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April 3, 2023

VIA ELECTRONIC FILING

Caroline Thomas Jacobs
Director, Office of Energy Infrastructure Safety
715 P Street, 20th Floor
Sacramento, CA 95814

RE: SDG&E 2022 WMP Annual Report on Compliance
Docket # 2022-EC_ARC

Dear Director Thomas Jacobs:

San Diego Gas & Electric ("SDG&E") hereby provides to The Office of Energy infrastructure Safety's ("Energy Safety") its 2022 Wildfire Mitigation Plan Annual Report on Compliance ("ARC") pursuant to California Public Utilities Code (PU Code) § 8386.3(c)(1). This report addresses SDG&E's compliance with its WMP during the 2022 calendar year. SDG&E is submitting this report on Monday, April 3, due to the California state government holiday, Cesar Chaves Day, on Friday, March 31.

Respectfully submitted,

/s/ Laura M. Fulton

Attorney for
San Diego Gas and Electric Company

Wildfire Mitigation | SDGE™

San Diego Gas & Electric Company
2022 WILDFIRE MITIGATION PLAN
ANNUAL REPORT ON COMPLIANCE

April 3, 2023

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1 Introduction

Wildfire safety, prevention, mitigation, and recovery are central priorities for San Diego Gas & Electric (SDG&E). Consistent with these priorities and applicable laws and regulatory requirements, SDG&E's Wildfire Mitigation Plan (WMP) was founded upon the goal of minimizing the probability that SDG&E's electric infrastructure might be the original or contributing source of ignition resulting in wildfire. On February 11, 2022, SDG&E submitted its 2022 Wildfire Mitigation Plan Update (2022 WMP) in accordance with updated guidance from the Commission and the Office of Energy Infrastructure Safety (Energy Safety).[1] The programs, initiatives, and plans described in SDG&E's 2022 WMP highlight many of SDG&E's ongoing efforts to mitigate the risk of catastrophic wildfire related to electrical infrastructure and reduce the customer impacts of Public Safety Power Shutoff (PSPS) events.

In 2022, SDG&E implemented and tracked the progress of 73 different mitigations outlined in its 2022 WMP. Progress on these mitigations is reported through 41 quantitative and 32 qualitative program metrics. SDG&E's mitigations involve a wide array of categories such as inspection and maintenance programs, system hardening programs, and vegetation management programs, all aimed at mitigating the risk of ignitions related to the electric system. Additional categories include situational awareness, which informs SDG&E's risk models and helps prioritize infrastructure replacement and upgrades, and Emergency Planning and Preparedness, which enables strategies and tools for real time decision making during emergency response and PSPS events. SDG&E also has mitigations aimed at reducing the impact of a wildfire should an ignition occur, including high-definition cameras, ground and aerial fire suppression resources, and a fuels management program. In addition, SDG&E has implemented mitigations designed to minimize the customer impacts associated with PSPS events, including the installation of sectionalizing devices, additional weather stations, and microgrids and customer service efforts including generator grant programs, operating Community Resource Centers (CRC) during PSPS events, and customer outreach programs aimed at wildfire and PSPS preparedness.

Pursuant to Public Utilities Code Section 8386.3(c)(1), SDG&E submits this Annual Report on Compliance addressing its WMP compliance for 2022. This report provides a breakdown of each mitigation described in SDG&E's 2022 WMP Update with a quantitative or qualitative metric to show risk reduction. As discussed in SDG&E's 2022 WMP Update, the risk reduction calculations performed for WMP programs rely on the quantitative targets to calculate the overall risk reduction for the program. This report also provides variance explanations for units greater or less than 10% of target and expenditures greater or less than 20% of target or $10 million dollars including potential impact on wildfire and PSPS risk reduction provided by the mitigation.

In 2022, SDG&E met or exceeded the risk reduction intent for 35 of 41 quantitative programs and all 32 qualitative programs. In these achievements, SDG&E has met its risk reduction intent as described in the 2022 WMP. The following are key accomplishments for activities that occurred between January 1, 2022, through December 31, 2022.[2] More details are included throughout this report.

[1] Final 2022 WMP guidelines were disseminated by Energy Safety on December 15, 2021.

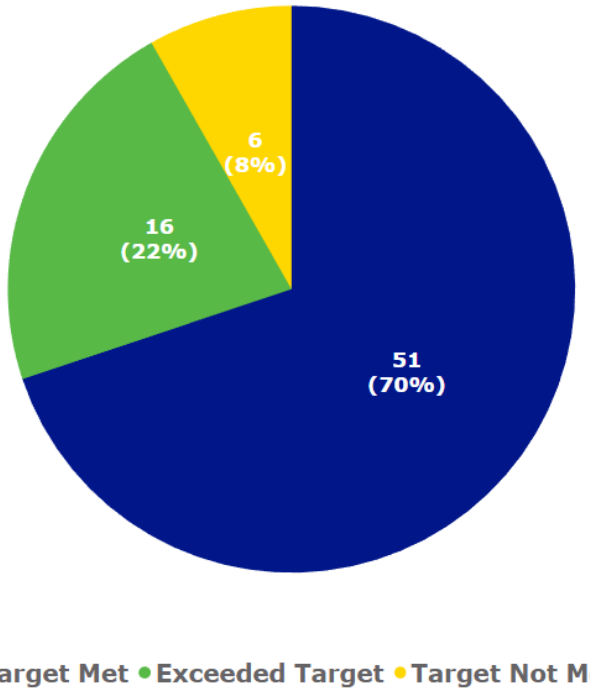
[2] SDG&E notes that the figures included in this Report in some cases differ from those submitted in its 2022 Fourth Quarter Quarterly Data Report, submitted February 1, 2023. The changes reflect minor corrections realized as SDG&E completed its 2023 WMP submission and nonspatial tables. SDG&E is also submitting a revised Fourth Quarter QDR to make these corrections.

- SDG&E fire hardened 106 miles of its overhead electric system within the high fire threat district (HFTD).
- SDG&E undergrounded 71 miles of its electric system within the HFTD.
- SDG&E completed routine and HFTD-focused distribution, substation, and transmission inspections, including timely remediation per general order requirements.
- SDG&E completed the LiDAR and Drone Investigation Assessment and Repair (DIAR) programs, inspecting 100 percent of distribution and transmission structures in Tier 2 and Tier 3 of the HFTD under each program.
- Vegetation management annual inspections and trimming were completed, including the inspection of over 250,000 trees in the HFTD and the trim or removal of over 10,000 targeted species trees in HFTD to enhanced clearance levels.
- SDG&E enhanced situational awareness capabilities by upgrading and rebuilding 50 weather stations.

Overall, SDG&E met the risk reduction intent for 51 program targets and exceeded 16 program targets outlined in its 2022 WMP. SDG&E did not meet 6 quantitative program targets as initially planned in its 2022 WMP, and those are discussed further in this report. Generally, for the 6 programs not meeting targets:

- 3 met the risk reduction intent of the initiative, but the original target was either derived based upon erroneous or inadequate information, or did not accurately capture the intent of the initiative;
- 3 remain in progress and will be completed in 2023.

Figure 1: Wildfire Mitigation Program Summary



Although SDG&E experienced zero PSPS events in 2022, several updates were made to SDG&E's Company Emergency and Disaster Preparedness Plan (CEADPP) in 2022. These updates ensured

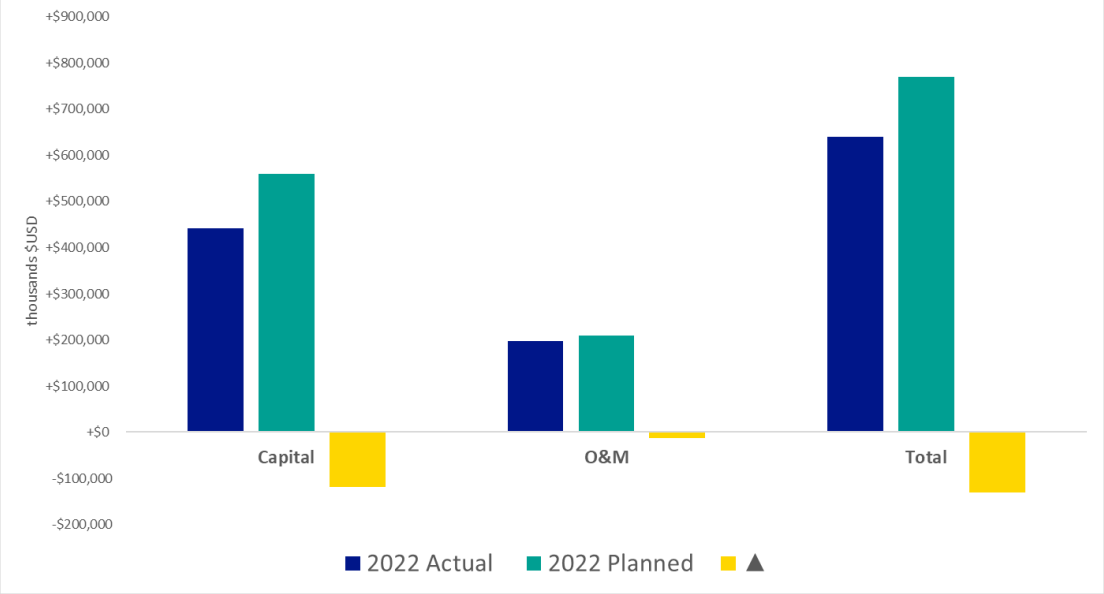
compliance with Emergency Management Accreditation Program (EMAP) standards and included the addition of hazard/threat-specific annexes, detailed information on hazard/threat identification and assessment processes, updated and formalized continuity of leadership for executives, and updated organization charts to implement companywide ICS. Additionally, a mobile app version of the Public Safety Partner Portal (PSPP) was developed to further support timely collaboration and coordination with our public safety partners during a PSPS event.

Below is a financial summary for SDG&E's 2022 Wildfire Mitigation Plan. SDG&E's expenditures for its initiatives was overall underspent by seventeen percent. O&M expenditure was very close to planned with a 5.8% underspend and capital expenditure was underspent by 21%. The majority of the underspend is attributable to covered conductor installation and undergrounding. In both cases, SDG&E achieved its targets and risk reduction intent for the year while realizing reduced costs to complete the work more efficiently.

Table 1: Financial Summary for 2022 WMP

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)	% Variance
Capital	$ 560,558.02	$ 441,819.83	- $ 118,738.19	- 21 %
O&M	$ 209,835.20	$ 197,623.30	- $ 12,211.90	- 5.8 %
TOTAL	**$ 770,393.23**	**$ 639,443.14**	**- $ 130,950.09**	**- 17 %**

Figure 2: Financial Summary for 2022 WMP



2 Risk Assessment and Mapping (2022 WMP Section 7.3.1)

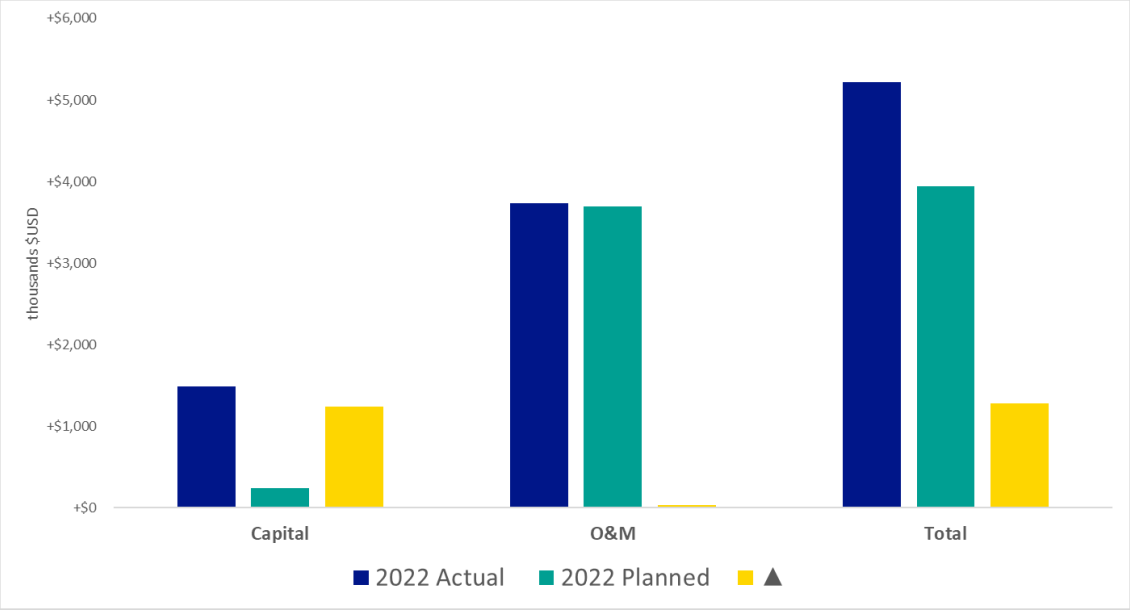
SDG&E made advancements in its risk modeling capabilities to better inform its investment strategies and initiative selections and to optimize its ability to target the areas of highest wildfire risk. During the 2020 to 2022 WMP cycle, SDG&E transitioned from utilizing the Wildfire Risk Reduction Model (WRRM) model to the Wildfire Next Generation System (WiNGS)-Planning model to evaluate the risk of wildfire and the likelihood and impacts of PSPS at the circuit segment level. In 2022, SDG&E incorporated new data inputs to the WiNGS-Planning model to, among other things, capture additional cost efficiencies, update ignition and weather data, and capture any risk reduction of existing infrastructure. These updates led SDG&E to re-shape its grid hardening strategy to perform additional undergrounding of electric lines over the next 10 years and reduce corresponding covered conductor installation. By executing this plan, SDG&E predicts it will significantly reduce the risk of utility-related wildfire and the impacts of PSPS within the service territory.

Below is a financial summary for the programs within the Risk Assessment and Mapping category of SDG&E's 2022 Wildfire Mitigation Plan. Variances greater or less than 10% of target and expenditures greater or less than 20% of planned spend or $10 million dollars are discussed further within each initiative.

Table 2: Financial Summary for Risk Assessment and Mapping Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 242.55	$ 1,485.83	$ 1,243.28
O&M	$ 3,697.20	$ 3,734.87	$ 37.67

Figure 3: Financial Summary for Risk Assessment and Mapping Programs



2.1 Summarized Risk Map (2022 WMP Section 7.3.1.1)

Risk Reduction

No discussion needed.

Table 3: Risk Reduction for Summarized Risk Map

2022 Plan	2022 Actual
SDG&E plans to continue enhancements on WRRM and WRRM-Ops that include upgrading fuel moisture inputs into fire behavior modeling, upgrading the forecaster interface, and incorporating data into a PSPS decision support tool. Enhancements planned for WiNGS-Planning and WiNGS-Ops include completing automation, developing user interface and visualization tools, improving the models with new data, and integration of Technosylva and weather data.	In 2022, SDG&E met its planned goals for WRRM, WRRM-Ops, WiNGS-Planning and WiNGS-Ops. Enhancements to WRRM and WRRM-Ops included: • The transitioning of models from static Microsoft excel files to the cloud allowed for centralized, dynamic data that improved transparency, reproducibility, and allowed a more agile risk assessment. • Continued to add new sources of information, new features, and enhanced user experience. • Moved the WiNGS-Planning model output to a visual platform which allowed for dissemination of the model and enhanced design scenario building to better guide investment planning decisions. • Moved the WiNGS-Ops model output dynamic risk modeling to a visual platform which will allow for easy access to information during events and strengthen confidence in PSPS decision-making. • Technosylva's Wildfire Analyst™ Enterprise (WFA-E) product has been updated to conduct modeling, deliver modeling outputs, and monitor and visualize results with software applications that are incorporated directly into operations wildfire risk modeling efforts. • The WiNGS-Planning and WiNGS-Ops Visualization platforms will be used to visually display and to disseminate the output of the WiNGS models to various user groups from top level executives to scoping analysts to EOC decision makers, and other stakeholders. The application consists of dashboards for WiNGS-Ops and WiNGS-Planning with dynamic web maps linked to informative widgets designed for use cases including PSPS decision making as well as investment planning. Within the Visualization applications, users will be able to view circuit and segment-level risk in the context of wildfire and PSPS events. Users will be able to run the WiNGS-Planning model with an expanded number of design-level scenarios to help guide investment decisions. The application is expected to go live in 2023.

Spend:

Capital costs for 2022 were projected based on enhancements planned for WiNGS-Planning and WiNGS-Ops. The additional spend in 2022 was due to cost associated with WiNGS Visualization Platform that was over original estimates anticipated.

Table 4: Spend for Summarized Risk Map

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 242.55	$ 1,485.83	$ 1,243.28
O&M	$ 3,697.20	$ 3,734.87	$ 37.67

PSPS Impact Reduction:

N/A

3 Situational Awareness and Forecasting (2022 WMP Section 7.3.2)

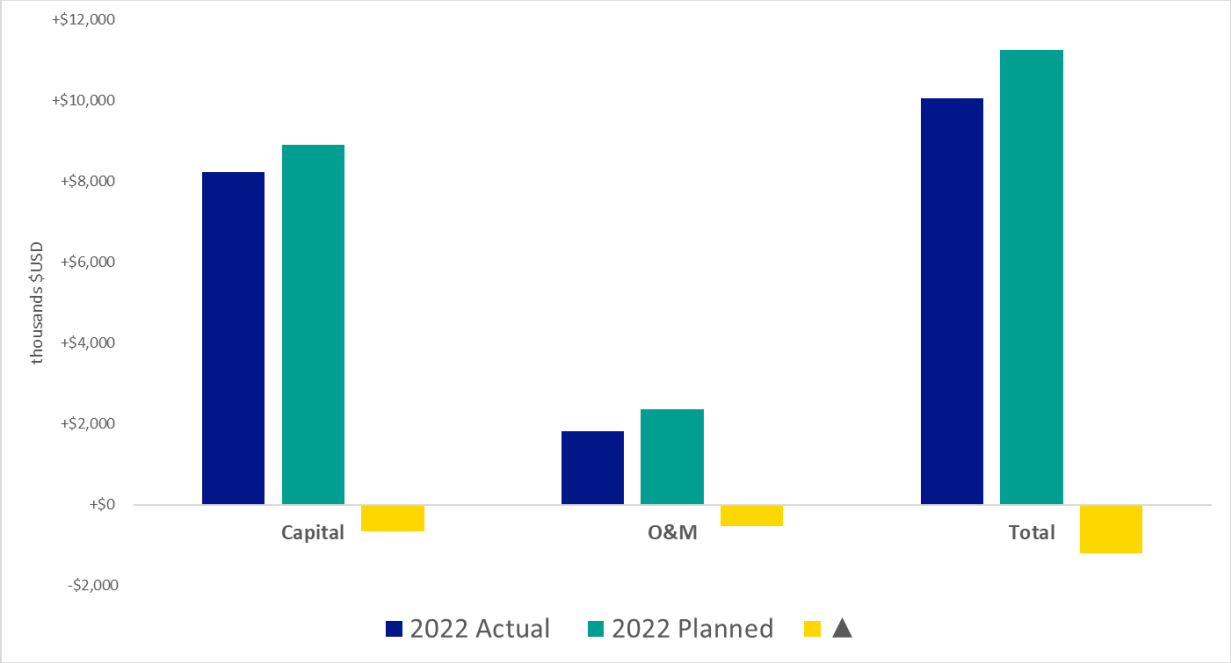
SDG&E improved upon its world-class situational awareness tools over the 2020 to 2022 WMP cycle. The Weather Station Network was expanded to include 222 weather stations across the service territory, and stations were upgraded with the capacity to provide wind speed data at up to 30 second intervals. SDG&E's artificial intelligence forecasting technology is now integrated with 216 weather stations, providing the latest technology and improved ability to forecast impending wind events. SDG&E's Artificial Intelligence (AI) smoke detection algorithm was developed in partnership with the Space Science and Engineering Center (SSEC) at the University of Wisconsin-Madison to identify fires soon after ignition by operationalizing satellite fire detection coupled with mountaintop cameras. SDG&E's Fire Potential Index (FPI) was further enhanced by obtaining data from five 10-hr-dead-fuel moisture sensors, nine normalized difference vegetation index (NDVI) cameras in strategic locations, and weekly NDVI values from low earth orbiting satellites. In 2022, SDG&E exceeded all four of its quantitative situational awareness initiatives.

Below is a financial summary for the programs within the Situational Awareness and Forecasting category of SDG&E's 2022 Wildfire Mitigation Plan. Variances greater or less than 10% of target and expenditures greater or less than 20% of planned spend or $10 million dollars are discussed further within each initiative.

Table 5: Financial Summary for Situational Awareness and Forecasting Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 8,912.01	$ 8,245.04	- $ 666.84
O&M	$ 2,353.91	$ 1,818.23	- $ 535.68

Figure 4: Financial Summary for Situational Awareness and Forecasting Programs



3.1 Advanced Weather Monitoring and Weather Stations (2022 WMP Section 7.3.2.1)

Risk Reduction

SDG&E completed additional weather station upgrades due to available inventory and crew availability to perform the work.

Table 6: Risk Reduction for Advanced Weather Monitoring and Weather Stations

2022 Plan	2022 Actual	% of Target	Units
20	50	250%	Weather stations

Spend

No discussion needed.

Table 7: Spend for Advanced Weather Monitoring and Weather Stations

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 525.26	$ 539.46	$ 14.21

PSPS Impact Reduction

N/A

3.2 Air Quality Index (2022 WMP Section 7.3.2.2.1)

Risk Reduction

SDG&E installed more sensors than planned for 2022 because labor resources to install the sensors became available quicker than originally anticipated.

Table 8: Risk Reduction for Air Quality Index

2022 Plan	2022 Actual	% of Target	Units
6	8	133.33%	Sensors

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

3.3 Camera Network (2022 WMP Section 7.3.2.2.2)

Risk Reduction

The mountaintop camera network in Southern California is unique in that it has reached maturity in camera coverage. SDG&E installed more cameras than planned due to installations carried over from 2021 due to permitting delays. The initial number of cameras projected for 2022 increased by four. Going forward, SDG&E's primary objective for the camera network is system resilience rather than expansion.

Table 9: Risk Reduction for Camera Network

2022 Plan	2022 Actual	% of Target	Units
8	12	150%	Cameras

Spend

SDG&E spent unplanned capital due to costs of expanding the camera network.

Table 10: Spend for Camera Network

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 0	$ 3.29	$ 3.29

PSPS Impact Reduction

N/A

3.4 Wireless Fault Indicators (2022 WMP Section 7.3.2.3)

Risk Reduction

Wireless fault indicators are installed via a fixed-bid contract, which allows the program to complete work as crews and resources are available. In 2022, SDG&E's contractors were able to install more indicators than planned.

Table 11: Risk Reduction for Wireless Fault Indicators

2022 Plan	2022 Actual	% of Target	Units
500	595	119%	Wireless fault indicators

Spend

The additional spend in 2022 was due to a unit completion count over target and trailing charges of $82,000 from 2021. There was a partial offset in cost increase due to a change to a fixed bid contract which lowered labor costs.

Table 12: Spend for Wireless Fault Indicators

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 686.75	$ 845.97	$ 159.22

PSPS Impact Reduction

N/A

3.5 Fire Potential Index (2022 WMP Section 7.3.2.4.1)

Risk Reduction

No discussion necessary.

Table 13: Risk Reduction for Fire Potential Index

2022 Plan	2022 Actual
In 2022, SDG&E will continue to work to advance fire science and weather science through their partnerships with academia, such as San Diego State College (SDSC), San Jose State University (SJSU), and University of Wisconsin.	SDSC weather model visualization is complete, and models and parameters are added frequently. Refinement of the SJSU Live Fuel Moisture model continues with additional databases. University of Wisconsin space-based fire alerts continue to prove effective temporally and spatially and are collaborative with the AI smoke detection camera network. Scripps Oceanography has completed a long-range advanced weather model for SDG&E that determines the probability and severity of Santa Anas.

Spend

The underspend in capital and O&M costs are due to software invoicing being delayed until 2023.

Table 14: Spend for Fire Potential Index

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)

Capital	$ 2,200.00	$ 1,632.00	- $ 567.87
O&M	$ 2,353.91	$ 1,818.23	- $ 535.68

PSPS Impact Reduction

While this program cannot be directly tied to a decrease in PSPS impacts, it does improve situational awareness during PSPS events.

3.6 Santa Ana Wildfire Threat Index (2022 WMP Section 7.3.2.4.2)

Risk Reduction

No discussion needed.

Table 15: Risk Reduction for Santa Ana Wildfire Threat Index

2022 Plan	2022 Actual
In 2022, the resolution of the modeling used to generate the SAWTI will be increased, which will require re-coding of the software that processes the weather and fuels data.	New super computers and subsequent weather modeling upgrade to create a higher resolution baseline is on track. SDG&E will continue to work with academia and the fire agencies to further develop fire science for integration into SAWTI.

Spend

The costs for this program are embedded within Fire Science and Climate Adaptation.

PSPS Impact Reduction

While this program cannot be directly tied to a decrease in PSPS impacts, it does improve situational awareness during PSPS events.

3.7 High-Performance Computing Infrastructure (2022 WMP Section 7.3.2.4.3)

Risk Reduction

No discussion needed.

Table 16: Risk Reduction for High-Performance Computing Infrastructure

2022 Plan	2022 Actual
SDG&E will add two new HPCC's, enhancing forecasting capabilities.	SDG&E acquired, configured, and installed two new High Performance Computing Clusters (HPCCs) in Fall 2022.

Spend

No discussion needed.

Table 17: Spend for High-Performance Computing Infrastructure

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 5,500.00	$ 5,224.32	- $ 275.68

PSPS Impact Reduction

N/A

3.8 Personnel Monitoring Equipment (2022 WMP Section 7.3.2.5)

Risk Reduction

No discussion needed.

Table 18: Risk Reduction for Personnel Monitoring Equipment

2022 Plan	2022 Actual
SDG&E will continue to integrate the latest risk assessments and scientific understanding to the deployment of observers during high-risk events to try to place observers in the best place to mitigate risk. Additional consistencies in updating digital maps and enhancements to field navigation will be reviewed for implementation in 2022.	No potential PSPS conditions were present in 2022. Extreme FPI was present, but after assessment and in-line with procedures, no personnel staging was necessary.

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

4 Grid Design and System Hardening (2022 WMP Section 7.3.3)

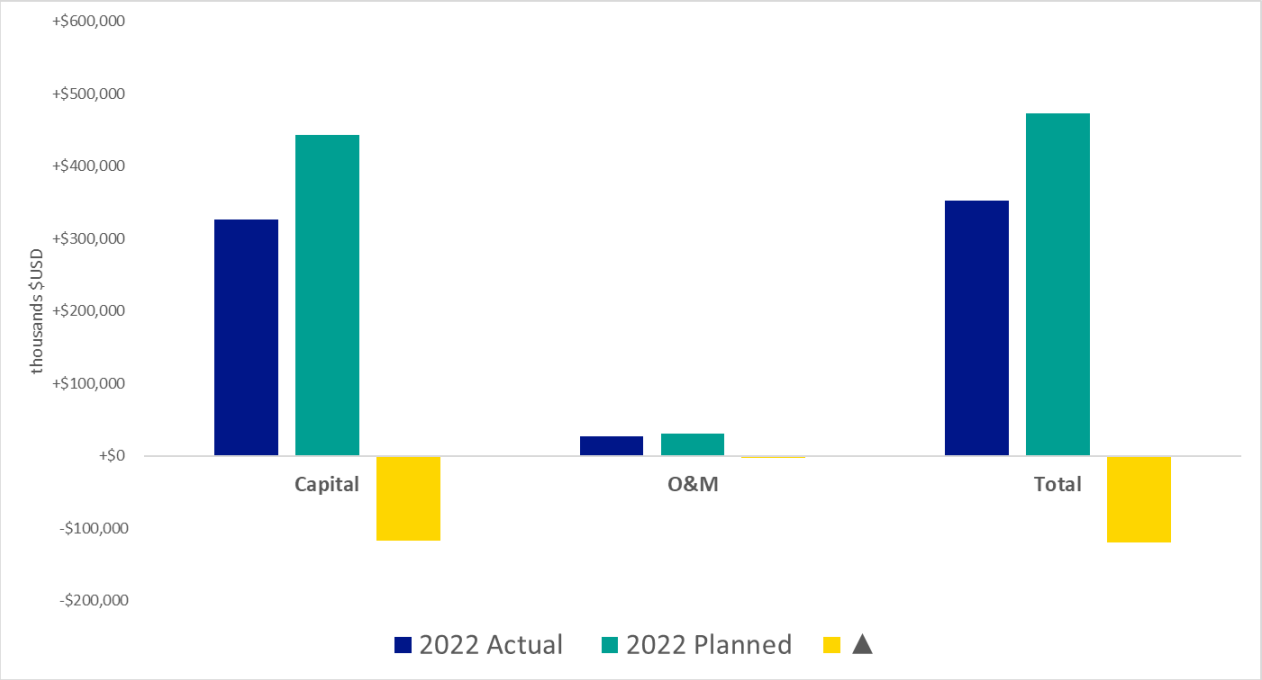
SDG&E's major risk reduction initiatives remain its large grid hardening initiatives, specifically transmission and distribution overhead hardening, installation of covered conductor, and strategic undergrounding of electric lines. In 2022, SDG&E successfully completed 106 miles of overhead hardening, installed 61 miles of covered conductor, and undergrounded 71 miles of electric lines, exceeding targets for those three initiatives. In addition, SDG&E implemented protection and equipment programs, such as advanced protection, the expulsion fuse replacement program, and the lightning arrestor program, with the intent of reducing the likelihood that a risk event results in an ignition. Finally, SDG&E implemented programs with the purpose of reducing PSPS impacts to customers including the PSPS sectionalizing program, microgrid and generator programs, and strategic undergrounding. The impacts of these programs are measured in the number of customers who will no longer be impacted by a PSPS event assuming weather conditions are similar to previous events. In sum, SDG&E met or exceeded targets for 13 of 18 grid hardening initiatives and did not meet targets for the remaining 5. Variances are discussed further within each initiative.

Below is a financial summary for the programs within the Grid Design and System Hardening category of SDG&E's 2022 Wildfire Mitigation Plan. Variances greater or less than 10% of target and expenditures greater or less than 20% of planned spend or $10 million dollars are discussed further within each initiative.

Table 19: Financial Summary for Grid Design and System Hardening Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 442,793.14	$ 326,059.68	- $ 116,733.81
O&M	$ 30,327.03	$ 26,966.06	- $ 3,360.97

Figure 5: Financial Summary for Grid Design and System Hardening Programs



4.1 SCADA Capacitors (2022 WMP Section 7.3.3.1)

Risk Reduction

SDG&E completed additional SCADA capacitor installations because lower labor costs increased job efficiency and allowed for more installations within budget.

Table 20: Risk Reduction for SCADA Capacitors

2022 Plan	2022 Actual	% of Target	Units
40	58	145.00%	SCADA capacitors

Spend

No discussion needed.

Table 21: Spend for SCADA Capacitors

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 3,230.75	$ 3,509.43	$ 278.67

PSPS Impact Reduction

N/A

4.2 Covered Conductor Installation (2022 WMP Section 7.3.3.3)

Risk Reduction

No discussion needed.

Table 22: Risk Reduction for Covered Conductor Installation

2022 Plan	2022 Actual	% of Target	Units
60	61.23	102.05%	Miles

Spend

The underspend of capital was due to completing work more efficiently that originally forecasted. SDG&E was able to complete 100% of the target work while spending less than originally forecasted. The overspend in O&M was due to improved identification of O&M costs in the source system since the initial spend was projected.

Table 23: Spend for Covered Conductor Installation

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 124,643.00	$ 89,512.00	- $ 35,131.35
O&M	$ 594.29	$ 3,220.85	$ 2,626.56

PSPS Impact Reduction

While this program cannot be correlated to a direct decrease in PSPS impacts, when an entire circuit segment is hardened it should increase the wind speed threshold for which the line would experience a PSPS.

4.3 Distribution Pole Replacement and Reinforcement (2022 WMP Section 7.3.3.6)

Risk Reduction

Discussion not needed.

Table 24: Risk Reduction for Distribution Pole Replacement

2022 Plan	2022 Actual
SDG&E plans to continue its mandated and enhanced inspection programs over the next 10 years. Regular inspections and subsequent remediations are a critical way of preventing potential equipment failures, faults, and ignitions. Expected structure replacement forecasts are adjusted annually based on the latest inspection data results, and the location and number of assets contained in specific inspection cycles.	No changes were made to this Program in 2022. The Pole Replacement and Reinforcement Program does not have specific targets set as all replacement work is reactive and based on findings from asset inspection programs. Proactive pole replacements are performed with other grid hardening initiatives.

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

4.4 Expulsion Fuse Replacement (2022 WMP Section 7.3.3.7)

Risk Reduction

No discussion needed.

Table 25: Risk Reduction for Expulsion Fuse Replacement

2022 Plan	2022 Actual	% of Target	Units
227	231	101.76%	Fuses

Spend

No discussion needed.

Table 26: Spend for Expulsion Fuse Replacement

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 734.00	$ 631.39	- $ 102.61

PSPS Impact Reduction

N/A

4.5 PSPS Sectionalizing Enhancements (2022 WMP Section 7.3.3.8.1)

Risk Reduction

SDG&E completed additional PSPS sectionalizing device installations due to available inventory and crew availability to perform the work.

Table 27: Risk Reduction for PSPS Sectionalizing Enhancements

2022 Plan	2022 Actual	% of Target	Units
10	12	120.00%	Switches

Spend

The overspend is due to the additional units that were installed.

Table 28: Spend for PSPS Sectionalizing Enhancements

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 1,909.68	$ 2,382.67	$ 472.99

PSPS Impact Reduction

PSPS sectionalizing enhancements enable SDG&E to divide the distribution system into smaller segments, which allows for more targeted application of PSPS to the areas of greatest risk and minimizes the impacts to adjacent customers. For the 11 devices installed in 2022, 10,982 customers could potentially see PSPS reduction benefits.

4.6 Microgrids (2022 WMP Section 7.3.3.8.2)

Risk Reduction

SDG&E experienced delays acquiring appropriate and sufficient land rights for the microgrid projects and has been delayed in deploying the permanent renewable solutions. This has shifted spend from 2022 into 2023 and 2024.

Table 29: Risk Reduction for Microgrids

2022 Plan	2022 Actual	% of Target	Units
4	1	25.00%	Microgrids

Spend

Delays have shifted spend from 2022 into 2023.

Table 30: Spend for Microgrids

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 13,309.08	$ 2,697.30	- $ 10,611.78
O&M	$ 1,607.28	$ 1,304.02	- $ 303.26

PSPS Impact Reduction

While the microgrid permanent renewable solution was not completed, PSPS impact to customers is mitigated through existing generators.

4.7 Installation of System Automation Equipment (2022 WMP Section 7.3.3.9)

Risk Reduction

SDG&E experienced delays acquiring approvals of easement requests due to external process change.

Table 31: Risk Reduction for System Automation Equipment

2022 Plan	2022 Actual	% of Target	Units
8	3	37.50%	Circuits

Spend

Increased capital expenditure was due to additional substation projects being added to the program after the planned spend was initially submitted coupled with increased engineering and construction costs. Unplanned spend in O&M is due to charges for required maintenance work related to associated capital project expenditures.

Table 32: Spend for System Automation Equipment

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 12,937.92	$ 23,822.12	$ 10,884.20
O&M	$ 0	$ 152.31	$ 152.31

PSPS Impact Reduction

N/A

4.8 Hotline Clamps (2022 WMP Section 7.3.3.10)

Risk Reduction

The fixed-bid contract allows the program to complete work as crew and resources/parts are available.

Table 33: Risk Reduction for Hotline Clamps

2022 Plan	2022 Actual	% of Target	Units
1650	1903	115.33%	Hotline clamps

Spend

The reduced spend can be attributed to efficiencies gained in the construction process. SDG&E condensed the work of three budgets into one work mobilization resulting in savings on labor and equipment.

Table 34: Spend for Hotline Clamps

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 4,320.56	$ 1,781.40	- $ 2,539.15

PSPS Impact Reduction

N/A

4.9 Generator Grant Program (2022 WMP Section 7.3.3.11.1)

Risk Reduction

SDG&E's program team revisited the delivery model and subsequently reduced the target as part of SDG&E's approved Change Order Report filed on October 14, 2022.[3] Illustrating the challenge in forecasting delivery of generators without the occurrence of PSPS events, SDG&E ultimately achieved a higher target than predicted.

Table 35: Risk Reduction for Generator Grant Program

2022 Plan	2022 Actual	% of Target	Units
700	921	131.57%	Generators

Spend

SDG&E had lower than expected expenditures associated with the Generator Grant Program in 2022 due to the revised target submitted as part of SDG&E's Change Order Report filed on October 14, 2022.[4]

Table 36: Spend for Generator Grant Program

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 10,400.00	$ 3,550.40	- $ 6,849.60

PSPS Impact Reduction

While no PSPS events occurred in 2022, the availability of generators directly improves customers' ability to use devices during PSPS events.

4.10 Standby Power Programs (2022 WMP Section 7.3.3.11.2)

Risk Reduction

No discussion needed.

Table 37: Risk Reduction for Standby Power Programs

2022 Plan	2022 Actual	% of Target	Units
412	376	91.26%	Generators

Spend

No discussion needed.

[3] *SDG&E 2022 Change Order Report*, p. 1: https://efiling.energysafety.ca.gov/Search.aspx?docket=2022-WMPs; *Office of Energy Infrastructure Safety Decision on San Diego Gas & Electric Company's Change Order Request in relation to its 2022 Wildfire Mitigation Plan Update* (February 9, 2022).
[4] *Id.*

Table 38: Spend for Standby Power Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 10,350.00	$ 12,043.42	$ 1,693.42

PSPS Impact Reduction

This program provides backup power in the case of a PSPS event.

4.11 Generator Assistance Program (2022 WMP Section 7.3.3.11.3)

Risk Reduction

The target for this program is developed based on the expectation of customers participating in anticipation of PSPS due to high winds, wildfire risk, or other weather emergency. In 2022, favorable weather reduced anticipation of PSPS resulting in lower-than-expected customer participation.

Table 39: Risk Reduction for Generator Assistance Program

2022 Plan	2022 Actual	% of Target	Units
1250	140	11.20%	Generators

Spend

SDG&E had lower-than-expected expenditures associated with the Generator Assistance Program in 2022 because SDG&E did not experience any PSPS events. The lack of PSPS activations drove participation in SDG&E's resiliency programs down in 2022.

Table 40: Spend for Risk Reduction for Generator Assistance Program

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 1,828.00	$ 758.99	- $ 1,069.01

PSPS Impact Reduction

The Expanded Generator Grant Program provided generator purchase rebates to customers within the HFTD. This resulted in 140 customers purchasing a generator.

4.12 Undergrounding of Electric Lines (2022 WMP Section 7.3.3.16)

Risk Reduction

No discussion needed.

Table 41: Risk Reduction for Undergrounding of Electric Lines

2022 Plan	2022 Actual	% of Target	Units
65	65	100.00%	Miles

Spend

Two primary factors resulted in SDG&E's reduced costs associated with strategic undergrounding. The first is that SDG&E was able to more efficiently construct the new underground circuits through development of new construction standards, including allowances for a shallower trench, which helped to reduce undergrounding construction costs on a per-mile basis. The second is that the projects completed in 2022 did not run into any subsurface conditions that required significant re-routes or alternate construction methods.

Table 42: Spend for Undergrounding of Electric Lines

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 188,844.66	$ 126,675.09	- $ 62,169.57
O&M	$ 1,048.58	$ 175.55	- $ 873.02

PSPS Impact Reduction

N/A

4.13 Distribution Overhead System Hardening (2022 WMP Section 7.3.3.17.1)

Risk Reduction

The increase in miles completed is a combination of trailing work from 2021 that fell into 2022 and additional availability to shift resources to complete the additional overhead mileage.

Table 43: Risk Reduction for Distribution Overhead System Hardening

2022 Plan	2022 Actual	% of Target	Units
5	26.3	526.00%	Miles

Spend

The Capital spend was higher than planned due to the completion of additional mileage. O&M costs were higher due to post-construction activities such as true-up remediations to ensure the design specifications are met based on post-construction LiDAR.

Table 44: Spend for Distribution Overhead System Hardening

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 16,311.54	$ 23,267.67	$ 6,956.13
O&M	$ 178.33	$ 3,249.08	$ 3,070.75

PSPS Impact Reduction

While this program cannot be tied to a direct decrease in PSPS impacts, when an entire circuit segment is hardened it should increase the wind speed threshold for which the line would experience a PSPS.

4.14 Transmission Overhead System Hardening (2022 WMP Section 7.3.3.17.2)

Risk Reduction

No discussion needed.

Table 45: Risk Reduction for Transmission Overhead System Hardening

2022 Plan	2022 Actual	% of Target	Units
18.5	18.28	98.81%	Miles

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

While this program cannot be tied to a direct decrease in PSPS impacts, when an entire circuit segment is hardened it can increase the wind speed threshold for which the line would experience a PSPS.

4.15 Transmission Underground System Hardening (2022 WMP Section 7.3.3.17.2)

Risk Reduction

No discussion needed.

Table 46: Risk Reduction for Transmission Underground System Hardening

2022 Plan	2022 Actual	% of Target	Units
18.5	18.28	98.81%	Miles

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

While this program cannot be tied to a direct decrease in PSPS impacts, when an entire circuit segment is hardened it can increase the wind speed threshold for which the line would experience a PSPS.

4.16 Transmission Overhead System Hardening – Distribution Underbuilt (2022 WMP Section 7.3.3.17.2)

Risk Reduction

SDG&E did not achieve target due to permitting delays.

Table 47: Risk Reduction for Distribution Underbuilt

2022 Plan	2022 Actual	% of Target	Units
18.5	18.28	98.81%	Miles

Spend

The decreased expenditure is due to delays in construction and only partial completion of the targeted miles.

Table 48: Spend for Distribution Underbuilt

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 4,272.71	$ 3,237.21	- $ 1,035.50

PSPS Impact Reduction

While this program cannot be tied to a direct decrease in PSPS impacts, when an entire circuit segment is hardened it can increase the wind speed threshold for which the line would experience a PSPS.

4.17 Distribution Communications Reliability Improvements (2022 WMP Section 7.3.3.18.1)

Risk Reduction

A variety of permitting activities delayed construction for a number of sites in 2022. Cleveland National Forest Environmental, City, and County jurisdictions played a role in delaying sites.

Table 49: Risk Reduction for Distribution Communications Reliability Improvements

2022 Plan	2022 Actual	% of Target	Units
25	21	84.00%	Stations

Spend

The reduction in capital expenditure is due to not receiving Spectrum License purchase resulting from Federal Communications Commission (FCC) delays. The unplanned O&M spend is due to unforeseen costs associated with software licensing and rent reclass at multiple sites.

Table 50: Spend for Distribution Communications Reliability Improvements

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 70,641.54	$ 45,177.26	- $ 25,464.28
O&M	$ 0	$ 714.39	$ 714.39

PSPS Impact Reduction

N/A

4.18 Lightning Arrestor Removal and Replacement (2022 WMP Section 7.3.3.18.2)

Risk Reduction

SDG&E completed additional lightning arrestor replacements due to available inventory and crew availability to perform the work.

Table 51: Risk Reduction for Lightning Arrestor Removal and Replacement

2022 Plan	2022 Actual	% of Target	Units
1,848	2,710	146.65%	Lightning Arrestors

Spend

No discussion needed.

Table 52: Spend for Lightning Arrestor Removal and Replacement

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 2,877.05	$ 3,296.74	$ 419.69

PSPS Impact Reduction

N/A

4.19 Avian Mitigation (2022 WMP Section 7.3.3.18.3)

Risk Reduction

SDG&E was able to complete additional Avian Mitigation installations due to available inventory and crew availability to perform the work.

Table 53: Risk Reduction for Avian Mitigation

2022 Plan	2022 Actual	% of Target	Units
847	973	114.88%	Poles

Spend

The reduced capital spend is due to a reduction in forecasted units to be completed for 2023 which led to decreased design and engineering costs in 2022. Minor unplanned O&M expenditures arose during the work performed in 2022.

Table 54: Spend for Avian Mitigation

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 3,081.20	$ 1,850.81	- $ 1,230.39
O&M	$ 0	$ 15.65	$ 15.65

PSPS Impact Reduction

N/A

5 Asset Management and Inspections (2022 WMP Section 7.3.4)

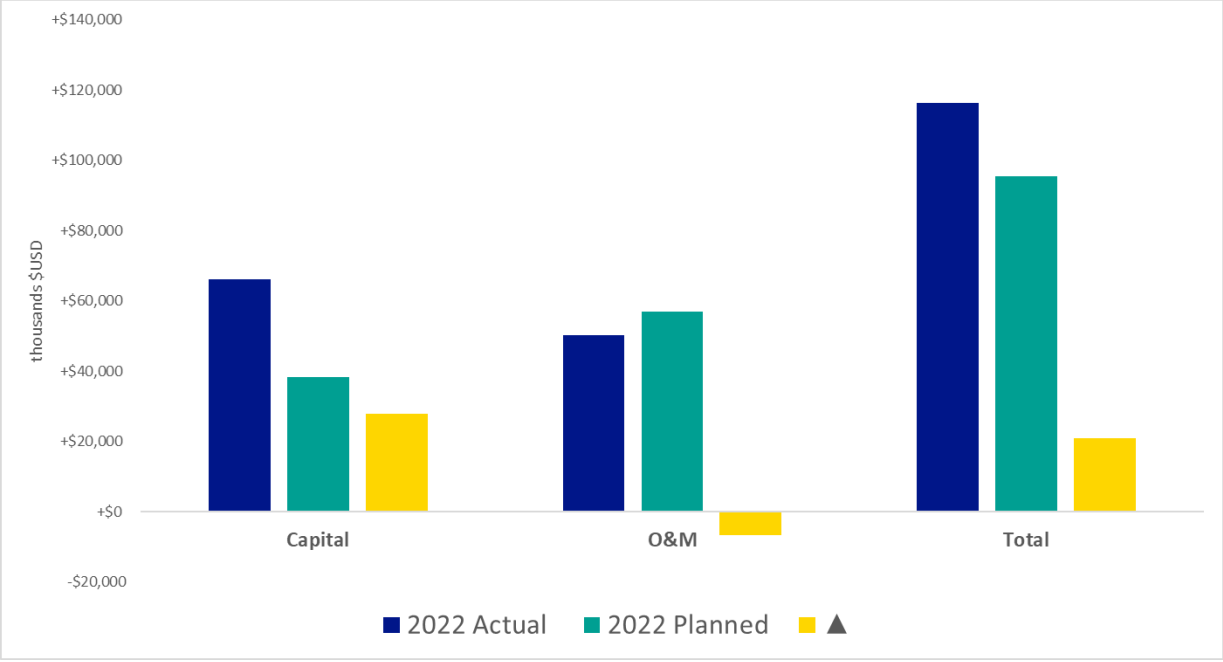
SDG&E's asset management and inspection programs are designed to promote safety for the public, SDG&E personnel, and contractors by providing a safe operating and construction environment while maintaining system reliability. Inspection and maintenance programs identify and repair conditions and components to reduce potentially defective equipment on the electric system, minimizing hazards and maintaining system reliability. These programs continue to identify ways to improve the safety of the electric system. This includes developing new programs such as the evolving DIAR Program and supplementing existing programs such as patrol and detailed inspections with non-routine, risk-informed inspections. SDG&E meets or exceeds the requirements of the inspections mandated by Public Resource Code Sections 4292 and 4293 as well as GO 95, GO 165, and GO 174.

Below is a financial summary for the programs within the Asset Management and Inspections category of SDG&E's 2022 Wildfire Mitigation Plan. Variances greater or less than 10% of target and expenditures greater or less than 20% of planned spend or $10 million dollars are discussed further within each initiative.

Table 55: Financial Summary for Asset Management and Inspections Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 38,384.89	$ 66,155.74	$ 27,770.85
O&M	$ 57,016.82	$ 50,243.99	- $ 6,772.84

Figure 6: Financial Summary for Asset Management and Inspections Programs



5.1 Detailed Inspections of Distribution Equipment (2022 WMP Section 7.3.4.1)

Risk Reduction

No discussion needed.

Table 56: Risk Reduction for Detailed Inspections of Distribution Equipment

2022 Plan	2022 Actual	% of Target	Units
18,177	17,935	98.67%	Inspections

Spend

The increase in capital spend is attributed to the acceleration of pole replacements in the HFTD that resulted from detailed, patrol, intrusive, and HFTD Tier 3 inspections.

Table 57: Spend for Detailed Inspections of Distribution Equipment

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 11,406.41	$ 13,924.91	$ 2,518.50
O&M	$ 1,155.38	$ 1,195.30	$ 39.92

PSPS Impact Reduction

N/A

5.2 Detailed Inspections of Transmission Equipment (2022 WMP Section 7.3.4.2)

Risk Reduction

SDG&E currently completes detailed inspections on all structures including HFTD structures on a 3-year cycle. For detailed inspections, transmission lines and structures have a target completion date. Inspections can be completed up to 3 months prior to the target completion date but must be completed within 3 months. The increased inspections are a result of completing inspections prior to the targeted completion date.

Table 58: Risk Reduction for Detailed Inspections of Transmission Equipment

2022 Plan	2022 Actual	% of Target	Units
2,087	2,323	111.31%	Inspections

Spend

No O&M spend is forecasted for transmission inspections, however a minor job requiring the replacement of distribution underbuilt conductor was required as a result of a transmission inspection.

Table 59: Spend for Detailed Inspections of Transmission Equipment

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 576.11	$ 489.81	- $ 86.30
O&M	$ 0	$ 0.03	$ 0.03

PSPS Impact Reduction

N/A

5.3 Infrared Inspections of Distribution Infrastructure (2022 WMP Section 7.3.4.4)

Risk Reduction

No discussion needed.

Table 60: Risk Reduction for Infrared Inspections of Distribution Infrastructure

2022 Plan	2022 Actual	% of Target	Units
12,000	12,264	102.20%	Inspections

Spend

No discussion needed.

Table 61: Spend for Infrared Inspections of Distribution Infrastructure

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 174.57	$ 158.93	- $ 15.64

PSPS Impact Reduction

N/A

5.4 Infrared Inspections of Transmission Infrastructure (2022 WMP Section 7.3.4.5)

Risk Reduction

No discussion necessary.

Table 62: Risk Reduction for Infrared Inspections of Transmission Infrastructure

2022 Plan	2022 Actual	% of Target	Units
6,154	6,259	101.71%	Inspections

Spend

Transmission costs are subject to FERC jurisdiction and are not reported within the WMP.

PSPS Impact Reduction

N/A

5.5 Intrusive Pole Inspections (2022 WMP Section 7.3.4.6)

Risk Reduction

SDG&E targeted routine wood pole intrusive inspections in the HFTD that were due for inspection in 2022. However, SDG&E completed additional non-routine inspections in the HFTD as required for design work on projects in-flight.

Table 63: Risk Reduction for Intrusive Pole Inspections

2022 Plan	2022 Actual	% of Target	Units
350	967	276.29%	Inspections

Spend

The overspend in O&M can be attributed to the additional non-routine inspections completed in 2022.

Table 64: Spend for Intrusive Pole Inspections

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 0	$ 0	$ 0
O&M	$ 24.00	$ 39.41	$ 15.41

PSPS Impact Reduction

N/A

5.6 LiDAR Inspections of Distribution Equipment (2022 WMP Section 7.3.4.7)

Risk Reduction

No discussion needed.

Table 65: Risk Reduction for LiDAR Inspections of Distribution Equipment

2022 Plan	2022 Actual
In 2022, all circuits within the HFTD will be completed. Captured data will be used to implement vegetation risk analysis within the HFTD. Additionally, Results of these analyses will be used for emergency operations during red flag and other extreme events. As system hardening projects continue to roll out, additional pre-LiDAR and post-LiDAR design and analysis will follow.	In 2022, LiDAR data was captured and processed on all circuits in the HFTD. LiDAR data was used to perform vegetation risk analysis on selected circuits within the HFTD. Because the entire HFTD was captured, a large-scale LiDAR collection initiative will not be implemented again for several years. However, LiDAR will continue to be captured to support pole loading calculations needed for system hardening projects such as covered conductor and traditional overhead hardening and corrective work orders involving pole or crossarm replacements.

Spend

No discussion needed.

Table 66: Spend for LiDAR Inspections of Distribution Equipment

Capital or O&M	2022 Target ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 3,000.00	$ 3,000.12	$ 0.12

PSPS Impact Reduction

N/A

5.7 LiDAR Inspections of Transmission Equipment (2022 WMP Section 7.3.4.8)

Risk Reduction

No discussion needed.

Table 67: Risk Reduction for LiDAR Inspections of Transmission Equipment

2022 Plan	2022 Actual
Perform LiDAR inspections of transmission lines as needed to support pole loading calculations for system hardening projects.	In 2022, SDG&E performed LiDAR inspections on all distribution circuits. Transmission LiDAR was captured on an as-needed basis to support design work for other grid hardening and structure replacement initiatives.

Spend

Transmission inspection costs are subject to FERC jurisdiction and are not reported within the WMP.

PSPS Impact Reduction

N/A

5.8 HFTD Tier 3 Inspections (2022 WMP Section 7.3.4.9.1)

Risk Reduction

No discussion needed.

Table 68: Risk Reduction for HFTD Tier 3 Inspections

2022 Plan	2022 Actual	% of Target	Units
12,268	12,263	99.96%	Inspections

Spend

No discussion needed.

Table 69: Spend for HFTD Tier 3 Inspections

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 0	$ 0	$ 0
O&M	$ 384.10	$ 342.42	- $ 41.68

PSPS Impact Reduction

N/A

5.9 Drone Assessments of Distribution Infrastructure (2022 WMP Section 7.3.4.9.2)

Risk Reduction

The increase in inspections completed is due to additional drone inspections performed in coastal canyon areas within the wildland urban interface (WUI).

Table 70: Risk Reduction for Drone Assessments of Distribution Infrastructure

2022 Plan	2022 Actual	% of Target	Units
22,000	30,044	136.56%	Inspections

Spend

The increase in capital spend is due to the additional inspections completed.

Table 71: Spend for Drone Assessments of Distribution Infrastructure

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 26,402.38	$ 51,741.01	$ 25,338.64
O&M	$ 52,000.00	$ 45,222.71	- $ 6,777.29

PSPS Impact Reduction

N/A

5.10 Drone Assessments of Transmission Infrastructure (2022 WMP Section 7.3.4.10.1)

Risk Reduction

The increase in inspections completed is due to additional drone inspections performed in coastal canyon areas within the WUI.

Table 72: Risk Reduction for Drone Assessments of Transmission Infrastructure

2022 Plan	2022 Actual	% of Target	Units
500	1,028	205.60%	Inspections

Spend

Transmission inspection costs are subject to FERC jurisdiction and are not reported within the WMP.

PSPS Impact Reduction

N/A

5.11 Additional Transmission Aerial 69kV Inspections of Transmission Infrastructure (2022 WMP Section 7.3.4.10.2)

Risk Reduction

No discussion needed.

Table 73: Risk Reduction for Additional Transmission Aerial 69kV Inspections of Transmission Infrastructure

2022 Plan	2022 Actual	% of Target	Units
1,654	1,649	99.70%	Inspections

Spend

Transmission inspection costs are subject to FERC jurisdiction and are not included within the WMP.

PSPS Impact Reduction

N/A

5.12 Patrol Inspections of Distribution Equipment (2022 WMP Section 7.3.4.11)

Risk Reduction

No discussion needed.

Table 74: Risk Reduction for Patrol Inspections of Distribution Equipment

2022 Plan	2022 Actual	% of Target	Units
86,490	86,821	100.38%	Inspections

Spend

No discussion needed.

Table 75: Spend for Patrol Inspections of Distribution Equipment

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 278.77	$ 285.06	$ 6.29

PSPS Impact Reduction

N/A

5.13 Patrol Inspections of Transmission Equipment (2022 WMP Section 7.3.4.12)

Risk Reduction

No discussion needed.

Table 76: Risk Reduction for Patrol Inspections of Transmission Equipment

2022 Plan	2022 Actual	% of Target	Units
6,312	6,445	102.11%	Inspections

Spend

Transmission inspection costs are subject to FERC jurisdiction and are not included within the WMP.

PSPS Impact Reduction

N/A

5.14 Quality Assurance/Quality Control of Inspections (2022 WMP Section 7.3.4.14)

Risk Reduction

No discussion needed.

Table 77: Risk Reduction for Quality Assurance/Quality Control of Inspections

2022 Plan	2022 Actual
SDG&E does not currently plan on implementing any improvements to this initiative. SDG&E will continue its current process of auditing its inspection and maintenance results on a quarterly basis.	SDG&E completed 100% of the QA/QC audits for the electric distribution system in 2022. SDG&E performed 896 audits on the overhead distribution system.

Spend

The costs for monitoring and auditing inspections are embedded within operational costs and are not split by HFTD and Non-HFTD.

PSPS Impact Reduction

N/A

5.15 Substation Inspections (2022 WMP Section 7.3.4.15)

Risk Reduction

In 2022, SDG&E completed more substation inspections than originally forecasted, exceeding the frequency of required inspections outlined in the maintenance practice.

Table 78: Risk Reduction for Substation Inspections

2022 Plan	2022 Actual	% of Target	Units
330	397	120.30%	Inspections

Spend

Substation inspection costs are subject to FERC jurisdiction and are not reported within the WMP.

PSPS Impact Reduction

N/A

6 Vegetation Management Inspections (2022 WMP Section 7.3.5)

SDG&E's Vegetation Management Program continues to reduce wildfire risk by pursuing enhanced clearances beyond regulatory requirements on high risk trees, pole clearing, and additional inspection activities. SDG&E continues its Fuels Management Program as a component of vegetation management to proactively mitigate the risk of ignition and propagation that could result from electrical equipment.

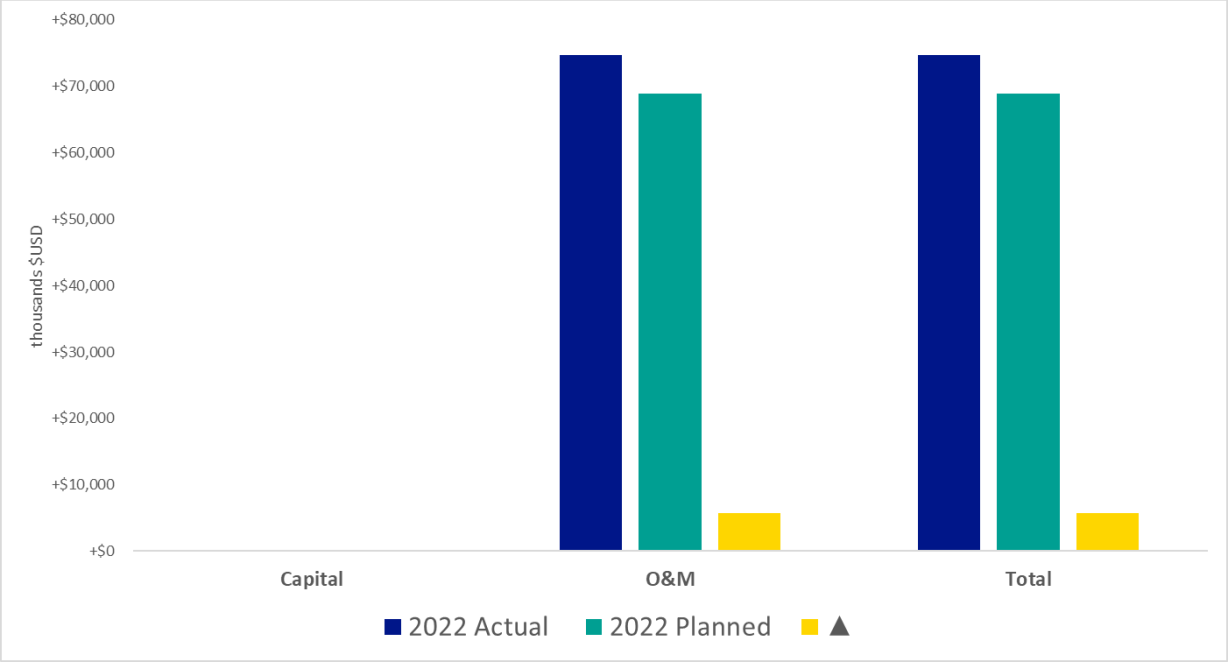
In 2022, SDG&E inspected over 500,000 trees across the service territory, brushed over 35,000 poles, and trimmed nearly 10,500 trees beyond regulatory clearances. SDG&E's WMP vegetation management initiatives span several activities including inspections, trimming and removals, fuels treatment, pole brushing, and audit.

Below is a financial summary for the programs within the Vegetation Management Inspections category of SDG&E's 2022 Wildfire Mitigation Plan. Variances greater or less than 10% of target and expenditures greater or less than 20% of planned spend or $10 million dollars are discussed further within each initiative.

Table 79: Financial Summary for Vegetation Management Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 0	$ 0	$ 0
O&M	$ 68,877.01	$ 74,648.28	$ 5,771.27

Figure 7: Financial Summary for Vegetation Management Programs



6.1 Vegetation Management - Community Engagement (2022 WMP Section 7.3.5.1)

Risk Reduction

No discussion needed.

Table 80: Risk Reduction for Vegetation Management Community Engagement

2022 Plan	2022 Actual
Grow the company sustainability initiative to provide 10,000 trees annually in collaboration with customers and local agencies. • Implement a Tree Rebate Program targeted at underserved communities to promote the planting of trees where climate equity is compromised. The program will offer each applicant a rebate in the purchase of up to 5 trees. This initiative will help promote environmental awareness, teach sustainable tree planting, improve climate, and encourage community involvement. An interactive company website will be created to educate customers about the program and how they can participate. • Develop and expand a customer survey regarding vegetation management operations to gather additional feedback on tree trimming operations. • Develop internal, quarterly newsletters to engage internal business units and raise awareness of vegetation management operations. • Continue to work collaboratively with state and federal agencies on the scope and effectiveness of sound vegetation management operations.	SDG&E provided approximately 9,560 trees to customers in 2022 as part of its incentive to remove incompatible trees growing near power lines and promote sustainable tree planting. An additional 2,047 trees were provided as part of the Community Tree Rebate Program (CTRP). The CTRP was successfully implemented in 2022, targeting underserved communities to promote the planting of trees where climate equity is compromised. The program offered each applicant a rebate on the purchase of up to 5 trees, ranging from 1 to 15 gallons. This program includes an interactive customer portal which helps educate customers about the program and guide their application process. SDG&E received the Tree Line USA® recognition for the twentieth consecutive year in 2022. Tree Line USA is awarded by the National Arbor Day Foundation to utilities that demonstrate best practices in utility arboriculture, and how trees and utilities can effectively co-exist for the benefit of communities. SDG&E redesigned its customer survey initiative to better incentivize customer engagement in Q2, 2022, and initiated a quarterly newsletter for internal SDG&E departments on Vegetation Management operations in Q2, 2022. SDG&E engaged external agencies such as California State Parks and US Forest Service on VM scoping activities; participated in IOU discussions for best practice; and continued its risk study with the Supercomputing Center related to outage risk analysis and clearances.

Spend

No discussion needed.

Table 81: Spend for Vegetation Management - Community Engagement

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 1,000.00	$ 872.17	- $ 127.83

PSPS Impact Reduction

N/A

6.2 Detailed Inspections and Management Practices for Vegetation Clearances Around Distribution Electrical Lines and Equipment (2022 WMP Section 7.3.5.2)

Risk Reduction

No discussion needed.

Table 82: Risk Reduction for Detailed Inspections for Vegetation Clearances Around Distribution Electrical Lines

2022 Plan	2022 Actual	% of Target	Units
491,822	509,110	103.52%	Inspections

Spend

No discussion needed.

Table 83: Spend for Detailed Inspections for Vegetation Clearances Around Distribution Electrical Lines

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 55,699.52	$ 59,775.66	$ 4,076.14

PSPS Impact Reduction

N/A

6.3 Fuels Management (2022 WMP Section 7.3.5.5)

Risk Reduction

No discussion needed.

Table 84: Risk Reduction for Fuels Management

2022 Plan	2022 Actual	% of Target	Units
500	500	100.00%	Poles Cleared

Spend

Increased spend is due to an erroneous accrual that will reverse. Additional overrun is due to contract delay in field work. The delay in field work necessitated a ramp up of crew resources and overtime to hit target.

Table 85: Spend for Fuels Management

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 6,377.49	$ 7,895.53	$ 1,518.04

PSPS Impact Reduction

N/A

6.4 LiDAR Inspections of Vegetation Around Distribution Infrastructure and Vegetation Management Technology (2022 WMP Section 7.3.5.7)

Risk Reduction

No discussion needed.

Table 86: Risk Reduction for LiDAR Inspections of Vegetation Around Distribution Infrastructure and Vegetation Management Technology

2022 Plan	2022 Actual	% of Target	Units
730	738	101.03%	Circuit Line Mile

Spend

The costs for this program are included within LiDAR Inspections of Distribution Equipment (7.3.4.7). The costs for this project were on track in 2022.

PSPS Impact Reduction

N/A

6.5 Other Discretionary Inspections of Vegetation Around Distribution Infrastructure – Enhanced Inspections, Patrols, and Trims (2022 WMP Section 7.3.5.9)

Risk Reduction

The implementation of enhanced clearances is neither predetermined nor performed on all targeted tree species. Rather, SDG&E identifies trees that cannot be maintained with routine clearance and/or present a potential threat to conductor by branch-break as candidates for enhanced clearance. The determination and application of enhanced clearances is made during pre-inspection and the tree trimming activity. The pre-inspection activity does not prescribe post-trim clearance, however the determination of whether a tree requires removal or substantial crown reduction due to growth rate or defect is made by the pre-inspector.

There is a high degree of variability in forecasting the number of trees that may require enhanced trimming, including but not limited to: species, precipitation, tree growth, location of defect, pruning frequency, and regional tree mortality. The methodology to derive the target for this initiative was modified in 2022 using tree inventory trim frequency data and historical averages. However, since SDG&E only formally began its enhanced trim/removal initiative in 2019, the data is still somewhat limited for forecasting using a trend analysis with a high degree of confidence. Using current trends, a more likely accurate forecast number of trees that will require enhanced clearance annually is between 10,000 and 11,000. SDG&E will continue to review its methodology to derive an appropriate, annual target for this initiative.

Table 87: Risk Reduction for Other Discretionary Inspections of Vegetation Around Distribution Infrastructure – Enhanced Inspections, Patrols, and Trims

2022 Plan	2022 Actual	% of Target	Units
12,500	10,488	83.90%	Trees Trimmed/Removed

Spend

Costs for this program are embedded within Detailed Inspections and Management practices for vegetation clearances in Section 6.2.

PSPS Impact Reduction

N/A

6.6 Quality Assurance/Quality Control of Inspections (2022 WMP Section 7.3.5.13)

Risk Reduction

No discussion needed.

Table 88: Risk Reduction for Quality Assurance/Quality Control of Inspections

2022 Plan	2022 Actual	% of Target	Units
15%	17%	102.00%	Inspections

Spend

The costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

6.7 Recruiting and Training of Vegetation Management Personnel (2022 WMP Section 7.3.5.14)

Risk Reduction

No discussion needed.

Table 89: Risk Reduction for Recruiting and Training of Vegetation Management Personnel

2022 Plan	2022 Actual
The line-clearance tree trimming training class established in 2021 and sponsored by SDG&E and the Utility Arborist Association will be expanded in Quarter 2 2022 to develop classroom and field curriculum courses for Pre-inspection.	In collaboration with the San Diego Community College District (SDCCD), utility industry representatives and the California Conservation Corps, two separate 5-week training courses for the Clearance Qualified Tree Trimming Program were completed in 2022. SDG&E also began collaborating on an expansion of this training program to include curriculum for Pre-inspectors.

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

6.8 Identification and Remediation of At-Risk Species (2022 WMP Section 7.3.5.15)

Risk Reduction

No discussion needed.

Table 90: Identification and Remediation of At-Risk Species

2022 Plan	2022 Actual
SDG&E will continue to refine its vegetation management practices for at-risk species based on research results, and by working with database developers to add genus-species identification within the inventory database tree records.	In 2022 SDG&E continued to update its new Genus-species attribute fields within the tree inventory database. Third-party auditing now includes accuracy of Genus-species attribute field. Ongoing collaborative study with San Diego Supercomputing Center to develop risk assessment and predictive modeling tool using Vegetation Management tree data and meteorological data. Bi-weekly joint IOU meetings as required by OEIS to benchmark and develop BMPs for outage tracking and clearance standards.

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

6.9 Removal and Remediation of Trees with Strike Potential to Electric Infrastructure - Hazard Tree Removal and Right Tree-Right Place (2022 WMP Section 7.3.5.16)

Risk Reduction

No discussion needed.

Table 91: Risk Reduction for Hazard Tree Removal and Right Tree-Right Place

2022 Plan	2022 Actual	% of Target	Units
106	105	99.06%	Vegetation Management Areas Completed

Spend

The costs for this program are embedded within the Tree Trim Balancing Account (TTBA).

PSPS Impact Reduction

N/A

6.10 Vegetation Inventory System - Tree Database (2022 WMP Section 7.3.5.19)

Risk Reduction

No discussion needed.

Table 92: Risk Reduction for Vegetation Inventory System

2022 Plan	2022 Actual
SDG&E plans to investigate the integration of the new work management system with other inter-departmental systems to streamline workflows. Research opportunities to share inventory data with external stakeholders for cross-activity initiatives.	SDG&E continued modification and process improvements to its inventory system (Epoch) through system enhancements, additional tree attributes, additional mapping layers, and improved upload capabilities. The addition of new Genus and species attribute fields improved identification granularity within the tree records. Additional new map layers and updated photo imagery within Epoch improved situational awareness and field planning. New Scheduling Work Orders (SWOs) specific to the off-cycle HFTD patrol activity allowed better planning, documentation, and reporting. New mapping capabilities to electronically track and document inspection progression. New data fields to electronically record customer refusals and other deferred work negated the need for hard copy forms. Creation of a refusal/deferred work dashboard

2022 Plan	2022 Actual
	allowed tracking and management of time-sensitive tree work.

Spend

The costs for this program are embedded within the Tree Trim Balancing Account (TTBA).

PSPS Impact Reduction

N/A

6.11 Vegetation Management to Achieve Clearances Around Electric Infrastructure – Pole Brushing (2022 WMP Section 7.3.5.20)

Risk Reduction

No discussion needed.

Table 93: Risk Reduction for Pole Brushing

2022 Plan	2022 Actual	% of Target	Units
34,000	35,485	104.37%	Poles Brushed

Spend

No discussion needed.

Table 94: Spend for Pole Brushing

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 5,800.00	$ 6,104.91	$ 304.91

PSPS Impact Reduction

N/A

7 Grid Operations and Protocols (2022 WMP Section 7.3.6)

SDG&E's grid operations and protocols consist of mitigations that reduce risk through changing the way SDG&E operates during periods of elevated and extreme wildfire risk. This includes the disabling of reclosing in the HFTD, the enabling of fast recloser settings, restricting work in the HFTD during days where the FPI is extreme and during Red Flag Warnings, and sending contract fire resources with crews during days where the FPI is elevated or extreme in the HFTD. These operational decisions have led to reduced ignitions on the electric system, and just as importantly have reduced ignitions during operational periods where an ignition is more likely to lead to a catastrophic fire.

Below is a financial summary for the programs within the Grid Operations and Protocols category of SDG&E's 2022 Wildfire Mitigation Plan. Variances greater or less than 10% of target and expenditures greater or less than 20% of planned spend or $10 million dollars are discussed further within each initiative.

Table 95: Financial Summary for Grid Operations and Protocols Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 23,672.12	$ 11,437.07	- $12,235.05
O&M	$ 12,554.40	$ 10,470.12	- $2,084.28

Figure 8: Financial Summary for Grid Operations and Protocols Programs

7.1 Crew Accompanying Ignition Prevention and Suppression Resources (2022 WMP Section 7.3.6.3)

Risk Reduction

No discussion needed.

Table 96: Risk Reduction for Crew Accompanying Ignition Prevention

2022 Plan	2022 Actual
SDG&E intends to utilize fire prevention resources as needed based on work activity and FPI. This program is regularly refined with the training qualifications of personnel serving on CFRs and utility activities are being reviewed annually. No further changes planned for 2022.	In 2022, SDG&E supported the activities of San Diego personnel as at-risk operations and maintenance work was performed during days with elevated or extreme FPI. Over 12 daily resources supported the activities These crews focused on fire prevention and ignition mitigation.

Spend

No discussion needed.

Table 97: Spend for Crew Accompanying Ignition Prevention

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 3,229.60	$ 3,073.87	- $155.73

PSPS Impact Reduction

N/A

7.2 Personnel Work Procedures and Training in Conditions of Elevated Fire Risk (2022 WMP Section 7.3.6.4)

Risk Reduction

No discussion needed.

Table 98: Risk Reduction for Personnel Work Procedures in Conditions of Elevated Fire Risk

2022 Plan	2022 Actual
SDG&E plans to review and update the Operations and Maintenance Wildland Fire Prevention Plan (ESP 113.1), conduct training on fire prevention, and refine procedures designed to prevent ignitions from SDG&E equipment or activities.	In 2022, SDG&E reviewed and revised ESP 113.1 and conducted training with field crews on the content of the plan.

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

7.3 Protocols for PSPS Re-energization (2022 WMP Section 7.3.6.5)

Risk Reduction

No discussion needed.

Table 99: Risk Reduction for Protocols for PSPS Re-energization

2022 Plan	2022 Actual
SDG&E will continue to explore ways to reduce post-event patrol times in an effort to reduce the impacts of PSPS events on its customers.	In 2022, SDG&E reviewed protocols and was prepared to follow its patrol and restoration process, committing to a 24-hour patrol and restoration period once the risk event passed. However, protocols were not tested due to the lack of PSPS events in 2022.

Spend

The costs for this program are embedded within Emergency Management Operations.

PSPS Impact Reduction

N/A

7.4 PSPS Events and Mitigation of PSPS Impacts (2022 WMP Section 7.3.6.6)

Risk Reduction

No discussion needed.

Table 100: Risk Reduction for PSPS Events and Mitigation of PSPS Impacts

2022 Plan	2022 Actual
SDG&E plans to continue capital projects including traditional hardening, undergrounding, covered conductor, microgrids, and generator programs, which will reduce the future scope and impact of PSPS events. Additionally, WiNGS-Planning modeling will allow SDG&E to consider segment-based estimates around both the wildfire risk and the PSPS impacts.	In 2022, SDGE continued system hardening projects and generator programs to reduce scope and impact of PSPS events. See respective sections for 2022 actuals and spend for those areas. SDG&E experienced no PSPS events in 2022. SDG&E incorporated several updates and enhancements to the WiNGS-Planning model. Data quality was enhanced by more accurately capturing hardening miles within the HFTD, improving the methodology behind calculating the overhead-to-underground mileage conversion contingency factor, and updating the data incorporated from WRRM. Updated data such as the effectiveness of different mitigations at reducing wildfire and PSPS risk and refreshing historical ignition counts to enhance the model's estimated ignition rates were also incorporated. A data refresh

2022 Plan	2022 Actual
	between model versions presents the most up to date and accurate information to inform decisions regarding grid hardening strategy. Components such as historical wind, weather station additions, PSPS history, system assets, information regarding vulnerable customers, and vegetation data were all been updated. Additionally, updated PSPS risk reduction was incorporated into WiNGS-Planning, which tracks PSPS risk mitigated via covered conductor and undergrounding projects per year over multiple years. PSPS probability within PSPS Risk Score quantification is now dynamically updated per hardening state assessment.

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

7.5 Aviation Firefighting Program (2022 WMP Section 7.3.6.7.1)

Risk Reduction

No discussion needed.

Table 101: Risk Reduction for Aviation Firefighting

2022 Plan	2022 Actual
SDG&E plans to purchase and outfit the Firehawk to become a firefighting resource expected to be in-service in late 2022. In addition, SDG&E plans to install wire crossing hazard placards to increase the safety of helicopter patrols on distribution and transmission circuits within the HFTD. It is SDG&E's goal to have 24/7 access to aviation firefighting resources.	In 2022, SDG&E purchased a Sikorsky S-70M which is being outfitted for firefighting with a 1,000-gallon tank. Due to certification requirements of the Federal Aviation Administration (FAA), it is estimated that this helicopter will be in service in late 2023/ early 2024. In 2022, SDG&E provided the following availability and dispatches: • Air Crane - zero days unavailable • Blackhawk - zero days unavailable

Spend

The underspend in capital is due to delays in obtaining FAA approval of materials and kits. O&M decreased expenditure is due primarily to fewer flight hours than expected.

Table 102: Spend for Aviation Firefighting

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 23,672.12	$ 11,437.07	- $ 12,235.05
O&M	$ 9,324.80	$ 7,396.25	- $ 1,928.55

PSPS Impact Reduction

N/A

8 Data Governance (2022 WMP Section 7.3.7)

SDG&E continues to pursue centralization of wildfire mitigation data and automation of metrics reporting. An inventory of required data and data sources and identification of data owners provide the scope for Data Governance Frameworks (DGF) outlining policy and supporting logic process documentation for both manual and automated data in 2022. Each line of data presented in the WMP Metrics Tables was clearly defined by data owners in repeatable and verifiable process to track and ensure data integrity. Due to the evolving nature of data and its maturity, efforts to maintain accurate and current DGFs and supporting logic documentation are and will continue to be the focus. Centralization of disparate data was largely a manual effort in early 2022, advancing by Q3 to automation of the Central Data Repository (CDR) in some categories including asset inspections and vegetation management. These changes streamline efficiencies in the collection of data and allow for an electronic format that will provide data metrics in a searchable format, like a GIS data structure.

Future capabilities include self-service reporting through use of Collibra, a data intelligence platform that provides data cataloging, lineage, quality, governance, and privacy standards. This tool will also provide standardized reports for users and a process by which unique reports can be requested by users, from validated raw data.

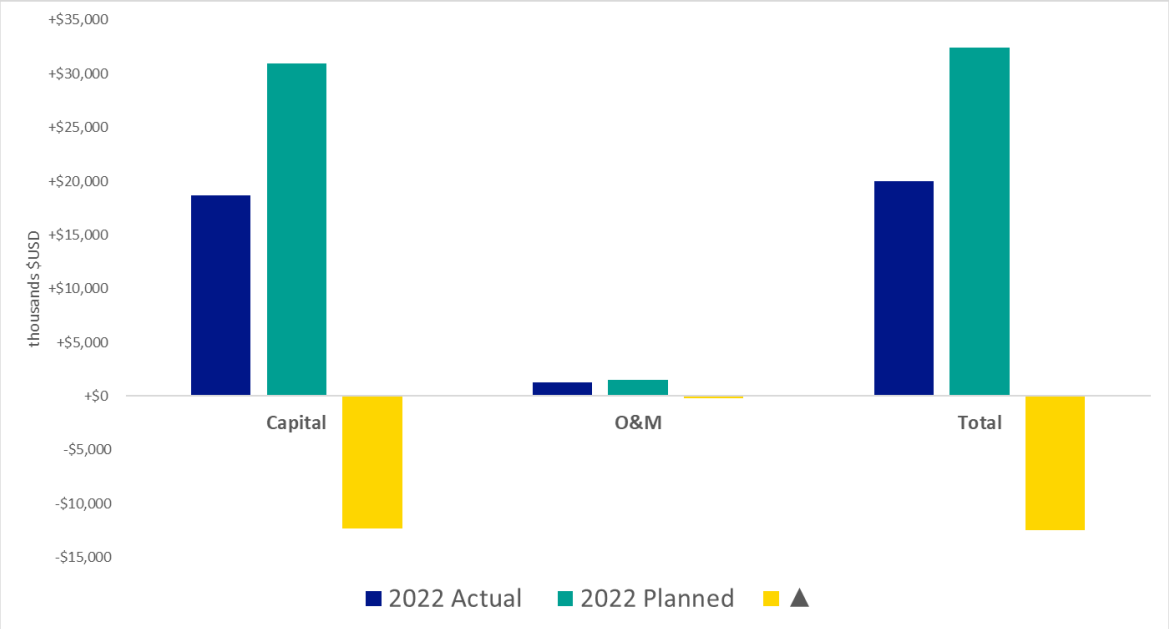
In 2022, SDG&E completed approximately 85% of the effort needed to implement the DGF and CDR with remaining efforts prioritized in 2023 to satisfy new data guidelines presented by Energy Safety.

Below is a financial summary for the programs within the Data Governance category of SDG&E's 2022 Wildfire Mitigation Plan. Variances greater or less than 10% of target and expenditures greater or less than 20% of planned spend or $10 million dollars are discussed further within each initiative.

Table 103: Financial Summary for Data Governance Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 30,970.88	$ 18,673.81	- $ 12,297.07
O&M	$ 1,490.26	$ 1,304.99	- $ 185.27

Figure 9: Financial Summary for Data Governance Programs



8.1 Centralized Repository for Data (2022 WMP Section 7.3.7.1)

Risk Reduction

No discussion needed.

Table 104: Risk Reduction for Centralized Repository for Data

2022 Plan	2022 Actual
SDG&E plans to continue documentation for the central catalog of metric logics to provide improved transparency, initiate DGF and documentation standards for data models and predictive analytics algorithms, collaborate on the implementation of the OEIS GeoDatabase schema with Asset Management, deliver of DG education for data owners and data stakeholders, continue to conduct internal mock-audit checks of existing documentation.	SDG&E continued the automation process for Metrics Tables, to the SDG&E HANA Central Data Repository (CDR). In Q1, 72 non-spatial metrics were automated, with 12 repointed to the OEIS common schema. Metrics Table 12 spatial and non-spatial data was centralized, bringing the total to 470 metrics supported in HANA CDR. By early Q4, 602 metrics were automated, with 516 repointed to the OEIS data schema. Creation of new and review of existing Master Logic Manual or Automated documentation continued in parallel with data centralization and automation. Internal mock audits conducted by WM DG PM conducted in draft state for new metrics, and by random sample for those existing. By early Q4 2022, 581 metrics had associated DG documentation. WM and AM PM leads partnered with SDG&E Data Governance Office to develop documentation and processes for data users across the enterprise. WM and AM Leads also began implementation of Collibra, the searchable backend platform that will reside within the HANA CDR. Collibra Working Groups and Training Meetings began midyear; WMP portfolio scoped to be the first data set ingested into the self-service tool.

2022 Plan	2022 Actual
	DFGs and supporting logic documentation for data models and predictive analytics algorithms scoped for Q4 2022 slipped to 2023, after OEIS released 2023 Data Guidelines. Guidelines outlined a complete revamp of 2023 Metrics Tables, Quarterly Data Report (QDR), and associated data schema templates, with the expectation 2022 Q4 data submitted in the new formats. Due to new data guidelines, remaining 2022 requirements were delayed to comply with new 2023 guidance.

Spend

The capital expenditure decreased due to more accurate allocation of costs for the Enterprise Asset Management Platform (now known as Asset 360), delayed go-live date for Investment Prioritization (now known as Investment Prioritization & Optimization), and a reduction of scope (WMP advanced analytics).

Table 105: Spend for Centralized Repository for Data

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 30,970.88	$ 18,673.81	- $ 12,297.07
O&M	$ 1,490.26	$ 1,304.99	- $ 185.27

PSPS Impact Reduction

N/A

8.2 Collaborative Research on Utility Ignition and/or Wildfire - Innovation Lab and Other Collaboration (2022 WMP Section 7.3.7.2)

Risk Reduction

No discussion needed.

Table 106: Risk Reduction for Collaborative Research on Utility Ignition

2022 Plan	2022 Actual
SDG&E plans to establish lasting partnerships with the at least three members of the academic community to sponsor ongoing wildfire mitigation-related data and collaborative research through internship programs where SDG&E further exposes graduate-level academic students to data driven wildfire mitigation within utility companies.	In 2022, SDG&E developed a collaborative white paper and presented it to the International Council on Large Electric System (aka CIGRE) late in 2022. This study has been made available for all members of the international CIGRE organization. The findings from the study provide an opportunity for electric utilities worldwide that are managing risk of wildfire to enhance current practices or for utilities for whom this risk is emerging, a starting point for preparing a comprehensive wildfire risk management plan.

Spend

The costs for this program are embedded within the Fire Science and Climate Adaptation Department.

PSPS Impact Reduction

N/A

8.3 Ignition Management Program (2022 WMP Section 7.3.7.4.1)32

Risk Reduction

No discussion needed.

Table 107: Risk Reduction for Ignition Management Program

2022 Plan	2022 Actual
SDG&E intends to collect evidence of heat reports, coordinate responses to CAL OEIS, and begin the development of process documents with BBB. Efforts will be taken to refine the ignition event information gathering process. This program aims to further refine process documents and connect mitigation owners with data repositories.	In 2022, SDG&E's Ignition Management Program followed up on evidence of heat reports and successfully integrated data into an enterprise-wide database. In addition, the requirements for 4hr, 12hr, 1 day, and 30-day reporting/notification requirements in regulatory document 29300 were implemented as a part of the IMP program. Training and efforts to further mature the program continue to increase the efficiency and produce positive outcomes.

Spend

The costs for this program are embedded within the Fire Science and Climate Adaptation Department.

PSPS Impact Reduction

N/A

8.4 Reliability Database (2022 WMP Section 7.3.7.4.2)

Risk Reduction

No discussion needed.

Table 108: Risk Reduction for Reliability Database

2022 Plan	2022 Actual
SDG&E continues to work towards migrating the current Access database to an AWS IT supported application for outage coding. The SAIDIDAT+ initiative has a target implementation date of late Q2 2022.	SDG&E implemented SAIDIDAT+ in Q3 2022.

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

9 Resource Allocation Methodology (2022 WMP Section 7.3.8)

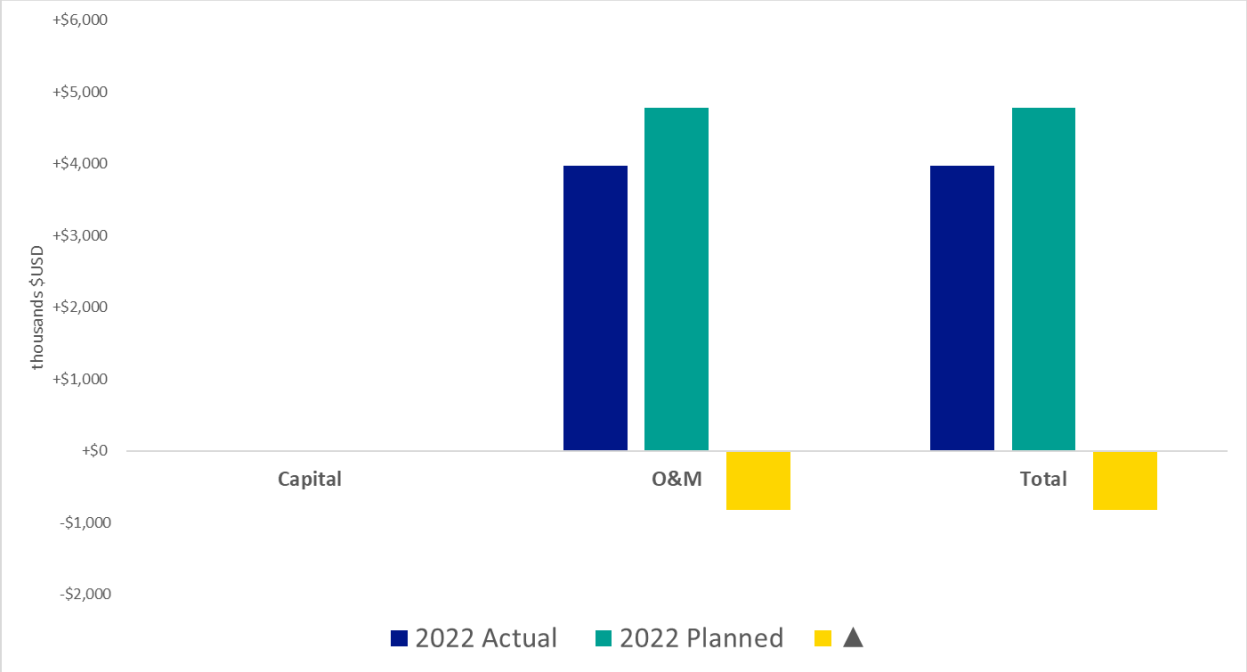
SDG&E's enterprise risk management process includes risk-informed investment decision-making. As addressed in SDG&E's 2019 RAMP, the capital planning process is the Company's current annual process for prioritizing funding based on risk-informed priorities and input from operations. As with the Company's risk evaluation processes, the capital planning process is continuing to evolve as the Company endeavors to achieve the goal of more quantitatively determining the risk reduction per dollar invested, also referred to as risk spend efficiency or RSE.

Below is a financial summary for the programs within the Resource Allocation Methodology category of SDG&E's 2022 Wildfire Mitigation Plan. Variances greater or less than 10% of target and expenditures greater or less than 20% of planned spend or $10 million dollars are discussed further within each initiative.

Table 109: Financial Summary for Resource Allocation Methodology Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 0	$0	$0
O&M	$ 4,785.88	$ 3,966.63	- $ 819.25

Figure 10: Financial Summary for Resource Allocation Methodology Programs



9.1 Allocation Methodology Development and Application (2022 WMP Section 7.3.8.1)

Risk Reduction

No discussion needed.

Table 110: Risk Reduction for Allocation Methodology Development and Application

2022 Plan	2022 Actual
SDG&E will continue to improve the data that is used in the WiNGS-Planning model that evaluates risk and will work on assessing the need and approach for expanding model use in grid hardening with new data and integration of new modeling elements to support scoping and initiatives for risk-informed prioritization. To reinforce data-driven performance evaluation and sustainable and integrated risk-informed asset management, SDG&E is continuing to pursue alignment with ISO 55000 standards through the implementation of the Investment Prioritization Tool as part of the Asset Integrity Management (AIM) Program. SDG&E will continue to enhance its approach to resource allocation for risk-based decision-making. As data becomes available and integrated across systems, SDG&E plans to increase the use of risk to inform decision-making and increase granularity of risk assessments to enhance the ability to aggregate and disaggregate assets for various modeling applications. This visibility will enable real-time scenario and sensitivity analyses for mature risk-based decision-making. In addition, SDG&E intends to expand the investment prioritization prototype development to other lines of business (i.e., Gas, IT, Fleet, Facilities) to adopt a consistent common value framework.	In 2022, SDG&E implemented an Investment Prioritization tool for electric transmission, distribution, and substation and piloted its use in production. Operating units were trained on the use of the tool and project teams are now expanding the tool to other enterprise business units. In addition, SDG&E progressed the automation of WiNGS-Planning with updates to model attribution. A segment-specific lifecycle cost savings methodology was developed to improve assessment of projected hardening increasing specificity to investment prioritization. The lifecycle cost has been incorporated into the WiNGS-Planning 2.0 model, which will more accurately capture cost associated with different mitigations, ultimately updating risk-spend efficiencies. Other asset-level model enhancements are being reviewed to update data and integrate into the WiNGS-Planning model to improve prioritization efforts.

Spend

No discussion needed.

Table 111: Spend for Allocation Methodology Development and Application

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 0	$ 0	$ 0
O&M	$ 4,785.88	$ 3,966.63	- $ 819.25

PSPS Impact Reduction

N/A

10 Emergency Planning and Preparedness (2022 WMP Section 7.3.9)

The mission of the SDG&E's Emergency Management is to coordinate safe and effective emergency preparedness for the Company, SDG&E's customers, and emergency response personnel. This mission extends to safely and efficiently preparing for, responding to, and recovering from all threats and hazards through strategic planning, training, and exercising, and a sustained Quality Assurance and Improvement process. SDG&E manages emergencies in alignment with the state Standardized Emergency Management System (SEMS) and federal National Incident Management System (NIMS), to coordinate across all levels of utility, government, and agency activity. The Company utilizes a utility-compatible Incident Command Structure (ICS) as an all-hazards framework to manage emergency incidents and events.

Below is a financial summary for the programs within the Emergency Planning and Preparedness category of SDG&E's 2022 Wildfire Mitigation Plan. Variances greater or less than 10% of target and expenditures greater or less than 20% of planned spend or $10 million dollars are discussed further within each initiative.

Table 112: Financial Summary for Emergency Planning and Preparedness Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 8,848.44	$ 2,765.56	- $ 6,082.89
O&M	$ 15,170.40	$ 12,381.77	- $ 2,788.63

Figure 11: Financial Summary for Emergency Planning and Preparedness Programs

10.1 Adequate and Trained Workforce for Service Restoration (2022 WMP Section 7.3.9.1)

Risk Reduction

No discussion needed.

Table 113: Risk Reduction for Adequate and Trained Workforce for Service Restoration

2022 Plan	2022 Actual
SDG&E will continue its comprehensive training program to support outage restoration, patrols, inspections and maintenance, and risk events. SDG&E plans to enhance personnel training through incorporating virtual reality (VR) training into existing curriculums. VR training will include emergency response, ICS, and routine inspection programs for inspectors, linemen, and troubleshooters. In addition, SDG&E plans to build and Electric Safety Center within Skills Training Center to enhance safety-specific training initiatives.	In 2022, SDG&E Skills Training completed all training to meet internal WMP goals and ESCMP requirements. In addition to conducting and completing comprehensive training programs, key accomplishments for 2022 include: • Development of Electric Safety Center • Integrated ICS into Lineman and Line Assistants new hire training • Over 230 QEW employees completed PSPS VR training to encompassing patroller and observer roles and ICS • Integrated VR into training for inspection and maintenance programs • Conducted PSPS and Fire Seasonal Readiness training at all operating districts • Deployed Contractor Orientation including training on equipment and standards; Implemented a SharePoint page enabling contractor access to all Standard Practice requirements • Presented Arc & Spark demonstrations at 3 community Fire Fairs • Completed over 6,800 safety field visits

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

10.2 Community Outreach, Public Awareness, and Communication Efforts (2022 WMP Section 7.3.9.2)

Risk Reduction

No discussion needed.

Table 114: Risk Reduction for Community Outreach, Public Awareness and Communication Efforts

2022 Plan	2022 Actual
SDG&E intends to make communications accessible in prevalent languages and preferred formats, including ASL communications (e.g., notifications, programs, and resources information) • Develop comprehensive joint IOU and IOU specific multi-channel marketing campaigns to promote services and resources available before, during and after a PSPS activation leveraging simplified, easy to understand/plain language • SDG&E's plans to enhance the survey process to include additional preparedness resources, partnering with CBOs to offer surveys and begin exploring additional program offerings based on customers' most-mentioned requests and needs.	In 2022, SDG&E discussed multi-channel marketing campaigns during joint IOU monthly meetings as related to a statewide AFN public education campaign. SDG&E engaged with local broadcast media and utilized various mediums to reach the public, including AFN communities, and Limited English Proficient residents, to provide wildfire safety and emergency preparedness information, PSPS awareness and PSPS education. Project teams collaborated with stakeholders and subject matter experts in accessible communications to explore additional platforms that can assist with accessible communications. Throughout the year, SDG&E also completed various Mini-Wildfire Safety Fairs with key community partners and CBOs within SDG&E's Energy Solutions Partner Network.

Spend

The underspend in capital is due to delayed project starts for enhancing the Emergency Notification System (ENS). As described in the table above, SDG&E is exploring additional platforms that can assist with accessible communications and is engaged with stakeholders and subject matter experts. This is an ongoing effort with expected project start in 2023.

Table 115: Spend for Community Outreach, Public Awareness, and Communication Efforts

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 8,848.44	$ 2,765.56	- $ 6,082.89
O&M	$ 15,170.40	$ 12,381.77	- $ 2,788.63

PSPS Impact Reduction

N/A

10.3 Customer Support in Emergencies (2022 WMP Section 7.3.9.3)

Risk Reduction

No discussion needed.

Table 116: Risk Reduction for Customer Support in Emergencies

2022 Plan	2022 Actual
In 2022, SDG&E plans to focus on strengthening existing partnerships while also building new partnerships with organizations that represent the needs of customers with AFN, with an emphasis on the deaf and blind communities, seniors, and the non-English speaking population. SDG&E	In 2022, SDG&E established relationships with more than 5 new Energy Solutions Partners (ESP) and developed targeted marketing campaigns to reach individuals with AFN. Existing partnerships were renewed with key support vendors including 211 San Diego, 211 Orange County, and FACT.

2022 Plan	2022 Actual
continues to identify organizations with quick response capacity that can meet the needs of customers across the region during PSPS activations. SDG&E is exploring expanded food resource options with the San Diego Food Bank (a Community Information Exchange partner of 211 San Diego) and resiliency solutions for those impacted in the HFTD during PSPS. SDG&E plans to develop targeted marketing campaigns to individuals with AFN, broader marketing efforts as well as trainings and materials for CBOs. SDG&E is preparing to explore opportunities to provide for targeted resiliency items to households with individuals with AFN (e.g., lights, sensors, cooler bags, gas cards, battery powered blenders.) SDG&E will continue to work with stakeholders and experts to identify accessibility enhancement opportunities.	SDG&E identified the need for and implemented Video Remote Interpreting (VRI) resource and training to all CRC and Branch Office staff, allowing for complex conversations and information sharing in ASL and non-English languages. SDG&E employees may access the VRI resource by PC, tablet or Smart Phone via the Boost Lingo platform. ASL translators via video chat, or non-English translators (voice only) are available 24/7 to equally provide important information and to engage in conversations with all customers. New PSPS preparedness partnerships were developed with the San Diego Center for the Blind the San Diego County Library to distribute PSPS preparedness information throughout 33 locations. SDG&E conducted virtual presentation on PSPS support services, customer programs and accessibility resources with ASL and Spanish interpreters to the Regional Center of San Diego and Imperial County, Regional Center of Orange County and the State Council of Developmental Disabilities San Diego and Imperial County. Three in-person presentations and one virtual presentation was provided to the San Diego Center for the Blind.

Spend

Costs for this program are tracked within Emergency Management Operations.

PSPS Impact Reduction

N/A

10.4 Disaster and Emergency Preparedness Plan (2022 WMP Section 7.3.9.4)

Risk Reduction

No discussion needed.

Table 117: Risk Reduction for Disaster and Emergency Preparedness Plan

2022 Plan	2022 Actual
SDG&E plans to update its CERP based on lessons learned. Additional annexes and standard operating procedures will be developed to support the CERP as new emergent risks arise	In 2022, SDG&E finalized the new comprehensive plan. The name of the plan was updated to comply with new GO166 rules and is titled the Company Emergency and Disaster Preparedness Plan (CEADPP).

Spend

Costs for this program are tracked within Emergency Management Operations.

PSPS Impact Reduction

N/A

10.5 Preparedness and Planning for Service Restoration - Mutual Assistance and Contractors (2022 WMP Section 7.3.9.5)

Risk Reduction

No discussion needed.

Table 118: Risk Reduction for Preparedness and Planning for Service Restoration

2022 Plan	2022 Actual
SDG&E plans to develop a formal mutual assistance training program, to include automating processes where possible to streamline the deployment and demobilization processes.	In 2022, SDG&E began the automation process in Q1 and continued the automation efforts throughout the year. Additionally, training with partners was conducted in Q4.

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

10.6 Protocols in Place to Learn from Wildfire Events - After Action Reports (2022 WMP Section 7.3.9.6)

Risk Reduction

No discussion needed.

Table 119: Risk Reduction for Protocols in Place to Learn from Wildfire Events

2022 Plan	2022 Actual
SDG&E plans to continue the After-Action Review (AAR) program expansion activities and related initiatives to enhance the strong safety and growth mindset culture. This objective will be accomplished by integrating the AAR program's continuous quality improvement processes with those of the Safety Management System (SMS). The future state of the AAR process will include root cause analysis, and both qualitative and quantitative risk assessment. This enhanced process will allow for improved benchmarking, metrics, systematic enhancements, and cross-functional learning/information sharing on all events.	In 2022, SDG&E executed three training exercises with subsequent after-action review processes to create learning opportunities and strengthen preparedness and response during a PSPS event. These learning opportunities will be incorporated into future training and exercises, and in select instances, have already been incorporated into PSPS procedures. Additionally, the AAR program expanded to include action planning and root cause analysis as a part of the menu of services included to strengthen overall stakeholder and internal Emergency Management Department emergency response and readiness. In partnership with the Training and Exercise Division, the AAR program identified, assessed, and completed action planning for lessons learned from the SDG&E PSPS Functional Exercise in August. Lessons learned and subsequent corrective actions gleaned from 2022 PSPS exercises have been documented and shared to be further incorporated into 2023 pre-season training curriculum.

Spend

Costs for this program are embedded within normal operations.

PSPS Impact Reduction

N/A

11 Stakeholder Cooperation and Community Engagement (2022 WMP Section 7.3.10)

A first-class level of engagement and cooperation amongst all wildfire stakeholders is extremely important to SDG&E, as it endeavors to fulfill its commitment to mitigate the risk of wildfires and adverse impacts of PSPS events. SDG&E remains dedicated to partnering with utility customers, elected officials, nonprofit support organizations, first responders, and all other public safety and community partners, understanding they all play a unique and important role in achieving wildfire prevention and mitigation in SDG&E's service territory. SDG&E provides an essential service, and it takes its role within the communities it serves very seriously. This is especially true during PSPS events, when communities—neighborhoods in which SDG&E's employees, families and friends live—depend on complete, accurate, and timely information for their well-being.

SDG&E will continue to strive to provide all stakeholders up-front awareness and information, using available channels to educate the public on wildfire preparedness and PSPS events. It is SDG&E's goal to equip those it serves with the information and resources to navigate the adversity of an emergency, wildfire, or PSPS event. Through thoughtful education campaigns and strategic partnerships, SDG&E has implemented a robust, external communication strategy, which is continuously analyzed to identify areas of improvement. SDG&E also leverages its broadened and increased relationships with CBOs and stakeholders to amplify and disseminate critical, sometimes life-saving information.

One of the pillars of SDG&E's wildfire and PSPS awareness lies within its Energy Solutions Partner network, which consists of nearly 200 CBOs. In addition, key to SDG&E's stakeholder engagement is its relationships with emergency response agencies, both locally and at the state-level. SDG&E is widely recognized as a world-class innovator with its Fire Science and Climate Adaptation department. This team is routinely asked, and happily provides, best practices to other national utilities, as well as internationally. This cooperation, in addition to communication practices, lays the foundation for SDG&E's success in stakeholder cooperation and community engagement.

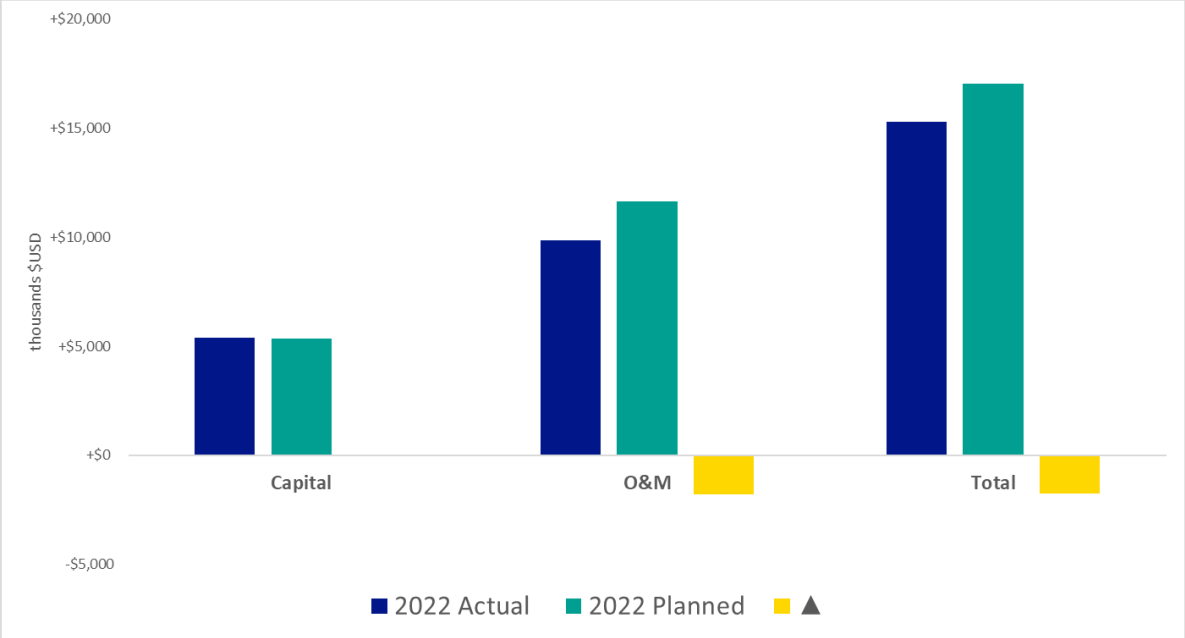
SDG&E remains committed to fostering productive collaboration and engaging the communities it serves. Endeavoring to collaboratively identify fresh ways to better serve our communities will remain a top priority.

Below is a financial summary for the programs within the Stakeholder Cooperation and Community Engagement category of SDG&E's 2022 Wildfire Mitigation Plan. Variances greater or less than 10% of target and expenditures greater or less than 20% of planned spend or $10 million dollars are discussed further within each initiative.

Table 120: Financial Summary for Stakeholder Cooperation and Community Engagement Programs

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 5,363.74	$ 5,404.77	$ 41.03
O&M	$ 11,662.26	$ 9,876.03	- $ 1,786.23

Figure 12: Financial Summary for Stakeholder Cooperation and Community Engagement Programs



11.1 Community Engagement - Community Outreach and Public Awareness (2022 WMP Section 7.3.10.1)

Risk Reduction

No discussion needed.

Table 121: Risk Reduction for Community Outreach and Public Awareness

2022 Plan	2022 Actual
SDG&E plans to enhance collaboration with community partners, including Fire Safe Councils, local Fire Departments, Community Emergency Response Teams (CERT), AFN partners, tribal nations, local town organizations, and other CBOs in order to educate on PSPS, emergency response, and programs available to all communities.	In 2022, SDG&E hosted a series of six webinars about PSPS, safety during a PSPS event, and how to be prepared for the threat of wildfire. Webinars were held for Public Safety Partners, Critical Facilities partners, Municipalities, and other partners. SDG&E also hosted more than 50 Mini-Wildfire Safety Fairs, which are small community events that enhance coordination efforts with Fire Safe Councils, CBOs, CERT Teams, Fire Departments, and Tribal Governments to focus on educating and preparing customers for wildfires in hard-to-reach and rural communities, with a focus on customers with AFN. SDG&E expanded fully accessible customer emergency notifications (ASL video, English voice, and accessible text) to unplanned power outages in addition to PSPS notifications. Additionally, the implementation of the Video Remote

2022 Plan	2022 Actual
	Interpreting (VRI) application for Customer Service Field technicians began in the fourth quarter of 2022. Annual contracts were renewed between SDG&E and our AFN direct support partners 211 San Diego, 211 Orange County, FACT, and Salvation Army.

Spend

The lower than planned spend is due to favorable weather conditions that lessen EOC activations and an early end to the PSPS/Wildfire season.

Table 122: Spend for Community Outreach and Public Awareness

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
O&M	$ 600.00	$ 398.25	- $ 201.75

PSPS Impact Reduction

N/A

11.2 PSPS Communication Practices (2022 WMP Section 7.3.10.1.1)

Risk Reduction

No discussion needed.

Table 123: Risk Reduction for PSPS Communication Practices

2022 Plan	2022 Actual
SDG&E will continue to collaborate with AFN councils and working groups as well as other stakeholders to identify and implement opportunities for enhancement. New opportunities within established partnerships with local Tribal Councils and other resources that serve Native American communities will be explored. SDG&E is working to significantly expand 2022 wildfire safety and PSPS outreach communications to Native American communities. Along with the expanded communication efforts, SDG&E is working to develop new communications in a culturally appropriate and relevant manner.	Continued technology communication enhancements to the following: PSPS website by enhancing the website to improve the customer experience, site performance and reliability, as well as increase accessibility and translating all online wildfire safety and PSPS collateral (digital versions of printed materials) into the 22 prevalent languages; further refined and expanded the SDGE Alerts (PSPS) mobile app based on user feedback; refinements to the Public Safety Partner Portal communication platform, and launching a parallel PSPS app for the portal. Continued refinement of the customer notification process to include enhanced accessibility, explore system capacity to address customer feedback, refine messaging based on customer, public safety and community partner feedback to include estimated length of outage, estimated restoration times, and when power was turned back on. PSPS notifications were also simplified to drive to a central location (sdge.com/ready) for real-time information and resources. That website landing page has also been updated and simplified for customers to easily get updated information including AFN resources, a heat map of areas affected by PSPS, and ability for customers and the public to

2022 Plan	2022 Actual
	look up and map the closest Community Resource Centers to their current location. Developed and launched a semi-automated process to create a real-time accessible version of emergency customer notifications for the sensory disabled. Each emergency customer notification includes a URL to an accessible version of that notification. Continued engagement with local Tribal constituents through regular meetings and providing informational materials and emergency backpacks. Expansion of the multi-channel engagement and communications strategy. A targeted, customized PSPS public education campaign to AFN customers living in the HFTD started in June and ran through the remainder of 2022. Messaging promoted offerings and 211 services customized for AFN customers. This campaign utilized the tactics listed above and additional AFN specific tactics were layered in such as Eldercare directories, trusted rural print outlets and many others identified in the Q3 AFN Plan Update. Refine and Expand Customer Notification Process Notifications for shared customers were updated based on alignment with the other California IOUs. Shared customers are served by one utility and the customer-of-record with another utility. This shared-notification refinement process will continue into Q1 of 2023. Additionally, as there were no PSPS occurrences in SDG&E's territory during 2023, customer notifications were not tested for retention and comprehension. SDG&E plans to resume efforts to solicit feedback from customers affected by PSPS during the 2023 PSPS season. Customer notifications will also be examined and potentially refined and/or simplified for the 2023 season.

Spend

No discussion needed.

Table 124: Spend for PSPS Communication Practices

Capital or O&M	2022 Planned ($000)	2022 Actual ($000)	$ Change ($000)
Capital	$ 5,363.74	$ 5,404.77	$ 41.03
O&M	$ 11,062.26	$ 9,477.78	- $1,584.47

PSPS Impact Reduction

N/A

11.3 Cooperation with Suppression Agencies (2022 WMP Section 7.3.10.3)

Risk Reduction

No discussion needed.

Table 125: Risk Reduction for Cooperation with Suppression Agencies

2022 Plan	2022 Actual
SDG&E plans to maintain coordination with agencies in the SDG&E service territory.	In 2022, SDG&E participated in numerous meetings and planning committees along with responding to incidents.

Spend

Costs for this program are embedded within the Fire Science & Climate Adaptation program.

PSPS Impact Reduction

N/A

Appendix A: ARC Summary

Utility Initiative Name	2022 WMP Section	Capital Planned ($, thousands)	Capital Actual ($, thousands)	Capital Change ($, thousands)	Capital Change (%)	O&M Planned ($, thousands)	O&M Actual ($, thousands)	O&M Change ($, thousands)	O&M Change (%)	2022 Target (units)	2022 Actual (units)	% of Target	Units
A summarized risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment	7.3.1.1	$ 242.55	$ -	$ (242.55)	-	$ 3,697.20	$ 3,734.87	$ 37.67	1%	na	na	na	na
Advanced weather monitoring and weather stations	7.3.2.1	$ 525.26	$ 539.46	$ 14.21	3%	$ -	$ -	$ -	-	20	50	250.00%	Weather Stations
Air Quality Index	7.3.2.2.1	$ -	$ -	$ -	-	$ -	$ -	$ -	-	6	8	133.33%	Sensors
Camera Network	7.3.2.2.2	$ -	$ 3.29	$ 3.29	-	$ -	$ -	$ -	-	8	12	150.00%	Cameras
Wireless Fault Indicators	7.3.2.3	$ 686.75	$ 845.97	$ 159.22	23%	$ -	$ -	$ -	-	500	595	119.00%	Wireless Fault Indicators
Fire potential index	7.3.2.4.1	$ 2,200.00	$ 1,632.00	$ (567.87)	-26%	$ 2,353.91	$ 1,818.23	$ (535.68)	-23%	na	na	na	na
Santa Ana Wildfire Threat Index	7.3.2.4.2	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
High-Performance Computing Infrastructure	7.3.2.4.3	$ 5,500.00	$ 5,224.32	$ (275.68)	-5%	$ -	$ -	$ -	-	na	na	na	na
Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions	7.3.2.5	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Capacitor maintenance and replacement program	7.3.3.1	$ 3,230.75	$ 3,509.43	$ 278.67	9%	$ -	$ -	$ -	-	40	58	145.00%	SCADA capacitors
Covered conductor installation	7.3.3.3	$ 124,643.00	$ 89,512.00	$ (35,131.35)	-28%	$ 594.29	$ 3,220.85	$ 2,626.56	442%	60	61.23	102.05%	Miles
Distribution pole replacement and reinforcement, including with composite poles	7.3.3.6	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Expulsion fuse replacement	7.3.3.7	$ 734.00	$ 631.39	$ (102.61)	-14%	$ -	$ -	$ -	-	227	231	101.76%	Fuses
PSPS sectionalizing enhancements	7.3.3.8.1	$ 1,909.68	$ 2,382.67	$ 472.99	25%	$ -	$ -	$ -	-	10	12	120.00%	Switches
Microgrids	7.3.3.8.2	$ 13,309.08	$ 2,697.30	$ (10,611.78)	-80%	$ 1,607.28	$ 1,304.02	$ (303.26)	-19%	4	1	25.00%	Microgrids
Installation of system automation equipment	7.3.3.9	$ 12,937.92	$ 23,822.12	$ 10,884.20	84%	$ -	$ 152.31	$ 152.31	-	8	3	37.50%	Circuits
Maintenance, repair, and replacement of connectors, including hotline clamps	7.3.3.10	$ -	$ -	$ -	-	$ 4,320.56	$ 1,781.40	$ (2,539.15)	-59%	1650	1903	115.33%	Hotline clamps
Generator Grant Programs	7.3.3.11.1	$ -	$ -	$ -	-	$ 10,400.00	$ 3,550.40	$ (6,849.60)	-66%	700	921	131.57%	Generators
Standby Power Programs	7.3.3.11.2	$ -	$ -	$ -	-	$ 10,350.00	$ 12,043.42	$ 1,693.42	16%	412	376	91.26%	Generators
Generator Assistance Programs	7.3.3.11.3	$ -	$ -	$ -	-	$ 1,828.00	$ 758.99	$ (1,069.01)	-58%	1250	140	11.20%	Generators
Undergrounding of electric lines and/or equipment	7.3.3.16	$ 188,844.66	$ 126,675.09	$ (62,169.57)	-33%	$ 1,048.58	$ 175.55	$ (873.02)	-83%	65	65	100.00%	Miles
Traditional hardening distribution overhead system hardening	7.3.3.17.1	$ 16,311.54	$ 23,267.67	$ 6,956.13	43%	$ 178.33	$ 3,249.08	$ 3,070.75	1722%	5	26.3	526.00%	Miles
Overhead transmission fire hardening	7.3.3.17.2	$ -	$ -	$ -	-	$ -	$ -	$ -	-	18.5	18.28	98.81%	Miles
Underground transmission fire hardening (Transmission)	7.3.3.17.2	$ -	$ -	$ -	-	$ -	$ -	$ -	-	5.5	5.69	103.45%	Miles
Overhead transmission fire hardening (Distribution Underbuilt)	7.3.3.17.2	$ 4,272.71	$ 3,237.21	$ (1,035.50)	-24%	$ -	$ -	$ -	-	7.6	0.6	7.89%	Miles
Distribution Communications Reliability Improvements (LTE)	7.3.3.18.1	$ 70,641.54	$ 45,177.26	$ (25,464.28)	-36%	$ -	$ 714.39	$ 714.39	-	25	21	84.00%	Stations
Lightning arrestor removal and replacement	7.3.3.18.2	$ 2,877.05	$ 3,296.74	$ 419.69	15%	$ -	$ -	$ -	-	1848	2,710	146.65%	Lightning Arrestors
Avian Mitigation	7.3.3.18.3	$ 3,081.20	$ 1,850.81	$ (1,230.39)	-40%	$ -	$ 15.65	$ 15.65	-	847	973	114.88%	Poles
Detailed inspections of distribution electric lines and equipment	7.3.4.1	$ 11,406.41	$ 13,924.91	$ 2,518.50	22%	$ 1,155.38	$ 1,195.30	$ 39.92	3%	18,177	17,935	98.67%	Inspections
Detailed inspections of transmission electric lines and equipment	7.3.4.2	$ 576.11	$ 489.81	$ (86.30)	-15%	$ -	$ 0.03	$ 0.03	-	2,087	2,323	111.31%	Inspections
Infrared inspections of distribution electric lines and equipment	7.3.4.4	$ -	$ -	$ -	-	$ 174.57	$ 158.93	$ (15.64)	-9%	12,000	12,264	102.20%	Inspections
Infrared inspections of transmission electric lines and equipment	7.3.4.5	$ -	$ -	$ -	-	$ -	$ -	$ -	-	6,154	6,259	101.71%	Inspections
Intrusive Pole Inspections	7.3.4.6	$ -	$ -	$ -	-	$ 24.00	$ 39.41	$ 15.41	64%	350	967	276.29%	Inspections
LiDAR inspections of distribution electric lines and equipment	7.3.4.7	$ -	$ -	$ -	-	$ 3,000.00	$ 3,000.12	$ 0.12	0%	na	na	na	na
LiDAR inspections of transmission electric lines and equipment	7.3.4.8	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na

Utility Initiative Name	2022 WMP Section	Capital Planned ($, thousands)	Capital Actual ($, thousands)	Capital Change ($, thousands)	Capital Change (%)	O&M Planned ($, thousands)	O&M Actual ($, thousands)	O&M Change ($, thousands)	O&M Change (%)	2022 Target (units)	2022 Actual (units)	% of Target	Units
HFTD Tier 3 distribution pole inspections	7.3.4.9.1	$ -	$ -	$ -	-	$ 384.10	$ 342.42	$ (41.68)	-11%	12,268	12,263	99.96%	Inspections
Drone assessments of distribution infrastructure	7.3.4.9.2	$ 26,402.38	$ 51,741.01	$ 25,338.64	96%	$ 52,000.00	$ 45,222.71	$ (6,777.29)	-13%	22,000	30,044	136.56%	Inspections
Drone Assessments of transmission Infrastructure	7.3.4.10.1	$ -	$ -	$ -	-	$ -	$ -	$ -	-	500	1,028	205.60%	Inspections
Additional Transmission Aerial 69kV Tier 3 Visual Inspection	7.3.4.10.2	$ -	$ -	$ -	-	$ -	$ -	$ -	-	1,654	1,649	99.70%	Inspections
Patrol inspections of distribution electric lines and equipment	7.3.4.11	$ -	$ -	$ -	-	$ 278.77	$ 285.06	$ 6.29	2%	86,490	86,821	100.38%	Inspections
Patrol inspections of transmission electric lines and equipment	7.3.4.12	$ -	$ -	$ -	-	$ -	$ -	$ -	-	6,312	6,445	102.11%	Inspections
Quality assurance / quality control of inspections	7.3.4.14	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Substation inspections	7.3.4.15	$ -	$ -	$ -	-	$ -	$ -	$ -	-	330	397	120.30%	Inspections
Additional efforts to manage community and environmental impacts	7.3.5.1	$ -	$ -	$ -	-	$ 1,000.00	$ 872.17	$ (127.83)	-13%	na	na	na	na
Detailed inspections of vegetation around distribution electric lines and equipment	7.3.5.2	$ -	$ -	$ -	-	$ 55,699.52	$ 59,775.66	$ 4,076.14	7%	491,822	509,110	103.52%	Inspections
Fuel management and reduction of “slash” from vegetation management activities	7.3.5.5	$ -	$ -	$ -	-	$ 6,377.49	$ 7,895.53	$ 1,518.04	24%	500	500	100.00%	Poles Cleared
LiDAR inspections of vegetation around distribution electric lines and equipment	7.3.5.7	$ -	$ -	$ -	-	$ -	$ -	$ -	-	730	737.5	101.03%	Circuit Line Mile
Other discretionary inspection of distribution electric lines and equipment, beyond inspections mandated by rules and regulations	7.3.5.9	$ -	$ -	$ -	-	$ -	$ -	$ -	-	12,500	10,488	83.90%	Trees Trimmed/Removed
Quality assurance / quality control of vegetation inspections	7.3.5.13	$ -	$ -	$ -	-	$ -	$ -	$ -	-	15%	17%	102.00%	Inspections
Recruiting and training vegetation management personnel	7.3.5.14	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Remediation of at-risk species	7.3.5.15	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Removal and remediation of trees with strike potential to electric lines and equipment	7.3.5.16	$ -	$ -	$ -	-	$ -	$ -	$ -	-	106	105	99.06%	Vegetation Management Areas
Vegetation inventory system	7.3.5.19	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Vegetation management to achieve clearances around electric lines and equipment	7.3.5.20	$ -	$ -	$ -	-	$ 5,800.00	$ 6,104.91	$ 304.91	5%	34,000	35,485	104.37%	Poles
Crew-accompanying ignition prevention and suppression resources and services	7.3.6.3	$ -	$ -	$ -	-	$ 3,229.60	$ 3,073.87	$ (155.73)	5%	na	na	na	na
Personnel work procedures and training in conditions of elevated fire risk	7.3.6.4	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Protocols for PSPS re-energization	7.3.6.5	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
PSPS events and mitigation of PSPS impacts	7.3.6.6	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Aviation Firefighting Program	7.3.6.7.1	$ 23,672.12	$ 11,437.07	$ (12,235.05)	-52%	$ 9,324.80	$ 7,396.25	$ (1,928.55)	-21%	na	na	na	na
Centralized repository for data	7.3.7.1	$ 26,978.15	$ 14,993.41	$ (11,984.74)	-40%	$ 1,490.26	$ 1,304.99	$ (185.27)	-12%	na	na	na	na
Collaborative research on utility ignition and/or wildfire	7.3.7.2	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Documentation and disclosure of wildfire-related data and algorithms	7.3.7.3	$ 3,992.73	$ 3,680.40	$ (312.33)	-8%	$ -	$ -	$ -	-	na	na	na	na
Ignition management program	7.3.7.4.1	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Reliability database	7.3.7.4.2	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Allocation methodology development and application	7.3.8.1	$ -	$ -	$ -	-	$ 4,785.88	$ 3,966.63	$ (819.25)	-17%	na	na	na	na
Risk spend efficiency analysis not include PSPS	7.3.8.3	$ -	$ 1,485.83	$ 1,485.83	-	$ -	$ -	$ -	-	na	na	na	na
Adequate and trained workforce for service restoration	7.3.9.1	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na

Utility Initiative Name	2022 WMP Section	Capital Planned ($, thousands)	Capital Actual ($, thousands)	Capital Change ($, thousands)	Capital Change (%)	O&M Planned ($, thousands)	O&M Actual ($, thousands)	O&M Change ($, thousands)	O&M Change (%)	2022 Target (units)	2022 Actual (units)	% of Target	Units
Community outreach, public awareness, and communications efforts	7.3.9.2	$ 8,848.44	$ 2,765.56	$ (6,082.89)	-69%	$ 15,170.40	$ 12,381.77	$ (2,788.63)	-18%	na	na	na	na
Customer support in emergencies	7.3.9.3	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Disaster and emergency preparedness plan	7.3.9.4	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Preparedness and planning for service restoration	7.3.9.5	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Protocols in place to learn from wildfire events	7.3.9.6	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
Community outreach, public awareness, and communications efforts (emergency)	7.3.10.1	$ -	$ -	$ -	-	$ 600.00	$ 398.25	$ (201.75)	-34%	na	na	na	na
PSPS communication practices	7.3.10.1.1	$ 5,363.74	$ 5,404.77	$ 41.03	1%	$ 11,062.26	$ 9,477.78	$ (1,584.47)	-14%	na	na	na	na
Cooperation with suppression agencies	7.3.10.3	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
CNF MSUP Powerline Replacement Program (Transmission)	7.3.3.17.3	$ -	$ -	$ -	-	$ -	$ -	$ -	-	na	na	na	na
CNF (Distributon Underground)	7.3.3.17.3	$ 617.55	$ 717.76	$ 100.20	16%	$ -	$ -	$ -	-	na	na	na	na
CNF(Distribution Overhead)	7.3.3.17.3	$ 752.51	$ 874.61	$ 122.10	16%	$ 1,900.03	$ 2,212.35	$ 312.32	16%	na	na	na	na
	Total:	$ 560,557.83	$ 441,819.86	$ (118,738.19)		$ 209,835.20	$ 197,623.30	$ (12,211.90)					