CLIMATE PLAN

Source: Clarion Associates

HAZARDS ADDRESSED

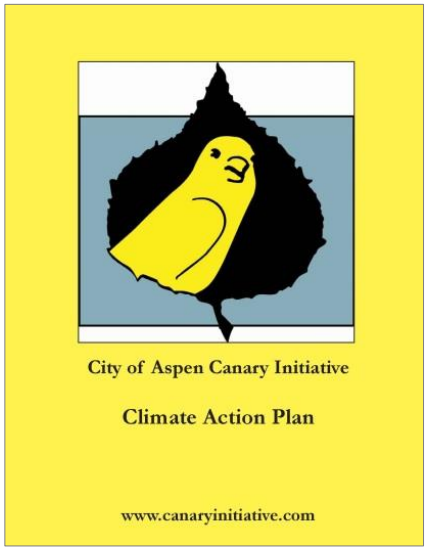
HOW IT WORKS

Climate plans, also referred to as "climate action plans," are an increasingly common type of specialized plan developed by local governments to address the challenges of a changing climate. They are designed to provide a strategic framework for driving local actions to assess, understand, and reduce greenhouse gas emissions, identified as a root cause of climate change. Plans increasingly also include strategies to prevent or minimize the anticipated adverse effects of climate change.

One distinction in climate planning terminology is important: "mitigation" refers to the practice of reducing greenhouse gases, while "adaptation" refers to anticipating and taking action to reduce the adverse consequences of climate change, including those relating to natural hazards risks. An example of a mitigation strategy might be converting public buses to biodiesel or other alternative fuels, while an example of an adaptation strategy would be adopting a larger setback from flood-prone areas.

At a minimum, climate plans include:

- An inventory of existing emissions;



The City of Aspen adopted its Climate Action Plan in 2007, one of the earliest plans adopted in the state, as part of the Canary Initiative, a community effort to reduce the threat of climate change.

Source:
aspenpitkin.com/Portals/0/docs/City/GreenInitiatives/Canary/CAP-final%20without%20dates.pdf

- The identification of reduction goals or targets; and
- The evaluation and prioritization of local actions to achieve those emission goals or targets.

Ideally, they also include:

- An assessment of current and projected climatic conditions (based on data that is downscaled for local applicability);
- A strategy for preparing and adapting to the negative effects or consequences; and
- The identification of resources or funding sources required to implement the overall plan.

While local climate plans largely serve as a blueprint for emission reduction efforts, many communities find it advantageous to address climate preparedness and adaptation efforts in the same document. In these cases **the development and implementation of the climate plan should be integrated with the local hazard mitigation plan** to eliminate duplication of effort but also to ensure that the assessment and understanding of climate-related vulnerabilities and community risk reduction strategies are consistent and closely coordinated. Community goals and policies for climate change mitigation and adaptation should also be incorporated into the local comprehensive plan, as many strategies will likely overlap with policies across multiple elements. Colorado communities should be prepared for an increased threat from natural hazards such as drought, extreme heat, wildfire, or severe storms based on climate change projections.

IMPLEMENTATION

Similar to many other plans, the long-term effectiveness of climate plans requires the local adoption and execution of policies, actions, and programs identified in the plan, as well as measuring their success over time. Unique to climate plans, however, is the need to quantify, measure, and report progress on the reduction of greenhouse gases over a given time period as prescribed in the plan. Therefore, communities must be prepared to develop and maintain a greenhouse gas inventory or identify a source for this scientific data (such as the Colorado Climate Center, cited below).

Climate action plans also typically differentiate between community-wide actions and those assigned to specific local agencies or departments, each of which should be held accountable for managing certain sources of emissions. The implementation of climate plans also relies heavily on the completion of specific actions designed to mitigate or adapt to the effects of climate change. For purposes of natural hazard mitigation, this requires the routine tracking, evaluation, and reporting of risk reduction strategies that may also be referred to separately as climate adaptation or climate preparedness actions. Effective intergovernmental coordination on these parallel or overlapping efforts is paramount for success.

WHERE IT'S BEEN DONE

Plaza near Union Station, Denver, CO.

Source: Arina P. Habich

In 2007, **Denver** unveiled its *Climate Action Plan* and set a greenhouse gas reduction goal to reduce emissions by 10 percent per capita below 1990 levels by 2020. Denver is on track to meet this goal and continues to be proactive in reducing city-wide per capita emissions. In 2014, in recognition that the climate is already changing with the potential to harm the city's social, economic, and environmental sectors, Denver adopted a separate and supplemental *Climate Adaptation Plan*. The objectives of the *Climate Adaptation Plan* are to prepare for and mitigate the risks associated with potential climate impacts to Denver, including higher temperatures and increases in the urban heat island effect, more extreme weather events, reduced annual snowpack, earlier snowmelt, and the resultant change to downstream flows.

Beginning in the spring of 2012, in response to the need for long-term planning and a coordinated response to the consequences of climate change in Denver, the City convened a working group made up of department representatives to begin identifying the top vulnerabilities to climate change and assess the impacts. The group established a framework of short, medium, and long-term climate adaptation activities to allow Denver to reach its long-term vision to be one of the most innovative and resilient cities in the face of climate change. The short, medium, and long-term activities are categorized by the following six broad planning areas that will be affected by different impacts from climate change and can thereby adapt in different ways:

- Buildings and Energy
- Health and Human Services
- Land Use and Transportation
- Urban Natural Resources
- Water Consumption
- Food and Agriculture

According to Mayor Michael Hancock, Denver's *Climate Adaptation Plan* (2014) "provides a collaborative path forward to protect what we cherish so that future generations will enjoy economic opportunity, effective and efficient infrastructure, parks and open spaces, and an environment conducive to supporting resident health and well-being."

In November 2015, **King County, Washington,** approved a comprehensive update to its *Strategic Climate Action Plan* (SCAP) which serves as a national best practice for a plan that actively addresses both climate change mitigation and adaptation. The plan includes two clear and distinct sections: one focused on reducing greenhouse gas emissions and the other on preparing for climate change impacts, with the latter recognizing that many impacts are now inevitable. The SCAP effectively serves as King County's blueprint for climate action with a paramount goal to integrate mitigation and adaptation tactics into all areas of local government operations, plans, policies, and procedures –

including the County's Comprehensive Plan, which began including climate resiliency recommendations in 2008.

ADVANTAGES AND KEY TALKING POINTS

Climate plans establish the roadmap for how a community will address climate change through mitigation and adaptation activities. Climate plans can help assess and communicate how projected changes in climate may impact the community in social, economic, and environmental terms, and identify actionable and measureable strategies for minimizing those impacts. Other benefits include:

- Affirms that the community is locally engaged in the issue of global climate change.
- Describes how climate change is expected to affect future economic and environmental conditions, including natural hazards.
- Establishes clear goals and targets to evaluate progress over time.
- Includes a variety of no-cost or low-cost investment opportunities along with "no regret" policy options that elected leaders can more readily support.
- Provides an additional mechanism for implementing or advancing hazard risk reduction strategies (climate adaptation). For example, climate plans may support and/or be directly linked to actions identified in the local hazard mitigation plan, such as the replacement of aging stormwater infrastructure to better accommodate increased flows resulting from more intense rainfall events and earlier spring runoff.
- Can complement a community's hazard mitigation plan by helping to inform the risk assessment and mitigation strategy.

"No Regret" Policy Options

Due to the uncertainties associated with future climate change, many communities are seeking to identify and prioritize "no-regrets" approaches to their decision-making process. These include actions that can be easily justified from social, economic, and/or environmental perspectives based on current conditions and whether the impacts of climate change and natural hazard events actually occur or not. In other words, no-regrets actions are considered cost-effective now under a range of future scenarios and do not involve hard trade-offs with other policy or funding alternatives.

CHALLENGES

Climate plans often require technical and scientific expertise to prepare, particularly in downscaling global or regional climate model data and developing a local baseline inventory of greenhouse gas emissions. Such expertise may not be available locally and can be expensive to obtain. Other related challenges include:

- Climate change remains a potentially divisive issue for some stakeholders, including elected officials.
- Uncertainty and wide ranges of potential future scenarios are inherent to any long-term climate model projections.
- Can be challenging to implement specific actions and achieve goals without adequate funding or resources, particularly for emissions reduction.

KEY FACTS

Administrative capacity	Community planner supported by experts in climate science
Mapping	Not typically required
Regulatory requirements	None required, but can support plan implementation
Maintenance	Should be updated at a regular time interval (every three to five years minimum)
Adoption required	Yes
Statutory reference	N/A
Associated costs	Staff time, plus potential costs for quantifying greenhouse gas emissions, downscaling climate models or other technical work, public outreach activities, and/or consultant services

EXAMPLES

City of Aspen Canary Initiative	aspenpitkin.com/Living-in-the-Valley/Green-Initiatives/Canary-Initiative
City of Boulder Climate Action Plan	bouldercolorado.gov/climate
Town of Carbondale Energy and Climate Protection Plan	coloadaptationprofile.org
City and County of Denver Climate Action and Adaptation Plans	denvergov.org/environmentalhealth/EnvironmentalHealth/EnvironmentalQuality/Climate/tabid/444803/Default.aspx
City of Fort Collins Climate Action Plan Framework	fcgov.com/climateprotection
City of Glenwood Springs Energy and Climate Action Plan	garfieldcleanenergy.org/pdf/government/climate-plans/Glenwood-Springs-ECAP.pdf
Town of Newcastle Climate Action and Environmental Initiatives	newcastlecolorado.org/business/green-business
King County, WA Strategic Climate Action Plan	kingcounty.gov/environment/climate/king-county/climate-action-plan.aspx

State of Colorado Climate Plan and Water Plan	cwcbweblink.state.co.us/WebLink/ElectronicFile.aspx?docid=196541&searchid=243b8969-739b-448c-bd2d-699af9b7aea0&dbid=0 (Climate Plan) colorado.gov/cowaterplan (Water Plan)

FOR MORE INFORMATION

Colorado Department of Public Health and Environment Climate Change Website
colorado.gov/pacific/cdphe/categories/services-and-information/environment/air-quality/climate-change

Colorado Water Conservation Board Climate Change Website
cwcb.state.co.us/environment/climate-change/Pages/main.aspx

Colorado Climate Network
coclimatenetwork.org

Colorado Climate Change Vulnerability Study
wwa.colorado.edu/climate/co2015vulnerability

Colorado Climate Center
ccc.atmos.colostate.edu

The Colorado Climate Preparedness Project
coloadaptationprofile.org

Rocky Mountain Climate Organization
rockymountainclimate.org