

CALIFORNIA PUBLIC  
UTILITIES COMMISSION  
**SALT CREEK  
SUBSTATION PROJECT**

Post-Construction  
Monitoring Report

APRIL 2017



**PANORAMA**  
ENVIRONMENTAL, INC.

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COMMISSION  
**SALT CREEK SUBSTATION PROJECT**  
Post-Construction Monitoring Report

**APRIL 2017**

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### ABBREVIATIONS AND ACRONYMS

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APM	applicant proposed measure
BMP	best management practice
CDFW	California Department of Fish and Wildlife
CPUC	California Public Utilities Commission
CRMMP	Cultural Resources Mitigation Monitoring Plan
EIR	Environmental Impact Report
ESA	Endangered Species Act
HPTP	Historic Properties Treatment Plan
HSMER Plan	Hazardous Substance Management and Emergency Response Plan
MM	mitigation measure
MMCRP	Mitigation Monitoring, Compliance, and Reporting Program
MPR	Minor Project Refinement
NCCP	Natural Community Conservation Plan
NPDES	National Pollutant Discharge Elimination System
NTP	Notice to Proceed
Panorama Project	Panorama Environmental, Inc. Salt Creek Substation Project
RWQCB	Regional Water Quality Control Board
SDG&E	San Diego Gas and Electric
SMARTS	Storm Water Multiple Application and Report Tracking System
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

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## EXECUTIVE SUMMARY

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### OVERVIEW

Construction of the Salt Creek Substation Project (project) began on July 18, 2016, and the site development phase of the project was completed on April 5, 2017. The project is now in the below-grade phase. Applicant proposed measures (APMs) and mitigation measures (MMs) identified in the Environmental Impact Report (EIR) for the project, as well as permit conditions, were implemented prior to and during construction.

Panorama Environmental, Inc. (Panorama) prepared this Post-Construction Monitoring Report to fulfill the reporting requirement described in the Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) for this project. This Post-Construct Monitoring Report contains a summary of all monitoring activities that occurred prior to and during construction, summary of issues and resolutions, discussion of project outcomes and lessons learned for future projects, and a status update for all project requirements (Appendix A and requirement tracking tables) with a summary of any remaining tasks that must be completed. The purpose of this report is to describe San Diego Gas and Electric's (SDG&E's) compliance with environmental requirements for the project (i.e., APMs and MMs), and to present an analysis of data collected by Panorama throughout the construction monitoring phase. This report addresses compliance with all requirements applicable to the pre-construction and construction phases. This report has been prepared prior to SDG&E's completion of post-construction requirements, due to the long-term monitoring and reporting required for these components (i.e., 5 years for revegetation).

A summary of remaining tasks and responsibilities for SDG&E, Panorama, and the California Public Utilities Commission (CPUC); lessons learned; and recommendations for future projects are presented in Section 6 Conclusions and Recommendations.

# 1 INTRODUCTION

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## 1.1 PROJECT SUMMARY

SDG&E filed an application with the CPUC on September 25, 2013 (Application Number A.13-09-014) for a Permit to Construct the project. The SDG&E application and Proponent's Environmental Assessment were deemed complete by the CPUC on May 19, 2014. The CPUC prepared an EIR for the project pursuant to the California Environmental Quality Act. The CPUC adopted the final EIR and approved the project on May 12, 2016 (Decision 16-05-005).

The EIR included APMs and MMs to reduce all project impacts on the environment, other than Aesthetics, Noise, and Recreation resources, to less-than-significant levels. All significant and unavoidable impacts from the project would be limited to the period during and up to 5 years following construction of the project. Noise impacts would last approximately 18 months. Aesthetic and Recreation impacts would be reduced to less-than-significant levels within a period of 5 years as vegetation matures and provides visual screening of the facility. The EIR also included procedures for preparing and implementing a MMCRP to guide SDG&E and CPUC individuals to implement APMs and MMs, as well as permit requirements. The key components of the MMCRP describe protocols for responsible personnel to verify, document, and report implementation of APMs and MMs prior to, during, and following construction.

Construction of the project began on July 18, 2016, and the site development phase was completed on April 5, 2017. The remaining construction activities will occur within the developed and walled substation pad with the exception of revegetation activities, which will be completed in the Fall of 2017.

## 1.2 PURPOSE

The purpose of this report is to fulfill the final reporting requirement described in the MMCRP (Section 2.5.8 Reporting), which requires that a mitigation monitoring summary report documenting project compliance with APMs and MMs be prepared following construction. This report summarizes implementation of project APMs and MMs, the success of the overall monitoring effort, and the status of APM and MM compliance.

## 2 IMPLEMENTATION SCHEDULE

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### 2.1 PRE-CONSTRUCTION

The CPUC and leads from the SDG&E environmental compliance team developed the MMCRP prior to construction, and discussed expectations regarding APM and MM implementation. The SDG&E compliance team completed pre-construction requirements described in Section 3.1 of this document, and the CPUC monitoring team verified that they were implemented adequately. Pre-construction site development (e.g., mobilization of equipment; clearing of vegetation; conducting earthwork; staking; installation of perimeter fencing, silt fencing, and BMPs; and developing site surfaces) began on July 18, 2016.

Figure 2.1-1 and Figure 2.1-2 are overviews of the project site photographed on June 21, 2016.

**Figure 2.1-1 Southwesterly View of the Project Site**



## 2 IMPLEMENTATION SCHEDULE

Figure 2.1-2 Westerly View of the Project Site



### 2.2 CONSTRUCTION

Construction started on July 18, 2016 and is anticipated to end in January 2018. Total duration of construction is estimated to last 18 months, including periods of inactivity. Construction delays occurred due to two 30-minute construction safety stand-downs and rain (i.e., for the vault work on Hunte Parkway, Access Road A, Minor Project Refinement [MPR] #7, and substation work). Figure 2.2-1 shows the grading of the substation pad site on September 23, 2016. Figure 2.2-2 and Figure 2.2-3 show site development progress on October 7, 2016 and November 4, 2016, respectively.

APMs and MMs applicable to construction were implemented during all work periods. SDG&E Environmental Inspectors and CPUC Environmental Monitors were present during construction and verified that APMs and MMs were appropriately implemented. Applicable APMs and MMs were also implemented during periods of construction inactivity, such as the erosion control best management practices (BMPs). MMCRP approval, communication, reporting, and MPR procedures were implemented throughout construction. These procedures are described in Chapters 3, 4, and 5.

## 2 IMPLEMENTATION SCHEDULE

Figure 2.2-1 Grading of Substation Pad Site



Figure 2.2-2 Site Development (October 7, 2016)



## 2 IMPLEMENTATION SCHEDULE

Figure 2.2-3 Site Development (November 4, 2016)



### 2.3 POST-CONSTRUCTION

Several APMs and MMs require post-construction restoration, revegetation, and/or monitoring of work areas that were disturbed during construction. Revegetation of the site is planned for the Fall of 2017. Special-status plant surveys in potential enhancement areas are planned for the Spring of 2017 and special-status plant translocation will occur in the Fall of 2017. Monitoring of revegetation and special-status plant enhancement activities is required for a period of 5 years.

### 3 COMPLIANCE VERIFICATION AND MONITORING

Procedures for the review, authorizations, and reporting by CPUC are described in the MMCRP. This section describes how those procedures were implemented over the course of the project.

#### 3.1 PRE-CONSTRUCTION REQUIREMENTS

The SDG&E compliance team was required to complete a variety of pre-construction requirements identified in the MMCRP. Pre-construction requirements primarily consisted of submitting and obtaining CPUC approval for project plans, acquiring applicable jurisdictional agency permits and approvals, and conducting pre-construction surveys for sensitive plant and animal species.

##### 3.1.1 Notices to Proceed

The CPUC monitoring team verified that all pre-construction requirements were met through the Notice to Proceed (NTP) process described in the MMCRP. SDG&E submitted one NTP request for construction of the project. The CPUC issued the NTP authorization on June 21, 2016 with conditions of approval. The NTP request and approval letter are included in Appendix B.

##### 3.1.2 Plans and Programs

Plans and programs were developed for the project to address implementation of both general and specific mitigation identified in APMs and MMs. The plans and programs consisted of documents that identified applicable APMs and MMs and served as an implementation guide for project personnel to ensure compliance. Table 3.1-1 lists construction and mitigation plans prepared for the project. Plans were updated as needed during construction.

**Table 3.1-1 Plans and Programs**

Plan Name	Requirement Sources	Submittal and Review Details
MMCRP	State General Order No. 131-D	The MMCRP was published in May 2016.
Burrowing Owl Monitoring and Mitigation Plan	APM BIO-1	The final CDFW-approved Plan dated September 2014 was published with the Draft EIR. The Plan was implemented beginning January 2016.
Dust Control Management Plan	MM Air-1	Plan was approved by CPUC on 5/23/2016.

## 4 MINOR PROJECT REFINEMENTS

Plan Name	Requirement Sources	Submittal and Review Details
Landscape and Irrigation Plan and Temporary Impact Restoration Plan	MM Aesthetics-1	Plan was submitted to CPUC on 5/11/16, 1/30/17, and 2/23/17. Plan was approved on 3/02/17.
Cultural Resources Mitigation Monitoring Plan (CRMMP)	APM CUL-1 APM CUL-7 MM Cultural Resources-2 <sup>1</sup> MM Cultural Resources-3 MM Cultural Resources-4	Plan was submitted to CPUC on 2/12/16, 3/09/16, and 4/22/16. Plan was approved on 5/23/16.
Hazardous Substance Management and Emergency Response (HSMER) Plan	APM HAZ-1 APM HAZ-2	Plan was submitted to CPUC on 3/08/16, 4/22/16, and 6/03/16. Plan was approved on 6/06/16.
Stormwater Pollution Prevention Plan (SWPPP)	APM HYDRO-1	Plan was submitted to CPUC on 2/12/16, 4/22/16, and 6/03/16. Plan was approved on 6/16/16.
Stormwater Management Plan	APM HYDRO-2	Plan was submitted to CPUC on 4/22/16 and 6/03/16. Plan was approved on 6/16/16.
Transportation Management Plan (including Traffic Control Plans associated with encroachment permits)	MM Traffic-3	Plan was submitted to CPUC on 3/08/16 and 4/22/16. Plan was approved by CPUC on 5/16/2016.
Facilities Color Treatment Plan and Surface Treatment Plan	MM Aesthetics-2	Plan was submitted to CPUC on 2/12/16 and 6/03/16. Plan was approved on 6/16/16.
Habitat Enhancement Plan for Vegetation Communities	MM Biology-1b	N/A. SDG&E submitted evidence of available habitat mitigation lands to CPUC on 1/29/16.
Salvage and Relocation Plan for Special-Status Plants	MM Biology-2	Plan was submitted to CPUC on 2/12/16 6/30, and 9/29/16. CPUC approved the Plan with conditions on 10/10/16.
Restoration and Enhancement Plan	APM BIO-4 MM Biology-3 MM Biology-11	Plan was submitted to CPUC on 5/17/16, and 6/27/16. Plan was approved by CPUC on 6/30/16.
Spill Prevention, Control, and Countermeasure Plan	APM HAZ-1	Plan was submitted to CPUC on 2/22/17.

<sup>1</sup> MM Cultural Resources-2 requires preparation of a Historic Properties Treatment Plan (HPTP) that would address inadvertent discoveries of cultural resources that could occur at the Salt Creek Substation. A separate HPTP is not required because SDG&E addressed procedures for inadvertent discoveries of cultural resources in the CRMMP required by MM Cultural Resources-2.



## 4 MINOR PROJECT REFINEMENTS

Plan Name	Requirement Sources	Submittal and Review Details
SDG&E Project Fire Plan	APM HAZ-3	Plan dated August 2013 was submitted to CPUC with the PEA on 9/25/2013. Plan was published with the Draft EIR on 5/15/2015.

### 3.1.3 Permits and Approvals

Table 3.1-2 lists permits and approvals for the project. Some permits listed in the EIR and MMCRP were not required after consultation with jurisdictional agencies. Conversely, construction and encroachment permits that were required, but not included in the EIR or MMCRP, have been included in Table 3.1-2. Copies of permits and approval documents for the project are included in Appendix C.

**Table 3.1-2 Permits and Approvals**

Permits and Approvals	Jurisdictional Agency	Purpose	Submittal and Review Details
<b>Federal and State Agencies</b>			
SDG&E Subregional Natural Community Conservation Plan (NCCP)	USFWS, CDFW	Includes a Federal Endangered Species Act (ESA) Section 10(A) permit and a California ESA Section 2081 Memorandum of Understanding for incidental take with an Implementation Agreement with the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), respectively, for the management and conservation of multiple species and their associated habitats.	Completed on 12/15/1995.
Compensatory mitigation for impacts to vegetation communities	USFWS, CDFW	SDG&E Subregional NCCP, Sections 7.2 and 7.4	SDG&E submitted evidence of available habitat mitigation lands for impacts associated with the substation property. For impacts to special-status plants, SDG&E prepared a Salvage and Relocation Plan for Special-Status Plants (refer to Table 3.1-1).
<b>State</b>			
CPUC Permit to Construct	CPUC	<i>State General Order No. 131-D</i> CPUC authorization to construct the project	The Commission approved the project (Alternative 2) on 5/12/16.

## 4 MINOR PROJECT REFINEMENTS

Permits and Approvals	Jurisdictional Agency	Purpose	Submittal and Review Details
National Pollutant Discharge Elimination System (NPDES) Construction General Permit	SWRCB, CPUC	Disturbance of more than 1 acre of land during construction <i>Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ</i>	Submitted to SWRCB and approved on 3/25/16. Waste Discharge Identification number (No. 9 37C375119) was obtained from RWQCB.  SWPPP submitted to CPUC on 2/12/16, 4/22/16, and 6/09/16. CPUC approved the SWPPP on 6/16/16.
General NPDES Permit for Discharges from Utility Vaults & Underground Structures to Surface Waters	SWRCB, CPUC	Discharge of water from utility vaults during operation and maintenance <i>NPDES No. CAG990002; Order No. 2006-0008-DWQ</i>	Waste Discharge Identification number (No. 9 37C375119) was obtained from RWQCB on 3/25/16.
<b>Local Agencies</b>			
Grading/Driveway Permits	City of Chula Vista, CPUC	Proposed grading at the Salt Creek Substation and sidewalk alterations; TL 6965 undergrounding	Submitted to CPUC on 3/15/16 and approved on 5/15/16.
Recycled Water Application	Otay Water District (OWD), San Diego County, Department of Environmental Health, CPUC	Use of recycled water in San Diego County	Temporary permit for construction water was received on 6/07/16.  Recycled water permit for landscape irrigation will be obtained prior to installation of irrigation lines in Fall of 2017.

## 3.2 ON-SITE MONITORING

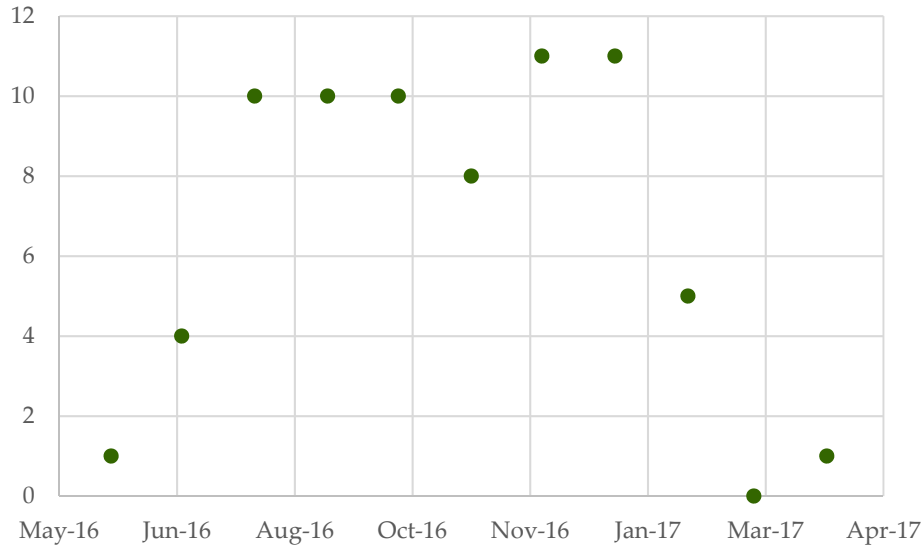
### 3.2.1 Construction Monitoring

SDG&E Environmental Inspectors monitored construction activities on site from July 18, 2016 to the present, and CPUC Environmental Monitors monitored construction activities on site from July 18, 2016 to April 3, 2017. One or more SDG&E Environmental Inspectors monitored construction each day and performed pre-construction and ongoing biological clearances as required by APMs and MMs. SDG&E specialty monitors (e.g., cultural, paleontological, and SWPPP) were present as needed and required by applicable APMs and MMs.

## 4 MINOR PROJECT REFINEMENTS

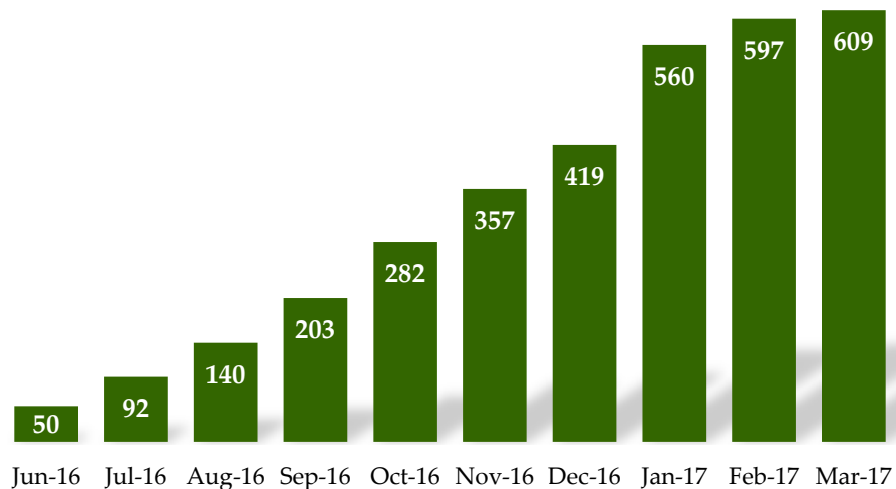
CPUC Environmental Monitors conducted semiweekly site inspections during periods of moderate to high construction activity, and weekly during periods of low construction activity (Figure 3.2-1 below). CPUC Environmental Monitors visited the site a total of 71 times immediately prior to and during construction.

**Figure 3.2-1 CPUC Site Visits During Construction**



Monitoring details were captured in daily compliance and inspection reports prepared by both the SDG&E compliance team and CPUC monitoring team. Reported incidents are summarized in Section 5. Copies of the daily reports and training attendance sheets are attached to the CPUC Monitoring Summary Reports for the applicable reporting period in Appendix D. A total of 609 staff were trained between June 2016 and March 2017 (Figure 3.2-2).

**Figure 3.2-2 Total Personnel Trained by Month**



## 4 MINOR PROJECT REFINEMENTS

### 3.2.2 Post-Construction Monitoring

SDG&E is currently working on construction of the substation within the finished substation pad and wall. On-going construction activities include installation of the ground grid, installation of transformers and construction of buildings, and future energization and testing of the facility. CPUC monitoring is not required for work conducted within the substation pad, or energization and testing.

In the Fall of 2017, SDG&E will install landscaping and irrigation on the substation slopes. SDG&E will monitor the landscape and irrigation installation as required by the MMCRP. Monitoring will be conducted once by the CPUC monitoring team after the landscaping installation is complete to verify that environmental procedures were followed and landscaping is properly implemented. Reporting

Reporting procedures are described in the MMCRP. The purpose of reporting was to document compliance by field inspections conducted for the project during construction. Specific reports described in the MMCRP or project permits are described below.

### 3.2.3 SDG&E Reporting

#### SDG&E Daily Compliance Reports

SDG&E Environmental Inspectors and specialty monitors prepared daily compliance or inspection reports for each day monitoring took place, such as construction monitoring or pre-construction clearances. The daily reports captured construction, compliance, and monitoring activities. Multiple daily reports were generated as needed when more than one SDG&E monitor was on site performing independent monitoring. Daily reports were submitted to CPUC as attachments to the weekly reports; however, the SDG&E Weekly Compliance Reports that summarize all the daily reports for the period were the primary source of compliance documentation for the project.

#### SDG&E Weekly Compliance Reports

The SDG&E Compliance Team summarized daily reports each week into a weekly summary report that highlighted construction and compliance activities, and any compliance issues or public complaints. The weekly reports were submitted to the CPUC throughout the construction period, including periods of construction inactivity. SDG&E's weekly compliance reports are included as attachments to the CPUC Monitoring Summary Reports located in Appendix D. SDG&E submitted a total of 38 weekly compliance reports during the site development phase of construction. Reports were submitted each week of construction from July 2016 to April 2017. SDG&E will continue to submit weekly reports until construction is completed in 2018.

#### SWPPP Reports

CWE, a civil engineering firm, prepared SWPPP inspection and annual reports as required by the General Construction Permit with the State Water Resources Control Board. SWPPP reports are available on the Storm Water Multiple Application and Report Tracking System (SMARTS) website (Waste Discharge Identification # 9 37C375119). SWPPP monitoring and reporting will

## 4 MINOR PROJECT REFINEMENTS

continue until a Notice of Termination is submitted by SDG&E through the SMARTS website when areas of temporary disturbance have achieved at least 70 percent vegetative cover.

### 3.2.4 CPUC Reporting

#### CPUC Monitoring Inspection Reports

CPUC Environmental Monitors prepared daily monitoring inspection reports for each site visit. Inspection reports captured observational summaries for construction and compliance activities, and included photographs of inspected areas. Any issues with compliance were documented and reported to the SDG&E Compliance Team as described in the MMCRP. CPUC Monitoring Inspection Reports are included as attachments to the CPUC Monitoring Summary Reports located in Appendix D. A total of 70 Monitoring Inspection Reports were prepared and submitted to the CPUC in Monthly Reports during construction.

#### CPUC Monthly Monitoring Summary Reports

Panorama submitted Monthly Mitigation Monitoring Summary Reports (Monthly Reports) to the CPUC Project Manager throughout construction activities. The Monthly Reports summarized construction, compliance, and monitoring activities. In addition, the Monthly Reports provided a record of project requests and approvals described in the MMCRP. A Total of 10 Monthly Reports were submitted to the CPUC during construction.

#### CPUC Final Monitoring Report

This report satisfies Panorama's requirement to prepare a Post-Construction Monitoring Report as described in the MMCRP. The need for a Final Report to document compliance with post-construction requirements (i.e., revegetation) will be determined by the CPUC in the future.

## 3.3 SDG&E PROPOSED MEASURES AND MITIGATION MEASURE VERIFICATION TABLE

Tables listing the verification status of all APMs and MMs from the EIR are located in Appendix A. The verification status and a brief summary of verification details are listed in each table, as well as any issues that were encountered, which are also described in Section 5. All pre-construction and construction period requirements have been completed. Remaining post-construction monitoring and reporting requirements are identified in this section and the tables in Appendix A. Compliance documentation, such as memorandums, surveys, notices, and letters are included in Appendix E.

## 4 MINOR PROJECT REFINEMENTS

### 4 MINOR PROJECT REFINEMENTS

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The MMCRP describes procedures to address MPRs that deviate from the final EIR Project Description. MPRs were requested and processed prior to and during construction as needed in order to construct the project, and ensure that no additional significant impacts to the environment occurred.

#### 4.1 MINOR PROJECT REFINEMENTS

Table 4.1-1 lists MPRs processed for the project. MPR authorizations are included in Appendix B. Figure 4.1-1 provides a summary of processed MPRs and the type of modification that was required. Work area modification and erosion control accounted for the majority of the project changes requested by SDG&E. These types of changes are typical during construction.

**Table 4.1-1 Minor Project Refinements**

Request Number	Date Requested	Date Processed	Location	Description	Type
1	7/12/2016	7/15/2016	Northwest corner of SDG&E property, adjacent to Hunte Parkway	Increase the previously identified limits of disturbance in the northwest corner of SDG&E's property by 0.55 acres	Work Area
2	9/2/2016	9/6/2016	East portion of SDG&E property within transmission corridor	Increase the limits of disturbance in the east substation work area by 0.13 acres to allow for additional parking	Work Area
3	8/23/2016	8/25/2016	East portion of SDG&E property within transmission corridor	Increase the limits of disturbance by 0.01 acre in the east portion of property within SDG&E transmission corridor	Work Area
4 <sup>2</sup>	10/21/2016	N/A	Along and within the substation driveway to Hunte Parkway	Add a fourth distribution circuit to the previously proposed circuits to avoid overloading one of the approved circuits	N/A

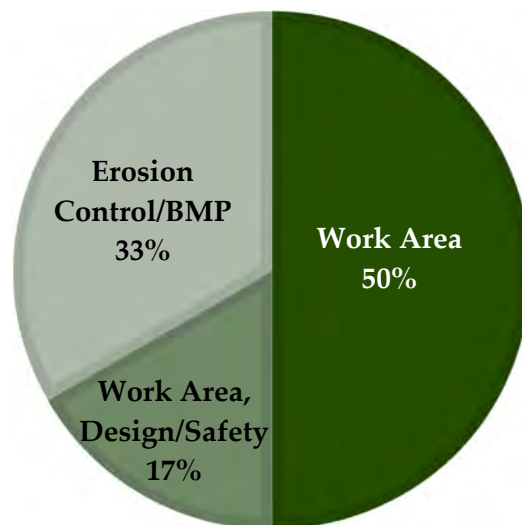
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<sup>2</sup> The actions proposed in MPR #4 were included in the CPUC-approved Final EIR and did not constitute a project refinement.

## 4 MINOR PROJECT REFINEMENTS

Request Number	Date Requested	Date Processed	Location	Description	Type
5	10/20/2016	10/21/2016	On and adjacent to Hunte Parkway	Modify the approved MPR 1 by changing the fire service lateral line location approximately 100 feet northeast of the proposed location to improve structural stability of the line	Work Area; Design/Safety; Water Service
6	12/15/2016	12/15/2016	Between the project limit fence and the Transmission Corridor Road	Place 5 tons of 6-inch rock in a rill formed above the catch basin as an emergency erosion control Best Management Practice	Erosion Control; BMP
7	1/13/2017	1/17/2017	Above the catch basin and between the upper and lower transmission corridor roads	Construct a 50-foot concrete section of the lower transmission corridor road with attached brow ditch and 25-foot concrete spillway above the catch basin, and place 5 tons of 6-inch rock in the rill between the upper and lower transmission corridor roads to reduce stormwater velocity and minimize soil erosion	Erosion Control; Drainage System; BMP

Figure 4.1-1 Summary of Minor Project Refinements by Type



## 5 COMPLIANCE LEVEL EVENTS

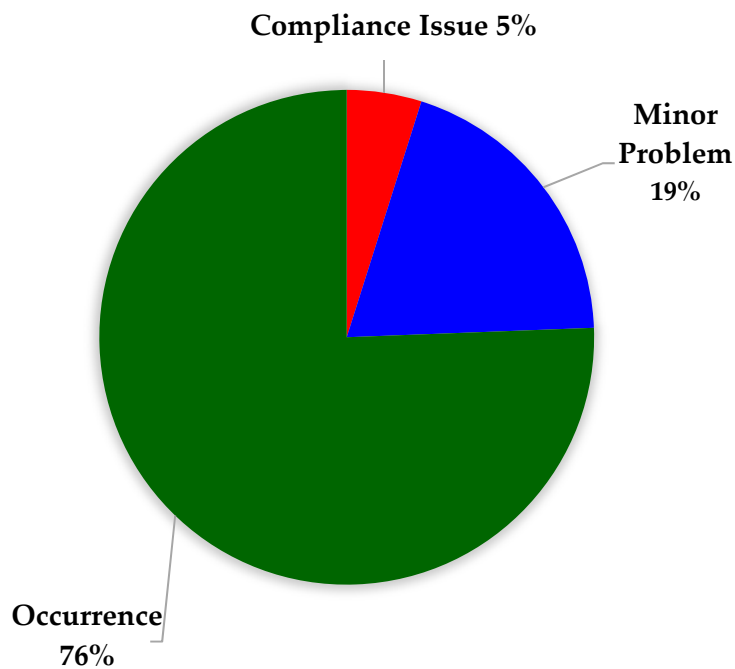
### 5.1 COMPLIANCE LEVEL EVENTS REPORTED

Compliance issues and violations were documented throughout construction using a hierarchy of terms representing levels of severity. Compliance was documented using four terms described in the MMCRP. SDG&E reports categorized small oil leaks as Occurrences, whereas CPUC reports did not include them. Compliance level and the total events documented are summarized in Table 5.1-1 and Figure 5.1-1.

**Table 5.1-1 Summary of Compliance Level Events (“Incidents”)**

Compliance Level	CPUC Total	SDG&E Total
Occurrence	8	30
Minor Problem	3	8
Compliance Issue	1	1
Noncompliance	0	0
<b>CPUC Total</b>	<b>12</b>	<b>39</b>

**Figure 5.1-1 Summary of All Compliance Level Issues**





## 6 CONCLUSIONS AND RECOMMENDATIONS

The date and summary for Minor Problem and Compliance Issue events are provided in Table 5.1-2. A complete description of each compliance level issue can be found in the CPUC Monitoring Summary Report for the associated reporting period.

**Table 5.1-2 Record of Minor Problem and Compliance Issue Events (“Incidents”)**

#	Date	Compliance Level	Observing Party	Topic/Requirements
1	8/20/2016	Minor Problem	CPUC Monitoring Team, SDG&E Compliance Team	Native American Monitor Not On-site (MM Cultural Resources-4)
2	8/26/2016	Compliance Issue	CPUC Monitoring Team	Vehicle Outside Workspace Limits (MM Biology-1a, MM Biology-2, MM Traffic-3)
3	10/7/2016	Minor Problem	CPUC Monitoring Team, SDG&E Compliance Team	Idling Vehicle (MM Noise-2)
4	10/12/2016	Minor Problem	SDG&E Compliance Team	Vehicle Driving Off Access Road (MM Biology-1a, MM Biology-2,)
5	10/28/2016	Minor Problem	CPUC Monitoring Team, SDG&E Compliance Team	Uncovered Transport of Soil (Dust Control Plan)
6	12/12/2016	Minor Problem	SDG&E Compliance Team	On-site water spill (APM HYDRO-1)
7	1/9/2017	Minor Problem	SDG&E Compliance Team	Vehicle Driving Off Access Road (MM Biology-1a)
8	1/18/2017	Minor Problem	SDG&E Compliance Team	Vehicle Driving Off Access Road (MM Biology-1a)
9	1/25/2017	Minor Problem	SDG&E Compliance Team	Vehicle Driving Off Access Road (MM Biology-1a)
10	3/8/2017	Compliance Issue	SDG&E Compliance Team	VOC Emission Nonconformance (APM AIR-3)

Figure 5.1-2 summarizes the monthly frequency of CPUC site visits and total incidents recorded by CPUC and SDG&E.

## 6 CONCLUSIONS AND RECOMMENDATIONS

**Figure 5.1-2 Frequency of Recorded Incidents and CPUC Site Visits**

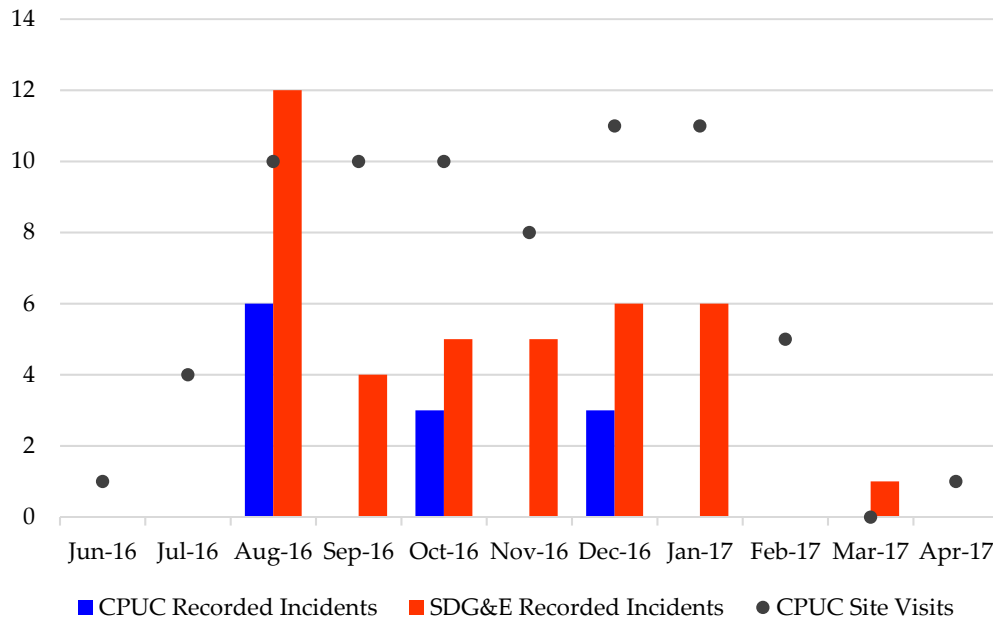
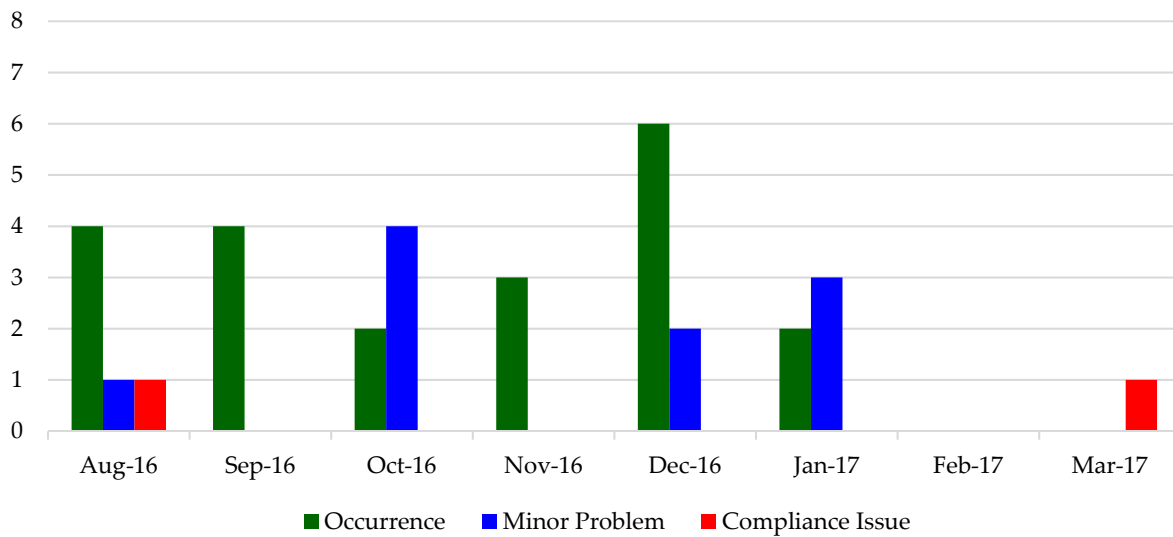


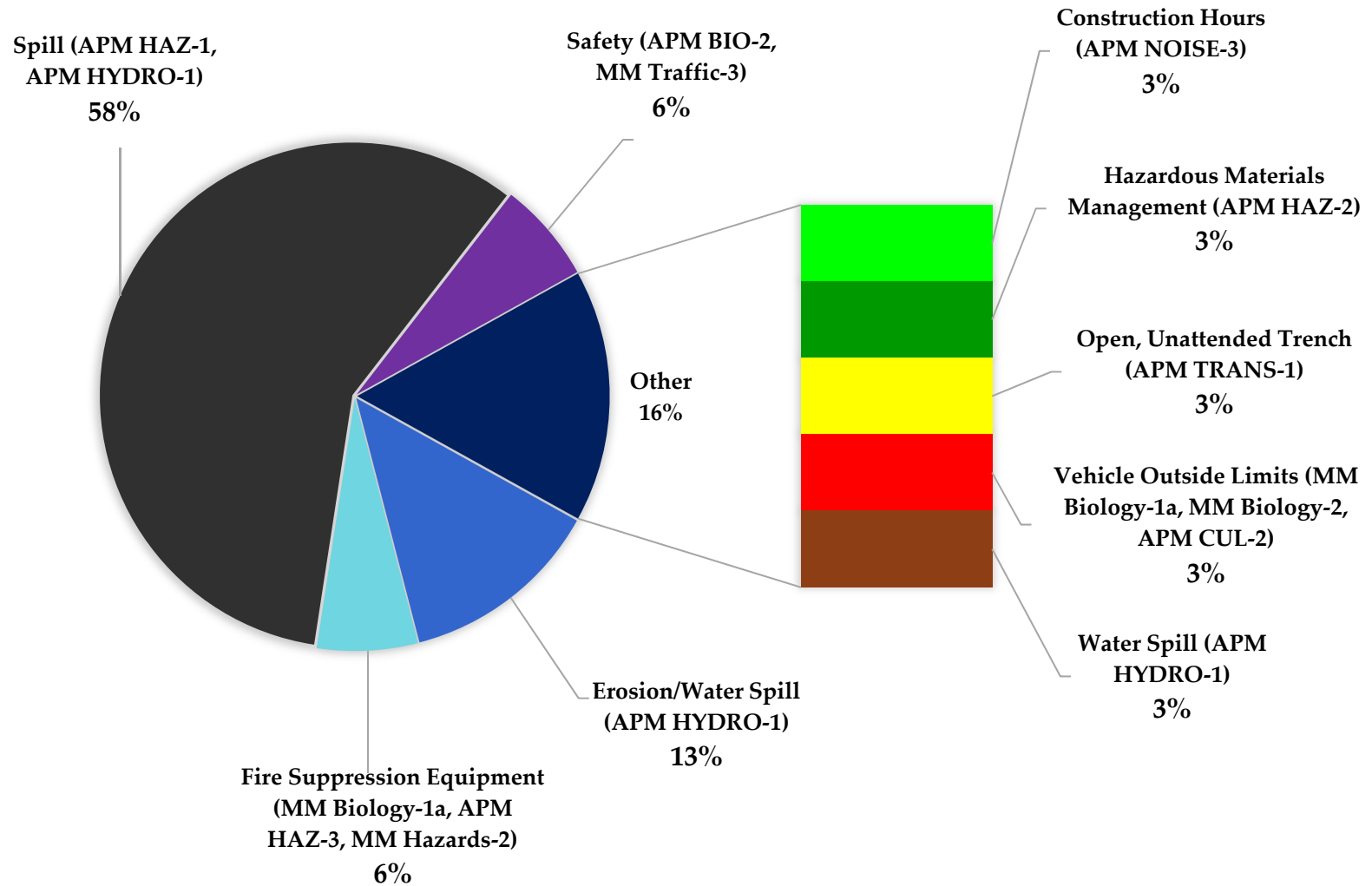
Figure 5.1-3 illustrates the total frequency of recorded compliance level issues during construction by month. The total incidents tended to follow the level of construction activity.

**Figure 5.1-3 Documented Compliance Level Frequency by Month**



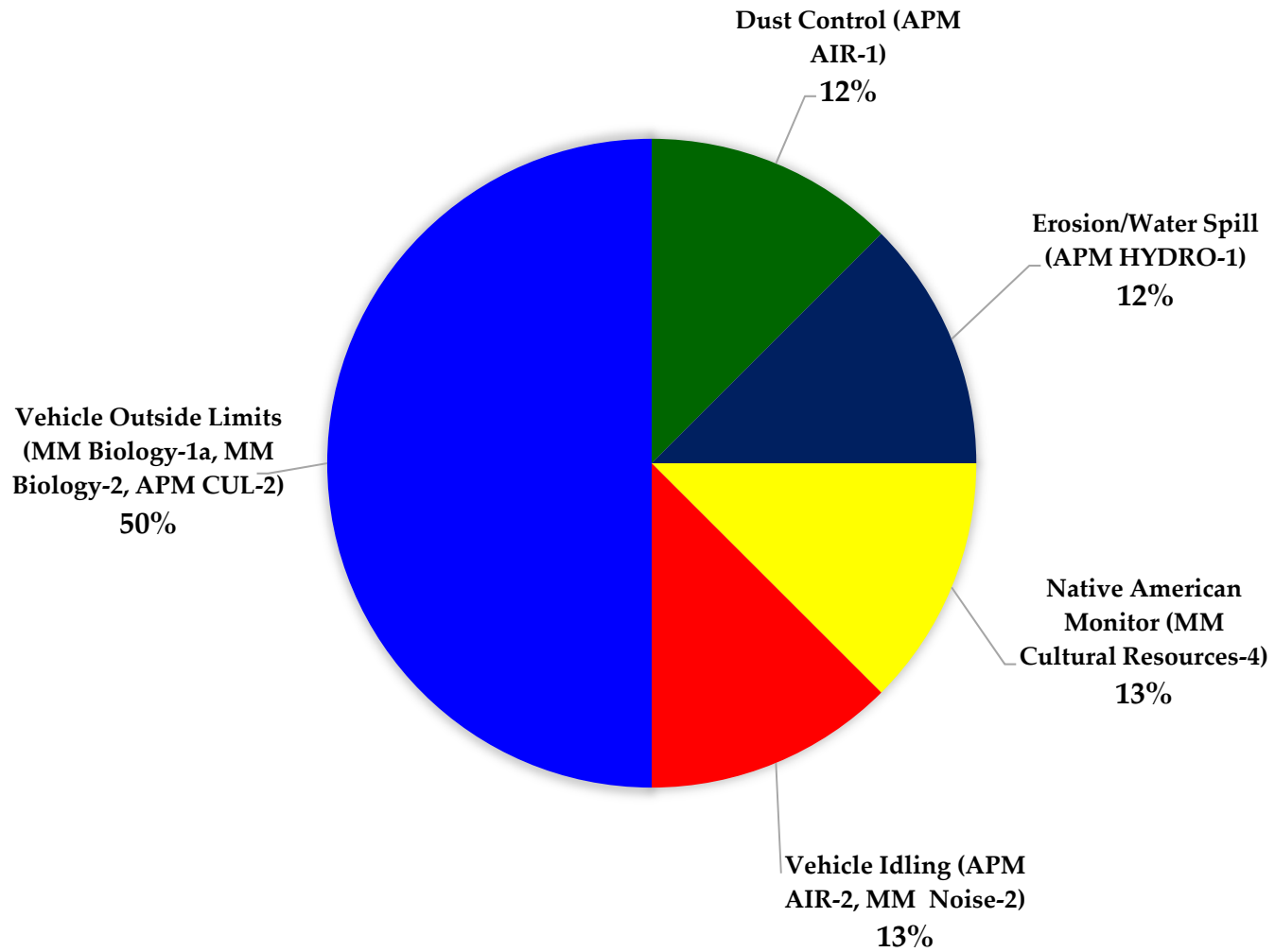
## 6 CONCLUSIONS AND RECOMMENDATIONS

Figure 5.1-4 Summary of Occurrence Level Issues by Type



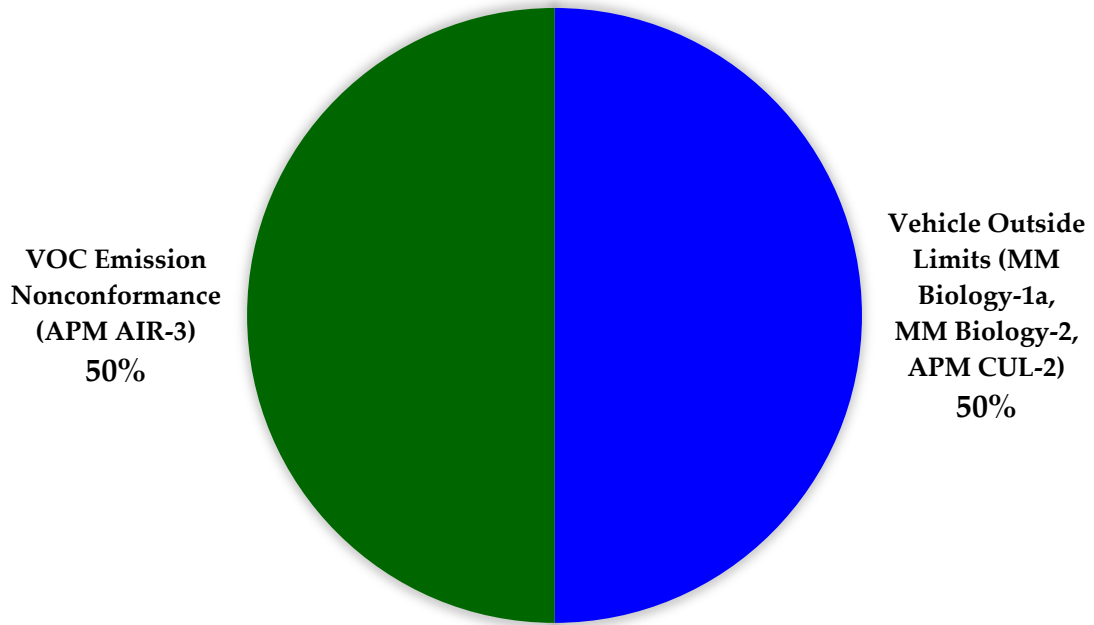
## 6 CONCLUSIONS AND RECOMMENDATIONS

Figure 5.1-5 Summary of Minor Problem Level Issues by Type



## 6 CONCLUSIONS AND RECOMMENDATIONS

Figure 5.1-6 Summary of Compliance Issue Level Issues by Type



# 6 CONCLUSIONS AND RECOMMENDATIONS

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## 6.1 CONCLUSIONS

Construction of the project began on July 18, 2016, and is anticipated to be complete after approximately 18 months of construction. Figure 6.1-1 shows the conclusion of site development as of April 3, 2017. The project is now in the below-grade phase. Environmental protection measures, including APMs and MMs identified in the project EIR, as well as permit conditions, were implemented adequately prior to, during, and immediately following construction. Some issues were encountered during implementation; however, the issues were corrected and did not result in significant impacts to the environment. Remaining requirements for SDG&E, Panorama, and CPUC, as well as lessons learned and recommendations for future projects are identified in the following sections. Implementation of the MMCRP was successful, and significant impacts to the environment were avoided.

**Figure 6.1-1 Conclusion of Site Development Phase**



## 6 CONCLUSIONS AND RECOMMENDATIONS

### 6.2 SUMMARY OF REMAINING TASKS AND RESPONSIBILITIES

#### 6.2.1 SDG&E's Responsibilities

SDG&E will continue constructing the substation within the finished substation pad and wall as described in Section 3.2.2. SDG&E will install landscaping and irrigation on the substation slopes in the Fall of 2017, and is responsible for the following tasks:

1. **Planting and Temporary Impact Restoration (MM Aesthetics-1, APM BIO-4, MM Biology-11).** SDG&E is responsible for planting landscape materials per Landscape and Irrigation Plan and Temporary Impact Restoration Plan within 3 months of substation completion. SDG&E is responsible for restoring all areas that are temporarily disturbed by project activities to approximate preconstruction conditions following completion of construction as needed or appropriate. Disturbed areas will be revegetated where appropriate to re-establish a natural-appearing landscape and reduce potential visual contrast with the surrounding landscape. All construction materials and debris will be removed from the project area and recycled or properly disposed of offsite. SDG&E will conduct a final survey after restoration to ensure that clean-up activities are successfully completed as required.
2. **Landscape Maintenance and Monitoring (MM Aesthetics-1).** SDG&E is responsible for ensuring that all disturbed areas at the project site achieve a minimum of 80 percent revegetation success for all container plantings with a tree canopy height of 12 feet or more, as described in the Landscaping and Irrigation Plan. SDG&E will submit landscape monitoring reports to CPUC throughout the duration of monitoring to ensure successful revegetation of the substation slope to partially screen the facility from view within 5 years after construction.
3. **Permanent stabilization BMPs for soil erosion (MM Geology-1, Utility Permit).** SDG&E is responsible for implementing permanent stabilization BMPs to control soil erosion once temporary surface disturbances are completed or removed and within 7 days following final earthwork in the area. Permanent stabilization BMPs may include hydroseeding, planting, and minor regrading. SDG&E Reclamation Specialist shall inspect and monitor BMPs following installation in areas where revegetation has been performed until minimum vegetation cover specified in the Revegetation Plan is established.
4. **Post-Construction Survey and Reporting (APM BIO-2).** SDG&E is responsible for coordinating the biological monitors to perform a survey of the entire project area after construction is complete and determine the actual impacts. The impacts and corresponding compensatory mitigation credit calculations would be included in the Post-Construction Report and NCCP Annual Report and submitted to USFWS and CDFW after construction is complete.
5. **Monitoring of Salvaged and Relocated Special-Status Plants (MM Biology-2).** SDG&E is responsible for a minimum of annual monitoring of salvaged and relocated special-status plant species for 5 years until success criteria are met.

## 6 CONCLUSIONS AND RECOMMENDATIONS

Success criteria include a minimum of 1:1 replacement of the impacted population with 2:1 mitigation for Otay tarplant.

6. **Invasive Weed Monitoring (MM Biology-3).** SDG&E is responsible for monitoring post-construction invasive weed cover relative to the pre-construction invasive weed levels and reporting in the Annual Report for Landscaping and Revegetation.
7. **Preparation of a paleontological summary report (APM CUL-6).** SDG&E is responsible for completing a final summary report of any potential recovery and screen washing of small fossil remains, discussing the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils during and after construction. The report includes an itemized inventory of all collected and catalogued fossil specimens.
8. **SF<sub>6</sub> Management (APM GHG-1).** SDG&E is responsible for implementing SF<sub>6</sub> mitigation strategies during operation and maintenance of SF<sub>6</sub>-containing equipment installed as part of the project.
9. **Post-Project Trail Condition Report (MM Recreation-1).** SDG&E is responsible for submitting a Post-Project Trail Condition Report to CPUC within 90 days of construction completion, documenting the final state of all trails within the project work area and access roads. SDG&E shall complete all trail repairs to CPUC approval.

### 6.2.2 Panorama's Responsibilities

1. **Review monitoring reports.**
  - a. **Revegetation and Restoration Monitoring (MM Aesthetics-1).** Panorama will review landscape monitoring reports annually for 5 years or until the success criteria are met. Panorama will conduct a field investigation at the completion of planting to verify the implementation of the landscaping according to the approved Landscaping and Irrigation Plan.
  - b. **Post-Project Trail Condition Report (MM Recreation-1).** Panorama shall review the Post-Project Trail Condition Report and verify that all trails are repaired by the end of construction.
2. **Verify implementation of measures and compliance with plans.**
  - a. **Restoration, revegetation, clean up, and monitoring (MM Aesthetics-1 and APM BIO-4).** Panorama will verify that all restoration, revegetation, and clean-up activities are successfully completed after construction, and the survey has been completed.
  - b. **Weed control (MM Biology-3).** Panorama must ensure monitoring and control of any weed spread for 2 years after construction.



## 6 CONCLUSIONS AND RECOMMENDATIONS

### 6.2.3 CPUC's Responsibilities

1. **Close the Project.** Once restoration is deemed adequate and no further monitoring is required, CPUC is responsible for closing the project, updating the project website status, and posting any necessary final documentation.

## 6.3 LESSONS LEARNED AND RECOMMENDATIONS FOR FUTURE PROJECTS

Panorama analyzed project compliance and monitoring data, evaluated issues during construction, and tracked lessons learned for the project. As part of the conclusion for this report, recommendations are presented for future projects to improve the CPUC mitigation monitoring process.

### 6.3.1 Compliance Incidents

- **Issue: Vehicles travelling outside of designated access routes.** On three occasions, vehicles drove outside the boundaries of the access roads. On two of the three occasions, the upper transmission access road was made impassable due to rain. Trucks attempting to pass each other on the same road drove off the access road. The third occasion occurred when a truck attempted to turn from one access road to the other, and drove off the road.

**Lessons Learned:** (1) Having a second flagger present at the entrance to the construction site is critical when access is restricted to one access road.

(2) Installing ropes along the edges of the access road prevented a recurrence of the problem.

- **Issue: Vehicles parked on site without the mandatory fire equipment.**  
**Lessons Learned:** The problem was solved by having the flagger at the entrance to the project check each vehicle for the mandatory fire equipment.
- **Incident Reporting: SDG&E resolved and self-reported all incidents.** SDG&E promptly resolved and accurately reported all incidents as they occurred.  
**Lessons Learned.** Establishing a relationship based on mutual respect early in the process encouraged SDG&E to be responsible environmental stewards. We established regular lines of communication and inspected the project early and consistently. We also worked with SDG&E collaboratively to resolve all issues as they arose.

### 6.3.2 Project Design

- **Issue: Insufficient areas in project design allocated for parking and work areas.** Most MPRs were associated with the need for additional areas for work areas and parking.  
**Lessons Learned:** Consider additional areas for parking and access in the project design process.

## 6 CONCLUSIONS AND RECOMMENDATIONS

### 6.3.3 Paleontological Monitoring

- **Issue: Debate regarding whether paleontological monitoring is necessary.**  
**Lessons Learned:** After months of monitoring with no results, a significant paleontological find was made at the project site, justifying the need for paleontological monitoring during all ground disturbance.

### 6.3.4 Communication

The CPUC, SDG&E and their contractors successfully established communication protocols early in the construction phase and held weekly phone calls to resolve all issues as they arose. The clear communication protocol resulted in quick resolution to all issues and avoidance of major issues. Minor erosion control problems were addressed successfully to avoid major erosion or slope failure during periods of record rainfall for the area.