

U.S. Small Business Administration

2012

Climate Change Adaptation Plan

Table of Contents

- I. Policy Framework for Climate Change Adaptation
 - A. Statement of Policy
 - B. Responsibility for Climate Change Adaptation Planning
- II. Agency Vulnerability and Program Responses
 - A. Summary of Predicted Impacts of Climate Change
 - B. Program Operations and Health, Safety and Security
 - i. COOP
 - ii. Office of Credit Risk Management
 - iii. Office of Disaster Assistance Lending Programs
 - iv. Office of Disaster Assistance Emergency Preparedness Website
- III. Process of Agency Adaptation Planning and Evaluation
- IV. Actions to Better Understand and Address Climate Change Risks and Opportunities

I. Policy Framework for Climate Change Adaptation

A. Statement of Policy

As stated in Section 16 of President Obama's EO 13514, *Federal Leadership in Energy, Environment and Economic Performance*, the Federal Government has a critical obligation to carry out climate adaptation planning because climate change directly affects a wide range of Federal services, operations, programs, and assets, and clearly has broad national security implications. SBA is committed to supporting the Interagency Climate Change Adaptation Task Force's recommendations to identify aspects of climate change that will affect SBA operations and to instituting climate adaptation planning, starting with its disaster assistance operations. SBA is also reviewing its lending, procurement, and business development programs to determine if changes are needed to facilitate climate change adaptation.

Furthermore, SBA is committed to increasing its understanding of climate change variables and minimizing the impact of SBA operations on the environment. In addition, we will adopt the Interagency Climate Change Adaptation Task Force's guiding principles and framework for adaptation planning and incorporate this planning into the agency's annual Strategic Sustainability Performance Plan. Furthermore, the Climate Change Adaptation Plan will be developed by the Sustainable Performance at SBA Working Group and coordinated among the major impacted programs. Finally, SBA will identify programs and resources to support the climate change adaptation planning process and update SBA's Plan as necessary.

B. Responsibility for Climate Change Adaptation Planning

In accordance with E.O. 13514, SBA has appointed its Chief Operating Officer as the Senior Sustainability Officer (SSO), who is responsible for ensuring the Climate Change Adaptation Plan is implemented and updated annually. He has assigned the task of developing, implementing and evaluating this plan to SBA's Office of Management &

Administration. The Office of Disaster Planning provides additional support through risk analysis and coordination of Continuity of Operations (COOP) planning. Starting in June 2012, the Sustainable Performance at SBA Working Group will also review this plan and participate in all future planning efforts. The Working Group is open to participation by all SBA offices.

II. Agency Vulnerability and Program Responses

A. Summary of Predicted Impacts of Climate Change

The predicted impacts of climate change include rising temperatures, increasingly heavy downpours, rising sea level, longer growing seasons, reductions in snow and ice and changes in river flows.¹ The intensity of these impacts vary from region to region, but include: the destruction of roads and infrastructure due to melting permafrost in Alaska; damage to coastal communities from erosion; more insect infestations and forest fires in forested regions; rising ocean temperatures and ocean acidification; storm surges that impact structures near the nation's coasts; heat waves of greater severity; and increasing water scarcity and electricity demand during the summer months.² Possible human health threats include: heat stress, water borne diseases, poor air quality, extreme weather, and disease caused by insects and rodents.³

Moreover, the Climate Change Adaptation Task Force 2011 report states: "Climate change is expected to significantly affect the United States. By the end of this century, global sea level is expected to rise by more than 2 feet in a low emissions scenario or nearly 3.5 feet in a higher emissions scenario. Higher sea levels, especially in combination with storm surge, will increasingly inundate U.S. coastal communities and threaten coastal ecosystems and infrastructure... Heat waves are expected to become more frequent and intense, posing

¹ U.S. Global Change Research Program "Global Climate Change Impacts in the United States" page 4.

² U.S. Global Change Research Program "Global Climate Change Impacts in the United States" pages 4-5.

³ U.S. Global Change Research Program "Global Climate Change Impacts in the United States" page 16.

a threat to human health and agriculture. For rivers fed by snowpack, runoff will continue to occur earlier, with reduced flows late in the summer.”⁴

In addition, the scientific community has increasingly acknowledged a connection between climate change and the cumulative number and intensity of natural disasters in recent years. For example, “in April 2011, the United States experienced record-breaking floods, tornadoes, drought, and wildfires all within a single month. As of September 2011, NOAA’s National Climatic Data Center had already reported ten weather events from 2011 for which damages and/or costs reached or exceeded \$1 billion each exceeding the previous *annual* record of nine events recorded over the entire year in 2008.”⁵ While it is not possible to attribute any single event to climate change, their cumulative and record breaking impact supports evidence that climate change may already be impacting natural disasters in the United States.

Some of these impacts have greater implications for SBA than others. Trends such as increases in droughts, fires and floods have implications for SBA’s disaster loan program and small business lending programs. The relationship between climate change and natural disasters also affects SBA’s Office of Disaster Assistance, which manages the agency’s Disaster Loan Program, and the Office of Disaster Planning, which conducts preparedness and continuity planning. The possible health threats posed by climate change are also addressed through the Office of Disaster Planning’s pandemic plans. The Climate Change Adaptation Plan identifies four major programmatic areas at SBA that are impacted by climate change and/or allow the Agency to adapt to climate change: COOP, the Office of Credit Risk Management, the Office of Disaster Assistance lending program, and the Office of Disaster Assistance emergency preparedness website.

B. Program Operations and Health, Safety and Security

i. COOP

⁴ U.S. Climate Change Adaptation Task Force 2011 Report pages 2-3.

⁵ U.S. Climate Change Adaptation Task Force 2011 Report page 4.

SBA has 183 facilities in 160 cities spread across the United States, the U.S. Virgin Islands, Puerto Rico and Guam. The risk climate change poses to these facilities is as varied as the locations themselves. Nonetheless, SBA is well prepared to face climate change based risks in each of these locations, whether in the form of a natural disaster or a pandemic, through the Agency COOP planning structure. Each facility has a tailored plan designed to address its specific security and disaster response needs. Relevant components of these plans include: a threat assessment that looks at man-made and natural threats to the location; the identification of and plans for continuation of SBA's Mission Essential Function(s); the designation of alternate operating sites and/or processes; emergency test requirements; the classification of emergency levels; a COOP implementation checklist; an occupant emergency plan; and an emphasis on telework as a strategy for mitigating the impacts of an event. Should a climate change influenced event impact a particular SBA facility, the plan for that facility would govern the response.

Similarly, COOP planning also addresses employee and public health and safety risks. The plans prepare for the immediate and lingering impacts of a natural disaster in the manner described above. In addition, the plans include information about support for SBA victims of disaster and emergency family support. Should members of the public be in an SBA facility during an event, the plans account for protecting the safety of both the public and employees. Finally, the COOP plans include a section on pandemic health threats that address planning, operations, telework, records management, as well as the protection of both employees and the public.

ii. Credit Risk Management

SBA is home to several small business loan guarantee programs including the 7(a), 504 and microloan programs. The 7(a) Loan Program is SBA's primary program for helping start-up and existing small businesses, with financing guaranteed for a variety of general business purposes. SBA does not make loans itself, but rather guarantees loans made by participating lending institutions. The 504 program involves collaboration between SBA and a nonprofit Certified Development Company (CDC). CDCs work with SBA

and private-sector lenders to provide financing to small businesses through the program, which provides growing businesses with long-term, fixed-rate financing for major fixed assets, such as land and buildings.

The Office of Credit Risk Management (OCRM) is charged with oversight of the Agency's lending partners and with the analysis and evaluation of SBA's loan programs. This includes developing and implementing plans, operating procedures, and standards to effectively determine, analyze and monitor the risk management profile of SBA's loan portfolio and its lenders. The mission of the Office of Credit Risk Management is to maximize the efficiency of SBA's lending programs by effectively managing program credit risk, monitoring lender performance, and enforcing lending program requirements.

Certain elements of the Office of Credit Risk Management's risk management strategy are well suited to address risks that climate change poses to loans backed by SBA. In particular, SBA's insurance requirements and OCRM's associated compliance checks are important to minimizing risk to SBA's portfolio created by climate change. These requirements are based upon regulations such as 13 CFR §120.170 which require that "a loan recipient must obtain flood insurance if any building (including mobile homes), machinery, or equipment acquired, installed, improved, constructed, or renovated with the proceeds of SBA financial assistance is located in a special flood hazard area." In addition, SBA requires hazard insurance on all collateral which may also cover events such as storms, floods and fires depending on the specific requirements of the policy.⁶ SBA's internal policies also require that lender reviews and examinations include insurance requirement compliance checks. This requirement and the associated compliance checks help mitigate risk posed by climate change.

iii. Office of Disaster Assistance (ODA) Disaster Lending Programs

The Office of Disaster Assistance's mission is to provide low interest disaster loans to homeowners, renters, businesses of all sizes and private, non-profit organizations to repair or replace real estate, personal property, machinery & equipment, inventory and

⁶ 13 CFR §120.160

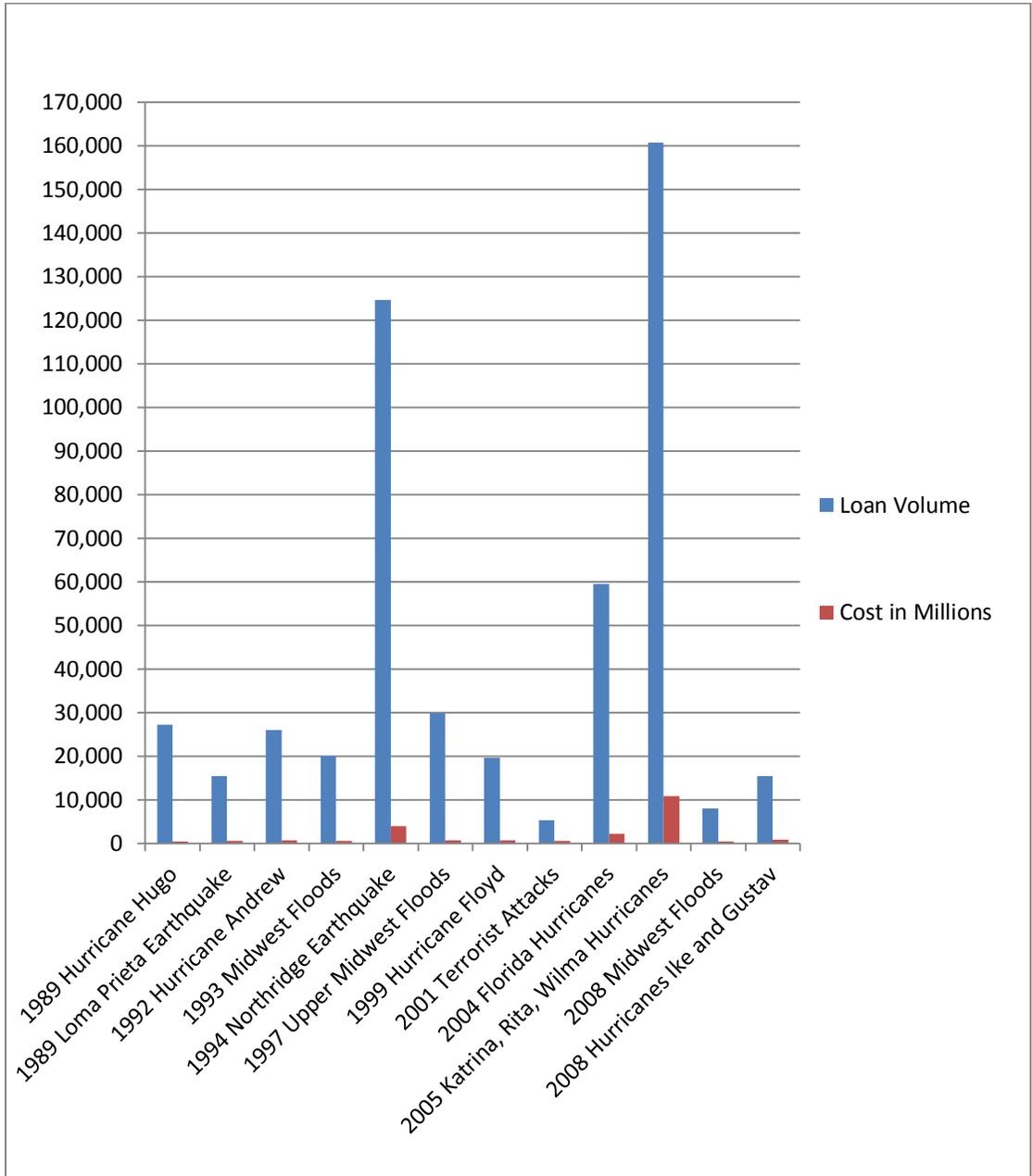
business assets that have been damaged or destroyed in a *declared disaster*. SBA's disaster loans are the primary form of federal assistance for the repair and rebuilding of non-farm, private sector disaster losses. Because of the potential impact of climate change on natural disaster frequency, intensity and type, SBA continues to examine risk to ensure that it can effectively provide disaster loans, regardless of those impacts.

In coordination with ODA, the Office of Disaster Planning annually analyzes risk during its review of the SBA *Disaster Preparedness and Recovery Plan* (DPRP). The DPRP identifies earthquakes and hurricanes as the greatest natural sources of risk to ODA's loan making capacity. The DPRP risk analysis focuses on both the geographical dispersion and variation in causes of disasters:

- States with high numbers of declared disasters: California, Texas, Missouri, Illinois, Mississippi, Alabama, Florida, Ohio, West Virginia, Virginia and New York
- The types of disasters with the greatest possible impacts, hurricanes and earthquakes. Because a hurricane's effects may cover several states and may occur in quick succession, they constitute one of the most severe challenges to SBA operations.⁷
- The most common types of declared disasters:
 - Floods
 - Tornadoes
 - Hurricanes
 - Winter storms
 - Slides
 - Fires
 - Earthquake

⁷ http://www.sba.gov/sites/default/files/Disaster%20Recovery%20Plan_0.pdf

- The historical events which have resulted in the greatest cost expenditures and lending activity:

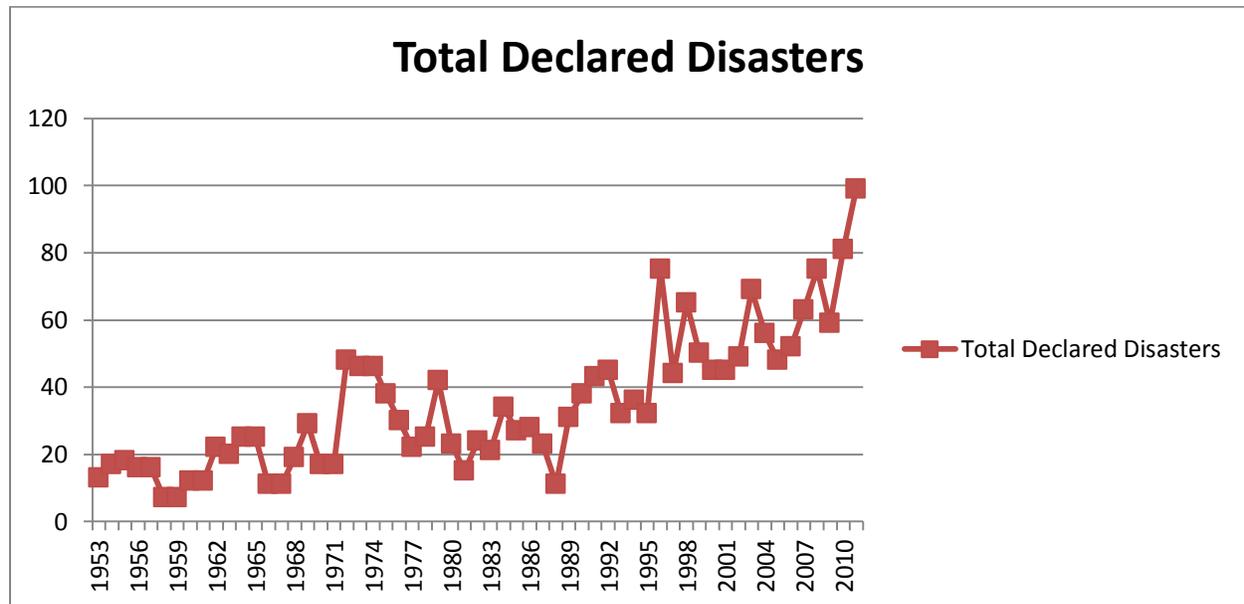


⁸ http://www.sba.gov/sites/default/files/Disaster%20Recovery%20Plan_0.pdf

Loan Volume and Cost in \$ Millions by Event

Event	Loan Volume	Cost in \$ Millions
1989 Hurricane Hugo	27,168	491
1989 Loma Prieta Earthquake	15,473	584
1992 Hurricane Andrew	25,992	696
1993 Midwest Floods	19,992	626
1994 Northridge Earthquake	124,692	4,000
1997 Upper Midwest Floods	29,939	739
1999 Hurricane Floyd	19,637	675
2001 Terrorist Attacks	5,339	526
2004 Florida Hurricanes	59,488	2,200
2005 Katrina, Rita, Wilma Hurricanes	160,807	10,900
2008 Midwest Floods	8,020	420
2008 Hurricanes Ike and Gustav	15,504	838

In addition, data from another federal agency, FEMA, shows a general increase in the number of declared disasters over time which impacts ODA's operational capacity:



9

⁹ http://www.fema.gov/news/disaster_totals_annual.fema

Total Declared Disasters by Year

Year	Total Declared Disasters
1953	13
1954	17
1955	18
1956	16
1957	16
1958	7
1959	7
1960	12
1961	12
1962	22
1963	20
1964	25
1965	25
1966	11
1967	11
1968	19
1969	29
1970	17
1971	17
1972	48
1973	46
1974	46
1975	38
1976	30
1977	22
1978	25
1979	42
1980	23
1981	15
1982	24
1983	21
1984	34
1985	27

1986	28
1987	23
1988	11
1989	31
1990	38
1991	43
1992	45
1993	32
1994	36
1995	32
1996	75
1997	44
1998	65
1999	50
2000	45
2001	45
2002	49
2003	56
2004	68
2005	48
2006	52
2007	63
2008	75
2009	59
2010	81
2011	99

Another tool utilized by ODA is FEMA’s HAZUS Model. HAZUS is a Geographical Information Systems based system created by FEMA that enables decision-making in disaster preparedness, response, and recovery by projecting the impact of disasters and also by projecting potential losses that will result from these disasters. SBA uses HAZUS to evaluate the various impacts that hurricane, flood, and earthquake disaster scenarios will have on different parts of the United States. The results from the evaluation of these scenarios provide essential information that SBA uses to determine the scope of its disaster

response effort and to further refine its disaster response processes. Specifically, SBA culls information about disaster scope; uninsured property loss; persons displaced; businesses displaced; physical property loss; and demographic information. This information is useful both for relative adjustments to the specific disaster response and for long-term refinement to the entire SBA disaster response process.¹⁰

Tools like HAZUS and the DPRP, supported by ODP's annual review, assure that ODA has sufficient capacity to deal with conceivable disaster scenarios based on available trends and statistics. However, the frequency and intensity of disasters may be influenced by climate change. The DPRP process ensures that few individual events could create significant challenges to ODA's surge capacity, but ODP and ODA will have to monitor trends to prevent potential climate change impacts creating a challenge to disaster loan making capacity.

iv. Office of Disaster Assistance Emergency Preparedness Website

In addition to its disaster lending programs, ODA has also created a publicly available portal on SBA's internet website¹¹ that contains information for business owners on how to prepare for natural disasters and emergencies. The information available on the website includes:

- Links to FEMA's business preparedness site and building a disaster kit site, and the Red Cross Ready Rating program
- Tip sheets on how to identify critical business functions and create an emergency communications plan
- A tutorial on SBA's Disaster Assistance Program
- Checklists for hurricane, winter weather, flood, tornado and wildfire preparedness
- Additional pages on disaster preparedness, disaster cleanup, disaster recovery and State run programs

¹⁰ http://www.sba.gov/sites/default/files/Disaster%20Recovery%20Plan_0.pdf

¹¹ <http://www.sba.gov/prepare#>

By providing and compiling this information for the public, ODA is helping businesses adapt to climate change themselves in coordination with FEMA, state programs and non-profits.

III. Process of Agency Adaptation Planning and Evaluation

SBA will continue to tie climate change adaptation planning to its existing sustainability programming. Starting in June 2012, the Agency convened a monthly working group on Sustainable Performance at SBA that disseminates the existing information compiled here and will assist with all future activities, including future adaptation plans. In addition, the Office of Disaster Planning will continue to ensure disaster planning and readiness for SBA and the efficient use of resources through DPRP and COOP planning processes. Consistent with its annual sustainability planning and implementation, the Agency will incorporate climate change adaptation activities into the existing cycle of reporting and activities.

IV. Actions to Better Understand and Address Climate Change Risks and Opportunities

To encourage better understanding of climate change risks, the Agency will support staff of the Office of Management & Administration, the Office of Disaster Assistance, and the Office of Disaster Planning in obtaining training related to climate change adaptation such as conferences, webinars and seminars. The primary mechanisms for addressing climate change risks and opportunities will be the Sustainable Performance at SBA Working Group and the annual reporting cycle.