



# 11-22-2021 PSPS Event

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PSPS After-Action Report / Improvement Plan

Publication Date: January 14, 2022

*The After-Action Report/Improvement Plan (AAR/IP) outlines strengths, as well as areas identified for improvement. For each area for improvement, recommendations are outlined for consideration.*

## INCIDENT OVERVIEW

<b>Event Start Date</b>	November 22, 2021
<b>Operational Periods</b>	November 22, 2021, 18:00 to November 26, 2021, 18:00
<b>Activation Levels</b>	Emergency Operations Center (EOC) - Level 4 Deputy Operational Chief – Electric (DOC-E) Type 2 – Elevated
<b>Weather Conditions</b>	The National Weather Service (NWS) issued a Red Flag Warning in effect from November 25 at 14:00 to November 26 at 18:00.  The SDG&E Fire Potential Index (FPI) reached an “Elevated” state for all districts in the service territory, with four districts reaching a rating of 14, indicating the potential for large and damaging fires.  The Santa Ana Wind Threat Index rated as Moderate, signaling the potential for rapid fire growth upon ignition.
<b>Cascading Hazards</b>	Elevated wildfire risk
<b>Customer Impact</b>	Event’s Potential Customer Meter Impacts: 54,527 De-energized Customer Meters: 5,858 De-energized Medical Baseline: 47 De-energized Critical Facilities: 241 De-energized Tribes: 5
<b>De-Energized Communities</b>	Alpine, Boulevard, Descanso, Jamul, Pala, Pauma Valley, Potrero, and five Tribal reservations, including Campo, Cuyapaipa, La Jolla, Pauma, and Viejas.
<b>Customer Notifications</b>	207,044 detailed customer notifications
<b>Public Safety Partner Notifications</b>	8,301 partner communications were made which included: NGOs, 2-1-1, tribal, state, county, municipal, military, telecommunication, medical, law enforcement, fire, and CERT
<b>External Partner Resources</b>	Salvation Army prepared 90 hotel rooms; 2-1-1 set up a call center to receive Access and Functional Needs (AFN)/customer need requests; Richard Health & Associates (RHA) provided generator delivery support for Medical Baseline/Life Support clients.
<b>Community Resource Centers</b>	Activated: Descanso, Potrero, and Valley Center, Prepared but not Activated: Lake Morena, Fallbrook, Descanso
<b>Devices De-energized</b>	Distribution Circuits in Scope: 79 Distribution Circuits De-energized: 13

## SUMMARY OF EVENTS

Date	Time	Event	Comments
11/22/21	11:57	DOC-E Activation	Done for a potential PSPS
11/22/21	12:58	NWS Issues a Red Flag Warning	
11/22/21	15:00	Activating PSPS Protocols	First pre-event call initiated in DOC-E Situation Room.
11/22/21	17:23	Notifications Initiated	California Public Utilities Commission, CalOES, San Diego County OES, Public Safety Partners, AFN partners, and customer notifications begun.
11/23/21	12:00	Initial EOC Operational Briefing	Weather, notifications, resource/system preparations: -Safe driving in windy conditions (esp. high profile) -Fully equipped vehicles
11/23/21	06:00	Patrols Initiated	
11/24/21	14:30	12hr / EOC Activation sent to public safety partners	
11/24/21	18:00	EOC Activation	
11/24/21	21:45	De-energizations Initiated	
11/25/21	8:00	CRCs activated	Descanso and Potrero locations
11/25/21	12:00	Valley Center CRC activated	
11/25/21	16:30	Re-energizations Initiated	
11/25/21	16:45	All CRCs closed	
11/25/21	17:00	DOC-E Demobilization	
11/25/21	17:46	EOC De-activated	
11/25/21	18:17	NWS expires Red Flag Warning	

Table 1. Time of Events

## AFTER-ACTION REVIEW ACTIVITIES

Two web-based After-Action Review (AAR) surveys were developed for this event; an EOC-focused survey and the field-based survey for the DOC-E to meet their unique responsibilities and evaluate responders' readiness. See Appendix B and C for expanded survey results.

Additionally, an engagement survey was sent to SDG&E's public safety partners assessing any improvement needs. Valuable feedback was offered on the efficacy of notifications sent out, ideas for information sharing on social media, and communication consistency with local agencies. See Appendix D for Public Safety Partner Level of Engagement scores.

On December 12, 2021, the Operational and Field Emergency Readiness division (OFER Div.) facilitated a focused AAR debrief with the Notifications Team, which is an EOC team consisting of multiple units who produce externally facing notifications.

Feedback and lessons learned identified through the EOC and DOC-E surveys were analyzed, assessed, and prioritized in preparation for the Improvement Planning process, the next step in the AAR process (outlined in Graphic 1). Customer Programs Director, Alex Kim, began improvement planning efforts with a customer and client-focused meeting to draft corrective actions on December 10, 2021. The OFER Div. facilitated a second Improvement Planning session with the Notification Team on December 13, 2021.



Graphic 1: AAR Process

## Continuous Quality & Safety Improvement

### Strengths

The following areas are strengths demonstrated during the events.

- 1:** No injuries to the public or SDG&E personnel.
- 2:** No ignitions caused by SDG&E equipment.
- 3:** Fully staffed the event with EOC and DOC-E responders and three Community Resource Centers (CRCs) during the Thanksgiving holiday, demonstrating SDG&E's commitment to public safety, reliability, and service delivery.
- 4:** Technical support teams responded swiftly to issues that impacted situational awareness platforms, such as the PSPS Dashboard.
- 5:** Achieved 100% positive notification success rate on 1,129 Access and Functional Needs (AFN) and Medical Baseline customers.
- 6:** The AFN unit expanded available services to now include same-day generator delivery, accessible hotel stays at no cost, accessible hotel transportation, family or Community Resource Centers, preparedness items, warm meals, food support gift cards for assistance.
- 7:** Launched a Public Safety Partner Portal: the portal directly supported stakeholder cooperation by enabling third-party access to real-time PSPS event resources like GIS maps, potentially impacted customers, and supplemental resources. This helped facilitate cross-agency collaboration, targeted messages, and resource coordination through support networks.

## Areas for Improvement

The following areas require improvement to achieve the full capability level:

### Core Capability: Safety, Health & Environmental Response

**1:** When field Observers were assigned to the operation, their destinations were not communicated – preventing districts from identifying hazards adequately prior to observer arrival.

#### Recommendation:

- a. Resource coordination teams and District leadership to consult with Fire Coordinators on the hazards associated with observation and patrol activity locations. Where appropriate, Fire Coordination to brief the DOC-E on site hazards to mitigate field risks.

### Core Capability: Communications & Interoperability

**1:** Tribal reservation names were not incorporated into the PSPS Dashboard, increasing the manual process for de-energization and re-energization notifications to these communities.

#### Recommendation:

- a. Coordinate with the appropriate vendors/application owners to complete the necessary mapping software modifications and updates to enhance the end-user experience. Recommended updates will allow users to easily find community-friendly names affiliated with an impacted weather station.

**2:** Field personnel dispatched to communication “dead zones” faced challenges with traditional means of communication (e.g., cell phones and radios).

#### Recommendations:

- a. Create a layer in GIS SPARC which outlines known communication “dead zones” and poor reception areas.
- b. Investigate options in GIS SPARC to input live situational awareness information provided by the field on areas currently experiencing communication issues.

**3:** Developing the Executive Briefing template was an extensive manual effort that affected responders’ ability to focus on and participate in EOC Policy room discussions and decisions.

**Recommendation:**

- a. Streamline the Executive Briefing template information gathering and assembly to meet information needs at the executive level and balance responder responsibilities.

**Core Capability: Operational Communications**

**1:** The Notification Team reported a single instance where event notifications did not follow the recommended de-mobilization sequence.

**Recommendations:**

- a. EOC leadership to investigate the feasibility of a Notifications Team Lead as a central resource for notification sequences, systems, and contacts.
- b. Additional training for the Notification Team on sequencing for internal and external-facing notifications. Training to include points-of-contact; EOC units responsible for notifications within this process.
- c. The EOC Technical Unit to research a technological solution to centralize essential elements of information critical to the notifications process, such as impacted community names and medical baseline customers.

**2:** Customer feedback indicated that select PSPS notification calls went unanswered because they were flagged as spam. As we cannot leave a voicemail on a rejected call, several customers were unaware of the PSPS event.

**Recommendations:**

- a. SDG&E to work with the communications vendor to resolve the customer notification faults designated as “system error.”
- b. SDG&E to partner with the Safety & Enforcement Division, affiliated with the California Public Utilities Commission, to develop a detailed explanation of system error causes and a mitigation plan.

**Core Capability: Operational Coordination**

**1:** With the increase of new EOC Responders, many were unaware of what information they were responsible for related to the SDG&E Executive Leadership Briefing PowerPoint.

**Recommendations:**

- a. The EOC Planning section to coordinate additional training and/or education resources concerning the SDG&E Executive Leadership Briefing.
- b. Recommend members from the Planning Section compile a responsibility matrix-style reference guide.

**2:** There were instances where field workers did not check-in with the proper authority when arriving on a jobsite, impacting some levels of situational awareness.

**Recommendation:**

- a. When responders are assigned to the field, they are to check in with the proper authority before leaving the facility and when arriving at a new jobsite. This ensures proper tracking of workforce locations and ensures proper situational awareness of personnel in proximity to electric infrastructure.

## APPENDIX A: IMPROVEMENT PLAN

Continuous Improvement Opportunity	Capability Element	Recommended Mitigation Activities	Responsible Employee/Parties	Primary POC	Target Completion Date
Resource coordination teams and District leadership to consult with Fire Coordinators on the hazards associated with observation and patrol activity locations. Where appropriate, Fire Coordination to brief the DOC-E on site hazards to mitigate field risks.	Safety, Health & Environmental Response	Resource coordination teams and District leadership to consult with Fire Coordinators on the hazards associated with observation and patrol activity locations. Where appropriate, Fire Coordination to brief the DOC-E on site hazards to mitigate field risks.	OFER Division, DOC-E, Fire Coordination, District Operations	Denny Neville, Richie Veihl, Cory Mitsui	December 2022
Tribal reservation names were not incorporated into the PSPS Dashboard, increasing the manual process for de-energization and re-energization notifications to these communities.	Communications and Interoperability	Coordinate with the appropriate vendors/application owners to complete the necessary mapping software modifications and updates to enhance the end-user experience. Recommended updates will allow users to easily find community-friendly names affiliated with an impacted weather station.	OFER Division, Notifications Team	Brett Carnot, Tonya Anthony	December 2022
Field personnel dispatched to communication “dead zones” faced challenges with traditional means of communication (e.g., cell phones and radios).		Create a layer in GIS SPARC which outlines known communication “dead zones” and poor reception areas.  Investigate options in GIS SPARC to input live situational awareness information provided by the field on areas currently experiencing communication issues.	OFER Division, DOCRCT-E, IT, Sole Worker Safety Program – Coffey Belmonte	Katherine Fuller, Brian Braidic, Denny Neville	December 2022



<p>Developing the Executive Briefing template was an extensive manual effort that affected responders' ability to focus on and participate in EOC Policy room discussions and decisions.</p>		<p>Streamline the Executive Briefing template information gathering and assembly to meet information needs at the executive level and balance responder responsibilities.</p>	<p>EOC, EOC Tech Unit</p>	<p>TBA</p>	<p>Early Q3 2022</p>
<p>The Notification Team reported a single instance where event demobilization notifications did not follow the recommended sequence.</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Operational Communications</p>	<p>EOC leadership to investigate the feasibility of a Notifications Team Lead as a central resource for notification sequence, systems, and contacts.</p> <p>Additional training for the Notification Team on sequencing for internal and external-facing notifications. Training to include points-of-contact; EOC units responsible for notifications within this process.</p> <p>The EOC Technical Unit to research a technological solution to centralize essential elements of information critical to the notifications process, such as impacted community names and medical baseline customers.</p>	<p>Customer Service, EOC Tech Unit, PSPS Dashboard owners</p>	<p>Chris Bolton, Wendy Quach, Mona Freels</p>	<p>Early Q3 2022</p>
<p>Customer feedback indicated that select PSPS notification calls went unanswered because they were flagged as spam. As we cannot leave a voicemail on a rejected call, several customers were unaware of the PSPS event.</p>		<p>SDG&amp;E to work with the communications vendor to resolve the customer notification faults designated as "system error."</p>	<p>Business Services, ENS, EOC Tech Unit</p>	<p>Wendy Quach, Bryce Tiernan, Brett Carnot</p>	<p>Resolved</p>
		<p>SDG&amp;E to partner with the Safety &amp; Enforcement Division, affiliated with the California Public Utilities Commission, to develop a detailed explanation of system error causes and a mitigation plan.</p>	<p>EOC Notifications Group</p>	<p>Brett Carnot, Catrina Gregory</p>	<p>Early Q3 2022</p>

<p>With the increase of new EOC Responders, many were unaware of what information they were responsible for related to the SDG&amp;E Executive Leadership Briefing PowerPoint.</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Operational Coordination</p>	<p>The EOC Planning section to coordinate additional training and/or education resources concerning the SDG&amp;E Executive Leadership Briefing.</p>	<p>EOC Planning Section</p>	<p>Emergency Services</p>	<p>Early Q3 2022</p>
<p>There were instances where field workers did not check-in with the proper authority when arriving on a jobsite, impacting some levels of situational awareness.</p>		<p>Recommend members from the Planning Section compile a responsibility matrix-style reference guide.</p>	<p>EOC Planning Section</p>		<p>Resolved</p>
		<p>When responders are assigned to the field, they are to check in with the proper authority before leaving the facility and when arriving at a new jobsite. This ensures proper tracking of workforce locations and ensures proper situational awareness of personnel in proximity to electric infrastructure.</p>	<p>OFER Division, DOC-E</p>	<p>Cory Mitsui, Ahsan Mirza</p>	<p>Resolved</p>

This IP was developed by SDG&E’s Emergency Management Department following the 11-22-21 PSPS event.

## APPENDIX B: DOC-E RESPONDER SURVEY

	DISAGREE	SOMEWHAT DISAGREE	NEUTRAL	SOMEWHAT AGREE	AGREE	NOT APPLICABLE	TOTAL
Transitioning into my emergency response role was smooth with few roadblocks.	0.00% 0	0.00% 0	0.00% 0	5.88% 1	88.24% 15	5.88% 1	17
The training I received for my role adequately prepared me for what I encountered on this operation.	0.00% 0	5.88% 1	0.00% 0	23.53% 4	70.59% 12	0.00% 0	17
This event experience has increased my confidence and competence in my emergency response role.	0.00% 0	0.00% 0	5.88% 1	11.76% 2	76.47% 13	5.88% 1	17
My briefings prior to assignment gave me the context I needed to be successful.	5.88% 1	5.88% 1	0.00% 0	11.76% 2	70.59% 12	5.88% 1	17
My position's event objectives were clearly outlined.	0.00% 0	11.76% 2	0.00% 0	5.88% 1	76.47% 13	5.88% 1	17
I was made aware of the resources available to carry out my objectives.	0.00% 0	0.00% 0	0.00% 0	11.76% 2	82.35% 14	5.88% 1	17
Communication between my section and other sections was seamless.	11.76% 2	0.00% 0	5.88% 1	11.76% 2	70.59% 12	0.00% 0	17
Position-specific guidance documents were readily available to me (if unavailable, please select 'Not Applicable').	0.00% 0	5.88% 1	0.00% 0	0.00% 0	82.35% 14	11.76% 2	17

Graphic 1. DOC-E Responder Survey, Part One

	AGREE	SOMEWHAT AGREE	NEUTRAL	SOMEWHAT DISAGREE	DISAGREE	TOTAL
Safety messaging was effective and consistent.	58.82% 10	17.65% 3	23.53% 4	0.00% 0	0.00% 0	17
When Safety concerns were raised, they were adequately addressed.	70.59% 12	5.88% 1	17.65% 3	5.88% 1	0.00% 0	17
Safety values were modeled by leadership at all levels of the operation.	76.47% 13	0.00% 0	17.65% 3	5.88% 1	0.00% 0	17

Graphic 2. DOC-E Responder Survey, Part Two

Across eight questions evaluating the operational experience (Graphic 1), there were 129 responses ranging from “Neutral - Agree” and eight responses within “Somewhat Disagree – Disagree.” Responses that were in the “Somewhat Disagree – Disagree” range gave insight for these responses: difficulty communicating with field responders who were operating in a territory with scant service for their devices, difficulties tracking up-to-date pre-patrol listings, and differing communication methods between DOC-E and the EOC (ex: communicating through email, Teams, and event invites).

Responses related to Safety (Graphic 2) had 45 within the “Neutral – Agree range and two in the “Somewhat Disagree – Disagree” range. Lessons learned developed from a Safety perspective included advanced identification for observer locations to verify scene safety as well as a lack of responders with complete training in their roles – this operation had many employees experiencing their first PSPS event.

## APPENDIX C: EOC RESPONDER SURVEY

	DISAGREE	SOMEWHAT DISAGREE	NEUTRAL	SOMEWHAT AGREE	AGREE	NOT APPLICABLE	TOTAL
The training I received for my role adequately prepared me for what I encountered on this operation.	2.56% 1	5.13% 2	7.69% 3	25.64% 10	58.97% 23	0.00% 0	39
My briefings prior to assignment gave me the context I needed to be successful.	5.13% 2	0.00% 0	5.13% 2	12.82% 5	76.92% 30	0.00% 0	39
My position's event objectives were clearly outlined.	0.00% 0	5.13% 2	2.56% 1	12.82% 5	79.49% 31	0.00% 0	39
I was made aware of the resources available to carry out my objectives.	0.00% 0	5.13% 2	7.69% 3	23.08% 9	61.54% 24	2.56% 1	39
Communication between my section and other sections was seamless.	5.13% 2	5.13% 2	5.13% 2	28.21% 11	53.85% 21	2.56% 1	39
My initial event briefing gave me the context I needed to be successful.	2.56% 1	7.69% 3	0.00% 0	15.38% 6	74.36% 29	0.00% 0	39

EOC responders' ranking their experience across six questions, there were a total of 234 responses with 17 within the "Somewhat Disagree – Disagree" range and 215 ranking the statements between "Neutral – Agree." Feedback provided that may contribute understanding into the "Somewhat Disagree – Disagree" responses were similar to those in the DOC-E survey: there were a high number of responders going through their first PSPS event, confusion with communication venues with the wide variety of mediums used in the response (email, phone, Teams, virtual Policy Room), and intermittent failures of the dashboard to deliver up-to-date data.

## APPENDIX D: PUBLIC SAFETY PARTNER LEVEL OF ENGAGEMENT

The following public safety partner survey was sent to select external agencies to assess SDG&E's level of engagement during the PSPS event. 31 respondents account for the positive level of engagement demonstrated below.

