

# **Roundtable of Federal Hazard Mitigation Partners in the Pacific Islands**

March 11 and 12, 2003  
Honolulu, Hawai`i

## **OUTLINE OF PROCEEDINGS**

- ❖ **Overview**
- ❖ **Agenda**
- ❖ **List of Participants**
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## Roundtable of Federal Hazard Mitigation Partners in the Pacific: Overview

A number of federal agencies are conducting cutting-edge hazard identification and mitigation-related activities within the Pacific islands region. These include the ongoing hazard mitigation planning efforts of the Federal Emergency Management Agency (FEMA) under the Disaster Mitigation Act of 2000 as well as its efforts to develop digital flood insurance rate maps (DFIRMs); the U.S. Army Corps of Engineers' flood control and shore protection projects; mitigation-related efforts and assorted data collection and dissemination activities conducted by offices of the National Oceanic and Atmospheric Administration (NOAA); and a variety of data collection, analysis, and mapping activities conducted by the U.S. Geological Survey (USGS). A better understanding of these mitigation activities—what they involve, where they are being conducted, by whom, and when—will enable us as federal partners in the region to identify areas where there may be gaps or overlaps and, perhaps more importantly, to identify areas or projects where we might be able to work together.



photo by Bill Chadwick

The Roundtable of Federal Hazard Mitigation Partners in the Pacific, hosted by the NOAA Pacific Services Center in Honolulu on March 11 and 12, 2003, brought together representatives from agencies, institutions, and organizations involved in natural hazard identification and mitigation activities at the federal level in the Pacific islands.



This roundtable was designed to accomplish three outcomes:

1. Illuminate the unique challenge and opportunities of working in the Pacific, given issues of culture, politics, geography, and history.
2. Invite the sharing of information about the various partner agencies, their purposes and priorities, projects and activities worth spotlighting, and opportunities for collaboration.
3. Motivate and establish ongoing communication and coordination of effort in hazard management in the Pacific.

*Mahalo* to all participants for their input. A special thanks to Marina Piscalish and Kalani Souza of MAPping Change, LLC, for meeting planning, facilitation, and follow-up; Stephen Latimer of the Graduate School, USDA, for meeting logistics; the NOAA Coastal Services Center for input and support; and Eileen Shea and Chris Chung for assistance in planning.



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# Roundtable of Federal Hazard Mitigation Partners in the Pacific Islands

March 11 and 12, 2003

Doubletree Alana Hotel-Waikiki  
1956 Ala Moana Boulevard  
Honolulu, Hawai'i

## AGENDA

### Tuesday, March 11

7:45 – 8:15 Registration and Continental Breakfast

8:15 – 8:20 Gathering/Pule

8:20 – 8:30 Welcome

8:30 – 8:45 Introduction of Participants

8:45 – 9:10 Overview of Agenda and Desired Outcomes

9:10 – 9:30 The Pacific Islands in Context  
**Neil Hannahs**, Kamehameha Schools

9:30 – 10:30 Connecting with End-Users

*Speakers*

*5 min. each*

- **Eileen Shea**, East-West Center
- **Larry Kanda**, Hawai'i Civil Defense
- **Chris Chung**, Hawai'i Coastal Zone Management
- **Ann Sakaguchi**, University of Hawai'i (UH) Social Sciences

Connecting with End-Users

*Facilitated Discussion*

10:30 – 10:45 BREAK

10:45 – 11:00 Introduction to the Panel Process

11:00 – 12:30 Panel #1 – Implementation: Measures and Mechanisms

*Speakers*

*12 min. each*

- **Sally Ziolkowski**, FEMA/Region IX and **David Kennard**, FEMA/PAO  
(FEMA, Disaster Management Act 2000, hazard mitigation proposal process, National Flood Insurance Program, DFIRM, map modernization)
- **Ed Young**, NOAA National Weather Service Pacific Region Headquarters  
(NWS Pacific Region Headquarters products and services, highlighting Pacific Island outreach)

- **Paul Scholz**, NOAA Coastal Services Center, and **Keelin Kuipers**, NOAA Office of Ocean and Coastal Resource Management and the Coastal Services Center  
*(CSC, Coastal Storms Initiative, OCRM role/programs)*
- **Cheryl Anderson** and **Mike Hamnett**, University of Hawai'i Social Science Research Institute  
*(Hawai'i Statewide Hazard Mitigation Forum, state and territory HMPs)*
- **Laura Kong**, NOAA National Weather Service and the International Tsunami Information Center  
*(ITIC Clearinghouse, Hawai'i State Earthquake Advisory Committee and Tsunami Technical Advisory Committee)*

PANEL DISCUSSION – **Moderator, Ed Young**

12:30 – 1:30 LUNCH *(to be provided)*

1:30 – 3:00 Panel #2 – Analysis: Decision-Support Tools and Techniques

*Speakers 8 to 10 min. each*

- **Paul Mizue**, U.S. Army Corps of Engineers  
*(ACOE analysis/modeling tools, Rota and Samoa Flood Studies)*
- **Ed Olenic**, NOAA/NWS Climate Prediction Center  
*(CPC US Hazards Assessment)*
- **Andy Nash**, NOAA/NWS Honolulu Forecast Office  
*(NWS forecast tools)*
- **David Kennard**, FEMA Public Assistance Office, and **Sally Ziolkowski**, FEMA/Region IX  
*(FEMA decision-support tools)*
- **Russell Jackson**, NOAA Coastal Services Center  
*(CSC decision-support tools)*
- **Chris Chiesa** and **Jim Buika**, Pacific Disaster Center  
*(PDC products and services)*
- **Jill Meyer** and **Laurie Sullivan**, NOAA Office of Response and Restoration  
*(ORR products and services)*

PANEL DISCUSSION – **Moderator, Russell Jackson**

3:00 – 3:15 BREAK

3:15 – 4:45 Elements of and Criteria for Quality Interagency Collaboration  
*Facilitated Discussion*

4:45 – 5:00 Day One Wrap-Up and Feedback

5:00 – 6:00 Pau Hana Reception *(pupus poolside)*

## Wednesday, March 12

7:45 – 8:15 Continental Breakfast

8:15 – 8:30 Agenda Review

8:30 – 10:00 Panel #3 – Inventory: Baseline Data

*Speakers*

*7 to 8 min. each*

- **Henry Wolter**, USGS Western Geographic Science Center  
*(USGS products and services)*
- **Gerry Wheaton**, NOAA Office of Coast Survey  
*(OCS, Nautical charts and the US Coast pilot, NOWCOAST)*
- **Darcee Killpack**, NOAA Pacific Services Center  
*(NOAA imagery, topography, and bathymetry products)*
- **Craig Tasaka**, Hawai'i Department of Business, Economic Development, and Tourism  
*(HDBEDT social and economic assets data)*
- **Craig Clouet**, Kamehameha Schools  
*(Cultural and environmental assets data)*
- **Pat Caldwell**, NOAA National Coastal Data Development Center  
*(NCDDC historical wave and water level data)*
- **Lukas Moxey**, Joint Institute for Marine and Atmospheric Research  
*(JIMAR, Coastwatch products)*
- **Eric Yamashita**, UH Social Sciences Research Institute  
*(Status of hazards-related geospatial data in Hawai'i and Samoa)*

PANEL DISCUSSION – **Moderator, Henry Wolter**

10:00 – 10:15 BREAK

10:15 – 11:45 Panel #4 – Inventory: Natural Hazards Events and Trends

*Speakers*

*6 to 7 min. each*

- **Bruce Richmond**, USGS  
*(Atlas of Natural Hazards in the Hawaiian Coastal Zone)*
- **Gary Chock**, Martin and Chock, Inc.  
*(SCDMSAC AAL Estimates)*
- **Eileen Shea**, East-West Center  
*(Update on Pacific climate activities)*
- **Eddie Bernard**, NOAA Pacific Marine Environmental Laboratory  
*(PMEL, National Tsunami Hazard Mitigation Program)*
- **Roger Lukas**, UH School of Ocean and Earth Science and Technology  
*(Hawai'i Ocean Regional Observing System)*
- **Bernie Kilonsky** and **Mark Merrifield**, UH School of Ocean and Earth Science and Technology  
*(Trends of sea level rise)*
- **Chip Fletcher**, UH School of Ocean and Earth Science and Technology  
*(Coastal erosion hazards)*
- **Paul Okubo**, USGS Hawaiian Volcano Observatory  
*(Seismic and volcanic hazards)*

- **Ed Harp, USGS**  
*(Data to support the documentation of landslide distributions and analysis of landslide hazards)*

**PANEL DISCUSSION – Moderator, Eileen Shea**

- 11:45 – 12:30 Reflection of Panel Presentations and  
Review of Online Project and Activities Summaries
- 12:30 – 1:30 Working Lunch – Discussing High-Impact Possibilities for Shared Effort  
(Activities and Coordination)
- 1:30 – 1:45 BREAK
- 1:45 – 2:45 ROUNDTABLE #1 – Identification of Priority Projects  
and Activities for Joint Action  
*Facilitated Discussion*
- 2:30 – 2:45 BREAK
- 2:45 – 3:30 ROUNDTABLE #2 – Identification of Priority Communication  
and Coordination Needs and Mechanisms for the Region  
*Facilitated Discussion*
- 3:30 – 3:45 BREAK
- 3:45 – 4:15 Action Items and Immediate Next Steps
- 4:15 – 4:45 Closure and Feedback

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## Roundtable of Federal Hazard Mitigation Partners in the Pacific Islands

### DISCUSSION SUMMARIES LINKED TO AGENDA

#### Tuesday, March 11

9:30 – 10:30 Connecting with End-Users

*Facilitated Discussion*

11:00 – 12:30 Panel #1 – Implementation: Measures and Mechanisms

PANEL DISCUSSION –

- Create pilot project to make multi-hazard mapping
- Bring geophysical data in a GIS context
- Bring assets to the table of proactive planning efforts/pre-disaster planning
- Make mapping systems compatible
- Make base-line data sets compatible
- Agree on data sets
- Support capacity building for emergency managers
- Support cross training for emergency managers
- Link what is being done at state and county level with regional and national level efforts
- ICONUS consortium
- Use PSC to create and sustain these kinds of coordinated efforts
- Create forum as coordinating entity
- Optimize/coordinate applications in region for federal pre-disaster planning funds

1:30 – 3:00 Panel #2 – Analysis: Decision-Support Tools and Techniques

PANEL DISCUSSION –

- Build GIS capacity/optimize the fall-out possible from GIS planning
- Build processes for community-wide participation in hazard and mitigation management planning (rather than just two or three groups involved)
- Create a database or inventory of the decision-support tools available for use by end-users
- Assure consistency of information available from decision-tool maps and databases, regardless of the agency the information comes from
- Train people in the use of the tools and ensure *appropriate* use
- Build inventories for the islands of the Pacific
- Foster bilateral relationships to support infrastructure for FHM
- Integrate databases
- Complete/support the Pacific component of various project – giving us a voice in the development of those efforts
- Integrate non-western values and sources of data into our work within the region
- Improve efforts and effectiveness of end-user involvement from the very beginning
- Test or verify the physical models being used in these information systems
- Define what we mean by an extreme event and how we should measure it. Determine what needs to be measured and how we can we do it.

- Address the need to better document disasters, at proper scales, and early enough to be useful
- Determine the shelf-life of actual software and decision tools. How are software and data services updated, and how are users informed of updates or inadequacies of tools as developments occur?
- Commit to design and use a disaster accounting system – looking at and measuring losses and impacts
- Create indicator indices to better assess effectiveness of policies, programs, etc.
- Improve accessibility of loss-estimate data
- Determine proper steps for doing a loss estimate inventory – pre-plan and prepare teams

3:15 – 4:45 Elements of and Criteria for Quality Interagency Collaboration

*Facilitated Discussion*

- Impact (or significance on the region or the FHM field)
- Capacity (funds, data, expertise, time, staff, etc.)
- Motivation (of those who will do the work)
- Commitment (of leadership)

**Wednesday, March 12**

8:30 – 10:00 Panel #3 – Inventory: Baseline Data

PANEL DISCUSSION –

- Coordinate LIDAR data collection (talk to John Dorman, North Carolina, and Puget Sound folks about lessons learned)
- Create a list server for posting data on pending disasters
- Create a single source/clearinghouse of bathymetry data sets
- Establish a one-stop digital portal for data (FYI: NCDDC has assigned itself this task)
- Inventory data sets for hazard assessment decision making
- Create a cultural assets inventory (be sensitive about sharing data and information)
- Ensure consistency and compatibility between GIS mapping systems
- Consider other users' needs when collecting data via a centralized and coordinated project/activity listing (e.g., PSC or PDC)

10:15 – 11:45 Panel #4 – Inventory: Natural Hazards Events and Trends

PANEL DISCUSSION –

- Identify sources of information
- Establish a single source for data archiving and management (especially for projects whose funding has run out)
- Look at existing/emerging activities that offer chances for people to be involved and assist (e.g., hazards aspects of ocean info systems, Tsunami program)
- Link to end-users, customized portals (e.g., PREL, NWS)
- Build a database of best practices and experience on reaching out and serving end-users and creating a forum for dialogue
- Capture best practices for initiating and sustaining programs beyond their original funding
- Participate in NESDIS meeting in Boulder, Colorado, in June (NGDC) to support expansion into international arena

- Collaborate to support the region's aerial photography needs (i.e., develop an RFP specifying needs to be met by the contractor; capitalize on current moment of opportunity with the military)
- Undertake pre-disaster planning and roll it into the state plan for disaster management (i.e., RFP's with specs to capitalize on FEMA disaster response monies)
- Design emergency manager training by FHM (what to do and what to ask for)

11:45 – 12:30 Reflection of Panel Presentations and  
Review of Online Project and Activities Summaries

#### Issues/Questions Generated by Panel Presentations

- How much coordination is enough or too much?
- How do we leverage this "federal family" to bring more funding, resources, programs, and projects to the region?
- How do we foster an understanding that working in the Pacific means working internationally? Is SHOAL data available for use?
- Did the dam break model account for existing precipitation?
- Is there a database that identifies where contaminated materials exist?

#### Needs Communicated by Presenters and Captured during Panel Presentations

- Clear, accepted terminology and definitions
- Information dissemination in low-tech communities
- Getting information out to those who need and can use it
- Customer-oriented, needs-based approaches to service
- Application of coastal zone management practices in Pacific region
- Regional coordination of hazard managers
- Mapping hazards and addressing the intersection of politics, geography, and science
- Using the state HMF model as a frame for regional HMF model
- Streamlining the channel for forecasting (i.e., optimizing NWS framework for forecasting)
- How Hawai'i should be represented in the CPC US Hazards Assessment? (Tell Ed Olenic); feedback from the region regarding hazard assessment needs
- AMBER adjustments to flash flood guidance
- Combine AMBER output with other GIS data layers; produce a format in real time and distribute to all who want it
- Good historical information for Pacific Disaster Center (Risk and Vulnerability Assessment)
- Interest in OR&R database of contaminants in Pacific
- Expand into the Pacific abandoned vessel removal efforts (OR&R project)

1:45 – 2:45 ROUNDTABLE #1 – Identification of Priority Projects and Activities for Joint  
Action

*Facilitated Discussion – Note: Numbers in parentheses indicate number of votes for that project. Numbers in bold are the highest-priority projects.*

#### Prioritized Short-Term Projects

- Address needs of end-users. Host meeting with end-users, hold end-user workshops, and design a process for keeping this relationship ongoing **(23)**
- Resolve data issues (coordination, maintenance, consistent standards, distribution, e.g., LIDAR aerial photos, bathy/topo data) **(21)**
- Create an inventory of hazards, data and activities, models, and tools **(16)**
- Assign a federal coordinator for activities who will secure high-level support and consistent funding for HM **(15)**

- Identify resources for this forum of federal HM partners and host an annual March PI RM Hui **(14)**
- Assemble a hazard-focused LIDAR group (9)
- Create a FHM list server (8)
- Create a database clearing house (6)
- Encourage links to other agencies and activities (5)
- Get recommendations from meeting participants regarding what data sets are needed (2)
- Establish a system for sharing best practices (5)
- Engage federal leadership responses to NAS report (2)
- Apply results of inventories to the results of state hazard plans (2)

#### Prioritized Mid- to Long-Term Projects

- Work with states and local governments on HM capabilities **(16)**
- Conduct a needs assessment
- Get correct specs into response OPS and MT plans
- Exercise plans in realistic tabletop scenarios
- Develop a suite of decision-support tools to ensure consistency and compatibility **(14)**
- Organize/coordinate regional hazard-specific forums (regional focal point/host for these efforts and virtual, inter-agency network on hazards) **(14)**
- Long-term commitment and follow-up on the outcomes of this forum **(14)**
- Identify end-user needs and plan for response to those needs **(13)**
- Inventory and analyze agency missions and projects (12)
- Support training and capacity building for federal hazard managers (best practices and latest technology) (9)
- Promote proactive work and planning (9)
- Identify priority data needs and where the gaps exist (7)
- Tap into or establish a new post-disaster surveying capability (6)
- Identify an entity to hold and maintain the hazards ATLAS data from HCZ (6)
- Implement an 8–14 day forecast (CPC) (5)
- Acquire pre-disaster baseline built environment data and funding for such activities (5)
- Acquire high-resolution DEM data (10 meters) (4)
- Incorporate third-party data into HAZUS (1)

2:45 – 3:30      ROUNDTABLE #2 – Identification of Priority Communication  
and Coordination Needs and Mechanisms for the Region  
*Facilitated Discussion*

#### Ideas Regarding Ongoing Coordination and Communication for This Network

- Create a name/logo (Pacific Hazards Alliance, Pacific All-Hazards Union—PAU)
- Establish a short-term coordination office and project manager or executive secretary for the group (PSC?)
- Design user workshops to take advantage of existing mechanisms (i.e., climate workshops)
- Create a list server
- Establish a Web site for the group (OIA managed?)
- Have sub or working groups meet and coordinate as needed. Take advantage of existing mechanisms (i.e., state-wide LIDAR group, climate info system network)
- Have yearly meetings of the PAU
- Target outreach activities (land-use planning community, DOD, EPA, etc.)
- Create a council with reps from each of the agencies to report to the federal coordinator
- Establish rules of engagement or by-laws for the PAU

- Consider OIA Pacific Office as the coordinating entity for this network
- Partner with NGOs and take advantage of their funding relationships and their other strengths

3:45 – 4:15      Action Items and Immediate Next Steps

Agreed-Upon Next Steps

- Distribute all meeting proceedings by end of the week
- By end of April, send revised and final forum proceedings
- Send out forum evaluation
- Put up a Web site that includes the info shared here and gathered for this meeting
- Use the Web site for moving the collaboration forward
- Identify needed subgroups and enlist participation from each partner within the next month
- Use the tools from this forum as the beginning boiler plate for a strategic plan

**Projects and Activities Database Submissions**  
**Roundtable of Federal Hazard Mitigation Partners in the Pacific Islands**  
**March 11 and 12, 2003**

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NOAA, NOC, National Geodetic Survey .....	3
Hawai`i Coastal Zone Management Program.....	4
University of Hawai`i, School of Ocean and Earth Science and Technology	
Department of Geology and Geophysics, Coastal Geology Group.....	5
University of Hawai`i Social Science Research Institute.....	6
NOAA National Weather Service Climate Prediction Center.....	8
US Geological Survey .....	10
NOAA/NWS Honolulu Weather Forecast Office .....	11
National Coastal Data Development Center .....	12
Pacific Disaster Center .....	13
NOAA, Pacific Marine Environmental Laboratory .....	15
USGS, Hawaiian Volcano Observatory.....	17
Federal Emergency Management Agency .....	18
USGS, Coastal and Marine Geology Program .....	19
NOAA Office of Response and Restoration .....	20
Guam Weather Forecast Office .....	21
NOAA Office of Coast Survey .....	22
Department of the Interior, USGS .....	23
Joint Institute of Marine and Atmospheric Research, University of Hawai`i.....	24
State of Hawai`i Civil Defense.....	25
U.S. Army Corps of Engineers.....	26
NOAA Coastal Services Center .....	27

**Agency1:** Pacific Services Center

**Agency1\_Acronym:** NOAA/NOS/PSC

**Mission:** Enhance the ability of coastal communities in American Samoa, CNMI, Guam, and Hawai'i to mitigate the impacts of catastrophic and chronic natural hazards through partnership development, information exchange, and technical assistance.

**Long-term:** Enhance the ability of coastal communities in American Samoa, CNMI, Guam, and Hawai'i to mitigate the impacts of catastrophic and chronic natural hazards through partnership development, information exchange, and technical assistance.

**Short-term:** Project opportunities analysis, April 03

Roundtable of Federal Mitigation Partners in the Pacific Islands – March 03

Inventory templating – ongoing

Hazard Mitigation Options Training Module – August 03

Storm Damage Assessment and Reporting Tool (SDART) – 04

**Region:** Pacific

**Island:** Hawai'i, American Samoa, Guam, CNMI

**Lead Personnel:** John Marra

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**User:** Disaster Response, Adaptation Planning

**Hazard:** Hurricanes or Typhoons, Wind, Rain/Riverine flooding, Waves and Water Levels, Sea-Level Rise, Earthquakes and Subsidence, Tsunami, Landslides and Slope Erosion, Volcanism

**Phase:** Inventory, Analysis, Implementation

**Agency1:** NOAA, NOC, National Geodetic Survey

**Agency1\_Acronym:** NGS

**Mission:** Deliver and evolve the nation's foundation of reference for latitude, longitude, height, velocity, shoreline, and gravity throughout the United States with consistency, accuracy, timeliness, currency, and easy access to support public safety, coastal stewardship, economic prosperity, and environmental well being.

**Long-term:**

### 1. NATIONAL SPATIAL REFERENCE SYSTEM DELIVERY AND EVOLUTION

A. Delivery: Increase the reliability, accessibility, availability, and accuracy of the National Spatial Reference System (NSRS).

Monitor NSRS (results: latitude, longitude, height, velocity, shoreline, gravity, along with temporal changes and data accuracy estimates).

Update standards and specifications (results: accessibility, availability, accuracy, and consistency).

Accelerate the completion of survey projects (results: access and timeliness).

Disseminate data and information in most customer responsive and least costly manner.

B. Evolution: Evolve the NSRS to respond to the changing environment and user needs.

Increase efficiencies and accuracy with innovative technology application.

Broaden the applications for nontraditional users to achieve economic gains

Implement height modernization (results: accuracy, consistency, timeliness, and efficiency).

Expand CORS nationwide.

Complete and update the national shoreline.

Improve observations and models for determination of velocities.

Assess new remote sensing technologies in response to customer needs.

### 2. CUSTOMERS AND PARTNERS Optimize relationships to meet evolving needs and changing requirements.

A. Understand and anticipate customer needs.

Implement mechanism for communications and feedback from customers and end-users.

Expand customer base beyond traditional users.

Promote one-stop shopping for NOS customers.

Deliver standards, specifications, data, and information with customer efficiency objectives.

Enable customers to efficiently use geodetic products and techniques.

B. External Partners: Enhance partnerships to increase transferability of geodetic tools, methods, techniques, and technologies.

Increase support for state advisor program to include coverage for all coastal states.

Expand advisor role for NOS integration.

Optimize synergies with federal partners.

Expand advisor role for community-based geodesy to better support state and local geographic information systems.

Increase linkages with professional and industry groups.

C. Exploit partnerships within NOAA and NOS to achieve agency goals.

D. Achieve one-stop shopping for users of NOS products and services.

E. Leverage federal partnerships.

F. Increase dissemination and application of standards, specifications, and guidelines.

G. Initiate intra-NOS synergies

H. Enable users to efficiently work with their own leveling data.

### 3. TECHNICAL LEADERSHIP/DEVELOPMENT AND APPLICATIONS Achieve world-class leadership in use and innovative techniques and application of geodetic science, remote sensing, and precise positioning.

A. Expand GPS applications to height modernization and beyond.

B. Enhance air, land, marine transportation safety and efficiencies.

C. Expand remote sensing and photogrammetry applications in the coastal environment.

D. Increase influence on world standards and spatial infrastructure.

Enhance participation in international forums, groups, and organizations.

Coordinate with NOS international office.

E. Influence national and international policy development.



F. Increase publication of professional papers.

**Short-term:** GPS survey campaign in CNMI that will provide horizontal and vertical integration and positional improvements required to support the diversity of GIS, engineering, geophysical, charting, and mapping applications required within NOAA/NOC and other federal and local government agencies and private sector requirements. NGS will conduct an integrated survey program to provide positional accuracies better than 1 cm in the horizontal and 2 cm in the ellipsoid height components. Goals to accomplish: Establish a High Accuracy Reference Network (HARN)/Cooperative Base Network (CBN) with 5–10 km spacing on each island. Establish geodetic-quality leveling network on each island. Establish an absolute gravity station or relative gravity on all the islands. The GPS observations will start in first of April and the leveling will be done from April to June.

**User:** Adaptation Planning, Scientific Community

**Hazard:** Sea-Level Rise

**Agency1:** Hawaii Coastal Zone Management Program

**Agency1\_Acronym:** CZM-Hawaii

**Mission:** Partnering with Hawaii's communities to promote a sustainable coastal environment by building upon our heritage and inspiring island stewardship.

**Long-term:** Partnership development, information exchange, technical and funding support through participation in coastal hazard activities such as the Statewide Hazard Mitigation Forum, the Hawaii State Earthquake Advisory Committee, the Tsunami Technical Review Committee, the Lava Flow Mitigation Technical Committee, the Hawaii Coastal Erosion Committee, and the steering committees of each county's pre-disaster mitigation planning group. Ongoing public outreach and education by participation in disaster mitigation expositions, building industry fairs, and community and school events.

**Short-term:** County of Kauai Multi-Hazard Mitigation Plan, Maui Multi-Hazard Mitigation Plan, County of Hawaii Multi-Hazard Mitigation Plan, State of Hawaii Multi-Hazard Mitigation Plan-each of these plans are intended to be completed by Nov. 2003, and in no event later than Nov. 2004.

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**User:** Adaptation Planning

**Hazard:** Hurricanes or Typhoons, Wind, Rain/Riverine Flooding, Waves and Water Levels, Fire and Drought, Earthquakes and Subsidence, Tsunami, Landslides and Slope Erosion, Volcanism

**Phase:** Inventory, Analysis, Implementation

**Agency1:** University of Hawai`i, School of Ocean and Earth Science and Technology,  
Department of Geology and Geophysics – Coastal Geology Group

**Agency1\_Acronym:** SOEST

**Mission:** Conduct scientific research and teach at undergraduate and graduate levels

**Long-term:** Study of coastal geologic history and coastal processes

**Short-term:** Determination of shoreline change rates for Hawaiian Islands

Determination of reef natural accretion history and mid-Pacific sea level history and impacts

**Systems1:** NDBC Buoy

**Systems2:** Shoals Lidar

**Systems3:** Aerial Photographs

**Systems4:** Direct beach profile measurements

**Region:** Hawai`i

**Island:** Oahu

**Lead\_Personnel:** Chip Fletcher

**Title:** Professor

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**Primary\_URL:** [http://www.soest.hawaii.edu/coasts/cgg\\_main.html](http://www.soest.hawaii.edu/coasts/cgg_main.html)

**User:** Scientific Community

**Hazard:** Hurricanes or Typhoons, Waves and Water Levels, Sea-Level Rise, Tsunami

**Phase:** Inventory, Analysis

**Agency1:** University of Hawai'i Social Science Research Institute

**Agency1\_Acronym:** UHSSRI

**Mission:** The Social Science Research Institute (SSRI) facilitates and supports interdisciplinary, applied research that addresses critical, social, environmental, and economic problems primarily in Hawai'i and the Asia Pacific region. This is done through collaboration with faculty and students throughout the University of Hawai'i and with other educational and research institutions, regional and international organizations, the private sector, and federal, state, and county agencies. It is supported largely by contracts and grants from public agencies and private organizations.

SSRI serves as the sponsored research division of the College of Social Sciences. SSRI provides practical experience to students at the University of Hawai'i through involvement in research, planning, and training projects. SSRI's staff assists county, state, and federal agencies and local community groups in Hawai'i with training and technical assistance. SSRI also works with instructional units to integrate SSRI's research efforts into courses offered at the University of Hawai'i.

The institute is currently working in five problem areas: crime, drug abuse, youth problems, and poverty; resources, sustainable development, and futures research; telecommunication and information policy; culture, language and social problems; and health services and health policy. SSRI also cooperatively manages the UH Economic Research Organization (UHERO) with the Department of Economics and the Globalization Research Center. SSRI also provides needs assessment and evaluation research services.

**Long-term:** Resource Management, Sustainable Development, and Futures Research  
Projects in this area focus on fisheries development and management; ecological restoration; improving coastal zone and ocean resource management; policy and planning options for global climate variability and change; mitigating the risks of natural disasters; studies of the economies of Hawai'i and the Asia-Pacific region; environmental information scanning, envisioning preferred futures workshops; scenario building; strategic and long range planning for government agencies and public institutions; appropriate dispute resolution procedures for judiciaries; law and technology in the 21st Century; telecommunication and technology futures; and curriculum development for futures studies. The Hawai'i Research Center for Futures Studies and the UH Economic Research Organization work in this program area.

Established in 1998, the Hawaii Statewide Hazard Mitigation Forum has been formed to raise public awareness about how to mitigate (reduce) property loss due to natural hazards. While we cannot keep natural disasters from happening, we can work toward lessening their economic effects. Hawaii Statewide Hazard Mitigation Forum members represent county, state, and federal agencies, as well as the private sector. The Forum has been chaired by the Director of SSRI and staffed by SSRI personnel along with personnel from Hawaii State Civil Defense. The Forum will continue to promote hazard mitigation activities indefinitely.

**Short-term:** Pacific ENSO Applications Center (1994-present) provides seasonal to inter-annual climate forecast and information products to the US affiliated Pacific Islands as a joint venture of the University of Hawai'i, the University of Guam, the Pacific Basin Development Council and the US National Weather Service, Pacific Region. Newsletter published quarterly with tailored climate forecasts and information on El Nino and La Nina events and their impacts. Also includes research on climate applications in water resource management, health, fisheries and other sectors. Website <<http://lumahai.soest.hawaii.edu/Enso/index.html>>

Statewide Hazard Mitigation Forum public information and public awareness campaign (February 2001-present) provides information to Hawaii's people on the risks of natural disasters and what can be done to mitigate those risks. Primary communication channel is the website:

<http://www.mothernature-hawaii.com/>. Campaign planned by Statewide Hazard Mitigation Forum Public Information and Awareness Committee. Program staffed by students and faculty of SSRI. Website supplemented by extensive media campaign in 2001-2002.

Kauai Project Impact and Mitigation Planning Project (October 2001-September 2003). Scope: facilitation of a hazard mitigation plan for the County of Kauai to meet Disaster Management Act of 2000 mitigation planning requirements. Involves development of GIS layers for critical facilities and important assets, a risk and vulnerability assessment, and development of a mitigation plan.

State of Hawaii Hazard Mitigation Planning Program (June 2002-November 2003). Scope: facilitation of development of county and state hazard mitigation plans to meet requirements of

the Disaster Management Act of 2000. Involves development of GIS layers for the State plan and assisting county governments in development of their plan. Program planned by Statewide Hazard Mitigation Forum Planning Committee and staffed by State Civil Defense and students and staff of SSRI.

City and County of Honolulu Risk and Vulnerability Assessment (September 2002-September 2003). Scope: Assisting the City and County of Honolulu GIS unit to develop GIS layers for a risk and vulnerability assessment. SSRI may bid on a contract to facilitate development of the City and County's mitigation plan also.

American Samoa Hazard Mitigation Planning Project (February 2003-October 2003) conducted through a contract from American Samoa Government on a sub-contract with the East-West Center/Pacific Disaster Center. Project entails gathering data GIS and other data for a risk and vulnerability assessment to be conducted by the Pacific Disaster Center and facilitation of a planning process by faculty, students, and staff of SSRI.

Drought Planning for Statewide Hazard Mitigation Plan (January 2003-September 2003). This is a joint venture with the School of Ocean and Earth Sciences and Technology. SSRI is developing GIS layers for a drought risk and vulnerability assessment to be used by the Department of Land and Natural Disaster to revise a drought plan to be included in the Statewide Hazard Mitigation Plan.

Impact Climate Variability and Change on Health in the Pacific Islands (July 2001-September 2003). This is the third phase of a project aimed at understanding the impact of seasonal to inter-annual climate variability on the incidence of reportable diseases in the Pacific Islands. This is a joint venture involving the East-West Center, the Fiji School of Medicine, the ministries of Health in Cook Islands and Fiji, and the Cook Islands and Fiji Meteorological Services.

**Region:** Pacific

**Island:** Oahu

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**Hazard:** Hurricanes or Typhoons, Wind, Rain/Riverine Flooding, Waves and Water Levels, Sea-Level Rise, Fire and Drought, Earthquakes and Subsidence, Tsunami, Landslides and Slope Erosion, Volcanism

**Phase:** Inventory, Analysis, Implementation

**Agency1:** Department of Commerce-National Oceanic and Atmospheric Administration-National Weather Service-Climate Prediction Center

**Agency1\_Acronym:** DOC-NOAA-NWS-CPC

**Mission:** CPC monitors, diagnoses and predicts short-term (1 week to years) climate variations for the protection of life and property and enhancement of the U.S. economy.

**Long-term:** CPC and the Office of Climate, Weather and Water Services, is developing partnerships with the energy, agriculture, financial and emergency management communities for the purpose of making CPC products more useful.

**Short-term:** 1. U.S. Hazards Assessment- an operational product produced each week. Valid for days 3-14 in the future. Gives categorical forecasts of extreme precipitation, flood, drought, wind, severe weather hazards. Released each Tuesday, but updated frequently on Wednesday through Friday. Begun September 1997. Became operational in September 2000. Product consists of a web page: <http://www.cpc.ncep.noaa.gov/products/predictions/threats> and a live, free telephone conference call (send email to [mike.halpert@noaa.gov](mailto:mike.halpert@noaa.gov) to subscribe) each Wednesday at 2:00 PM Eastern Time, lasting about 1/2 hour. Dissemination is via AWIPS, Family of Services and Internet.

2. 6-10 Day Outlook of Average Temperature and Total Precipitation operational product. Issued daily between 3:00 PM and 4:00 PM Eastern Time. Product consists of: a) maps over continental U.S. and Alaska of the total probability of the occurrence of the most likely of three categories (above, normal and below) of 5-day mean temperature and total precipitation, b) A text bulletin entitled "Prognostic Discussion" which describes the forecaster's reasoning and which includes a table giving a state-by-state breakdown of the forecast categories. The product is prepared by a single forecaster each week day (including holidays) and by an automated process on weekends. Dissemination is to AWIPS, Family of Services and Internet.

3. 8-14 Day Outlook of Average Temperature and Total Precipitation. Co-produced/issued with the 6-10 Day Outlook. Shares the text bulletin with the 6-10 Day Outlook. Maps use the same format. Dissemination modes and schedule are identical to 6-10 Day product.

4. 30-day Outlook of Average Temperature and Total Precipitation. Consists of 1 map for each variable (T, P) of the probability anomaly of the most likely of three (above, normal, below) categories, and a text bulletin giving forecasters reasoning. Produced once each month and disseminated on the Thursday falling between the 15th and the 21st, inclusive. The product is valid for the upcoming calendar month and, therefore, has a lead time of about 2 weeks. A zero-lead 30-day experimental product is being tested.

5. 90-day Outlook of Average Temperature and Total Precipitation for CONUS and Alaska. This suite of products consists of 1 map for each variable (T, P) of the probability anomaly of three categories (above, normal, below), for 13 lead times, ranging from 1/2 month (i.e., the upcoming set of 3 adjacent months), 1 1/2 months (i.e., the set of 3 adjacent months starting 1 1/2 months in the future), ..., 12 1/2 months. Thus, there are a total of 26 maps for each issuance of this product. A text bulletin accompanies this product. The product is issued each month on the Thursday falling between the 15th and the 21st, inclusive. Dissemination is to AWIPS, Family of Services and Internet.

6. 90-Day Hawaiian Outlook. This is a text product and is issued at the same time, via the same modes and for the same lead-times as the 90-day Outlook for CONUS and Alaska.

7. Experimental 90-day Outlook for the Pacific Islands. Gives probability of precipitation for central Pacific Islands.

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**User:** Incident Response, Disaster Response, Adaptation Planning, Scientific Community, General Public

**Hazard:** Hurricanes or Typhoons, Wind, Rain/Riverine Flooding, Waves and Water Levels, Sea-Level Rise, Fire and Drought

**Phase:** Analysis

**Agency1:** U S Geological Survey

**Agency1\_Acronym:** USGS - Geography Discipline

**Mission:** Mapping and Geographic Science

**Long-term:** Implementation of The National Map and Homeland Security Mapping of the high Priority 133 Urban Areas. Geographic Science Activities including advanced applications of LIDAR and IFSAR, Satellite System Sensors & Integrated Science Programs which includes the Water, Biology, and Geology Disciplines of the USGS.

**Short-term:** National Map implementation projects, which includes data integration, ArcIms & and Web Mapping Services for data dissemination

**Region:** Western US and Pacific Basin

**Island:** Oahu

**Lead\_Personnel:** Kenneth J. Osborn

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**Agency2:** USGS

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**User:** Disaster Response, Scientific Community



**Agency1:** NOAA/NWS/WFO Honolulu

**Agency1\_Acronym:**

**Mission:** The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure, which can be used by other governmental agencies, the private sector, the public, and the global community.

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**User:** Disaster Response, Scientific Community, General Public

**Hazard:** Hurricanes or Typhoons, Wind, Rain/Riverine Flooding, Waves and Water Levels, Fire and Drought

**Phase:** Inventory, Analysis, Implementation

**Agency1:** National Coastal Data Development Center

**Agency1\_Acronym:** NOAA/NESDIS/NODC/NCDDC

**Mission:** Archive of and access to coastal oceanographic data

**Long-term:** NCDDC: populate NOAA archives; build coastal catalog for distributed archives; serve data and products

Joint Archive for Sea Level (JASL): international archive of science-ready hourly, daily, and monthly values: continue to populate archive

Joint Archive for Shipboard ADCP (JASADCP): international archive of science-ready ocean current measurements from vessel-mounted ADCPs; continue to populate, serve as Data Assembly Center for CLIVAR

**Short-term:** No specific short-term projects

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**User:** Incident Response, Disaster Response, Adaptation Planning, Scientific Community, General Public

**Hazard:** Waves and Water Levels, Sea-Level Rise

**Phase:** Inventory

**Agency1:** Pacific Disaster Center

**Agency1\_Acronym:** PDC

**Mission:** Pacific Disaster Center's mission is to support the development of more effective policies, institutions, programs and information products for the comprehensive disaster management community of the Asia-Pacific region and beyond.

**Long-term:** - Develop and Apply Risk and Vulnerability Assessment Methodologies  
- Implement/Enhance Decision/Policy Maker Support Networks  
- Establish Methods of Capacity Enhancement related to information and knowledge supporting Disaster Management

**Short-term:** IDSS - The PDC has been supporting institutional and infrastructure development in the Caribbean region leading to the development of an Integrated Decision Support System (IDSS). IDSS is designed to support planning, preparation, and recovery from regional natural disasters. Sponsored by humanitarian assistance elements of the US Southern Command (USSOUTHCOM), its goal is to establish institutional resources, at the regional and national level, supporting comprehensive emergency management.

APHAVA - In support of the needs of regional planning agencies involved in disaster mitigation and preparedness, the PDC is developing a web-accessible Asia Pacific Natural Hazard and Vulnerability Atlas (APHAVA). APHAVA will provide a venue for decision makers to explore issues related to risk, vulnerability, and regional impact assessment within a geospatial framework.

SOPAC/CHARM RVA - As part of South Pacific Applied Geophysical Commission's (SOPAC) Comprehensive Hazard, Risk and Mitigation (CHARM) initiative, this project coordinates the application of PDC's modeling and data resources with the Pacific Marine Environmental Laboratory (PMEL) in the formulation of tsunami inundation products of Port Vila and Mele Bay. These products include inundation maps, damage assessments, and data visualization products. SOPAC funded this project through the World Bank's Catastrophic Insurance Pilot Project.

American Samoa RVA and Mitigation Project - A two-phase effort leading to a hazard mitigation plan for the American Samoa. Phase I will develop a comprehensive Natural Hazard Risk and Vulnerability Assessment, to gain an understanding of the risks of natural disasters. Phase II will develop and provide for the implementation of the American Samoa Mitigation Plan.

JUSTSAP - Over the last three years the PDC has supported the Japan-US Science, Technology and Space Applications Program (JUSTSAP). The PDC and the Asia Disaster Reduction Center now co-chair the JUSTSAP working group on Disaster Monitoring, Management, and Mitigation (DM3). An exercise exploring the application of remote sensing and electronic collaboration technologies for improved disaster response and management is planned for November of 2004.

DPMA - The PDC has been supporting the Disaster Prevention and Mitigation Activity (DPMA). DPMA is a US Army, Pacific (USARPAC) humanitarian assistance/disaster response (HADR) program. The HADR provides a fundamental overview of a nation's vulnerabilities and a review of the national disaster plan. This support has contributed to a more thorough assessment of the resources at risk within the island nations in the Southern Pacific and Indian Oceans. This activity continues this year in the Philippines.

Regional Exercise Support – PDC provides emergency managers and planners within Hawai'i and throughout Asia-Pacific with collaboration tools and dynamic information products addressing disaster preparedness, response and recovery phases. Recent and upcoming exercises include Cobra Gold, Blue Pacific and Makani Pahili.

**Region:** Greater Asia-Pacific Region

**Lead\_Personnel:** Mr. Peter Colvin

**Title:** Executive Director

**Agency2:** Pacific Disaster Center

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**State\_Territory:** HI

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**Email:** pcolvin@pdc.org

**Primary\_URL:** [www.pdc.org](http://www.pdc.org)

**User:** Disaster Response, Adaptation Planning, Scientific Community

**Hazard:** Hurricanes or Typhoons, Wind, Rain/Riverine Flooding, Waves and Water Levels, Fire and Drought, Earthquakes and Subsidence, Tsunami, Volcanism, Hazardous Materials

**Phase:** Inventory, Analysis

**Agency1:** National Oceanic and Atmospheric Administration / Pacific Marine Environmental Laboratory

**Agency1\_Acronym:** NOAA/PMEL

**Mission:** Improve tsunami hazard mitigation products and the speed, accuracy and reliability of tsunami warnings.

**Long-term:** 1. The NOAA Center for Tsunami Inundation Mapping Efforts (TIME). The NOAA TIME Center was established at PMEL by the U.S. National Tsunami Hazard Mitigation Program (NTHMP), a NOAA-led, multi-State (AK, CA, HI, OR, WA), multi-agency (NOAA, USGS, FEMA) effort.

Long-term Technical Assistance:

- Tsunami Hazard Mitigation: Guide and assist NTHMP partners in the development of tools and products, such as tsunami inundation maps.

- Tsunami Warning: Apply the latest advances in measurement and modeling technology to improve speed, accuracy and reliability.

Partnership Development:

- Tsunami Hazard Mitigation: State and local Emergency Management (EM) and Technical agencies and officials. Academic tsunami modeling experts. USGS, FEMA, NOAA/National Ocean Survey (NOS).

- Tsunami Warning: NOAA Tsunami Warning Centers (TWCs). Academic tsunami modeling experts. USGS, NOAA/NOS, NOAA/NDBC.

Information Exchange:

- NTHMP Steering Group participation and reports
- Joint database development efforts (bathymetry, topography, etc.)
- Special Workshop Reports
- TIME Center website (<http://www.pmel.noaa.gov/tsunami/time/>)

2. Deep-ocean Assessment and Reporting of Tsunamis (DART) project.

PMEL developed the DART systems and Pacific network, and operational responsibility for the network is in the process of being transferred to NOAA/NDBC. PMEL technical guidance and assistance will continue to be provided (<http://www.pmel.noaa.gov/tsunami/Dart/>).

**Short-term:** 1. FY02-FY03 Inundation Modeling Computational Grids

- AK: Seward, Sitka, Yakutat, Whittier
- CA: Central and Northern coastal communities (TBD)
- HI: Kahului
- WA: Straits of Juan de Fuca

2. FY02-FY03 Inundation Maps and Related Products

- WA: Straits of Juan de Fuca

3. FY03 Special Workshop Reports

- 20 Jun 2002 Workshop on Puget Sound Tsunami Sources
- 21 Jan 2003 Workshop on Far-field Tsunami Forecasting

4. FY03-FY04 Possible expansion of the DART Pacific network.

**Systems1:** Deep-ocean Assessment and Reporting of Tsunamis

**Systems\_Acronym1:** DART

**Systems2:** NOAA/NOS Coastal Tide Gage Network

**Region:** Pacific

**Lead\_Personnel:** Frank I. Gonzalez

**Title:** Leader, Tsunami Program

**Agency2:** NOAA/PMEL

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**Primary\_Phone:** (206) 526-6803

**Fax:** (206) 526-6485

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**Primary\_URL:** <http://www.pmel.noaa.gov/tsunami/>

**Secondary\_URL:** <http://www.pmel.noaa.gov/tsunami/time>

**Tertiary\_URL:** <http://www.pmel.noaa.gov/tsunami/Dart>

**User:** Incident Response, Disaster Response, Adaptation Planning, General Public

**Hazard:** Tsunami

**Phase:** Inventory, Analysis, Implementation

**Agency1:** U S Geological Survey, Hawaiian Volcano Observatory

**Agency1\_Acronym:** HVO

**Mission:** -volcano and earthquake monitoring and research

-volcano and earthquake hazards mitigation

**Long-term:** -seismographic monitoring of earthquakes and volcanoes on island of Hawai`i

-seismological research on earthquake and volcano processes in Hawai`i and to extend application and interpretation more generally and to other volcanic and tectonic settings

**Short-term:** -seismographic monitoring of earthquakes and volcanoes on island of Hawai`i >

earthquake catalogs, earthquake web page postings, earthquake email distributions, ongoing  
-implementation of automated procedures for earthquake data analysis, including cross

**Systems1:** HVO seismographic network

**Region:** Hawai`i - USA

**Island:** Hawai`i

**Lead\_Personnel:** Paul Okubo

**Title:** Geophysicist

**Agency2:** U S Geological Survey, Hawaiian Volcano Observatory

**Street:** P O Box 51

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**State\_Territory:** HI

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**Secondary\_Phone:** (808) 967-7328

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**Email:** pokubo@usgs.gov

**User:** Scientific Community

**Hazard:** Earthquakes and Subsidence, Tsunami, Volcanism

**Phase:** Inventory, Analysis

**Agency1:** Federal Emergency Management Agency

**Agency1\_Acronym:** FEMA

**Mission:** Provide supplemental assistance to State efforts in responding to disasters

**Long-term:** Hazard Mitigation Grant Program (HMGP)

National Flood Insurance Program (NFIP)

Hurricane Program

National Earthquake Hazard Reduction Program (NEHRP)

Mitigation Planning

Pre-Disaster Mitigation Program (PDM)

**Short-term:** various projects under one of 33 Presidential Disaster Declarations

**Region:** Region IX (Oakland, CA)

**Island:** Pacific Area Office (Honolulu, HI)

**Lead\_Personnel:** David N. Kennard

**Title:** Mitigation Specialist

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**Primary\_URL:** fema.gov

**User:** Incident Response, Disaster Response, Scientific Community, General Public

**Hazard:** Hurricanes or Typhoons, Wind, Rain/Riverine Flooding, Waves and Water Levels, Fire and Drought, Earthquakes and Subsidence, Tsunami, Landslides and Slope Erosion, Volcanism

**Phase:** Inventory, Analysis, Implementation



**Agency1:** US Geological Survey, Coastal and Marine Geology Program

**Agency1\_Acronym:** USGS – CMG

**Mission:** Conduct scientific research to better understand geologic processes and their impacts.

**Long-term:** Combination of National and Regional scale projects where scientific research studies are designed to answer specific goals and objectives.

**Short-term:** Projects with Pacific Island components include:

1) National Coastal Hazard Assessment. Producing maps of historical shoreline position for sandy coasts (in cooperation with UH) and coastal impacts of selected major storms. on-going.

2) Coral Reef Health and Sustainability. Reef mapping, geologic and oceanographic processes. To date the focus has been on S Molokai, W Maui, and National Parks. on-going.

3) Tsunami Hazards. Field mapping and modeling (recent studies on the PNG tsunami). on-going.

4) Hawaii Shoreline Erosion (cooperative with UH). completed

**Systems1:** Field studies

**Region:** Pacific

**Lead\_Personnel:** Bruce Richmond

**Title:** Geologist

**Agency2:** USGS

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**User:** Scientific Community

**Hazard:** Hurricanes or Typhoons, Rain/Riverine Flooding, Waves and Water Levels, Sea-Level Rise, Earthquakes and Subsidence, Tsunami, Landslides and Slope Erosion, Volcanism

**Phase:** Inventory, Analysis

**Agency1:** NOAA Hazardous Materials Division of the Office of Response and Restoration of the National Ocean Service

**Agency1\_Acronym:** NOAA HAZMAT

**Mission:** Vision Statement

A healthier environment for an improved quality of life.

Mission Statement

Develop, communicate, and apply practical and credible science in responding to risks and mitigating the consequences from spills and other hazards threatening coastal environments and communities.

Goal 1 Respond to Hazards - Respond to spills and other hazards threatening coastal environments and communities.

Goal 2 Prevention and Preparedness - Protect coastal environments and communities at risk from spills and other hazards through effective prevention and preparedness activities.

Goal 3 Training and Outreach - Transfer knowledge, understanding and ability to address spills and other hazards threatening coastal environments and communities.

Goal 4 Research and Development Conduct research and development that will improve the protection and recovery of coastal environments and communities from spills and other hazards.

**Long-term:** See Web site.

**Short-term:** See Web site.

**Region:** Hawaiian Islands and Oceania

**Island:** All

**Lead\_Personnel:** Sarah Scherer

**Title:** Asst. Scientific Support Coordinator

**Agency2:** NOAA HAZMAT, OR&R

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**Primary\_URL:** <http://response.restoration.noaa.gov>

**User:** Incident Response, Disaster Response, Scientific Community

**Hazard:** Hazardous Materials, Search and Rescue

**Agency1:** Weather Forecast Office Guam

**Agency1\_Acronym:** WFO Guam

**Mission:** To provide weather and environmental support to the civilian communities of Guam, the CNMI, Palau, FSM, and the RMI. This includes: routine weather forecasts for the public, marine users, and aviation users; tropical cyclone watches and warnings; out-reach and training; Climate and ENSO Discussions. Also provides upper air balloon observations for use in world weather database.

**Long-term:** 1. Make Micronesian Weather Service Offices (WSOs) "no surprise" weather services.

By 2005.

2. Make Micronesian WSOs "self sufficient". This means that two meteorologists would be on site and the WSO would provide local forecasts using Guam WFO guidance. By 2007. (See PRH input)

3. Implement hydrology forecast and early warning program for the Micronesian Islands. By 2005.

4. FAA plans to put automatic weather observing systems at Palau, Yap, Chuuk, Kosrae, Majuro, Rota, and Tinian. This is currently unfunded.

**Short-term:** 1. Will provide rainfall climatology data to Palau, FSM, RMI, and CNMI, including 1924-1937 Japanese rainfall data and Majuro data back to 1955.

2. Will provide Hurrevac software and training to Micronesian EMOs. Hurrevac is a FEMA/Corp of Engineers computer display program for tropical cyclone warnings.

3. We plan to introduce the Saffir-Simpson Tropical Cyclone Scale (relationship of max tropical cyclone winds to potential damage) to the Mariana Islands in 2003 and to the rest of Micronesia in 2004. By May 2003 and June 2004.

4. Plan to make Guam a StormReady community. This is a NWS program to prepare a community to a level where it can meet the stringent designation as StormReady. By Dec 2003.

**Systems1:** Automated Surface Observing System

**Systems\_Acronym1:** ASOS

**Systems2:** Next Generation Doppler Weather Radar

**Systems\_Acronym2:** NEXRAD

**Systems3:** Emergency Manager's Weather Information Network

**Systems\_Acronym3:** EMWIN

**Systems4:** Hurricane Evacuation software

**Systems\_Acronym4:** HURREVAC

**Region:** Pacific

**Island:** Guam

**Lead\_Personnel:** Genevieve Miller, Chip Guard

**Title:** Meteorologist-in-charge, Warning Coordination Meteorologist

**Agency2:** Weather Service Forecast Office Guam

**Street:** 3232 Hueneme Road

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**User:** Incident Response, Disaster Response, Adaptation Planning, Scientific Community, General Public

**Hazard:** Hurricanes or Typhoons, Wind, Rain/Riverine Flooding, Waves and Water Levels, Sea-Level Rise, Fire and Drought, Tsunami, Landslides and Slope Erosion

**Phase:** Inventory, Analysis

**Agency1:** Office of Coast Survey, National Ocean Service, National Oceanic and Atmospheric Administration

**Agency1\_Acronym:** OCS, NOS, NOAA

**Mission:** To gather hydrographic data, shoreline, cultural features, and aids to navigation for application to nautical charts and US Coast Pilots for general use by the maritime community. The purpose of the products is to support maritime commerce, environmental integration, and homeland security.

**Long-term:** OCS Navigation Managers work with the public to identify chart and Coast Pilot issues.

NOAA Response Teams (NRTs) conduct chart adequacy surveys.

Contractor conduct major hydrographic projects.

NOAA Hydrographic Ship gather data for application to nautical charts.

Membership with USGS concerning consistent Geographic Names on maps and charts.

**Short-term:** Working with US Army Corps of Engineers on improvements to data acquisition in Federal Channel for application to the nautical charts.

Establish a partnership with California Coastal Commission to received changes to the coastal environment that impact the chart through the permitting process.

Developing a program to inform the mariner of boundaries for marine managed areas through the nautical chart and US Coast Pilot.

Partnership with USCG, NIMA, and NOAA for consistent and up to date Local Notice to Mariner.

LNM warn mariners of impending hazards to navigation.

**Region:** West Coast and Pacific Navigation Manger

**Island:** Main

**Lead\_Personnel:** Gerald E. Wheaton

**Title:** West Coast and Pacific Regional Manager

**Agency2:** Navigational Service Division, OCS, NOS, NOAA

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**Zip:** 93955

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**Email:** Gerry.Wheaton@noaa.gov

**Primary\_URL:** <http://chartmaker.ncd.noaa.gov>

**User:** Adaptation Planning

**Phase:** Inventory

**Agency1:** Dept. of the Interior, USGS

**Agency1\_Acronym:** USGS/NMD

**Mission:** Providing Science for a changing world.

**Long-term:** Develop the National Map for Hawai'i and the Pacific Basin. Provide Geospatial data for Hawai'i and the Pacific Basin

**Systems1:** The National Map

**Systems\_Acronym1:** TNM

**Region:** Hawai'i and Pac. Basin

**Island:** Oahu

**Lead\_Personnel:** Henry B. Wolter

**Title:** Liaison for Hawai'i and Pacific Basin Islands

**Agency2:** DOI/USGS/NMD

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**Primary\_Phone:** (808) 587-2409

**Secondary\_Phone:** (808) 295-4713

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**Email:** hwolter@usgs.gov

**Primary\_URL:** <http://mapping.usgs.gov/>

**Secondary\_URL:** <http://nationalmap.usgs.gov/>

**User:** Incident Response, Disaster Response, Adaptation Planning, Scientific Community, General Public

**Hazard:** Waves and Water Levels, Sea-Level Rise, Fire and Drought, Earthquakes and Subsidence, Landslides and Slope Erosion, Volcanism

**Phase:** Inventory, Analysis, Implementation

**Agency1:** Joint Institute of Marine and Atmospheric Research - University of Hawai'i

**Agency1\_Acronym:** JIMAR-UH

**Mission:** To develop and distribute near real-time satellite-derived ocean products to support management and research of living marine resources

**Long-term:** Near-real time acquisition, processing, archival and distribution of near real-time data for Central and Western Pacific marine environment.

**Short-term:** Collaboration with interested parties interested in the development of region-specific marine products

**Systems1:** Various satellite and in-situ platforms

**Systems\_Acronym1:** NASDA ADEOS II, ESA

**Systems2:**

**Systems\_Acronym2:** NOAA GOES, NASA Aqua & Terra

**Systems3:**

**Systems\_Acronym3:** TOPEX/Poseidon, ERS, GFO

**Systems4:**

**Systems\_Acronym4:** QuikSCAT, Jason

**Region:** Pacific Basin

**Island:** Oahu, Hawai'i

**Lead\_Personnel:** Lucas Moxey

**Title:** Hawai'i Coastwatch

**Agency2:** JIMAR-UH

**Street:** 2570 Dole Street

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**Email:** Lucas.Moxey@noaa.gov

**Primary\_URL:** <http://coastwatch.nmfs.hawaii.edu/>

**Secondary\_URL:** <http://www.nmfs.hawaii.edu/info.html>

**User:** Incident Response, Disaster Response, Adaptation Planning, Scientific Community, General Public

**Hazard:** Hurricanes or Typhoons, Wind, Waves and Water Levels, Sea-Level Rise, Fire and Drought, Volcanism, Search and Rescue

**Phase:** Inventory, Analysis

**Agency1:** State of Hawaii Civil Defense

**Agency1\_Acronym:** State Civil Defense (SCD)

**Mission:** Prepare for and respond to natural and man-made disasters.

**Long-term:** Hawaii State Earthquake Advisory Committee (HSEAC)  
Tsunami Technical Review Committee

Both topics presented by Dr. Laura Kong, Chair of HSEAC.

**Region:** State of Hawaii

**Lead\_Personnel:** Brian S. Yanagi

**Title:** Earthquake Program Manager

**Agency2:** State of Hawaii Civil Defense

**Street:** 3949 Diamond Head Road

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**User:** Incident Response, Disaster Response, Adaptation Planning, Scientific Community,  
General Public

**Hazard:** Earthquakes and Subsidence, Tsunami, Volcanism

**Phase:** Inventory, Analysis, Implementation

**Agency1:** U.S. Army Corps of Engineers

**Agency1\_Acronym:** Honolulu District (CEPOH)

**Mission:** The U.S. Army Corps of Engineers mission is to serve the Army and the Nation by providing a full spectrum of operations in peace and war including creating synergy between water resource development and the environment; restoring, managing and enhancing ecosystems, local and regional; building and sustaining the critical facilities for military installations and the public; responding to local, national and global disasters; providing a full spectrum of engineering and contingency support.

**Long-term:** Water resources development (mission): includes flood damage reduction, hurricane and storm damage protection construction, and to lesser extent harbor projects [as related to hazard mitigation]. Partnership is with non-federal agencies for financial cost sharing and ultimate ownership and O&M.

Emergency response, recovery (mission): Corps is member of interagency federal disaster team under direction of FEMA upon declaration of a national disaster.

**Short-term:** Hurricane Evacuation Studies (Mass Management Tool) - all Pacific areas. start FY98; continuous activities. Activities in Guam, CNMI, Hawai'i American Samoa pending start. Flood Plain Management special studies- continuous. Current studies: Song Song (Guam), Waiolani (HI), Holualua (HI), Waimanalo (HI)

Current Shore Protection projects ranging from recon to construction stages: Talofoto Bay (Guam), Vatia (Am Sam), Faganeanea/ Amaluia (Am Sam), Adelup (Guam), Inarajan (Guam), Talofoto Shore (Guam), South Agat (Guam), Leloaloe (Am Sam), North Shore Oahu (HI), Launiupoko (HI), Kihei (HI), Waikiki (HI), Sacred Falls (HI), Commercial Port (Guam), Fuel Pier (Guam), Power Plant Rd (Guam).

Current Flood Control projects ranging from recon to construction stages: Keopu-Hienaloli (HI), Palai (HI), Ala Wai (HI), Iao (HI), Waiakea (HI), Repair Four FC Projects (HI), Kahuku (HI), Wailele (HI), Wailupe (HI), Kuliouou (HI).

**Systems1:** No weather, buoy, or satellites

**Systems\_Acronym1:**

**Systems2:** Installs steam gages with USGS

**Systems\_Acronym2:**

**Region:** Pacific incl Hawai'i, Guam, CNMI, Am Samoa

**Island:** U.S.-flag states and territories.

**Lead\_Personnel:** Paul Mizue

**Title:** Chief, Civil & Public Works Branch

**Agency2:** U.S. Army Corps of Engineers, Honolulu District

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**Primary\_URL:** www.poh.usace.army.mil

**User:** Incident Response, Disaster Response, Adaptation Planning, Scientific Community, General Public

**Hazard:** Hurricanes or Typhoons, Rain/Riverine Flooding, Waves and Water Levels, Tsunami

**Phase:** Inventory, Analysis, Implementation



**Agency1:** National Oceanic and Atmospheric Administration - Coastal Services Center

**Agency1\_Acronym:** NOAA CSC

**Mission:** Mission Statement: To support the environmental, social, and economic well being of the coast by linking people, information, and technology.

The NOAA Coastal Services Center works with various branches of NOAA and other federal agencies to bring information, services, and technology to the nation's coastal resource managers. The Center is a partner in over 100 ongoing projects geared to resolve site specific coastal issues.

**Primary Customers:** State and local coastal resource managers

State and local coastal resource managers are at the forefront of the nation's efforts to preserve coastal resources and promote responsible development. The Center helps these coastal managers gain, collectively and individually, the additional technology, data, and expertise they need to accomplish this task. Members of the coastal management community include local and state governments, regulatory programs, protected areas, wildlife agencies, Sea Grant programs, planners, scientists, and emergency preparedness officials.

**Primary Partners:**

- Local, state, and federal government organizations
- Nonprofits
- Private companies
- Academia

**Long-term:** All of the work conducted by the NOAA Coastal Services Center can be categorized into one or more of the following themes: Smart Coastal Growth, Habitat, Hazards, and Coastal National Spatial Data Infrastructure. The projects and activities being conducted under all of the themes have some connections to hazards, but the Hazards, and Coastal National Spatial Data Infrastructure themes would be most relevant to those interested in hazard mitigation.

**Hazards Theme:**

Coastal hazards include both natural and man-made events (chronic and episodic) that threaten the health of coastal ecosystems and communities. This definition includes, but is not limited to, hurricanes, tsunamis, erosion, oil spills, harmful algal blooms, and pollution. Center projects in this theme area work to reduce the environmental, social, and economic impacts from coastal hazards by providing information and tools that facilitate increased decision-support capabilities for coastal managers.

**Coastal National Spatial Data Infrastructure Theme:**

The National Spatial Data Infrastructure (NSDI) is a nationwide effort to improve the utilization of geospatial data within the United States. The Center fully supports this effort for the benefit of local and state coastal resource managers. Center projects in this theme area assist coastal managers in a variety of data-related tasks, including data acquisition, processing, storage, distribution, ease of use, and inclusion in the decision-making process.

**Short-term:** Vulnerability Assessment Methodologies and Techniques Related Projects:

Community Vulnerability Assessment Tool - completed - available at <http://www.csc.noaa.gov/products/nchaz/startup.htm>

Vulnerability Assessment Techniques (VAT) Workshops - have co-hosted 3 workshops with the Organization of American States - Unit for Sustainable Development and Environment, and the Caribbean Development Bank to create a networking opportunity and dialogue for exploring new ideas and potential partnerships in the application of vulnerability assessments throughout the Western Hemisphere. A Web site, Vulnerability Assessment Techniques and Applications, to serve information related to vulnerability assessment methodologies and regulations

<<http://www.csc.noaa.gov/vata/>>. The Web site also has a searchable database of over 40 case study applications of vulnerability assessments (all presented at the VAT workshops).

Coastal Storms Initiative - FL Pilot - Risk and Vulnerability Assessment Tool is currently under development and will be completed by the end of FY 2003. For more information please see <<http://www.csc.noaa.gov/csi/projects/assessment-tool.html>>.

Coastal Risk Atlas - Northeast FL and MS Pilots - currently under development, expected to be completed by the end of FY 2003. The purpose of the project is to deliver an on-line risk/vulnerability atlas for the coastal U.S. using NCDDC information technologies. The CRA will

provide the data and proven methodology to enable communities to assess vulnerabilities unique to the coastal zone. For more information access < <http://www.ncddc.noaa.gov/cra> >.

Flood Forecast Mapping - NC Pilot - currently under development and the capability to produce operational flood forecast maps will be available by the end of FY 2003.

Historical Tropical Cyclone Mapping and Analysis Tool - Atlantic Basin complete and version 2, which will include the Pacific Basin and some additional functionality, will be completed by National Hurricane Awareness Week this year (May 18, 2003). The Historical Hurricane Tracks tool is an interactive mapping application that allows you to easily search and display 150 years of Atlantic Basin tropical cyclone data. To access the Tool go to

<<http://hurricane.csc.noaa.gov/hurricanes/index.htm> >

The Center also conducts 2 hazard related training courses: Vulnerability Assessment Training and The Coastal Zone Management Role in Managing Hazards

**Region:** Coastal Zone throughout the US and Territories

**Lead\_Personnel:** Russell Jackson

**Title:** Coastal Hazards Specialist

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**User:** Incident Response, Disaster Response, Adaptation Planning, Scientific Community, General Public

**Hazard:** Hurricanes or Typhoons, Wind, Rain/Riverine Flooding, Waves and Water Levels, Fire and Drought, Earthquakes and Subsidence, Tsunami, Landslides and Slope Erosion, Hazardous Materials

**Phase:** Inventory, Analysis, Implementation

## Roundtable of Federal Hazard Mitigation Partners in the Pacific Islands

March 11 and 12, 2003  
Honolulu, Hawai'i

### AGENCY, INSTITUTION, & ORGANIZATION ACRONYMS

<b>ACOE</b>	U.S. Army Corps of Engineers
<b>EWC</b>	East-West Center
<b>PDC</b>	Pacific Disaster Center
<b>FEMA</b>	Federal Emergency Management Agency
<b>PAO</b>	Pacific Area Office
<b>FMPPI</b>	Federal Mitigation Partners in the Pacific Islands
<b>HCD</b>	Hawai'i State Civil Defense
<b>MSAC</b>	Multi-Hazard Science Advisory Committee
<b>HDEBT</b>	Hawai'i Department of Business, Economic Development, and Tourism
<b>OP</b>	Office of Planning
<b>GIS</b>	Geographic Information Systems
<b>HCZM</b>	Hawai'i Coastal Zone Management Program
<b>HDLNR</b>	Hawai'i Department of Land and Natural Resources
<b>HSHMF</b>	Hawai'i State Hazard Mitigation Forum
<b>ITIC</b>	International Tsunami Information Center
<b>JIMAR</b>	Joint Institute for Marine and Atmospheric Research
<b>JTWC</b>	Joint Typhoon Warning Center
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NCDDC</b>	National Coastal Data Development Center

**NESDIS** National Environmental Satellite, Data, and Information Service

**NMFS** National Marine Fisheries Service

**NOS** National Ocean Service

**CSC** Coastal Services Center

**NCCOS** National Centers for Coastal Ocean Science

**NGS** National Geodetic Survey

**OCRM** Office of Ocean and Coastal Resource Management

**OCS** Office of Coast Survey

**ORR** Office of Response and Restoration

**PSC** Pacific Services Center

**NWS** National Weather Service

**PRH** Pacific Region Headquarters

**HFO** Honolulu Forecast Office

**CPC** Climate Prediction Center

**OAR** Oceanic and Atmospheric Research

**PMEL** Pacific Marine Environmental Laboratory

**OIA** Office of Insular Affairs

**PI** Pacific Islands

**PREL** Pacific Resources for Education and Learning

**SOPAC** South Pacific Applied Geoscience Commission

**SPREP** South Pacific Regional Environment Programme

**UH** University of Hawai`i

**SOEST** School of Ocean and Earth Science and Technology

**CGG** Coastal Geology Group

**SLC** Sea Level Center

**SSRI** Social Sciences Research Institute

**UNESCO** United Nations Educational, Scientific, and Cultural Organization

**USGS** United States Geologic Survey

**HVO** Hawai'i Volcano Observatory

**PSC** Pacific Service Center

**WGSC** Western Region Geologic Service Center

**USP** University of the South Pacific