



Department of Labor

Climate Change Adaptation Plan

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1. INTRODUCTION

In compliance with the recently signed Executive Order 13653 *Preparing the United States for the Impacts of Climate Change* (November 6, 2013), Federal agencies were directed to take a series of steps to make it easier to strengthen their resilience to extreme weather and prepare for other impacts of climate change. Federal agencies must build upon earlier climate change planning efforts (pursuant to Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, (October 5, 2009) to establish an integrated strategy toward sustainability in the Federal government). This strategy must include evaluation of the most significant climate change related risks to, and vulnerabilities in, agency operations and missions in both the short and long term, and outline actions that agencies will take to manage these risks and vulnerabilities. Further, Federal agencies are to integrate consideration of climate change into agency operations and overall mission objectives and update these plans annually.

Accordingly, building upon earlier efforts, this document represents the Department of Labor (DOL) Climate Change Adaptation Plan (“Adaptation Plan”). This Adaptation Plan is a policy framework for climate change adaptation, analyzing agency risks and vulnerabilities, and performing adaptation planning in accordance with the Council on Environmental Quality (CEQ) guidance, *Preparing Federal Agency Climate Change Adaptation Plans in Accordance with Executive Order 13653* (Dec. 19, 2013). DOL’s Adaptation Plan will be submitted to the Council on Environmental Quality (CEQ).

The Department of Labor (DOL) fosters and promotes the welfare of the job seekers, wage earners, and retirees of the United States by improving their working conditions, advancing their opportunities for profitable employment, and protecting their retirement, health care, and other benefits. Toward this end, DOL, through its component agencies, administers and enforces more than 180 Federal laws and numerous regulations that cover the workplace for some 10 million employers and 125 million workers all for the purpose of expanding access to opportunity for America’s workers. These programs are not involved significantly in substantial greenhouse gas (GHG) emitting production processes. However, in fulfilling this mission, the Department’s main resource is its workforce and its main concern is America’s workforce both of which are affected substantially by climate change impacts.

DEPARTMENT OF LABOR AGENCIES

Office of the Secretary

Worker Protection Agencies

Employment Benefit Security Administration (EBSA) Mine Safety and Health Administration (MSHA)

Office of Labor Management Standards (OLMS) Occupational Safety and Health Administration (OSHA)

Office of Federal Contract Compliance Programs (OFCCP) Office of Workers' Compensation Programs (OWCP)

Wage and Hour Division (WHD)

Employment and Training Agencies

Employment and Training Administration (ETA (including Job Corps (JC))

Veterans Employment and Training Service (VETS)

Statistical Agencies

Bureau of Labor Statistics (BLS)

Policy Agencies

Office of Disability Employment Policy (ODEP) Bureau of International Labor Affairs (ILAB)

Women's Bureau (WB)

Administrative Law Agencies

Administrative Review Board (ARB) Benefits Review Board (BRB) Employees' Compensation Appeal Board (ECAB)

Office of the Administrative Law Judges (OALJ)

Support Agencies

Office of the Assistant Secretary for Administration and Management (OASAM)

Office of the Assistant Secretary for Policy (OASP) Office of the Chief Financial Officer (OCFO)

Office of Congressional and Intergovernmental Affairs (OCIA)

Office of Public Affairs (OPA) Office of the Inspector General (OIG)

Solicitor of Labor (SOL)

DOL agency mission requirements were paramount in conducting the high-level analysis of the vulnerability to climate change.¹ The agency's three highest-risk critical vulnerabilities/assets were found to be personnel, utilities (including information technology, telecommunications (data and voice), power, and water) infrastructure, and buildings (for Job Corps). Across these three major asset categories, DOL agencies most frequently identified severe weather events and extreme temperatures as the key climate stressors, followed by drought and temperature changes, and then sea level rise. Common climate change vulnerabilities fell into four broad categories: 1) workers health and access to workplace impacts, 2) infrastructure including information technology, telecommunications, transportation, utility and connectivity disruption among personnel and workers resulting from weather events, 3) fiscal resources diversion away from completing agency mission to funding climate change adaptive accommodations, e.g., additional travel, personnel and technical assistance, and lack of fiscal resources for completing mission in the face of climate change events, and 4) buildings on the 125 Job Corps Center (JCC) campuses across the Nation affected by climate change.

DOL agency workforces accomplish the missions of their agencies and the 180 federal laws and regulations through a variety of means including inspecting work sites. For example, MSHA administers the Federal Mine Safety and Health Act of 1977 to enforce compliance with mandatory safety and health standards in the nation's mines. MSHA's mission is to prevent death, disease, and injury from mining and promote safe and healthful workplaces for the Nation's miners. Statutorily, MSHA is required to conduct complete inspections of all underground mines four times per year, and all active surface mines twice per year. Consequently, each day mining inspectors travel many miles to inspect the nation's mines to safeguard worker health and safety. Mines may be many miles apart and inspectors are subject to the impact of climate change to accomplish required inspections, e.g., extreme weather. Similarly, the Department's other six worker protection and enforcement agencies inspectors inspect work sites every day. Approximately half of the DOL vehicle fleet is used by these worker protection agencies, which exposes the workers, work and vehicles to the effects of climate change, e.g., extreme weather.

Job Corps delivers comprehensive job skills training and education to eligible youth, most of whom live, train, and study on the 125 residential campuses comprising nearly 2400 buildings located in 48 states, Puerto Rico, and the District of Columbia. The other half of the DOL vehicle fleet is used on Job Corps campuses for student transportation and for staff to conduct key functions of the program's mission. For example, fleet vehicles transport students to work-based learning sites, community colleges, recreational activities, public and private transportation (bus lines, airports), and are used to evacuate students during emergency events. These students and the workers who run the programs are subject to climate change impacts.

Job Corps is the Department's leader on renewable energy. In addition to training students for jobs in renewable energy careers, JC uses sustainable technologies and equipment at their centers. And, DOL and JC sustainability efforts are boosted through these technologies by installing these solutions on JCCs nationwide. Through these efforts, and others, the Department meets the E.O. 13514 requirement to increase the use of renewable energy, and is already prepared to meet the higher requirements of the Presidential Memorandum—*Federal Leadership on Energy Management* (December 5, 2013).

Job Corps produces renewable energy with wind turbines at the Pine Ridge, Angell, Cassadaga, Hawaii/Maui, solar photovoltaic production at the Westover, Edison, and Woodland JCCs, and solar hot water at the Miami JCC. The Loring and Albuquerque JCCs produce domestic hot water using biomass. Additional Job Corps renewable energy projects planned are: biomass boilers at the Boxelder JCC and a wind turbine at the Weber Basin JCC.

DOL efforts to install renewable energy on Job Corps campuses, some of which is sold to the national grid, are intended to reduce the carbon emissions that are contributing to climate change and also to help to make these geographic localities more resilient to withstand power outages due to climate change. Further, DOL has exceeded the EPA's 2005 requirement that agencies increase renewable energy use such that at least 7.5 percent of the agency's total electricity consumption is accounted for by Renewable Energy Credits for FY 2013 and beyond. In FY 2013, DOL's renewable energy use as a percentage of total electricity consumption already clocked in at 11.1%.

As previously noted in the 2011 DOL climate adaptation plan, Job Corps' unique strength lies in its role as a community member and federal partner positioned to provide trained young adults who volunteer to provide assistance. Over the years, Job Corps students have been involved in fire-fighting and other disaster management efforts all across the country. Job Corps' federally operated centers (Civilian Conservation Centers), operated by the USDA Forest Service, work closely with DOL to establish health, safety, and emergency planning and responses. JC works with other Federal agencies in emergencies many of which result from extreme weather.

The Department has considered the need to improve climate adaptation resilience, including the costs and benefits of such improvement. The Department's capital equipment investment in information technology infrastructure and the move to the cloud increases resilience in the ability of DOL personnel to telework and therefore accomplish mission despite climate change impacts. DOL has relocated and consolidated existing facilities, e.g., data centers. This move provides resilience for the DOL IT infrastructure and for telework. As to suppliers and supply chain, agency leasing and building upgrades, DOL, like all Federal agencies, looks to

the General Service Administration to address climate change adaptation matters in these areas.

The Department will look at any barriers that discourage investments or actions to increase resilience. DOL will continue to look at how its component agencies' funding programs affect State, local and tribal communities' climate change risk, e.g., grantees through the employment and training agencies. Further, the Department will continue to update policies related to the National Environmental Policy Act.

The Department of Labor is proud of its unique contribution to the opportunity for America's workers to work in a safe environment. To that end, the Appendix includes resources from the Occupational Safety and Health Administration regarding workers in extreme weather and weather events.

2. POTENTIAL VULNERABILITY AND IMPACTS

The Department's mission activities are affected and have been affected directly by many of the climate change impacts.

- Sea Level Rise Impacts: Coastal erosion, storm surges, flooding, loss of landmass, loss of wetlands and fresh water, water contamination.
- Extreme Weather Events Increases: Hurricanes, tornados, tsunamis, high wind storms, storm surges, and extreme rainstorms causing flooding, water contamination, power outages, loss of real and personal property, loss of transportation and other public infrastructure, risks to emergency services, loss of supply chain for customary products and services, etc.
- Gradual Seasonal Temperature Increases: Heat stress, increased pests, increased infectious diseases, increased allergies and asthma, air pollution and increased "ozone days," loss of biodiversity, drought, agricultural animal heat stress and food crop losses, increased wildfires, increased demand for water and energy resources, damage to highway infrastructure, energy infrastructure failures, and in Alaska melting permafrost leading to soil sinkage and building collapse and ice infiltration into river systems.
- Gradual Seasonal Increased Precipitation: Increased flooding, building damage, increased stormwater runoff and water contamination.
- Energy and Water Resource Impacts: Increased demand leading to regional shortages and economic disruption. Water scarcity leading to security and community impacts, loss of the natural environment and wildlife, food source loss and disruptions, etc. *See* U.S. Global Change Research Program, [Global Change Impacts in the United States](http://nca2009.globalchange.gov/) (2009) available at: <http://nca2009.globalchange.gov/>.

- Related Impacts: loss of supply chains, failure of transportation, energy, communication, or IT infrastructure, declines in local economic activities or communities, etc.

DOL agencies identified four broad categories of common climate change vulnerabilities:

Personnel:

Severe weather impacted and impacts DOL employee's individually as well as their ability to get to work and perform their work throughout the United States. Seasonal temperature changes, degraded air quality and extreme weather have created and pose potential health impacts for DOL workers and the workers whose safety and health the Department is charged with protecting. (See Journal of Occupational and Environmental Hygiene, 6: 542–554). For example, DOL agencies noted that:

- Increased days with heat in excess of 100 degrees Fahrenheit has caused and may cause situations of "code red" or "save the air" ozone days and also utility company power conservation days that could impact operations.
- An increase in extreme weather events has required and may require suspension of operations such as for an impending storm, followed by extended shutdown of operations due to infrastructure damage or loss of electrical power.
- Extreme weather events have resulted and can result in damage to employee's and their families' residences causing them to address personal exigencies rather than Departmental work.
- An increase in excessive heat, extreme weather events and natural disasters has led and may also lead to increases in DOL agency work, e.g., increased Federal Employees' Compensation Act cases being filed from federal responders including National Park Service firefighters, Federal Emergency Management Agency first responders and any other occupation necessitating outdoor work.

Infrastructure:

Information technology and necessary connectivity, utility, transportation all have experienced and may experience disruption as a result of climate change impacts. Any disruption whether caused by utility failure or DOL and/or provider IT system issues severely limits – if not eliminates -- the ability of DOL personnel to accomplish agency mission because telework and its key connectivity provide the major means to do so.

Fiscal resources:

With Federal budget constraints, climate change adaptive actions, e.g., additional travel, personnel and technical assistance, divert funding away from normal operations. Further, there is a lack of fiscal resources for completing agency missions in the face of climate change events.

Buildings:

Nearly 2400 buildings on the 125 Job Corps Center (JCC) campuses across the Nation have been and are subject to climate change impacts. In addition, Job Corps Center campuses have served and will serve often as alternative shelter for communities in the event of extreme weather events.

3. PRIORITY ACTIONS TO ADAPT TO CLIMATE CHANGE

DOL and its agencies climate change plans take into account preparedness, adaptation and resilience as they work to prevent and mitigate negative impacts of climate change and protect mission activities. Building on experience and continuity planning, DOL and its agencies have put in place a series of actions which help ensure the accomplishment of DOL mission in the face of climate change impacts.

Personnel-related

A variety of personnel related actions enable the Department's most important resource to continue work on agency missions. The chief means to enable personnel to continue to work is telework. The continued and increasing robustness of telework throughout the Department is essential to DOL accomplishing its mission when climate change impacts occur. DOL and its agencies have worked to ensure employees who can perform their work remotely have telework agreements and plan accordingly on an ongoing basis. The Department has worked and is working to remove endemic impediments to telework, e.g., data that is not digital and accessible remotely, and addressing security concerns regarding records with personally identifiable information. Similarly, DOL is working to inculcate a culture of managers and employees who

are effective, efficient and telework. All employees and managers must take telework training and telework is encouraged and is increasing throughout the Department.

DOL and its agencies have instituted other personnel work approaches to ensure mission accomplishment, including but not limited to: cross job sharing, regional job sharing, work reallocation between district and regional offices, especially post operation suspension, establishing alternative work sites, re-prioritizing workload. Agencies included increased hiring, technical assistance and travel in budgets where possible and appropriate to ensure personnel are in the necessary locations to accomplish mission.

Infrastructure

The Department's key modernization initiative—moving its IT infrastructure to the Cloud—is the major means enabling DOL to accomplish mission in the event of climate change. In addition to increased promotion of telework within the Department, new IT initiatives will ensure greater flexibility with the ability to perform work outside of the physical office including, but not limited to: cloud email, virtual desktop infrastructure (VDI), and cloud storage/collaboration. Nearly all of the Department's work can continue with the flexibility provided by IT infrastructure modernization efforts. In addition, to build on the alternative work approaches and flexibilities, DOL and its agencies are working to update and increase availability and flexibility of collaborative tools agencies need to perform their missions.

However, IT infrastructure is affected by other utility disruptions, e.g., electricity, etc. Examples include, the work to process worker compensation claims, schedule and record work site inspections, take and analyze filings from employee pension plans and unions, and obtain and release key economic data is affected by climate change impacts and workers in this arena use IT infrastructure to accomplish mission. To address climate change impact, DOL agencies will use the alternative personnel work approaches set forth above.

DOL agencies are working to increase teleconferencing capability including using other agency facilities to enable remote hearings and meetings. And agencies that use vehicles to perform their work have examined means to diversify transportation modes in the event of climate change impacts. Reviewing differing work and transportation modes is important because with the increase in severe weather and events comes an increase in government assistance to rebuild and the need for DOL worker protection agencies to inspect such work sites. The Department Data Center Consolidation Initiative (DCCI) will realize important climate change mitigation results because of the reduced energy footprint. In 2014, the DCCI continued to progress in the seven year plan to consolidate DOL data centers in the Washington DC metropolitan area initially and expanding the focus to all data centers across the US. The effort included the procurement of a state of the art Tier 3 commercial data center which became operational in May 2013. To move

forward with the efficient migration of DOL systems, services and capabilities, the Department had to build out a network infrastructure complete with expanded circuit bandwidth and high speed network backbone to support the virtualized and cloud based environment and migration strategy for DOL agency systems. Since the completion of the network target architecture in December, 2013, the DOL has closed 13 non-core data centers through consolidation or elimination and plans to complete the closure of 4 additional non-core data centers by the end of 2014.

The Department's robust continuity programs, that are exercised annually, ensure viability of plans to ensure continuity of its work and the essential functions that support that work in the event of climate change impacts. Alternate work sites have been identified to support operations in the event of an emergency affecting the National Office or regional office for a period of approximately 30 days, or until normal operations can resume. The Department's constantly updated continuity of operations and pandemic plans contribute to readiness in the event of climate change impacts.

Job Corps has used climate change awareness to update its programs for its students to include more training related to career opportunities in renewable energy.

Fiscal Resources

The lack of fiscal resources for completing agency missions in the face of climate change events is an ongoing problem especially in the face of ever-constricted Federal budgets. Climate change may require additional travel, personnel, and technical assistance which budgets may not include. In addition, DOL climate change impact actions often divert funding away from regular operations. A key strategy to address the lack of funding includes Departmental efforts to strengthen the ability to work remotely. Thus, increasing telework, use, reliability and robustness will continue to be important to DOL for all operational reasons including addressing climate change impacts.

For DOL agencies that make grants, climate change impacts DOL agency grantees ability to complete grant obligations. In this event funds may revert back to DOL. DOL agencies are considering how to address this issue.

Buildings

With nearly 2400 buildings, many of them quite aged, JCC campuses prepare for climate change impact affecting their training and students through a number means. Job Corps Centers are prepared for evacuation in the event of climate change impact. For example, Job Corps has identified that some Centers are particularly susceptible to forest fire. JCC campuses have served and will serve often as alternative shelter for communities in the event of extreme weather events. Pursuant to the DOL sustainability plan, Job Corps' renewable energy and greenhouse gas reduction efforts contribute to climate change mitigation across the United States. Analysis of climate change impact and adaptation has been included in statements of work for JC site changes requiring environmental impact assessments.

The DOL Headquarters, the Frances Perkins Building (FPB) is a new participant in the National Capital Region Planning efforts. DOL has already included a climate impact analysis and adaptation planning in its environmental impact reviews under the National Environmental Policy Act (NEPA).

APPENDIX:

Occupational Safety and Health Administration Resources Regarding Workers in Extreme Weather and Weather Events

OSHA Climate Change Impact Resources

Extreme weather events such as floods, landslides, storms, tornadoes, droughts, and wildfires have become more frequent and intense in recent decades, as temperatures and climatic variability change. OSHA is concerned with workers involved in response and cleanup efforts who may have greater exposure to risky conditions as the frequency and severity of extreme weather events increases.

*Seven categories of climate-related hazards are identified: (1) increased ambient temperature, (2) air pollution, (3) ultraviolet exposure, (4) extreme weather, (5) vector-borne diseases and expanded habitats, (6) industrial transitions and emerging industries; and (7) changes in the built environment.*¹

Cold Stress Quick Card: <http://www.osha.gov/Publications/OSHA3156.pdf>

Cold Stress Safety and Health

Guide: <http://www.osha.gov/SLTC/emergencypreparedness/guides/cold.html>

Heat Illness: <http://www.osha.gov/SLTC/heatillness/index.html>

Heat Safety Tool: http://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html

Heat Stress: <http://www.osha.gov/SLTC/heatstress/index.html>

¹ Schulte, P. A., Chun, H.K. Climate Change and Occupational Safety and Health: Establishing a Preliminary Framework: *Journal of Occupational and Environmental Hygiene*, 6: 542–554 (2009).

OSHA provides resources in the event of disaster.

Emergency Preparedness and Response Landing

Page: <https://www.osha.gov/SLTC/emergencypreparedness/index.html>

Winter Weather: https://www.osha.gov/dts/weather/winter_weather/index.html

Hurricanes: <https://www.osha.gov/dts/weather/hurricane/index.html>

Wildfires: <https://www.osha.gov/dts/wildfires/index.html>

Tornadoes: <https://www.osha.gov/dts/weather/tornado/index.html>

Floods: <https://www.osha.gov/dts/weather/flood/index.html>

OSHA provides resources in event of specific hazards:

Radiation: <https://www.osha.gov/SLTC/radiation/>

Biological Agents: <http://www.osha.gov/SLTC/biologicalagents/index.html>

ⁱ Climate Change Impact data considered by Department of Labor:

U.S. Climate Change Global Research Program, <http://globalchange.gov/>. US.EPA, Climate Change, <http://www.epa.gov/climatechange/>; NASA, Global Climate Change, Vital Signs of the Planet, http://climate.nasa.gov/climate_resource_center ; NOAA, Climate, <http://www.noaa.gov/climate.html>

Regional Specific Information:

U.S. Global Change Research Program, Global Change Impacts in the United States (2009) available at: <http://nca2009.globalchange.gov/>

Alaska

<http://www.epa.gov/climatechange/impacts-adaptation/alaska.html> (US EPA);
<http://nca2009.globalchange.gov/Alaska> (US Global Change Research Program)

U.S. Tropical Islands

<http://www.epa.gov/climatechange/impacts-adaptation/islands.html> (US EPA);
<http://nca2009.globalchange.gov/islands> (US Global Change Research Program)

Southeast

<http://www.epa.gov/climatechange/impacts-adaptation/southeast.html> (US EPA)
<http://nca2009.globalchange.gov/southeast> (US Global Change Research Program)

Southwest

<http://www.epa.gov/climatechange/impacts-adaptation/southwest.html> (US EPA)
<http://nca2009.globalchange.gov/southwest> (US Global Change Research Program)

Northeast

<http://www.epa.gov/climatechange/impacts-adaptation/northeast.html> (US EPA)
<http://nca2009.globalchange.gov/northeast> (US Global Change Research Program)

Northwest

<http://www.epa.gov/climatechange/impacts-adaptation/northwest.html> (US EPA)
<http://nca2009.globalchange.gov/northwest> (US Global Change Research Program)

Midwest

<http://www.epa.gov/climatechange/impacts-adaptation/midwest.html>
<http://nca2009.globalchange.gov/midwest> (US Global Change Research Program)

Great Plains

<http://www.epa.gov/climatechange/impacts-adaptation/greatplains.html> (US EPA)
<http://nca2009.globalchange.gov/great-plains> (US Global Change Research Program)

Coastal Areas

<http://www.epa.gov/climatechange/impacts-adaptation/coasts.html> (US EPA)
<http://nca2009.globalchange.gov/coasts> (US Global Change Research Program)

National Capital Planning Region (D.C.)

See Report of the Scientific and Technical Working Group, Maryland Commission on Climate Change, Global Warming and the Free State Comprehensive Assessment of Climate Change Impacts in Maryland (2008), available at http://www.umces.edu/sites/default/files/pdfs/global_warming_free_state_report.pdf.