OFFICE OF ENERGY INFRASTRUCTURE SAFETY'S

GEOGRAPHIC INFORMATION SYSTEMS DATA STANDARD

VERSION 2.1
SEPTEMBER 2021

TABLE OF CONTENTS

1. INTRODUCTION

In this document, the Office of Energy Infrastructure Safety (Energy Safety) presents standards, schemas, and guidance on data preparation and submittal and a schedule for submission of Geographic Information Systems (GIS) data to Energy Safety in support of its oversight and enforcement of electrical corporations' compliance with wildfire safety[1]. Considering existing limitations with electrical corporation data capabilities and differing business processes that support the collection, treatment, and storage of GIS data, Energy Safety is employing a phased approach for full implementation of this standard. Therefore, in addition to providing a geodatabase (GDB) file template with this document, Energy Safety has provided an Excel file, titled "Energy Safety GIS Data Schema Status Report." This Excel document is to be used to record the status of data and provide explanations for why some data are currently missing, if any. It contains tables of Energy Safety GIS data schemas, and each table includes additional columns to track data status (see Section 2.6 of this document for more details).

Electrical corporations' standardized GIS data submissions will provide Energy Safety with important asset and risk data that will be used to monitor and evaluate utility safety, wildfire risk reduction, and compliance activities. The GIS data standard described in this document shall apply to the following electrical corporations:

- Bear Valley Electric Service
- Horizon West
- Liberty Utilities
- Pacific Gas and Electric
- PacifiCorp
- San Diego Gas and Electric
- Southern California Edison
- Trans Bay Cable[2]

Energy Safety understands that electrical corporations are at different stages of their data journeys and employ differing business practices, which may impact certain electrical corporations' abilities to fully comply with the requirements in this document. Energy Safety expects to routinely review and refine its GIS data requirements, in executing its mission of reducing risk of catastrophic wildfire ignitions from electrical facilities and equipment through a data-driven approach. As such, Energy Safety's GIS data standard is best viewed as a living document and will continue to evolve as data quality and capabilities grow.

[1] As described in Public Utilities Code 326 and pursuant to Chapter 6 (commencing with Section 8385) of Division 4.1.

[2] Not all electrical corporations will be subject to the same GIS data reporting requirements. Energy Safety will separately issue guidance to Horizon West and Trans Bay Cable detailing the extent of their GIS data submission requirements.

Although Energy Safety is taking a pragmatic approach to phasing the implementation of its GIS data reporting requirements, this does not indicate an acceptance of the status quo nor tolerance for any avoidance or delay tactics. Energy Safety fully expects to push the upper boundaries of current data collection and reporting efforts. Moreover, because consistent, high quality, and standardized data are fundamental to Energy Safety's ability to evaluate and monitor the implementation of electrical corporations' wildfire safety and WMPs effectively, Energy Safety expects electrical corporations' complete and total cooperation and diligent effort to bring their data submissions into full compliance with Energy Safety's requirements as soon as possible. In addition, Energy Safety expects electrical corporations to aggressively enhance and mature their overall data management capabilities as they are elemental to their ability to understand risk, implement wildfire mitigation initiatives, and conduct safe operations.

2. SUBMISSION STANDARDS

2.1 Submission Schedule

GIS data are to be submitted to Energy Safety on a quarterly basis. Starting in 2021, these quarterly data submissions will be aligned with calendar quarters for clarity of reporting and consistency for comparison. In general, following the completion of a calendar quarter, electrical corporations will be provided a calendar month to gather, collect, and translate its data into the format and schema required by Energy Safety, and submit the required data on the first of the following month.[3] For example, submissions for first quarter data will be due annually on May 1. One exception to this schedule will be that fourth quarter data will be submitted with the WMP, which will likely occur after the first of the following month and will be detailed in the WMP guidelines. Below is a table of submission deadlines for the quarterly data submissions.

Table 1. Data submission schedule

Quarter	Submission Date
Q1 Data	May 1
Q2 Data	August 1
Q3 Data	November 1
Q4 Data	With WMP Submission

Some feature classes may not need to be submitted as frequently as others. Specifically, electrical corporations are not required to submit data that have not changed multiple times per year (e.g., if a specific asset feature class stays the same all year, meaning no records were added or removed and no attribute data changed for any of the records, this feature class would only be required in the first quarter submission for that year). However, any time previously submitted data are updated in the three months between submissions, the updated data must be submitted. In addition, any time the data schema is changed by Energy Safety, all data shall be submitted in the new schema during the subsequent submission.

[3] If this filing date falls on a weekend or a holiday, then electrical corporations will be required to submit the data on the next working day.

2.2 Timeframe of Data

All data except initiative data must represent those data available during or representative of the calendar quarter before a given submission. For example, asset data submitted on May 1 should cover all assets (in the required categories) that were in place during Q1 or at least the assets that were in place and had data available during that time. If data geometry or attributes are updated between submissions, each submission must include the updated data. As discussed in Section 2.1 above, data that have not changed since the prior reporting quarter do not need to be re-submitted within the same year.

Initiative data are unique in this regard as they should include data about activities planned for the next quarter. Initiative data also require status designations. Field values for status will specify when initiatives are complete, in-progress, or planned. Accordingly, initiative data must be reported each quarter and include projects and inspections that were completed in the previous quarter, projects and inspections that are in-progress from the previous quarter and will continue into the following quarter, and projects and inspections that are planned for the next quarter after a given submission. For example, in the data report received for the first quarter in early May, Energy Safety expects that electrical corporation submissions will include vegetation inspections completed from January through March 2021, vegetation inspections that either began in or before 2021 and will continue into the second quarter of the year (i.e., in-progress), and also vegetation inspections electrical corporations plan on conducting in the April through June 2021 timeframe (i.e., the following calendar quarter). These vegetation inspection projects would be expected to have status designations of complete, in-progress, and planned, respectively.

As it pertains to Public Safety Power Shutoff (PSPS) event and damage data, there are current California Public Utilities Commission (CPUC) requirements that certain information be reported within 10 days after a PSPS event[4]. Although consolidating reporting requirements is ideal to eliminate duplicative efforts and use resources efficiently, Energy Safety recognizes that there may be PSPS data elements in its GIS data reporting requirements that take longer than the current 10-day reporting deadline to collect, review, and deliver. Additionally, there are elements in Energy Safety's requirements that are more detailed than any reporting requirements for data in the current 10-day post-event reports. Accordingly, the "Energy Safety GIS Data Schema Status Report" Excel file, discussed further in Section 2.6, requires respondent electrical corporations to identify, among other information, whether each Energy Safety-required PSPS data field will be submitted as part of its existing 10-day post-event reports.

[4] See Resolution ESRB-8, Commission Decision (D.)19-05-042, and D.20-05-051.

2.3 Populating the Geodatabase

2.3.1 Overview

Energy Safety will provide a generic GDB template that matches the current data standard. This GDB will include empty feature classes and tables for all data that are to be submitted to Energy Safety and will essentially serve as a set of pre-formatted containers that are to be filled by electrical corporations. The GDB includes a series of feature datasets with each one containing thematically similar feature classes. The GDB also contains tables to be associated with the feature classes using primary and foreign keys as specified. The template GDB has attribute domains set up with all predetermined field values specified by Energy Safety.

The empty feature classes and tables in the provided GDB file templates can be populated with data in ArcCatalog. Prior to filling the GDB, electrical corporations will need to determine which of their existing data fields match or are equivalent to the fields in Energy Safety schema, and then they will need to transform entire feature classes and tables or subsets of their existing data to match Energy Safety standard. Explanations of this process must be included in the metadata description, as discussed in Section 2.3.6 below.

The template GDBs provided to electrical corporations follow appropriate naming conventions, with the exception that utilities will need to rename the GDB and each feature class or table to include an abbreviation of their name and the correct year and quarter, as specified in section 2.3.4 below. The template GDB will also have aliases for all field names. However, electrical corporations will need to define some custom field values for fields that do not have predetermined values. They will also need to provide metadata, as further described in section 2.3.6 below.

2.3.2 Addressing Missing Data

2.3.2.1 Entirely Empty Feature Classes and Tables
For each GIS data submission to Energy Safety, submit as much of the required data in the GDB as can be submitted. In some cases, this may result in feature classes and tables with fields partially filled out. There may also be feature classes and tables in which no fields can be filled out at all. Delete any empty feature classes and tables prior to submission to Energy Safety. Only submit feature classes and tables that have data.

2.3.2.2 Empty Cells
When there is no data for a cell, and “Unknown,” “-99,” or “N/A” are not applicable values, the cell should be left null or calculated as null if it is not already null. Do not place empty spaces or other placeholders into fields when no data are available.

2.3.3 Overall Data File Requirements

Electrical corporations must meet the following requirements when submitting GIS data to Energy Safety:

1. Submit data as feature classes and related tables in a single GDB per submission.
2. Update the year and quarter for each GDB, feature class, and table to be correct for the particular submission.
3. Submit GDB files that are interoperable and compatible with ArcGIS Desktop 10.0 at a minimum, but ideally, all data will be interoperable with ArcGIS Pro.
4. Ensure all data attributes follow the schemas included in this document.
5. Customize metadata as needed and follow the requirements in this document.
6. Use the "WGS84 Web Mercator (auxiliary sphere)" projected coordinate system (WKID 3857)[5] for all data submitted.
7. Review data for quality prior to submission. This includes ensuring all records have reasonably correct geolocations.[6] Identify all data attributes that do not have accurate values and explain why this is the case in metadata. Data outside of California is not required, except where electrical infrastructure traverses state borders (e.g., cameras or weather stations installed on mountain tops at state borders). Any assets with inaccurate coordinates (which place them outside of California borders) will not be considered a complete part of a data submission. Upon receipt, Energy Safety will review data submissions for quality and completeness. Repeated issues with data quality will be considered in future WMP reviews by Energy Safety.

2.3.4 Geodatabase, Feature Class, and Related Table Naming Conventions

Naming conventions are mostly preset in the GDB files provided by Energy Safety to electrical corporations. However, each electrical corporation must submit its completed GDB back to Energy Safety and rename it to include:

1. An abbreviation identifying the electrical corporation,
2. The year and quarter covered (i.e., Q1, Q2, etc.) in the data submission

For example, a hypothetical electrical corporation named California Electric Utility (CEU)[7] submitting a GDB that covered the second quarter of 2022 (submitted on August 1, 2022)

---

[5] This projected coordinate system will enhance performance for some of the Energy Safety's data products. However, when calculating measurements from data (e.g., span length), use the "NAD 1983 California (Teale) Albers (Meters)" projected coordinate system (WKID 3310) as it is more localized and will result in more accurate values.

[6] For example, pole-mounted asset data points being a few feet offset from power lines would often not be an issue, but something like outage points in the middle of the Pacific Ocean would be an issue.

[7] The file templates provided to electrical corporations generally utilize "CEU" as a placeholder for the electrical corporation abbreviation that must be revised in accordance with the name of the respondent electrical corporation.

would use the following format for the GDB file name: "CEU_2022_Q2." A full list of the feature classes and related tables to be included in each GDB are provided in Section 3 of this document. Feature classes and related tables in the GDB are to be named with a format similar to the GDB, except there will be a content label (i.e., feature class or table name, already provided in the template GDB) in the middle of the filename (e.g., "CEU_PrimaryDistributionLine_2022_Q2"). The template GDB provided by Energy Safety will have the placeholder "XXX" where utilities should place a 2-4 letter abbreviation of their name, and will have the current year (when published) in the GDB name and all feature class and table names.

2.3.5 Attribute Value Formatting

All text attribute values shall have sentence style capitalization in which the only words capitalized in a value are proper nouns, acronyms and the first letter of a sentence (e.g., "Tree branch fell into line," "Expulsion fuse," "All aluminum conductor [AAC]," etc.). All fields must be formatted based on the field-specific directions provided in this document.

2.3.6 Metadata

For each feature class, electrical corporations are required to update, at a minimum, the metadata sections below with data-specific and electrical corporation-specific information. The "Summary" sections have been completed by Energy Safety.

- Description
    - Provide description information, including explanations for incomplete or partially inaccurate data and any details about unusual or problematic aspects of the data that Energy Safety should be aware of.
    - Describe the methodology for how the data were developed. This includes, at a minimum, identifying the sources (by filename) from which the data were derived and an explanation of how data were pulled from those sources. Also, describe any data field collection techniques.
    - Describe the timeframe represented by the data. This may vary by feature class and by electrical corporation. For example, certain asset data may be the latest available, but only represent the state of real-world conditions as of six months prior to a submission date, because that was the last time such data were collected. Initiative and risk event data may also represent specific varying timeframes based on an electrical corporation's existing data collection and reporting procedures.
    - Clarify communication contacts and protocols.[8]

[8] Electrical corporation or Energy Safety staff may redact staff contacts and other information deemed confidential in public versions of the GIS data, but electrical corporation contact information and all other confidential data must be provided to the Energy Safety.

    - Identify a primary and secondary point of contact (POC) for future correspondence related to GIS data.
    - Provide the role/position and contact information (phone numbers and e-mail addresses) for both primary and secondary GIS data POCs.
    - If desired, a headless generic e-mail address can also be included in addition to but not as an alternative for the contact information described above.
    - Identify preferred protocols for correspondence with GIS data POCs (e.g., specify who should be copied on correspondence).

- Credits
    - List the entity or entities responsible for the data development. Include the names of any contracting companies that assisted with data development.
- Use limitations
    - Describe confidentiality concerns and any special notes about circumstances/purposes for which the data should not be used. For each feature class, include a list of fields that are confidential, and explain why the data in those fields are confidential, and/or identify a subset of records whose location is confidential (must be based on an included attribute).
- Definitions for electrical corporation-generated field values for fields that do not have predetermined values assigned as attribute domains in the provided GDB (e.g., the "SwitchgearType" field in the "Switchgear" feature class).[9]

Furthermore, Energy Safety encourages electrical corporations to expand the "Tags" section of the metadata as needed. Metadata submitted by electrical corporations must be embedded within GDB feature classes. Separate metadata in alternate formats will not be accepted by Energy Safety.

2.3.7 Related Tables

The GDBs provided to electrical corporations include empty placeholder related tables for applicable feature classes. Electrical corporations must completely fill in and submit these related tables. A high-level entity-relationship diagram (ERD) is included in Appendix A of this document to depict the relationships between the spatial and non-spatial tabular data in this standard. Subsets of this high level ERD are included in appropriate subsections throughout this document.

The data specified in this standard can be related (or joined) with primary keys (PKs) and foreign keys (FKs) that enable linking of feature class attribute tables and related data

[9] In ArcGIS Pro, field definitions can be added under "Entity and Attribute Information" in the "Fields" section.

tables.[10] Unique field values ("EventID," "CircuitID," etc.) contained within multiple feature classes and related tables can also be used to link various data tables to each other as needed. Electrical corporations are encouraged to provide additional related tables beyond those provided by Energy Safety, if available.

Relationship files for the related tables have not been provided because Energy Safety GIS data standard does not impose a strict database relationship rule between the parent and child tables. Another reason relationship files for related tables are not provided is because each electrical corporation uses different database management systems. When it comes to relating feature classes to associated related tables, at a minimum, electrical corporations must fill in all the primary key and foreign key field values applicable to feature classes and their related tables.

2.3.8 Confidentiality

Each feature class and table in the template GDB, with the exception of the "Red Flag Warning Day" feature, has a field named "Confidential" which accepts values of "Yes" or "No". Utilities should note all records they consider confidential in the attributes using this field. Energy Safety

2.4 Overall Data File Requirements

Electrical corporations must meet the following requirements when submitting GIS data to Energy Safety:

1. Submit data as feature classes and related tables in a single GDB per submission.
2. Update the year and quarter in the name of each GDB, feature class, and table, so it matches the submission date for a given submission. The date will need to be updated when the same GDB template is being re-used. The correct date may already be applied when a new GDB template is being used for the first time.
3. Submit GDB files that are interoperable and compatible with ArcGIS Desktop 10.0 at a minimum, but ideally, all data will be interoperable with ArcGIS Pro.
4. Ensure all data attributes follow the schemas included in this document.
5. Customize metadata as needed and follow the requirements in this document.
6. Use the "WGS84 Web Mercator (auxiliary sphere)" projected coordinate system (WKID 3857)[11] for all data submitted.

[10] Electrical corporations must not rely on "OBJECTID"—a field auto-generated by ArcGIS software—as a unique ID. The "OBJECTID" field should not be considered as a unique ID because its values change during geoprocessing.
[11] This projected coordinate system will enhance performance for some of the ENERGY SAFETY's data products. However, when calculating measurements from data (e.g., span length), use the "NAD 1983 California (Teale) Albers (Meters)" projected coordinate system (WKID 3310) as it is more localized and will result in more accurate values.

7. Review data for quality prior to submission. This includes ensuring all records have reasonably correct locations.[12] Identify all data attributes that do not have accurate values and explain in metadata why this is the case. Data outside of California are not required, except where electrical infrastructure traverses state borders (e.g., cameras or weather stations installed on mountain tops at state borders). Any assets with inaccurate coordinates (e.g. which place them outside of California borders) will not be considered a complete part of a data submission. Upon receipt, Energy Safety will review data submissions for quality and completeness. Repeated issues with data quality will be considered in future WMP reviews by Energy Safety.

2.5 Submitting Photos

2.5.1 Photo Folders and Naming Conventions

Photo naming conventions should adhere to the following formats that vary based on the photo log table with which they are associated. The date the photo was taken should always be included in YYYYMMDD format. If applicable/logical, an optional district ID value can be added between the utility name and inspector initial values (e.g., "UtilityName_DistrictID_InspectorInitial_PspsDamage_YYYYMMDD_PhotoNumber").

PSPS Damage Photo Log

- UtilityName_InspectorInitial_PspsDamage_YYYYMMDD_PhotoNumber
- For example: CEA_AB_PspsDamage_20200703_00001.jpg

Risk Event Photo Log

- UtilityName _InspectorInitial_RiskEvent_YYYYMMDD_PhotoNumber
- For example: CEA_AB_Ignition_20200703_00001.jpg

Initiative Photo Log

- UtilityName _InspectorInitial_Initiative_YYYYMMDD_PhotoNumber
- For example: CEA_AB_VMProject_20200703_00001.jpg

2.5.2 Photo Submission Scope

2.5.2.1 Overview

As described further in this document, photos are required for PSPS damage event locations, ignitions, vegetation management projects, and grid hardening projects. If available,

[12] For example, pole-mounted asset data points being a few feet offset from power lines would often not be an issue, but something like outage points in the middle of the Pacific Ocean would be an issue.

electrical corporations are also encouraged to submit photos for wire down locations, vegetation inspections, and asset inspections.

2.5.2.2 PSPS Damage Event Location Photos: Required

At least one photo is to be taken of the asset damage, and at least one photo is to be taken of the fuel bed below the asset damage (the area where sparks, burning debris, etc. could hit the ground and cause an ignition). Photos are required for all forms of damage covered by the feature class and related schema in Section 3.3.6 of this document. Enter "PhotoID," "FuelBedPhotoID," and "DamageEventID" values in the "PSPS Damage Photo Log" related table to ensure photos can be linked to their associated GIS points.

2.5.2.3 Ignition Photos: Required

Submit a photo for each location where an ignition started. Enter "PhotoID" and "IgnitionID" values in the "Risk Event Photo Log" related table to ensure photos can be linked to their associated GIS points.

2.5.2.4 Vegetation Management Project Photos: Required

For each project point, take a photo of the project location before and after the project is undertaken. Populate the "PhotoBeforeID," "PhotoAfterID," and "VmpID" fields in the "Initiative Photo Log" related table to ensure photos can be linked to their associated GIS points. For line and polygon data, photos should be taken at an interval of one "before" photo and one "after" photo per span involved with a vegetation management project. For lines and polygons, the "FromDevice" and "ToDevice" fields in the "Initiative Photo Log" table should also be filled in to identify specific spans where photos were taken.

2.5.2.5 Grid Hardening Project Photos: Required

For each project point, take a photo of the project asset(s) receiving hardening before and after hardening is undertaken. Populate the "PhotoBeforeID," "PhotoAfterID," and "GhID" fields in the "Initiative Photo Log" related table to ensure photos can be linked to their associated GIS points. For line hardening data, photos should be taken at an interval of one "before" photo and one "after" photo per span involved with a hardening. For line hardening, the "FromDevice" and "ToDevice" fields in the "Initiative Photo Log" table should also be filled in to identify specific spans where photos were taken.

2.5.2.6 Wire Down Photos: Optional

Submit a photo for each point location where a wire down event occurred. Enter "PhotoID" and "WireDownID" values in the "Risk Event Photo Log" related table to ensure photos can be linked to their associated GIS points.

2.5.2.7 Vegetation Inspection Photos: Conditionally Required

Only submit vegetation inspection photos for cases where inspections reveal issues (e.g., regulatory non-compliance, fire risk hazards, etc.). If a vegetation inspection reveals issues, and corrective action is taken, take a photo of the inspection issue before and after the action. When this is the case, for points, populate the "PhotoBeforeID," "PhotoAfterID," and "VmiID" fields of the "Initiative Photo Log" related table. For line and polygon inspection data, photos should be taken at an interval of one "before" photo and one "after" photo per span involved with an inspection. For lines and polygons, the "FromDevice" and "ToDevice" fields in the "Initiative Photo Log" table should also be filled in to identify specific spans where photos were taken. If an issue is discovered, and corrective action will not be taken until after the next data submission, still populate the "PhotoBeforeID" and "VmiID" fields prior to submission.

2.5.2.8 Asset Inspection Photos: Conditionally Required

Only submit asset inspection photos for cases where inspections reveal issues (e.g., regulatory non-compliance, fire risk hazards, etc.). If an asset inspection reveals issues, and corrective action is taken, take a photo of the inspection issue before and after the action. When this is the case, for points, populate the "PhotoBeforeID," "PhotoAfterID," and "AiID" fields of the "Initiative Photo Log" related table. For line and polygon inspection data, photos should be taken at an interval of one "before" photo and one "after" photo per span involved with an inspection. For lines and polygons, the "FromDevice" and "ToDevice" fields in the "Initiative Photo Log" table should also be filled in to identify specific spans where photos were taken. If an issue is discovered, and corrective action will not be taken until after the next data submission, still populate the "PhotoBeforeID" and "AmiID" fields prior to submission.

2.6 Completing Excel Status Workbook

2.6.1 Introduction

An Excel workbook ("Energy Safety QDR Spatial Data Status Report", referred to as "status report" hereafter) is provided concurrently with this guidance and is intended to complement the GDB file template. The status report is to be used to record data availability, status, and related information for each electrical corporation GIS data submission to Energy Safety. The status report is intended to provide Energy Safety and other stakeholders transparent insight into current data snapshots and continued progress towards full compliance with Energy Safety spatial data reporting requirements. Before submitting the completed status report back to Energy Safety each quarter, utilities should rename it to include their name or abbreviation, and the year and quarter it pertains to (e.g. "Energy Safety QDR Spatial Data Status Report CEU 2022 Q1".

Energy Safety GIS Data Schema Status Report contains an overview sheet, as well as a more detailed sheet for each feature dataset in the GDB:

- Asset Point
- Asset Line
- PSPS Event
- Risk Event
- Initiative
- Other Required Data

2.6.2 Overview Sheet

The "Overview" sheet provides a quick, high-level view of what feature classes and tables were submitted and why. This sheet lists every feature class and table, organized by dataset, and has the following columns:

- Submitted
- Reason
- Availability Explanation
- Metadata included
- Metadata Absence Explanation
- Data Procurement Actions
- Estimated Delivery

Fill out the "Submitted" column for each feature class and table. If no data were populated to the provided template, no data are being submitted (i.e. utilities must not submit an empty feature class or tables and populate that row in the spreadsheet with "Yes" in the "Submitted" column). If any data are submitted, populate the "Submitted" column as "Yes", even if the data are incomplete. If "Submitted" is no, populate the "Reason" column as well

(utilities do not need to populate this column for any feature classes or tables that were included in their submission). There are three possible reasons data were not submitted, detailed in the table below.

Reason	Explanation / Examples
No change since last submission	There have been no changes to the utility's internal data since the last QDR spatial data submission (OEIS will continue to use previously submitted data)
Not able to provide	Utility does not currently collect relevant data; utility is not currently able to convert its data to the required format
Not relevant for the reporting quarter	Utility did not have anything to report for the quarter (e.g. no PSPS events occurred)l utility does not have any assets in the category (e.g. transmission lines for Bear Valley); utility does not collect data in this format but submitted other equivalent data (e.g. vegetation inspections, which may be submitted as any combination of points/lines/polygons as appropriate)

2.6.2.1 Availability Explanation

For any feature class the utility was "Not able to provide", the utility must provide an "Availability Explanation" in that column. At a minimum, explain why data are unavailable. Enter other relevant commentary as needed. Utilities do not need to provide an explanation for data not submitted because there were no changes since the last submission or because there were no relevant data for the reporting quarter as defined in the table above.

2.6.2.2 Metadata

If required metadata were not included for a feature class or table, populate the "Metadata Included" column as "No" and provide an explanation for why metadata are absent in the "Metadata Absence Explanation" column. Metadata required to be input by electrical corporations are described in Section 2.3.6.

2.6.2.3 Data Procurement Actions and Estimated Delivery

For any feature class the utility was "Not able to provide", the utility must explain what actions the electrical corporation has taken and plans to take to collect and report currently unavailable data in the Data Procurement Actions" column and when data are expected to be available in the "Estimated Delivery" column. Utilities do not need to provide these explanations for data not submitted because there were no changes since the last submission or because there were no relevant data for the reporting quarter as defined in the table above.

2.6.3 Feature Dataset Sheets

The feature dataset-specific sheets provide more space to explain processing steps and detailed availability for specific attributes in each feature class. If no data were submitted in a feature class, utilities do not need to add any information on the feature dataset-specific sheet – noting that the feature class was not submitted, and why, on the overview sheet, is sufficient. For each dataset in the standard, the feature dataset sheet lists the field names, field descriptions, and specifications for each feature class and related table in Energy Safety GIS data standard. The following columns are also included to provide a status and related information **for each field**:

- Data provided in current submission?
- Availability explanation
- Data procurement actions
- Estimated delivery
- Provided in 10-Day Post-Event Report?[13]

The "Data provided in current submission?" column must be completed for all fields in each feature class or table that was submitted. If the submitted data are complete, none of the other columns need to be filled out. If the submitted data are incomplete, the remaining columns must be completed as explained below. [14]

2.6.3.1 Data Provided in Current Submission?

Enter "Yes," "No," or "Partially" based on how much data was provided. If all applicable rows for a field have a real value (i.e., not "-99," "Unknown," or null), enter "Yes." If some values are populatd, but others are "-99," "Unknown," or null, enter "Partially." If all values are "-99," "Unknown," or null, enter "No."

2.6.3.2 Availability Explanation

Enter information in this column for unavailable and partially available data at the field level. At a minimum, explain why data are unavailable or partially available. Enter other relevant commentary as needed.

2.6.3.3 Data Procurement Actions

Enter information in this column for unavailable and partially available data at the field level. Explain what actions the electrical corporation has taken and plans to take to collect and report currently unavailable or partially available data.

[13] This column only pertains to the PSPS Event tab.
[14] The "Provided in 10-Day Post-Event Report?" column is required for the PSPS Event sheet.

2.6.3.4 Estimated Delivery

Enter information in this column for unavailable and partially available data at the field level. State when such data can be submitted to Energy Safety. Explain time delays or other timing issues as needed. 2.6.3.5 Provided in 10-Day Post Event Report?

Applies to PSPS events only - enter “Yes” or “No.” Indicate “Yes” if the subject data field is currently provided in 10-day post-event reports required by ESRB-8, D.19-05-042, and D.20-05-051. Otherwise, indicate “No.”

2.7 Actual Submission

Prior to submission, GDBs must be scanned for viruses and compressed into a zipped folder. Zipped GDBs must be transmitted through Energy Safety's sharepoint secure file transfer portal. Each utility has been designated a secure folder on Energy Safety's sharepoint site; files will have the naming format specified in section 2.3.4 above. Energy Safety will provide direct links to the appropriate folders for uploading QDRs to identified utility points of contact prior to submission deadlines. Utilities must email data@energysafety.ca.gov once their data are uploaded to notify the division.

Pre-submission checklist

The following checklist may be used by electrical corporations before submission to help verify their data follows the standards set forth in this document for submission of spatial QDR data.

	1.Utility is submitting a single zipped geodatabase and a single data report excel workbook
	2.The geodatabase is named with the utility abbreviation and correct year and quarter (see section 2.3.4)
	3.The geodatabase does not contain any empty feature classes or tables
	4.The status report excel workbook name contains the utility name or abbreviation, and the same year and quarter as the geodatabase
	5.The utility has uploaded the above (zipped geodatabase and status report) to its designated folder on Energy Safety's sharepoint portal
	6.The utility has sent an email to data@energysafety.ca.gov notifying the Energy Safety Data Analytics Division that it has submitted its data for the quarter

3. DATA SCHEMA

3.1 Asset Point (Feature Dataset)

3.1.1 Camera (Feature Class)

Field Name	Field Description	Field Type
AssetID	Unique ID for a specific camera. It should be a traceable stable ID within the utility's operations/processes. Primary key for the Camera feature class attribute table.	Text
SuppportStructureID	Unique ID for support structure to which camera is attached. It should be a traceable stable ID within the utility's operations/processes. Foreign key to the Support Structure feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AssetType	Type of point asset. Required value: Camera	Text
CameraLocationName	Unique name of camera location (e.g. "Cisco Buttes 1", "Penn Valley"). For Alert Wildfire cameras, this should match the name on the website.	
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
County	County in which asset is located.	Text
AssetLatitude	Latitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float
AssetLongitude	Longitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float

3.1.2 Connection Device (Feature Class)

Note: utilities do not need to report flying taps as part of this feature class.

Field Name	Field Description	Field Type
AssetID	Unique ID for a specific connection device. It should be a traceable stable ID within the utility's operations/processes. Primary key for the Connection Device feature class attribute table.	Text
FromStructureID	ID of the structure upstream of the span of line containing a connection device. This structure may be a support structure (e.g., pole or tower) if the span is overhead, and it may be something else (e.g., manhole, vault, etc.) if the span is underground. Foreign key to the Support Structure feature class attribute table.	Text
ToStructureID	ID of the structure downstream of the span of line containing a connection device. This structure may be a support structure (e.g., pole or tower) if the span is overhead, and it may be something else (e.g., manhole, vault, etc.) if the span is underground. Foreign key to the Support Structure feature class attribute table.	Text
CircuitID	ID of circuit associated with asset. This will be a unique standardized identification name of the circuit. Foreign key to all the related asset line feature class attribute tables.	Text
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AssetType	Type of point asset. Required value: Line connection device	Text
AssetOHUG	Is the asset overhead or underground? Possible values: • Overhead • Underground • Unknown	Text
ConnectionDeviceType	What type of connection device is the asset? Possible values: • Splice • Connector • Clamp • Unknown • Other - See comment **Note: utilities do not need to report flying taps as part of this feature class.**	Text
ConnectionDeviceTypeComment	Connection device type not listed in the options above.	Text
ConnectionDeviceSubtype	What is the specific subtype of the connection device? • Automatic Splice • Crimp Splice • Explosive Sleeve Splice (i.e., permanent, fused) • 3-bolt • Parallel Groove • Unknown	Text

	• Other - See comment	
ConnectionDeviceSubtypeComment	Connection device subtype not listed in the options above.	Text
AssociatedNominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. “0-60”, “<500”). Leave blank if unknown.	Text
AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. “0-60”, “<500”). Leave blank if unknown.	Text
CircuitName	Name of circuit associated with asset. Leave blank or enter "N/A" if there is no unique circuit name that is different than the circuit ID. There is no need to repeat "CircuitID" values in this field.	Text
SubstationName	Name of substation associated with asset.	Text
Manufacturer	Name of the manufacturer of the connection device. Do not use acronyms or abbreviations for this field. Fully spell out the manufacturer name. Enter “Unknown” if this cannot be determined.	Text
ModelNumber	Model number of the asset. Enter “Unknown” if this cannot be determined.	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which asset is located.	Text
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter “-99” if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the “InstallationYear” and “InstallationDate” values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • 100+ • Unknown • N/A (only enter this if there is an “InstallationYear” value)	Text
UsefulLifespan	The number of years an asset is expected to have a useful functioning existence upon initial installation. If unknown, enter “-99.”	Integer

ExemptionStatus	Is the asset exempt per California Public Resources Code (PRC) 4292? This field is especially important and a high priority for Energy Safety and the State of California. Non-exempt equipment requires support structure clearance. Possible values: • Yes • No • Unknown • N/A	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
AssetLatitude	Latitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float
AssetLongitude	Longitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float

2.1.3 Customer Meter (Feature Class)

Field Name	Field Description	Field Type
MeterID	Unique ID for a specific meter. It should be a traceable stable ID within the utility's operations/processes. Primary key for the Customer Meter feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
CircuitID	ID of circuit associated with asset. This will be a unique standardized identification name of the circuit. Foreign key to all the related asset line feature class attribute tables.	Text
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
AssetType	Type of point asset. Required value: Customer meter	Text
CircuitName	Name of circuit associated with asset. Leave blank or enter "N/A" if there is no unique circuit name that is different than the circuit ID. There is no need to repeat "CircuitID" values in this field.	Text
SubstationName	Name of substation associated with asset.	Text
Manufacturer	Name of the manufacturer of the meter. Do not use acronyms or abbreviations for this field. Fully spell out the manufacturer name. Enter "Unknown" if this cannot be determined.	Text
ModelNumber	Model number of the asset. Enter "Unknown" if this cannot be determined.	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which asset is located.	Text
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter "-99" if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the "InstallationYear" and "InstallationDate" values are unknown. Possible values:	Text

	• 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • 100+ • Unknown • N/A (only enter this if there is an "InstallationYear" value)	
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
AssetLatitude	Latitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float
AssetLongitude	Longitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float

3.1.4 Fuse (Feature Class)

IMPORTANT: Only overhead fuse locations are to be included in this feature class.

Field Name	Field Description	Field Type
AssetID	Unique ID for a specific fuse. It should be a traceable stable ID within the utility's operations/processes. Primary key for the Fuse feature class attribute table.	Text
SupportStructureID	Unique ID for support structure to which fuse is attached. It should be a traceable stable ID within the utility's operations/processes. Foreign key to the Support Structure feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
CircuitID	ID of circuit associated with asset. This will be a unique standardized identification name of the circuit. Foreign key to all the related asset line feature class attribute tables.	Text

AssetType	Type of point asset: Required value: Fuse	Text
AssociatedNominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. “0-60”, “<500”). Leave blank if unknown.	Text
AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. “0-60”, “<500”). Leave blank if unknown.	Text
SubstationName	Name of substation associated with asset.	Text
CircuitName	Name of circuit associated with asset. Leave blank or enter "N/A" if there is no unique circuit name that is different than the circuit ID. There is no need to repeat "CircuitID" values in this field.	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which asset is located.	Text
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date
LastMaintenanceDate	Date of the last maintenance. Leave blank if unknown.	Date
ExemptionStatus	Is the asset exempt per California Public Resources Code (PRC) 4292? This field is especially important and a high priority for Energy Safety and the State of California. Non-exempt equipment requires support structure clearance. Possible values: • Yes • No • Unknown • N/A	Text
FuseRating	The nominal current rating of the fuse in amperes.	Float
FuseType	Type of fuse device. Possible values: • Bridged • Current limiting • Expulsion • Fused elbow • Unknown • Other - See comment	Text
FuseTypeComment	Fuse type not listed in the options above.	Text
FuseSubtype	What is the specific subtype of the fuse device?	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

AssetLatitude	Latitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float
AssetLongitude	Longitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float

3.1.5 Lightning Arrester (Feature Class)

Field Name	Field Description	Field Type
AssetID	Unique ID for a specific lightning arrester. It should be a traceable stable ID within the utility's operations/processes. Primary key for the Lighting Arrester feature class attribute table.	Text
SupportStructureID	Unique ID for support structure to which lightning arrester is attached. It should be a traceable stable ID within the utility's operations/processes. Foreign key to the Support Structure feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
CircuitID	ID of circuit associated with asset. This will be a unique standardized identification name of the circuit. Foreign key to all the related asset line feature class attribute tables.	Text
AssetType	Type of point asset. Required value: Lightning arrester	Text
AssociatedNominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text
AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text
SubstationName	Name of substation associated with asset.	Text
CircuitName	Name of circuit associated with asset. Leave blank or enter "N/A" if there is no unique circuit name that is different than the circuit ID. There is no need to repeat "CircuitID" values in this field.	Text

Manufacturer	Name of the manufacturer of the lightning arrester. Do not use acronyms or abbreviations for this field. Fully spell out the manufacturer name. Enter “Unknown” if this cannot be determined.	Text
ModelNumber	Model number of the asset. Enter “Unknown” if this cannot be determined.	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which asset is located.	Text
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date
LastMaintenanceDate	Date of the last maintenance. Leave blank if unknown.	Date
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter “-99” if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the “InstallationYear” and “InstallationDate” values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • 100+ • Unknown • N/A (only enter this if there is an “InstallationYear” value)	Text
UsefulLifespan	The number of years an asset is expected to have a useful functioning existence upon initial installation. If unknown, enter “-99.”	Integer
ExemptionStatus	Is the asset exempt per California Public Resources Code (PRC) 4292? This field is especially important and a high priority for Energy Safety and the State of California. Non-exempt equipment requires support structure clearance. Possible values:: • Yes • No • Unknown • N/A	Text
ArresterRating	Rating of the lightning arrester in kilovolts.	Float

Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
AssetLatitude	Latitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float
AssetLongitude	Longitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float

3.1.6 Substation (Feature Class)

Field Name	Field Description	Field Type
SubstationID	ID of substation associated with asset. Primary key for the Substation feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AssetType	Type of point asset. Required value: Substation	Text
SubstationName	Name of substation.	Text
SubstationNominalVoltagekV	Nominal voltage (in kilovolts) ratings associated with the substation. Include all applicable voltages separated by slashes (e.g., "230/139/69/12"). Ranges are also acceptable (e.g. "0-60"). Enter "-99" if N/A.	Text
SubstationOperatingVoltagekV	Operating voltage (in kilovolts) ratings associated with the substation. Include all applicable voltages separated by slashes (e.g., "230/139/69/12"). Ranges are also acceptable (e.g. "0-60"). Enter "-99" if N/A.	Text
SubstationRating	Power rating of the substation in mega volt amps (MVAs).	Float
SubstationType	Type of substation. Possible values: • Network • Loop • Radial	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which asset is located.	Text
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date
InstallationDate	Date the first asset of the substation was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter "-99" if unknown.	Integer

Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
AssetLatitude	Latitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float
AssetLongitude	Longitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float

3.1.7 Support Structure (Feature Class)

In these requirements, "support structure" refers to the pole, tower, or other structure that supports overhead electrical equipment (e.g., circuits, transformers, fuses, etc.).

Field Name	Field Description	Field Type
SupportStructureID	Unique ID for support structure. It should be a traceable stable ID within the utility's operations/processes. Primary key for the Support Structure feature class attribute table. Enables connection to the Fuse, Lightning Arrester, Switchgear, and Transformer feature class attribute tables.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
CircuitID	ID of circuit associated with asset. This will be a unique standardized identification name of the circuit. Foreign key to all the related asset line feature class attribute tables.	Text
AssetType	Type of point asset. Required value: Support structure	Text
ExemptionStatus	Does the support structure hold equipment that is exempt from Public Resource Code (PRC) 4292 vegetation clearance requirements? This field is especially important and a high priority for Energy Safety and the State of California. Non-exempt equipment requires support structure clearance. Possible values: • Yes • No • Unknown • N/A	Text

CircuitName	Name of circuit associated with asset. Leave blank or enter "N/A" if there is no unique circuit name that is different than the circuit ID. There is no need to repeat "CircuitID" values in this field.	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which asset is located.	Text
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date
LastMaintenanceDate	Date of the last maintenance. Leave blank if unknown.	Date
LastIntrusiveDate	Date of the last intrusive. Leave blank if unknown.	Date
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter "-99" if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the "InstallationYear" and "InstallationDate" values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • 100+ • Unknown • N/A (only enter this if there is an "InstallationYear" value)	Text
UsefulLifespan	The number of years an asset is expected to have a useful functioning existence upon initial installation. If unknown, enter "-99."	Integer
SupportStructureType	Type of support structure. Possible values: • Pole • Tower • Other - See comment	Text
SupportStructureTypeComment	Support structure type (analogous to a pole or tower) not listed in the options above.	Text
SupportStructureMaterial	Material from which support structure is made. Possible values: • Wood • Metal • Composite • Wrapped wood	Text

	• Concrete • Other - See comment	
SupportStructureMaterialComment	Support structure material not listed in the options above.	Text
SupportStructureMaterialSubtype	The subtype of structure material. For example, if a wood pole, the type of wood (i.e. Douglas Fir, Cedar, etc.).	Text
Underbuild	Does the line support multiple transmission or primary distribution circuits? Possible values: • Yes • No	Text
ConstructionGrade	Grade of construction, in accordance with GO 95, Rule 42. Possible Values: • Grade A • Grade B • Grade C	Text
CrossarmAttached	Is one or more crossarms attached to the support structure? Possible values: • Yes • No • Unknown	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
AssetLatitude	Latitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float
AssetLongitude	Longitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float

3.1.8 Switchgear (Feature Class)

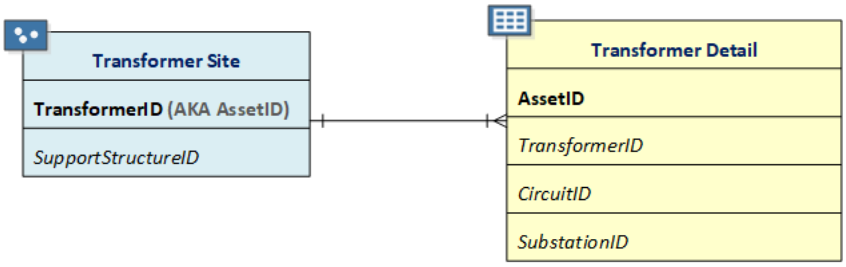
Field Name	**Field Description**	**Field Type**
AssetID	Unique ID for a specific switchgear asset. It should be a traceable stable ID within the utility's operations/processes. Primary key for the Switchgear feature class attribute table.	Text
SupportStructureID	Unique ID for support structure to which a switchgear asset is attached. It should be a traceable stable ID within the utility's operations/processes. Foreign key to the Support Structure feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E	Text

	• SCE • SDG&E • TBC	
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
CircuitID	ID of circuit associated with asset. This will be a unique standardized identification name of the circuit. Foreign key to all the related asset line feature class attribute tables.	Text
AssetType	Type of point asset. Required value: Switchgear	Text
AssetOHUG	Is the asset overhead or underground? Possible values: • Overhead • Underground • Unknown	Text
AssociatedNominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. Enter “-99” if N/A.	Float
AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. Enter “-99” if N/A.	Float
SubstationName	Name of substation associated with asset.	Text
CircuitName	Name of circuit associated with asset. Leave blank or enter "N/A" if there is no unique circuit name that is different than the circuit ID. There is no need to repeat "CircuitID" values in this field.	Text
Manufacturer	Name of the manufacturer of the equipment. Do not use acronyms or abbreviations for this field. Fully spell out the manufacturer name. Enter “Unknown” if this cannot be determined.	Text
ModelNumber	Model number of the asset. Enter “Unknown” if this cannot be determined.	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which asset is located.	Text
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date
LastMaintenanceDate	Date of the last maintenance. Leave blank if unknown.	Date
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter “-99” if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the “InstallationYear” and “InstallationDate” values are unknown. Possible values: • 0-9 • 10-19 • 20-29	Text

	• 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • 100+ • Unknown • N/A (only enter this if there is an “InstallationYear” value)	
UsefulLifespan	The number of years an asset is expected to have a useful functioning existence upon initial installation. If unknown, enter “-99.”	Integer
ExemptionStatus	Is the asset exempt per California Public Resources Code (PRC) 4292? This field is especially important and a high priority for Energy Safety and the State of California. Non-exempt equipment requires support structure clearance. Possible values: • Yes • No • Unknown • N/A	Text
CurrentRating	Nominal current rating of the switchgear in amperes.	Float
AssetClass	Is the asset associated with transmission or distribution? If the asset is associated with subtransmission, enter “Transmission.” Possible values: • Distribution • Transmission	Text
SCADAEnabled	Can supervisory control and data acquisition (SCADA) be utilized with the asset? Possible values: • Yes • No • N/A	Text
SwitchgearType	Type of switchgear (switch, cut-out fuse, circuit breaker, etc.)	Text
SwitchgearSubtype	Specific type of switch, cut-out fuse, circuit breaker, etc.	Text
SwitchgearInsulatingMedium	Medium (air, gas, oil, etc.) providing insulation for switchgear asset. Be specific.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
AssetLatitude	Latitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float
AssetLongitude	Longitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float

3.1.9 Transformer Site (Feature Class)

Using a one-to-many relationship, add as many related tables (per transformer site point) as are necessary to provide information about each transformer at the site. If there is only one transformer, use only one related table. If there is a bank of transformers represented by a single point, use one related table per transformer. Use the schema below. The ERD below illustrates the relationship between the feature class table (blue) and related table (beige).



Field Name	Field Description	Field Type
TransformerSiteID	Unique ID for a specific transformer site. It should be a traceable stable ID within the utility's operations/processes. Primary key enabling connection to the Transformer Detail related table.	Text
SupportStructureID	Unique ID for support structure to which transformer is attached. It should be a traceable stable ID within the utility's operations/processes. Foreign key to the Support Structure feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AssetType	Type of point asset. Required value: Transformer	Text
AssetOHUG	Is the asset overhead or underground? Possible values: • Overhead • Underground • Unknown	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD	Text

	HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	
County	County in which asset is located.	Text
InaBank	Does a single point represent multiple assets that exist in a bank arrangement (i.e., transformer bank)? Possible values: • Yes (if multiple transformers are represented by a single point, enter additional related table records in the Transformer Detail related table as needed)No • Unknown	Text
QuantityinBank	How many transformers exist in a bank arrangement (if applicable)? Enter "-99" if unknown.	Integer
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
AssetLatitude	Latitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float
AssetLongitude	Longitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float

3.1.10 Transformer Detail (Related Table)

Field Name	Field Description	Field Type
AssetID	Unique ID for a specific transformer asset. It should be a traceable stable ID within the utility's operations/processes. Primary key for the Transformer Detail related table.	Text
TransformerSiteID	Unique ID for a specific transformer site. It should be a traceable stable ID within the utility's operations/processes. Foreign key enabling connection to the Transformer Site feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
CircuitID	ID of circuit associated with asset. This will be a unique standardized identification name of the circuit. Foreign key to all the related asset line feature class attribute tables.	Text

TransformerSubtype	Specific subtype of the transformer. Possible values: • Single phase pad-mounted • Single phase subsurface • Single phase overhead • Three phase pad-mounted • Three phase subsurface • Three phase overhead	Text
AssociatedNominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. Enter "-99" if N/A.	Float
AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. Enter "-99" if N/A.	Float
SubstationName	Name of substation associated with asset.	Text
CircuitName	Name of circuit associated with asset. Leave blank or enter "N/A" if there is no unique circuit name that is different than the circuit ID. There is no need to repeat "CircuitID" values in this field.	Text
Manufacturer	Name of the manufacturer of the transformer. Do not use acronyms or abbreviations for this field. Fully spell out the manufacturer name. Enter "Unknown" if this cannot be determined.	Text
ModelNumber	Model number of the asset. Enter "Unknown" if this cannot be determined.	Text
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date
LastMaintenanceDate	Date of the last maintenance. Leave blank if unknown.	Date
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter "-99" if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the "InstallationYear" and "InstallationDate" values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • 100+ • Unknown • N/A (only enter this if there is an "InstallationYear" value)	Text
UsefulLifespan	The number of years an asset is expected to have a useful functioning existence upon initial installation. If unknown, enter "-99."	Integer
ExemptionStatus	Does the transformer hold equipment that is exempt from Public Resource Code (PRC) 4292 vegetation clearance requirements? This field is especially important and a high priority for Energy Safety and	Text

	the State of California. Non-exempt equipment requires support structure clearance. Possible values: • Yes • No • Unknown • N/A	
TransformerRating	Nominal electrical load capacity in kilovolt amps (kVAs).	Float
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.1.11 Weather Station (Feature Class)

Field Name	Field Description	Field Type
StationID	The equivalent to the "Asset ID" field from other feature classes. Station ID for the weather station. It should enable data users to look up the data collected by the weather station. Primary key for the Weather Station feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AssetType	Type of point asset. Required field: Weather station	Text
Manufacturer	Name of the manufacturer(s) of the asset. Do not use acronyms or abbreviations for this field. Fully spell out the manufacturer name. Enter "Unknown" if this cannot be determined. Enter multiple names as necessary, separated by semicolons.	Text
ModelNumber	Model number of the asset. Enter "Unknown" if this cannot be determined.	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which asset is located.	Text
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date

InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter “-99” if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the “InstallationYear” and “InstallationDate” values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • 100+ • Unknown • N/A (only enter this if there is an “InstallationYear” value)	Text
UsefulLifespan	The number of years an asset is expected to have a useful functioning existence upon initial installation. If unknown, enter “-99.”	Integer
WeatherStationURL	Website address for weather station information (if publicly available).	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
AssetLatitude	Latitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float
AssetLongitude	Longitude coordinate of asset (in decimal degrees). Field-calculate in GIS software.	Float

3.2 Asset Line (Feature Dataset)

3.2.1 Transmission Line (Feature Class)

IMPORTANT: If a utility classifies some lines as “sub-transmission” those lines must be included in this feature class, and the utility’s definition of “sub-transmission” must be explained in metadata.

Field Name	Field Description	Field Type
CircuitID	Unique ID for a specific circuit. It should be a traceable stable ID within the utility’s operations/processes.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
LineClass	Classification of line asset. Possible values: • Transmission • Sub-transmission	Text
CircuitName	Name of circuit associated with asset. Enter "N/A" if there is no unique circuit name that is different than the circuit ID. There is no need to repeat "CircuitID" values in this field.	Text
County	County in which asset is located. If the line crosses multiple counties, list all counties separated by commas.	Text
ConductorType	Type of conductor. Possible values: • Bare • Covered • Insulated • Other – See comment	Text
ConductorTypeComment	Conductor type not listed in the options above.	Text
AssetOHUG	Is the asset overhead or underground? Possible values: • Overhead • Underground • Unknown	Text
NominalVoltagekV	Nominal voltage (in kilovolts) of conductor. Do not use more than two decimal places. Enter “-99” if N/A.	Float

OperatingVoltagekV	Operating voltage (in kilovolts) of conductor. Do not use more than two decimal places. Enter "-99" if N/A.	Float
SubstationName	Name of substation associated with asset.	Text
ConductorMaterial	Conductor material. Possible values: • All aluminum conductor (AAC) • All aluminum alloy conductor (AAAC) • Aluminum conductor aluminum reinforced (ACAR) • Aluminum conductor steel reinforced (ACSR) • Aluminum conductor steel supported (ACSS) • Copper (Cu) • Other - See comment	Text
ConductorMaterialComment	Conductor material not listed in the options above.	Text
ConductorSize	Size of conductor (e.g. No. 4 Cu or 1/0 ACSR).	Text
ConductorOD	Overall diameter of the conductor in inches.	Float
Terminal1	Substation name of first terminal.	Text
Terminal2	Substation name of second terminal.	Text
Terminal3	Substation name of third terminal.	Text
Terminal4	Substation name of fourth terminal.	Text
Terminal5	Substation name of fifth terminal.	Text
Terminals	Substation name of other terminal(s).	Text
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date
LastMaintenanceDate	Date of the last maintenance. Leave blank if unknown.	Date
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter "-99" if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the "InstallationYear" and "InstallationDate" values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • 100+ • Unknown • N/A (only enter this if there is an "InstallationYear" value)	Text
UsefulLifespan	The number of years an asset is expected to have a useful functioning existence upon initial installation. If unknown, enter "-99."	Integer
AmpacityRating	Nominal ampacity rating of the conductor in amperes.	Float
Greased	Is the conductor greased to prevent water intrusion? Possible values:	Text

	• Yes • No • Unknown	
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.2.2 Primary Distribution Line (Feature Class)

Field Name	Field Description	Field Type
CircuitID	Unique ID for a specific circuit. It should be a traceable stable ID within the utility's operations/processes.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
LineClass	Classification of line asset. Required value: Primary distribution	Text
CircuitName	Name of circuit associated with asset. Leave blank or enter "N/A" if there is no unique circuit name that is different than the circuit ID. There is no need to repeat "CircuitID" values in this field.	Text
County	County in which asset is located. If the line crosses multiple counties, list all counties separated by commas.	Text
ConductorType	Type of conductor. Possible values: • Bare • Covered • Insulated • Other – See comment	Text
ConductorTypeComment	Conductor type not listed in the options above.	Text
AssetOHUG	Is the asset overhead or underground? Possible values: • Overhead • Underground • Unknown	Text
NominalVoltagekV	Nominal voltage (in kilovolts) of conductor. Do not use more than two decimal places. Enter "-99" if N/A.	Float

OperatingVoltagekV	Operating voltage (in kilovolts) of conductor. Do not use more than two decimal places. Enter "-99" if N/A.	Float
SubstationName	Name of substation associated with asset.	Text
ConductorMaterial	Conductor material. Possible values: • All aluminum conductor (AAC) • All aluminum alloy conductor (AAAC) • Aluminum conductor aluminum reinforced (ACAR) • Aluminum conductor steel reinforced (ACSR) • Aluminum conductor steel supported (ACSS) • Copper (Cu) • Other - See comment	Text
ConductorMaterialComment	Conductor material not listed in the options above.	Text
ConductorSize	Size of conductor (e.g. No. 4 Cu or 1/0 ACSR).	Text
ConductorOD	Overall diameter of the conductor in inches.	Float
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date
LastMaintenanceDate	Date of the last maintenance. Leave blank if unknown.	Date
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter "-99" if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the "InstallationYear" and "InstallationDate" values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • 100+ • UnknownN/A (only enter this if there is an "InstallationYear" value)	Text
UsefulLifespan	The number of years an asset is expected to have a useful functioning existence upon initial installation. If unknown, enter "-99."	Integer
AmpacityRating	Nominal ampacity rating of the conductor in amperes.	Float
Greased	Is the conductor greased to prevent water intrusion? Possible values: • Yes • No • Unknown	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

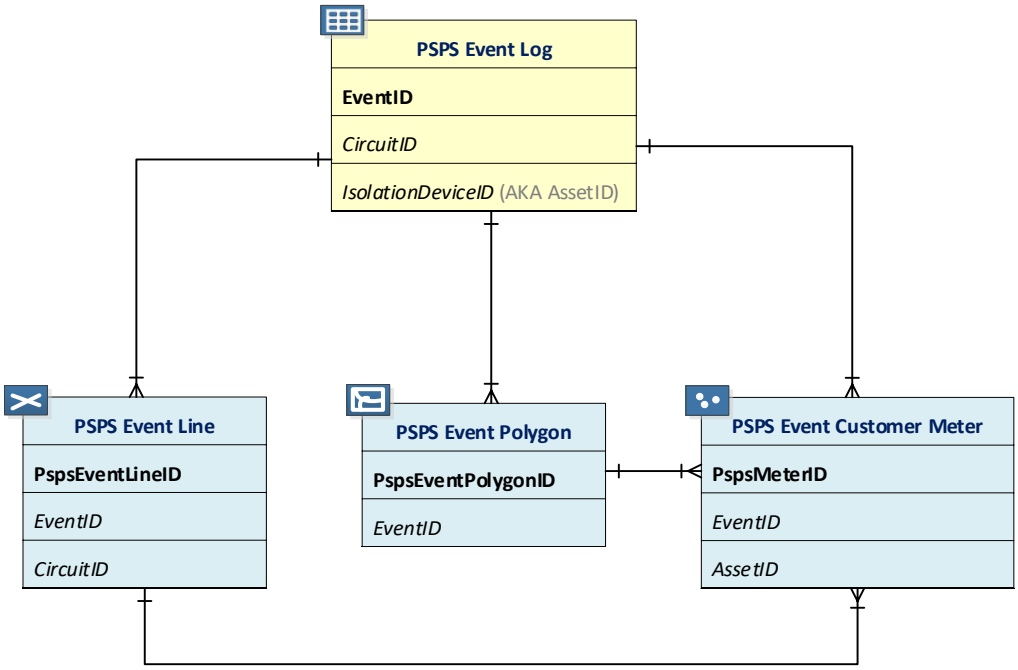
3.2.3 Secondary Distribution Line (Feature Class)

Field Name	Field Description	Field Type
CircuitID	Unique ID for a specific circuit. It should be a traceable stable ID within the utility's operations/processes. This ID is expected to be based on the circuit name of the secondary line's associated primary distribution line.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
LineClass	Classification of line asset. Required value: Secondary distribution	Text
CircuitName	Name of circuit associated with asset. This name is expected to be based on the circuit name of the secondary line's associated primary distribution line. Leave blank or enter "N/A" if there is no unique circuit name that is different than the circuit ID. There is no need to repeat "CircuitID" values in this field.	Text
County	County in which asset is located. If the line crosses multiple counties, list all counties separated by commas.	Text
ConductorType	Type of conductor. Possible values: • Open wire • Duplex • Triplex • Quadruplex • Other - See comment	Text
ConductorTypeComment	Conductor type not listed in the options above.	Text
AssetOHUG	Is the asset overhead or underground? Possible values: • Overhead • Underground • Unknown	Text
NominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text
OperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text

SubstationName	Name of substation associated with asset.	Text
ConductorMaterial	Conductor material. Possible values: • All aluminum conductor (AAC) • All aluminum alloy conductor (AAAC) • Aluminum conductor aluminum reinforced (ACAR) • Aluminum conductor steel reinforced (ACSR) • Aluminum conductor steel supported (ACSS) • Copper (Cu) • Other - See comment	Text
ConductorMaterialComment	Conductor material not listed in the options above.	Text
ConductorSize	Size of conductor (e.g. No. 4 Cu or 1/0 ACSR).	Text
ConductorOD	Overall diameter of the conductor in inches.	Float
LastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date
LastMaintenanceDate	Date of the last maintenance. Leave blank if unknown.	Date
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter “-99” if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the “InstallationYear” and “InstallationDate” values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • 100+ • Unknown • N/A (only enter this if there is an “InstallationYear” value)	Text
UsefulLifespan	The number of years an asset is expected to have a useful functioning existence upon initial installation. If unknown, enter “-99.”	Integer
AmpacityRating	Nominal ampacity rating of the conductor in amperes.	Float
Greased	Is the conductor greased to prevent water intrusion? Possible values: • Yes • No • Unknown	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.3 PSPS Event (Feature Dataset)

3.3.1 Entity-Relationship Diagram for PSPS Events



3.3.2 PSPS Event Log (Related Table)

Field Name	Field Description	Field Type
EventID	A unique standardized identification name of the unique event. Primary key enabling connection to PSPS event feature class attribute tables	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp	Text

	• PG&E • SCE • SDG&E • TBC	
EOCActivationDateTime	Date and time electrical corporation's emergency operations center (EOC) was activated.	Date
StartDateTime	Start date and time of the PSPS event.	Date
AllClearDateTime	Date and time that the weather event precipitating the PSPS event cleared the area, and the utility began inspection and restoration efforts. One value per record – if sub-areas of a single PSPS event were cleared at different times, create multiple records for that event.	Date
AllLoadUpDateTime	Date and time that the last customer (in the area represented by this record) was fully restored following the PSPS event. If there are multiple records for one PSPS event, this is not required to be the date/time of restoration for the last customer in the entire PSPS event.	Date
County	County in which asset is located. If the line crosses multiple counties, list all counties separated by commas.	Text
WindRisk	Was high wind a driving risk factor in the PSPS decision? Possible values: • Yes • No	Text
RelativeHumidityRisk	Was low relative humidity a driving risk factor in the PSPS decision? Possible values: • Yes • No	Text
TemperatureRisk	Was high temperature a driving risk factor in the PSPS decision? Possible values: • Yes • No	Text
VegetationRisk	Was a higher probability of vegetation interference a driving risk factor in the PSPS decision? Possible values: • Yes • No	Text
AssetRisk	Was a higher probability of asset failure a driving risk factor in the PSPS decision? Possible values: • Yes • No	Text
DeadFuelRisk	Was a high presence of dead fuel a driving risk factor in the PSPS decision? Possible values: • Yes • No	Text
LiveFuelRisk	Was a high presence of live fuel a driving risk factor in the PSPS decision? Possible values: • Yes • No	Text
RedFlagWarningRisk	Was the presence of a Red Flag Warning risk day a driving factor in the PSPS decision? Possible values: • Yes	Text

	• No	
OtherRisk	Was some other form of risk (not covered by the fields above) a driving risk factor in the PSPS decision? Possible values: • Yes • No	Text
OtherRiskReason	Brief description of what the "OtherRisk" category is if there is a "Yes" value under the "OtherRisk" field. Possible example statements include things like "vehicle collision," "reported ignition," etc. Enter "N/A" if the value for "OtherRisk" is "No."	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.3.3 PSPS Event Line (Feature Class)

This feature class includes lines that experienced de-energizing during PSPS events.

Field Name	Field Description	Field Type
PspsEventLineID	An underscore delimited concatenation of "EventID"+"_"+"CircuitID." Primary key for the PSPS Event Line feature class attribute table.	Text
EventID	A unique standardized identification name of the unique event. Foreign key enabling connection to PSPS Event Log related table.	Text
CircuitID	A unique standardized identification name of the circuit that was de-energized. Foreign key to all the related asset line feature class attribute tables. There should be only one value per record – may have multiple records in table for one PSPS event if multiple circuits were involved. Use the same Event ID for these records.	Text
SubstationID	A unique standardized identification name of the substation/feeder feeding the circuit that was de-energized during the PSPS event. Foreign key to the Substation feature class attribute table. There should be only one value per record – may have multiple records in table for one PSPS event if multiple substations were involved. Use the same Event ID for these records.	Text
IsolationDeviceID	A unique standardized identification name of the isolation device. Should match the value in the "AssetID" field of the isolation device's point data in the Switchgear feature class. A foreign key. AKA AssetID. There should be only one value per record – may have multiple records in table for one PSPS event if multiple isolation devices were involved. Use the same Event ID for these records.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E	Text

	• SCE • SDG&E • TBC	
IsolationDevice	The device which isolated the circuit during the PSPS event. Possible values: • Circuit Breaker • Fuse • Switch • Other - See comment There should be only one value per record – may have multiple records in table for one PSPS event if multiple devices were used. Use the same Event ID for these records.	Text
IsolationDeviceComment	Isolation device not listed in the options above.	Text
PredictedDurationMinutes	Anticipated duration of PSPS event's circuit shutoff after it is initiated. Must be reported in whole number minutes.	Integer
ActualDurationMinutes	Actual duration of PSPS event's circuit shutoff. This would be determined after restoration and must be reported in whole number minutes. This should be the duration for the customer whose service was restored last (the maximum duration for the outage).	Integer
DurationPredictionError	"PredictedDurationMinutes" minus "ActualDurationMinutes." Positive values indicate shorter than predicted PSPS outage duration; negative values indicate longer than predicted PSPS outage duration.	Integer
TotalCustomerMinutes	Actual outage minutes experienced by customers.	Integer
TotalCustomers	Total impacted customers. This is not necessarily a sum of all customer category values listed below because medical baseline customers may also be in other customer categories.	Integer
ResidentialCustomers	Total residential customers.	Integer
MedicalBaselineCustomers	Total medical baseline customers.	Integer
CommercialIndustrialCustomers	Total commercial/industrial customers.	Integer
OtherCustomers	Total customers that do not fall within residential or commercial/industrial (as requested under Decision 12-04-024).	Integer
CriticalInfrastructure	Number of critical infrastructure locations (in accordance with Decision 19-05-042 as modified by D.20-05-051) impacted by the PSPS event.	Integer
CriticalInfrastructureDuration	Duration of critical infrastructure locations (in accordance with Decision 19-05-042) de-energized during the PSPS event. Must be reported in whole number minutes.	Integer
CriticalInfrastructureImpact	"CriticalInfrastructure" multiplied by "CriticalInfrastructureDuration."	Integer
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

County	County in which asset is located. If the line crosses multiple counties, list all counties separated by commas.	Text

3.3.4 PSPS Event Polygon (Feature Class)

This feature class includes the parcels of customers impacted by PSPS events. If an electrical corporation provides this feature class as parcels, the electrical corporation does not need to provide the "PSPS Customer Meter Points" feature class. However, if the electrical corporation provides this feature class as more general polygons that are not exact parcels, it does need to provide the "PSPS Customer Meter Points" feature class.

Field Name	Field Description	Field Type
PspsEventPolygonID	Primary key for the PSPS Event Polygon feature class attribute table.	Text
EventID	A unique standardized identification name of the unique event. Foreign key enabling connection to the PSPS Event Log related table.	Text
CircuitID	A unique standardized identification name of the circuit that was de-energized. Foreign key to all the related asset line feature class attribute tables. There should be only one value per record – may have multiple records in table for one PSPS event if multiple circuits were involved. Use the same Event ID for these records	Text
SubstationID	A unique standardized identification name of the substation/feeder feeding the circuit that was de-energized during the PSPS event. Foreign key to the Substation feature class attribute table. There should be only one value per record – may have multiple records in table for one PSPS event if multiple substations were involved. Use the same Event ID for these records.	Text
IsolationDeviceID	A unique standardized identification name of the isolation device. Should match the value in the "AssetID" field of the isolation device's point data in the Switchgear feature class. A foreign key. AKA AssetID. There should be only one value per record – may have multiple records in table for one PSPS event if multiple isolation devices were involved. Use the same Event ID for these records.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
IsolationDevice	The device which isolated the circuit during the PSPS event. Possible values: • Circuit Breaker	Text

	• Fuse • Switch • Other - See comment There should be only one value per record – may have multiple records in table for one PSPS event if multiple devices were used. Use the same Event ID for these records.	
IsolationDeviceComment	Isolation device not listed in the options above.	Text
PredictedDurationMinutes	Anticipated duration of PSPS event's circuit shutoff after it is initiated. Must be reported in whole number minutes.	Integer
ActualDurationMinutes	Actual duration of PSPS event's circuit shutoff. This would be determined after restoration and must be reported in whole number minutes. This should be the duration for the customer whose service was restored last (the maximum duration for the outage).	Integer
DurationPredictionError	"PredictedDurationMinutes" minus "ActualDurationMinutes." Positive values indicate shorter than predicted PSPS outage duration; negative values indicate longer than predicted PSPS outage duration.	Integer
TotalCustomerMinutes	Actual outage minutes experienced by customers.	Integer
TotalCustomers	Total impacted customers. This is not necessarily a sum of all customer category values listed below because medical baseline customers may also be in other customer categories.	Integer
ResidentialCustomers	Total residential customers.	Integer
MedicalBaselineCustomers	Total medical baseline customers.	Integer
CommercialIndustrialCustomers	Total commercial/industrial customers.	Integer
OtherCustomers	Total customers that do not fall within residential or commercial/industrial (as requested under Decision 12-04-024).	Integer
CriticalInfrastructure	Number of critical infrastructure locations (in accordance with Decision 19-05-042 as modified by D.20-05-051) impacted by the PSPS event.	Integer
CriticalInfrastructureDuration	Duration of critical infrastructure locations (in accordance with Decision 19-05-042) de-energized during the PSPS event. Must be reported in whole number minutes.	Integer
CriticalInfrastructureImpact	"CriticalInfrastructure" multiplied by "CriticalInfrastructureDuration." This field features the total PSPS impact on critical infrastructure.	Integer
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
County	County in which parcel affected by PSPS event is located. If the data polygon intersects multiple counties, list all counties separated by commas.	Text

3.3.5 PSPS Event Customer Meter Point (Feature Class)

This feature class includes points for the customer meters assigned to customers who experience a PSPS event. Its geometry will always be a subset of the “Customer Meters” feature class.

Field Name	Field Description	Field Type
PspsEventMeterID	An underscore delimited concatenation of "EventID"+"_"+"AssetID.” Primary key for the PSPS Event Customer Meter Point feature class attribute table.	Text
EventID	A unique standardized identification name of the unique PSPS event associated with a customer meter. Foreign key enabling connection to the PSPS Event Log related table.	Text
AssetID	Unique ID for a specific meter. It should be a traceable stable ID within the utility’s operations/processes. Foreign key to the Customer Meter Point feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the customer meter intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which asset is located.	Text

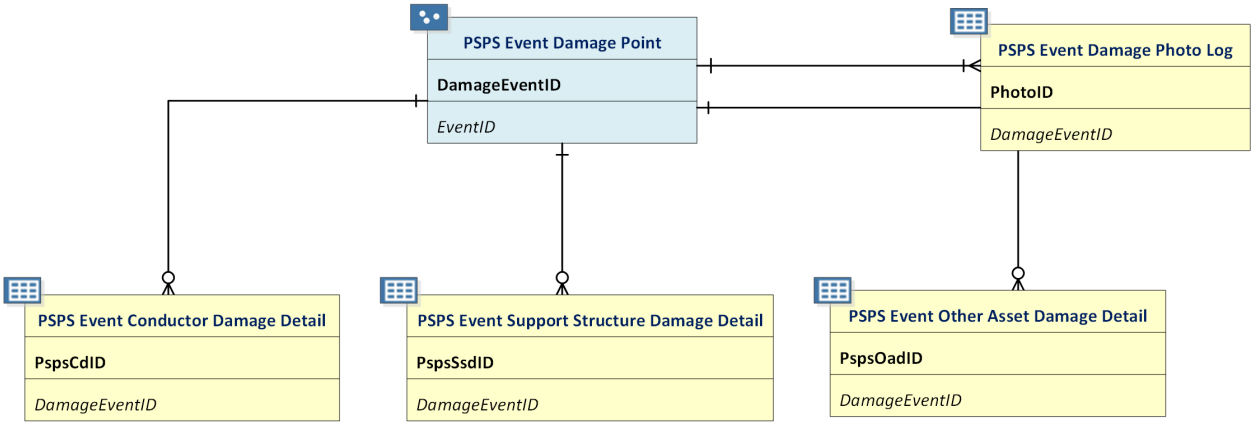
3.3.6 PSPS Event Asset Damage

3.3.6.1 Overview and Entity-Relationship Diagram for PSPS Asset Damage

The schemas in this section are intended to help electric utilities collect accurate data covering fire hazard-related damage to electrical assets that occurs during PSPS events. Among other actions, the data may be used to monitor damage, model fire hazard potential,

and assess the effectiveness of PSPS events. PSPS damage GIS data is a valuable fire prevention resource and will help utilities, agencies, and other stakeholders reduce or eliminate the potential for ignitions associated with various electrical assets.

Photos are a required part of PSPS event asset damage data collection. At least one photo is to be taken of the asset damage, and at least one photo is to be taken of the fuel bed below the asset damage (the area where sparks, burning debris, etc., could hit the ground and cause an ignition). Photos are required for all forms of damage covered by the feature class and related schema in Section 3.3.6 of this document. Enter "PhotoID," "FuelBedPhotoID," and "DamageEventID" values in the "PSPS Damage Photo Log" related table to ensure photos can be linked to their associated GIS points.



3.3.6.2 PSPS Event Damage Point (Feature Class)

Note: Data for all the fields in the tables in this section are not required to be submitted with the 10-day report associated with PSPS event damages. Electrical corporations have already been provided with the 10-day report requirements. Photos are required to accompany this feature class. See Section 3.3.6.1 for more guidance.

Field Name	Field Description	Field Type
DamageEventID	ID value for an individual PSPS event. Event ID values for damage points should match event ID values in corresponding PSPS event GIS data. Primary key enabling connection of the PSPS Event Damage Point feature class attribute table to the PSPS Event Conductor, Support Structure, and Other Asset damage detail related tables.	Text
EventID	A unique standardized identification name of the unique event. Foreign key enabling connection to the PSPS Event Log related table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty	Text

	• PacifiCorp • PG&E • SCE • SDG&E • TBC	
FuelBedDescription	Type of fuel bed existing under damage location. Possible values: • Fire-resistive fuel bed - Fuel bed not conducive to propagating fire where damage occurred (e.g. asphalt, concrete, gravel, etc.). • Grass fuel model - Fuel bed comprised of annual grasses where damaged occurred. • Brush fuel model - Fuel bed comprised of mainly brush or shrubs where damage occurred (e.g. chamise, manzanita, chaparral, scotch broom, etc.). • Timber fuel model - Fuel bed comprised of a timber where damaged occurred (e.g., forests, timber litter, logging slash, etc.). • Other - See comment	Text
FuelBedDescriptionComment	Fuel bed description not listed in the options above.	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset damage point intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which asset damage is located.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
Latitude	Latitude of point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of point (in decimal degrees). Field-calculate in GIS software.	Float

3.3.6.3 PSPS Event Conductor Damage Detail (Related Table)

Using a one-to-many relationship, add as many "Conductor Damage" related table records (per PSPS damage location point) as are necessary to provide information about each instance or instances of conductor asset damage represented by a single point. If there is only one instance of damage per point, use only one related table record. If there are multiple instances of damage in the same location represented by a single point, use one related table record per instance of damage.

Field Name	Field Description	Field Type
PspsCdID	Primary key for the PSPS Event Conductor Damage Detail related table.	Text
DamageEventID	ID value for an individual PSPS event. Event ID values for damage points should match event ID values in corresponding PSPS event GIS data. Foreign key enabling connection to the PSPS Event Damage Pointfeature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
CircuitID	Unique ID for a specific circuit. It should be a traceable stable ID within the utility's operations/processes. Foreign key to the related asset line feature class attribute tables.	Text
FromDeviceID	The upstream support structure asset ID. Foreign key to the related asset point feature class attribute tables. AKA AssetID.	Text
ToDeviceID	The downstream support structure asset ID. Foreign key to the related asset point feature class attribute tables. AKA AssetID.	Text
FeederID	Circuit/feeder ID for the damaged span of line. Foreign key to the related asset line feature class attribute tables.	Text
SubstationID	ID of substation associated with asset. Foreign key to the Substation feature class attribute table.	Text
DamageDateTime	Date and time or estimated date and time damage occurred.	Date
Asset	Specific type of asset that is damaged. Required value: Conductor	Text
NominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text
OperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text
ConductorMaterial	Conductor material. Possible values: • All aluminum conductor (AAC) • All aluminum alloy conductor (AAAC) • Aluminum conductor aluminum reinforced (ACAR) • Aluminum conductor steel reinforced (ACSR) • Aluminum conductor steel supported (ACSS) • Copper (Cu) • Other - See comment	Text

ConductorMaterialComment	Conductor material not listed in the options above.	Text
ConductorType	Type of conductor. Possible values: • Bare • Covered • Other – See comment	Text
ConductorTypeComment	Conductor type not listed above.	Text
ConductorLength	Conductor length in feet based on GIS data.	Float
FailedEquipmentDescription	Equipment that contributed to the conductor damage. Write “Unknown” or “N/A” as appropriate.	Text
ExternalForceDescription	Force responsible for causing the conductor damage.	Text
SubstationName	Name of substation associated with asset.	Text
SubstationType	Type of substation. Possible values: • Radial • Loop • Network	Text
Cause	High-level category for conductor damage cause. Possible values: • Object contact • Equipment failure • Wire-to-wire contact • Contamination • Utility work/operation • Vandalism/theft • Unknown • Other - See comment	Text
CauseComment	Cause category not listed in options above.	Text
EnergizedOnGround	Did the damaged conductor make contact with the ground while energized? Possible values: • Yes • No • Unknown	Text
ManufacturerModelID	The manufacturer and asset model specifications that would enable one to identify exactly what type of equipment was involved with the damage. Do not use acronyms or abbreviations for this field. Fully spell out the manufacturer and model names. If some sort of model or part code/name is not available, at least record the manufacturer name. Write "Unknown" if no manufacturer info can be determined based on information available in the field. “Unknown” values should be reviewed by other electrical corporation staff after data collection and filled in from existing databases or other sources if possible.	Text
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter “-99” if unknown.	Integer

EstimatedAge	The age of the asset in years. Only fill this out if the “InstallationYear” and “InstallationDate” values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • >100 • Unknown • N/A (only enter this if there is an “InstallationYear” value)	Text
UsefulLifespan	The number of years an asset would have been expected to have a useful functioning existence prior to damage. If unknown, enter “-99.”	Integer
LikelyArcing	Was arcing likely because of the damage? Possible values: • Yes • No • Unknown	Text
DamageType	Type of damage sustained. Possible values: • Asset damage • Asset failure • Equipment damage • Equipment failure • Veg contact • Object contact	Text
DamageDescription	Description of damage. Possible values: • Broken conductor • Damaged conductor • Kite in line • Pine needles on line • Tree bark on line • Tree branch on line • Tree leaning into line • Tree leaning toward line • Wire-to-wire contact • Other - See comment	Text
DamageDescriptionComment	Damage category not listed in the options above and/or additional relevant details about damage	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.3.6.4 PSPS Event Support Structure Damage Detail (Related Table)

Using a one-to-many relationship, add as many related table records (per PSPS damage location point) as are necessary to provide information about each instance or instances of support structure asset damage represented by a single point. If there is only one instance of damage, use only one related table record. If there are multiple instances of damage in the same location represented by a single point, use one related table record per instance of damage.

Field Name	Field Description	Field Type
PspsSsdID	Primary key for the PSPS Event Support Structure Damage Detail related table.	Text
DamageEventID	ID value for an individual PSPS event. Event ID values for damage points should match event ID values in corresponding PSPS event GIS data. Foreign key enabling connection to PSPS Event Damage Point feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AssetID	Unique ID for a specific point asset. It should be a traceable stable ID within the utility's operations/processes. Foreign key to the related asset point feature class attribute tables.	Text
FeederID	Circuit/feeder ID for the damaged span of line. Foreign key to the related asset line feature class attribute tables.	Text
DamageDateTime	Date and time or estimated date and time damage occurred.	Date
Asset	Specific type of asset that is damaged. This list of dropdown menu items should be modified by each electrical corporation to cover the assets most likely to be involved in PSPS damage. Possible values: • Pole • Tower • Crossarm • Secondary arms • Other - See comment	Text
AssetComment	Asset not listed in the options above.	Text
Cause	High-level category for support structure damage cause. Possible values: • Object contact • Equipment failure • Wire-to-wire contact	

	• Contamination • Utility work/operation • Vandalism/theft • Lightning • Unknown • Other - See comment	
CauseComment	Cause category not listed above.	
AssociatedNominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. “0-60”, “<500”). Leave blank if unknown.	Text
AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. “0-60”, “<500”). Leave blank if unknown.	Text
SupportStructureMaterial	Material of which support structure is made. Possible values: • Wood • Metal • Composite • Wrapped wood • Concrete • Other - See comment	Text
MaterialComment	Support structure material not listed in the options above.	Text
ManufacturerModelID	The manufacturer and asset model specifications that would enable one to identify exactly what type of equipment was involved with the damage. Do not use acronyms or abbreviations for this field. Fully spell out the manufacturer and model names. If some sort of model or part code/name is not available, at least record the manufacturer name. Write "Unknown" if no manufacturer info can be determined based on information available in the field. “Unknown” values should be reviewed by other electrical corporation staff after data collection and filled in from existing databases or other sources if possible.	Text
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter “-99” if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the “InstallationYear” and “InstallationDate” values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89	Text

	• 90-99 • >100 • Unknown • N/A (only enter this if there is an “InstallationYear” value)	
UsefulLifespan	The number of years an asset would have been expected to have a useful functioning existence prior to damage. If unknown, enter “-99.”	Integer
LikelyArcing	Was arcing likely because of the damage? Possible values: • Yes • No • Unknown	Text
DamageType	Type of damage sustained. Possible values: • Asset damage • Asset failure • Equipment damage • Equipment failure • Veg contact • Object contact	
DamageDescription	Description of damage. Possible values: • Broken pole • Damaged pole • Broken tower • Damaged tower • Broken crossarm • Damaged crossarm • Other - See comment	Text
DamageDescriptionComment	Damage category not listed in the options above and/or additional relevant details about damage	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.3.6.5 PSPS Event Other Asset Damage Detail (Related Table)

Using a one-to-many relationship, add as many related table records (per PSPS damage location point) as are necessary to provide information about each instance or instances of other asset damage (other than conductor or support structure damage) represented by a single point. If there is only one instance of other asset damage, use only one related table record. If there are multiple instances of damage in the same location represented by a single point, use one related table record per instance of other asset damage.

Field Name	**Field Description**	**Field Type**
PspsOadID	Primary key for the PSPS Event Other Asset Damage Detail related table.	Text
DamageEventID	ID value for an individual PSPS event. Event ID values for damage points should match event ID values in corresponding PSPS event GIS data. Foreign	Text

	key enabling connection to PSPS Event Damage Point feature class attribute table.	
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AssetID	Unique ID for a specific point asset. It should be a traceable stable ID within the utility's operations/processes. Foreign key to the related asset point feature class attribute tables.	Text
FeederID	Circuit/feeder ID for the damaged span of line. Foreign to the related asset line feature class attribute tables.	Text
DamageDateTime	Date and time or estimated date and time damage occurred.	Date
Asset	Specific type of asset that is damaged. This list of dropdown menu items should be modified by each electrical corporation to cover the assets most likely to be involved in PSPS damage. Possible values: • Down guy • Neutral • Service neutral • Span guy • Tie wire • Wood pin • Anchor • Other - See comment	Text
AssetComment	Asset not listed in the options above.	Text
Cause	High-level category for other asset damage cause. Possible values: • Object contact • Equipment failure • Wire-to-wire contact • Contamination • Utility work/operation • Vandalism/theft • Unknown • Other - See comment	
CauseComment	Cause category not listed above.	
AssociatedNominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text
AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text

ManufacturerModelID	The manufacturer and asset model specifications that would enable one to identify exactly what type of equipment was involved with the damage. Do not use acronyms or abbreviations for this field. Fully spell out the manufacturer and model names. If some sort of model or part code/name is not available, at least record the manufacturer name. Write "Unknown" if no manufacturer info can be determined based on information available in the field. “Unknown” values should be reviewed by other electrical corporation staff after data collection and filled in from existing databases or other sources if possible.	Text
InstallationDate	Date the asset was installed. Leave blank if unknown.	Date
InstallationYear	Year of asset installation. Use four digits. Enter “-99” if unknown.	Integer
EstimatedAge	The age of the asset in years. Only fill this out if the “InstallationYear” and “InstallationDate” values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • >100 • Unknown • N/A (only enter this if there is an “InstallationYear” value)	Text
UsefulLifespan	The number of years an asset would have been expected to have a useful functioning existence prior to damage. If unknown, enter “-99.”	Integer
ExemptionStatus	Is the asset exempt per California Public Resources Code (PRC) 4292? This field is especially important and a high priority for Energy Safety and the State of California. Non-exempt equipment requires support structure clearance. Possible values: • Yes • No • Unknown • N/A	Text
LikelyArcing	Was arcing likely because of the damage? Possible values: • Yes • No • Unknown	Text
DamageType	Type of damage sustained. Possible values: • Asset damage • Asset failure • Equipment damage • Equipment failure	Text

	• Veg contact • Object contact	
DamageDescription	Description of damage. Possible values: • Broken down guy • Broken hand tie • Broken neutral • Broken service neutral • Broken guy wire • Broken tie wire • Broken tree branch near line • Broken pin • Broken insulator • Damaged crossarm • Guy and anchor damage • Tree branch on transformer • Other - See comment	Text
DamageDescriptionComment	Damage category not listed in the options above and/or additional relevant details about damage.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.3.6.6 PSPS Event Damage Photo Log (Related Table)

In this table, enter information about photos that accompany the "PSPS Event Damage Point" feature class. If more than one damaged asset photo or more than one fuel bed photo is applicable to an individual PSPS damage point, enter a seperate record for each damaged asset photo or fuel bed photo that is being submitted.

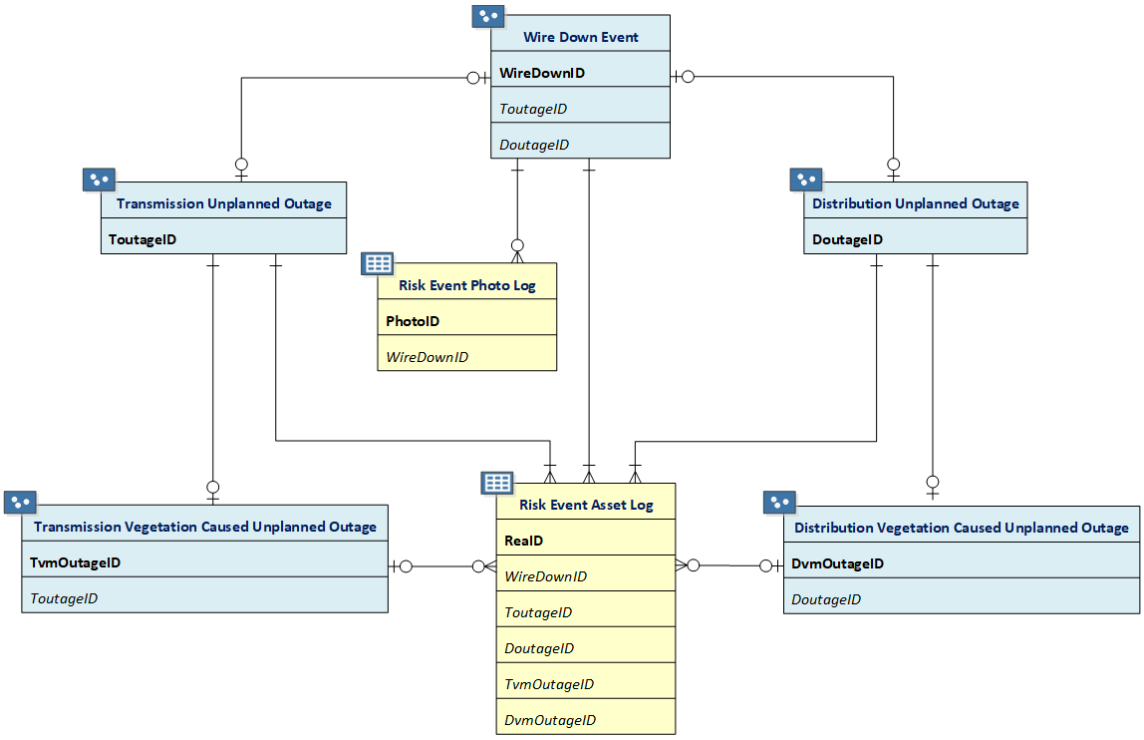
Field Name	**Field Description**	**Field Type**
DamagedAsset PhotoID	Name for a photo of the damaged asset. Enables damaged asset photos to be linked to GIS data. A primary key for the PSPS Damage Photo Log related table. Photos must be geotagged JPEG or PNG files. Use the following naming format: UtilityName _InspectorInitial_PspsDamage_YYYYMMDD_PhotoNumber. For example, "UtilityG&E_AB_PspsDamage_20200703_1.png". If applicable/logical, an optional district ID value can be added between the utility name and inspector initial values (e.g., "UtilityName_DistrictID_InspectorInitial_PspsDamage_YYYYMMDD_PhotoNumber").	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty	Text

	• PacifiCorp • PG&E • SCE • SDG&E • TBC	
FuelBedPhotoID	Name for a photo of the fuel bed below the damaged asset. Enables fuel bed photos to be linked to GIS data. A primary key for the PSPS Damage Photo Log related table. A primary key for the PSPS Damage Photo Log related table. Photos must be geotagged JPEG or PNG files. Use the following naming format: Use the following naming format: UtilityName _InspectorInitial_PspsDamageFuelBed_YYYYMMDD_Photo#. For example, "UtilityG&E_AB_PspsDamage_20200703_1.png". If applicable/logical, an optional district ID value can be added between the utility name and inspector initial values (e.g., UtilityName_DistrictID_InspectorInitial_PspsDamageFuelBed_YYYYMMDD_Photo#).	Text
DamageEventID	Foreign key to the damage point feature class and damage detail related tables.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.4 Risk Event Point (Feature Dataset)

3.4.1 Overview and Entity-Relationship Diagram for Wire Down Events, Outages, and Ignitions

This dataset contains feature classes for wire down events, overall unplanned outages, vegetation-related outages (VM outages), and ignitions. All these feature classes are related to the "Risk Event Asset Log" related table. The ignition feature class is also related to the "Risk Event Photo Log" related table. Photos are required for the ignition points. Photos are encouraged but optional for wire down locations.



3.4.2 Wire Down Event (Feature Class)

If submitting photos, submit a photo for each point location where a wire down event occurred. Enter “PhotoID” and “WireDownID” values in the “Risk Event Photo Log” related table to ensure photos can be linked to their associated GIS points.

Field Name	Field Description	Field Type
WireDownID	Unique ID for the wire down event. Primary key for the Wire Down Event feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
ToutageID	A unique ID for the transmission outage event. Foreign key to the Transmission Outage feature class attribute table.	Text
DoutageID	A unique ID for the distribution outage event. Foreign key to the Distribution Outage feature class attribute table.	Text
WireDownDate	The start date of the wire down event. Leave blank if unknown.	Date
WireDownYear	The year that the risk event occurred. Use four digits.	Integer
Cause	High-level category for wire down event cause. Possible values: • Object contact • Equipment failure	Text

	• Wire-to-wire contact • Contamination • Utility work/Operation • Vandalism/theft • Unknown • Other - See comment	
CauseComment	Wire down cause description not listed in the options above.	Text
ObjectContact	Description of object involved in the contact if the value of "SuspectedWireDownCause" is "Object contact." Enter N/A for this field if the value of "SuspectedWireDownCause" is not "Object contact." Possible values: • Vegetation contact • Animal contact • Balloon contact • Vehicle contact – car pole • Vehicle contact – aircraft • 3rd party contact (e.g., 3rd party tree trimmer) • Unknown • N/A	Text
EquipmentFailure	Description of failed or damaged equipment or component involved if "SuspectedWireDownCause" value is "Equipment failure." Enter N/A for this field if the value of "SuspectedWireDownCause" is not "Equipment failure." Possible values: • Anchor/guy • Capacitor bank • Conductor • Connector device • Crossarm • Fuse • Insulator and bushing • Lightning arrester • Pole • Recloser • Relay • Sectionalizer • Splice • Switch • Tap • Tie wire • Transformer • Voltage regulator/booster • Unknown • Other - See comment • N/A	Text
EquipmentFailureComment	Equipment failure description not listed in the options above.	Text
AssociatedNominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text
AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text
SpanLength	The length of a single-phase conductor, in feet, as measured between the "FromDevice" and "ToDevice" assets.	Float

TotalSplices	The total number of splices in the span of conductor involved in the wire down event. In the event of wire down events occurring over multiple spans, include the total number of splices in all failed spans.	Integer
MaxSplices	The maximum number of splices in an individual phase conductor involved in the wire down event.	Integer
MultipleDown	Was more than one span of conductors impacted by the wire down event? Possible values: • Yes • No	Text
ConductorMaterial	Material of the conductor that failed in the wire down event. Possible values: • All aluminum conductor (AAC) • All aluminum alloy conductor (AAAC) • Aluminum conductor aluminum reinforced (ACAR) • Aluminum conductor steel reinforced (ACSR) • Aluminum conductor steel supported (ACSS) • Copper (Cu) • Other - See comment	Text
ConductorMaterialComment	Conductor material description not listed in the options above.	Text
ConductorSize	Size (e.g. No. 4, 1/0, etc.) of the conductor involved in the incident, in AWG or KCMIL.	Text
ConductorOD	Overall diameter of the conductor, in inches.	Float
ConductorRating	The nominal ampacity rating of the conductor involved in the wire down event in amperes.	Float
OutageStatus	Was there an outage associated with the event? Possible values: • Yes • No	Text
Energized	Was the conductor energized while in contact with a grounded object during the event? If the wire down event did not result in contact with a grounded object, then enter “N/A” for this field. Possible values: • Yes • No • Unknown	Text
IgnitionStatus	Was there an ignition associated with the wire down event? Possible values: • Yes • No	Text
WireDownNotes	Additional information or notes available for the wire down event and not captured in other fields.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the outage intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County where the wire down event occurred.	Text
District	Operating district where the wire down event occurred.	Text

Latitude	Latitude of event point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of event point (in decimal degrees). Field-calculate in GIS software.	Float

3.4.3 Ignition (Feature Class)

Photos are required to accompany this feature class. Submit a photo for each location where an ignition started. Enter “PhotoID” and “IgnitionID” values in the “Risk Event Photo Log” related table to ensure photos can be linked to their associated GIS points.

Field Name	Field Description	Field Type
IgnitionID	Unique ID for the ignition event. Primary key for the Ignition feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
SubstationID	Unique ID of the substation supplying the involved circuit. Foreign key to Substation feature class attribute table.	Text
NearestWeatherStationID	Unique ID of weather station closest to the ignition location. Foreign key to the Weather Station feature class attribute table.	Text
ToutageID	A unique ID for the transmission outage event. Foreign key to the Transmission Outage feature class attribute table.	Text
DoutageID	A unique ID for the distribution outage event. Foreign key to the Distribution Outage feature class attribute table.	Text
FireStartDateTime	Date and time ignition started. Leave blank if unknown.	Date
FireStartYear	The year that the risk event occurred. Use four digits.	Integer
FireDetectionMethod	The method by which the utility first learned of the ignition event. Possible values: • Public • Satellite • Camera • Utility staff • Fire agency • Other – See comment	Text
FireDetectionMethodComment	Fire detection method description not listed in the options above.	Text
SuspectedInitiatingCause	The suspected initiating event of the ignition. Possible values: • Object contact • Equipment failure • Wire-to-wire contact • Contamination • Normal operation • Vandalism/theft • Lightning • Unknown • Other – See comment	Text
SuspectedInitiatingCauseComment	Suspected ignition initiating event that is not listed in the options above.	Text
ObjectContact	Description of object involved in contact if “Object contact” is the value of the “SuspectedInitiatingCause” field. If “Object contact” is not the value of the “SuspectedInitiatingCauset” field, enter “N/A.” Possible values: • Vegetation • Animal • Balloon	Text

	• Vehicle contact – car pole • Vehicle contact – aircraft • 3rd party facility • Unknown • N/A • Other – See comment	
ObjectContactComment	Description of object contact not listed in the options above; or, any additional information about object contact	
EquipmentFailure	Description of equipment involved in the ignition if "Equipment failure" is the value of the "SuspectedInitiatingEvent" field. If "Equipment failure" is not the value of the "SuspectedInitiatingEvent" field, enter "N/A." Possible values: • Anchor/guy • Capacitor bank • Conductor • Connector device • Crossarm • Fuse • Insulator and bushing • Lightning arrester • Pole • Recloser • Relay • Sectionalizer • Splice • Switch • Tap • Tie wire • Transformer • Voltage regulator/booster • Unknown • Other - See comment • N/A	Text
AssociatedNominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text
AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text
OtherCompanies	Companies (other than the electrical corporation submitting data) that had assets affected by the ignition event. These may include telephone, internet, and other service providers with equipment on affected infrastructure, if any. Enter "NA" if no other companies were affected.	Text
EquipmentType	The type of equipment involved in the ignition event. Possible values: • Overhead • Pad-mounted • Subsurface	Text
Determination	The entity relied upon to make the determination that was used to fill in the value of the "SuspectedInitiatingCause" field above. Possible values: • Utility personnel • Fire Agency • Other – See comment	Text

DeterminationComment	Determination entity not listed in the options above.	Text
FacilityContacted	The first facility that was contacted by an outside object. Only to be used if "Object contact" is selected as the value of the "SuspectedInitiatingCause" field. Possible values: • Bushing mounted cutout • Capacitor bank • Communications line • Conductor - Primary • Conductor - Secondary • Conductor - Transmission • Crossarm • Fuse • Guy/span wire • Insulator • Jumper • Support structure (pole or tower) • Pothead • Recloser • Riser • Service connector • Service drop • Splice/clamp/connector • Switch • Tie wire • Transformer • Voltage regulator • Other - See comment	Text
FacilityContactedComment	Any contacted facility that does not fall in the list above. If multiple facilities from the list above were contacted, list them here.	
ContributingFactor	Factors suspected as contributing to the ignition. Possible values: • Weather • External Force • Human Error • Unknown • Other – See comment	Text
ContributingFactorComment	Contributing factor description not listed in the options above.	Text
RFWStatus	Was there a red flag warning (RFW) issued by the National Weather Service (NWS) in effect at the ignition location at the time of ignition? Possible values: • Yes • No	Text
RFWIssueDateTime	The date and time when the NWS issued the RFW in effect at the ignition location at the time of the ignition. Leave blank if there was no RFW in effect at the time of ignition at the ignition location. Also leave blank if unknown.	Date
FWWStatus	Was there a fire weather watch (FWW) issued by the National Weather Service (NWS) in effect at the ignition location at the time of ignition? Possible values: • Yes • No	Text
FWWIssueDateTime	The date and time when the NWS issued the FWW in effect at the ignition location at the time of the ignition event. Leave blank if	Date

	there was no FWW in effect at the time of ignition at the ignition location. Also leave blank if unknown.	
HWWStatus	Was there a high wind warning (HWW) issued by the NWS in effect at the ignition location at the time of ignition? Possible values: • Yes • No	Text
HWWIssueDateTime	The date and time when the NWS issued the HWW in effect at the ignition location at the time of the ignition. Leave blank if there was no HWW in effect at the time of ignition at the ignition location. Also leave blank if unknown.	Date
OriginLandUse	Status of land at origin of ignition. Possible values: • Rural • Urban Urban is defined as more than 1,000 people per square mile using U.S. Census data at the tract level or smaller units. All other areas will be considered rural.	Text
MaterialAtOrigin	Fuel material for the ignition origin, Possible values: • Vegetation • Structure • Other – See comment	Text
MaterialAtOriginComment	Origin material not listed in the options above.	Text
FuelBedDescription	Type of fuel bed existing at the damage location. Possible values: • Fire-resistive fuel bed - Fuel bed not conducive to propagating fire where damage occurred (e.g. asphalt, concrete, gravel, etc.). • Grass fuel model - Fuel bed comprised of annual grasses where damaged occurred. • Brush fuel model - Fuel bed comprised of mainly brush or shrubs where damage occurred (e.g. chamise, manzanita, chaparral, scotch broom, etc.). • Timber fuel model - Fuel bed comprised of a timber where damaged occurred (e.g. forests, timber litter, logging slash, etc.). • Other - See comment	Text
FuelBedDescriptionComment	Fuel bed description not listed in the options above.	Text
FireSize	Size, in acres unless otherwise indicated, of fire resulting from the ignition. Possible values: • Structure-only • <3 meters of linear travel • <0.25 • 0.26-9.99 • 10-99 • 100-299 • 300-999 • 1,000-4,999 • 5,000+ • Unknown	Text
SuppressedBy	Entity responsible for suppressing ignition. Possible values: • Customer • Fire agency • Self-extinguished • Utility • Unknown	Text

SuppressingAgency	If the "SupressedBy" field has the value of "Fire Agency", enter the fire department name.	Text
FireInvestigation	Whether the fire authority having jurisdiction investigated the ignition and the status of the investigation. Possible values: • Yes – Complete • Yes – Pending • No	Text
FireAHJ	If there was an investigation of the ignition by a fire authority having jurisdiction, enter the fire agency name.	Text
OutageStatus	Was there an outage associated with the event? Possible values: • Yes • No	Text
IgnitionNotes	Additional information regarding the ignition event. All additional data fields collected by the utility that are not included in this ignition schema shall be included in this field. This field is not required; if the utility does not collect any additional information, it may be left blank.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the ignition event intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County where the ignition event occurred.	Text
District	Operating district where the ignition occurred.	Text
Latitude	Latitude of event point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of event point (in decimal degrees). Field-calculate in GIS software.	Float

3.4.4 Transmission Unplanned Outage (Feature Class)

For this table, include only unplanned outages (exclude planned outages).

Field Name	Field Description	Field Type
ToutageID	The unique ID for outage event. Primary key for the Transmission Unplanned Outage feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp	Text

	• PG&E • SCE • SDG&E • TBC	
SubstationID	Unique ID for the source substation feeding the circuit impacted by the outage. Must be traceable stable ID within a specific asset class. Foreign key to Substation feature class attribute table.	Text
BasicCause	High-level category for event cause. Possible values: • Object contact • Equipment failure • Wire-to-wire contact • Contamination • Operator error • Vandalism/theft • Lightning • Unknown • Other - See comment	Text
BasicCauseComment	Basic cause description not listed in the options above; or, any additional information regarding cause (unless additional info is regarding object contact or equipment failure, which have their own comment fields).	Text
BasicCauseObject	Description of object involved in contact. Only applicable if the "BasicCause" field has the value of "Object contact." If this is not the case, choose “N/A.” If the object involved in the contact is not in the list below, use the "Other - See comment" value and input an appropriate comment in the “BasicCauseObjectComment” field. Possible values: • Vegetation • Animal • Balloon • Vehicle contact – car pole • Vehicle contact – aircraft • 3rd party facility • Unknown • N/A • Other – See comment	Text
BasicCauseObjectComment	Basic cause object description not listed in the options above; or, any additional information about object contact.	Text
DamagedDevice	The device type that failed or experienced the damage that initiated the outage. Only applicable if the "BasicCause" field has the value of "Equipment failure." If this is not the case, choose “N/A.” If the device involved in the equipment failure is not in the list below, use the "Other - See comment" value and input an appropriate comment in the “DamagedDeviceComment” field. Possible values: • Anchor/guy • Capacitor bank • Conductor • Connector device • Crossarm • Fuse • Insulator and bushing • Lightning arrester • Pole • Recloser • Relay • Sectionalizer	Text

	• Splice • Switch • Tap • Tie wire • Transformer • Voltage regulator/booster • Unknown • N/A • Other - See comment	
DamagedDeviceComment	Damaged device description not listed in the options above; or any additional information about damaged device.	Text
ExpulsionFuseOperation	Did an expulsion fuse operate during the outage? Enter "N/A" if the subject circuit is not equipped with expulsion type fuses. Possible values: • Yes • No • N/A	Text
OutageDescription	Description or additional information for the outage. Not required.	Text
EventYear	The year outage started. Use four digits.	Integer
OutageStartDateTime	The date and time outage started. Leave blank if unknown.	Date
OutageEndDateTime	The date and time of full restoration.	Date
OutageDuration	The total time to restore all customers, from the first customer out, in minutes.	Float
CustomerMinutesInterrupted	Total customer-minutes interrupted associated with the outage. Do not more than two decimal places.	Float
CustomersOutMomentary	Total number of unique customers that experienced an outage lasting 5 minutes or less. Note: electrical corporation may use a different definition of "momentary" – if so, specify in the "OutageIntervalAlternativeDefinition" field.	Integer
CustomersOutSustained	Total number of unique customers that experienced an outage lasting longer than 5 minutes. Note: utility may use a different definition of "momentary" – if so, specify in the "OutageIntervalAlternativeDefinition" field.	Integer
CustomerCount	The total number of customers impacted by the outage. May not be the sum of the values in the "CustomersOutSustained" and "CustomersOutMomentary" fields (some customers may experience both in the same event – do not double count).	Integer
OutageInterval	Indication of whether the subject outage was momentary (i.e., 5 minutes or less) or sustained (i.e., longer than 5 minutes). Possible values: • Momentary • Sustained Note: utility may use a different definition of "momentary" – if so, specify in the "OutageIntervalAlternativeDefinition" field.	Text
OutageIntervalAlternativeDefinition	If the utility uses a different definition of "momentary" than specified above (5 minutes or less), specify the alternative definition here.	Text
AssociatedNominalVoltagekV	Voltage (in kilovolts) associated with outage. Do not use more than two decimal places. Enter "-99" if N/A.	Float
AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. Enter "-99" if N/A.	Float

OtherCompanies	Companies (other than the electrical corporation submitting data) that had assets affected by the outage event. These may include telephone, internet, and other service providers with equipment on affected infrastructure, if any. Enter “NA” if no other companies were affected.	Text
OutageClass	The class of circuit involved in the outage. Required value: Transmission	Text
RecloserSetting	If the subject circuit is equipped with reclosing capabilities, indicate whether the reclose function was enabled or disabled at the time of the outage. If the subject circuit is not equipped with reclosing capabilities, enter “N/A.” Possible values: • Enabled • Disabled • N/A	Text
IsolationDeviceType	Type of protective device that operated. Possible values: • Circuit breaker • Fuse • Lightning arrester • Switch • Transformer • Recloser • Jumper • Other – See comment	Text
IsolationDeviceTypeComment	Isolation device type description not listed in the options above.	Text
MajorEventDay	If all outages on a certain date exceed a statistical limit called Major Event Day (MED), this flag is set against outages associated with that day and typically excluded from certain types of reports. Possible values: • Yes • No	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the outage intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
LocationOrAddress	Address or location description for the outage location.	Text
County	County where the outage event is located.	Text
District	Operating district where the outage event occurred.	Text
Latitude	Latitude of event point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of event point (in decimal degrees). Field-calculate in GIS software.	Float

3.4.5 Transmission Vegetation Caused Unplanned Outage (Feature Class)

This feature class is intended to isolate and provide additional information for the "Transmission Unplanned Outage" feature class points that record outages caused by vegetation. Therefore, the "Transmission VM Unplanned Outage" feature class points are a subset of the "Transmission Unplanned Outage" feature class points, though they have some different attributes.

Field Name	Field Description	Field Type
TvmOutageID	The unique ID for an outage caused by vegetation. Primary key for the Transmission VM Outage feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
ToutageID	Foreign key to the Transmission Outage feature class attribute table.	Text
VmOutageDescription	Description or additional information for the outage event.	Text
InspectionDate	Date of inspection. Leave blank if unknown.	Date
VegetationSpecies	Species of the vegetation involved in causing the outage.	Text
TreeHeight	If a tree was involved with the outage, enter a height estimate (in feet). If a tree was not involved with the outage, enter "-99" Maximum value: 300.	Integer
TreeDiameter	If a tree was involved with the outage, enter tree diameter at breast height (in inches). If a tree was not involved with the outage, enter "-99" Maximum value: 180.	Integer
TreeTrunkDistance	If a tree was involved with the outage, enter the horizontal distance (in feet) of the tree's trunk from the impacted power lines. If a tree was not involved with the outage, enter "-99"	Integer
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.4.6 Distribution Unplanned Outage (Feature Class)

For this table, include only unplanned outages (exclude planned outages).

Field Name	Field Description	Field Type

DoutageID	The unique ID for the distribution unplanned outage event. Primary key for the Distribution Unplanned Outage feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
SubstationID	Unique ID for the source substation feeding the circuit impacted by the outage. Must be traceable stable ID within a specific asset class. Foreign key to Substation feature class attribute table.	Text
BasicCause	High-level category for event cause. Possible values: • Object contact • Equipment failure • Wire-to-wire contact • Contamination • Operator error • Vandalism/theft • Lightning • Unknown • Other - See comment	Text
BasicCauseComment	Basic cause description not listed in the options above; or any additional information about cause (unless additional info is regarding object contact or equipment failure, which have their own comment fields).	Text
BasicCauseObject	Description of object involved in contact. Only applicable if the "BasicCause" field has a value of "Object contact." If this is not the case, choose “N/A.” If the object involved in the contact is not in the list below, use the "Other - See comment" value and input an appropriate comment. Possible values: • Vegetation • Animal • Balloon • Vehicle contact – car pole • Vehicle contact – aircraft • 3rd party facility • N/A • Unknown • Other - See comment	Text
BasicCauseObjectComment	Basic cause object description not listed in the options above; or any additional information about object.	Text
DamagedDevice	The device type that failed or experienced damage which initiated the outage. Possible Values: • Anchor/guy • Capacitor bank • Conductor • Connector device • Crossarm • Fuse • Insulator and bushing • Lightning arrester • Pole	Text

	• Recloser • Relay • Sectionalizer • Splice • Switch • Tap • Tie wire • Transformer • Voltage regulator/booster • N/A • Unknown • Other - See comment	
DamagedDeviceComment	Damaged device description not listed in the options above; or any additional information about damaged device.	Text
ExpulsionFuseOperation	Did an expulsion fuse operate during the outage? Enter "N/A" if the subject circuit is not equipped with expulsion type fuses. Possible values: • Yes • No • N/A	Text
OutageDescription	Description or additional information for the outage. Not required.	Text
EventYear	The year outage started. Use four digits.	Integer
OutageStartDateTime	The date and time outage started. Leave blank if unknown.	Date
OutageEndDateTime	The date and time of full restoration.	Date
OutageDuration	The total time to restore all customers, from the first customer out, in minutes.	Float
CustomerMinutesInterrupted	Total customer-minutes interrupted associated with the outage. Not more than two decimal places.	Float
CustomersOutMomentary	Total number of unique customers that experienced an outage lasting 5 minutes or less. Note: utility may use a different definition of "momentary" – if so, specify in the "OutageIntervalAlternativeDefinition" field.	Integer
CustomersOutSustained	Total number of unique customers that experienced an outage lasting longer than 5 minutes. Note: utility may use a different definition of "momentary" – if so, specify in the "OutageIntervalAlternativeDefinition" field.	Integer
CustomerCount	The total number of customers impacted by the outage. May not be the sum of the values in the "CustomersOutSustained" and "CustomersOutMomentary" fields (some customers may experience both in the same event – do not double count).	Integer
OutageInterval	Indication of whether the subject outage was momentary (i.e., 5 minutes or less) or sustained (i.e., longer than 5 minutes). Possible values: • Momentary • Sustained Note: utility may use a different definition of "momentary" – if so, specify in the "OutageIntervalAlternativeDefinition" field.	Text
OutageIntervalAlternativeDefinition	If the utility uses a different definition of "momentary" than specified above (5 minutes or less), specify the alternative definition here.	Text
AssociatedNominalVoltagekV	Nominal voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. "0-60", "<500"). Leave blank if unknown.	Text

AssociatedOperatingVoltagekV	Operating voltage (in kilovolts) associated with asset. Do not use more than two decimal places. OK to use ranges (e.g. “0-60”, “<500”). Leave blank if unknown.	Text
OtherCompanies	Companies (other than the electrical corporation submitting data) that had assets affected by the outage event. These may include telephone, internet, and other service providers with equipment on affected infrastructure, if any. Enter “NA” if no other companies were affected.	Text
OutageClass	The class of circuit involved in the outage. Required value: Distribution	Text
RecloserSetting	If the subject circuit is equipped with reclosing capabilities, indicate whether the reclose function was enabled or disabled at the time of the outage. If the subject circuit is not equipped with reclosing capabilities, enter “N/A.” Possible values: • Enabled • Disabled • N/A	Text
IsolationDeviceType	Type of protective device that operated. Possible values: • Circuit Breaker • Fuse • Lightning Arrester • Switch • Transformer • Recloser • Jumper • Other – See comment	Text
IsolationDeviceTypeComment	Isolation device type description not listed in the options above.	Text
MajorEventDay	If all outages on a certain date exceed a statistical limit called Major Event Day (MED), this flag is set against outages associated with that day and typically excluded from certain types of reports. Possible values: • Yes • No	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the outage intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
LocationOrAddress	Address or location description for the outage location.	Text
County	County where the outage event occurred.	Text
District	Operating district where the outage event occurred.	Text
Latitude	Latitude of event point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of event point (in decimal degrees). Field-calculate in GIS software.	Float

3.4.7 Distribution Vegetation Caused Unplanned Outage (Feature Class)

This feature class is intended to isolate and provide additional information for the "Distribution Unplanned Outage" feature class points that record outages caused by vegetation. Therefore, the "Distribution VM Unplanned Outage" feature class points are a subset of the "Distribution Unplanned Outage" feature class points, though they have some different attributes.

Field Name	Field Description	Field Type
DvmOutageID	The unique ID for distribution outage caused by vegetation. Primary key for the Distribution Vegetation Caused Unplanned Outage feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
DoutageID	Foreign key to the Distribution Unplanned Outage feature class attribute table.	Text
VmOutageDescription	Description or additional information for the outage event.	Text
InspectionDate	Date of inspection. Leave blank if unknown.	Date
VegetationSpecies	Species of vegetation involved in causing the outage.	Text
TreeHeight	If a tree was involved with the outage, enter a height estimate (in feet). If a tree was not involved with the outage, enter "N/A." Maximum value: 300.	Integer
TreeDiameter	If a tree was involved with the outage, enter tree diameter at breast height (in inches). If a tree was not involved with the outage, enter "N/A." Maximum value: 180.	Integer
TreeTrunkDistance	If a tree was involved with the outage, enter the horizontal distance (in feet) of the tree's trunk from the impacted power lines. If a tree was not involved with the outage, enter "N/A."	Integer
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.4.8 Risk Event Asset Log (Related Table)

Field Name	Field Description	Field Type
ReaID	The unique ID for the associated asset. Primary key for the Risk Event Asset Log related table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp	Text

	• PG&E • SCE • SDG&E • TBC	
WireDownID	Foreign key to the Wire Down Event feature class attribute table.	Text
FromDeviceID	The AssetID of the upstream structure(s) supporting the conductor involved in the wire down event. Enter multiple IDs if multiple upstream structures are in the same location. Foreign key to all the associated asset point feature class attribute tables.	Text
ToDeviceID	The AssetID of the downstream structure(s) supporting the conductor involved in the wire down event. Enter multiple IDs if multiple downstream structures are in the same location. Foreign key to all the associated asset point feature class attribute tables.	Text
IgnitionID	Foreign key to the Ignition feature class attribute table.	Text
StationID	Unique ID for the nearest weather station to the ignition location. Enter multiple IDs if multiple stations are in the same location. Must be traceable stable ID within a weather station. Foreign key to the Weather Station feature class attribute table.	Text
ToutageID	Foreign key to the Transmission Unplanned Outage feature class attribute table.	Text
TvmOutageID	Foreign key to the Transmission VM Unplanned Outage feature class attribute table.	Text
DoutageID	Foreign key to the Distribution Unplanned Outage feature class attribute table.	Text
DvmOutageID	Foreign key to the Distribution Outage feature class attribute table.	Text
IsolationDeviceID	The AssetID of the device that operated to de-energize the circuit for an outage event. Should be traceable within a specific asset class. Foreign key to all the associated asset point tables.	Text
DamagedDeviceID	The AssetID of the device that failed or experienced the damage thatinitiated the outage. Should be traceable within a specific asset class. Foreign key to all the associated asset point feature class attribute tables.	Text
AssetID	Unique ID for asset point feature class attribute tables. Must be traceable stable ID within a specific asset class. Foreign key to all the associated asset point feature class attribute tables.	Text
CircuitID	Unique ID for the specific circuit impacted by a risk event. Must be traceable stable ID within a specific asset class. Foreign key to all the associated asset line feature class attribute tables.	Text
SubstationID	Unique ID for the source substation feeding the circuit impacted by the outage. Must be traceable stable ID within a substation. Foreign key to the Substation feature class attribute table.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.4.9 Risk Event Photo Log (Related Table)

In this table, enter information about photos that accompany particular risk event feature classes. If more than one photo is applicable to an individual risk event point, enter a separate record for each photo that is being submitted.

Field Name	Field Description	Field Type

PhotoID	Name for a photo of the risk event location. Enables a risk event photo to be linked to GIS data. Primary key for the Risk Event Photo Log related table. Photos must be geotagged JPEG or PNG files. Use the following naming format: UtilityName _InspectorInitial_RiskEvent_YYYYMMDD_PhotoNumber. For example, "UtilityG&E_AB_PspsDamage_20200703_1.png". If applicable/logical, an optional district ID value can be added between the utility name and inspector initial values (e.g., "UtilityName_DistrictID_InspectorInitial_RiskEvent_YYYYMMDD_PhotoNumber").	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
IgnitionID	Foreign key to the Ignition feature class attribute table.	Text
WireDownID	Foreign key to the Wire Down Event feature class attribute table.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

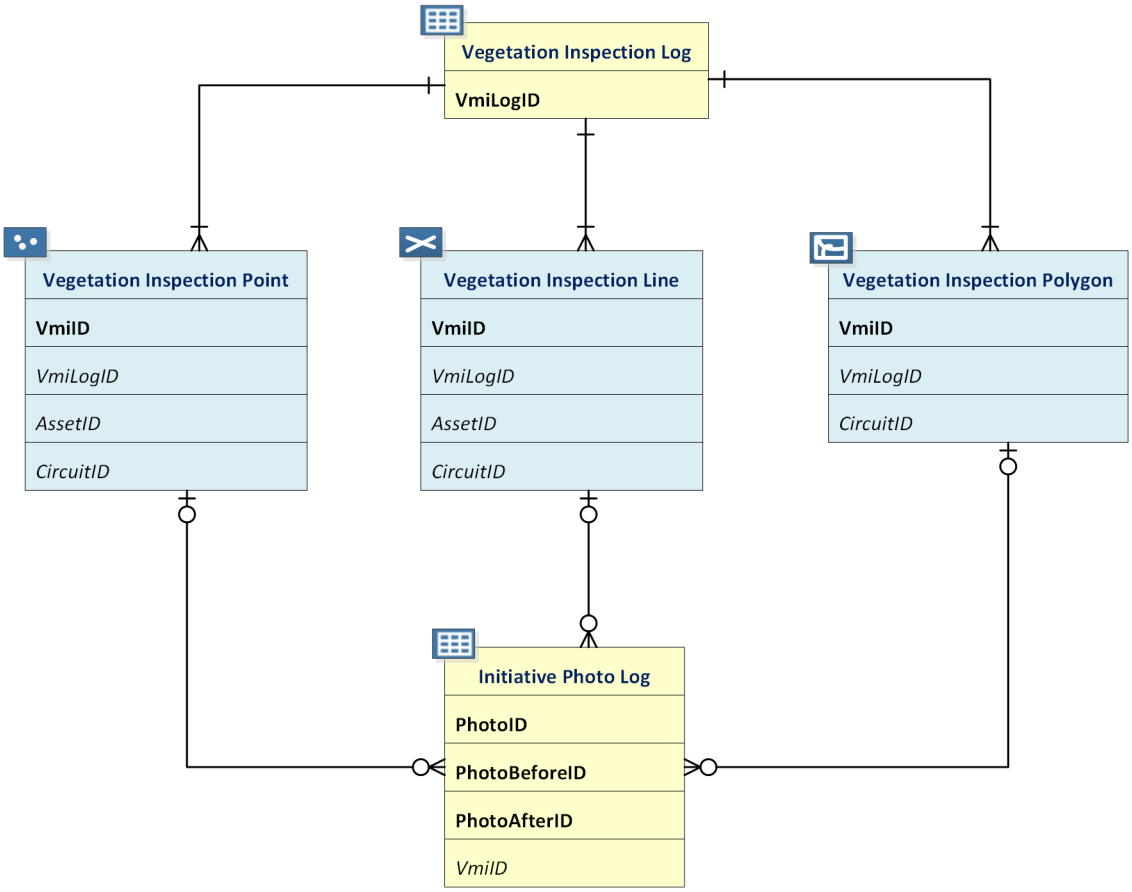
3.5 Initiative (Feature Dataset)

3.5.1 Vegetation Inspections

3.5.1.1 Overview and Entity-Relationship Diagram for Vegetation Inspections

Vegetation inspections are focused on inspecting the state of vegetation near electrical assets whereas vegetation management projects involve the physical manipulation of vegetation (clearing, thinning, etc.). For vegetation inspections, Energy Safety provided template feature classes for points, lines, and polygons in case an electrical corporation records vegetation inspection data in any of these geometries. Any vegetation inspection data recorded in these formats must be submitted. However, if an electrical corporation records inspection data in one format but not another (e.g., points but not polygons), it does not have to convert existing data to another geometry, unless specifically requested to do so by Energy Safety. If an electrical corporation does not record any vegetation inspection data in any geospatial geometry, it must start recording vegetation inspection GIS geometry data going forward. With each quarterly data submission, electrical corporations shall submit data for inspections which were either active or completed within the reporting period (i.e., the previous quarter), and data for inspections planned for the next quarter (i.e., the following reporting period).

Photos are encouraged but optional for vegetation inspections. If submitting vegetation inspection photos, only submit vegetation inspection photos for cases where inspections reveal issues (e.g., regulatory non-compliance, fire risk hazards, etc.). If a vegetation inspection reveals issues, and corrective action is taken, take a photo of the inspection issue before and after the action. When this is the case, for points, populate the "PhotoBeforeID," "PhotoAfterID," and "VmiID" fields of the "Initiative Photo Log" related table. For line and polygon inspection data, photos should be taken at an interval of one "before" photo and one "after" photo per span involved with an inspection. For lines and polygons, the "FromDevice" and "ToDevice" fields in the "Initiative Photo Log" table should also be filled in to identify specific spans where photos were taken. If an issue is discovered, and corrective action will not be taken until after the next data submission, still populate the "PhotoBeforeID" and "VmiID" fields prior to submission.



3.5.1.2 Vegetation Inspection Log (Related Table)

Field Name	Field Description	Field Type

VmiLogID	Unique ID or job ID of a vegetation inspection activity. Primary key for the Vegetation Inspection Log related table.	Text
VmpLogID	Unique ID or job ID of a vegetation management project resulting from a vegetation inspection. A foreign key to the Vegetation Management Project Log related table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
ChangeOrder	Has a change order been requested for this grid hardening initiative since the approval of the utility's previous WMP? Possible values: • Yes • No	Text
ChangeOrderDate	Date the change order was submitted. Leave blank if unknown.	Date
ChangeOrderType	The type of change order requested. Possible values: • Increase in scale • Decrease in scale • Change in prioritization • Change in deployment timing • Change in work being done • Other change – See comment	Text
ChangeOrderTypeComment	Change order type not listed above.	Text
InspectionStartDate	The date when a vegetation management inspection began or is planned to begin. If exact date is not known, may approximate to first day of the month inspection was started. May leave blank for planned inspections.	Date
InspectionEndDate	The date when a vegetation management inspection ended or is planned to end. If exact date is not known, may approximate to last day of the month inspection was finished. End date is not required if inspection is in progress. May leave blank for planned inspections.	Date
InspectionType	Initiative activities related to the vegetation management project. If multiple activities are related, list them in the "InspectionType" comment field. Possible values: • Assessing trees with the potential to strike • Clearances – required • Clearances – beyond requirements • Hazard trees • Tree mortality • Other – See comment	Text
InspectionTypeComment	Inspection type description not listed in the options above. If multiple activities are related to the project, list them here.	Text

InspectionQA	Has the inspection been checked for quality assurance? Possible values: • Yes • No	Text
CommercialHarvest	Does the inspection involve commercial harvest? Possible values: • Yes • No • Unknown.	Text
TreeTrimCount	The number of trees identified for trimming from the vegetation management inspection. Trees counted shall be over 6" DBH and outside a 4' radius of the conductor.	Integer
InspectionComment	Additional comments regarding the vegetation inspection project.	Text
InspectionMethod	Inspection method. Possible values: • Ground inspection • Aerial – drone • Aerial – helicopter • Remote sensing – imagery • Remote sensing – LiDAR • Other – See comment	Text
InspectionMethodComment	Inspection method description not listed in the options above.	Text
InspectionTechnology	The technology that an inspector uses for the vegetation management inspection. Possible values: • Collector for ArcGIS • Survey123 for ArcGIS • Workforce for ArcGIS • ArcGIS QuickCapture • Other – See comment • None	Text
InspectionTechnologyComment	Inspection technology description not listed in the options above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.5.1.3 Vegetation Inspection Point (Feature Class)

Photos are required to accompany this feature class. See Section 3.5.1.1 for more guidance.

Field Name	**Field Description**	**Field Type**
VmiID	Unique ID or job ID of a vegetation inspection activity. Primary key for the Vegetation Inspection Point feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty	Text

	• PacifiCorp • PG&E • SCE • SDG&E • TBC	
VmiLogID	Unique ID or job ID of a vegetation inspection activity. Foreign key to the Vegetation Inspection Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
AssetID	Unique ID for a specific point asset. Must be traceable stable ID within a specific asset class. Foreign key to all the related Asset Point feature class attribute tables.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line feature class attribute tables.	Text
InspectionLocationOrAddress	Address or location description for the inspection location.	Text
ParcelAPN	Assessor Parcel Number (APN), a number assigned to parcels of real property by the tax assessor of a particular jurisdiction for purposes of identification and record-keeping.	Text
TreeHealth	Is the tree healthy? Possible values: • Yes • No	Text
TreeSpecies	Common name for species of tree.	Text
TreeHeight	Tree height (feet). Round the value. Maximum value: 300.	Integer
TreeDiameter	Tree diameter at breast height (inches). Round the value. Maximum value: 180.	Integer
TreeDistance	Distance (in feet) between tree and nearest utility asset.	Integer
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of the electrical corporation's most recent WMP where section begins.	Integer
InspectionStatus	The status of the vegetation inspection project. Possible values: • Planned	Text

	• In progress • Complete	
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the management inspection intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County where the vegetation inspection is located.	Text
District	Operating district where the vegetation inspection occurred.	Text
Latitude	Latitude of event point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of event point (in decimal degrees). Field-calculate in GIS software.	Float

3.5.1.4 Vegetation Inspection Line (Feature Class)

Photos are required to accompany this feature class. See Section 3.5.1.1 for more guidance.

Field Name	Field Description	Field Type
VmiID	Unique ID or job ID of a vegetation inspection activity. Primary key for the Vegetation Inspection Line feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
VmiLogID	Unique ID or job ID of a vegetation inspection activity. Foreign key to the Vegetation Inspection Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
AssetID	Unique ID for a specific point asset. Must be traceable stable ID within a specific asset class. Foreign key to all the related Asset Point feature class attribute tables.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line feature class tables.	Text
InspectionLocationOrAddress	Address or location description for the inspection location.	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
InspectionStatus	The status of the vegetation inspection project. Possible values: • Planned • In progress • Complete	Text

InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC High Fire Threat District (HFTD) area that the vegetation management project intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. If a data line spans multiple HFTD areas, list them under the “HFTDClassComment” field. Possible values: • Tier 3 • Tier 2 • Non-HFTD • Multiple - see comment HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
HFTDClassComment	If the project line intersects multiple HFTD areas, list all of them here.	Text
County	County where the vegetation management inspection occurred. If the data line intersects multiple counties, list all counties separated by commas.	Text
District	Operating district where the vegetation management inspection occurred. If the data line intersects multiple districts, list all districts separated by commas.	Text

3.5.1.5 Vegetation Inspection Polygon (Feature Class)

Photos are required to accompany this feature class. See Section 3.5.1.1 for more guidance.

Field Name	Field Description	Field Type
VmiID	Unique ID or job ID of a vegetation inspection activity. Primary key for the Vegetation Inspection Polygon feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
VmiLogID	Unique ID or job ID of a vegetation inspection activity. Foreign key to the Vegetation Inspection Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line feature class attribute tables.	Text
InspectionLocationOrAddress	Address or location description for the inspection location.	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
InspectionStatus	The status of the vegetation inspection project. Possible values: • Planned • In progress • Complete	Text
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity	Float

	represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC High Fire Threat District (HFTD) area that the vegetation management project intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. If a data polygon spans multiple HFTD areas, list them under the "HFTDClassComment" field. Possible values: • Tier 3 • Tier 2 • Non-HFTD • Multiple - see comment HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
HFTDClassComment	If the project polygon intersects multiple HFTD areas, list all of them here.	Text
County	County where the vegetation management inspection is located. If the data polygon intersects multiple counties, list all counties separated by commas.	Text
District	Operating district where the vegetation management inspection occurred. If the data polygon intersects multiple districts, list all districts separated by commas.	Text

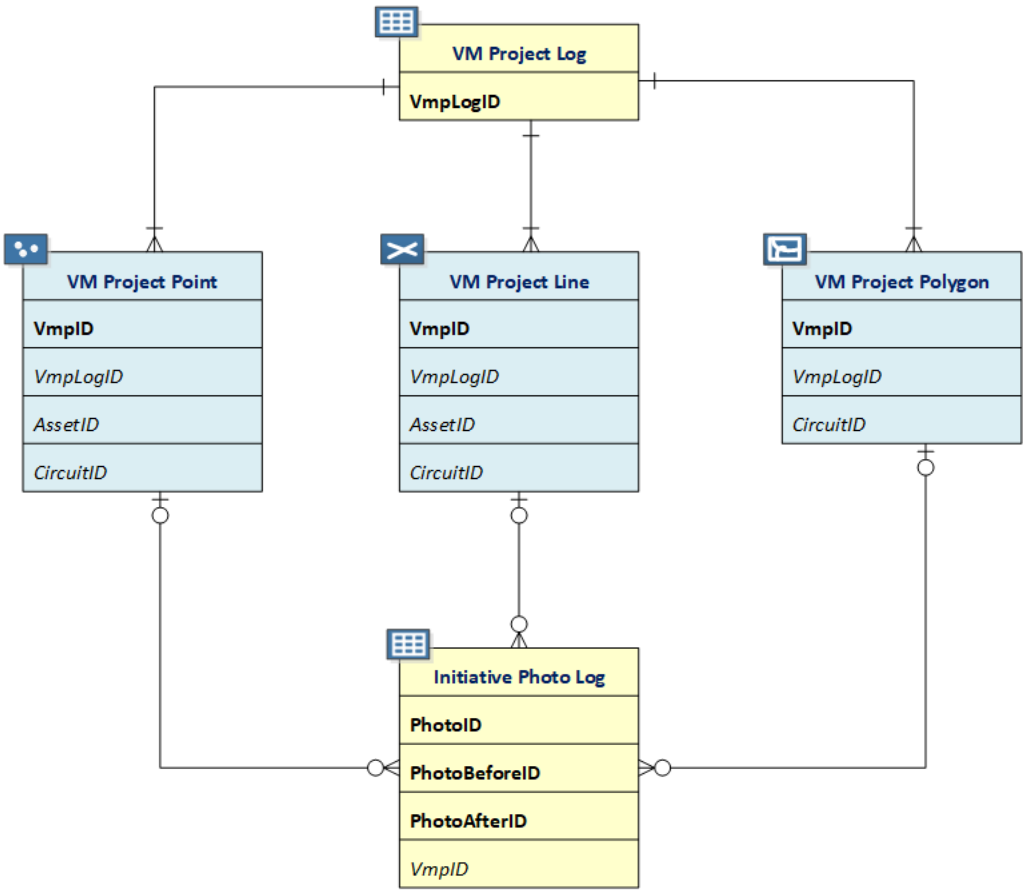
3.5.2 Vegetation Management Projects

3.5.2.1 Overview and Entity-Relationship Diagram for Vegetation Management Projects

In the context of these requirements, vegetation management projects involve the physical manipulation of vegetation (clearing, thinning, etc.) whereas inspections are focused on inspecting the state of vegetation near power line assets. For vegetation management projects, Energy Safety provided template feature classes for points, lines, and polygons in case an electrical corporation records vegetation management project data in any of these geometries. Any vegetation management data recorded in these formats must be submitted. However, if an electrical corporation records vegetation management data in one format but not another (e.g., points but not polygons), it does not have to convert existing data to

another geometry, unless specifically requested to do so by Energy Safety. If an electrical corporation does not record any vegetation inspection data in any geospatial geometry, they must start recording vegetation inspection GIS geometry data going forward. With each quarterly data submission, utilities shall submit data for vegetation management projects which were either active or completed within the reporting period (i.e., the previous quarter), and data for vegetation management projects planned for the next quarter (i.e., the following reporting period).

Photos are required for vegetation management projects. For each project point, take a photo of the project location before and after the project is undertaken. Populate the "PhotoBeforeID," "PhotoAfterID," and "VmpID" fields in the "Initiative Photo Log" related table to ensure photos can be linked to their associated GIS points. For line and polygon data, photos should be taken at an interval of one "before" photo and one "after" photo per span involved with a vegetation management project. For lines and polygons, the "FromDevice" and "ToDevice" fields in the "Initiative Photo Log" table should also be filled in to identify specific spans where photos were taken.



3.5.2.2 Vegetation Management Project Log (Related Table)

Field Name	Field Description	Field Type
VmpLogID	Unique ID or job ID of an initiative. Primary key for Vegetation Management Project Log related table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
ChangeOrder	Has a change order been requested for this grid hardening initiative since the approval of the utility's previous WMP? Possible values: • Yes • No	Text
ChangeOrderDate	Date the change order was submitted. Leave blank if unknown.	Date
ChangeOrderType	The type of change order requested. Possible values: • Increase in scale • Decrease in scale • Change in prioritization • Change in deployment timing • Change in work being done • Other change – See comment	Text
ChangeOrderTypeComment	Change order type not listed above.	Text
DescriptionOfWork	Additional description of the vegetation management work (not required).	Text
StartDate	The start date of the vegetation management project. This field must have values for all projects that have a value of "Complete" or "In Progress" in the "VmpStatus" field. If exact date is not known, may approximate as the first day of the month in which project began. May leave blank for planned projects.	Date
EndDate	The completion date of the vegetation management project. This field must at least have values for all projects that have a value of "Complete" in the "VmpStatus" field. If exact date is not known, may approximate as last day of the month in which project was completed. End date is not required if project is in progress. May leave blank for planned projects.	Date
CoastalRedwoodExemption	Coastal redwood exception to clearance being applied. Possible values: • Yes • No	Text

EncroachPermit	Is an encroachment permit required for the vegetation management project? Possible values: • Yes • No	Text
EnvPermit	Is special environmental permitting needed for the vegetation management project? Possible values: • Yes • No	Text
EnvPermitProject	Specific activity (e.g., timber harvest under an exemption) for which a permit was obtained.	Text
CALFIREHdNumber	If applicable, enter the CAL FIRE harvest document number applicable to the initiative. When the permitted project is timber harvest under an exemption, this field must include the harvest document number of the exemption (e.g., 2-20EX-01049-BUT). Enter "N/A" if not applicable.	Text
OtherEnvPermitDocumentation	For any projects that do not have a CAL FIRE harvest document number or that have a CAL FIRE Harvest document number and additional permit documentation, enter any key details about environmental permit documentation and project ID numbers. Enter "N/A" if there is not additional permit documentation.	Text
CommercialHarvest	Does the initiative involve commercial harvest? Possible values: • Yes • No • Unknown	Text
SlashManagement	How is brush or slash generated by the vegetation management project being managed or treated? Possible values: • None • Lopping • Chipping • Removal • Other – See comment	Text
SlashManagementComments	Brush/slash management method not listed above.	Text
FireResponsibility	The assigned designation of the land where the subject vegetation management project is scheduled. Possible values: • Local Responsibility Area (LRA) • State Responsibility Area (SRA) • Federal Responsibility Area (FRA) An authoritative CAL FIRE feature service for this data can be found here: https://calfire-forestry.maps.arcgis.com/home/item.html?id=5bc422648cf045f38d10e1630fb71a71. A GDB of the data can downloaded from here under the "SRA – LRA – FRA" heading: https://frap.fire.ca.gov/mapping/gis-data/.	Text

CaltransProp	Is the vegetation management project located on Caltrans property? Possible values: • Yes • No	Text
TreeTrimCountPlanned	Number of trees planned for trimming in the project. Enter “0” if tree trimming is not part of the vegetation project.	Integer
TreeTrimAcreagePlanned	Acreage of trees planned for trimming in the project. Use two decimal places. Enter “0” if the vegetation project data are not recorded as a polygon or if tree trimming is not part of the project.	Float
TreeRemovalCountPlanned	Number of trees planned for removal in the project. Enter “0” if tree removal is not part of the vegetation project.	Integer
TreeRemovalAcreagePlanned	Acreage of trees planned for removal in the project. Use two decimal places. Enter “0” if the vegetation project data are not recorded as a polygon or if tree removal is not part of the vegetation project. Trees counted shall be over 6” DBH and outside a 4’ radius of the conductor.	Float
TreeTrimCountActl	Number of trees actually trimmed as part of the project. Enter “0” if tree trimming is not part of the vegetation project or if the vegetation project has a value of “Planned” under the “VmpStatus” field.	Integer
TreeTrimAcreageActl	Acreage of trees actually trimmed as part of the in the project. Two decimal places. Enter “0” if the vegetation project data are not recorded as a polygon or if tree trimming is not part of the vegetation project or if the vegetation project has a value of “Planned” under the “VmpStatus” field.	Float
TreeRemovalCountActl	Number of trees actually removed as part of the project. Enter “0” if tree removal is not part of the vegetation project or if the vegetation project has a value of “Planned” under the “VmpStatus” field.	Integer
TreeRemovalAcreageActl	Acreage of trees actually removed as part of the project. Use two decimal places. Enter “0” if the vegetation project data are not recorded as a polygon or if tree removal is not part of the vegetation project or if the vegetation project has a value of “Planned” under the “VmpStatus” field.	Float
VegetationTreatmentType	The type(s) of treatment scoped for the project. Possible values: • Radial clearance – standard • Radial clearance - enhanced • Overhang clearing • Tree removal – hazard tree • Tree removal – tree mortality • Tree trimming • Pole brushing • Fire break creation • Brush clearance • Other or multiple treatment types – See comment	Text

VegetationTreatmentTypeComment	Treatment type not listed in options above—or multiple treatment types listed in options above. If multiple, list all separated by commas.	Text
WoodDestination	Record how boles of trees (6" diameter and greater) will be treated. If multiple destinations apply, list them all in the "VegetationDestinationComment" field. This field may be left blank if no trees will be/were removed. Possible values: • Sawmill • Firewood • Biomass facility • Left whole on-site (whether bucked or not) • Left chipped on-site • Burned on-site • Other - See comment	Text
WoodDestinationComment	Wood destination not listed above; or, if multiple destinations apply, list them here.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.5.2.3 Vegetation Management Project Point (Feature Class)

Photos are required to accompany this feature class. See Section 3.5.2.1 for more guidance. This feature class is intended to provide data for situations in which individual trees or utility support structures (poles or towers) being treated are recorded by individual GIS points. If there are vegetation management projects involving multiple trees or support structures per GIS geometry, the "Vegetation Project Line" or "Vegetation Project Polygon" feature classes are to be used instead. If the points provided represent support structures, the "Vegetation Treatment Type" in the related record in the "Vegetation Management Project Log" must be "Pole Brushing", and the fields related to specific tree information ("Tree ID" through "Tree Diameter") do not need to be filled out.

Field Name	Field Description	Field Type
VmpID	Unique ID or job ID of an initiative. Primary key for Vegetation Management Project Point feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
VmpLogID	Unique ID or job ID of an initiative. Foreign key to the Vegetation Inspection Project Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
AssetID	Unique ID for a specific point asset. Must be traceable stable ID within a specific asset class. Foreign key to all the related Asset Point feature class attribute tables.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line feature class attribute tables.	Text
ProjectLocationOrAddress	Address or location description for vegetation project location. Enter “N/A” if there is no address where the project is located.	Text
ParcelAPN	Assessor Parcel Number (APN), a number assigned to parcels of real property by the tax assessor of a particular jurisdiction for purposes of identification and record-keeping.	Text
TreeID	A unique ID associated with the individual tree within the scope of the vegetation management project.	Text
TreeHealth	Is the subject tree healthy? Possible values: • Yes • No	Text
TreeHazard	Is the subject tree a hazard tree? Possible values: • Yes • No	Text
TreeSpecies	Common name for tree species in scope for the vegetation management project.	Text
SpeciesGrowthRate	Generalized growth rate of the subject tree species. Possible values: • Slow growing • Moderately growing	Text

	• Fast growing	
TreeHeight	Tree height (feet). Round the value. Maximum value: 300.	Integer
TreeDiameter	Tree diameter at breast height (inches). Round the value. Maximum value: 180.	Integer
LineDeenergized	Do the power lines need to be de-energized to perform the work? Possible values: • Yes • No	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
VmpStatus	Status of the vegetation management project. Possible Values: • Complete • In progress • Planned	Text
HerbicideUse	Are any herbicides planned to be used or were any herbicides used as part of the project? Possible values: • Yes • No	Text
HerbicideName	If any herbicides are planned for use or were used, list the specific products used / to be used.	Text
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

HFTDClass	The CPUC High Fire Threat District (HFTD) area that the vegetation management project intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County where the vegetation management project is located.	Text
District	Operating district where the vegetation management project occurred.	Text
Latitude	Latitude of event point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of event point (in decimal degrees). Field-calculate in GIS software.	Float

3.5.2.4 Vegetation Management Project Line (Feature Class)

Photos are required to accompany this feature class. See Section 3.5.2.1 for more guidance. This feature class can be used to record projects for which there are multiple trees or other plants covered by a line segment.

Field Name	**Field Description**	**Field Type**
VmpID	Unique ID or job ID of an initiative. Primary key for Vegetation Management Project Line feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
VmpLogID	Unique ID or job ID of an initiative. Foreign key to the Vegetation Inspection Project Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
AssetID	Unique ID for a specific point asset. Must be traceable stable ID within a specific asset class. Foreign key to all the related Asset Point feature class attribute tables.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line feature class attribute tables.	Text
ProjectLocationOrAddress	Address or location description for project location.	Text

LineDeenergized	Do the power lines need to be de-energized to perform the work? Possible values: • Yes • No	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
VmpStatus	Status of the vegetation management project. Possible Values: • Complete • In progress • Planned	Text
HerbicideUse	Are any herbicides planned to be used or were any herbicides used as part of the project? Possible values: • Yes • No	Text
HerbicideName	If any herbicides are planned for use or were used, list the specific products used / to be used.	Text
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC High Fire Threat District (HFTD) area that the vegetation management project intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. If a data line spans multiple HFTD areas, list them under the "HFTDClassComment" field. Possible values:	Text

	• Tier 3 • Tier 2 • Non-HFTD • Multiple - see comment HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	
HFTDClassComment	If the project line intersects multiple HFTD areas, list all of them here.	Text
County	County where the vegetation management project is located. If the data line intersects multiple counties, list all counties separated by commas.	Text
District	Operating district where the vegetation management project occurred. If the data line intersects multiple districts, list all districts separated by commas.	Text

3.5.2.5 Vegetation Management Project Polygon (Feature Class)

Photos are required to accompany this feature class. See Section 3.5.2.1 for more guidance. This feature class can be used to record projects for which there are multiple trees or other plants covered by a polygon.

Field Name	Field Description	Field Type
VmpID	Unique ID or job ID of an initiative. Primary key for Vegetation Management Project Polygon feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
VmpLogID	Unique ID or job ID of an initiative. Foreign key to the Vegetation Inspection Project Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line feature class attribute tables.	Text
ProjectLocationOrAddress	Address or location description for project location.	Text
LineDeenergized	Do the power lines need to be de-energized to perform the work? Possible values: • Yes • No	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
VmpStatus	Status of the vegetation management project. Possible Values: • Complete • In progress • Planned	Text

HerbicideUse	Are any herbicides planned to be used or were any herbicides used as part of the project? Possible values: • Yes • No	Text
HerbicideName	If any herbicides are planned for use or were used, list the specific products used / to be used.	Text
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC High Fire Threat District (HFTD) area that the vegetation management project intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. If a data polygon spans multiple HFTD areas, list them under the “HFTDClassComment” field. Possible values: • Tier 3 • Tier 2 • Non-HFTD • Multiple - see comment HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
HFTDClassComment	If the project polygon intersects multiple HFTD areas, list all of them here.	Text
County	County where the vegetation management project is located. If the data polygon intersects multiple counties, list all counties separated by commas.	Text
District	Operating district where the vegetation management project occurred. If the data polygon intersects multiple districts, list all districts separated by commas.	Text

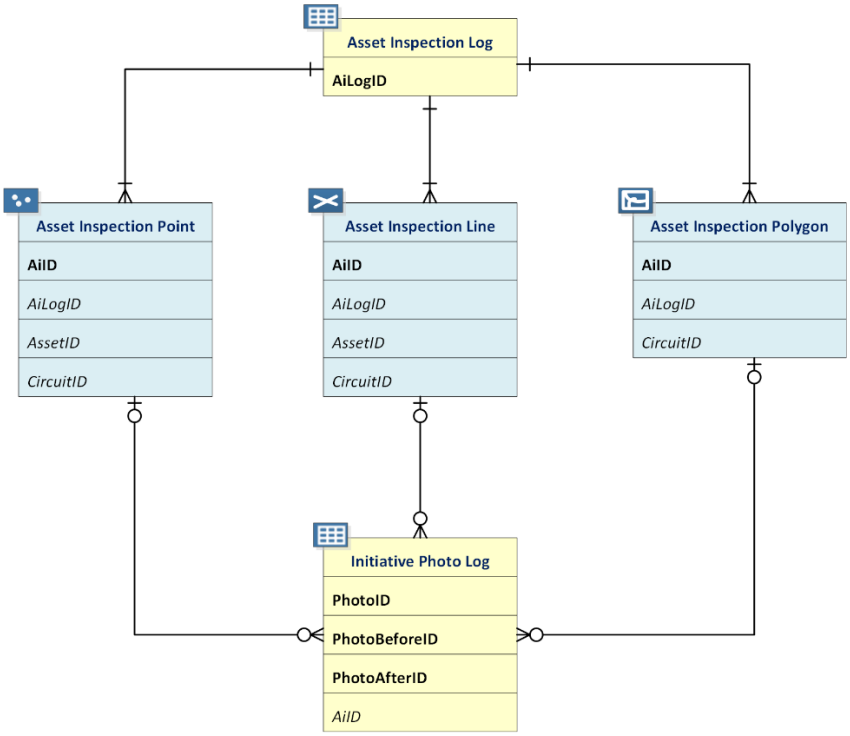
3.5.3 Asset Inspections

3.5.3.1 Overview and Entity-Relationship Diagram for Asset Inspections

For asset inspections, Energy Safety provided template feature classes for points, lines, and polygons in case an electrical corporation records asset inspection data in any of these geometries. Any asset inspection data recorded in these formats must be submitted.

However, if an electrical corporation records asset inspection data in one format but not another (e.g., points but not polygons), it does not have to convert existing data to another geometry, unless specifically requested to do so by Energy Safety. If an electrical corporation does not record any asset inspection data in any geospatial geometry, it must start recording asset inspection GIS geometry data going forward. With each quarterly data submission, electrical corporations shall submit data for inspections which were either active or completed within the reporting period (i.e., the previous quarter), and data for inspections planned for the next quarter (i.e., the following reporting period).

Photos are encouraged but optional for asset inspections. If submitting asset inspection photos, only submit them for cases where inspections reveal issues (e.g., regulatory non-compliance, fire risk hazards, etc.). If an asset inspection reveals issues, and corrective action is taken, take a photo of the inspection issue before and after the action. When this is the case, for points, populate the "PhotoBeforeID," "PhotoAfterID," and "VmiID" or "AiID" fields of the "Initiative Photo Log" related table. For line and polygon inspection data, photos should be taken at an interval of one "before" photo and one "after" photo per span involved with an inspection. For lines and polygons, the "FromDevice" and "ToDevice" fields in the "Initiative Photo Log" table should also be filled in to identify specific spans where photos were taken. If an issue is discovered, and corrective action will not be taken until after the next data submission, still populate the "PhotoBeforeID" and "VmiID" or "AiID" fields prior to submission.



3.5.3.2 Asset Inspection Log (Related Table)

Field Name	Field Description	Field Type
AiLogID	Unique ID or job ID of an asset inspection activity. Primary key for the Asset Inspection related table.	Text
VmpLogID	Unique ID or job ID of a vegetation management project resulting from an asset inspection. A foreign key to the Vegetation Management Project related table. Enter the corresponding VmpID if the subject asset inspection resulted in the creation of a vegetation management project. If the asset inspection did not result in the creation of a related vegetation management project, then enter "N/A" for this field.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
ChangeOrder	Has a change order been requested for this grid hardening initiative since the approval of the utility's previous WMP? Possible values: • Yes • No	Text
ChangeOrderDate	Date the change order was submitted. Leave blank if unknown.	Date
ChangeOrderType	The type of change order requested. Possible values: • Increase in scale • Decrease in scale • Change in prioritization • Change in deployment timing • Change in work being done • Other change – See comment	Text
ChangeOrderTypeComment	Change order type not listed above.	Text
InspectionStartDate	The date when an asset inspection began. If exact date is not known, may approximate as first day of the month in which inspection began.	Date
InspectionEndDate	The date when an asset inspection was completed. If the asset inspection was started and completed on the same day, "InspectionStartDate" and "InspectionEndDate" will have the same value. If exact date is not known, may approximate as last day of the month in which inspection was completed.	Date
PerformedBy	Who performed the asset inspection? Possible values: • Utility staff • Contractor	Text

	• Other – See comment	
PerformedByComment	Inspector description not listed in the options above.	Text
InspectionType	The type of asset inspection performed. Possible values: • Patrol • Detailed • Pole loading • Other - See comment	Text
InspectionTypeComment	Inspection type description not listed in the options above.	Text
InspectionQA	Has the inspection been checked for quality assurance? Possible values: • Yes • No	Text
InspectionComment	Additional comments related to the asset management inspection.	Text
ComplianceFinding	Did the asset inspection result in the finding of any non-compliance issues? Possible values: • Yes • No	Text
InspectionMethod	The method(s) by which the asset inspection was conducted. Possible values: • Ground Inspection • Aerial – drone • Aerial – helicopter • Remote sensing – imagery • Remote sensing – LiDAR • Other - See comment	Text
InspectionMethodComment	Inspection method not listed in the options above—or multiple inspection methods listed in the options above. If multiple, list all values separated by commas.	Text
InspectionTechnology	The technology that an inspector uses for the asset inspection project. Possible values: • Collector for ArcGIS • Survey123 for ArcGIS • Workforce for ArcGIS • ArcGIS QuickCapture • Other – See comment	Text
InspectionTechnologyComment	Inspection technology not listed in the options above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.5.3.3 Asset Inspection Point (Feature Class)

Photos are encouraged but optional for this feature class. See section 3.5.3.1 for more guidance.

Field Name	Field Description	Field Type
AiID	Unique ID or job ID of an asset inspection activity. Primary key for the Asset Inspection Point feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AiLogID	Unique ID or job ID of an asset inspection activity. Foreign key to the Asset Inspection Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
AssetID	Unique ID for a specific point asset. Must be traceable stable ID within a specific asset class. Foreign key to all the related Asset Point feature class attribute tables.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line feature class attribute tables.	Text
InspectionLocationOrAddress	Address or location description for the inspection location.	Text
ParcelAPN	Assessor Parcel Number (APN), a number assigned to parcels of real property by the tax assessor of a particular jurisdiction for purposes of identification and record-keeping. If the asset inspected does not intersect a parcel boundary, enter “N/A” for this field.	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation’s most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer

InspectionStatus	Status of the asset inspection. Possible Values: • Complete • In progress • Planned	
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the asset inspection intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County where the asset inspection project occurred.	Text
District	Operating district where the asset inspection project occurred.	Text
Latitude	Latitude of event point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of event point (in decimal degrees). Field-calculate in GIS software.	Float

3.5.3.4 Asset Inspection Line (Feature Class)

Photos are encouraged but optional for this feature class. See section 3.5.3.1 for more guidance.

Field Name	Field Description	Field Type
AiID	Unique ID or job ID of an asset inspection activity. Primary key for the Asset Inspection Line feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AiLogID	Unique ID or job ID of an asset inspection activity. Foreign key to the Asset Inspection Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
AssetID	Unique ID for a specific point asset. Must be traceable stable ID within a specific asset class. Foreign key to all the related Asset Point tables.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line tables.	Text
InspectionLocationOrAddress	Address or location description for the inspection location.	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
InspectionStatus	Status of the asset inspection. Possible Values: • Complete • In progress • Planned	

InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC High Fire Threat District (HFTD) area that the asset inspection intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. If a data line spans multiple HFTD areas, list them under the "HFTDClassComment" field. Possible values: • Tier 3 • Tier 2 • Non-HFTD • Multiple - see comment HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
HFTDClassComment	If the project line intersects multiple HFTD areas, list all of them here.	Text
County	County where the asset inspection project is located. If the data line intersects multiple counties, list all counties separated by commas.	Text
District	Operating district where the asset inspection project occurred. If the data line intersects multiple districts, list all districts separated by commas.	Text

3.5.3.5 Asset Inspection Polygon (Feature Class)

Photos are encouraged but optional for this feature class. See section 3.5.3.1 for more guidance.

Field Name	Field Description	Field Type
AiID	Unique ID or job ID of an asset inspection activity. Primary key for the Asset Inspection Polygon feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AiLogID	Unique ID or job ID of an asset inspection activity. Foreign key to the Asset Inspection Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line feature class attribute tables.	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
InspectionStatus	Status of the asset inspection. Possible Values: • Complete • In progress • Planned	
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float

CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC High Fire Threat District (HFTD) area that the asset inspection intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. If a data polygon spans multiple HFTD areas, list them under the "HFTDClassComment" field. Possible values: • Tier 3 • Tier 2 • Non-HFTD • Multiple - see comment HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
HFTDClassComment	If a project polygon intersects multiple HFTD areas, list all of them here.	Text
County	County where the asset inspection project is located. If the data polygon intersects multiple counties, list all counties separated by commas.	Text
District	Operating district where the asset inspection project occurred. If the data polygon intersects multiple districts, list all districts separated by commas.	Text

3.5.4 Grid Hardening

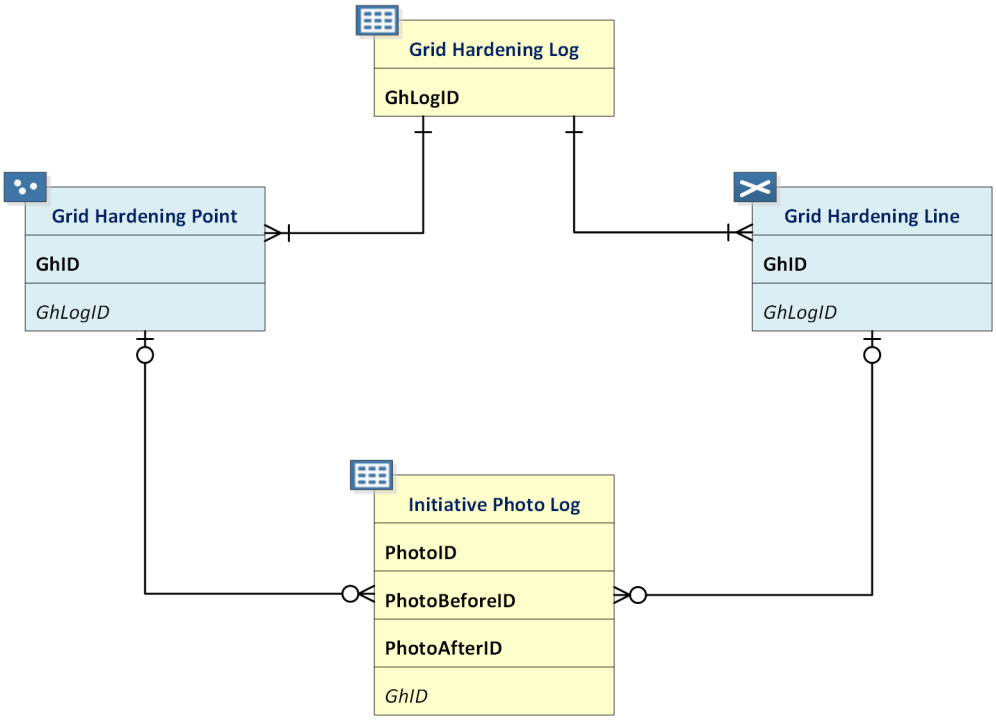
3.5.4.1 Overview and Entity-Relationship Diagram for Grid Hardening

Examples of the types of grid hardening for which Energy Safety expects to receive GIS data include undergrounding, covering conductors, wrapping poles with fire resistant material, and equipment replacements and additions (e.g., adding switchgear assets to minimize the scope of PSPS events, replacing old wooden poles with poles made of fire-resistant materials, etc.).

For grid hardening, Energy Safety provided template feature classes for points and lines in case an electrical corporation records grid hardening data in either of these geometries. Any grid hardening data recorded in these formats must be submitted. However, if an electrical corporation records grid hardening data in one format but not another (e.g., points but not lines), it does not have to convert existing data to another geometry unless specifically requested to do so by Energy Safety. If an electrical corporation does not record any grid hardening data in any geospatial geometry, it must start recording grid hardening GIS geometry data going forward. With each quarterly data submission, electrical corporations shall submit data for grid hardening projects which were either active or completed within

the reporting period (i.e., the previous quarter), and data for grid hardening projects planned for the next quarter (i.e., the following reporting period).

Photos are required for grid hardening projects. For each project point, take a photo of the project asset(s) being hardened before and after hardening is undertaken. Populate t he “PhotoBeforeID,” “PhotoAfterID,” and “GhID” fields in the “Initiative Photo Log” related table to ensure photos can be linked to their associated GIS points. For line hardening data, photos should be taken at an interval of one “before” photo and one “after” photo per span involved with a hardening. For line hardening, the “FromDevice” and “ToDevice” fields in the “Initiative Photo Log” table should also be filled in to identify specific spans where photos were taken.



3.5.4.2 Grid Hardening Log (Related Table)

Field Name	Field Description	Field Type
GhLogID	Unique ID or job ID of a grid hardening activity. Primary key for the Grid Hardening Log related table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AiLogID	Unique ID or job ID of an asset inspection activity. Foreign key to the Asset Inspection Log related table.	Text
ChangeOrder	Has a change order been requested for this grid hardening initiative since the approval of the utility's previous WMP? Possible values: • Yes • No	Text
ChangeOrderDate	Date the change order was submitted. Leave blank if unknown.	Date
ChangeOrderType	The type of change order requested. Possible values: • Increase in scale • Decrease in scale • Change in prioritization • Change in deployment timing • Change in work being done • Other change – See comment	Text
ChangeOrderTypeComment	Change order type not listed above.	Text
StartDate	Start date of the grid hardening project. If exact date is not known, may approximate as first day of the month in which project began.	Date
EndDate	Completion date of the grid hardening project. If exact date is not known, may approximate as last day of month in which project was completed. Not required for projects which are in progress.	Date
LineDeenergized	Lines need to be de-energized to perform the work. Possible values: • Yes • No	Text
PerformedBy	Who performed the grid hardening activity? Possible values: • Utility staff • Contractor • Other - See comment	Text
PerformedByComment	Entity that performed grid hardening and is not listed in options above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes	Text

	• No	

3.5.4.3 Grid Hardening Point (Feature Class)

Photos are required to accompany this feature class. See Section 3.5.4.1 for more guidance.

Field Name	Field Description	Field Type
GhID	Unique ID or job ID of a grid hardening activity. Primary key for the Grid Hardening Point feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
GhLogID	Unique ID or job ID of a grid hardening activity. Foreign key to the Grid Hardening Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
AssetID	Unique ID for a specific point asset. Must be traceable stable ID within a specific asset class. Foreign key to all the related Asset Point feature class attribute tables.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line feature class attribute tables.	Text
GridHardeningLocationOrAddress	Address or location description for the grid hardening location.	Text
ParcelAPN	Assessor Parcel Number (APN), a number assigned to parcels of real property by the tax assessor of a particular jurisdiction for purposes of identification and record-keeping. If the asset inspected does not intersect a parcel boundary, enter “N/A” for this field.	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text

WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
GhStatus	The status of the grid hardening activity. Possible values: • Planned • In progress • Complete	Text
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC high-fire threat district (HFTD) area the grid hardening project intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County where the grid hardening project is located.	Text
District	Operating district where the grid hardening project is located.	Text
Latitude	Latitude of event point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of event point (in decimal degrees). Field-calculate in GIS software.	Float

3.5.4.4 Grid Hardening Line (Feature Class)

Photos are required to accompany this feature class. See Section 3.5.4.1 for more guidance.

Field Name	Field Description	Field Type
GhID	Unique ID or job ID of a grid hardening activity. Primary key for the Grid Hardening Line feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
GhLogID	Unique ID or job ID of a grid hardening activity. Foreign key to the Grid Hardening Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
AssetID	Unique ID for a specific point asset. Must be traceable stable ID within a specific asset class. Foreign key to all the related Asset Point feature class attribute tables.	Text
CircuitID	Unique ID for a specific line asset. Must be traceable stable ID within a specific asset class. Foreign key to the Asset Line feature class attribute tables.	Text
GridHardeningLocationOrAddress	Address or location description for the grid hardening location.	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Situational awareness and forecasting • Grid design and system hardening • Asset management and inspections • Vegetation management and inspections	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer

GhStatus	The status of the grid hardening activity. Possible values: • Planned • In progress • Complete	Text
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
HFTDClass	The CPUC High Fire Threat District (HFTD) area that the grid hardening project intersects. For this data, anything outside Tiers 2 and 3 must be categorized as “Non-HFTD.” Do not record any Zone 1 or Tier 1 values. If a data line spans multiple HFTD areas, list them under the “HFTDClassComment” field. Possible values: • Tier 3 • Tier 2 • Non-HFTD • Multiple - see comment HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
HFTDClassComment	If the project line intersects multiple HFTD areas, list all of them here.	Text
County	County where the grid hardening project is located. If the data line intersects multiple counties, list all counties separated by commas.	Text
District	Operating district where the grid hardening project is located. If the data line intersects multiple districts, list all districts separated by commas.	Text

3.5.5 Other Initiatives

3.5.5.1 Overview

Utilities may utilize these feature classes and the related table to provide any spatial data they have on initiatives which do not fit into one of the previous classes.

3.5.5.2 Other Initiative Log (Related Table)

Field Name	Field Description	Field Type
OiLogId	Unique ID or job ID of other initiative activity. Primary key for the Other Initiative Log related table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
StartDate	The start date of the activity. If exact date is not known, may approximate as first day of the month in which project began.	Date
EndDate	The completion date of the activity. If exact date is not known, may approximate as last day of month in which project was completed. Not required for projects which are in progress.	Date
OiComment	Any other information about the activity.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.5.5.3 Other Initiative Point (Feature Class)

Field Name	Field Description	Field Type
OiId	Unique ID or job ID of an Other Initiative activity. Primary key for the Other Initiative Point feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
ChangeOrder	Has a change order been requested for this grid hardening initiative since the approval of the utility's previous WMP? Possible values: • Yes • No	Text

ChangeOrderDate	Date the change order was submitted. Leave blank if unknown.	Date
ChangeOrderType	The type of change order requested. Possible values: • Increase in scale • Decrease in scale • Change in prioritization • Change in deployment timing • Change in work being done • Other change – See comment	Text
ChangeOrderTypeComment	Change order type not listed above.	Text
OiLogId	Unique ID or job ID of an Other Initiative activity. Foreign key to the Other Initiative Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
LocationOrAddress	Address or location description for the activity.	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Data governance • Resource allocation methodology • Emergency planning and preparedness • Stakeholder cooperation and community engagement	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
OiStatus	The status of the activity. Possible values: • Planned • In progress • Complete	Text
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text

Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
County	County where the initiative is located.	Text
District	Operating district where the initiative is located.	Text
Latitude	Latitude of event point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of event point (in decimal degrees). Field-calculate in GIS software.	Float

3.5.5.4 Other Initiative Line (Feature Class)

Field Name	**Field Description**	**Field Type**
OiId	Unique ID or job ID of an Other Initiative. Primary key for the Other Initiative Line feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
OiLogId	Unique ID or job ID of an Other Initiative activity. Foreign key to the Other Initiative Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
LocationOrAddress	Address or location description for the activity.	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation • Data governance • Resource allocation methodology • Emergency planning and preparedness • Stakeholder cooperation and community engagement	Text
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
OiStatus	The status of the activity. Possible values: • Planned • In progress • Complete	Text

InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical InitiativeTarget identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
County	County where the initiative is located. If the data line intersects multiple counties, list all counties separated by commas.	Text
District	Operating district where the initiative is located. If the data line intersects multiple districts, list all districts separated by commas.	Text

3.5.5.4 Other Initiative Polygon (Feature Class)

Field Name	**Field Description**	**Field Type**
OiId	Unique ID or job ID of an Other Initiative activity. Primary key for the Other Initiative Polygon feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
OiLogId	Unique ID or job ID of an Other Initiative activity. Foreign key to the Other Initiative Log related table.	Text
UtilityInitiativeTrackingID	Unique Tracking ID for a given Utility Initiative across submissions. This ID must match the "Utility Initiative Tracking ID" field for the same utility initiative in the QIU, in every submission over time. This field should remain static even if WMP Initiative Category, WMP Initiative Activity, or WMP Section numbers change.	Text
LocationOrAddress	Address or location description for the activity.	Text
WMPInitiativeCategory	Broad category for the initiative. Possible values: • Risk mapping and simulation	Text

	• Data governance • Resource allocation methodology • Emergency planning and preparedness • Stakeholder cooperation and community engagement	
WMPInitiativeActivity	More specific description of initiative activity. Use items listed in WMP guidelines section 9.1 (p. 49). May add new activity descriptions not in that list.	Text
WMPSection	Section of the electrical corporation's most recent WMP explaining the initiative.	Text
WMPPageNumber	Page number of WMP where section begins.	Integer
OiStatus	The status of the activity. Possible values: • Planned • In progress • Complete	Text
InitiativeTarget	The numerical target for the identified initiative activity during the reporting period. This is the expected target for the particular activity represented by the geometry, not the overall target for the larger initiative (if those are different). Do not change targets for completed projects to reflect what was actually performed.	Float
QuarterlyProgress	The amount of the Initiative Target that was completed in the reporting period, if any. This will be in the same units as the Initiative Target.	Float
CumulativeProgress	The amount of the Initiative Target that was complete at the end of the reporting period, cumulative for the year, if any. This will be in the same units as the Initiative Target.	Float
InitiativeTargetUnits	The units (e.g., trees, line miles, etc.) for the numerical Initiative Target identified above.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
County	County where the initiative is located. If the data polygon intersects multiple counties, list all counties separated by commas.	Text
District	Operating district where the initiative is located. If the data polygon intersects multiple districts, list all districts separated by commas.	Text

3.5.6 Initiative Photo Log (Related Table)

In this table, enter information about photos that accompany initiative feature classes. If more than one photo is applicable to an individual initiative geometry (point, line, or polygon), enter a separate record for each photo. Only one ID field needs to be filled out for each record (unless the same photo is relevant to multiple activities/geometries – this is not anticipated). Photos must be geotagged JPEG or PNG files. For the three photo ID fields (which are the first three fields in the table below), use the following naming format: "UtilityName _InspectorInitial_RiskEvent_ YYYYMMDD_PhotoNumber." For example, "UtilityG&E_AB_PspsDamage_20200703_1.png"

If applicable/logical, an optional district ID value can be added between the utility name and inspector initial values (e.g., “UtilityName_DistrictID_InspectorInitial_RiskEvent_ YYYYMMDD_PhotoNumber”).

Field Name	Field Description	Field Type
PhotoID	Name for a photo showing an initiative or inspection findings. A primary key for the Initiative Photo Log related table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
PhotoBeforeID	Name for a photo showing the initiative location prior to the project happening or prior to a corrective action taking place. A primary key for the Initiative Photo Log related table.	Text
PhotoAfterID	Name for a photo showing the initiative location after a project happens or after a corrective action takes place. A primary key for the Initiative Photo Log related table.	Text
VmpID	Unique ID or job ID of an initiative. Foreign key to the Vegetation Management Project Point, Line and Polygon feature class attribute tables. This value can be repeated based on the number of photos taken.	Text
VmiID	Unique ID or job ID of a vegetation management inspection activity. Foreign key to the Vegetation Management Inspection Point, Line, and Polygon feature class attribute tables. This value can be repeated based on the number of photos taken.	Text
AiID	Unique ID or job ID of an asset inspection activity. Primary key for the Asset Inspection Log related table. This value can be repeated based on the number of photos taken.	Text
GhID	Unique ID or job ID of a grid hardening activity. Foreign key to the Grid Hardening Point and Line feature class attribute tables. This value can be repeated based on the number of photos taken.	Text
OiID	Unique ID or job ID of an other initiative activity. Foreign key to the Other Initiative Point, Line, and Polygon feature class attribute tables. This value can be repeated based on the number of photos taken.	Text
FromDeviceID	The asset ID for a support structure upstream of an initiative location. This field is to be filled out to help locate initiatives that are along conductor lines or within a polygon based on conductor lines.	Text
ToDeviceID	The asset ID for a support structure downstream of an initiative location. This field is to be filled out to help locate initiatives that are along conductor lines or within a polygon based on conductor lines.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.6 Other Required Data (Feature Dataset)

3.6.1 Other Power Line Connection Location (Point Feature Class)

The feature class below is intended to record the points where electrical corporation power lines feed into power lines managed by an organization other than the electrical corporation submitting data. These other power lines may be owned by individuals, businesses (including other electrical corporations), or other entities.

Field Name	Field Description	Field Type
OplcID	Unique ID of private power line connection location. Primary key for the Electrical Corporation Power Line-Other Power Line Connection Location Point feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
OtherLineOwner	Name of individual or other entity that owns the line to which the submitting corporation's electrical corporation line is connecting.	Text
ConnectionAsset	Asset enabling the connection.	Text
ConnectionPointAssetID	AssetID of the asset that enables the connection. Must be traceable stable ID within a specific asset class. Foreign key to the related asset point feature class attribute tables.	Text
CorporationLineID	AssetID of the electrical corporation line that feeds energy into or receives energy from the private line. Must be traceable stable ID within a specific asset class. Foreign key to the related asset line feature class attribute tables.	Text
OtherLineClass	Classification of line asset that meets corporation line at connection location. Possible values: • Transmission • Primary distribution • Secondary Distribution • Unknown	Text

HFTDClass	The CPUC high-fire threat district (HFTD) area the connection location intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
County	County in which connection location is located.	Text
OtherConductorType	Type of conductor that connects to corporation line. Possible values: • Bare • Covered • Other – See comment	Text
ConnectionType	Type of energy transfer happening at location. Possible values: • Corporation to private • Corporation to corporation	Text
ConnectionOHUG	Is the connection overhead or underground? Possible values: • All Overhead • All underground • Overhead to underground • Underground to overhead • Unknown	Text
OtherNominalVoltagekV	Nominal voltage (in kilovolts) of other conductor connected to corporation line. Do not use more than two decimal places. Enter "-99" if not applicable.	Float
OtherOperatingVoltagekV	Operating voltage (in kilovolts) of other conductor connected to corporation line. Do not use more than two decimal places. Enter "-99" if not applicable.	Float
OtherConductorMaterial	Conductor material of other line that connects to corporation line. Possible values: • All aluminum conductor (AAC) • All aluminum alloy conductor (AAAC) • Aluminum conductor aluminum reinforced (ACAR) • Aluminum conductor steel reinforced (ACSR) • Aluminum conductor steel supported (ACSS) • Copper (Cu) • Unknown. • Other - See comment	Text
OtherConductorMaterialComment	Conductor material not listed in the options above.	Text
OtherConductorSize	Size of other conductor that connects to corporation line (e.g. No. 4 Cu or 1/0 ACSR). Write "Unknown" if this is not known.	Text
OtherConductorOD	Overall diameter of the other conductor that connects to the corporation conductor in inches. Leave blank if this is not known.	Float
ConnectionLastInspectionDate	Date of the last inspection. Leave blank if unknown.	Date

ConnectionLastMaintenanceDate	Date of the last maintenance. Leave blank if unknown.	Date
ConnectionEstablishmentDate	Date the connection was established. Leave blank if unknown.	Date
ConnectionEstablishmentYear	Year of connection establishment. Leave blank if unknown.	Integer
EstimatedConnectionAge	The age of the connection in years. Only fill this out if the "ConnectionEstablishmentYear" and "ConnectionEstablishmentDate" values are unknown. Possible values: • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • >100 • Unknown • N/A (only enter this if there is a "ConnectionEstablishmentYear" value)	Text
OtherUsefulLifespan	The number of years the other line connected to the corporation line is expected to have a useful functioning existence upon initial installation. If unknown, enter "-99."	Integer
OtherAmpacityRating	Nominal ampacity rating of the other conductor in amperes.	Float
OtherLineGreased	Is the other conductor connected to the corporation line greased to prevent water intrusion? Possible values: • Yes • No • Unknown	Text
ConnectionComments	Describe any additional key details that should be known about the connection location.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.6.2 Critical Facility (Point Feature Class)

Field Name	Field Description	Field Type
FacilityID	Unique ID for a specific critical facility. It should be a traceable stable ID within the utility's operations/processes. Primary key to the Critical Facility point feature class attribute table.	Text

UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
FacilityName	Name of the facility.	Text
FacilityCategory	Critical facility category. See examples table below this table for examples of facilities that fall under these categories. Possible values: • Chemical • Communications • Educational • Emergency services • Energy • Government facilities • Healthcare and public health • Public safety answering points • Transportation • Water and wastewater systems • Other - See comment	Text
FacilityCategoryComment	Facility category not covered by the options above.	Text
FacilityDescription	Brief facility description (e.g., fire station, prison, nursing home, etc.).	Text
CircuitID	ID of circuit associated with critical facility.	Text
MeterID	ID of meter associated with critical facility.	Text
BackupPower	Does the facility have a backup power source? Possible values: • Yes • No • Unknown	Text
BackupType	Type of backup power source. Possible values: • Storage battery • Diesel generator • Gas generator • Combined/hybrid • Other - See comment	Text
BackupTypeComment	Backup type not listed in the options above.	Text
BackupCapacity	Hours of energy storage of backup generation from backup power source.	Float
PopulationImpact	The approximate number of people that depend on this critical facility.	Integer

HFTDClass	The CPUC high-fire threat district (HFTD) area the critical facility intersects. For this data, anything outside Tiers 2 and 3 must be categorized as "Non-HFTD." Do not record any Zone 1 or Tier 1 values. Possible values: • Tier 3 • Tier 2 • Non-HFTD HFTD data can be downloaded from: https://ia.cpuc.ca.gov/firemap.	Text
PSPSDays	The number of days the critical facility was impacted by PSPS events in the reporting period.	Integer
ParcelAPN	ID of parcel containing critical facility. Assessor Parcel Number (APN), a number assigned to parcels of real property by the tax assessor of a particular jurisdiction for purposes of identification and record-keeping.	Text
Address	The address of the critical facility.	Text
City	The city of the critical facility.	Text
Zip	The 5-digit zip code of the critical facility.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
Latitude	Latitude coordinate of critical facility (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude coordinate of critical facility (in decimal degrees). Field-calculate in GIS software.	Float

3.6.2.1 Critical Facility Category Examples

Chemical	Facilities associated with the provision of manufacturing, maintaining, or distributing hazardous materials and chemicals.
Communications	Communication carrier infrastructure including selective routers, central offices, head ends, cellular switches, remote terminals, and cellular sites.
Emergency services	Police stations, fire stations, emergency operations centers.
Energy	Public and private utility facilities vital to maintaining or restoring normal service, including, but not limited to interconnected publicly owned utilities and electric cooperatives.
Government facilities	Schools, prisons, government agency buildings, etc.
Healthcare and public health	Public health departments and medical facilities, including hospitals, skilled nursing facilities, nursing homes, blood banks, health care facilities, dialysis centers, and hospice facilities.
Public safety answering points	911 call centers.
Transportation	Rail stations, bus stations, gas stations, electric vehicle charging stations, etc.
Water and wastewater systems	Facilities associated with the provision of drinking water or processing of wastewater, including facilities used to pump, divert, transport, store, treat, or deliver water or wastewater.
Other	Does not fit in above categories.

3.6.3 Red Flag Warning Day (Polygon Feature Class)

The values in this feature class can be determined with publicly available information. Submit red flag warning day data in polygons for all fire weather zones, as defined by the National Weather Service, that intersect the electrical corporation's service territory, including those that only partially intersect the territory. Electrical corporations do not have to clip the polygons to match the service territory boundaries. Fire weather zone GIS polygon data can be downloaded from the National Weather Service here.

Field Name	Field Description	Field Type
RfwID	Unique ID and primary key for the Red Flag Warning Day feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
FireWeatherZoneID	ID number of fire weather zone.	Text
FireWeatherZoneName	Name of fire weather zone.	Text
RedFlagWarningIssueDateTime	Start date and time of the Red Flag Warning.	Date
NumberRedFlagWarningDays	Number of red flag warning days.	Float

3.6.4 Administrative Area (Polygon Feature Classes)

Submit administrative area polygons for all administrative areas used to manage the service territory. Submit one feature class per administrative area type. Each feature class submitted must utilize the schema below. Do not force all administrative areas into one feature class. The overall service territory is the broadest administrative area type that Energy Safety expects to receive. For electrical corporations with a territory that surrounds the territories of other electricity providers, a precise service territory polygon must be submitted with areas removed to account for embedded service territories of other providers (e.g., public utilities and cooperatives that may be entirely surrounded by an electrical corporation's service territory). Include all administrative areas used by the electrical corporation, including areas used for design and construction purposes (e.g., high wind areas, corrosive environments, etc.). All administrative area features classes must be submitted at least once, and when they are updated or revised, the latest version of them should be submitted with the electrical corporation's subsequent quarterly data submission.

Field Name	Field Description	Field Type
AdminID	Unique ID and primary key for the Administrative Area feature class attribute table.	Text
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
AreaType	Type of administrative area (service territory, region, district, zone, etc.)	Text
SubAreaType	Utility sub-area type. Enter "N/A" if an administrative area feature class is not broken into sub-polygons with unique names. Possible values: • Operational • Construction • Weather • Organizational • "N/A" • Other - See comment	Text
SubAreaTypeComment	Sub-area type not listed in the options above.	Text
Name	Name of administrative area.	Text
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text

3.6.5 Major Woody Stem (MWS) Exempt Tree Point

Submit current point locations for major woody stem (MWS) exempt trees designated as such by the electrical corporation. MWS trees are exempt from certain vegetation clearance requirements. A legal description of qualifying trees and conditions can be found under 14 CCR § 1257. Exempt Minimum Clearance Provisions - PRC 4293. Previously, MWS points were only submitted to CAL FIRE in July of each year.

Field Name	Field Description	Field Type
UtilityID	Standardized identification name of the utility. Possible values: • BV • HWT • Liberty • PacifiCorp • PG&E • SCE • SDG&E • TBC	Text
Species	Tree species common name. Do not use codes of scientific names.	Text
LastInspectionDate	Last date MWS tree was inspected.	Date
Quantity	Quantity of MWS trees represented by a single point if there are more than one. This may not be applicable to all electrical corporations. Leave this value as null if it is not applicable.	Integer
Confidential	Does the utility consider this record confidential? Possible Values: • Yes • No	Text
Latitude	Latitude of MWS tree point (in decimal degrees). Field-calculate in GIS software.	Float
Longitude	Longitude of MWS tree point (in decimal degrees). Field-calculate in GIS software.	Float

APPENDICES

Appendix A. Abbreviation Definitions

AAAC	All-aluminum alloy conductor
AAC	All-aluminum conductor
ACAR	Aluminum conductor aluminum reinforced
ACSR	Aluminum conductor steel reinforced
ACSS	Aluminum conductor steel supported
Actl	Actual
AHJ	Authority having jurisdiction
Ai	Asset inspection
AKA	Also known as
APN	Assessor parcel number
CPUC	California Public Utilities Commission
Cu	Copper
DD	2-digit day
Env	Environmental
EOC	Emergency operations center
ERD	Entity-relationship diagram
FK	Foreign key
FRA	Federal responsibility area
FWW	Fire weather watch
GDB	Geodatabase
Gh	Grid hardening
GIS	Geographic information system
HFTD	High-fire threat district
hh	2-digit hour
HWW	High wind warning
kV	Kilovolt
kVA	Kilovolt amp
LRA	Local responsibility area
MM	2-digit month
mm	2-digit minute
MVA	Megavolt-ampere
MWS	Major woody stem
N/A	Not applicable
NWS	National Weather Service
Oplc	Other power line connection
PK	Primary key

POC	Point of contact
PRC	Public Resources Code
PSPS	Public safety power shutoff
Q	Quarter (calendar quarter)
QAL	Quarterly advice letter
QDR	Quarterly data report
RFW	Red flag warning
SCADA	Supervisory control and data acquisition
SRA	State responsibility area
ss	2-digit second
VM	Vegetation management
Vmi	Vegetation management inspection
Vmp	Vegetation management project
WGS	World Geodetic System
WKID	Well-known ID
WMP	Wildfire mitigation plan
OEIS	Wildfire Safety Division

Appendix B. Glossary

GIS/Data Terminology

Attribute: Nonspatial information about a geographic feature in a GIS, usually stored in a table and linked to the feature by a unique identifier. For example, attributes of a river might include its name, length, and sediment load at a gauging station.
- Source: Esri GIS dictionary

Attribute domain: In a geodatabase, a mechanism for enforcing data integrity. Attribute domains define what values are allowed in a field in a feature class or nonspatial attribute table. If the features or nonspatial objects have been grouped into subtypes, different attribute domains can be assigned to each of the subtypes.
- Source: Esri GIS dictionary

Attribute table: A database or tabular file containing information about a set of geographic features, usually arranged so that each row represents a feature and each column represents one feature attribute. In a GIS, attribute tables are often joined or related to spatial data layers, and the attribute values they contain can be used to find, query, and symbolize features.
- Source: Esri GIS dictionary

Entity-relationship diagram (ERD): Data modeling technique that graphically illustrates an information system's entities and the relationships between those entities. An ERD is a conceptual and representational model of data used to represent the entity framework infrastructure.
- Source: Techopedia

Esri: Originally stood for Environmental Systems Research Institute. This is the company that makes the ArcGIS line of GIS software.

Feature class: Feature classes are homogeneous collections of common features, each having the same spatial representation, such as points, lines, or polygons, and a common set of attribute columns, for example, a line feature class for representing road centerlines. The four most commonly used feature classes are points, lines, polygons, and annotation (the geodatabase name for map text).
- Source: ArcGIS Help

Feature dataset: In a geodatabase, a collection of feature classes stored together so they can participate in topological relationships with one another. All the feature classes in a feature

dataset must share the same spatial reference; that is, they must have the same coordinate system and their features must fall within a common geographic area. Feature classes with different geometry types may be stored in a feature dataset.
- Source: Esri GIS dictionary

Field: A column in a table that stores the values for a single attribute.
- Source: Esri GIS dictionary

Foreign key: An attribute or set of attributes in one table that match the primary key attributes in another table. Foreign keys and primary keys are used to join tables in a database.
- Source: Esri GIS dictionary

Geodatabase: The geodatabase is the native data structure for ArcGIS and is the primary data format used for editing and data management. While ArcGIS works with geographic information in numerous geographic information system (GIS) file formats, it is designed to work with and leverage the capabilities of the geodatabase. At its most basic level, an ArcGIS geodatabase is a collection of geographic datasets of various types held in a common file system folder, a Microsoft Access database, or a multiuser relational DBMS (such as Oracle, Microsoft SQL Server, PostgreSQL, Informix, or IBM DB2). Geodatabases come in many sizes, have varying numbers of users and can scale from small, single-user databases built on files up to larger workgroup, department, and enterprise geodatabases accessed by many users.
- Source: ArcGIS Help

GIS: Stands for geographic information system. A system designed to capture, store, manipulate, analyze, manage, and present all types of geographic location data, allowing the user to question, analyze, and interpret data to understand relationships, patterns, and trends. GIS information is stored in layers of spatial data in a format that can be stored, manipulated, analyzed, and mapped.
- Source: California Open Data Portal

Metadata: Information about a dataset that makes the data easier to find or identify. Metadata includes the title and description, method of collection, limitations author, publisher, area and time period covered, license, date and frequency of release. Metadata describes the dataset's structure, data elements, its creation, access, format, and content.
- Source: California Open Data Portal

Primary key: An attribute or set of attributes in a database that uniquely identifies each record. A primary key allows no duplicate values and cannot be null.
- Source: Esri GIS dictionary

Projected coordinate system: A reference system used to locate x, y, and z positions of point, line, and area features in two or three dimensions. A projected coordinate system is defined by a geographic coordinate system, a map projection, any parameters needed by the map projection, and a linear unit of measure.
- Source: Esri GIS dictionary

Schema: The structure or design of a database or database object, such as a table, view, index, stored procedure, or trigger. In a relational database, the schema defines the tables, the fields in each table, the relationships between fields and tables, and the grouping of objects within the database. Schemas are generally documented in a data dictionary. A database schema provides a logical classification of database objects.
- Source: Esri GIS dictionary

Shapefile: The shapefile format is a popular geospatial vector data format for geographic information system (GIS) software. The shapefile format can spatially describe vector features: points, lines, and polygons, representing, for example, water wells, rivers, and lakes.
- Source: California Open Data Portal

Electrical Terminology

Ampacity: Maximum amount of current that a wire or cable can safely carry.
- Source: Merriam-Webster

Ampere: The unit of measurement of electrical current produced in a circuit by 1 volt acting through a resistance of 1 Ohm.
- Source: U.S. Energy Information Administration Glossary

Arc: Sustained luminous discharge of electricity across a gap in a circuit or between electrodes.
- Source: Merriam-Webster

Conductor: Material or object that permits an electric current to flow easily
- Source: Merriam-Webster

Circuit: A conductor or a system of conductors through which electric current flows.
- Source: U.S. Energy Information Administration Glossary

Current: A flow of electrons in an electrical conductor. The strength or rate of movement of the electricity is measured in amperes.
- Source: U.S. Energy Information Administration Glossary

Fuse: An electrical safety device consisting of or including a wire or strip of fusible metal that melts and interrupts the circuit when the current exceeds a particular amperage.
- Source: Merriam-Webster

Distribution: The delivery of energy to retail customers.
- Source: U.S. Energy Information Administration Glossary

Isolation device: A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches and other control circuit type devices are not energy isolating devices.
- Source: Occupational Safety and Health Administration Loto Tutorial (definition for "energy-isolating device")

Kilovolt: Unit of potential difference equal to 1,000 volts.
- Source: Meriam-Webster

Ohm: A measure of the electrical resistance of a material equal to the resistance of a circuit in which the potential difference of 1 volt produces a current of 1 ampere.
- Source: U.S. Energy Information Administration Glossary

Recloser: Switch or circuit breaker that establishes an electrical circuit again manually, remotely, or automatically after an interruption of service.
- Source: Merriam-Webster

SCADA: Stands for supervisory control and data acquisition. Refers to industrial control systems that are employed to control and keep track of equipment or a plant in industries like water and waste control, telecommunications, energy, transport, and oil and gas refining. SCADA is a computer system used to gather and analyze real-time data. This data is processed by the computer and is presented on a regular basis. SCADA also saves and make logs for every event into a log file that is saved on a hard drive or is sent to a printer. SCADA gives warnings by sounding alarms if situations develop into hazardous scenarios.
- Source: Techopedia

Substation: Facility equipment that switches, changes, or regulates electric voltage.
- Source: U.S. Energy Information Administration Glossary

Transformer: An electrical device for changing the voltage of alternating current.

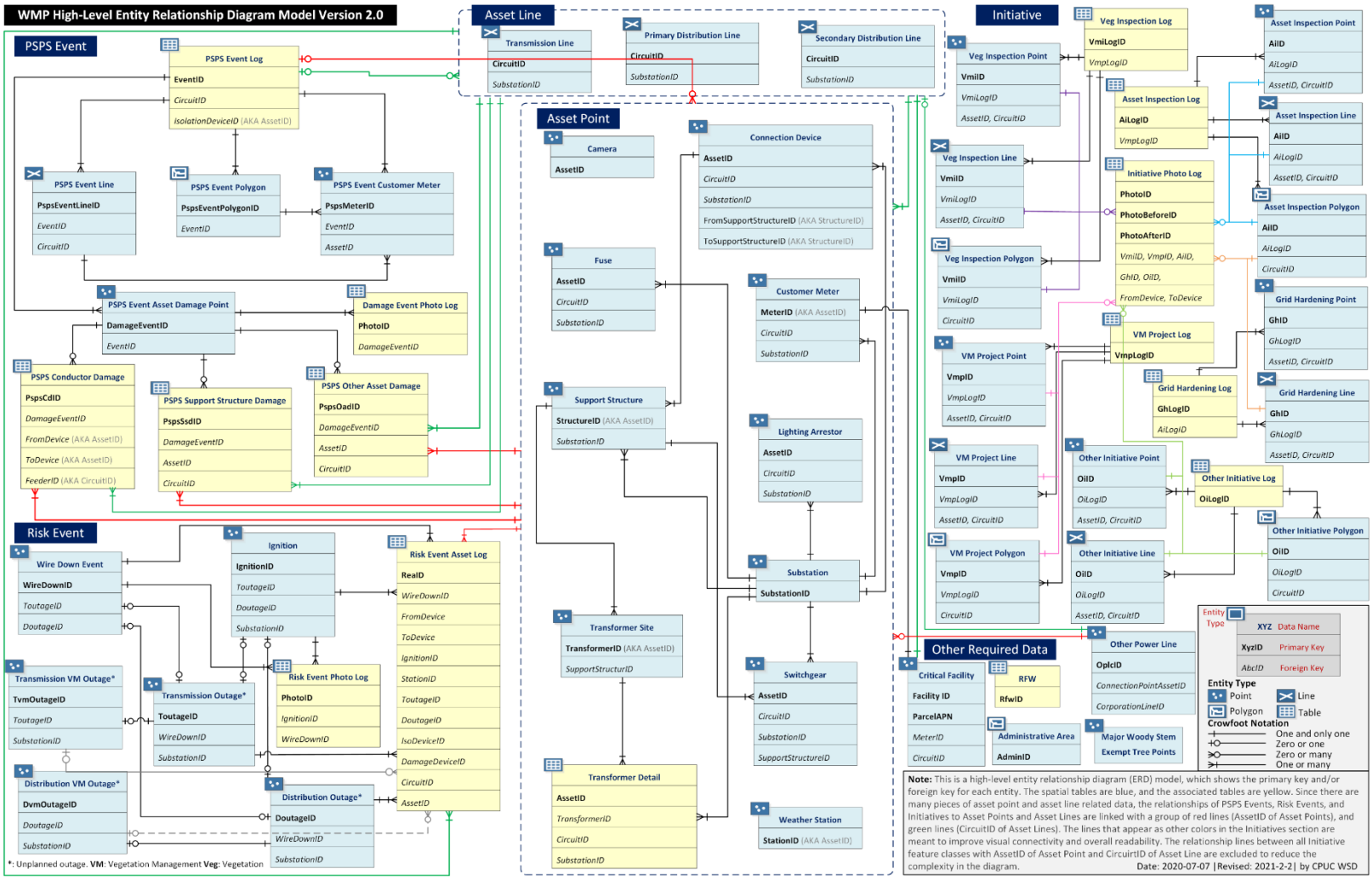
- Source: U.S. Energy Information Administration Glossary

Transmission: The movement or transfer of electric energy over an interconnected group of lines and associated equipment between points of supply and points at which it is transformed for delivery to consumers or is delivered to other electric systems. Transmission is considered to end when the energy is transformed for distribution to the consumer.
- Source: U.S. Energy Information Administration Glossary

Volt: The practical meter-kilogram-second unit of electrical potential difference and electromotive force equal to the difference of potential between two points in a conducting wire carrying a constant current of one ampere when the power dissipated between these two points is equal to one watt and equivalent to the potential difference across a resistance of one ohm when one ampere is flowing through it.
- Source: Merriam-Webster

Voltage: The electric force that causes current in a conductor.
- Source: San Diego Gas and Electric Glossary of EMF Terms

Appendix C. High-Level Entity-Relationship Diagram (ERD)



DATA DRIVEN
FORWARD-THINKING
INNOVATIVE
SAFETY FOCUSED

OFFICE OF ENERGY INFRASTRUCTURE SAFETY
A California Natural Resources Agency
www.energysafety.ca.gov

715 P Street, 20th Floor
Sacramento, CA 95814
916.902.6000

OFFICE OF ENERGY
INFRASTRUCTURE
SAFETY