**Notes from 2017 Fires Geospatial AAR Meeting Feb 9 2017**

Goal: Sharing the experiences of 2017 to learn how to better share data in a disaster environment.

1. Develop trust and partnerships
2. Understand Capabilities of various agencies
3. Develop maximized effectiveness of processes for response and recovery

**Attending Agencies -** CNG – SSgt Chad Penner

* CNG – SSgt James Brown
* USGS – Dale Cox/Disaster Scenarios (Haywired for April 2018)
* Cal OES – Brian Woodbeck/Ops Nor Cal
* Nasa - Vince Ambrosia/Wildfire Support Group at Moffat UAV
* Nasa – Lorri Schultz/Nasa Disasters End User Engagement
* Nasa – David Borges/Langley – Disasters Team GIS
* University of Pittsburg (PA) - Louise Comfort/Disaster Information Management Systems
* CA Dept Public Health – Armando Chevez/Support Disasters and link GIS
* County of Napa GIS - Ashley Llewellyn/Land Development and Emergency GIS Support
* Cal Fire/FRAP – Tiffany Meyer/Data and GIS Support
* Cal Fire – Steve Hawks SFM Chief/Def Space
* City of San Luis Obispo/So Cal IMT 2 – Dawn Hutchison/GIS
* USFS – Lorri Peltz-Lewis/EGP Data Services
* USGS - Carol Ostergren/National Geospatial Program info (topo/Lidar/others) for CA and NV
* US DHS – Terrence Newsome/HSIN Mission Advocate
* CPUC – Maria Solis/Utility Geospatial Manager to gather utility data for emergency needs
* Cal Trans Andrew Lozano/GIS Manager for emergency support and data needs
* Cal OES Air Coordination Group – Derek Kantar/ Air Coordination and RS and imagery needs
* Cal OES - Steve Lai/GIS Manager emergency data collaboration/sharing/coordination
* Nasa JPL – Maggi Glasscoe/Disaster Coordinator
* USGS EROS - Lynn Lamb
* USGS - Ken Hudnut
* USFS – Stacy representing Tim Lindeman Reg 5 GIS Manager
* CA Dept of Public Health – Svetlana Smorodinsky MPH CDPH-DEODC-EPT-OHB
* CA State Water Resources Control Board/ Jeff Kapellas Water issues
* CA Dept of Conservation - Roth/Watershed Evaluation and Response
* CA Dept of Toxics and Substance Control
* Firescope –Tom Gikas (LAFD) Firescope GIS Group Chair
* Jim Wollbrink, San Jose Water/CALWARN
* San Diego LE Coordination Center – Marie Kennedy Link local resources and DHS
* USGS EROS Data Center – Lynn Lam HDDS (Brenda Jones recently retired)
* USFS Region 5, Stacy Stannish GIS Analyst Acting Coordinator
* USGS, Not sure of name/position
* CA Toxic Substance Control Board

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| **Agency** | **Good** | **Bad** | **Actions** |
| **County of Napa GIS** | Had data beforehandProperty Values important! Used Zillow to have a more current value. Pop Counts and Building FootsLive editing of maps/damage counts | Public Info Needs – fire perimeters (Geomac to static)Interactive Needs: Heavy server traffic (2Million hits on 4th day of fire in EOC) so moved to AGOL but had to do it on the fly during event. Then had a permission issue.Staffing Data Locating and Processing – need to coord with other locals to not duplicate data efforts. Not a denial, just need to know where. Who to call for imagery. | Preplanning dataLearn how to find data- centralized and organized,Spatial web-enabled data from Cal OES, HazWaste sites (Geotracker) data exists but not quickly accessibleHow to cache the AGOL permissions. Need to step away from people-centric to process-centric methods. Need to have Cal OES and others ability to push web services to open source (non-esri) users. KML is hard because it is not real—time qualityVulnerable Pop driven data needs (Helipads/CERT/sharing standards)AAR lessons distributed (plotter quit, paper ran out, etc)Vulnerable pop, use CERT to prioritize areasHave a prepped portal/AGOL frameworkActively participate in data networking(Montecito Debris Flow – Use the Incidnet action Plan (IAP) to help ID contacts). Include Locals contact list!!Sensitive Data – restricted access with no copies allowed except for incident single copy. Need agreements in place.  |
| **San Diego Law Enforcement Coordination Center** |  |  | Questions to be clarified: Who to ask questions between Fusion Centers and DHSWho is authorized to see what data |
| **CAL FIRE** (Damage Inspection Focus)  | 12K structures collected via esri collector. Will use on all fires in 2018 where building is impacted. Use this data to analyze mitigations and effectiveness as well as DA. QA/QC process for raw data. Data from CALFIRE goes to CALOES and FEMA. Also use multi-hazard collector app for floods, EQ, mudslides. Plus is Collector customizable capability. (Beale Mst Sgt Tyler – UAV, RC26, MQ9, Sat Im.) Use imagery from Dig Globe. HDDS compresses data too much. Always seek parcel layer and building footprint payers from Locals or other. World View data from Digital Globe has enough resolution to see structural damage if uncompressed.Interra is publishing imagery through NIFC Enterprise Geospatial Portal | Had some issues with the HDDS resolution for building damage.Need good quality building footprints from locals.  | Need centralized numbers reporting process so no discrepancy between agencies. Issue at Napa.Look at the planning cycle times to see which “cooperator’ type meeting can occur at what point in the cycle? Involve all incident cooperators (local, utilities, etc). ID way to track what type of imagery is being collected during an incident and how to acquire. Need to know how to ask for the right product. USGS has a collection management request available. EGP also has a continuous feed. Need to explore improving HDDS quality. Is it file or imagery compression. There is no coordinated system for requesting imagery anywhere nationally. Need to develop one? Often there are 2-3 agencies overflying and collecting simultaneously. DHS CA Air Coordination Group tries to deconflict the missions. Need an ‘Imagery Coordinator’. Water – SWQRCB has water data. An app that combines aspects of ESRI Collector app with functions of Survey123 would be better |
| USFS |  |  | Request webex presentation of EGP training |
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| **CAL OES** | Try to be a pass-through for data and imagery. Help with info-gathering and dissemination.  |  | Imagery – need an open source webservice (pre-stitched and rectified).Need Common Operational Information rather than COP’s. Need image coordinatorInteractive, editable data from CAL OES is not always accessible. Recognize that not all products fit all needs (kmz, webservices, etc). Need to discuss ahead of time.  |
| **USGS -** Montecito Debris Flow | EQ issues are water supply, fire, lifelines. USGS models are used in detailed scenario plans – Ex: Haywired and aftershocks.Communities and people highly impacted by these events (Napa EQ and MDF)Looking to support any way we can – rapid response imagery, debris flow models. Pre-coordination with may agencies over past few years was instrumental in getting fast data. Air coordination to get helicopter/imagery after Montecito worked well.Don’t have a plan for EQ aftershocks1200 Nikon geo-tagged still photos shot a few days into the flow to collect perishable data. Circulated via hard disc. Able to use same camera to gather ground photos. Also recently used upgraded air photo camera for 4K+ air photos soon to be released.   |  | Need to document perishable data as early as possible in incident without disturbing responders. Need to be self-reliant with a plan. How can CAL TRANS best coordinate imagery with USGS? Need for rapid response imagery after a fire or landslide. Debris from DF is removed quickly after incident. Important for understanding behavior and extent.Unclear to some where Montecito Landslide boundary data went after it was developed and where to access. |
| **CDPH**/Health/Env Occupational Emergency  | Recovery Needs are also critical – sometimes fall by the wayside re: data needs.  |  | Need to plan for recovery data needs once the EOC’s stand down? Public and agency needs don’t stop for analysis, dissemination, planning. How does post-coordination get included in the planning. Napa response that they do not take the data down, but may need to plan for a hand-off. What data is needed to say when it is safe for citizens to go back homeWhat data is needed to support ability to rebuild. |
| **CA Nat Guard**Incident Awareness and Assessment (IAA) | (SSgt Brown) – receive an MRT fro m Cal OES for incident intel and then relay to Beale assets. EX: needed 24-hr intel so used the MQ 9 (12-hr drone). Also used satellites for debris flow.  |  | Question about ability of imagery to be applied to other needs such as fire modeling. Who knows when/how Google flies data?Should we have a state/federal page for APAN (Guard version of WebEOC)? Utilities are looking in this direction for APAN use for data-sharing. Better than DART but both systems should have access. Everyone should be logging onto DART. Also looking at one login for multiple agency systems. SIRUS – COP for MQ9 CNG community. Also integrating a chat function. Also beginning to incorporate other feeds. All FMV’s have IR capability.  |
| **NASA**Disaster and Wildfire Support Element | Key Elements:PreFire MappingActive Fire MappingPost-fire MappingUses a BAER “RECOVER DSS” to deliver information within a 5-minute timeframe from request.Had HSI data due to serendipitous test flight.If there is a product you need NASA can make it. | Did not always translate data request and format need well. Want to work on the comms necessary to link scientists with end users.Products requested that they need to teach themselves will take longer to make. (eg. Month delay on mudslide vulnerability product)Often times people do not know the information that NASA is collecting | Develop conversations on how to ID the right end users and formats required for best use. ID various common resolutions needed. Working on internal tempo of science-need timeframes vice emergency users. Data latency is built-in. Developing Disaster Mapping Platform (in Beta mode now) Consider NASA webinar to educate and collaborate on formatting needs.  |
| **DHS** HISN | Use of HISN Connect as a way to access HISN data and personal session (an Adobe Connect service). Can create or join Pods and connect via mobile to update real-time. Can do screen and device share. 100’s of connect sessions on any given day. DHS publishes many damage related products for disasters. Access is best through HISN.  | Strict log in requirements to maintain access to HSIN | Need to facilitate DHS presentation of HSIN connect and HIFLD users to Local State agencies.How do we push out local data securely to other usersLocal / State Public Safety Geospatial staff should get a HSIN account. Get to know HIFLD Open geospatial data |
| **CAL TRANS** | Activation of the Cal Trans DOC. Hosting an internal MCOP for SA. Tasked with finding the local road closures and had to go searching for that information. Shelters locations also important. Cal Trans QuickMaps is a basic but available viewer.  | Needed to hunt for data sources on road closures/conditions/bridges/shelter directions.Do not have any consumable services. Cal Trans Data Library is good but may only offer static, older data.  | Need to develop better local connections in order to get all the necessary data. Echo the issue of kml formats within an esri environment is problematic. Would like to work on being a data provider as well as end-point.  |
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**Group Follow-ons:**

1. Create a database of databases
2. Information is held by many different levels of government with differing capabilities. Need to rely on county level EM/EOC for data management with coordination by State OES!
3. CAL OES (and/or Incident IAP) should contain data-as-a-resource element via the Plans Section.
4. Do not have a systematic way of organizing needs – vetting, private industry, public, etc.
5. Need to work on imagery coordination – air flights are better organized. Consider an Imagery Coordinator to share seat with Air Coordination at the SOC.
6. Cal OES is not intended to be the data warehouse. Cal OES is best used as a data portal pointer and is working toward that.
7. NASA would like to host a webinar to discuss products and get CA user feedback on the Disaster Portal.
8. Data and products are different and need to be better defined? How to choose the right parameters (speed vs accuracy, training, formats, caveats, restrictions).
9. Develop feedback mechanism post-incident to learn what worked and did not.
10. Need to focus on the sensitive data issue and figure out how to share.
11. Encourage local GIS groups to gather and plan. Bring partners into the conversation – even the unlikely ones. Outreach!
12. Need to find champions at the strategic levels.
13. Need to build trust between the organizations and individuals.
14. Expand the concept of “Incident Period” to more include long recovery times to keep data from disappearing.

Kate Dargan, Interra Group Ideas:

* Time is of the essence.
	+ These are early days in the data sharing world for government. **Build processes not products!** Is the CA “group” willing to tackle the strategic problem or only the tactical one?
* Data collection is bad. Distributed accessible data is good.
	+ Blockchain concept?
* Is this a human problem, a technology problem, or a money problem?
* What is the severity of the problem (1-10 scale)
* Is the issue intel management or geospatial data sharing?
* How do we break the problem into immediate needs versus long-term improvements?
* Is centralization the goal or is distributed with permission the need?
	+ Who’s job is it? Fed/state/local? How do you solve a problem that you don’t have the resources to solve?
* How to use SDIC for data collaboration?
	+ Published shareability with noticeable gaps if reluctant partners.
* What is ‘the group’ to follow up with?
	+ CA Earthquake Clearinghouse Working Group
	+ Cal OES – CA GIS Council/CA Emergency Coordination GIS Group
	+ CA GIS Council
* What is the best model to use to think about data sharing?
	+ Health
	+ Public Safety
	+ Education
	+ Military
	+ Crowd-sourced
* What current institutional structures will support data-sharing?
	+ LEPC
	+ IMT
	+ EM
	+ Emergency CWN Catalogue
	+ Local Emergency Plans
* Generic Incident Data Plan
	+ Immediate
	+ IA/Extended Operational
	+ Reporting Req’s
	+ Positional/Safety
	+ Document/Archives
	+ Standards
	+ Leadership
	+ Public
* Pre-stage data/imagery requests
	+ Purpose/Incident Type
	+ Best Type/Platform
	+ Sources/Transfer Method
	+ Contacts
	+ Cost/License
	+ Timeframes
* Develop an ICS-oriented 3-D model of incidents/disasters that tracks structured actions, planning cycles, ICS/IAP positions/resources/tasks, all organized around an incident type and then expanded to identify the needed data by timeframe.
	+ ID position/task>Data>Time of Need>reason>Source>. Also map to ESF.

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| Data Type | Security | Agency Source | Agency Contact | Size/Res | Txfr Method |
| (Name/Descriptor) | (Restricted, sensitive, license access, official, public) |  |  |  | Drive, web serv, direct) |
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