

GSFC Disaster Working Group

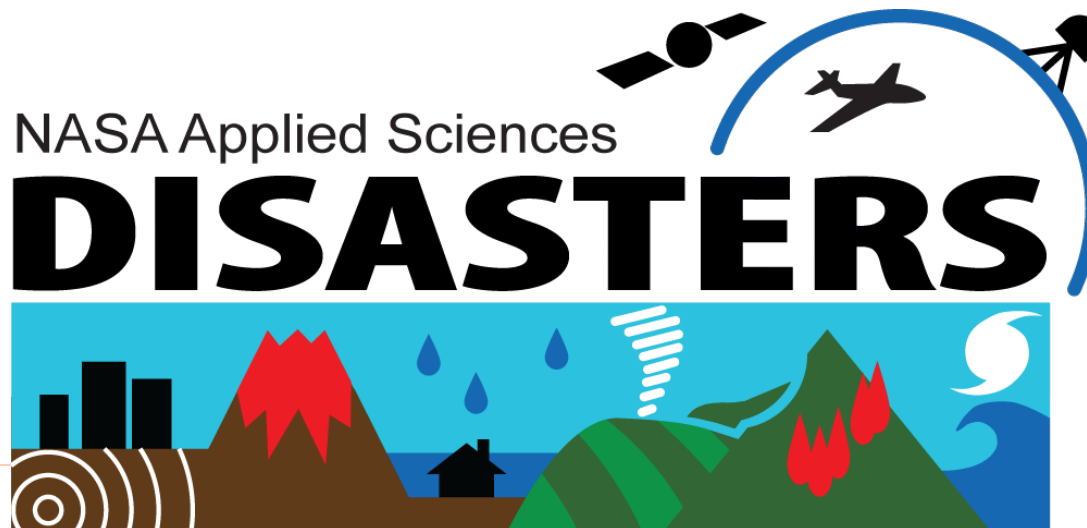
June 16th, 2016

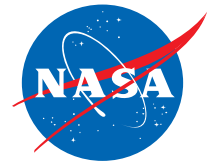
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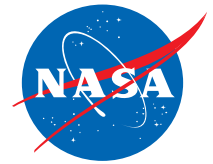




Agenda

- 1:00-1:10 – Updates from the coordinators and group
- 1:10-1:20 – Summary of Flood workshop
- 1:20-1:40 – Presentation by Ralph Kahn on volcano work and summary of last month's volcano meeting
- 1:40-2:00 – Discussion, action items, and next steps





Updates

- Response Activities:
 - Southern US Flooding
- Exercises
 - Cascadia Rising



Cascadia Rising 2016

Website:

- Prototype concept for front end website

- Continuing to work on the conceptual framework for a "back end" system for data management

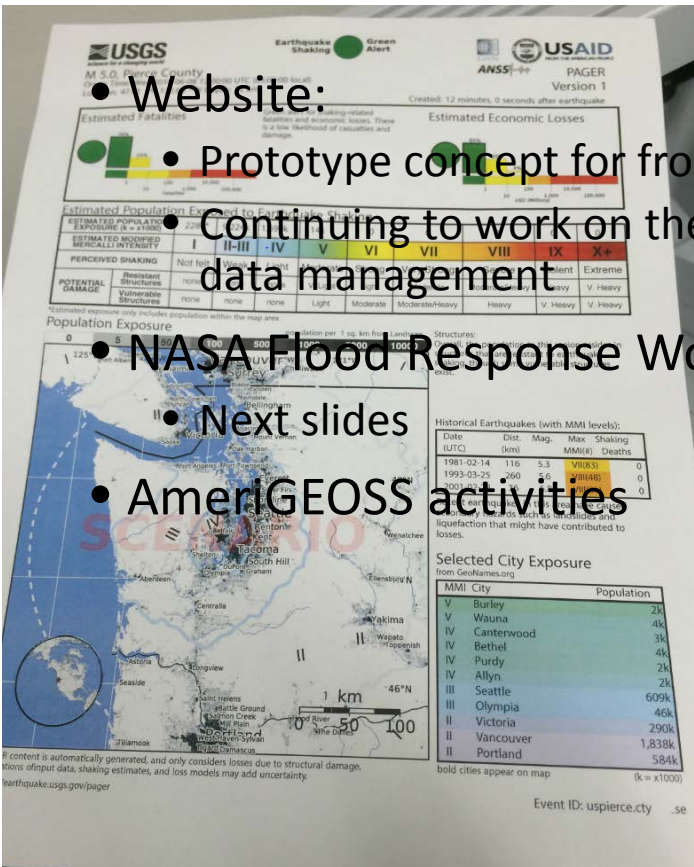
NASA Flood Response Workshop

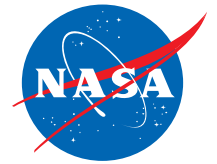
- Next slides
- AmeriGEOSS activities



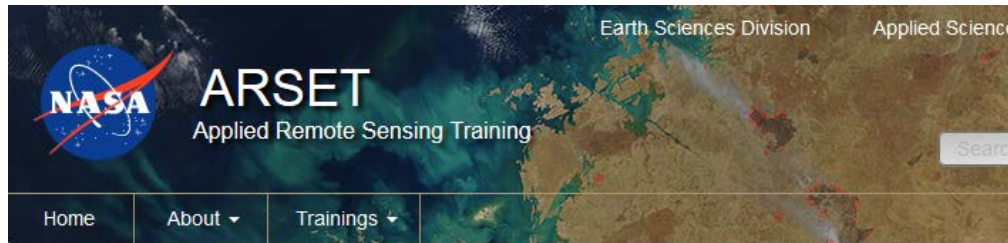
A 9.0 magnitude earthquake along the Cascadia Subduction Zone (CSZ) and the resulting tsunami is the most complex disaster scenario that emergency management and public safety officials in the Pacific Northwest could face. Cascadia Rising is an exercise to address that disaster.

June 7-10, 2016 Emergency Operations and Coordination Centers (EOC/ECCs) at all levels of government and the private sector will activate to conduct a simulated field response operation within their jurisdictions and with neighboring communities, state EOCs, FEMA, and major military commands.





Trainings & Workshops



<http://arset.gsfc.nasa.gov/>

Using NASA Remote Sensing for Disaster Management



Dates: Thursday, June 9, 2016 to Thursday, June 30, 2016

Times: 11:00 a.m.-12:00 p.m. and 6:00-7:00 p.m. EDT (UTC-4)

NASA remote sensing and modeling resources are useful for managing a variety of disasters - including earthquakes, tsunamis, volcanoes, floods, landslides, wildfires, and oil spills - particularly in regions with very little in situ data. This introductory webinar will provide an overview of NASA remote sensing data and applications for disaster management.

Learning Objectives:

Participants will become aware of available NASA resources for disaster management, and will learn to access remote sensing observations using covered web tools for local disaster events.



Trainings & Workshops, cont'd.



The screenshot shows the NASA PMM website with a navigation menu and a 'Training' section. The 'Training' section is titled 'Recent Training Sessions' and lists three webinars with their dates and topics. Each webinar has a list of links for recordings, slides, and data products. There are also sections for 'Upcoming Training Sessions' and 'Register for Upcoming Training Sessions'.

Training

Recent Training Sessions

Thank you for everyone who attended our past [GPM](#) Applications Webinars. For those who were unable to attend live, the webinar recording and slides can be viewed below. All the links and file downloads should be accessible during the replay, but if you have any trouble please [contact us](#).

Webinar 1 - December 8, 2015: Overview of Global Precipitation Measurement (GPM) Mission, Data Products and Data Access Tools

- [View a recording of the webinar](#)
- [Download the webinar slides \(pdf\)](#)

Webinar 2 - March 15, 2016: GPM Data Product Updates and Demonstration of Web-tools for Data Search, Analysis, Visualization, and Download

- [View a recording of the webinar](#)
- [Download the webinar slides \(.pdf\)](#)
- [Accessing GPM data products using Giovanni \(.pdf\)](#)
- [Accessing GPM data products using Mirador \(.pdf\)](#)
- [Accessing GPM data products using PPS STORM \(.pdf\)](#)

Webinar 3 - June 14, 2016: Demonstration of Case Studies of Data Import and Analysis in GIS

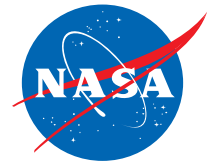
- [View a recording of the webinar](#)
- [Download the webinar slides \(.pdf\)](#)
- [Instructions to download GPM IMERG data and import into QGIS \(.pdf\)](#)
- [Processing HDF files for visualizing in ArcMap \(.pdf\)](#)

Upcoming Training Sessions

The Global Precipitation Measurement ([GPM](#)) Applications Program announces a series of webinars during 2015-16 with the goals of providing:

- an overview of GPM mission
- a description of GPM data products
- information and a demonstration of data access web-tools
- a demonstration of data import and usage in GIS
- a tutorial on programming modules/scripts for reading GPM data products.

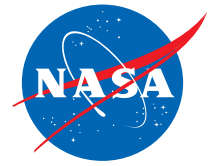
- <https://pmm.nasa.gov/training>



Upcoming workshops

- NASA Direct Readout Conference, Valladolid, Spain: June 21-24th
- Workshop to Develop a Portfolio of **Low Latency Datasets** for Time-Sensitive Applications, September 27-29th, 2016. Langley Research Center, Hampton VA
 - If you can attend, please register using the following link:<https://www.surveymonkey.com/r/8HYSHNJ> AND
 - **In NCTS by 27th June:** "Workshop to Develop a Portfolio of Low Latency Datasets for Time-Sensitive Applications" September 27-29, 2016, Hampton, VA - **NCTS#26068-16.**
- Others?

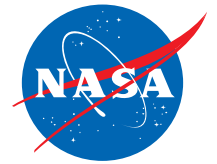




Updates from Group?

- Proposal news?
- Workshop news?
- Relevant events?





NASA Flood Response Workshop

Morning Intro, June 14th

- **Research and Analysis**

- Supports fundamental research understanding that might underpin response efforts

- **Applied Sciences**

- Focus on development and transition of products and capabilities to operational users

- **Technology**

- End-to-end satellite data processing and dissemination, support technological advances and data distribution

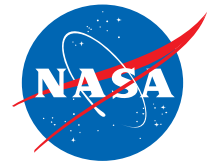
- **Flight**

- Satellite and airborne instruments to support rapid response, monitoring and recovery activities

- **Partnerships**

- Domestic and International activities supporting and advancing capabilities within the area of flood mitigation, response, and recovery





Who was there?

- NASA people (GSFC, JPL, MSFC, HQ, etc.)
- Academics
- Local, regional, national and international emergency responders
- Private industry
- NGA, USAID/OFDA, Army Corp, FEMA, NOAA/NWS
- Red Cross
- OMB/Flood Plain Management
- National Water Center

About ~90 people

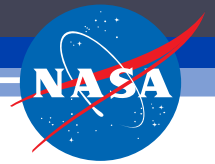




NASA Playbook: Scenario exercise on 6/15

- The structure of the current NASA Playbook:
 - Trigger to enter?
 - What can NASA and its partners provide that is valuable?
 - When can we do it?
 - Who are we going to coordinate and give it to (domestic & international)?
 - When do we decide to exit?
 - Post event after action analysis





Structure of the Exercise

- One flood response scenario to drive discussion based on input from the following core groups:
 - Emergency Management
 - Monitoring and Observing
 - Mapping and Modeling
 - Product Dissemination and Distribution
 - Capacity Building & End User Engagements



Example Scenario:

- It is now June 18th. The series of torrential rainfall events has dropped as much as 50 inches of rain across Coahuila Province, Mexico, which is flowing rapidly toward the Rio Grande basin.
- Despite a series of early flood control actions taken across the Lower and Middle Rio Grande Valley, releases from Falcon Dam (TX) within the last 12 hours, have more than doubled to 1,125 cms; causing the Rio Grande to surge to major flood levels in Starr and extreme western Hidalgo County.
- Power outages are being reported and roads are flooded and closed. Urban, coastal, and rural areas are reporting widespread flooding.
- Local authorities have issued mandatory evacuations in parts of Hidalgo, Starr and Zapata Counties.



Falcon Dam, TX



Points of Discussion:

- **Emergency Managers & Response Teams:**

- What would you be doing?
- What kinds of decisions are you making? What information do you need to make those decisions?
- What do you need to provide to the public?

- **Science & Agency Teams:**

- What would you be doing to support response?
- Who would you be coordinating/working with?
- What would you be producing, who would you be sending it to, how would you send it, and when?

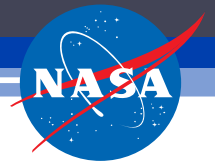




Next Steps

- Refine playbook based on response from each element of timeline across different groups
- Develop a more refined “call list” to enable and promote relationships amongst the sectors *before* a major event
- Continued understanding of data and product needs (latency and delivery tolerance), sensitivities across sectors to better understand roles and responsibilities





Ralph Kahn's presentation





Discussion and wrap-up

- Get updates on current activities of the NASA Disasters Program (disasters, solicitations, other)
- Disaster response – what is “expected” what can *be* expected
- Summary of Disasters through GSFC White Paper and Data Matrix
- Discuss current GSFC disaster activities (research, operational activities, etc.)
- Two-way feedback on current needs, issues, etc.
- **What else would be helpful?**

