

California Water/Wastewater Agency Response Network

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MUTUAL AID AND ASSISTANCE IN THE WATER SECTOR

A PRESENTATION FOR THE:
SUMMER 2020 MEETING: REGION 9 TRIBAL CAUCUS

AUGUST 13, 2020



Critical Infrastructure Web



Goal of All WARN's

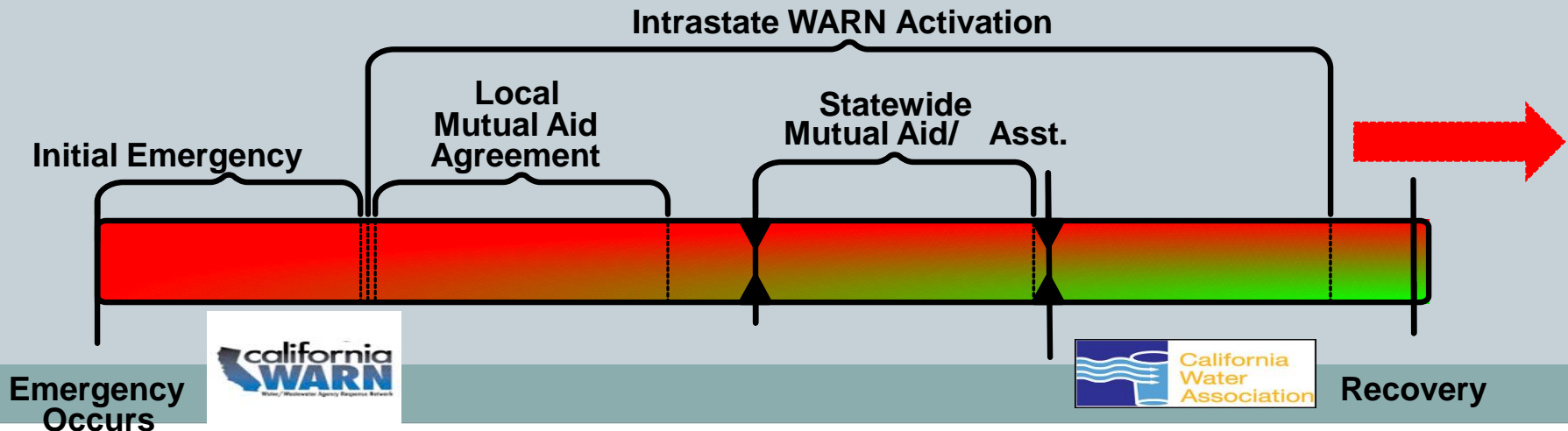
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FORMALIZES EXISTING CAPABILITIES TO PROVIDE MUTUAL AID AND ASSISTANCE TO ENHANCE THE WATER AND WASTEWATER SECTOR RESILIENCY AGAINST NATURAL AND HUMAN-MADE DISASTER TO ENSURE CONTINUITY OF SERVICE TO OUR SECTORS CUSTOMERS.

Why Sign?

4

- Loss of water and wastewater services:
 - Severely impairs the ability of the community to return to normal
 - Impacts public health and safety
 - Restoration is essential for fire suppression and medical services
- CalWARN Reduces the response “gap”



What does the agreement do?

5

- **Expedites response to disasters with local resources by**
 - Providing access and ability to share specialized resources
 - Includes personnel and equipment
 - Applies to both Public and Private utilities
 - Can be used for large service impacts
 - ✦ No requirement for a Disaster Declaration
- **Deployed resources**
 - Remain under the authority of the sending utility
 - Can be recalled at any time by sending utility
- **Indemnification and worker compensation to protect participating utilities**
- **Voluntary response - there is no obligation to respond.**
- **Coordination with other agreements/programs**
 - The agreement does not supersede existing systems
 - Compliments existing state and local emergency management programs
 - Works within State and National Programs
- **Interstate aid is facilitated by the nationally adopted Emergency Management Assistance Compact (EMAC) in alignment with the National Response Framework.**

Management of CalWARN

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- **Utility-based volunteer organization**
 - Formalized by a Mutual Aid and Assistance Agreement
 - ✦ Signed Agreements are held by the Municipal Water District of Orange County as the formal documentation
 - ✦ 403 Signatories in CA
 - ✦ Estimate that more than 85% of water population is covered
 - Mobilization is governed by an Operational Plan
- **CalWARN State Steering Committee**
 - Broken into 6 regions (CA Mutual Aid Regions)
 - Two Chairs for each region
 - Voted on by Region every 2 years
 - Meet monthly
- **Host meetings & trainings @ AWWA CA-NV Conferences**

CalWARN State Steering Committee

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- State President
 - Past President
- Southern Region I
 - Chair 1
 - Chair 2
- Coastal Region II Chair
 - Chair 1
 - Chair 2
- Northern Region III Chair
 - Chair 1
 - Chair 2
- Inland Region IV Chair
 - Chair 1
 - Chair 2
- Valley Region Chair V
 - Chair 1
 - Chair 2
- Southern Region VI
 - Chair 1
 - Chair 2

California Regions



Resources for Water/Wastewater Utilities

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www.calwarn.org

- Agreement & Contact Form
- Signatory List
 - Contact info
 - Limited resource info
- Operational plan
- Tools and resources
 - Response Considerations Checklist
- State Steering Committee contact list

www.nationalwarn.org

- National WARN Info
 - WARN FAQ Sheet
 - The WARN Initiative - The Big Picture
- National Success stories
 - Economic Benefits of Forming & Participating in WARN
- Operations plan/Job aids
 - WARN Tabletop Exercise Facilitator Guide
 - AWWA Resource Typing Manual
 - AWWA Resource Typing Manual Cost Development Spreadsheet
- USEPA Resources
 - USEPA EMAC Tip Sheet for Water Sector (PDF)
 - USEPA Water Sector Mutual Aid & Assistance Fact Sheet (PDF)
 - USEPA Small Water Systems & WARN (PDF)
 - USEPA Tribal Water Systems & WARN (PDF)



Utilizing WARN for Response

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Activating WARN



- **Who Activates CalWARN**
 - YOU
 - Cal OES
 - County Operational Areas
- **What is activated**
 - Water Sector Specific Position
 - CalWARN Chair-1/Chair-2 for impacted region
- **When**
 - Small Incidents
 - Catastrophic Incidents
- **Why**
 - Coordination of information & resources
 - First responder coordination
 - Coordination of needed resources
- **How**
 - Call any CalWARN Chair



CalWARN Coordination

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- **Small Events**
 - Utility to Utility
- **Large events**
 - Coordinated by Water Sector Specific Position @ County/Operational Area EOC
 - CalWARN Region Chair-1/Chair-2 assists
 - Works within the CA Emergency Response Structure (ICS/NIMS)

What resources are shared with WARN?

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- **Qualified Personnel and Equipment (Portable)**
 - Operations
 - Maintenance
 - Treatment
 - Management
 - Customer Service
 - Laboratory
- **Only ONE Limitation**
 - Commodity



What resources are shared with WARN?

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- 2008 Resource Typing Manual Developed
- 2019 Updated Resource Typing Update
 - Integration with FEMA Typing
- Relation to AWIA:
 - “plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water.”

CalWARN Response Coordination Goals

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- Liaison for all impacted water and wastewater utilities within the affected area
- Coordination of all types of water infrastructure
 - Potable water, wastewater, recycled water, dams, and levees
 - Works with CalOES Regional EOC and County/OA EOC
- Guiding Principle
 - No longer represents their own utility
 - Utilizes Standard Operating Procedures and Forms
 - Recommends priorities and considerations for response

Expansion and Success

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Expanding WARN

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- **A couple successes**
 - Florida experienced 4 hurricanes in 2004
 - Responded into Mississippi after Katrina landfall 8/2005
 - It worked!
- **Associations met Nov 2005**
 - Lessons learned from Katrina
 - How mutual aid had been successful
 - How to facilitate mutual aid
- **Common Understanding**
 - Support the effort
 - Move forward together
 - Mutual aid is key

WARN Went National & International

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- In 49 States
- International
 - Australia – In Process
 - Canada - Implemented
 - Mexico – In Process



Utilities Helping Utilities

Joint Policy Statement on Mutual Aid & Assistance Networks

The water sector is committed to a “Utilities Helping Utilities” concept and is taking steps to encourage utilities and local/state governments to establish intrastate mutual aid and assistance networks. The purpose of these networks is to provide a method whereby water/wastewater utilities that have sustained damages from natural or manmade events could obtain emergency assistance in the form of personnel, equipment, materials, and other associated services as necessary, from other water/wastewater utilities. The objective is to provide rapid, short-term deployment of emergency services to restore the critical operations of the affected water/wastewater utility.

A pre-established agreement among a network of utilities can complement and enhance local capabilities to prepare for and respond to a broad range of threats, both natural and man-made. The establishment of such intrastate mutual aid and assistance networks is a core principle of the National Preparedness Goal developed by the Department of Homeland Security.

Formalizing the existing capability to provide mutual aid and assistance provides the water/wastewater sector with a degree of resiliency against natural or manmade disaster to ensure continuity of service to our sector’s customers.

It is essential that all partners in the water and wastewater community work together to support this concept. We encourage our members to discuss this concept with peers and take the steps necessary to establish an intrastate mutual aid and assistance network.

Mutual Aid Joint Policy Statement
February 15, 2006

Successful Support

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- Utility Owner/Operators
- Professional Association Representation
 - (AWWA, NRWA, WEF, sanitation association, etc.)
- State Water and Wastewater Primacy Agency
 - (State health, environmental protection, etc.)
- State Emergency Management and/or Homeland Security Agency
 - (State EMAC coordinator)
- US EPA Region Representation

Provides Enhanced Partnerships

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- **Cal EMA**
 - Regional and State Cooperation
 - Representation at Northern and Southern
 - Continued Coordination
- **County/Operational Area**
 - Coordination with Cities, Fire Agencies, and Law Enforcement
 - Recognized need for representation



Recognition

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- **International Association of Emergency Managers**
 - Partners in Preparedness Award, 2006
- **National Emergency Management Association (NEMA)**
 - Recognized WARN as a best practice
 - Emergency Management Assistance Compact (EMAC)
 - WARN occupies seat on Advisory Council
 - International Association of Fire Chiefs and Police Chiefs Association are implementing a “WARN” model
- **Federal Emergency Management Agency**
 - NIMS Integration Center maintains copy of WARN agreement
 - Recognized WARN as model public private integration agreement

National Successful Uses of WARN

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- COWARN
 - City of Alamosa Salmonella outbreak, 2008
- FlaWARN
 - Hurricanes Katrina, Wilma and Rita, 2005
 - Tornadoes, 2007
- ORWARN
 - Detroit Blizzard 2008
- TNWARN, INWARN, KYWARN, AKWARN
 - Ice Storm February 2009
- TXWARN
 - Rain Storms and Hurricane Humberto, 2007
 - Hurricane Dolly and Ike, 2008
 - Drought 2014, Flood 2015
 - Hurricane Harvey, 2017

This list includes only the major documented cases of WARN activation

CalWARN - Getting Things Done

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- **History of Activations/Updates**
 - 1994-Northridge Earthquake
 - 1998-El Nino Storms
 - 2001-Sonora Fires
 - 2007-Southern California Fires, 2007-Emergency Potable Water Plan Developed
 - 2010-El Mayor Earthquake
 - 2014-Napa Earthquake
 - 2014-Emergency Potable Water Plan Updated
 - 2015-Valley Fire
 - 2016-WSSP Update
 - 2017-Northern and Southern California Fires
 - 2018-Northern and Southern California Fires
 - 2019-PSPS
 - 2020-COVID-19, PSPS, EQ???

San Diego Fires – October 2007

23

Firefighter Jason Falarski battles to save a house in Poway on Monday. For many in San Diego County, the scene was reminiscent of the deadly 2003 Cedar fire. Several hundred thousand people evacuated their homes as wildfires flared across the county, but the size of the exodus made escape impossible for some. (Wally Skaliy / Los Angeles Times)
October 22, 2007



Water System Impacts

24

- **Boil Water**
 - 27 water systems in San Diego County
 - 2,522 connections
- **Do Not Use**
 - Ramona Water District
 - Evacuation order included “turn on sprinklers” request
 - No pump power – negative pressure - ground Water intrusion concerns
 - Conflict between State and County Health directions
- **Alternate Uses**
 - Helo pickup at prime water sources
 - Potable water distribution sites

Water Response

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- **San Diego County Water Authority (SDCWA)**
 - Wholesale distributor to 24 utilities
 - Sits at the County Emergency Operations Center during emergencies
 - San Diego based local mutual assistance program
- **Mutual Aid requests managed by SDCWA**
- **Response from the San Diego utilities**
 - E-mail request sent out to county members
 - 20 minutes later 105 resources gathered from 16 unaffected utilities
 - Sufficient resources among the SDCWA member utilities to manage the event

Resource Needs

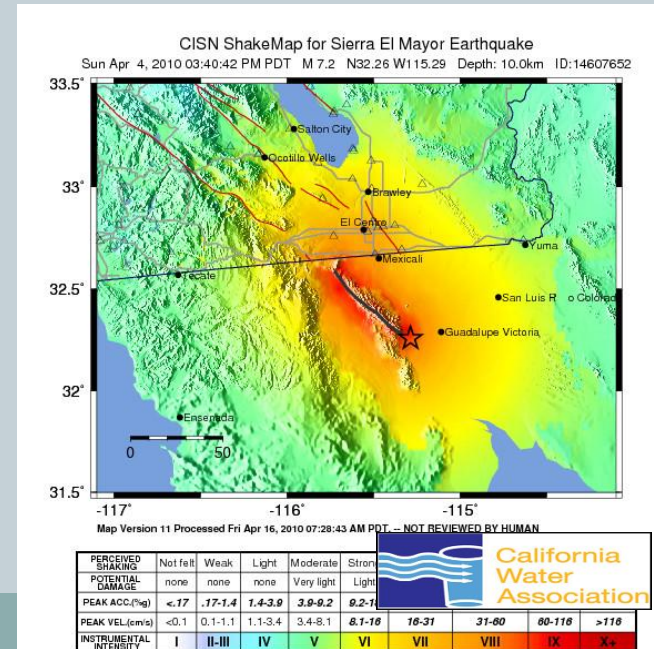
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- Resources provided
 - Staff
 - ✦ Operators
 - ✦ Mechanics
 - ✦ Electricians
 - ✦ Water Quality Techs
 - Water buffaloes for firefighting and cattle
- Bottled water distribution
 - County managed
 - Local distribution points established with the utility input
 - State Office of Emergency Services Guidance
 - ✦ <https://www.caloes.ca.gov/ICESite/Documents/Emergency%20Drinking%20H2O.pdf>

Easter Sunday Baja Earthquake

27

- 7.2 magnitude earthquake
- 90 miles south of border
- Damage along rivers that feed the Salton Sea
- Impact on six water/wastewater utilities, most significant:
 - Imperial Irrigation District
 - City of Calexico



CalWARN Support

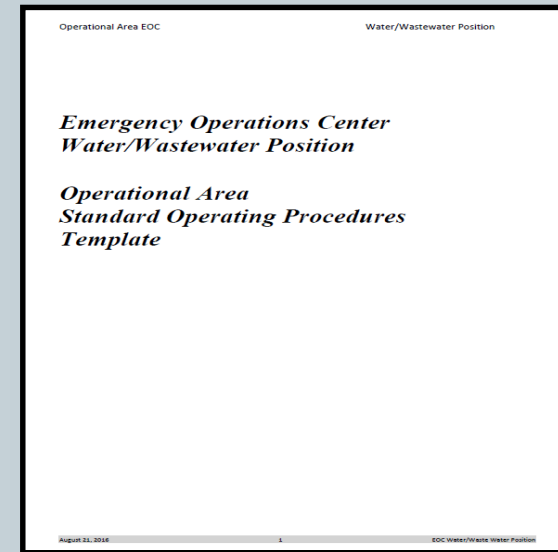
28

- **Staffed Water Desk**
 - Imperial County Operational Area EOC
 - California EMA Southern Region EOC
- **Technical expert**
 - Verified damages
 - Coordinated resources
 - Started alternate water supply planning
- **Mutual Aid /Resources Coordinated**
 - Tank diving team and rover
 - Documentation support
 - Portable treatment systems

WSSP – The Concept

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- Emergency Management Success for Water Issues Relies on
 - Representation at State
 - Representation at Region
 - Representation at County (Op Area)
- Liaison for all impacted water and wastewater utilities within the affected area
- Communicate and Coordinate all types of water infrastructure
 - Potable water, wastewater, recycled water, dams, and levees
- Guiding Principle
 - No longer represents their own utility
 - Standard Operating Guidance
 - Recommended priorities for response



Utilities Helping Utilities

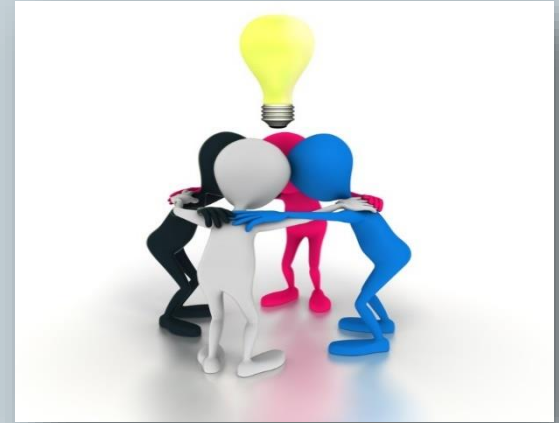


WSSP – The Concept

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WSSP The Genesis

- Golden Guardian Exercise 2008
 - Identified need
 - Encouraged by Cal OES
- Working Group
 - Water sector and emergency management representatives
 - 3 hours of brainstorming = 20+ work items
- Primary Objectives
 - Partnerships
 - Utility Operation Concepts
 - Utility Operation Details
 - Training and Exercises
 - Miscellaneous Concerns



WSSSP – The Development



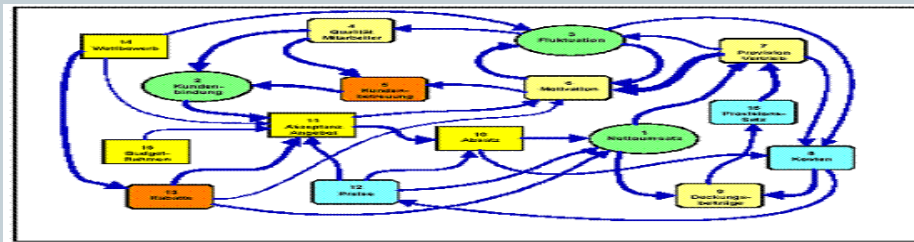
- **2009 – Stakeholders Meeting**
 - Lessons Learned
 - Brain Storm
 - Joint Water Task Force Meets Monthly
- **Develop Standard Operating Procedures**
 - 2009-2010 REOC Completed
 - 2010-2011 Op Area Completed
 - 2011-2013 Op Area to Utility Level (Santa Clara County)
 - 2016 Update All Documentation



WSSSP - The Process

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- Collect and verify situational awareness
- Monitor, track, and coordinate resource needs
- Assess and recommend alternate drinking water resources
- Recommend priorities in concert with the water utilities, local government or Counties
- Coordinate and resolve issues arising from events
- Coordinate with State agencies as needed

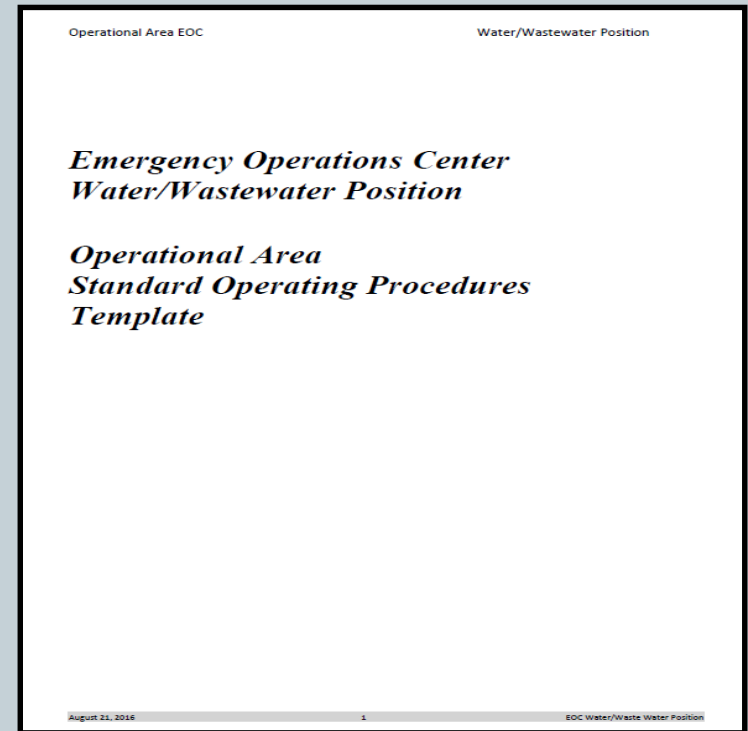


Utilities Helping Utilities

WSSP - The Implementation

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- Set up to self sustaining
 - User/Practitioner Training
 - Train the Trainer
 - Table Top Exercise



Utilities Helping Utilities



What You Need to Know

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- Process
 - Water Sector SOP
 - Checklists
- Tools
 - Appendices
 - Attachments

Operational Area EOC	Water/Wastewater Position
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August 21, 2014 2 EOC Water/Waste Water Position

Utilities Helping Utilities



CalWARN/CWA in Action

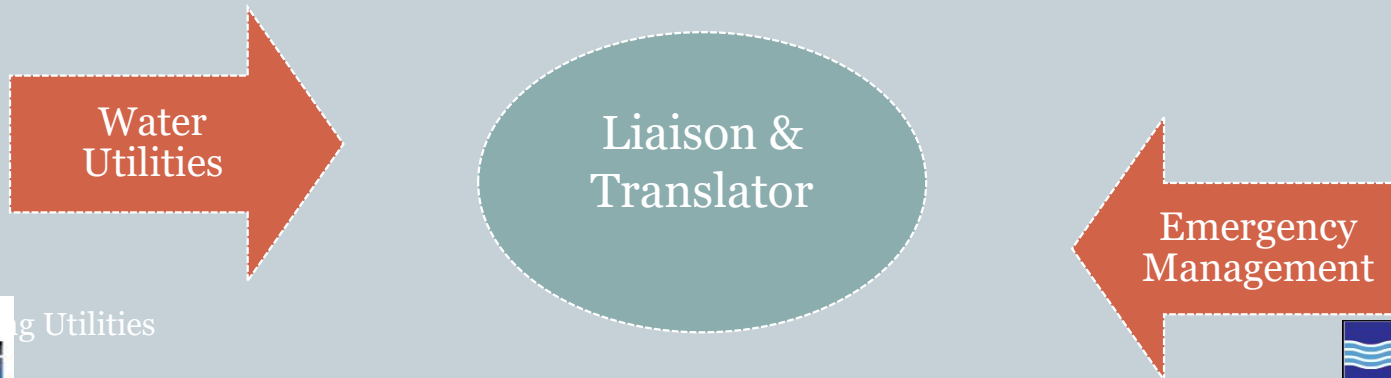
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WSSP The Key

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- Field Response
- Incident Command
- Department Operations Center
- Emergency Operations Center
- Water Sector Liaison (WSSP)



CalWARN Support to Napa EQ 2014



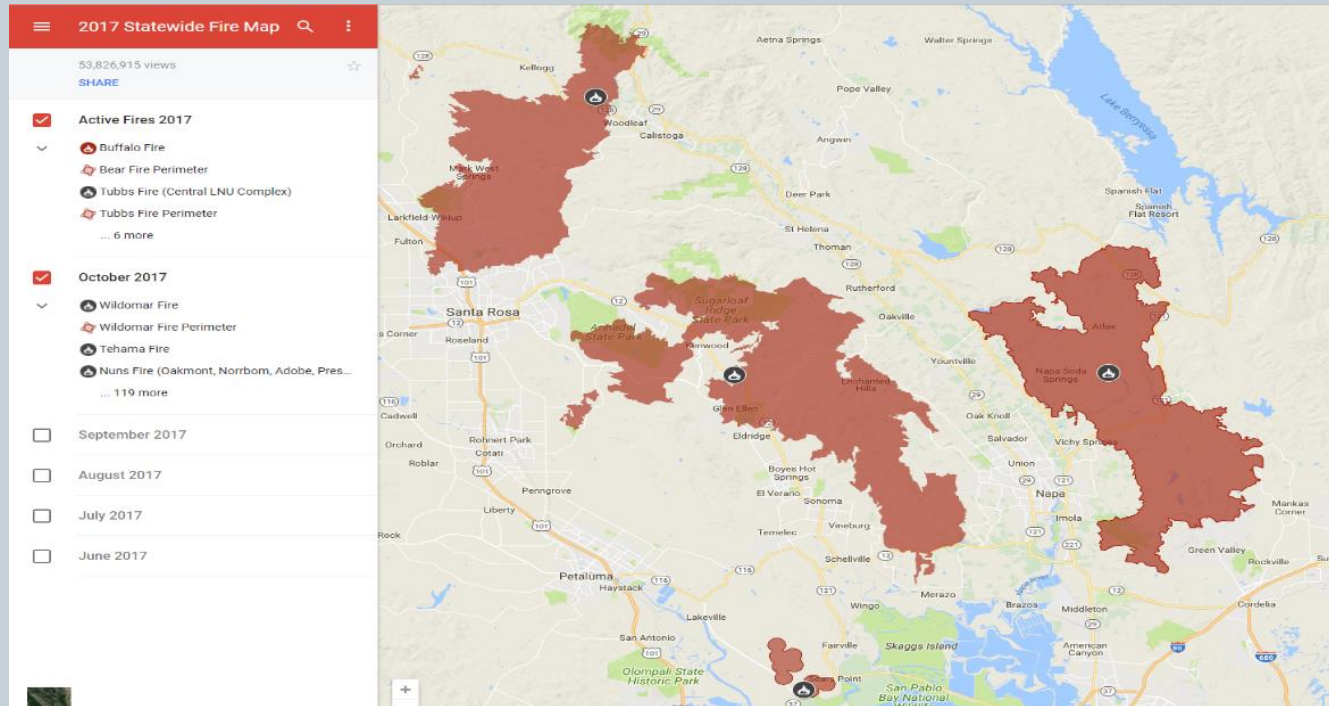
- **0320hrs:** Earthquake strikes
- **0438hrs:** Text message to Phil Brun of City of Napa – request for call if help needed
- **0637hrs:** Text returned
- **0700hrs:** – 1000hrs: SF Bay Area WARN agencies communicating - sharing damage assessments – discussing possibility of request for assistance from Napa
- **0820hrs:** Returned call from P. Brun - still assessing system damage - no assistance requested at this time
- **0955hrs:** Call for assistance from P. Brun – CalWARN agreement need to be signed – Use of AWWA Resource Typing Manual outlined
- **1006hrs:** Email SF Bay Area WARN agencies for request
- **1100hrs – 1830hrs:** 4 conference calls held to coordinate mutual assistance – also many emails
- **1930hrs:** 5 mutual assistance crews from three agencies set for deployment to Napa early morning 08/25/2014

Northern & Southern CA Fires

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Napa Sonoma Fires

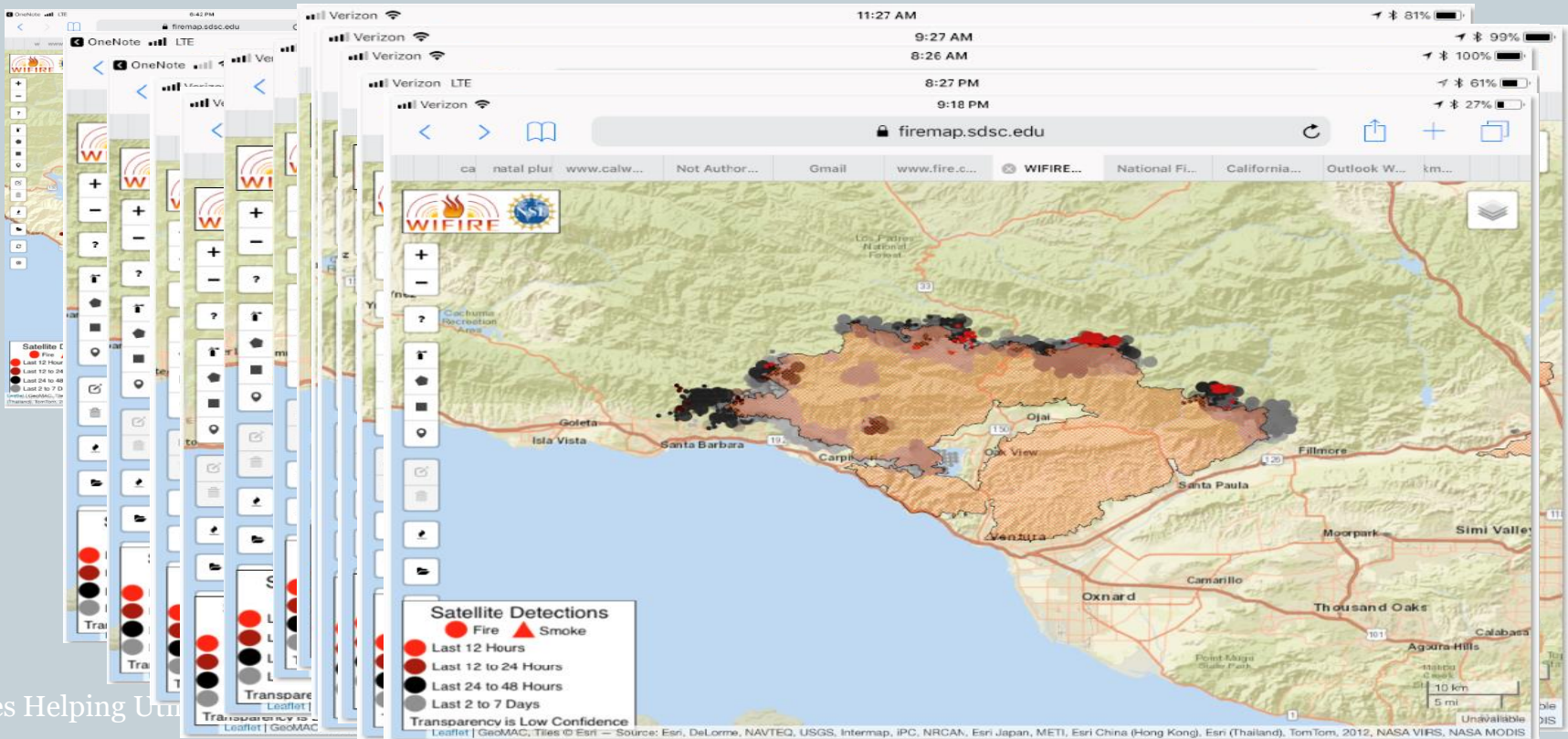


Atlas	Napa/Solano	51,624	October 8, 2017	October 31, 2017	Contained	6 fatalities, 785 structures destroyed, 40 damaged
Tubbs	Napa/Sonoma	36,807	October 8, 2017	October 31, 2017	Contained	22 fatalities, 1 injured, 5,643 structures destroyed
Nuns	Sonoma	56,556	October 8, 2017	October 30, 2017	Contained	Merged with the Norrbom, Adobe, Partrick, Pressley, and Oakmont Fires. 3 fatalities, 1,200 structures destroyed
	sonoma	1,660	October 9, 2017	October 13, 2017	Contained	
	sonoma	17,357	October 9, 2017	October 31, 2017	Contained	



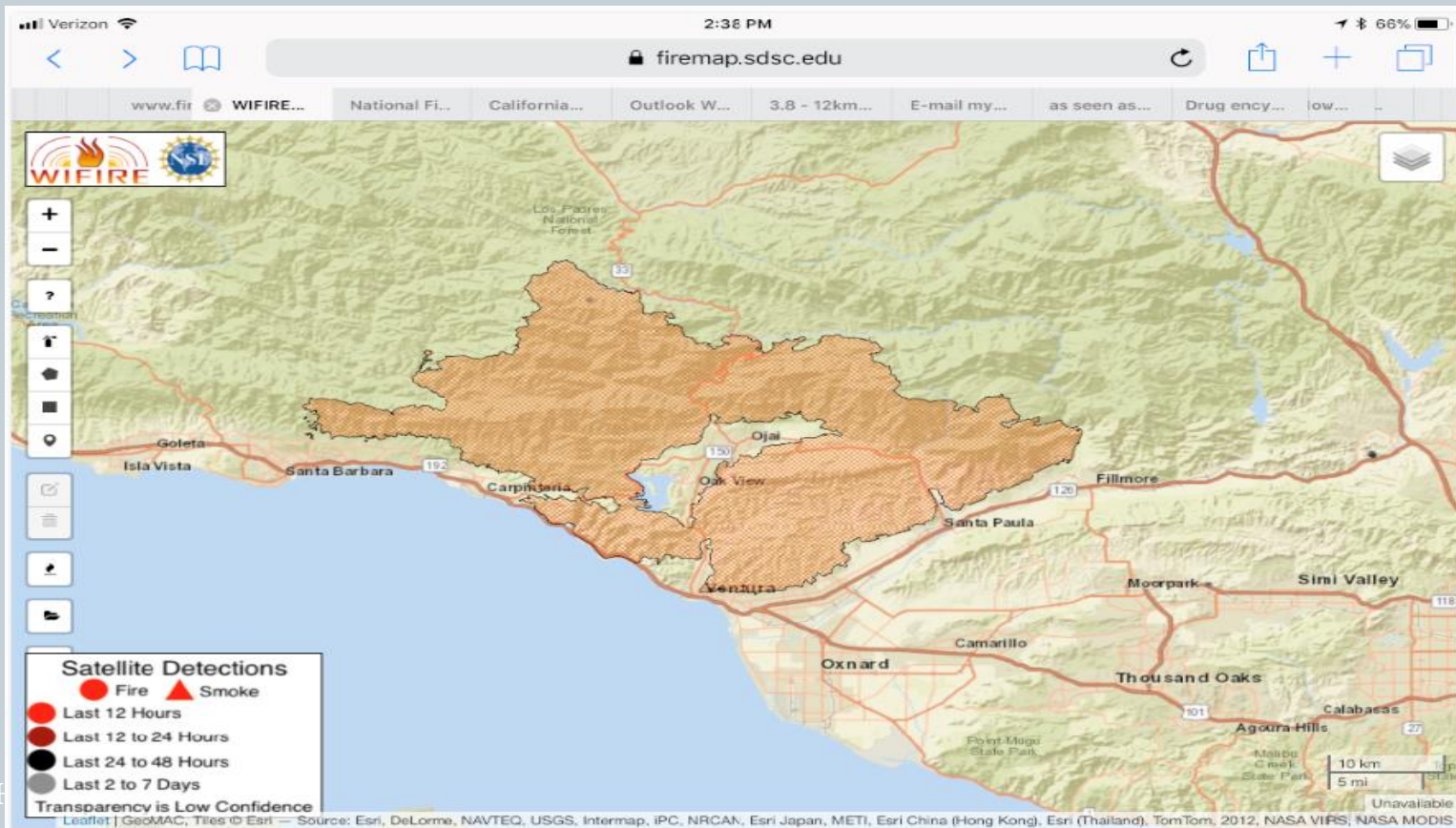
Thomas Fire Progression

40



Thomas Fire Final

41



Utilities I



ventura	281,893	December 4, 2017	92% contained	1,063 structures destroyed, 280 structures damaged, 2 firefighters
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Napa Sonoma Fires



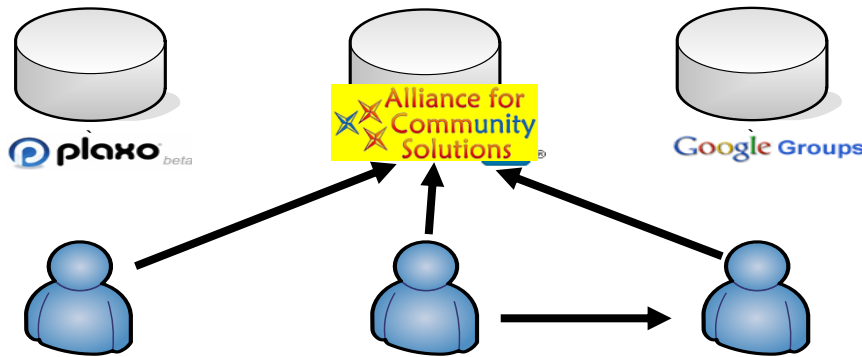
- There was Less Response; More Recovery
- WSSP - Valuable
- Sonoma Yes-Early
- Napa No-Late
- Field Presence at CalFire Coordinators Meeting “A Must”
- Contamination – The Unseen Disaster
- Regular Communications helped
- Determined More is needed in SOP on Recovery
- More is needed to get WSSP installed early
- Never enough insurance!
- Document, Document, Document (before & after)

CalWARN Technology: Information to Intelligence

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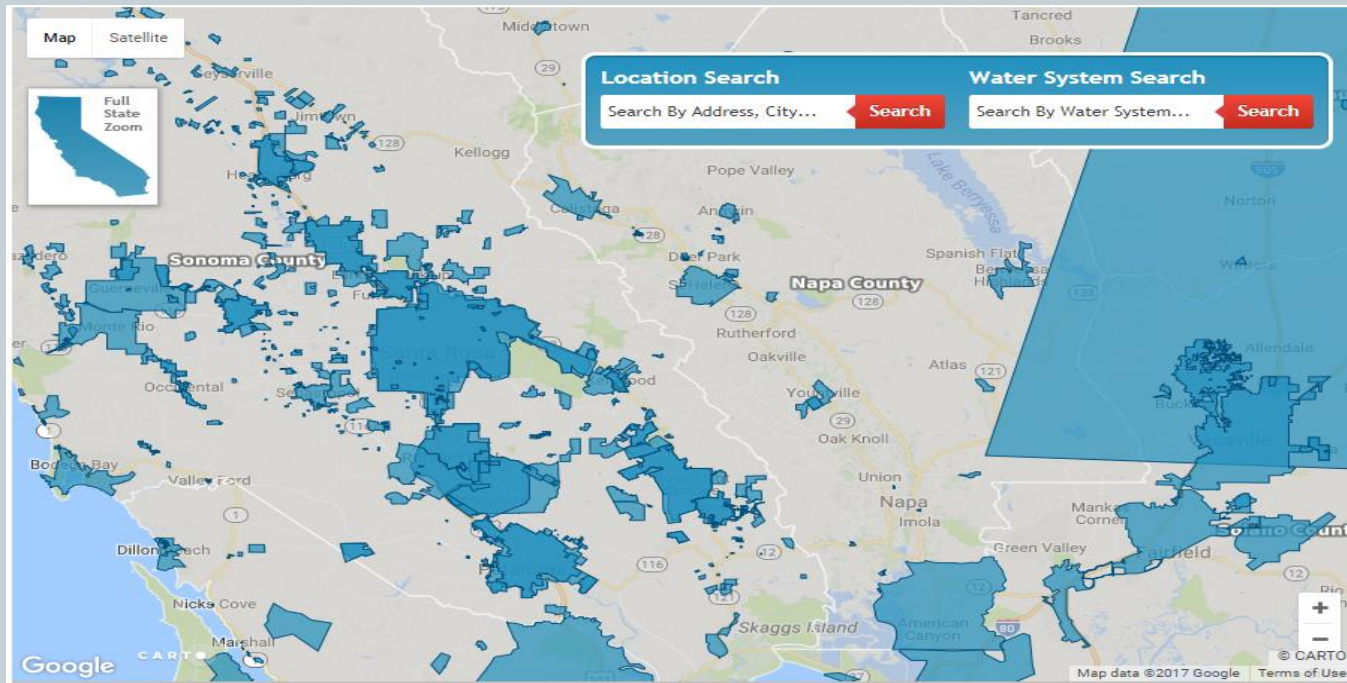
Emergency Management Social Networking



**How
Do
We
Connect?**

Three map layer control panels are shown, each with a 'Map Layers' title and a list of layer options. The first panel has four unchecked checkboxes. The second panel has four unchecked checkboxes. The third panel has four checkboxes, with the first three checked and the last one unchecked. Below each panel is a screenshot of a map interface showing the corresponding layer settings.

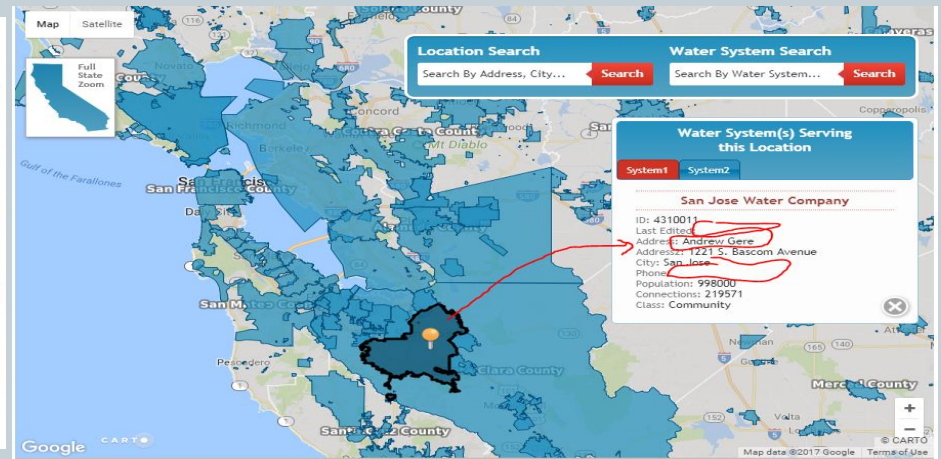
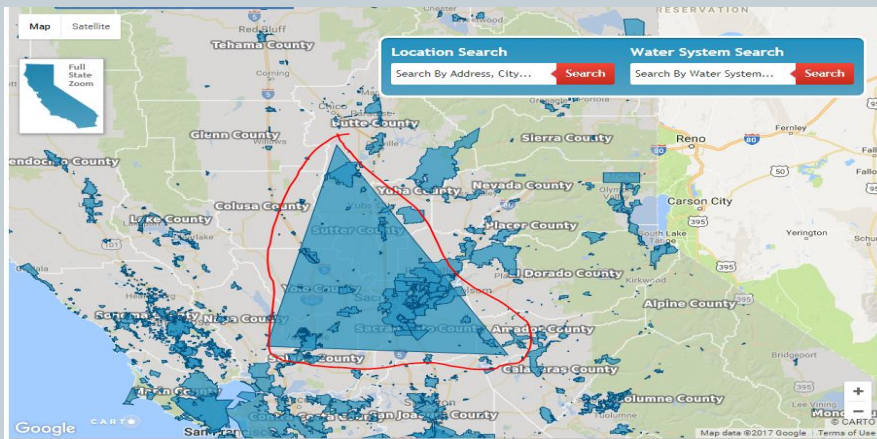
Division of Drinking Water Boundary Tool



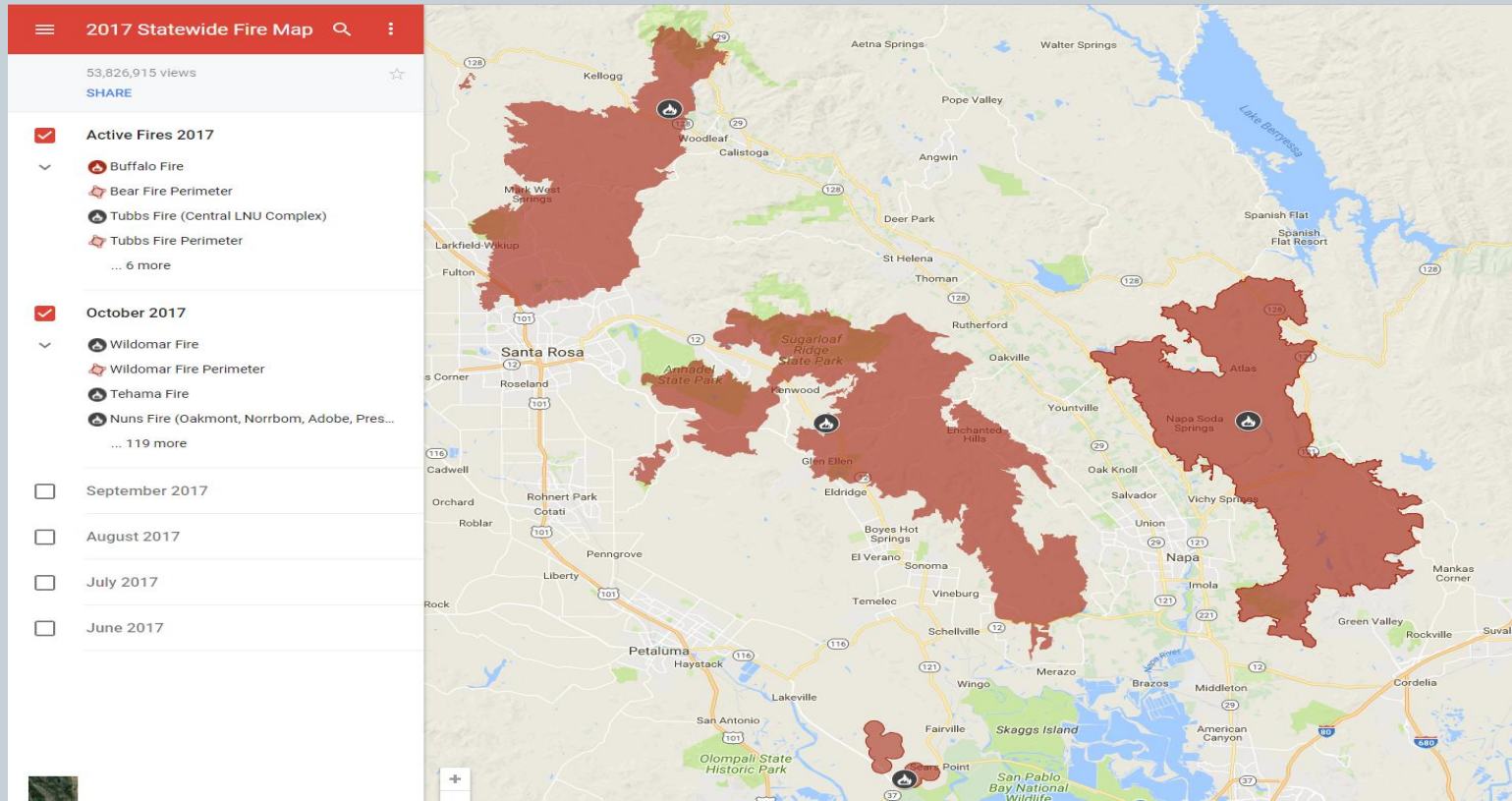
Great Tools Require Maintenance

46

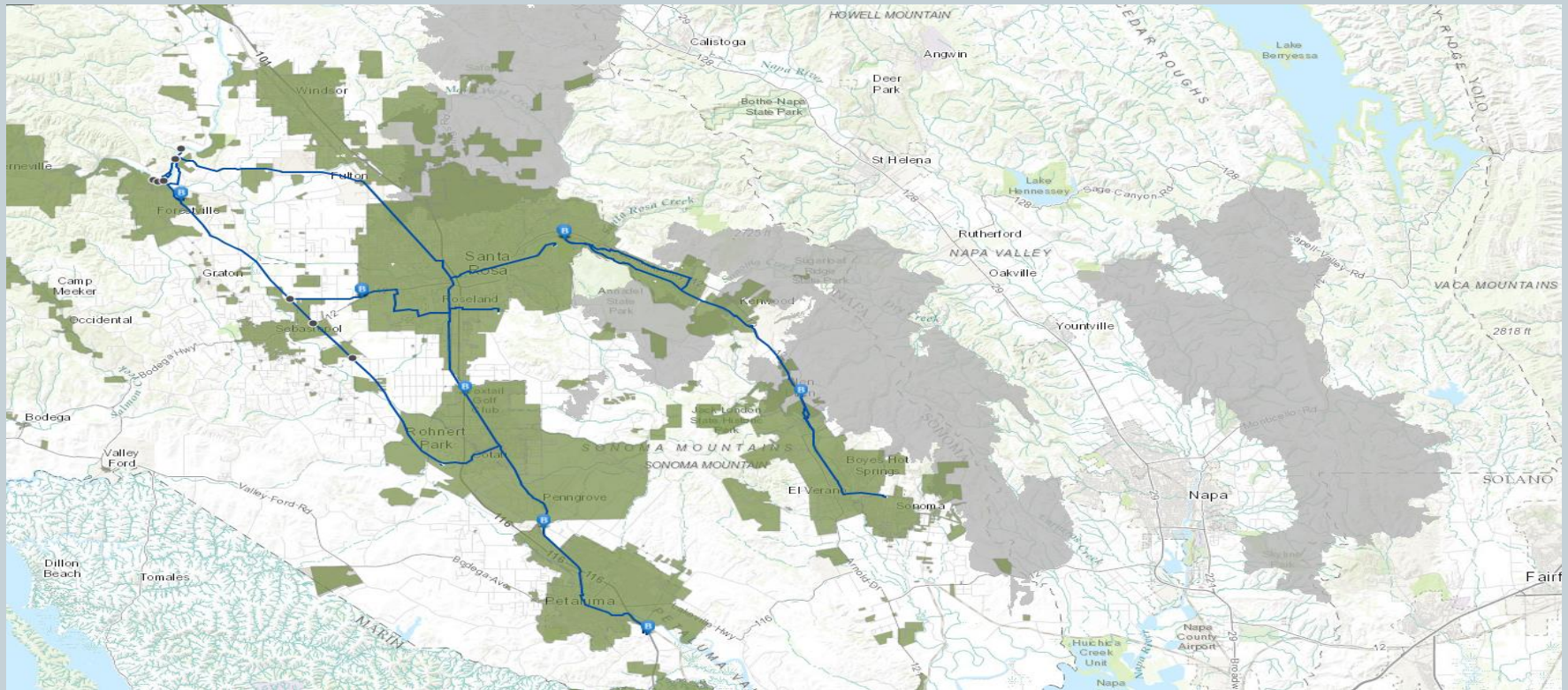
- DDW has developed some great tools
- Tools that need to be maintained to hold their value
- Examples:



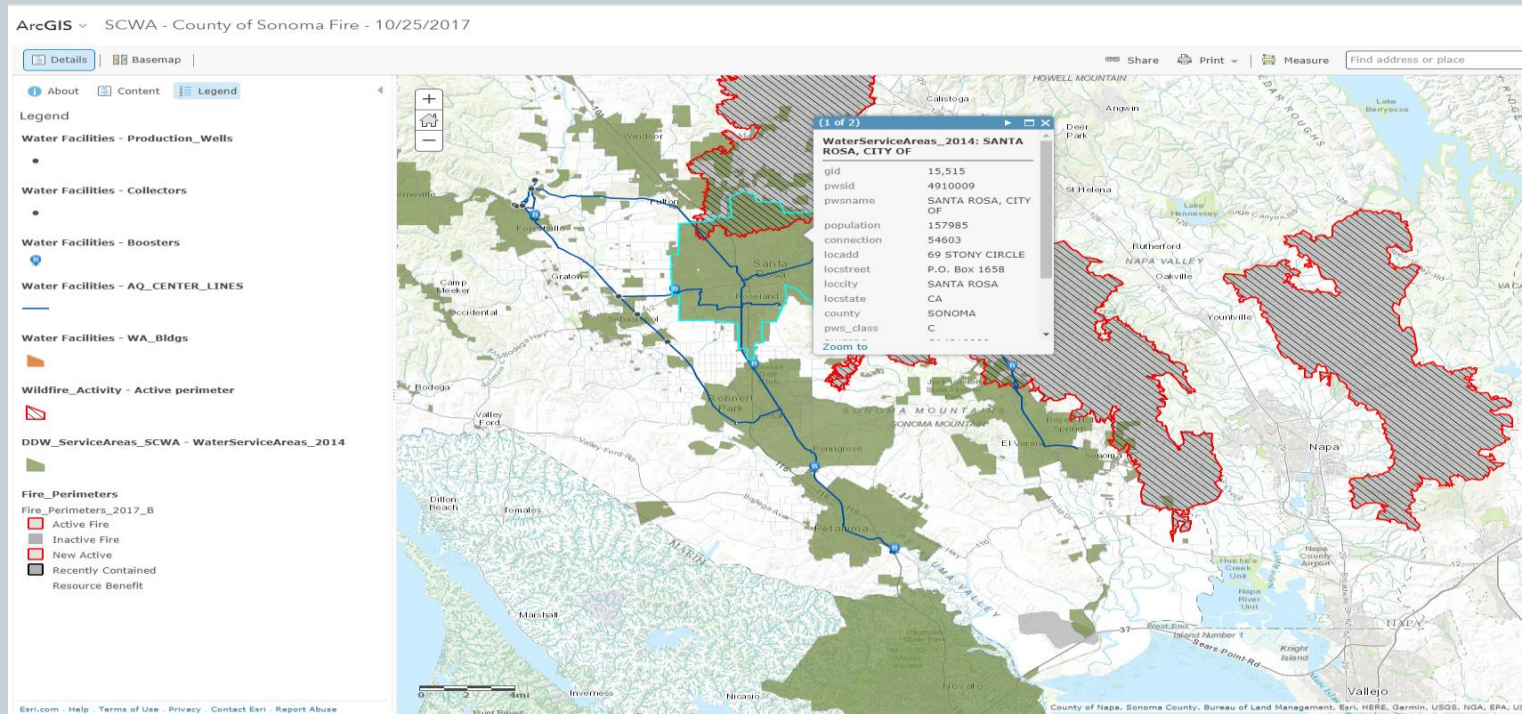
CalFire – Fire Boundary



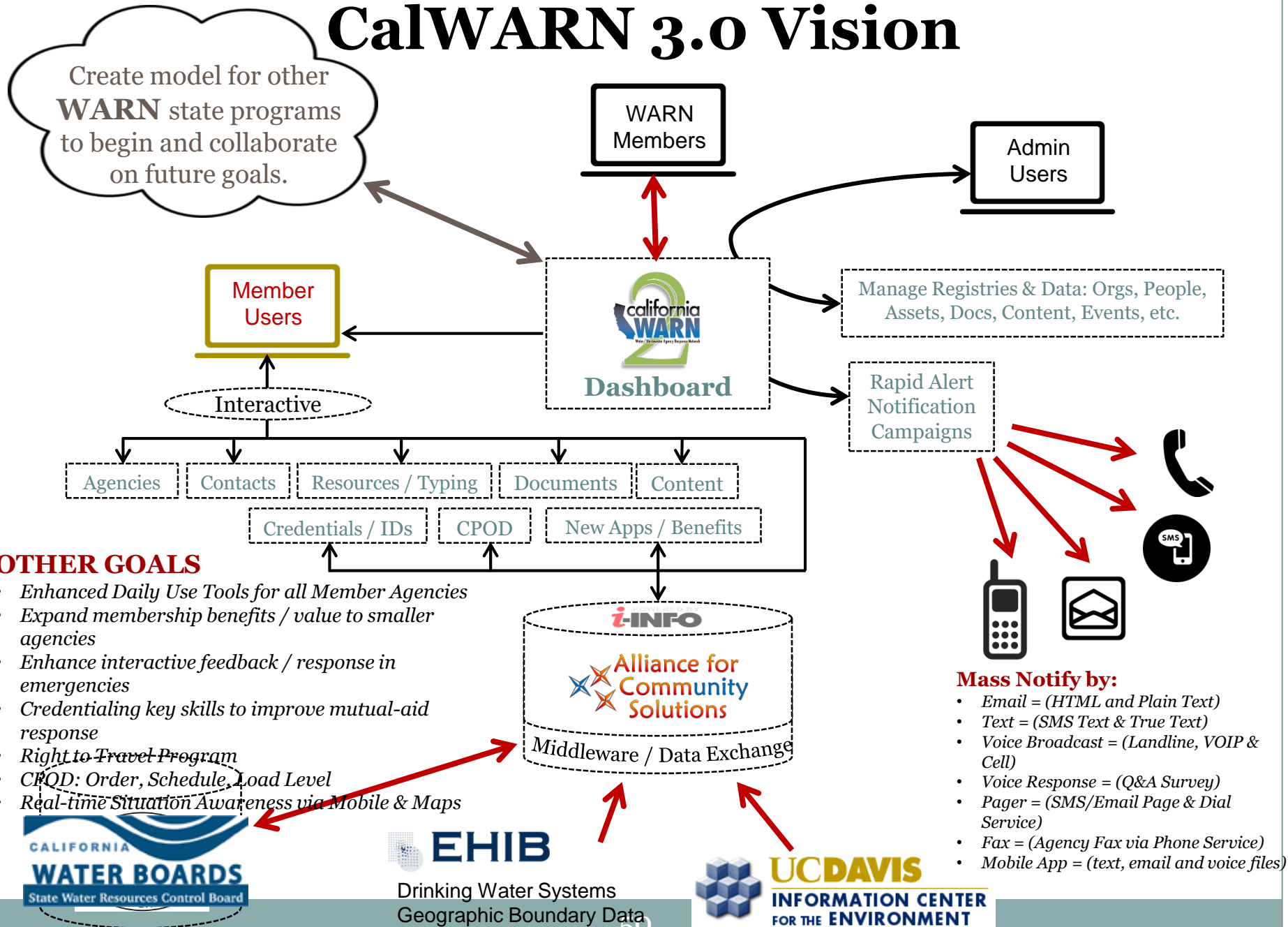
3 Maps = Intelligence!



Underlying Data Importance



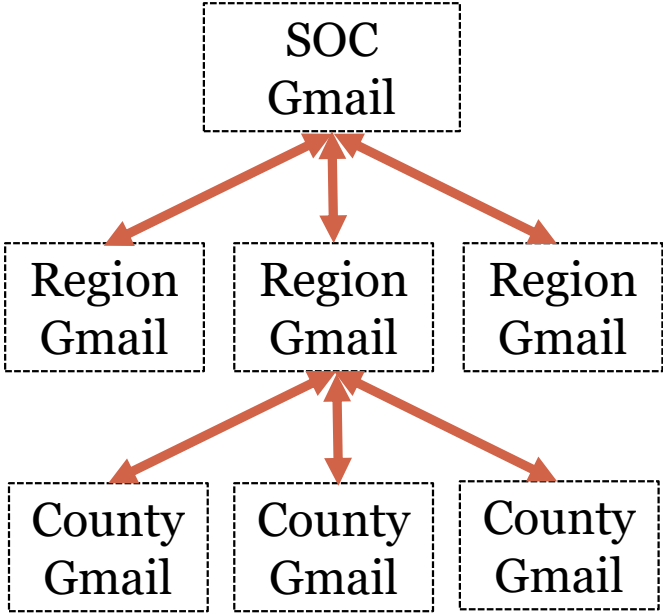
CalWARN 3.0 Vision



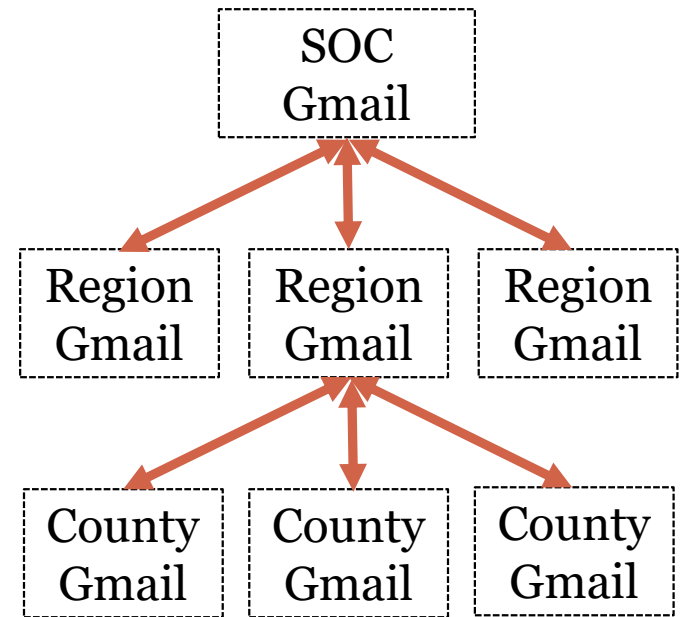
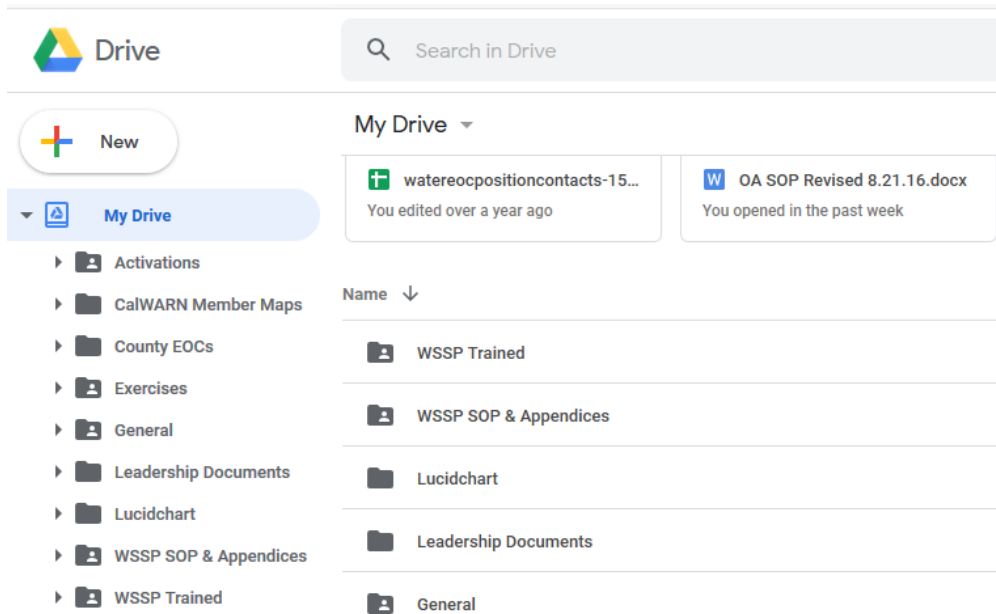
Google (Mail, Drive, MyMaps)

Sierra	sierra.wsp1@gmail.com	sierra.wsp1@gmail.com
Siskiyou	siskiyou.wsp@gmail.com	siskiyou.wsp@gmail.com
Solano	solano.wsp@gmail.com	solano.wsp@gmail.com
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Soc	soc.wsul@gmail.com	soc.wsul@gmail.com
Southern	SouthernREOCh2o@gmail.com	SouthernREOCh2o@gmail.com
Inland	InlandREOCwater@gmail.com	InlandREOCwater@gmail.com
Coastal	CoastalREOCh2o@gmail.com	CoastalREOCh2o@gmail.com
DDW Emergency Email Address	ddw-emergency-response@waterboards.ca.gov	DDW Controlled
CDPH Water	cdph.wsp@gmail.com	cdph.wsp@gmail.com
EPA Region 9 Water	epar9.wsp@gmail.com	epar9.wsp@gmail.com

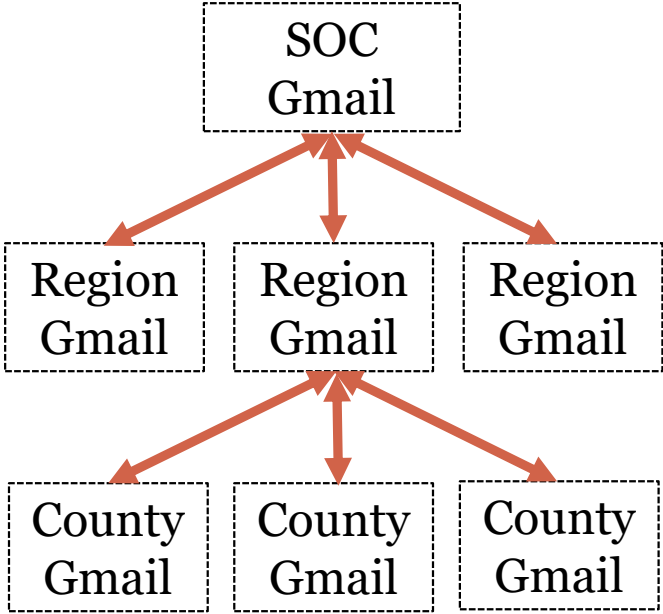
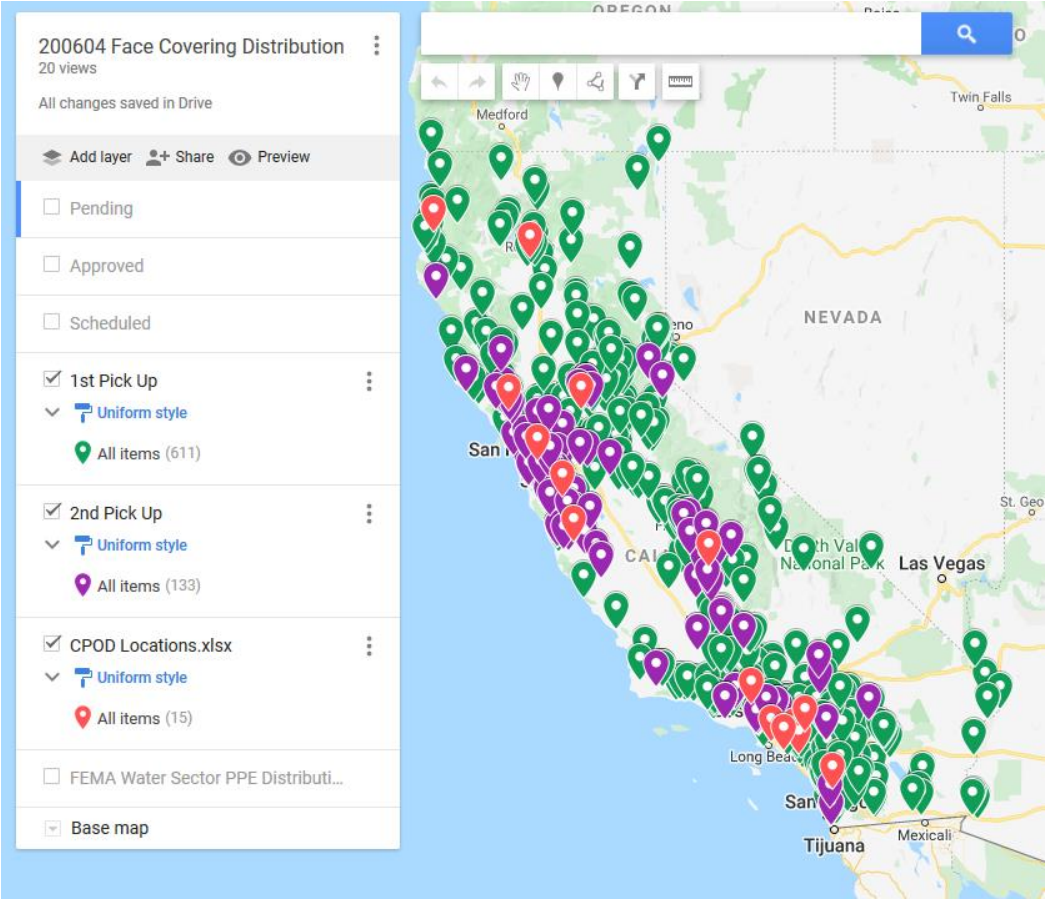
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Google (Mail, Drive, MyMaps)



Google (Mail, Drive, MyMaps)



Questions

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GO TO WWW.CALWARN.ORG
OR
CONTACT ANY CALWARN CHAIR

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408-279-7804