

Sacramento County Office of Emergency Services

# After Action Report Improvement Plan

## 2017 January Winter Storm



4/20/2017  
FINAL

## EXECUTIVE SUMMARY

Sacramento County was impacted by a series of Atmospheric River and storm systems starting January 3, 2017 through January 24, 2017. These storm systems cumulatively impacted the region causing worsening damage throughout the month. Sacramento continued to respond to levee issues and emergency work and the county continued to see flooded areas even though river levels dropped slightly.

Water from storm systems, king tides, releases, and runoff into the watershed impacted several areas of Sacramento County, specifically: Rio Linda, Point Pleasant, Glanville tract, Wilton and the southern portions of the County in which voluntary evacuations were called. Rescues took place in Point Pleasant assisting people from their homes to safe areas. Water damaged levees with breaks and overtopping. Additionally, several roadways were flooded. A private levee failure within San Joaquin County continues to cause flooding to New Hope Road through March 2017. Heavy soil saturation weakened the ground near trees and power poles and significant high winds caused numerous outages throughout the county, some lasting as long as 48 hours. Public utility crews spent excessive man hours responding to downed trees and limbs, and fire crews and equipment were completely tasked either on standby or response to downed power lines. Volunteer fire crews were brought in to supplement.

On January 25, 2017, the County was still actively engaged in emergency responses to levee erosion, boils, and repairs due to high water conditions caused by the weather systems and dam releases. Cosumnes River was flooded from levee failures at Twin Cities Road and roads in the area were closed on January 24, 2017. It took days before damage and debris assessments were completed.

The Emergency Operations Center and field crews were active throughout the month coordinating response to the storms and providing communication to the public about the risks and actions they should take to maintain their safety. Forty-six different agencies and departments came together for successful EOC operations.

This report evaluates some of the successes of the activation as well as opportunities for improvement, some of the key successes and improvement opportunities are:

### Key Successes

- The briefing call held each morning helped to orient staff to the day's conditions and anticipated risks and allowed for decision making and planning for that operational period. It was a key opportunity to connect with the field and share information and assist with resource requests.
- Air resources were made available by Sheriff, CHP and Metro Fire to support situational awareness in the Emergency Operations Center and to gather photographs and data for archival purposes.
- The facility was comfortable, secure and safe allowing staff to focus on their jobs and the residents of Sacramento County. Years of design changes and improvements to the facility resulted in a clean, operationally successful atmosphere.

## Key Improvement Areas

- Development of escalation protocols, standard operating procedures and policies to help in the determination and the cost benefit analysis of bringing in additional staff in a timelier manner.
- The need to educate and impress upon staff that training can become stale over time and that regularly accessing training and especially exercises benefits them in improving their understanding and performance of critical duties within the EOC.
- Confirm gauge datum and make adjustments to the Mokelumne Bensons Ferry gauge standards and protocols for evacuations at certain levels.
- A key improvement is the identification of additional personnel and establishing a training schedule. All EOC personnel should seek Cal OES Type III Position Credentialing to confirm their knowledge, skills and abilities for their assigned position.
- Development of a Job Spec or Job Analysis sheet for each EOC Position that identifies Knowledge, Skills, and Abilities so Department Managers have better tools to recommend appropriately skilled individuals for specific EOC positions and functions.
- Work with Department Managers to recruit and train individuals to EOC positions and work to ensure that they may remain in that position for a period of time (3-5 years) to reduce the knowledge decay and atrophy of personnel through constant rotations of new people.

## ACTIVATION OVERVIEW

<b>Incident Name</b>	2017 January Winter Storm	
<b>Incident Dates</b>	January 3 – January 24, 2017	
<b>Operational Area</b>	Sacramento County	
<b>OES Region</b>	Inland	
<b>Hazards</b>	Flood Winter Storm Power Outages	
<b>Activation Status</b>	January 6, 2017	Activated Level I
	January 8, 2017	Level II
	January 8, 2017	Level III
	January 14, 2017	Level II
	January 19, 2017	Level I
	January 24, 2017	Deactivated
<b>Sponsor</b>	Sacramento County Office of Emergency Services	
<b>Participating Organizations</b>	Survey results and sign in sheets are located in the <a href="#">Appendix D</a>	
<b>Point of Contact</b>	Mary Jo Flynn, MS, CEM Emergency Operations Coordinator Sacramento County Office of Emergency Services <a href="mailto:flynnm@sacoes.org">flynnm@sacoes.org</a> (916) 874-4671 office; (916) 508-5131 cell	

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## SEMS FUNCTIONS EVALUATED

SEMS Function	Total Participants	Evaluation	Corrective Action Requirements				
			Planning	Training	Personnel	Equipment	Facilities
<b>Management</b> Public Information, Safety, Liaison, Inter-agency Coordination, Security, etc.	13	S		✓			
<b>Command (Field)</b> Public Information, Safety, Liaison, Inter-agency coordination, Security, etc.	5	S	✓	✓			
<b>Operations</b> Law Enforcement, Fire/Rescue, Construction & Engineering, Medical/Health, Care & Shelter	55	S	✓	✓	✓		
<b>Planning / Intelligence</b> Situation Status & Analysis, Documentation, Advance Planning, Demobilization, etc.	2	S		✓	✓	✓	
<b>Logistics</b> Services, Support, Facilities, Personnel, Procurement, Supplies, Equipment, Food, etc.	10	S	✓	✓	✓	✓	
<b>Finance Administration</b> Purchasing, Cost Unit, Time Unit, Compensation and Claims Unit	1	S	✓	✓	✓	✓	
<b>Other Participants</b> Community Volunteers	4	S		✓	✓		
<b>Grand Total</b>	90						

**Ratings Definitions:**  
Satisfactory (S)  
Needs Improvement (NI)

## KEY CHRONOLOGICAL EVENTS

**01/06/2017 16:27:30**

Everbridge (Sacramento Alert Notification) was sent to residents alerting them to the possibility of flooding along the Cosumnes River, how to prepare, and where sandbagging supplies were available.

**01/07/2017 10:04:09**

The Department of Water Resources restocked all of the County sandbag locations and restocking was announced as ending on Saturday 1/7/17 at noon to allow the redeployment of county crews to flood response.

**01/07/2017 14:39:20**

The Red Cross opened an evacuation Center at 2:00 PM in Elk Grove, located at 9450 Elk Grove – Florin Rd.

**01/07/2017 16:57:14**

Voluntary evacuations in effect for Wilton/Cosumnes River Channel

**01/10/2017 20:16:39**

Voluntary evacuations in effect for Rio Linda, Mokelumne River and Wilton due to flooding.

**01/10/2017 11:41:25**

By noon the south canal which flows into Deer Creek will open. Since Deer Creek is already nearly full they are calling all necessary agencies to inform them of the action.

**01/11/2017 01:28:23**

Report of a levee breach at Grizy Slough north of New Hope Rd at Mokelumne River and Cosumnes River which is expected to crest and flood between 0200 – 0400 hours.

**01/11/2017 02:21:26**

Independent reports from San Joaquin and Sacramento County Sheriff Deputies identified a breach in the Mokelumne River. Reports of water flowing across New Hope Road just east of the Slough. Suggested road closures at New Hope and Kost. Deputies asked to make contact with the house if possible to advise them of the breach.



January 11, 2017 New Hope Levee Break

**01/11/2017 16:36:30**

Drinking water: 15 wells and 14 abandoned wells and one impacted regulated small drinking water system have been identified in the Point Pleasant area. Sac County EMD issued notices to these drinking water system operators that drinking water systems must be tested for possible bacterial contamination from water intrusion. PIOs have been directed to EMD's disaster response/preparation webpage for information regarding septic tank repair, food contamination as a result of a flood, well decontamination and more. PIO is creating a public safety announcement for the affected flood areas as it relates to septic tank repair and water well testing. Health Officer has been advised.

**01/11/2017 17:44:24**

Evacuation notifications lifted for Wilton, New Hope and Rio Linda.

**01/12/2017 04:00:58**

Mokelumne River is set to crest at 20' around 0400 hours. A large amount of water has flooded Lambert/Franklin and the water is rising very quickly and requesting CHP and County to put up road closed signs. Water rescue of one person from a vehicle.



January 11, 2017 Dillard and 99 FWY

**01/12/2017 04:44:00**

At 01:44 HRS and advisory was sent to residents that flooding is possible in the Point Pleasant and surrounding area due to high river stages south of Lambert road and that residents should prepare for evacuation.

**01/12/2017 08:18:43**

At 4:30 AM OES received notification of gauge levees of 20' at Benson's Ferry. Notification went out to residents at 4:44 AM in the Point Pleasant area "Flooding is possible in the Point Pleasant and the surrounding area due to high river stages south of Lambert Road. Residents should consider evacuating and moving to higher ground."

**01/12/2017 08:29:17**

Station 92, Courtland Fire was opened as a receiving center to assist with evacuees. Animal care and regulation established an animal evacuation reception center at Station 92.

**01/12/2017 09:55:21**

Animal Care and Regulation received three horses from the area for temporary housing.

**01/12/2017 13:46:44**

Environmental Management Division made contact with the Wilton Fire Chief, Cookson, to host a water distribution site for residents whose wells were impacted. Two pallets of bottled drinking water have been donated by Nestle Bottled Water Co.

**01/12/2017 18:14:05**



Lost Slough Levee and Glanville Tract: RD1002 placed a sheet of plywood over a culvert on the river side and used an excavator to backfill over the top to act as a plug. The plug slowed the flow from the river to the dry side of Glanville Tract. RD1002 will cover this installation with a steel plate 1/13/2017 in the morning. At 18:05 HRS an advisory was sent to residents that a failure of Lost Slough levee failure was possible and that resident should prepare for evacuation.

**01/13/2017**

Rescue of one person from a vehicle in the area of Twin Cities/Franklin/Bruceville

**01/13/2017**

High tide occurred in the Delta last night. EMD to investigate whether drinking water systems were impacted to high waters in the area. Will also check whether any restaurants in these areas were affected by high tides.

**01/13/2017 08:31:56**

New boil reported at Snodgrass Slough, fire crews evaluated and took protective actions.

**01/13/2017**

Cosumnes Fire is responding to Snodgrass Slough for reports of a boil that is forming. At 18:18 HRS and advisory was sent to residents that a failure of Snodgrass Slough levee was possible and that residents should prepare for evacuation.

**01/13/2017 12:04:39**

Two new sandbag locations were identified and opened supporting residents of Glanville, Walnut Grove and Hood.

**01/14/2017 07:00:00**

EOC changed activation levels from a Level 3 (SEMS)/Level 1 (NIMS) – Full Scale Activation to a Level 2 (same SEMS/NIMS) – Partial Staffing/Activated Sections.

**01/14/2017 08:50:00**

Two boils were discovered January 10. RD 341 contacted the EOC Coordinator in the evening to request crew help but none were available during the night hours. RD 341 ring sacked and installed a drain off for both boils and they are currently under control running clear water.

**01/14/2017 12:57:30**

EOC received a call from a property owner that a boil has occurred near the railroad trestle at 8741 River Rd. adjacent to Beach Stone Lake.

**01/14/2017 13:02:37**

Report of seepage in the levee along Georgiana Slough near 14810 Andrus Island Rd. on Upper Andrus Island.



**January 13, 2017 Rescue of one person**

**01/18/2017 19:44:00**

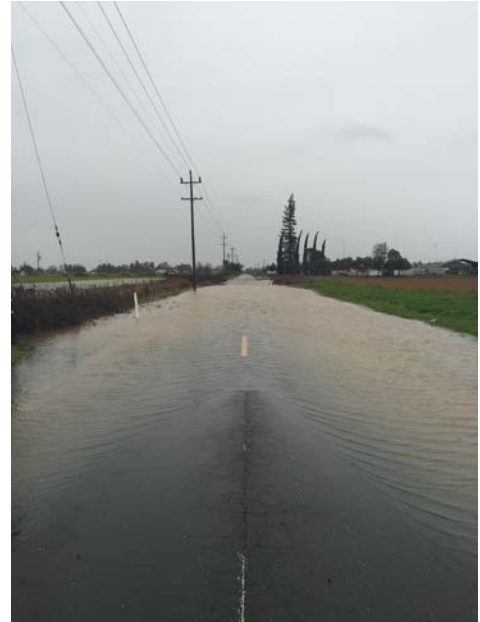
Due to high winds (peak gusts reaching 62 MPH at Sacramento International Airport) Sacramento Municipal Utilities District (SMUD) activated their emergency operations center to respond to over 500 outages and over 190,000 customers out of power. At the request of SMUD, the county activated the JIC to assist in coordinating messaging, especially to those who were dependent on power. 2-1-1 and County EMS coordinated a transportation plan for people with medical power needs to be transported to locations where they could access power.

**01/18/2017 21:53:30**

MHOA Activated. Multiple hospitals reporting power issues. At least 1 hospital on generator power hospital wide including the ED. Confirmed another, non ED hospital lost and then had power restored. Another has partial power loss and on generators for that area of the hospital. All EDs remain open at this time. In direct contact with SMUD EOC.

**01/22/2017 20:16:00**

SMUD deactivated their EOC, but expect several days of permanent repair and clean-up work. At the time of the deactivation there were 209 outages with 244 customers out; and a handful of customers that saw outages lasting longer than 48 hours.



**January 20 2017 Cherokee Lane in Herald**

**01/24/2017 14:27:00**

Confirmed flooding along Twin Cities Road and implemented road closures at that time. Still seeking the sources of the water, but are potentially due to three breaches along the Cosumnes River on levees owned by the Nature Conservancy. The water source is still being investigated.



**January 14, 2017 Two Cars Abandoned Lambert & Franklin**

## STRENGTHS

### Management Section

The initial operating periods within the EOC were at a Level 1 and escalated to a Level 2 activation. When the EOC escalated to its highest activation, Level 3, the Incident Management Team (IMT) from fire was extremely valuable as support to the Planning and Intelligence Section. They acted as added staff and assisted the Plans Section Chiefs in his duties, keeping the team on track and documenting the incident as needed. Field personnel from County DWR, Sheriff and Fire were extremely valuable in providing intel in a timely manner assisting staff with making timely decisions. Maps provided by GIS and County DWR were also very valuable.

Shortly after establishing a conference call and obtaining agreement on a process, the Joint Information Center (JIC) improved communications with the field Public Information Officers (PIO). Basic agreement included a process for rapid notification to the field for critical issues, and email notification for less critical issues. Staff worked well together within the EOC.

### Operations Section

Helicopter flights from Sheriff, CHP and Metro Fire provided quick access to visual confirmation of flooding, especially in areas of concern. The close coordination with the Law Operations Branch within the EOC provided a successful conduit of information from the field to the EOC to assist in real-time decision making regarding levee and flooding concerns.

The Sheriff department provided a photo archive solution to capture images from the field of flooded areas and closed roads. This was shared with key staff within the EOC.

### Planning Section

There was exceptional coordination between the two Planning Chiefs assigned to alternate operation periods. An early call to activate the Incident Management Team Plans Section proved to be a valuable decision, as the IMT staff that assisted in that section helped relieve burdens and helped to distribute the work load, providing some organizational context within the ICS structure.

### Other

A weather briefing call was held each morning which served as a general briefing for everyone. In order to include the Weather Service on these calls, they were scheduled for 10:00 AM.

The Department of Technology (DTech) EOC members were able to hastily arrive at a solution for archiving emails during this incident by establishing a common email address that everyone could copy so that their correspondence was captured and secure.

One of the key successes was that the EOC building was comfortable, secure and safe and provided the necessary resources for staff to complete their jobs. The AV system worked and was integral in providing real-time situational awareness via live news, river gauge and flood data displayed for everyone to see. Phones and computers worked. Overall, there was a tone of professionalism and true public

service that existed in the EOC. That tone is set by EOC management and the professional layout of the facility.

## AREAS FOR IMPROVEMENT

### Finance Section

The purchasing cards that are kept at the EOC had been expired and limited staff was available to make urgent purchases. Purchasing has since replaced and updated the purchasing cards, and during the incident created a work-around solution to allow purchasing for the incident.

### Logistics Section

EOC Logistics staff was short-handed in basic support and delivery functions. While some departments were able to utilize their own fleet, an untapped volunteer resources was available not only through MRC, but also through Hands On Sacramento.

**Improvement: Ensure that volunteer resources are discussed and deployed wherever possible to aid in some of the support and delivery needs.**

### Management Section

The JIC section ultimately became responsible for coordinating evacuation notifications to the public, in part because of access to the alert software and social media platforms to expand and explain the announcements. Early notifications were problematic in that they were not well coordinated with the field, and at least a few times caused additional burdens to first responders in the field affecting rescues and responding to media. Field PIOs were unaware of messaging out to the media and the public affecting their performance of duties. After a conference call with field and JIC Public Information Officers, agreement was made on a notification process involving critical public communications which involved text lists. Unfortunately, even this texting capability, while it did work, became burdensome as positions and people transitioned responsibilities.

**Improvement: PIOs will determine who should be on specific text message lists depending on whether the lists are approval of messaging or informing about messages.**

While initial operations went smoothly, as flooding escalated, the need for staffing increased. Through perhaps a lack of standard operating procedures or policies, the activation level was not elevated for several hours. However, once the activation level was increased, and staff was brought in to carry out assignments, the workload was better balanced and distributed.

**Improvement: Development of escalation protocols, standard operating procedures and policies to help in the determination and the cost benefit analysis of bringing in additional staff in a timelier manner.**

A contributing factor to the lack of initial escalation of EOC Activation may have been due to the novelty of the operation. Many staff had only participated in infrequent exercises and training and a significant learning curve of staff was present. While training and exercises are regularly held, individuals assigned to the EOC may have erroneously believed that training was current even if taken 5 or more years before.

**Improvement:** The need to educate and impress upon staff that training can become stale over time and that regularly accessing training and especially exercises benefits them in improving their understanding and performance of critical duties within the EOC.

## Operations Section

The Agriculture Commissioner position was lacking checklists and access to WebEOC which delayed their ability to participate within WebEOC.

Multiple departments conducted department-specific damage assessments that were uncoordinated. Some of this was the result of lack of shared information and lack of accurate mapping of flooded areas. Damage assessment teams should be considered, and a central portal for data sharing among the various departments responsible for damage assessment and recovery. Recommendations were made to incorporate use of Unmanned Aerial Vehicles (UAV)s to more accurately map flooded areas and transition that data to a damage assessment team.

Alerting messaging, specifically to Point Pleasant residents may have been delayed due to errors in gauge readings and data. In the future erring on the side of caution with the goal of providing as much time for residents, farmers and ranchers to prepare as possible.

**Improvement:** Develop standardized messaging and communicate messaging with the public. Ensure that field personnel are aware of messaging.

**Improvement:** Confirm gauge datum and make adjustments to the Mokelumne Bensons Ferry gauge standards and protocols for evacuations at certain levels.

While the Sheriff Department provided access to a photo archive solution, access was limited as were the download capabilities. When images are downloaded, they lose any attached metadata, which may be necessary for incident documentation. Additionally, some of the video and photos were difficult to see or interpret.

**Improvement:** If using the Sheriff photo archiving solution, provide training on photos, geolocation and meta-data needs. Alternatively, seek an archive solution for photos and videos.

## Planning Section

Early on in the incident map requests from various sources were going directly to GIS staff and bypassing the planning section. Significantly contributing to this issue was the fact that the plotter printer would not function appropriately. A hastily formed work-around was completed with other agencies available at the EOC facility.

**Improvement:** GIS staff must test the plotter and equipment at regular intervals. Pre-Printed maps of the county that are readily available for use should be identified.

Situation status reports were often copy and pasted from detail within WebEOC without abbreviation or summary. This was due to the fact that Planning section staff was entering all of the reports on behalf

of the sections. In the future training is needed on a proper situation status report, and training in the process flow so each section is ultimately responsible for their section's content.

**Improvement: Provide Situation Status training and expectations for all EOC staff.**

During the significant power outages on January 18, SMUD called upon the EOC to assist in coordinating a transportation plan for individuals who may have a medical need and dependence on power. Through much discussion it was determined that residents should call 2-1-1 and they would be provided with private transportation resources that could assist them. For fire or police/sheriff departments calling for an evacuation of a facility like a skilled nursing facility due to power disruption and non-functioning generators, they should request activation of the MOHAC.

**Improvement: Confirm and formalize the transportation plan and resources for people who are power dependent. Ensure all agencies are trained on the protocol for activating those resources when warranted.**

### Other

There was conflicting information from State Department of Water Resources and river projections were inaccurate either due to datum changes or interpretations of data.

General entries into WebEOC lacked specific detail like proper time and date stamps, especially when they were entered in after a series of events occurred.

An overarching theme of this incident was managing fatigue. Contributing factors to fatigue included primary EOC personnel arriving for a late afternoon shift even after starting their regular work shift earlier that morning without an opportunity for adequate rest. Additionally, the County does not yet have a deep enough bench of trained individuals who were able to rotate through positions.

**Improvement: A key improvement is the identification of additional personnel and establishing a training schedule. All EOC personnel should seek Cal OES Type III Position Credentialing to confirm their knowledge, skills and abilities for their assigned position.**

**Improvement: Development of a Job Spec or Job Analysis sheet for each EOC Position that identifies Knowledge, Skills, and Abilities so Department Managers have better tools to recommend appropriately skilled individuals for specific EOC positions and functions.**

**Improvement: Work with Department Managers to recruit and train individuals to EOC positions and work to ensure that they may remain in that position for a period of time (3-5 years) to reduce the knowledge decay and atrophy of personnel through constant rotations of new people.**

Generally, initial responding EOC staff was unsure of process flow and general position responsibilities. Some work was duplicated unnecessarily while other direction created unnecessary burdens for certain positions.

**Improvement:** Offer EOC Process Flow training through WebEOC and also a paper-based process flow to ensure all EOC staff is aware of the proper procedure for moving information and resources through the EOC.

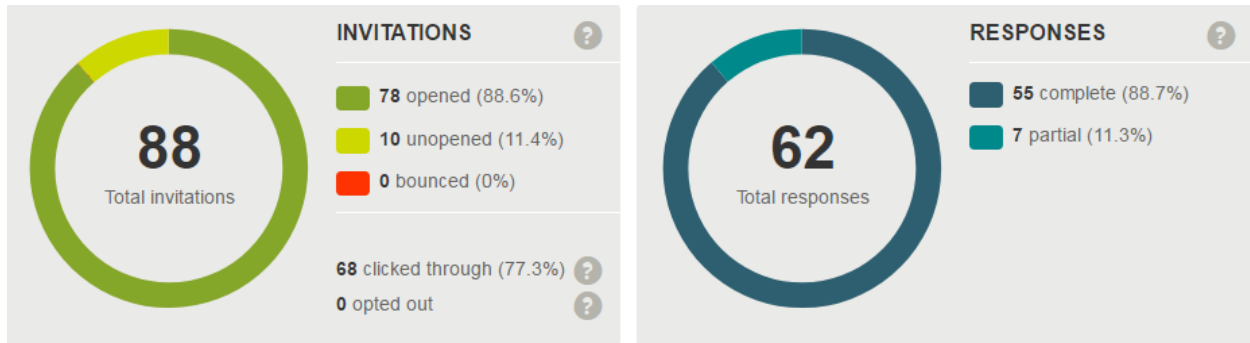
While DTech was able to arrive at a hastily developed solution for capturing and archiving emails, correspondence was likely missed due to the nature of people needing to manually add in the email address. In the future, EOC positions should have their own unique log-on to the computer terminal complete with a position-assigned email address so that all incident data is captured throughout the system.

**Improvement:** Create position specific log-on credentials and emails; ensure these along with the passwords and instructions are provided in the position binders.

## AFTER ACTION WRITTEN SURVEY

All activated staff were asked to participate in a written survey of their experience (N=88). Complete response rate was 88.7% (N = 55) and partial response rate was 11.3% (N = 7). The invitations to complete the survey were as follows:

- January 26, 2017: Sent invitations to 85 contacts
- January 31, 2017: Sent reminder to 65 contacts
- January 31, 2017: Sent invitation to 3 new contacts
- February 1, 2017: Sent reminder message to 6 contacts to finish their survey
- February 2, 2017: Sent reminder to 40 contacts



### Question 1

What type of organization do you work for?

Organization	Percent	N
Sacramento County Employee	79.03	49
Other local government	8.06	5
State government	4.84	3
Non-governmental organization	1.61	1
Other	6.45	4

### Question 2

Who notified you of your need to respond?

Category	Percent	N
Supervisor	46.77	29
SacOES	33.87	21
Self-Deploy	8.06	5
Mutual Aid	8.06	5
Phone Call	3.23	2

### Question 3, 4, 5 and 6

What were the timeframes from notification to deployment and finally, demobilization?

Those who arrived at the EOC on the first day of notification arrived within an average 1 hour 40 minutes. Others responded for the following operational period shift with an average of 17 hours 8 minutes from time of notification. For those who were delayed, the primary reason was that they were scheduled for a future operational period shift. On average those who participated in the EOC response worked 15 days, 14 hours and 13 minutes.



**Question 7**

What positions were filled?

Section	Percent	N
Operations	36.21	21
Logistics	29.31	17
Planning	12.07	7
Management	12.07	7
Finance	5.17	3
Mutual Aid	1.72	1
Uncategorized	3.45	2

**Questions 8 – 10**

What were the strengths and improvement opportunities that were experienced during the EOC Activation? This analysis is provided in the above [Strengths](#) and [Improvements](#) sections.

**Question 11**

Was your position and role in the response clear (duties, reporting structure, etc.)? Move the slider from 0 to 100 to adjust your response, where 0 meant completely unclear, a 100 meant very clear.

The average response was 72% (N = 58)

**Question 12**

Are you a Sacramento County Employee?

Yes responses 81.03% (N = 47); No responses 18.97% (N = 11)

Agencies represented included: Folsom fire and the SRIMT, OES Amateur Radio Services (OARS), CalOES, ARES, Cosumnes Fire Department, SMUD, Sacramento Metro Fire District, Hands On Sacramento, and 2-1-1 Sacramento.

**Question 13 and 14**

Sacramento County Staff Only: While you were activated, overall what percentage of your day-to-day duties were you able to continue performing? Move the slider from 0 to 100 to adjust your response, where 0 meant unable to complete any day-to-day activities, and 100 meant all day-to-day activities were satisfactorily completed.

The average response was 32% (N = 45).

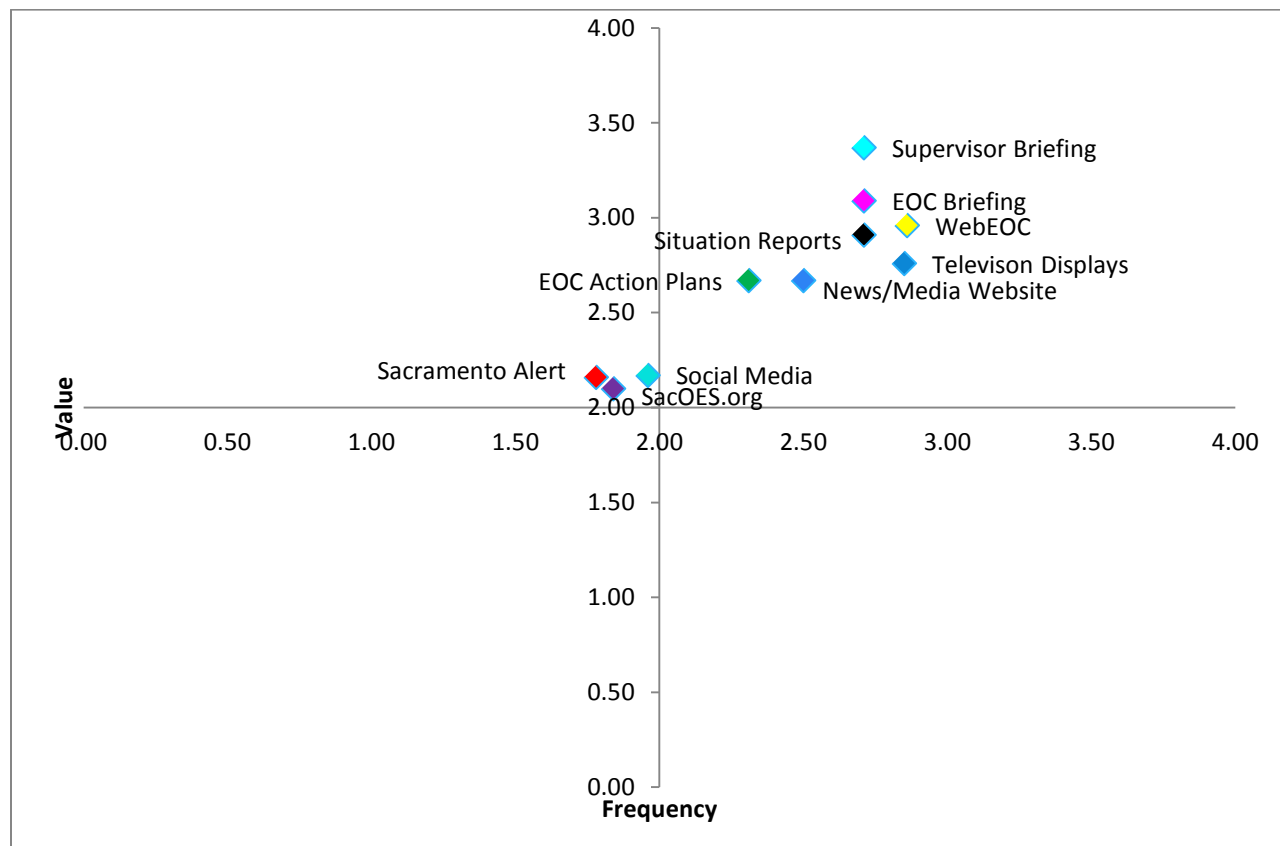
The most common reason for not being able to perform day-to-day work involved scheduling. Scheduling included working evening EOC shifts needing daytime hours to sleep, as well as missing previously scheduled meetings because EOC work took precedence. Furthermore, accessing and utilizing technology proved to be a challenge as well. Some respondents could not access their regular work or PC; others needed secure access that could not be completed off-site from their regular work location. A final reason for not being able to complete day-to-day activities included either a conflict with their EOC or daily role, or a lack of understanding how their daily role could be integrated into EOC operations. Others who were successful in maintaining day-to-day work also were able to make arrangements for a back-up in the office to take over critical daily work assignments.

Section	Percent	N
Critical Needs – Priorities at the EOC were higher	28.57	14
Scheduling – Either due to the nature of shift scheduling, or long hours	20.41	10
Technology Challenges – Could not connect to office desktop remotely	18.37	9
Uncategorized	16.33	8
EOC Role – there was confusion over EOC role vs. daily responsibilities or departments were unable to provide appropriate coverage for staff assigned to the EOC	10.20	5
Work transition to back-up – other department members picked up additional workload for the EOC assigned person	6.12	3

**Question 15**

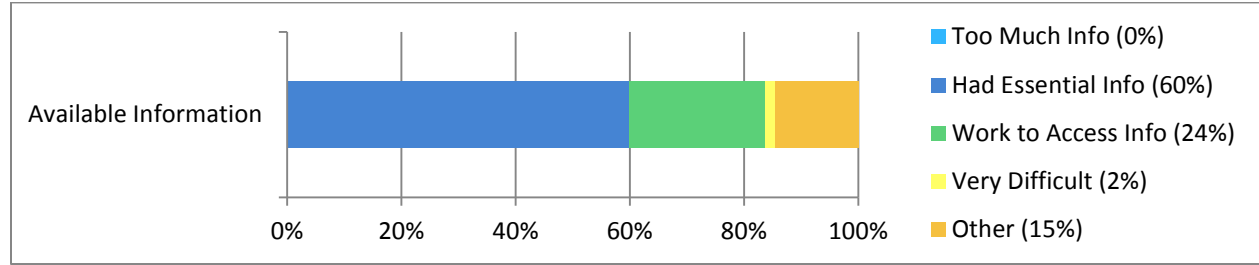
How often did you receive information about the situation and the response activities from these sources and what was the value of each source?

Respondents rated the value and frequency on a 4-point scale with 4 being the highest value or frequency, and 1 being the lowest. The upper right quadrant indicates a High Value and High Frequency, whereas the lower left quadrant indicates a Low Value and Low Frequency. The chart below shows that Supervisor Briefings provided the most value for information exchange, followed by EOC briefings. However, WebEOC entries and Television Displays were utilized more frequently. The least value was found to be SacOES.org, likely because that site was not advertised within the EOC as a resources and had a public facing information focus. Social Media and Sacramento Alert were also accessed the least and had lower value. This assessment may have been due to the fact that certain positions monitored those two communication tools and access was restricted throughout the EOC.



**Question 16**

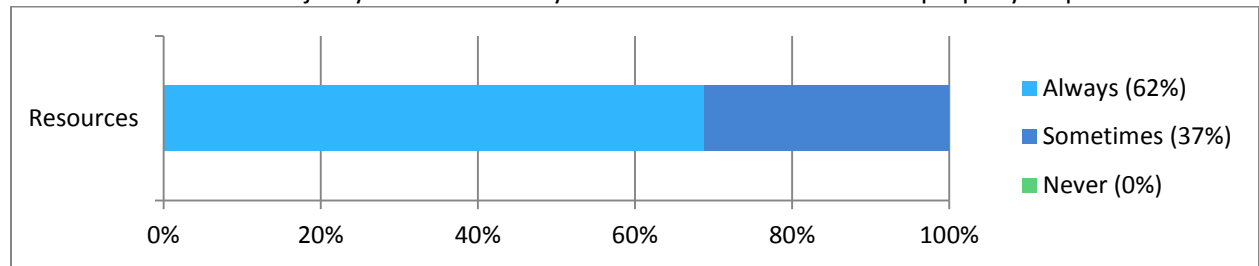
Did you feel that you had enough information about the situation and response activities to do your job?



**Question 17**

Did you have the resources necessary to respond?

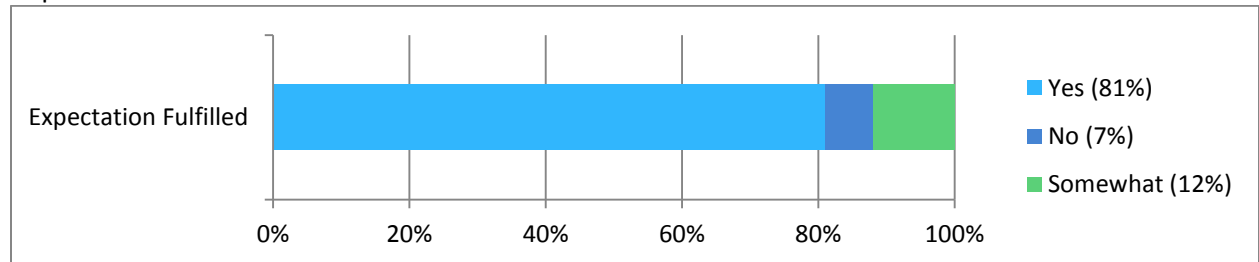
Staff indicated that a majority of the time they had the resources needed to properly respond.



**Question 18**

If you requested resources, was the request fulfilled to your expectation?

A high majority had their requests fulfilled. For those that did not, the primary reason for not meeting expectations was a delay in the resource processing. For example, during the January storms, GIS had multiple map requests from disparate sections, often asking for the same thing. During the February storm, a single point ordering process was implemented, and the time for maps to be generated rapidly improved.



**Questions 19 – 22**

Questions asked about lessons learned and recommendations for improvement items. This is addressed in the [Improvement Plan Matrix, Appendix A](#).

**Question 23**

Respondents were asked to identify staff that provided exceptional service during the incident. This summary is provided as an attachment in [Appendix C](#).

## APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for Sacramento County as a result of the 2017 January Winter Storms. All corrective actions are entered into WebEOC for tracking over time.

Corrective Action Area	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Equipment	Incident Photography	Identify a solution the public can use to easily submit photos of disaster damages they are witnessing. Look into photo archiving solutions to easily access photos along with metadata.				
Equipment	Organizational Chart	Provide an erasable large poster or dry erase board where incoming personnel can add their name to the organizational chart.				
Equipment	Photo archiving	If using the Sheriff photo archiving solution, provide training on photography, geolocation and meta-data needs. Alternatively, seek an archive solution for photos and videos.				
Equipment	Plotters and GIS Equipment	Create a testing schedule for GIS equipment to ensure functionality				
Equipment	Positions	Create position specific log-on credentials and emails; ensure these along with the passwords and instructions are provided in the position binder.				
Equipment	SacOES.org Website	Website needs to be updated with new templates and organization to make it easier to keep disaster information up-to-date.				
Equipment	Stream Gauge	Confirm gauge datum and make adjustments to the Mokelumne Bensons Ferry gauge standards and protocols for evacuations at certain levels.				
Equipment	UAS – UAV	Procure an Unmanned Aerial Vehicle and develop a program for Unmanned Aerial Systems for flood and disaster surveillance.				
Equipment	WebEOC Scheduler Board	Create a template schedule for each operational period within WebEOC. Provide training to Planning Section on utilization of scheduler.				

Corrective Action Area	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Other	Contract Development	Throughout the county, as contracts are developed, require the standard language from FEMA and CalOES				
Other	Purchasing Lists	Develop a list of caterers in the area and create agreements for purchase orders and pricing.				
Personnel	Contact Lists	Ensure that all personnel contact data is entered into WebEOC and Everbridge. Critical and JIC staff should be added to message groups so they receive the same messages as the public.				
Personnel	KSA and Job Sheets	Develop Knowledge, Skills, and Abilities (KSA) documents and Job Sheets for each EOC position as a recruitment tool to match personnel skillsets with the EOC positions available.				
Personnel	Operations Section Chief	Identify a staff member and provide access to training				
Personnel	Planning Section Staff	Identify and train additional staff members to fill Planning Section roles.				
Personnel	Staffing	Work with Department Managers to recruit and train individuals to EOC positions and work to ensure that they may remain in that position for a period of time (3-5 years) to reduce the knowledge decay and atrophy of personnel through constant rotations of new people.				
Personnel	Support Staff	Identify additional individuals who can serve support staff roles within the EOC				
Personnel	Volunteers	Ensure that volunteer resources are discussed and deployed wherever possible to aid in some of the support and delivery needs.				
Planning	Activations	Development of escalation protocols, standard operating procedures and policies to help in the determination and the cost benefit analysis of bringing in additional staff in a timelier manner.				
Planning	Checklists	Develop position binders and provide checklists. This should include an organizational chart and EOC phone numbers.				

Corrective Action Area	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Planning	JIC	PIOs will determine who should be on specific text message lists depending on whether the lists are approval of messaging or informing about messages.				
Planning	JIC Plan	Develop procedures for notifying JIC personnel as well as technology to communicate and coordinate information				
Planning	Messaging	Develop standardized messaging and communicate messaging with the public. Ensure that field personnel are aware of messaging.				
Planning	Transportation	Confirm and formalize the transportation plan and resources for people who are power dependent. Ensure all agencies are trained on the protocol for activating those resources when warranted.				
Training	Credentialing	A key improvement is the identification of additional personnel and establishing a training schedule. All EOC personnel should seek CalOES Type III Position Credentialing to confirm their knowledge, skills and abilities for their assigned position.				
Training	EOC Action Planning	Provide a training class on EOC Action Planning				
Training	EOC Planning	Provide training on a standardized schedule that incorporates introductions and regular briefings into the Cycle				
Training	EOC Training	Regular provision of basic EOC training and exercises.				
Training	Logistics Training	Additional training requested on Logistics				
Training	OES ARES	Provide training and process for Radio Operators to pass communications on to EOC Personnel				
Training	Procedures	Provide training on Standard Operating Procedures				

Corrective Action Area	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Training	Process Flow	Offer EOC Process Flow training through WebEOC and also a paper-based process flow to ensure all EOC staff is aware of the proper procedure for moving information and resources through the EOC.				
Training	Purchasing	Train purchasing staff to identify the vendors and update contracts to add emergency purchases. Create template language for future contracts and events.				
Training	Sit-Stat	Provide Situation Status training and expectations for all EOC staff.				
Training	WebEOC Quick Reference Guide	Update the quick reference guides and just-in-time videos for each section				

## APPENDIX D: PARTICIPATING ORGANIZATIONS

- 2-1-1 Sacramento
- Cal Fire
- Cal OES
- California Conservation Corps
- California Department of Water Resources
- CHP (air assets)
- City of Folsom Fire
- Cosumnes Community Services District
- Cosumnes Fire District
- Incident Management Team
- National Weather Service, Sacramento Office
- OARS/Radio Volunteers
- Rancho Murieta Association
- Reclamation District 1000
- Reclamation District 1002
- Reclamation District 1601
- Reclamation District 2110
- Reclamation District 2111
- Reclamation District 3
- Reclamation District 341
- Reclamation District 349
- Reclamation District 551
- Reclamation District 554
- Reclamation District 556
- Reclamation District 563
- Reclamation District 755
- Reclamation District 800
- Reclamation District 83
- Regional Parks
- Sacramento County Animal Care
- Sacramento County Department of Agriculture
- Sacramento County Department of Environmental Management
- Sacramento County Department of Facilities Maintenance and Operations
- Sacramento County Department of Finance and Purchasing
- Sacramento County Department of Health and Human Services
- Sacramento County Department of Human Assistance
- Sacramento County Department of Technology
- Sacramento County Department of Transportation
- Sacramento County Department of Waste Management and Recycling
- Sacramento County Department of Water Resources
- Sacramento County EOC
- Sacramento Metro Fire (including air assets)
- Sacramento Municipal Utility District (SMUD)
- Sacramento Sheriff (including air assets)
- Wilton Fire Department



## APPENDIX E: 2016 TRAINING

The following classes were available in 2016 offered by Sacramento County OES

Training Class	Date	Registered	Attended	No Show	Attendance Rate	% of Sac County Employees
Basic Public Information Officer JIC/JIS (G290/291)	11/7/2016 8:00	28	24	4	86%	17%
Disaster Cost Recovery: Work Process Flow	4/12/2016 8:00	43	38	5	88%	53%
Disaster Purchasing	4/11/2016 8:00	41	33	8	80%	55%
Emergency Operations Center Management and Operations (G775) and EOC Interface (G191) June 2016	6/13/2016 8:00	18	13	5	72%	38%
EOC Exercise: Bakken Oil	3/30/2016 8:00	129	112	17	87%	
Essential Emergency Management Concepts	1/25/2016 8:00	72	50	22	69%	42%
Everbridge Administrator Training	7/11/2016 8:30	10	9	1	90%	56%
Financial Aspects of Debris Management	4/12/2016 13:00	29	21	8	72%	43%
L967 All-Hazards Logistics	5/2/2016 8:00	21	19	2	90%	32%
Situation Assessment Common Operating Picture (SA/COP)	6/6/2016 8:00	54	40	14	74%	45%
Virtual Tabletop Exercise (VTTX) Agriculture	6/23/2016 8:30	11	9	2	82%	78%
Virtual Tabletop Exercise (VTTX) Bakken	5/12/2016 8:30	0	cancelled			
Virtual Tabletop Exercise (VTTX) Flood	3/22/2016 8:30	16	9	7	56%	67%
Virtual Tabletop Exercise (VTTX) Tornado	2/25/2016 8:30	8	8	0	100%	50%
Virtual Tabletop Exercise (VTTX): Chlorine Spill	7/14/2016 8:30	5	5	0	100%	60%
Virtual Tabletop Exercise (VTTX): CISM	9/15/2016 8:30	1	cancelled			
Virtual Tabletop Exercise (VTTX): MCI	8/25/2016 8:30	30	22	8	73%	45%
Virtual Tabletop Exercise (VTTX): Power Outage	12/1/2016 9:00	2	cancelled			
Virtual Tabletop Exercise (VTTX): Winter Storm	11/9/2016 9:00	26	20	6	77%	60%
WebEOC User Training	3/8/2016 9:00	57	42	15	74%	69%
Workshop: Joint Information System/Center (JIS/JIC)	1/14/2016 9:00	41	27	14	66%	