

FY 2012 CLIMATE CHANGE ADAPTATION PLAN U.S. DEPARTMENT OF EDUCATION



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Background

While the scope, severity, and pace of future climate change impacts are difficult to predict, it is clear that potential changes could have important impacts on the U.S. Department of Education's (the Department's) ability to fulfill its mission.

Climate change adaptation is a critical complement to mitigation; both are required to address the causes and consequences of climate change. Adaptation planning allows the Department to minimize negative impacts of climate change that are already occurring and take advantage of any new science or technologies that may mitigate or moderate climate change. Through adaptation planning, the Department identifies how climate change is likely to affect our ability to achieve our mission, operate our facilities, and meet our policy and program objectives. Through adaptation planning the Department develops, prioritizes, implements, and evaluates actions to moderate climate change risks and exploit any new opportunities that climate change may bring.

By integrating climate change adaptation strategies into our programs and operations, the Department better ensures that taxpayer resources are invested wisely, and Department services and operations remain effective in current and future climate conditions. The Department's Senior Sustainability Officer is responsible for ensuring implementation of all aspects of this plan. In 2011, the Department established an intra-agency committee that reviewed and discussed examples of climate change impacts by sector from the National Academies of Sciences report, *Adapting to the Impacts of Climate Change* to conduct a high-level analysis of agency vulnerability to climate change and develop priority actions. Through quarterly meetings of the intra-agency committee, the Department will monitor climate change adaptation actions, evaluate the need to adjust activities as new information becomes available, and review and update the climate adaptation plan.

Mission

The Department promotes student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access. The Department's mission is to:

- Strengthen Federal commitment to ensuring access to equal educational opportunity for every individual;
- Supplement and complement the efforts of States, the local school systems and other instrumentalities of States, the private sector, public and private nonprofit educational research institutions, community-based organizations, parents, and students to improve the quality of education;
- Encourage the increased involvement of the public, parents, and students in Federal education programs;
- Promote improvements in the quality and usefulness of education through Federally supported research, evaluation, and sharing of information;
- Improve the coordination of Federal education programs;
- Improve the management of Federal education activities; and
- Increase the accountability of Federal education programs to the President, the Congress, and the public.

Climate change could have an effect on the Department's overall mission of promoting student achievement and preparation for global competitiveness.

Climate change could have an effect on the Department's ability to ensure equal access to educational opportunity for every individual.

Climate change could have an effect on the Department's efforts to supplement and complement the efforts of states, local school systems, and other instrumentalities of the states.

Climate Change Impacts

The National Academy of Sciences report, *Adapting to the Impacts of Climate Change*, provided a range of major climate change impacts that may significantly affect the Department's ability to meet its goals and objectives. For example, increased risk of floods in some regions, increased frequency of coastal and riverine flooding, permanent flooding of coastal lands, and changes in frequency, intensity, and duration of extreme weather events could have an effect on student achievement as climate change affects communities; including schools. Similarly, these climate change impacts could affect educational opportunities for students in these affected communities. Finally, based on the effects of such climate changes, affected communities may not be able to "stand up" their educational infrastructure. As a result, ED might redirect resources to supplement/complement state and local efforts in other education-related areas as needed.

The *Adapting to the Impacts of Climate Change* report also highlighted average rises in temperatures, more frequent and/or longer heat waves, and changes in precipitation or water availability. All of these climate change impacts could affect school communities and student's learning environments. For example, increases in frequency, intensity, and duration of heat waves could have a direct impact on students and their caregivers' health, affecting student achievement and educational opportunities. As average temperatures rise and there is an increased demand for cooling, how will that strain educational facilities? With higher temperatures and reduced precipitation, could we see a migration of students from states and localities with insufficient water supplies to states and localities with more stable water supplies? If that migration occurs, what is the impact on school districts within the losing and gaining states and localities?

The Interagency Climate Change Adaptation Task Force, in its October 2011 *National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate*, highlights issues related to freshwater resources. According to the *National Action Plan*, rainfall amounts are expected to decline in some areas and increase in others, while the proportion of precipitation that falls as snow decreases. Rainfall and storms are expected to be more intense. The *National Action Plan* further highlights that in some areas rising sea levels are projected to inundate water infrastructure, posing significant challenges for managers of freshwater resources and ensuring adequate water supply will be more difficult.

Previous Related Departmental Efforts

After Hurricanes Katrina and Rita, the Department administered the Hurricane Educator Assistance Program (HEAP). HEAP's purpose was to provide funding to Louisiana, Mississippi, and Alabama to help recruit, retain, and compensate educators who committed to work for at least three years in an area in which a major disaster area was declared as a result of Hurricane Katrina or Hurricane Rita. Under the

program, a State educational agency (SEA) used its HEAP allocation to award subgrants to eligible local educational agencies (LEAs) to support the recruitment, retention, and compensation of new and current teachers, principals, assistant principals, principal resident directors, assistant directors, and other educators, who committed to work for at least three years in school-based positions in public elementary and secondary schools in an area in which a major disaster area was declared as a result of Hurricane Katrina or Hurricane Rita.

In addition to administering HEAP, the Department developed a web page, Hurricane Help for Schools, aimed at getting additional supplies to schools serving students displaced by the hurricane. The web page provided a means by which people from around the country could access the Department's web page to determine how they could help the school districts that were bringing in the new students. The web page served as a clearinghouse of resources for Americans who want to help the students displaced by the hurricane.

Also, the Department led a number of efforts to help the students affected by the hurricane, including: conducting a task force meeting of national education leaders on the coordination and deployment of resources, and to ensure the Department was in continuous contact with state and local education leaders to provide guidance and support; permitting student loan borrowers living in affected areas to delay payments on their loans without penalty; extending deadlines for applying to a number of higher education programs; and on a case-specific basis, relaxing certain reporting provisions of the Elementary and Secondary Education Act for affected states.

Under the Readiness and Emergency Management for Schools (REMS) program, the Department provided grant funding to support efforts by LEAs to create, strengthen, and improve emergency management plans at the district and school-building levels, including training school personnel on emergency management procedures; communicating with parents about emergency plans and procedures; and coordinating with local law enforcement, public safety or emergency management, public health, and mental health agencies and local government. Grant funds could be used for: reviewing and revising emergency management plans; training school staff; conducting building and facilities audits; communicating emergency response policies to parents and guardians; implementing the National Incident Management System (NIMS); developing an infectious disease plan; developing or revising food defense plans; purchasing school safety equipment (to a limited extent); conducting drills and tabletop simulation exercises; and preparing and distributing copies of emergency management plans.

The Department developed resources in support of the effort under REMS, including a *Guide to School Vulnerability Assessments*. This guide, published by the Department in 2008, emphasized a valuable part of emergency management planning - ongoing vulnerability assessment - and was intended to assist schools with the implementation of an effective vulnerability assessment process, which included choosing an appropriate vulnerability assessment tool. The guide was not intended to be prescriptive or to give step-by-step instructions for conducting assessments, rather it was intended to describe the key elements to be considered when selecting an assessment tool appropriate for school environments and provide guidance for conducting an assessment that will inform school emergency management activities. This guide was a companion piece to *Practical Information on Crisis Planning: A Guide for Schools and Communities*, originally published by the Department in 2003 as a guide for schools and districts to prepare for a variety of crises.

Further, the REMS Technical Assistance (TA) Center produced three publications: REMSExpress, Helpful Hints, and Lessons Learned. The REMSExpress was a newsletter that provided comprehensive information on key issues in school emergency management. Helpful Hints offered a quick overview of school emergency preparedness topics that were frequently the subject of inquiries, such as the creation of emergency supply kits or “go-kits.” Lessons Learned was a series of publications that were a brief recounting of actual school emergencies and crises. All publications supported an all-hazards approach to collaborative school emergency management that is guided by the four phases (prevention - mitigation, preparedness, response and recovery) and integrates the needs of people with disabilities. In addition, the REMS TA Center offered periodic webinars featuring presentations from experts in the field of emergency response.

Also, the Department administered the Emergency Management for Higher Education (EMHE) grant program. The EMHE program supported institutions of higher education (IHE) projects designed to develop, or review and improve, and fully integrate campus-based all-hazards emergency management planning efforts.

The EMHE grant program provided funds to IHEs to establish or enhance an emergency management planning process that integrated the various components and departments of each IHE; focused on reviewing, strengthening, and institutionalizing all-hazards emergency management plans; fostered partnerships with local and State community partners; supported vulnerability assessments; encouraged training and drilling on the emergency management plan across the community; required IHEs to develop a written plan for preventing violence on campus by assessing and addressing the mental health needs of students, faculty, and staff who may be at risk of causing campus violence by harming themselves or others; required IHEs to develop or update a written plan that prepared the campus for infectious disease outbreaks with both short-term implications for planning (e.g., outbreaks caused by methicillin-resistant *Staphylococcus aureus* (MRSA) or food-borne illnesses) and long-term implications for planning (e.g., pandemic influenza); and required IHEs to develop or update a written campus-wide continuity of operations plan that would enable the campus to maintain and/or restore key educational, business, and other essential functions following an emergency.

Current Related Departmental Efforts

On May 22, 2011, a tornado caused 161 fatalities, numerous casualties, and severe physical damage to Joplin Schools in Missouri. Three schools—Joplin High School, Irving Elementary, and Franklin Technology Center—were completely destroyed, and six other schools were severely damaged.

Through the Project School Emergency Response to Violence (Project SERV) program, the Department provides critical support for short-term and long-term education-related services for LEAs and IHEs to help them recover from a violent or traumatic event in which the learning environment has been disrupted and there is a need for resources to respond, recover, and re-establish a safe environment for students. The Department’s Office of Safe and Healthy Students has awarded more than \$28 million to 93 grantees, including Joplin Schools, since the grant program began in 2001. Though not specifically focused on climate change, the effects of climate change can impact programmatic operations.

Specifically, the Department awarded Joplin Schools an Immediate Services Project SERV grant of almost \$50,000 to help provide local students and education staff with academic and mental health services. Recently, to support the transition from short-term to long-term recovery, and to restore the learning

environment, Joplin Schools requested and was granted Project SERV Extended Services funding, in the amount of \$818,185. The award will provide support to personnel who will undertake a comprehensive school-centered, multi-tiered intervention and response initiative. Efforts include training educators and other personnel to provide behavioral interventions that support positive academic and behavioral changes of students. Modeled after its student-centered multi-tiered intervention program for students, Joplin schools will implement a similar program for their staff. Led by a case manager, there will be an intervention and support process for staff that includes facilitating access and referrals to mental health supports, as well as support training in "compassion fatigue." Compassion Fatigue recognizes that educators and staff are personally experiencing trauma and, at the same time, they are expected to continually care for and support the mental and behavioral needs of their students.

The Department administers programs and initiatives that encourage its stakeholders to pursue improved environmental health with a view toward equity. These programs serve as the cornerstone for the Department's Environmental Justice Strategy. Some of these programs are in their pilot year or have been proposed for future consideration within the Department.

In the Spring of 2011, the Department launched the Green Ribbon Schools recognition program. This national recognition award recognizes schools that save energy, reduce costs, feature environmentally sustainable learning spaces, protect health, foster wellness, and offer environmental education to boost academic achievement and community engagement. The recognition award is part of a larger Department effort to identify and disseminate knowledge about practices proven to result in improved student engagement, academic achievement, graduation rates, and workforce preparedness, as well as a government-wide aim to increase energy independence and economic security. Notably, even before the award completed its pilot year, it garnered the Department accolades from the U.S. Green Building Council and the Center for Environmental Innovation and Leadership.

In June 2012, the Department, in conjunction with the White House Council on Environmental Quality (CEQ), the Environmental Protection Agency (EPA), and the U.S. Surgeon General hosted the first-ever U.S. Department of Education Green Ribbon Schools National Ceremony in Washington, D.C. There were nearly 100 nominations submitted by 30 SEAs, the District of Columbia, and the Bureau of Indian Education. More than 350 schools completed applications to their SEAs. Among the list of winners were 66 public schools, including 8 charter schools, and 12 private schools. In total, the 78 winners nationwide were composed of 43 elementary, 31 middle and 26 high schools with approximately 50 percent representing high-poverty schools. Honored schools exercised a comprehensive approach to creating "green" environments through reducing environmental impact, promoting health, and ensuring a high-quality environmental and outdoor education to prepare students with the 21st century skills and sustainability concepts needed in the growing global economy.

The Promise Neighborhoods grant program aims to improve the educational and developmental outcomes of children and youth in distressed neighborhoods. The program seeks to improve the social well-being of large numbers of citizens through efforts to engage entire communities in activities that include creating safe and healthy spaces for children. By focusing on local infrastructures and resources, educational programs, family and community supports, and effective solutions for communities, this grant program is designed to assist children and youth in succeeding in early childhood and K-12 education and successfully transitioning to college and careers. Efforts supporting healthier kids and communities can promote resilience of individuals and communities to climate-related health risks.

Proposed under the Department's proposal for the reauthorization of the Elementary and Secondary Education Act of 1965, the Effective Teaching and Learning for a Well-Rounded Education grant program, would consolidate eight currently authorized programs that provide funding for subjects important to a complete education. Examples of these subjects include history, the arts, foreign languages, economic and financial literacy, and environmental education. Providing a complete education helps ensure that when our students graduate from high school they college and are career ready, and that they are also good citizens. In particular, support for environmental education may help to focus on the development of civic engagement skills and the relationship among complex social, economic, and environmental systems that could set the stage for a generation of citizens who will be prepared to grapple with new environmental and equity challenges.

The President's 2013 budget request for the Department includes:

- \$150 million for Effective Teaching and Learning: STEM - this new program would support the transition to college- and career-ready standards by helping States improve teaching and learning in science, technology, engineering and mathematics, and it would be administered in coordination with the math-science partnership program at the National Science Foundation. Funds would be used to support State implementation of comprehensive, evidence-based plans; professional development that aligns Federal, State, and local resources to promote high-quality STEM instruction; and for subgrants to high-need LEAs to support comprehensive STEM instruction in the grades and schools with the greatest needs.
- \$80 million for a proposed STEM teacher and leader training and professional development set aside from the proposed Effective Teachers and Leaders program. This program would provide competitive awards to create or expand high-quality pathways to teacher certification and other innovative approaches for recruiting, training, and placing talented recent college graduates and mid-career professionals in the STEM fields in high-need schools. The program would support the President's ambitious goal of preparing 100,000 excellent STEM teachers over the next decade.

In June 2012, the Department announced that the \$285 million Teacher Incentive Fund 2012 competition would invite applications for a separate competition that centers on improving STEM instruction. Specifically, districts are invited to apply for funds to support plans for recruiting, preparing, and retaining highly effective STEM educators. Applicants will propose plans to develop a master corps of STEM teachers through various efforts such as providing additional compensation based on effectiveness, creating career-ladder positions, and placing exceptional teachers in schools with the greatest need.

Efforts in STEM could address concerns noted in the *Draft National Ocean Policy Implementation Plan* from the National Ocean Council, specifically, Action 5: "Develop human capacity and the skilled workforce necessary to conduct ocean research and manage ocean, coastal, and Great Lakes resources." A diverse workforce with interdisciplinary skills and training is needed to keep the United States a world leader in ocean science research, and to provide the most knowledgeable management of our ocean, coastal, and Great Lakes resources possible. STEM efforts will support efforts to build the technical, scientific, and managerial workforce capacity to ensure that management of and research on the ocean and U.S. coastal and Great Lakes regions are of the highest quality possible.

Interagency Collaboration

The Department has collaborated with numerous Federal agencies in its environmental justice initiatives and in climate change adaptation discussions. The Department took input from more than a half dozen agencies, including the EPA, CEQ, Department of the Interior, and Department of Energy (DOE), in the development of its U.S. Department of Education Green Ribbon Schools Award competition. The Department used the tenets of that competition to assist the National Oceanic and Atmospheric Administration in developing an environmental literacy strategy for the Chesapeake Bay watershed area. The Department also partnered with the Departments of Labor and State to host a stakeholder consultation in preparation for the United Nations Conference on Sustainable Development.

The Department and the Federal Emergency Management Agency's (FEMA) Office of Individual and Community Preparedness have been collaborating to facilitate recovery and necessary support for Joplin Schools. Activities have included conference calls, technical assistance, and facilitating relationship-building between Joplin School officials and key local, state, and federal officials involved in the response and recovery.

The Department was a signatory to the Urban Waters Federal Partnership, an 11-agency effort to revitalize communities and waters across the nation. This effort will reconnect urban communities, particularly those that are overburdened or economically distressed, with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts to improve our nation's water systems and promote their economic, environmental and social benefits.

Efforts supporting healthier kids and communities can promote resilience of individuals and communities to climate-related health risks. For example, the Department actively supports: Let's Move! the comprehensive initiative, launched by the First Lady, dedicated to solving the challenge of childhood obesity within a generation, so that children born today will grow up healthier; and the HealthierUS School Challenge to establish rigorous standards for schools' food quality, participation in meal programs, physical activity opportunities, and nutrition education. This nationwide program has spurred schools that meet these standards all across the country to transform their environments into places where healthy eating and physical activity is experienced and learned.

Finally, the Department is a member of the National Prevention, Health Promotion, and Public Health Council and participated in the drafting of the 2011 National Prevention Strategy.

Moving Forward

The Department will continue to actively participate in the Climate Change Adaptation Community of Practice to better understand climate change risks and opportunities related to the Department's mission, programs, and operations. Given its mission with regard to equal educational access, the Department will take actions to help address high and adverse human health and environmental effects that negatively affect student achievement among minority and low-income student populations. As a result, the Department will focus on the following areas: healthy learning environments for students; energy-efficient school facilities; and sustainability education and environmental literacy. Specific goals for FY 2013 include:

1. Through enhanced communication and outreach on the importance of the environment and its impact on health and education, the Department will work to identify environmental resources for States, districts, and school communities to help them give proper consideration to these matters in their programs, operations, and infrastructures.
2. The Department will collaborate with other Federal agencies and private-sector organizations to highlight the importance of the environment and its impact on health and education for all students, especially those attending schools in underserved communities.
3. The Department will provide incentives for focusing on the importance of the environment and its impact on health and education by recognizing schools that are high achieving in these areas as part of the U.S. Department of Education Green Ribbon Schools recognition program.

In addition, as the Department strengthens its understanding of climate change risks, it will build on existing interagency collaborations to support efforts in key areas and reach out to other agencies that are likely to face similar climate change impacts and management challenges.

In FEMA's report, *A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action*; as a concept, Whole Community is a means by which residents, emergency management practitioners, organizational and community leaders, and government officials can collectively understand and assess the needs of their respective communities and determine the best ways to organize and strengthen their assets, capacities, and interests. A Whole Community approach attempts to engage the full capacity of the private and nonprofit sectors, including businesses, faith-based and disability organizations, and the general public, in conjunction with the participation of local, tribal, state, territorial, and Federal governmental partners. Building on the successful joint efforts of the Department and FEMA's Office of Individual and Community Preparedness to facilitate recovery and necessary support for Joplin Schools, in FY 2013 the Department will examine efforts that can be undertaken with FEMA to strengthen planning and investing in disaster resiliency for schools and affected communities and determine if there is a role for the Department in FEMA's efforts related to a Whole Community approach to emergency management.

The devastating tornado in Joplin, Missouri, led to the development of the Citizens Advisory Recovery Team (CART). CART is composed of city officials, business leaders, community leaders, and residents whose shared purposes are to engage residents to determine their recovery vision and share that vision with the community, provide a systematic way to address recovery through a planning process, and bring all segments of the community together to share information and work together. Shortly after the tornado, CART, with support from FEMA's Long-Term Recovery Task Force, Housing and Urban Development, EPA, and the American Institute of Architects, conducted extensive public input and community sessions to discuss housing and neighborhoods, schools and community facilities, infrastructure and environment, and economic development. During FY 2013, the Department will review the input provided through the community sessions and examine the role of schools in addressing emergency management.

In FY 2013, the Department will examine ways to support the work of the Department of Housing and Urban Development (HUD), the Department of Transportation (DOT), and the EPA in implementing the Sustainable Communities Initiative. Specifically, as the Sustainable Communities Initiative moves

forward, the Department will examine connections that can be made related to community resiliency and adaptation strategies for schools.

The mission of HUD's Office of Sustainable Housing and Communities (OSHC) is to create strong, sustainable communities by connecting housing to jobs, fostering local innovation, and helping to build a clean energy economy. In order to better connect housing to jobs, OSHC works to coordinate federal housing and transportation investments with local land use decisions in order to reduce transportation costs for families, improve housing affordability, save energy, and increase access to housing and employment opportunities. By supporting efforts to locate housing near job centers and affordable, accessible transportation, OSHC nurtures healthier, more inclusive communities which provide opportunities for people of all ages, incomes, races, and ethnicities to live, work, and learn together.

In addition to the Sustainable Communities Initiative, OSHC operates the Energy Innovation Fund. The objective of the Energy Innovation Fund is to catalyze innovations in the residential energy efficiency sector that have promise of replicability. The OSHC collaborates with HUD program offices, DOE, and EPA to develop strategies to reduce energy consumption in public and assisted housing. The Department will work with the OSHC in 2013 to determine if there are lessons that can be learned from the Energy Innovation Fund related to lowering costs and developing strategies to implement energy efficiency programs and installing clean energy systems that would be applicable to schools.

In FY 2013, the Department will engage the Interagency Working Group on Ocean Education to determine how the Department could support a proposed action included in the National Ocean Council's draft National Ocean Policy Implementation Plan, which is focused on increasing ocean and coastal literacy by expanding the accessibility and use of ocean content in formal and informal educational programming for students, educators, and the public. As the draft Implementation Plan notes, increased public understanding of ocean and coastal science and the importance of the ocean in Earth systems will produce a more informed citizenry; create better stewards of ocean, coastal, and Great Lakes resources; and increase awareness of business opportunities related to these resources. It will also increase interest in activities to address the issues facing the ocean, our coasts, and the Great Lakes.

Efforts with the Interagency Working Group on Ocean Education could be similar to actions the Department could take in collaboration with the National Fish and Wildlife Service to address Strategic Goal # 6 of the draft *National fish, wildlife, and plants Climate Adaptation Strategy*, in particular, Strategy 6.2: "Engage the public through targeted education and outreach efforts and stewardship opportunities - develop educational materials and teacher training for K-12 classrooms on impacts and responses to climate change."

In FY 2013, the Department will continue its collaboration with the White House Council on Environmental Quality (CEQ) and the EPA to implement the Green Ribbon Schools Initiative. Through this collaboration, the Department will determine if there are lessons and promising practices from the first-ever honorees from the Green Ribbon Schools recognition program that could be used to address climate change issues broadly for other schools. For example, a number of first-ever honorees reduced water use. Specifically, the Department will examine whether there are opportunities to take practices from these Green Ribbon Schools and apply them to Recommendation # 4 of the Interagency Climate Change Adaptation Task Force's *National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate* regarding the need to expand water use efficiency.

Currently, the Department and the Department of Health and Human Services (HHS) jointly administer the Race to the Top: Early Learning Challenge. In FY 2013, the Department will look to build on its strong partnership with HHS and identify opportunities for collaboration in the area of climate change adaptation. As noted earlier, with average rises in temperatures and more frequent and/or longer heat waves, these climate change impacts could affect the school community and student's learning environments. For example, increases in frequency, intensity, and duration of heat waves could have a direct impact on students and their caregivers' health, affecting student achievement and educational opportunities.

The Department will work with HHS to promote resilience of individuals and communities to climate-related health risk – focus on healthier kids and communities. These new efforts would be consistent with the Department's efforts related to the National Prevention, Health Promotion, and Public Health Council and the drafting of the 2011 National Prevention Strategy, as well as complement the First Lady's Lets Move! initiative and the Healthier US School Challenge.