CZMA CLIMATE CHANGE AND COASTAL HAZARDS E-NEWS UPDATE, Vol. 1

The Coastal Programs Division of NOAA's Office of Ocean and Coastal Resource Management distributes the CZMA Climate Change and Coastal Hazards E-News Update to keep state and territory coastal program managers and climate change/coastal hazards staff informed about climate change (as it pertains to coastal hazards) and coastal hazards activities. If you would like to receive the Climate Change and Coastal Hazards E-News Update, please e-mail christa.rabenold@noaa.gov. For previous issues, see the E-News Update archives at http://coastalmanagement.noaa.gov/news/climatenewsletter.html.

In this Issue:

NOAA UPDATES

OCRM's CPD Welcomes Christa Rabenold as Coastal Management and Hazards Specialist

Christa Rabenold recently joined the Coastal Programs Division as the Coastal Management and Hazards Specialist. Christa is working on a range of coastal hazards and climate change projects for CPD and OCRM, and she is also the liaison to the Mississippi coastal management program. Christa came to NOAA from Denver where she was an Emergency Management Specialist/Technical Editor with AMEC Earth and Environmental. In that capacity she wrote hazard mitigation plans for the State of Mississippi and City of Waveland, helping spur recovery from Hurricane Katrina. Before that, Christa was an Editor at the University of Colorado's Natural Hazards Center, where she edited the Natural Hazards Observer and other publications.

OCRM to Report on State Shorefront Development Regulations

OCRM is updating and expanding upon a study on shorefront development regulations conducted for Congress in 2001. The intent of the original study was to determine the extent to which coastal zone management program policies are in place and whether they are effective in preventing inappropriate development along the shorefront. This study will update the original findings and look more closely at how these regulations are

constructed and administered with special attention to areas where development is being prohibited (with some variances and exemptions) along hazard-prone (flood/erosion) shorefronts. In the face of continued development along our nation's coasts, devastating storms, and sea level rise, this information can be particularly valuable to states as they consider how best to deal with shorefront development.

OCRM staff will contact you for information pertinent to your state in early 2009. We sincerely appreciate your cooperation in this endeavor.

NOAA Imagery Depicts Hurricane Damage
http://ngs.woc.noaa.gov/eri_page/index.html

NOAA's National Geodetic Survey's Remote Sensing Division aerially photographed affected coastlines in the wake of damaging storms to support NOAA's national security and emergency response requirements. The imagery is intended to provide emergency managers with a broad view of damage and residual flooding to better prioritize their response efforts (it is also useful for the general public as a way to ascertain the fate of their homes and communities). Flight plans are developed based on official requests from federal, local, and state agencies that need the imagery for response purposes. OCRM informs state coastal zone managers when the NGS makes plans to fly a coastline so that managers can provide input to these plans.

Imagery is available online (for viewing and download) for storms flown since 2003, including this year's Hurricanes Gustav and Ike. Following the release of the NGS imagery for Hurricane Ike, Google Earth processed the data into a KML image overlay that shows before and after views of the affected area. This file, which requires Google Earth for viewing, is available for downloading at http://google-latlong.blogspot.com/2008/09/aftermath-of-hurricane-ike.html (a similar overlay is also available for Gustav).

New Guidebook Helps Coastal Louisiana Communities' Mitigate Hazards
http://www.lsu.edu/sglegal/pdfs/LaCoastalHazMitGuidebook.pdf

Written by the Louisiana Sea Grant College Program, and funded in part by the Louisiana CZM Program, the "Louisiana Coastal Hazard Mitigation Guidebook" (261 pp.) presents strategies that can help planners, managers, and property owners in coastal communities better prepare for and recover from coastal hazard events.

New Law and Policy Journal Examines Issue of Coastal Resiliency
http://www.olemiss.edu/orgs/SGLC/National/SGLPJ/SGLPJ.htm

The Sea Grant Law and Policy Journal provides a forum for the timely discussion and exploration of legal topics of relevance to NOAA's Sea Grant network of extension agents, researchers, coastal managers and users, and local decision makers. This inaugural issue contains articles written to help governments, communities, and individuals build safer coastal communities. Articles, which can be downloaded individually, include:
- Government and Academic Institutional Involvement in Gulf Coast Resiliency
- New Frameworks for Managing Dynamic Coasts
- Legal and Policy Impacts of Sea Level Rise on Beaches and Coastal Property
- Eroding Long-Term Prospects for Dynamic Beach Habitat in Florida: A Coastal Resiliency Conundrum
- Resistance to Resilience: Coastal Hazard Policy, Science and Planning in New Jersey
- Floods, Flood Insurance, Litigation, Politics - and Catastrophe: The National Flood Insurance Program

New Document Guides Design of Structures for Vertical Evacuation
http://www.atcouncil.org/pdfs/FEMAP646.pdf

"Guidelines for Design of Structures for Vertical Evacuation from Tsunamis" (176 pp.) from the Applied

Technology Council, funded by NOAA and the Federal Emergency Management Agency, provides guidance on building structures to resist tsunamis and earthquakes. In areas of low elevation, or in the event of insufficient warning time, vertical evacuation may be the only path to safety from a tsunami. A second publication on how use of this guidance can be encouraged and adopted at the state and local levels is under development.

OTHER FEDERAL UPDATES

FEMA's Hazard Mitigation Grant Program Aims to Reduce Risk
http://www.fema.gov/government/grant/hmgp/index.shtm

The purpose of the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) is to provide funds to states, territories, Indian tribal governments, and communities to significantly reduce or permanently eliminate future risk to lives and property from natural hazards. The HMGP funds projects in accordance with priorities identified in state, tribal, or local hazard mitigation plans. Funding is available following a major disaster declaration if requested by the governor and can be used for projects throughout the state (not just in the area of the declared disaster). The amount of HMGP funding depends on the costs associated with each disaster and whether or not the state has an "enhanced" hazard mitigation plan. States with enhanced plans may be eligible for up to 20 percent of the total estimated federal assistance (Public and Individual Assistance) provided after a major disaster declaration. The HMGP cost share is 75 percent federal/25 percent nonfederal.

How to make the HMGP work for your coastal program:
- Find out what kind of mitigation plan your state has (standard or enhanced).
- Make sure mitigation projects of interest to your program are identified in a FEMA-approved mitigation plan (state or local).
- Keep track of the disasters declared in your state (http://www.fema.gov/news/disasters.fema).
- Talk to your state hazard mitigation officer (usually in the emergency management/homeland security agency).

EPA Launches New Climate Ready Estuaries Web Site
http://www.epa.gov/cre/

This new Web site from the U.S. Environmental Protection Agency's (EPA) Climate Ready Estuaries Program offers information on climate change impacts to different estuary regions, access to tools and resources to monitor changes, and information to help managers develop adaptation plans for estuaries and coastal communities.

ADDITIONAL UPDATES

Paper Examines Government Liability for Flood Hazard Mitigation Measures
http://www.floods.org/PDF/ASFPM_Liability_for_mitigation_actions_Aug_2008_Kusler.pdf

"A Comparative Look at Public Liability for Flood Hazard Mitigation" (52 pp.) examines government liability for flood hazard mitigation measures such as dams, levees, and other structures as well as loss reduction efforts such as flood mapping, warning systems, evacuation planning, and floodplain regulations. The author concludes that "governments face the greatest risk of liability when they increase flood hazards and flood losses on private lands by filling, grading, ditching, or constructing roads, bridges, dams, levees, sea walls, or stormwater systems... Courts are much less likely to hold governments liable for the failure of nonstructural flood loss reduction measures such as warning systems, flood maps, emergency planning, and emergency operations... Courts are even less likely to hold governments liable for 'taking' private property through the

adoption of floodplain regulations." Despite past successes, the author cautions governments to take increasing care in the design and implementation of all mitigation measures; the standard of care needed to avoid liability will continue to rise as technology and databases improve.

Fortified Homes Fared Better against Wrath of Ike
http://www.disastersafety.org/main.asp?id=1102

The Institute for Business and Home Safety (IBHS) advocates improved home construction, maintenance, and preparation practices to better withstand natural disasters. Prior to Hurricane Ike, IBHS had designated 13 homes in Gilchrest, Texas, as "Fortified…for safer living." The Fortified program focuses on keeping the entire structure intact and making it more resilient, so families can resume their normal lives as quickly as possible. The Fortified homes performed better than others in the area, most of which were destroyed. Following the storm, all but 3 of the 13 Fortified homes survived, and the 3 that failed did so because they were struck by "un-Fortified" neighboring houses that had been washed off their foundations.

Study Estimates Value of Coastal Wetlands for Hurricane Protection
http://www.allenpress.com/pdf/AMBI-37-4-241.pdf

A recent research paper, "Value of Coastal Wetlands for Hurricane Protection" (8 pp.), suggests that U.S. coastal wetlands annually provide storm protection services worth $23.2 billion. It describes coastal wetlands as self-maintaining "horizontal levees" that provide storm protection and other ecosystem services that vertical levees do not and argues that the restoration and preservation of coastal wetlands is extremely cost-effective.

CSO Releases Second Annual Climate Change Report
http://www.coastalstates.org/uploads/PDFs/CSO%202008%20Climate%20Change%20Report.pdf

New from the CSO, "The Role of Coastal Zone Management Programs in Adaptation to Climate Change" (51 pp.) reports the results of a 2008 survey regarding the status of adaptation planning, priority information needs, and the anticipated resource needs of the coastal states, commonwealths, and territories.

Report Summarizes Experts' Views on the Future of Floodplain Management
http://www.floods.org/Foundation/Files/GFW%20Forum%20Report.pdf

"Floodplain Management 2050: Report of the Second Assembly of the Gilbert F. White National Flood Policy Forum" (64 pp.) contains the results of a dialog among experts in resource management; engineering; economics; demography; land use; insurance; local, state, and federal government; environmental sciences; planning; risk analysis; the law; building and construction; emergency management; finance; communication; transportation; and policy analysis on the future of floodplain management. It presents two views: one where floodplains continue to be managed as they have been in the past and another where aggressive action is taken. It concludes with what is needed to get us to the optimal future envisioned in the latter view.

Article Explores Why Disasters Are Getting Worse
http://www.time.com/time/nation/article/0,8599,1838400,00.html?xid=yeed-yah

This article from Time magazine hypothesizes that "we are getting more vulnerable to weather mostly because of where we live, not just how we live." The author cites a scientific study that found no trend in the number or intensity of storms at landfall since 1900 in her argument that what has changed over the last century is what we have placed in harm's way and how we are destroying our natural protective features.

Share Your Thoughts
If you have news that you would like to include in future updates, or suggestions about the type of information you would like to see here, please e-mail christa.rabenold@noaa.gov.