

Cal COP Disaster Management Model for EOCs

This document is built on lessons learned during preparations for and response to Hurricane Harvey in Houston, as well as the North Bay Fires in the San Francisco Bay Area. It is intended to outline preparations that can be made in California Common Operating Picture for Threat Awareness (Cal COP), to facilitate ideal usage in an Emergency Operations Center (EOC) setting in the days before, during, and after a large-scale disaster (if warning is feasible). This model contains a three-pronged approach, comprised of determining needs, performing technical setup, and providing training. There is a companion document to this Model, “Quick Reference for Use of Cal COP During Disasters,” intended to provide guidance in using Cal COP during a natural disaster.

I. Determining Needs

Stakeholders should work together to determine what information would be useful for responders and other personnel in an Emergency Operations Center activation to see in Cal Cop before, during, and after a natural disaster. This information includes live data feeds, map layers, field reports, and critical infrastructure and special event information.

a. Static Data

Static data is data put into the system that changes infrequently, such as information on important facilities or events. Three types of data are below:

- i. Critical infrastructure: data on critical sites, including hazardous materials, points of contact, and floor plans
- ii. Emergency support facilities: public gathering places, shelters, points of distribution. These facilities can be added in advance, or added during the disaster as needed.
- iii. Event data: provides information on any public gatherings scheduled during the disaster

b. Live Data Feeds

Data feeds connected to Cal COP can be viewed in Maps for a geographical view of where incidents of concern are occurring. They can also be viewed in Data Streams, filtered and prioritized by keywords. Types of live data found to be particularly useful during a large-scale disaster include the following.

- i. Law Enforcement Calls for Service: provide information about traffic hazards, looting, and crimes that may impact resource allocation
- ii. Fire Calls for Service: provide information about fires, downed power lines, ruptured utility lines, and rescues that may impact other operations
- iii. Emergency Medical Service Calls: provide information about medical emergencies
- iv. Local and national news feeds: provide current information and latest developments from in and around the region

c. Maps

Any GIS dataset can be added as a layer. Types of map layers found to be particularly useful during a large-scale disaster include the following.

- i. Weather maps: GIS layers from national or local agencies, showing local weather patterns that may impact response activities
- ii. Road closures: traffic and road conditions maps help guide personnel activities in the field
- iii. Water Sensor Data: rain, high-water, and flood sensors provide detailed, up-to-date information about the threat landscape
- iv. Utility lines: utility maps can show where critical lines run in relation to the disaster impacts
- v. Hazard zones: maps of natural hazard impact zones, such as flood zones, fault lines, or liquefaction zones, can provide valuable insights during a disaster
- vi. Camera locations: maps showing camera layers can let users quickly understand where to go for a live video of the situation
- vii. Population needs: population density maps or maps of populations with access and functional needs provide critical information for responders during a disaster

d. Field Reports

Personnel in the field can submit reports via Mobile Haystax to provide valuable information to the EOC. Different groups can use different configurations of the application to provide various types of information. Three uses for the application that may be particularly valuable during a large-scale disaster are below.

- i. Damage reports: provides immediate, geo-located information from the field to inform EOC about levels of damage, including pictures
- ii. Incident reports: allows field personnel to submit immediate, geo-located pictures and information on activities in the field not captured through other channels
- iii. Status reports: allows responders and field personnel to share their statuses and locations

II. Technical Setup

Once data needs have been determined and data added to the system, there are three steps that should be considered in advance of a large-scale disaster.

a. Provide Access

Accounts should be regularly updated to include any new personnel, deactivate former personnel, and ensure all users have access to the right types of information. Users should be encouraged to login regularly to avoid accounts becoming inactive.

Additionally, it is advisable to set up a general EOC account that can be used to display the system on a large EOC screen. This will enable individual users to still access the site through their own accounts on other devices, instead of tying up their account on the display.

b. Configure devices

Cal COP is accessed online through a web browser (Chrome is suggested) and via Mobile Haystax.

- i. Web access: all equipment should be kept up to date to ensure ease of access. The Cal COP web address should be bookmarked on any computers that will be used during a large-scale disaster. The “Quick Reference for Use of Cal COP During Disasters” should be kept near each workstation that may be used for Cal COP during the incident.
- ii. Map view: a default map view relevant to the disaster should be saved by all users.
- iii. Mobile devices: devices should have the Mobile Haystax application loaded with the correct configuration installed. A “Mobile Haystax Quick Start Guide” is available to facilitate this. Further, devices should be connected to the App Store or Play Store in case an update of the app is needed.

c. Configure phased channels

Lessons learned during Hurricane Harvey indicate that different types of data may be useful during different phases of the disaster. Thus, the recommendation is to have channels dedicated to specific phases of the disaster. Below are recommendations for what types of data may be useful during each phase.

- i. Pre-disaster phase channel: This channel will be of use in the run-up to a disaster for which there is advanced notice (hurricanes, tornado watches, storms, etc). Types of data that may be of use while mitigation measures are being taken are below.
 1. Calls for service filtered to show traffic hazards
 2. Calls for service filtered to show second alarm fires
 3. Field incident reports
 4. Local news
 5. Any other significant issues
- ii. During disaster channel:
 1. Calls for service filtered to show looting and in-progress crimes
 2. Calls for service filtered to show traffic hazards
 3. Calls for service filtered to show downed power lines
 4. Calls for service filtered to show ruptured gas lines
 5. Calls for service filtered to show rescue calls
 6. Calls for service filtered to show high water reports
 7. Calls for service filtered to show trapped persons
 8. Calls for service filtered to show fires
- iii. Immediate recovery phase channel: immediate event over; EOC still up
 1. Calls for service filtered to show traffic hazards
 2. Calls for service filtered to show looting and in-progress crimes
 3. Calls for service filtered to show significant fires
 4. Field Reports damage assessments showing levels of damage and types of facilities

III. Training

The final critical component to facilitate ease of use of Cal COP during a disaster is training. The valuable information in Cal COP is not fully realized unless people know how to access it, or how to enter it in the case of field reporting. There are two times when training can be provided specifically for Cal COP usage during disasters: before high hazard seasons start (tornado, hurricane, fire season) and just-in-time training.

a. Before hazard season training

Training prior to the high hazard season should be provided to all personnel involved in EOC activities. Targeted trainings focused on use of the Maps and Data Streams can be completed within an hour or two. Web-based sessions can help maximize the number of personnel able to attend each session. Additionally, specialized training should be given to Cal COP administrators, ensuring that they are able to both train other users and create accounts.

b. Just-in-time training

In the EOC, expected Cal COP users often get assigned to other roles, shifts change, new personnel come in, and new users need to be added to Cal COP and trained. All users with administrator access should be well-versed enough to provide quick Map and Data Streams training to personnel needing to become users and be able to create new accounts.

- I. Quick reference guides: these guides provide abbreviated instructions on how to use the system. The “Quick Reference for Use of Cal COP during Disasters” should be printed in advance and kept on hand at all workstations that will be accessing Cal COP. The “Mobile Haystax Quick Start Guide” should be kept on hand and made available to any new users.