1852
- A small number of American and British merchants arrived in California during this period, many of them in search of beaver and sea otter pelts

Types of Cultural Resources

- ❑ Prehistoric and historical archaeological sites and artifacts
- ❑ Architectural resources (historic buildings, structures)
- ❑ Places of traditional or cultural importance (Native American plant gathering and spiritual places)
- ❑ Graves (marked or unmarked)



Types of Paleontological Resources

Body Fossils

Hard skeletal parts of animal



Trace Fossils

Biological activity left behind by an animal



Tribal Cultural Construction Monitoring

- ❖ Ground disturbing activities at West Circle is within 500 feet of a current or historic creek channel, Shephard Creek
- ❖ Confederated Villages of Lisjan Nation (CVLN) Tribal monitor(s) are retained to monitor all ground disturbing construction activity at the West Circle location
- ❖ The monitor will have the authority to halt work activity(ies) temporarily within 100 feet of a find.



Procedures for Unanticipated Discoveries

- Stop work within 100 feet of the discovery, or as approved by the PG&E CRS
- Immediately notify PG&E CRS
- Do not touch or disturb
- Do not disclose the location to the public
- Resume construction only after PG&E CRS has given authorization



Procedures for Unanticipated Discovery of Human Remains

- If human remains, or suspected human remains are discovered, stop work within 100 feet of the discovery
- Immediately contact the PG&E CRS

- Under Section 21083.2 of CEQA, an important archaeological or historical resource is an object, artifact, structure, or site that is listed on, or eligible for listing on, the California Register of Historical Resources.
- CEQA includes in its definition of historical resources, “any object [or] site ...that has yielded or may be likely to yield information important in prehistory” (California Code of Regulations, Title 14, § 15064.5[3]), which is typically interpreted as including fossil materials and other paleontological resources.
- Assembly Bill 52 established that Tribal Cultural Resources must be considered under CEQA and also provided for additional Native American consultation requirements for the lead agency.
- California Public Resources Code includes additional state level requirements for the assessment and management of paleontological resources.

- ☐ Licenses and permits revoked
- ☐ Costly project delays
- ☐ Fines (both company and individual)
- ☐ Litigation
- ☐ Loss of trust



Air Quality and Dust Control (AMP AIR-1, AIR-2, AIR-3, GHG-1)



General Requirements

1. Limit vehicle and equipment idling time to a maximum of five minutes
2. Carpool to the site whenever possible
3. Limit the area of earth-disturbing activities occurring at any one time to limit fugitive dust
4. Secure and manage any spoil stockpiles



Minimize Greenhouse Gas Emissions (APM GHG-1)

- Apply a “common sense” approach to vehicle use so that idling is reduced as far as possible below the maximum of 5 consecutive minutes allowed by CA law
- If a vehicle is not required for immediate or continuous use, its engine will be shut off
- Discuss vehicle use in tailgate meetings
- Maintain construction equipment in proper working conditions

1. Water all exposed soil surfaces at least twice daily; or apply a non-toxic soil stabilizer
2. Adhere to 15 MPH speed limit on unpaved roads
3. Sweep streets daily if visible soil material is carried onto adjacent paved roads
4. Ensure truck wheels are free of excessive soil before exiting any construction sites
5. Post a publicly visible sign with contact information for dust complaints
6. Cover all trucks hauling dirt, sand, or loose materials
7. Cover inactive storage piles

Dust Control Continued (APM AIR-1)

- Where project activities are within 1,000 feet of residential areas, the following additional BMPs apply:
 - ❖ Limit simultaneous occurrence of excavation, grading, and ground-disturbing construction activities
 - ❖ Minimize the amount of excavated material or waste materials stored at the site
 - ❖ Stabilize soil where project grading occurred and the area is inactive for at least 14 calendar days.



Hazardous Materials Management

(APMs HAZ-1, HAZ-2, HAZ-3, HAZ-4, HAZ-5, HH-1a)

General Requirements

- Vehicle refueling or maintenance will occur offsite within PG&E or contractor yards
- No overnight parking of mobile equipment within 100 feet of wetlands, culverts, or creeks
- Stationary equipment used or stored within 100 feet of wetlands, culverts, or creeks must be positioned within secondary containment
- Use oil pans under stationary equipment or vehicles



Hazardous Material Procedures



- If soil that is suspected of being contaminated due to odor or unusual coloration is encountered during excavation activities, it will be segregated and tested
- Stop work if suspected hazardous substances are discovered and follow the **Soil Management Plan**
- If underground or aboveground storage tanks are found along the route, they will be removed prior to installation of new facilities

Spill Prevention and Handling

- Hazardous substance control and spill prevention
 - Avoid overtopping construction equipment fuel gas tanks
 - Use tarps and absorbent pads under vehicles when refueling to contain any spilled fuel
 - During routine maintenance of construction equipment, properly contain and remove grease and oils
- Handling, storage, and disposal
 - Collect hazardous materials in project-specific containers and transport to PG&E consolidation site

- Materials (oil-absorbent material, tarps, and storage drums) will be on site during construction to contain, collect, and dispose of any minor spill
- Contain the spill to minimize potential for it to enter a storm drain
- Direct excess water and liquid concrete to a lined, bermed area, where the concrete can dry
- Notify Construction Lead, Project Manager, and PG&E

Waste Characterization

- Soil and groundwater sampling will not occur prior to construction, as no hazardous materials are anticipated at the NTP 1 locations
- If hazardous materials are encountered, call the EFS
- If encountered, sampling will occur and appropriate handling, transportation, and disposal locations will be determined based on results of analyses





Notification Requirements

- ❑ PG&E Construction Supervisor to notify local Environmental Field Specialist and CPUC Environmental Monitor
- ❑ Report verbally immediately with written follow up no later than one work day after incident
- ❑ Immediate notification is necessary for any hazardous material spill that reaches a waterway or drainage system that could eventually flow to a waterway



Noise Management

(MM N-1a, APMs NOI-2, -3, -4, -7)

General Requirements

- Quiet equipment will be used during construction whenever possible
- Compressors and other small stationary equipment will be shielded with portable barriers if located within 200 feet of a residence
- Implement construction noise reduction measures
 - Equipment exhaust stacks and vents will be directed away from noise-sensitive uses where feasible



Traffic Management

APM TRA-1, TRA-2, MM T-1A

- ❖ Follow standard safety practices
- ❖ Follow conditions in obstruction permit from the City of Oakland
- ❖ Obstruction permit does not allow lane closure, road closures, restricted emergency vehicle access, or restricted access to residences





Fire Prevention and Suppression (APM WFR-1, WFR-2)

Fire Suppression (APM WFR-2)

- Equip vehicles with water, shovels, and fire extinguishers per PG&E contract
- Adhere to the requirements in the **Fire Prevention Plan** for the project



- The NTP 1 locations are within high Fire Hazard Severity Zones (FHSZs)
- Within Zone 530 of PG&E's Fire Index Area
- Smoking is not permitted at the project site
- Keep access roads and entry/exit pathways clear
- Do not park on or over dry vegetation
- All trucks and equipment will be equipped with approved spark arrestors



Hazards, Hazardous Materials, and Public Safety

(APM HAZ-1, HAZ-2, HAZ-3, HAZ-4, HAZ-5, MM HH-1a)



Hazards, Hazardous Materials, and Public Safety

- PG&E will implement construction controls, training, and communication to minimize the potential exposure of the public and site workers to potential hazardous materials
- Materials will be available on the project site during construction to contain, collect, and dispose of any minor spill
- All authorized personnel working on site, during either construction or operations and maintenance, will be trained according to PG&E standards
- The public will be excluded from all work locations
- Follow your organization's Health and Safety Plan for exposure to Hazardous Materials



Cleanup and Restoration



Cleanup and Restoration

1. All project measures apply during cleanup
2. Stabilize the work area until the mobilization of the next activity
3. Follow the measures specified in the MMCRP

Material Removal and Disposal

- Dispose of materials unsuitable for backfill in accordance with all regulations
- Haul excess excavated material and debris off-site to an approved disposal facility
- Remove all temporary erosion control structures no longer needed
- Always maintain a trash free work site



Community Relations



Public Notifications

PG&E Regulatory and Permit Specialist:

- Coordinates the preparation of public notification packages
- Distributes written notices at least one month before construction activity in the area
- Maintains the project's public hotline
- Leads communication with the public



If Approached by Landowners...

1. Listen politely
2. Thank them for their input
3. Provide them with the toll-free project telephone number
4. Inform them that you will convey their concerns to the PG&E public liaison

Respect Landowners

- Respect private property and landowners
- Do not stage personal belongings, construction materials, vehicles or equipment on adjacent private property
- Maintain vehicle and emergency access at all times
- Minimize noise and dust
- Minimize vehicle idling
- Always remove trash from work areas
- Direct inquiries to PG&E or your supervisor to get a resident or the public the information that they need



Closing Remarks/Wrap Up