

EPA CONCLUDES GREENHOUSE GASES THREATEN PUBLIC HEALTH AND THE ENVIRONMENT: The U.S. Environmental Protection Agency (EPA) announced that greenhouse gases (GHGs) threaten the public health and welfare of the American people. EPA also finds that GHG emissions from on-road vehicles contribute to that threat.

EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHGs fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements but rather allow EPA to finalize the GHG standards proposed earlier this year for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation. On-road vehicles contribute more than 23 percent of total U.S. GHG emissions. EPA's proposed GHG standards for light-duty vehicles, a subset of on-road vehicles, would reduce GHG emissions by nearly 950 million metric tons and conserve 1.8 billion barrels of oil over the lifetime of model year 2012-2016 vehicles. EPA's endangerment finding covers emissions of six key greenhouse gases – carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Information on EPA's findings: <http://www.epa.gov/climatechange/endangerment.html>

NATURAL AND ANTHROPOGENIC ENVIRONMENTAL CHANGE AS EVIDENCED IN HIGH-RESOLUTION CONTINENTAL ARCHIVES: The European Geosciences Union General Assembly 2010 (Vienna, Austria, 02 – 07 May 2010): Environmental archives on the continents record past changes in the atmosphere, biosphere, hydrosphere, and anthroposphere on different temporal and spatial scales. The analysis of biotic and abiotic proxies in natural archives such as lake and mire deposits, loess, tree-rings, and speleothems allows the reconstruction of processes and mechanisms of environmental change on annual to millennial time-scales during different parts of Earth's history. For this session oral and poster presentations are invited that (preferably) present multi-proxy studies of past environmental change (climate, human impact, as well as biotic and abiotic system responses) as recorded in one or several continental archives on annual, decadal, centennial and millennial time-scales. During an organized guided tour during the poster session authors will be invited to hold a short oral presentation explaining their poster to the rest of the audience. Abstract deadline is January 18 2010. Please follow the links below for further information: EGU General Assembly: <http://meetings.copernicus.org/egu2010/> Call-for-Paper Programme: <http://meetingorganizer.copernicus.org/EGU2010/sessionprogramme/BG#BG6>

CLIMATE CHANGE LEGISLATION ON HOLD UNTIL SPRING: The Senate has been unable to approve of a climate change bill within a very crowded legislative schedule, and the Senate now plans to schedule floor debate on a climate change bill after it completes work on health care and financial regulatory reform. The schedule roughly coincides with the revised United Nations plan to hold negotiations on a new treaty to replace the Kyoto Protocol in the spring of 2010. The international community thinks, and the Obama Administration agrees, that binding international agreements are unlikely if the U.S. Congress does not approve of climate change legislation in advance.

NUCLEAR BILL: Senators Jeff Bingaman (D-NM), Lisa Murkowski (R-AK) and Mark Udall (D-CO) introduced a bill to stimulate the development of new, cost-effective nuclear reactors on November 20, 2009. The bill, The Nuclear Power 2021 Act (S.2812) would authorize the

Department of Energy (DOE) to work in a public-private partnership to develop a standard design for two small (< 300 megawatts) modular reactors, obtain a design certification from the Nuclear Regulatory Commission by 2018 and obtain an operating license by 2021. The bill would amend the Energy Policy Act of 2005, which provides loan guarantees and other incentives for the development of large nuclear reactors (> 1000 megawatts). The full text of S. 2812 is available from Thomas: <http://thomas.loc.gov/cgi-bin/bdquery/z?d111:SN2812>:

OCEANS POLICY TASK FORCE PROVIDES UPDATE TO CONGRESS: The President's Interagency Ocean Policy Task Force (IOPTF) updated the Senate Commerce Committee on its progress in developing recommendations for a national ocean policy at a hearing in November. Much of the discussion centered on the recommendations of the interim report released in September. The IOPTF recommends an ocean council to coordinate federal policy initiatives. The report suggests a council chaired jointly by the Council for Environmental Quality and the Office of Science and Technology Policy. Numerous concerns were raised about the presumably insufficient role of the National Oceanic and Atmospheric Administration on the council. Marine spatial planning has been described as "zoning for oceans", and plays a large role in the recommendations of the task force. Zones are to be set out according to ecosystem based management, which would allow for ocean resource use to have minimal impact on sea life. More information on the IOPTF and a link to the interim report can be found here:

<http://www.whitehouse.gov/administration/eop/ceq/initiatives/oceans>

A more detailed AGI summary of the hearing is available at:

http://www.agiweb.org/gap/legis111/wateroceans_hearings.html#nov04

ARMY CORPS LIABLE FOR WORST FLOODING DURING KATRINA: A U.S. district court judge ruled that the U.S. Army Corps of Engineers (USACE) was liable for some of the worst flooding after Hurricane Katrina, marking the first ruling to hold the USACE liable for damage from a natural disaster. The judge found the USACE did not properly maintain a shipping channel, the Mississippi River Gulf Outlet (MRGO), which in 1988 had been deemed a threat to human life. The MRGO is called a "hurricane highway" that focused floodwater into eastern New Orleans and St. Bernard Parish. The ruling gives six individuals and one business a total of \$720,000 in compensation and more claims are likely. As it is, 490,000 claims, amounting to about \$500 billion in damages, have been filed against the government already. The actual government liability will remain in limbo for some time though as the USACE appeals the ruling and the whole process remains tied up in the courts. There appears to be no real winners in this situation. Members of Congress do hope this ruling will lead to better planning, design and maintenance of projects by the USACE. Read the NY Times story about the ruling online:

<http://www.nytimes.com/aponline/2009/11/18/us/AP-US-Katrina-Flood-Lawsuit.html>

EPA STUDY SHOWS FRESHWATER FISH CONTAMINATION: The Environmental Protection Agency (EPA) has released a study detailing the prevalence of toxic chemicals in freshwater using fish tissue samples from across the continental U.S. The National Lake Fish Tissue Study shows widespread distribution of persistent, bioaccumulative, and toxic (PBTs) chemicals in fish. Mercury and polychlorinated biphenyls (PCBs) were detected in all of the lakes sampled, while dioxins and furans were found in 81 percent of these lakes. Of the five

chemicals responsible for 97 percent of fish advisories at the end of 2008, each was found to be above human health screening values (SVs) in at least some lakes. PCB and mercury concentrations above SVs were found to be in especially high proportion, at 16.8 and 48.8 percent of lakes, respectively. Sampling was conducted over the course of four years on predator (such as largemouth bass and brook trout) and bottom dweller (such as blue catfish and common carp) composites at 500 lakes and reservoirs in the lower 48 states. Samples were tested for 268 PBTs. The study was carried out through a series of partnerships forged by the EPA with 47 states, three tribes, and two other federal agencies. The National Lake Fish Tissue Study is the first of its kind in the U.S. to utilize a random, statistical design, and thus be representative of contaminate distribution across the nation. More information on the study can be found at the EPA website here: <http://www.epa.gov/waterscience/fish/study/index.htm>

EPA PROPOSES NEW STANDARDS FOR SULFUR DIOXIDE: The Environmental Protection Agency (EPA) is proposing a new national one-hour sulfur dioxide emission standard between 50 and 100 parts per billion. EPA first set standards in 1971 as part of the National Ambient Air Quality Standards and has not changed the sulfur dioxide standard since then. The agency will announce a public comment period of 60 days in the Federal Register and will hold a public hearing on Jan. 5, 2010 in Atlanta. EPA must issue final standards by June 2, 2010. More information about the proposal is available at: <http://www.epa.gov/air/sulfurdioxide>

NASA SIGNS AGREEMENT WITH INDIA FOR OCEAN SATELLITE DATA: The National Aeronautics and Space Administration (NASA) signed an agreement with the Indian Space Research Organization (ISRO) to use data from the Indian satellite Oceansat-2. Oceansat-2 measures ocean surface wind speeds, atmospheric humidity and temperature to improve understanding of the oceans and ocean-atmosphere interactions. The data is essential for dealing with climate change, weather forecasting, ocean health and Earth system dynamics. ISRO is part of India's National Natural Resources Management System, and Oceansat-2 is but one of a large constellation of Earth-observing satellites operated by India for civilian use. More information about the Indian Space Research Organization is available at: <http://www.isro.org/>

MINERALOGISTS: HELP NEEDED FOR ASBESTOS RESEARCH: The National Institute for Occupational Safety and Health (NIOSH) drafted a research roadmap, Asbestos Fibers and Other Elongated Mineral Particles: State of the Science and Roadmap for Research, in January 2009. The roadmap provides an overview of the state of the science and a plan for future research in areas including toxicology, mineralogy, epidemiology, and exposure assessment. A National Academies committee has now reviewed the roadmap and provided a report. The committee notes "significant inconsistencies and deficiencies in mineralogical terminology and nomenclature." The committee recommends more rigorous terminology, a more systematic and integrated approach to mineralogical research in support of human health and greater involvement in planning and implementation from the mineralogical community. More information is available at: <http://www.cdc.gov/niosh/topics/asbestos/>

STUDY SAYS INVESTING IN NATURE COULD SAVE TRILLIONS: The Economics of Ecosystems and Biodiversity (TEEB) study sponsored in part by the United Nations, attempts to highlight the global economic benefits of biodiversity and the costs of ecosystem degradation. It stresses the value of nature to society and how often this value is overlooked in the international marketplace. The goal of the study is to increase the public awareness of nature's value and encourage the introduction of effective policy. The report shows that an annual investment of \$45 billion to protect environmentally sensitive areas could save up to \$5 trillion a year over several decades. The study cites one example in which Vietnam spent \$1 million last year replanting mangroves which will result in a savings of \$7 million on dike maintenance. To learn more about "The Economics of Ecosystems and Biodiversity," go to: <http://www.teebweb.org/>

INTERNATIONAL REPORT ON ENERGY OUTLOOK: The International Energy Agency's (IEA) World Energy Outlook report gives projections concerning the world's energy needs and the changing climate. The report estimates that from 2010 to 2030 about \$26 trillion will be needed for energy development globally and an additional \$10.5 trillion will be needed for energy technologies and efficiency in order to reduce greenhouse gas (GHG) emissions to about 450 parts per million (ppm) and avoid catastrophic climate change. More than half of the emissions reductions by 2030 will be from improved energy efficiency with the rest from renewables and biofuels, nuclear power, hybrid and electric vehicles and carbon capture and sequestration. Efficiency will lead to global savings of about \$8.6 trillion in transport, buildings and industry costs. Within the IEA scenario, demand for fossil fuels is projected to peak in 2020, however, fossil fuels will still contribute about 70 percent of global energy in 2030. The financial crisis reduced oil demand in 2009, but also led to a \$90 billion cut in investments in oil and gas exploration and development. This may lead to fewer supplies to meet growing demand and thus higher prices in the future. Natural gas is predicted to play a significant role in transitioning to a low-carbon energy economy. The huge boost in North American unconventional gas discoveries and production (primarily oil shale) makes natural gas a "transition fuel" to a clean energy economy in this world outlook. For more information on the World Energy Outlook report, go to: <http://www.worldenergyoutlook.org/>

STUDY SHOWS DAM CONTRIBUTED TO WENCHUAN EARTHQUAKE: A recent scientific study suggests that a Chinese dam built less than a mile from a well-known major fault may have triggered the 7.9 magnitude Wenchuan earthquake in May 2008, killing more than 69,000 people and leaving almost 18,000 missing. The authors of the study "Did the Zipingpu Reservoir Trigger the 2008 Wenchuan Earthquake?" created a two-dimensional model to evaluate how the Zipingpu Reservoir, holding 320 million tons of water, changed the stresses on several nearby faults. The authors of the study state that there is a lack of data from before the dam was built in 2005 to make a definite link between the dam and the earthquake, but estimate that the increased stress created by the reservoir was enough to hasten the occurrence of the earthquake by tens to hundreds of years. Chinese officials insist that the reservoir had nothing to do with the Wenchuan earthquake. To read the full research article (requires a subscription), go to: <http://www.agu.org/journals/gl/gl0920/2009GL040349/>

GEOLOGIST AVERTS ROCKSLIDE CATASTROPHE: A small, early morning rockfall in the Ocoee Gorge in Polk County, Tennessee had repair crews out working to clear the roads at the

beginning of November. Tennessee Department of Transportation (TDOT) geologist Vanessa Bateman drove to the site from Nashville to investigate. She heard noises coming from the hillside and immediately ordered an evacuation of people and heavy equipment away from the site. Within a half hour of her warnings, a large rockslide occurred right where the crew had been working and was videotaped by a local news crew. The rare videotape of a rockslide shows the power and damage they can cause. The slide essentially split Polk County in half, making the distance by road from one side of the slide to the other over 120 miles. The slide is expected to take months to clean up. This recent event has highlighted the importance of the TDOT Rockfall Mitigation Program that identifies sites of potential slides, assigns a hazard rating, and works to prevent them from occurring. Although the slide resulted in major transportation difficulties and a hefty clean-up, the residents of Polk County can be grateful to Bateman for preventing this inconvenience from being a tragedy. The video of the rockslide is available through YouTube at: <http://www.youtube.com/watch?v=39LCzBS8yOM>

CLIMATE CHANGE: COMPARISON OF THE CAP-AND-TRADE PROVISIONS IN H.R. 2454 AND S. 1733: Congressional Research Service report released November 5, 2009. This report provides a comparison of the cap and trade provisions of the American Clean Energy and Security Act of 2009 (H.R. 2454) and the Clean Energy Jobs and American Power Act (S. 1733). Both bills aim to reduce U.S. greenhouse gas emissions to 20% below 2005 levels by 2020 and 83% below 2005 levels by 2050. <http://openocrs.com/document/R40896/>

UNCONVENTIONAL GAS SHALES: DEVELOPMENT, TECHNOLOGY, AND POLICY ISSUES: Congressional Research Service report released October 30, 2009. This report discusses how technological advances have dramatically increased gas production from unconventional shales, environmental concerns with hydraulic fracturing treatments used to stimulate shale gas production, as well as land ownership and mineral resource owners' rights to surface access. <http://openocrs.com/document/R40894/>

ENERGY-WATER NEXUS: MANY UNCERTAINTIES REMAIN ABOUT NATIONAL AND REGIONAL EFFECTS OF INCREASED BIOFUEL PRODUCTION ON WATER RESOURCES GAO report released November 30, 2009. Water plays a crucial role in all stages of biofuel production. As demand for water from various sectors increases and places additional stress on already constrained supplies, the effects of expanded biofuel production may need to be considered. This report examines the known effects of biofuels production on water, the technological innovations that could alleviate the stress, and the research still needed. <http://www.gao.gov/products/GAO-10-116>

COAL COMBUSTION RESIDUE: STATUS OF EPA'S EFFORTS TO REGULATE DISPOSAL: GAO report released November 2, 2009. In light of the December 2008 spill releasing coal combustion residue (CCR)--or "fly ash" in this case--into the Emory River in Tennessee, Congress asked the U.S. Government Accountability Office (GAO) to identify: (1) the number of surface impoundments for storing CCR in the U.S.; (2) problems with the storage

of coal ash; and (3) the type of federal oversight that exists for CCR. This report details the GAO's findings. <http://www.gao.gov/products/GAO-10-85R>

LANDSCAPES ON THE EDGE: NEW HORIZONS FOR RESEARCH ON EARTH'S SURFACE: Prepublication released November 20, 2009. The book identifies nine challenges in the study of earth surface interactions and proposes four high-priority research initiatives. It poses questions about how our planet's past can tell us about its future; how landscapes record climate and tectonics; and how Earth surface science can contribute to developing a sustainable living surface for future generations. http://www.nap.edu/catalog.php?record_id=12700

RESEARCH AT THE INTERSECTION OF THE PHYSICAL AND LIFE SCIENCES: Prepublication released November 19, 2009. The book discusses how some of the mysteries of the biological world have been solved using tools and techniques developed in the physical sciences. It also presents major challenges that must be addressed and recommends several ways to accelerate progress in the field. http://www.nap.edu/catalog.php?record_id=12809

A TRANSPORTATION RESEARCH PROGRAM FOR MITIGATING AND ADAPTING TO CLIMATE CHANGE AND CONSERVING ENERGY SPECIAL REPORT 299: Prepublication released November 2, 2009. This book identifies research needs to develop policies and strategies relating to the transportation sector. It focuses on research programs that could provide guidance for policies affecting the use of surface transportation infrastructure, and aims to help officials begin adapting the infrastructure to climate changes. http://www.nap.edu/catalog.php?record_id=12801

THE DEPARTMENT OF INTERIOR (DOI) IS SOLICITING COMMENTS on the information collection protocol for state geological surveys and academic institutions requesting funds to assist in the monitoring of active volcanoes and to conduct volcano-related research. The Volcano Hazards Program (VHP) provides funding under the American Recovery and Reinvestment Act for improvement of the volcano monitoring systems and other monitoring-related activities that contribute to mitigation of volcano hazards. Comments on the necessity, quality, and utility of the information collected are due by January 15, 2010. Send comments to Phadrea Ponds by email: pponds@usgs.gov or fax: (970) 226-9230.

THE DEPARTMENT OF INTERIOR (DOI) WANTS COMMENTS on the information collection requirements for proposals for the National Institute for Water Resources – U.S. Geological Survey (NIWR-USGS) National Competitive Grant Program. The proposals support research on regional or interstate water problems which relate to specific program priorities identified jointly by the USGS and the state water resources research institutes. Comments on the necessity, quality, and utility of the information collected are due by December 16, 2009. Identify submission as 1028-NEW (NIWR) and send by email: OIRA_DOCKET@omb.eop.gov or fax: (202) 395-5806. Also submit a copy to Phadrea Ponds by email: pponds@usgs.gov, or fax: (970) 226-9230.

CLIMATE RESPONSE TO ORBITAL FORCING: EGU 2010 in Vienna (2-7 May, 2010):

The pacing of the global climate system by orbital variations is clearly demonstrated in the timing of glacial-interglacial cycles, but the mechanisms that translate this forcing into regional and global climate changes continue to be debated. We invite submissions that explore the climate system response to orbital forcing, that seek to support or refute the traditional Milankovitch view of a northern hemisphere ice-sheet control, and that test the stability of these relationships under different climate regimes or across evolving climate states (e.g. mid Pleistocene transition, Pliocene-Pleistocene transition, Miocene vs Pliocene). Submissions exploring proxy data and/or modeling work are welcomed. The deadline for abstract submission is 18th January 2010. Abstract submissions are now open and can be submitted to this session using the following link:

<http://meetingorganizer.copernicus.org/EGU2010/session/2930> General information on the EGU 2010 meeting can be found at <http://meetings.copernicus.org/egu2010/home.html>

FUNDING OPPORTUNITY: SERDP CORE AND SEED SOLICITATIONS.

The DoD Strategic Environmental Research and Demonstration Program (SERDP) released its annual Core and SEED solicitations for FY 2011 on October 29, 2009. Funds are available through a competitive process to both federal and private organizations to perform environmental research and development. Core Solicitation projects vary in cost and duration, consistent with the scope of the work proposed. Federal organizations respond to the Federal Call for Proposals and private sector organizations to the Broad Agency Announcement (BAA). For the Core solicitation, pre-proposals from the non-federal sector are due January 7, 2010 and federal proposals are due March 11, 2010. The SEED Solicitation is designed to provide a limited amount of funding, not to exceed \$150,000 in total cost and approximately one year in duration, for researchers to test proof of concept for work that will investigate new environmental approaches that entail high technical risk and/or have minimal supporting data. Federal organizations respond to the Federal Call for Proposals and private sector organizations to the BAA. All SEED proposals are due March 11, 2010. View the call for proposals and Statements of Need at <http://www.serdp.org/funding/>.

CALL FOR ABSTRACTS!! CONSOIL 2010 - MANAGEMENT OF SOIL, GROUNDWATER, AND SEDIMENT, SALZBURG, AUSTRIA, SEPTEMBER 22-24, 2010. The 11th edition will continue the successful programme of the ConSoil conferences. The themes of ConSoil 2010 reflect the latest topics in the management of soil, groundwater and sediment. ConSoil is the leading platform to exchange news and knowledge between: scientists, policy makers, consultants/service providers, administrators, site owners/river basin, managers, remediation companies/contractors, banking and insurance companies. The conference language will be English. Abstracts are due by December 21, 2009. For more information and to submit an abstract, see <http://www.consoil.de>.

CALL FOR ABSTRACTS!! REMEDIATION TECHNOLOGIES SYMPOSIUM 2010 (REMTECH 2010) FAIRMONT BANFF SPRINGS RESORT, BANFF, ALBERTA - OCTOBER 20-22, 2010. The Environmental Services Association of Alberta (ESAA) invites

you to submit papers and presentations focusing on technologies for the remediation of contaminated soil. The preliminary selection of papers and presentations will be based on submitted abstracts and reviewed by a panel of peers. Abstracts should be no more than 500 words and should include a presenter biography (bio not part of the word count), and must be received by May 20, 2009. For more information and to submit an abstract see, <http://www.esaa-events.com/remtech/call2010.htm>