

Responders Organized for Pass Emergencies (ROPE)

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ROPE Goal

- **The ROPE Field Operations Guide (FOG) and Standard Operating Guidelines (SOG) were developed to assist first responders in**
 - preparing for,
 - responding to,
 - recovering from, and
 - mitigating
- **a significant or catastrophic incident within the Cajon Pass area of San Bernardino County.**

Development

- **The first ROPE Plan was developed in the 1990's by the Office of Emergency Services in response to fires and transportation accidents that closed the Cajon Pass for several days at a time.**
- **In 2012, the need for a new and comprehensive ROPE Plan was recognized by the Office of Emergency Services. This started a three year effort to produce a comprehensive and usable plan.**

Stakeholders

- **Cajon Pass stakeholders include USFS, BLM; State agencies (CalFire, CalTrans, CHP, DWR, DFG), San Bernardino County Fire Department, Sheriff's Department, Public Works, Flood Control, County Museum, public utilities including Southern California Edison and the City of Los Angeles Department of Water and Power, Burlington Northern Santa Fe and Union Pacific Railroads; Kinder-Morgan Pipelines, The Gas Company; etc. In total there were 28 agencies involved in the development of the ROPE FOG/SOG.**
- **All stakeholders were part of the ROPE Committee. Subject matter experts were drawn from the stakeholders where possible.**

Purpose of ROPE:

1. Provide common communications plan

2. Provide locations for:

- **Incident Command Post**
- **Staging Areas**
- **Helispots**
- **Helibase**
- **Camps**
- **Fire Stations**
- **Fuel locations**
- **Water sources**
- **Evacuation Centers**
- **Arial Hazards**
- **School Sites**
- **Parks**
- **Pipelines**
- **Electrical Transmission Lines**
- **Railroads**
- **Critical Routes**

USE

- **First responders with primary responsibility for the Cajon Pass have ROPE FOGs in their response vehicles**
- **A Cache of FOGS is available for distribution for any first responders assigned to an incident from out of the area**
- **An electronic version is also available to first responders**
- **The first edition of ROPE FOGs was limited to 200 copies**

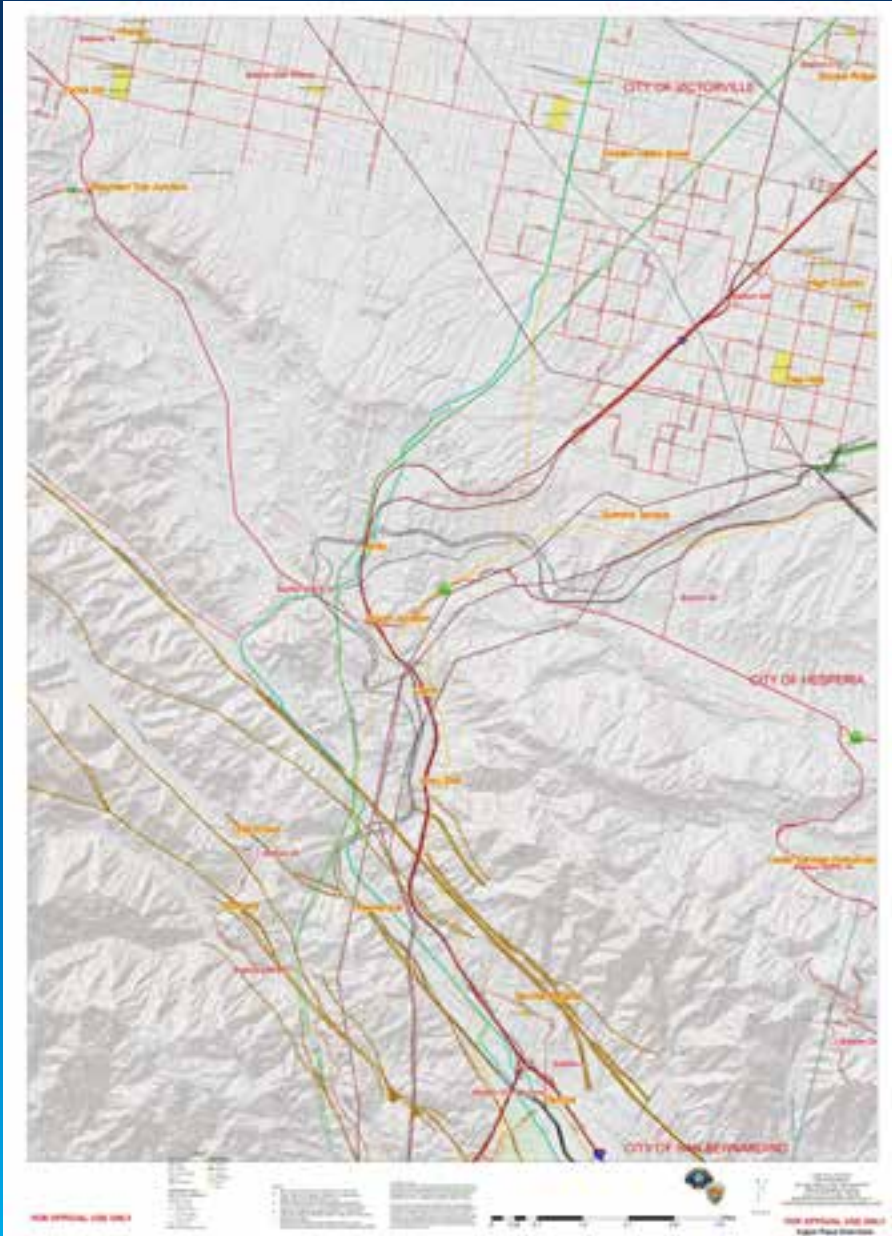
Required Analysis

- In order to develop the ROPE FOG, a thorough analysis of the Cajon Pass was needed
- Analysis was conducted on three areas of information:
 1. Geographic Setting
 2. Hazard/Risks
 3. Infrastructure
- Additional analysis was conducted on:
 - Responders Recovery Needs
 - Responders Communications Interoperability

Geographic Setting

- **The Cajon Pass is a mountain pass between the San Bernardino and San Gabriel Mountains, created by movements of the San Jacinto Section of the San Andreas Fault.**
- **The pass rises 2,200' from 2,000' to 4,200 at Cajon Summit in about 13 ¼ miles**
- **The area is covered with chaparral brush with a few intermittent streams**
- **Access is severely limited**

Geographic Area

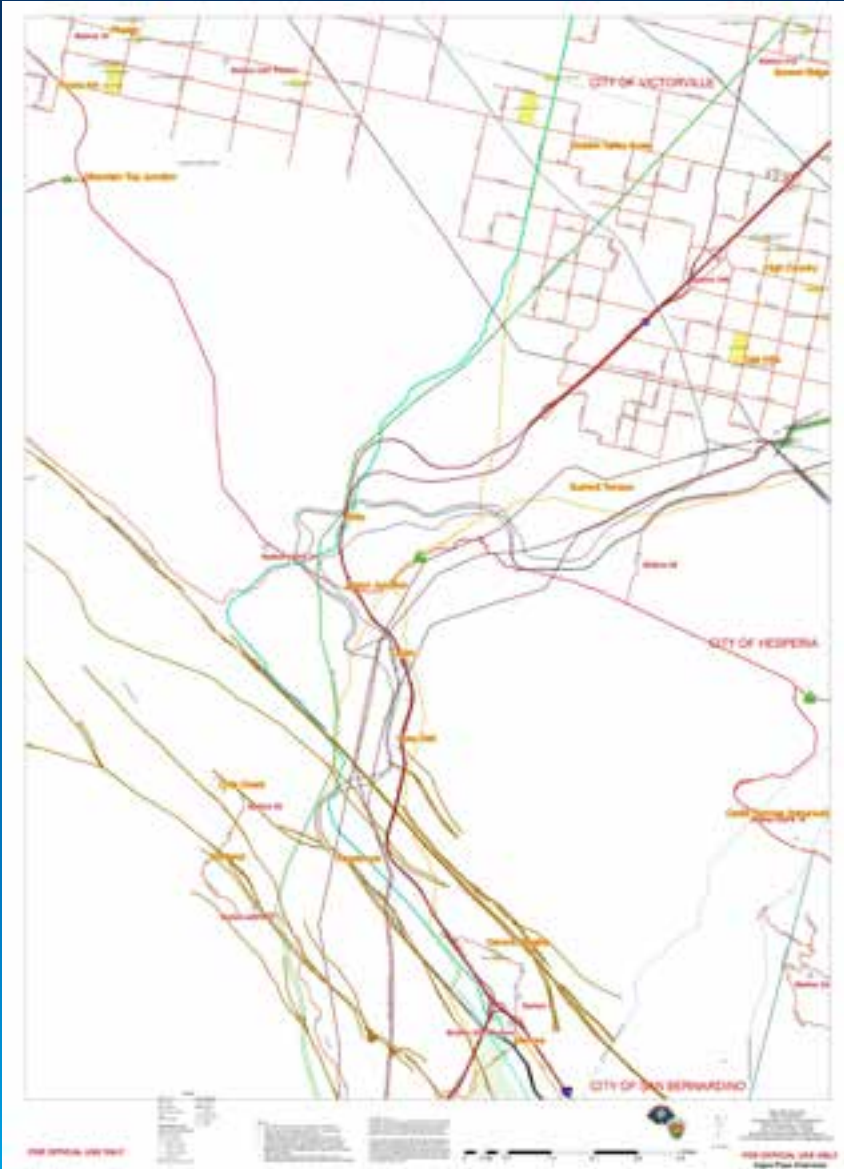


Critical Infrastructure

Cajon Pass

- **Critical Transportation Route from s. California to the rest of the United States**
 - **Highways**
 - **Railroads**
 - **Electrical Transmission Lines**
 - **Refined Petroleum Pipelines**
 - **Natural Gas pipelines**
 - **Communications Infrastructure**

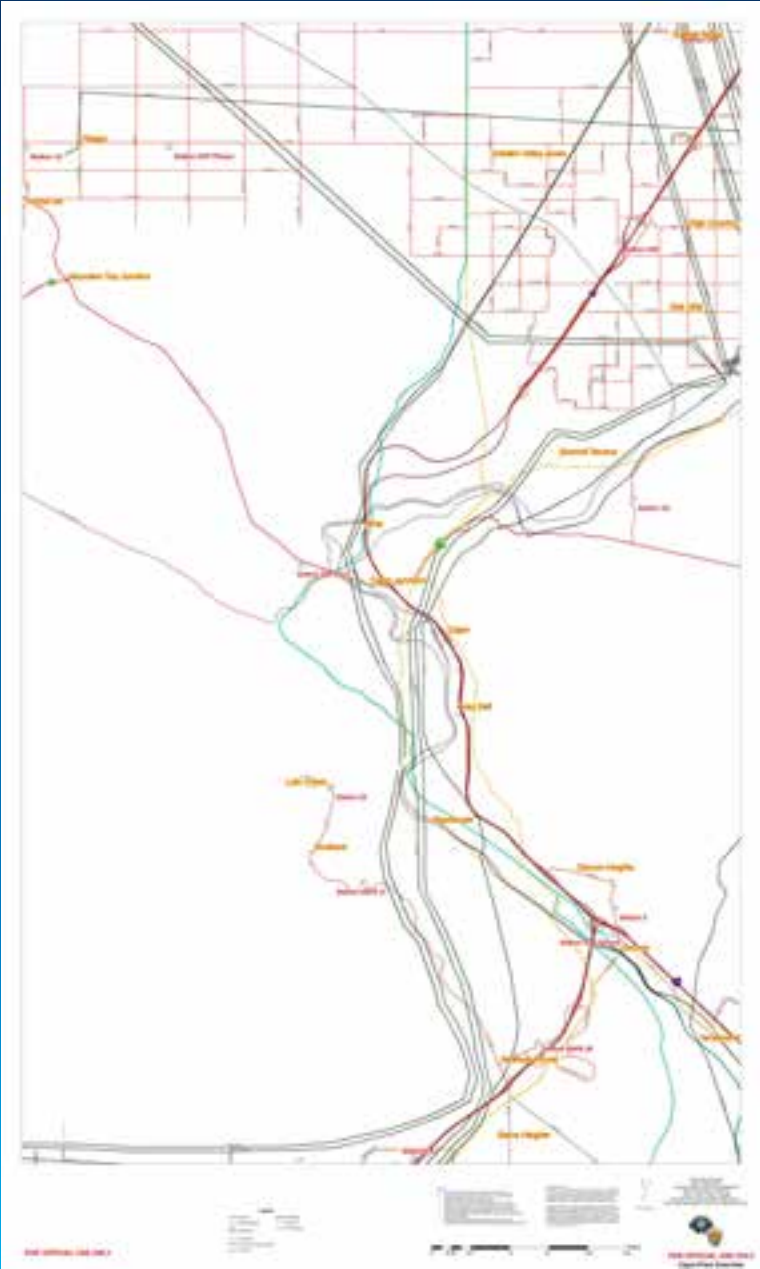
Critical Infrastructure



HAZARDS

- **Natural Hazards**
 - **Earthquake**
 - **Fire**
 - **Flood**
 - **Wind**
- **Manmade Hazards**
 - **Railroad Accidents**
 - **Highway Accidents**
 - **Powerline Accidents**
 - **Pipeline Accidents**

Manmade Hazards



Natural Hazards



Spatial Analysis

- **Spatial Analysis was conducted on three types of information:**
 - **Geographic Area**
 - **Hazards/Threats**
 - **Critical Infrastructure**
- **Stakeholders personal knowledge of the Cajon Pass made the collection of data and spatial analysis easier**
 - **Where personal knowledge was weak, Subject Matter Experts (SME's) were consulted**
- **Recognition of lack of expertise in a particular area and the use of SME's made for accurate analysis.**

Spatial Analysis Experts

- **Spatial analysis was conducted by the GIS Specialist at the Office of Emergency Services and selected stakeholders**
- **Subject Matter Experts were used wherever possible to assist and validate data analysis for the Cajon Pass**
- **The SME's were drawn from the ROPE Committee created to develop a comprehensive Field Operations Guide (FOG) and Standard Operating Guidelines (SOG) for first responders to the Cajon Pass after an earthquake or other significant or catastrophic incident that impacts the Pass.**

Geographic Spatial Analysis

- Analysis of the geography of Cajon Pass was done by review of maps for hazards:
- Natural
 - Waterways
 - Faults
 - Terrain - Landslides
 - Vegetation
- Manmade
 - Earth Cuts/Fills
 - Infrastructure Location
- All analysis was confirmed by field confirmation and ROPE Committee review.

Hazard/Threat Analysis

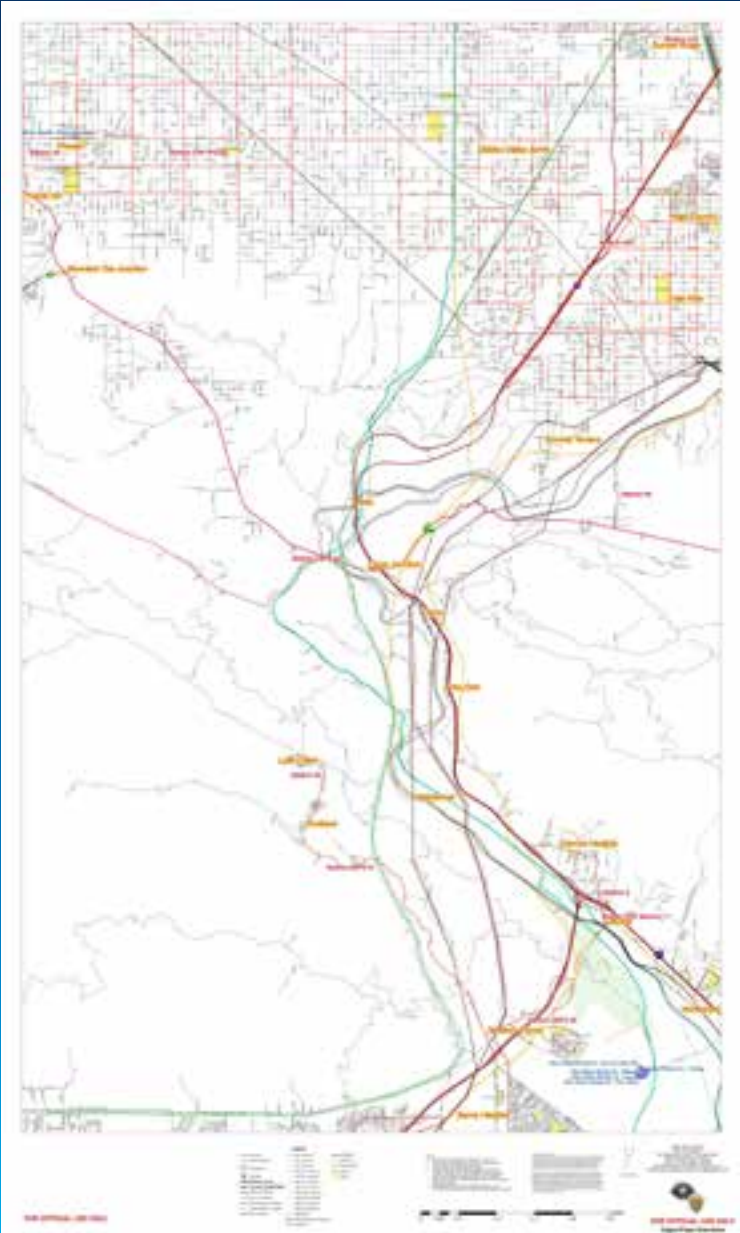
- **Analysis of the Hazards/Threats was conducted:**
 - **Earthquake Faults/Known earthquakes**
 - **Historic**
 - **Prehistoric**
 - **Flooding and flood channels**
 - **Weather Records**
 - **Flood Channels**
 - **Fires**
 - **Fire Records**
 - **Personal Fire Suppression Knowledge of ROPE members**

Locations were plotted on maps

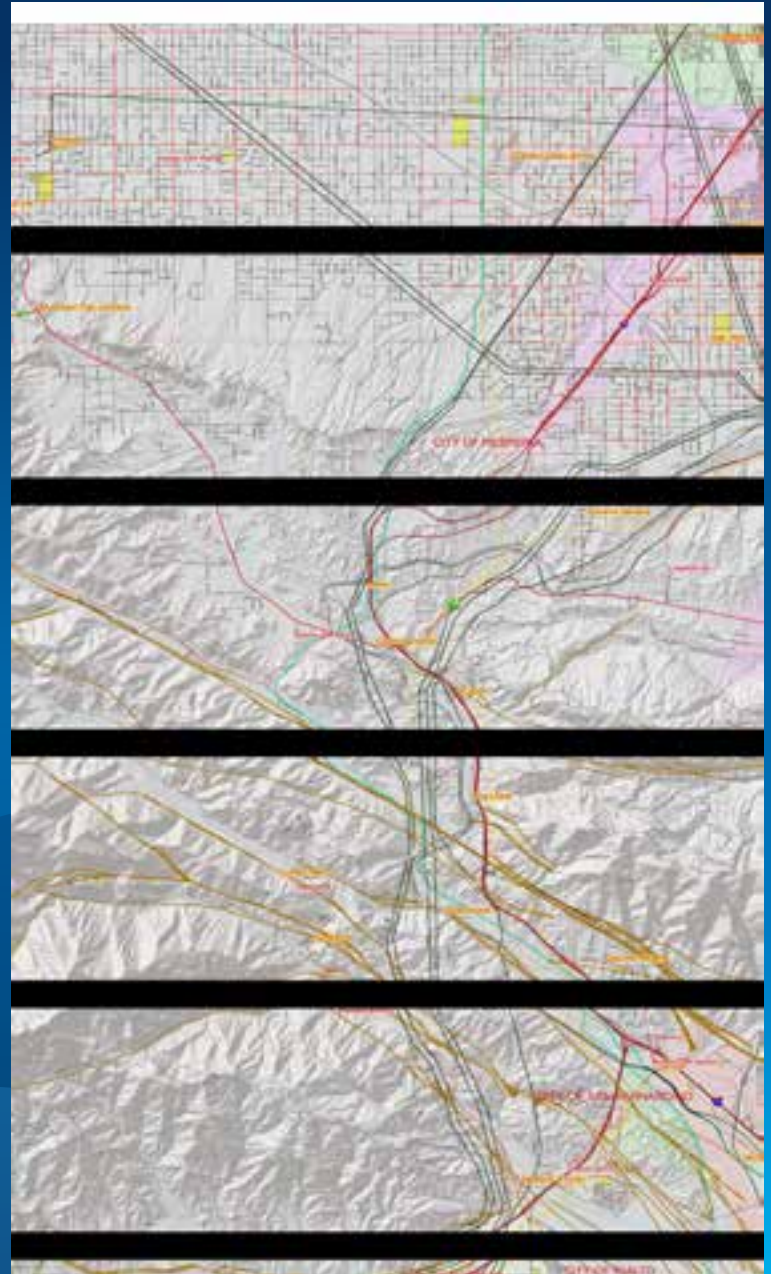
Analysis of Critical Infrastructure was completed on:

- **Roadways**
 - Freeways
 - State Highways
 - Critical Routes
 - Priority Routes
- **Railroads**
 - BNSF
 - UP
- **Pipelines**
 - Natural Gas
 - Refined Petroleum Products
- **Water Sources**
 - Wells
 - Reservoirs
 - Ponds/lakes
- **Electrical Distribution Systems**
- **Commercial Business Sites**
 - Fuel
 - Lodging
 - Dangerous Locations
 - Hazmat
 - Exotic Animals

Critical Infrastructure



Combined Spatial Analysis Results



Analysis Conclusions

- **Time Closure Lasts**
 - Fire Closure – Hours to Days
 - Transportation Accident – Hours to Days
 - Earthquake – Weeks to Months
- **Effect:**
 - Up to 20,000 people stranded in Cajon Pass
 - Electrical Supply Disrupted
 - Gas Supply Disrupted
 - Freight Distribution Interrupted
 - Communications Interrupted
- **Economic Costs**

Spatial Analysis Hints

- **Obtain the best data possible**
- **Verify all data**
 - **Some data was not properly located**
 - **Agencies are in the process of correcting data**
- **Field review of analysis to validate conclusions**
- **Confirm locations of all Incident specific pre-planned sites at least annually.**
- **Any similar development requires a cooperative effort by all stakeholders.**

Display of Spatial Analysis Results

SAN BERNARDINO COUNTY FIRE DEPARTMENT OFFICE OF EMERGENCY SERVICES

RESPONDERS ORGANIZED FOR PASS EMERGENCIES (ROPE) FIELD OPERATIONS GUIDE (FOG) 2014



CONFIDENTIAL - FOR OFFICIAL USE ONLY (FOUO)

ROPE FOG

Scope - Contents

Westbound I210 at Roxford St.
February 9, 1971
“E ticket” ride!



ROPE FOG Scope

- Interoperable communications planning guidance
- Communications Plan template
- Pre-identified communications capabilities
- Detailed maps of the Cajon Pass (21 maps total)
 - 4 Branches, each with 4 Divisions
- Each Division Map has an Information Sheet
- Information sheet contains:
 - Existing Infrastructure/Scene Safety
 - Available Water Supply
 - Communications Issues
 - Local Response
 - Agencies/Facilities
 - Access Routes
 - Potential Staging/ICP/LZ/Fuel Locations

Cajon Pass Branch Map



Detailed Information Sheet

BRANCH 3 - DIVISION Y

Existing Infrastructure/Scene Safety

- > **High Voltage Power Lines:**
 - Southern California Edison (SCE)
 - Threat to aircraft
 - Roads serving the power transmission lines may have washouts after inclement weather
- > **Natural Gas Pipelines:**
 - Southern California Gas Company
- > **Petroleum Products Pipelines:**
 - Calneuro/Exxon/Morgan T and 14'
- > **Railroads:**
 - Burlington Northern/Santa Fe (BN&SF) Railway
 - Union Pacific Railroad
- > **Highway Traffic:**
 - History - Various Hazardous Materials
- > **Flood Control Facilities:**
 - Cajon Creek - Channel
 - Cajon Creek - Levee
 - Devil Overlook - Channel
 - Lytle Creek - Levee
- > **San Mateo Sheriff Rehabilitation Center: 18000 Institution Rd., San Bernardino-Subject to washout/flooding**
- > **Potential Weather Impacts:**
 - High Winds
 - Localized Flooding
 - Snow Chains may be required
- > **2010 Census Tract Data Approximate # Residences/Population:**
 - Residences = 803
 - Population = 3,775
- > **Major communications cable routes in the area parallel to I-15**

Available Water Supply

- > **Local water resources/wells:**
 - City of Rialto - Contact # (909) 820-2000, Devore Water Company - Contact # (909) 799-1840, Fontana Water Company - Contact # (909) 420-2144, and Inland Valley Water District - Contact # (909) 412-2000
 - Regional Parks Water System: Park Lakes (Shafter)
- > **County Special Districts: Community Service Area (CSA) 70 -Zone J - Contact # (760) 955-9955**

Local Response Agencies/Facilities

- > **Fire Agencies:**
 - CAL FIRE:
 - Devore Fire Station - 14300 Cajon Blvd., Devore
 - City of Rialto Fire:
 - Fire Station #004 - 3255 N. Alder, Rialto
 - San Bernardino County Fire Protection District
 - Fire Station #2 - 1511 Devore Rd., Devore
 - US Forest Service
- > **Law Enforcement Agencies:**
 - Burlington Northern Santa Fe Railway Police, California Highway Patrol, San Bernardino County Sheriff, San Bernardino City Unified School District Police, and Union Pacific Railroad Police
- > **Flood Control Agencies:**
 - San Bernardino County Flood Control District
 - City of San Bernardino
- > **Road Maintenance Agencies:**
 - Caltrans (State Highways/Interstates)
 - City of Rialto Public Works
 - City of San Bernardino Public Works
 - San Bernardino County Department of Public Works
 - San Bernardino County Special Districts

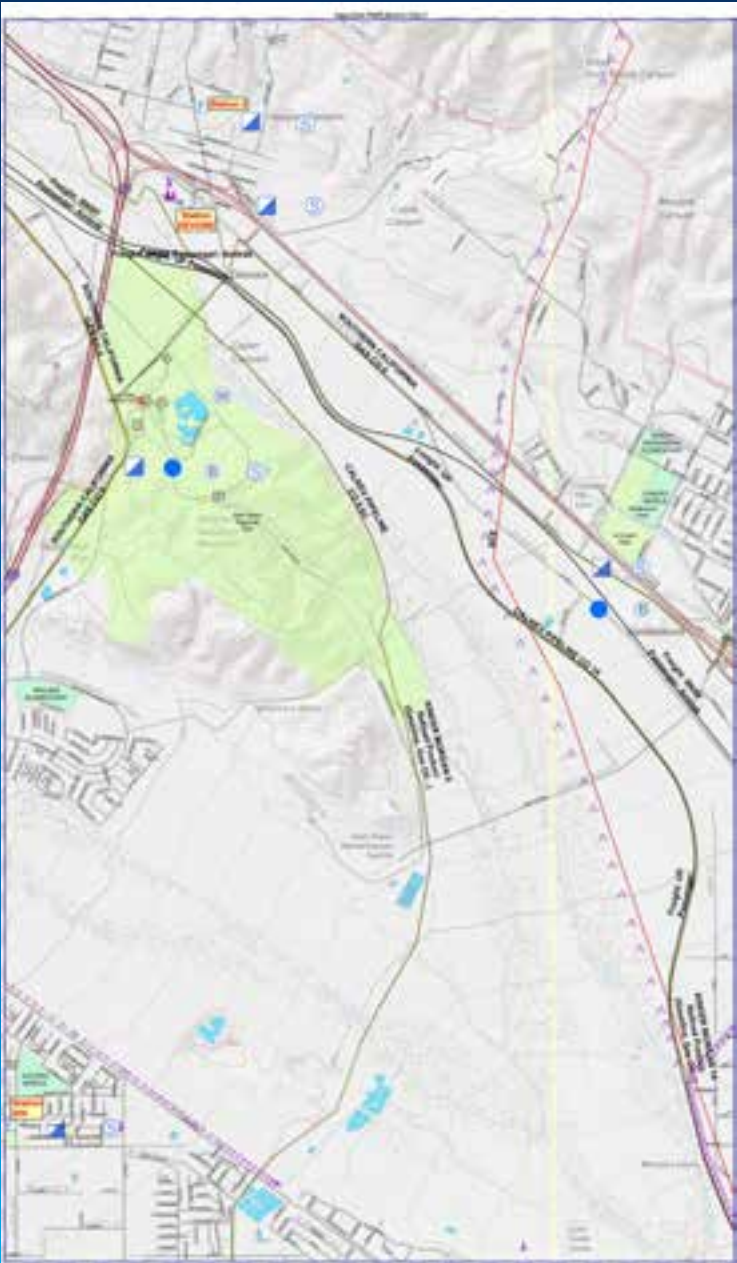
Potential Staging/CSPLZ Sites and Fuel Locations

- > **Staging/CSPLZ:**
 - Cesar E. Chavez Middle School - 6550 Magnolia Ave., San Bernardino
 - Glen Helen Regional Park - 2955 Glen Helen Pkwy., San Bernardino
 - North I-15 Quail area @ I-15 and I-215 Interchange
 - Fontaine Elementary School - 11870 Sycamore Creek Loop Pkwy., San Bernardino
 - Western Regional Little League Ball Park - 6727 N. Little League Dr., San Bernardino
- > **Fuel Locations:**
 - Sheriff EVOC Training Center - 18058 Institution Rd., San Bernardino

Access Routes

- > **I-15 North/South:**
 - Glen Helen Parkway and Institution Rd.
 - Route 60/Cajon Blvd.
 - Berns Ave./Riverside Dr.
- > **215 North/South:**
 - Little League Dr. (215 Overpass) and Palm Ave./Kendall Ave.

Division Map



ADDITIONAL ICS FORMS INCLUDED

- **Additional ICS Forms include:**
 - **ICS 201 – Resource Summary**
 - **ICS 202 – Incident Objectives**
 - **ICS – Organization Assignment List**
 - **ICS 205 – Incident Radio Communications Plan**
 - **ICS 207 – Incident Organization Chart**
- **Having forms available allows for rapid implementation of the Incident Command System**

FORMAT

- **ROPE FOG:**

- **Tabloid size (11" x 17") in landscape orientation**
- **Color Ink**
- **Double sided printing**
- **Laminated**
 - **Can be written on with markers or grease pencil**
- **Wire bound on the top (long) side**

- **NOTE:**

- **Maps and Information Pages are portrait orientation due to the geographic footprint of the Cajon Pass**

- **Cost:**

- **Each ROPE FOG is about \$40.**

Tabletop/ Field Exercise

September 24, 2013



Recognition

- **National Association of Counties**
 - **Achievement Award**
 - **June,2014**
- **Model Plan**
 - **Other jurisdictions now following our footsteps in developing similar plans**

Questions?

Contact Information:

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