RAPID NHERI
Natural Hazards Reconnaissance

RAPID Facility Roadmap of Support Provided to Users

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The RAPID's Roles

- Maintain and calibrate equipment for you to use
- Provide staff assistance for use when necessary
- Assist with proposal preparation:
  - Advice
  - Integration with science plan
  - Provide budget information for RAPID equipment and staff
- Logistical support:
  - Arrange and assist with equipment delivery
  - RApp (RAPID App) to help with team organization/coordination
- ***Outside our scope***:
  - *Coordinating reconnaissance missions*
  - *Setting the scientific objectives for reconnaissance missions*
  - *Providing funding for reconnaissance*

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Who can use the RAPID? (you can!)

- Open to anyone:
  - Academics, government agencies, private industry, etc.
  - Different rates for NSF vs. non-NSF (RAPID equipment is subsidized by NSF)
  - Different priority for equipment requests
  - We aim to accommodate all requests
- NSF Grants:
  - RAPID equipment can be requested for any NSF research
  - Reconnaissance possibilities:
    - NSF RAPID grants
    - NSF supported reconnaissance organizations (GEER http://www.geerassociation.org/ , ISEER (https://hazards.colorado.edu/news/center-news/102)
    - Other NSF proposals

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User Training and Site User Manual

- User training:
  - Recommended but not required
  - 1-Day overview workshops (like this)
    - General and coastal-focused training in Washington D.C., March 26
    - Earthquake-focused training at the NCEE in Los Angeles, June 25
    - Joint GEER-RAPID training in San Francisco, week of September 17
  - 4-Day intensive hands-on workshops (at RAPID headquarters in Seattle)
    - July 24-27, 2018
    - Creates cadre of RAPID equipment experts
    - List of participants and expertise will be maintained on https://rapid.designsafe-ci.org/
- Site user manual:
  - In progress, will be posted on the RAPID website

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Where can the RAPID Equipment be Deployed?

- Locations following natural hazards:
  - Priorities are wind events (hurricanes, tornados), earthquakes, and tsunamis
  - Both immediate response and recovery monitoring possible, as are "pre-event" missions
- To supplement instrumentation at large-scale experimental facilities
  - Priorities are tests at other NHERI facilities
- Focus on short term deployments:
  - Longer term deployments possible but we need to talk
  - Deployments more than two weeks will require a user agreement to ensure equipment can be returned for high priority use if it is needed

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What to Think About Before Requesting Equipment

- Is the project funded or is it in the proposal stage?
- Will our equipment meet you needs?
  - Review the available equipment and capabilities (https://rapid.designsafe-ci.org/equipment-portfolio/)
- Do you know how to use the equipment you want?
- Will you need field assistance from RAPID staff (required for certain equipment)?
- Will you need assistance processing the data (especially lidar data and development of point cloud models)?

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How to Request RAPID Equipment?

- Steps:
  1. Go to the RAPID website at https://rapid.designsafe-ci.org/
  2. Determine the desired equipment from the equipment portfolio at https://rapid.designsafe-ci.org/equipment-portfolio/
  3. Check that it is available for the dates you want
     - New page coming by June showing deployment of RAPID equipment in a calendar format
  4. Complete the preliminary equipment request form at https://rapid.designsafe-ci.org/
     - Button coming to our main page soon
  5. Wait for us to contact you (typically less than 24 hours)
  6. Work through scheduling, logistics, and rates with us
     - Note that the NHERI NCO will assist with scheduling

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RAPID Priorities for Equipment Requests

- The RAPID will make every effort to accommodate all requests
- When we can't, this table sets our priorities
- We have and continue to establish MOU's with other organizations that have similar equipment to help handle intensive drawdowns

User	Data Collection Activity				
	Near-Term Response to a Priority Natural Hazard[1]	Recovery Phase for a Priority Natural Hazard[1]	Experiments at NHERI Facilities	Other Natural Hazards	Other Applications
NSF Supported	1	2	2	3	3
Non –NSF Federal Agency	4	5	5	5	5
Other	5	6	6	6	6

[1] Priority Natural Hazards: Hurricanes, Tornados, Other Windstorms, Storm Surge, Earthquakes, Tsunamis, and Landslides

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Equipment Delivery

- The RAPID will organize the shipping of equipment
  - It may meet you in the field
  - You may retrieve from the UW
  - Our staff may meet you with it
  - You may receive a hand-off from another reconnaissance team
- You will be responsible for some of the delivery costs
- The site user manual (coming to the RAPID website) will have detailed requirements
- The RAPID will help with import/export controls
  - Instrument specific
  - Limitations on certain countries

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User Agreements and Insurance

- Users are required to sign a user agreement:
  - Safe conduct
  - Read user manual
  - For equipment operated by you:
    - Transfer of liability to you (your agency and/or university)
    - Agreement to replace if lost or damaged in your care
- Insurance:
  - RAPID's insurance will cover:
    - Use by our staff
    - Equipment during delivery
  - User's need to:
    - Ensure your agency will cover liability and damage/loss when under your use
    - Most universities have general policies that will cover your use of our equipment
    - You may have to pay for additional coverage depending on the equipment (Z-boat and UAVs)

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User Rates and Fees *(tentative)*

- Final rates will be published by early summer
- Preliminary rates (NSF users, for illustration only):
  - Equipment: $5 (small UAV) to $500 per day (long range lidar)
  - RAPID staff in field/lab: $500 per day + travel
  - RAPID data processing: $750 per day
- 8% overhead on all costs
- Estimated typical mission cost:
  - Long range lidar + medium UAV for 5 days in field without RAPID staff:
    - Equipment: $2750
    - Shipping: $1000 (conservative)
    - Overhead: $300
    - Total: $4050

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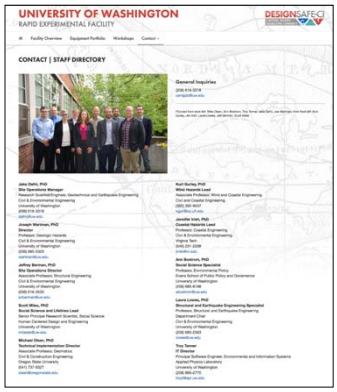
Where to go from here?

- If you are interested in reconnaissance research, **join GEER, or EERI, or other organizations that lead and participate in field missions**—but know too that you may organize your own reconnaissance missions and access RAPID instrumentation.
- If you would like to learn how to use the RAPID instrumentation, apply to attend the July 24-27, 2018 **hands-on training workshop** in Seattle.
- Think about **how reconnaissance can help answer your research questions,** and how reconnaissance can be used to address the **challenges outlined in the science plans.**
- **Be in touch** with us about with any questions or suggestions. Become familiar with our web resources. Contact NSF with rapid-mechanism specific questions.
- **Use and re-use the open data** developed by past, current, and future reconnaissance missions.
- **Spread the word** about the RAPID facility!
- —and thank you.



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