Compendium of Model Sustainability Practices

climate change

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CITY OF ALEXANDRIA VIRGINIA

CLIMATE CHANGE ADAPTATION STRATEGIES

INTRODUCTION

With much of Alexandria's character tied to its close proximity to the Potomac River, the city has benefited both historically and culturally from its waters. Alexandria has also bore witness to the Potomac's destructive nature, most recently during Hurricane Isabella in 2003 and its subsequent flooding. In the face of environmental concerns, many cities across the United States have embraced the charge of climate change mitigation. The U.S. Conference of Mayors has advocated for its "Climate Protection Agreement," which focus on greenhouse gas reduction. Over 802 mayors have signed the agreement – including the City of Alexandria under Mayor William Euille. Cities have translated this call for action into municipal and civic initiatives aimed at air quality improvements and reducing the cumulative impact their cities have on the surrounding environment.

While various mitigation strategies for air quality and greenhouse gas reduction have been developed and employed – with often duplicative approaches and goals – gaining consideration are strategies for a more uncertain challenge. A smaller cadre if cities across the United States and internationally, lead in part by non-governmental organizations and some state-level directives, have expanded their mitigation efforts and have begun to ask not only what their cities can do to positively impact the environment, but also how an altering environment can adversely impact them.

Whether it be issues of water consumption and drought in the American Southwest, or increased flooding in the American Northeast, these forward-thinking municipalities are exploring the concept of climate change adaptation strategies. These cities illustrate, though action and vision, that they can not only serve as an example to others through the mitigation of local climate change impacts, but also in planning for necessary local adaptations to a future of climate change. Unlike climate mitigation strategies that target similar goals regardless of location, adaptation planning recognizes that each city faces unique environmental and concomitant social vulnerabilities.

An October, 2007, report by the H. John Heinz III Center for Science, Economics and the Environment notes that understanding and identifying local vulnerabilities is a pivotal challenge in planning for their future needs in an altered environment. Such examples could include how rising summer temperatures effect vulnerable populations like the elderly and children and how rising sea levels impact city assets along waterfronts. The Heinz Center report, "A Survey of Climate Change Adaptation Planning," written by Bill Perkins, articulates that a wide variety of tools and empirical anecdotes exists for cities to utilize in considering the scope and needs of adaptation planning. Yet, defined "road maps" to guide cities through the process of vulnerability identification and solution planning are scarce. The report provides an excellent overview of possible frameworks that can be employed and best practices from both U.S. and international cities on climate change adaptation implementation. The report can be viewed at: http://www.heinzctr.org/NEW_WEB/PDF/Adaptation_Report_October_10_2007.pdf

Another recent report, released in December 2007 by the Lincoln Institute of Land Policy, presents a detailed explanation of accepted climate change risk and the national and international efforts in planning to protect cities from the effects of future natural disasters, such as flooding and hurricanes. Among other issues, the report, "Urban Planning for Climate Change," written by Edward J. Blakely, reviews municipal "heat island effect" mitigation strategies to confront rising urban temperatures and altered local climates. It also discusses adaptation strategy techniques, suggesting a now familiar template of first reducing climate risk, then profiling at-risk groups and finally generating strategies for adaptation. Blakely uses New Orleans, Louisiana, as an example for climate change impacts and adaptation strategy implementation. The repot can be viewed at: http://www.lincolninst.edu/pubs/PubDetail.aspx?pubid=1310

Non-governmental organizations and state-level initiatives play an influential part in the growing field of climate change adaptation planning. In 2005, the International Council for Local Environmental Initiatives (ICLEI) unveiled a "Climate Resilient Communities Campaign." ICLEI's website describes this as an effort, "…to help local governments throughout the U.S. improve their resiliency in the face of increasing climate disruptions and catastrophes that stem from global warming." The description further explains that, "…the program helps local governments develop tools to assess their vulnerabilities and prepare their communities for the impacts and costs associated with predicted global climate change." Over 150 cities from across the United States have joined the campaign – including Arlington County in Virginia and College Park, Mount Rainier, Takoma Park, Montgomery County and Prince George's County in Maryland.

At the neighboring state level, On April 20, 2007, Governor Martin O'Malley signed an executive order establishing the Maryland Climate Change Commission. Its 21 members comprise Secretaries of various Maryland state departments and agencies. The commission is charged with creating by April 20, 2008, a state Plan of Action, including the Comprehensive Climate Change Impact Assessment, the Comprehensive Greenhouse Gas and Carbon Footprint Reduction Strategy, and the Comprehensive Strategy for Reducing Maryland's Climate Change Vulnerability. The Maryland Climate Change Commission's Adaptation & Response Working Group has been focused on sea-level issues in the Chesapeake Bay and identifying Maryland's other climate vulnerabilities. The commission's final product will guide state and local climate change adaptation efforts.

The following are reviews of the climate change adaptation programs for two cities that provide best examples for the City of Alexandria as it considers a similar approach. While many cities have formed climate change task forces, charged with creating adaptation goals, these two cities have completed the plan process and provide best practices for each step.

CLIMATE CHANGE ADAPTATION STRATEGIES

1. Climate Adaptation Plan

Location: Keene, New Hampshire

Population: The City of Keene is comprised of 22,770 residents encompassing 37.6 square miles of jurisdiction. Keene the seat of Cheshire County, New Hampshire, located in the southwest corner of the state.

Department: City Planning Department

Start Date: In April of 2000, the City of Keene signed onto the Cities for Climate Protection Campaign (CCP) which is administered by the International Council for Local Environmental Initiatives (ICLEI).

Budget and Staffing and program costs associated with implementing the Urban Staff: climate adaptation plans are incorporated into approved department budgets.

Description: The Climate Adaptation Action Plan for the City of Keene was unanimously approved by the Keene City Council on November 15, 2007 and was introduced to a gathering of local governments from the Northeast committed to climate protection on November 29, 2007. ICLEI-Local Governments for Sustainability assisted Keene in developing the plan and hosted the regional event.

The plan utilized the ICLIE Climate Resilient Communities Milestone process as its framework. The plan is broken into sections focusing on articulating the need for climate change adaptation, assessing the community's climate vulnerabilities, discerning goals and priorities from those vulnerabilities and defining initiatives for their implementation. The plan also calls for its incorporation into the city's comprehensive master plan in order to influence policy, land use and capital improvement decisions through the focus of climate change.

Reporting: The city council created a Cities for Climate Protection Campaign Committee, comprising of local government officials, city staff, community members and academic representatives to identify the vulnerabilities and craft the overall plan. The committee reported to the city planning department and ultimately, to the city council for approval of the final plan.

Timeframe: Work commenced in 2004 and the final plan was approved in November 2007.

Alexandria

Match: Developing a climate change adaptation plan like Keene, and following the ICLEI framework would provide a predetermined, internationally accepted direction to follow. It would also provide Alexandria with a reward opportunity to document its progress compared to other cities.

Point of Contact: Planning Director: W. Rhett Lamb
3 Washington Street
Keene, NH 03431
(603) 352-5474

References: The November 2007 Climate Change Adaptation Plan, "Adapting to Climate Change: Planning a Climate Resilient Community," is available online at: http://www.ci.keene.nh.us/planning/Keene_Report_Combined_FINAL.pdf

2. Climate Adaptation Plan

Location: King County, Washington

Population: Seattle, Washington, is the county seat for King County and the county comprises 1,835,300 residents as of 2006. It encompasses 2307.6 square miles of jurisdiction.

Department: The climate change initiative is housed in the King County Department of Natural Resources and Parks.

Start Date: In March 2006, the County Executive, Ron Sims, issued an executive order directing the county to reduce its greenhouse gas output.

Budget and Staff: Staffing and program costs associated with implementing the climate plan is incorporated into approved department budgets.

Description: King County Climate Plan is a large document that includes a part on adaptation. Primarily, it addresses the county's greenhouse gas reduction targets both for King County government operations and for the community. This will eventually include all households and businesses in the county. The plan breaks into sections describing the impacts of climate change to the Pacific Northwest and includes strategies for adapting to the impacts of future changes. It also focuses climate change adaptation towards influencing future cost-benefit decisions of the county on development and community needs. The plan stresses that it is not a technical implementation blueprint for the county and that county departments will create such initiates from this framework in the future.

Reporting: The overall Climate Plan is the work product of the county's Interdepartmental Global Warming Action Team, comprised of representatives from the county executive office and many departments. It reports to the county executive, and in-turn, the county council.

Timeframe: In March 2006, the County Executive, Ron Sims, issued an executive order directing the county to reduce its greenhouse gas output. Three months prior, Sims created the action team by executive order to coordinate the county's efforts on climate change adaptation. The action team finalized the Climate Plan in February 2007. It is now working on a Global Warming Action Plan as the next step.

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King Street Center
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References: The February 2007 King County Climate Plan is available online at: http://www.metrokc.gov/exec/news/2007/pdf/ClimatePlan.pdf