



CLIMATE ACTION PLAN

Implementation Progress Report

October 2011

SUMMARY

Since 2000, Chula Vista has been implementing a “Climate Action Plan” to address the threat of climate change to the local community. Over the past 3 years, this original plan has been revised to incorporate new climate mitigation (2008) and adaptation (2011) measures to strengthen the City’s climate action efforts and to facilitate the numerous community co-benefits such as utility savings, better air quality, reduced traffic congestion, local economic development, and improved quality of life. As directed by City Council, staff has been implementing the 18 climate-related actions based on available funding. Although most City departments have been impacted by budget cutbacks over the last few years, staff has found innovative ways to leverage resources to ensure significant implementation of most actions. Staff continues to proactively seek new funding sources to support full implementation.

BACKGROUND

Since the early 1990s, Chula Vista has been engaged in multiple climate change forums including the United Nations Framework Convention on Climate Change, the ICLEI Cities for Climate Protection campaign, the California Climate Action Registry, and the U.S. Conference of Mayor’s Climate Protection Agreement and has committed to reduce its greenhouse gas (GHG) emissions 20% below 1990 levels. To accomplish this GHG reduction or climate “mitigation” goal, the City adopted a Carbon Dioxide (CO₂) Reduction Plan in 2000, which outlined steps for Chula Vista to reduce energy and fuel use at municipal facilities and throughout the community. In 2008, seven new climate mitigation measures were adopted by City Council to augment past efforts by improving energy and water efficiency, expanding renewable energy systems, converting to more fuel efficient and alternative fuel vehicles, and designing transit-friendly, walkable communities.

To complement these climate mitigation actions, City Council adopted eleven strategies in May 2011 to reduce Chula Vista’s vulnerability to expected local climate change impacts (known as climate “adaptation”). These strategies addressed expected impacts such as hotter and drier weather, diminished imported water supplies, more poor air quality/heat wave days, more frequent wildfires, shifts in habitat and species distribution, and increased rates of sea level rise. By minimizing the risks associated with climate impacts now, future costs and public health concerns can be avoided and/or minimized. As a result of the City’s climate action efforts, Chula Vista has been recognized for its sustainability accomplishments by multiple external organizations such as the US Environmental Protection Agency, ICLEI-Local Governments for Sustainability, Institute for Local Government, California Sustainability Alliance, California

Center for Sustainable Energy, San Diego Gas & Electric, Sierra Club, and EarthWorks San Diego.

IMPLEMENTATION PROGRESS

The following report outlines the implementation progress for the 7 climate mitigation measures and the 11 climate adaptation strategies. In contrast to past progress reports, staff has worked to succinctly summarize each action's background information, implementation status, and next steps in one page. For each action and its associated components, staff has also outlined whether the implementation is:

Completed – All required implementation steps have been completed

Ongoing – All required initial steps have been completed, but component is still actively being implemented

In Progress – Implementation steps are still being developed and pursued based on the original implementation plan

On-Hold – Implementation has not proceeded due to a programmatic barrier (such as funding)

As directed by City Council, staff has been implementing the 18 climate-related actions based on available funding. Although most City departments have been impacted by budget cutbacks over the last few years, staff has found innovative ways to leverage resources to ensure significant implementation of most actions. Of the 7 climate mitigation measures and their 27 associated implementation components initiated in 2008, only three components remain on-hold due to funding shortages – clean vehicle conversion of the City-contracted street sweepers (Mitigation Measure #2), the H Street Corridor Study (Mitigation Measure #6), and community turf conversions (Mitigation Measure #7). Of the more recent 11 climate adaptation strategies and their 30 associated implementation components, only one component dealing with storm water pollution prevention and reuse (Adaptation Strategy #5) and two components dealing with biological monitoring (Adaptation Strategies #8 & #9) have been delayed due to funding shortages.

Staff continues to proactively seek new funding resources and partnerships to support full implementation. Chula Vista and San Diego Gas & Electric (SDG&E) will begin to develop their new 2012-2015 work plan for their Local Government Partnership, which funds multiple climate change actions related to energy use. The City will be working to create similar successful partnerships with other agencies, universities, and non-profits in the future to support other climate change actions. Over the next 6 months, the City will also investigate the use of solid waste franchise fees to support expanded street sweeping services and their use of alternative fuels. Finally, the City will continue to pursue grant and supplemental environmental project funding through state and federal agencies. The City's new eCivis grant management tool will empower staff to more effectively research and identify potential grant funding sources to support climate change programs and initiatives.

CLIMATE MITIGATION MEASURES

The following (7) measures are designed to reduce greenhouse gas or “carbon” emissions from municipal operations and the broader Chula Vista community. The measures complement one another as well as state and federal climate mitigation initiatives.

**MITIGATION MEASURE #1
CLEAN VEHICLE REPLACEMENT POLICY FOR CITY FLEET**

Overview

Measure #1 directs the City to require that 100% of the replacement vehicles purchased for the municipal fleet be high efficiency (hybrid) or alternative fuel vehicles (AFVs). However, factors such as the appropriateness for the vehicle task, fueling infrastructure, petroleum displacement, and the overall cost and environmental benefit must be considered prior to purchasing each replacement vehicle.

CLIMATE MITIGATION MEASURE #1: 100% City-Fleet Replacement with AFVs	#	COMPONENTS	STATUS	PROGRESS
	1	Design and construction of a 12,000-gallon biodiesel tank at PWC	Completed	City's 128 diesel-fueled vehicles (or 23% of the total fleet) has been converted to biodiesel.
2	Replace City's-fleet with AFVs or hybrids	Ongoing	25% of City's total fleet has been converted to AFVs.	

Next Steps

City vehicles will be replaced with hybrids or AFVs on an ongoing basis, as appropriate funding becomes available. For Fiscal Year 2012, two wastewater vehicles will be replaced with AFVs or hybrids. No funding has been identified for other vehicle replacements in the current fiscal year.

**MITIGATION MEASURE #2
CLEAN VEHICLE REPLACEMENT FOR CITY- CONTRACTED FLEETS**

Overview

Measure #2 directs staff to work with fleets under City authority to influence their expanded use of alternative fuels and high efficiency/alternative fuel vehicles (AFV) including electric, biodiesel, ethanol, hybrid, hydrogen, and compressed natural gas (CNG) based on appropriateness for vehicle task, fueling infrastructure, petroleum displacement, overall cost, and environmental benefit.

#	COMPONENTS	STATUS	PROGRESS
1	Convert Chula Vista Transit to alternative fuels and/or high efficiency vehicles	Completed	100% of Chula Vista Transit fleet have been converted to AFV.
2	Convert Solid Waste Hauler to alternative fuels and/or high efficiency vehicles	Completed	100% of Allied Waste fleet have been converted to AFV.
3	Convert Street Sweeper to alternative fuels and/or high efficiency vehicles	On-Hold	Due to budget constraints, the current Street Sweeping contract was not able to include AFV, but the contract will be amended if more funding is identified.
4	Convert City-contracted taxis to alternative fuels and/or high efficiency vehicles	In Progress	As part of the current RFP process for taxi service, contractors are being asked to integrate alternative fuels and/or hybrid technologies.
5	Open publicly-available CNG dispenser at PWC	In Progress	Clean Energy, Inc. is installing a CNG fuel dispenser at PWC that will open to the public in October 2011.

Next Steps

The City continues to work with utilities and regional agencies to further develop local infrastructure for alternative fuels helping to ensure that these fueling options are readily available for contractors and the public, whenever possible. For example, City staff continues to explore the feasibility of installing electric vehicle (EV) charging stations at community-oriented municipal facilities. In addition, Chula Vista is a founding member of the San Diego Association of Governments' (SANDAG) Plug-In Electric Coordinating Council which will help to ensure local jurisdictions are ready to support expanding EV infrastructure.

**MITIGATION MEASURE #3
BUSINESS ENERGY EVALUATIONS**

Overview

The measure, as revised by City Council, states that businesses with storefronts or offices need to participate in a no-cost energy and water evaluation of their premises when a new business license is issued or once every 3-5 years for a renewed business license. The measure helps businesses identify efficiency opportunities at their facilities, access rebates and financing for efficiency improvements, and lower their monthly utility costs. Businesses are not required to implement any of the identified energy or water efficiency opportunities and are not required to complete evaluations for facility areas beyond their operational control (ex. whole-building systems operated and maintained by a Property Manager/Landlord).

#	COMPONENTS	STATUS	PROGRESS	
CLIMATE MITIGATION MEASURE #3: Business Energy Evaluations	1	Develop ordinance integrating energy & water evaluations into business licensing process	Completed	CVMC Chapter 20 was revised to include the evaluations, known as the "Free Resource & Energy Business Evaluations" (FREBE) program.
	2	Complete onsite energy & water evaluations for businesses annually	Ongoing	In 2011, 924 evaluations have been completed, while 225 businesses were exempt and 348 were out of business.
	3	Link businesses, who are interested in pursuing efficiency improvements, to available rebates, incentives, & financing	Ongoing	Through the FREBE program, over 327 businesses (or 35% of 'completed' evaluations) businesses received <u>free</u> water-saving aerators, smart power strips, HVAC maintenance, CFLs, or other efficiency upgrades in 2011.
	4	Report to City Council on collected fines from non-compliant businesses	Ongoing	In 2011, only 10 businesses (out of 1,535) remain non-compliant and have until November 15th to participate in FREBE. In 2010, only 1 business was fined (\$15) for non-compliance.

Next Steps

With San Diego Gas & Electric and the local water districts (Sweetwater Authority and Otay Water District), City staff will continue to identify and develop new utility-saving opportunities and services that can be offered to local businesses through the FREBE program. Since the program's inception, over 93% of businesses (based on participant surveys) stated that they would refer the FREBE program to another business.

**MITIGATION MEASURE #4
GREEN BUILDING STANDARD**

Overview

Measure #4 directed staff to adopt regulations mandating new and renovated residential and non-residential projects to incorporate early the requirements of the Housing and Community Development’s California Green Building Standards Code (CalGreen) and to be more energy efficient than the 2008 Building Energy Efficiency Standards (Title 24) by a specific percentage. In addition, the measure directed staff to implement a green building awareness program and update/establish design and regulatory provisions that incorporate sustainable practices at a community-scale.

#	COMPONENTS	STATUS	PROGRESS
1	Adopt a citywide Green Building Standard	Completed	In fall 2009, the City adopted the 2010 CA Green Building Standards Code early with local amendments. To date, 812 new residential and 15 new commercial units have complied with the new code.
2	Adopt a citywide Enhanced Energy Efficiency Standard	Completed	In fall 2009, the City adopted an Enhanced Energy Efficiency Code. To date, 544 new residential and 13 new commercial units have complied with the new code.
3	Launch a Green Building Awareness program for builders, permit applicants, & the general public	Ongoing	Through the City's Sustainability Desk at the permit counter, contractors are able to obtain info and assistance about sustainable building options.
4	Develop design guidelines for sustainable development	Completed	In 2011, the City incorporated sustainability criteria into its updated Air Quality Improvement Plan Guidelines and Design Manual for large and small-scale development, respectively.

Next Steps

The City will continue to implement its green building and related standards to emphasize energy and water efficiency, renewable energy, improved indoor air quality, and transit-friendly development. City staff is also exploring opportunities to offer expedited permitting and processing to new residential and non-residential building construction that exceeds the City’s Enhanced Energy Efficiency standard.

**MITIGATION MEASURE #5
SOLAR & ENERGY EFFICIENCY CONVERSION PROGRAM**

Overview

The “Solar & Energy Efficiency Conversion” program was recommended to help facilitate energy efficiency and renewable energy retrofits in the community and at municipal facilities. The community component, called the *Home Upgrade, Carbon Downgrade* program, is intended to help the average resident and small business overcome common institutional barriers, upfront capital costs, complicated application processes, and time constraints. The program also strives to promote local job creation and economic development by linking community participants with local contractors and vendors. Finally, Measure #5 included the implementation of a pre-wiring and pre-plumbing requirement for solar photovoltaic (pv) and solar hot water systems, respectively, in all new residential units.

#	COMPONENTS	STATUS	PROGRESS	
CLIMATE MITIGATION MEASURE #5: Solar & Energy Efficiency Conversions	1	Implement a Solar & Energy Efficiency Conversion program for the community	Ongoing	With federal stimulus funds, the City's <i>Home Upgrade, Carbon Downgrade</i> program has provided approximately \$250,000 in incentives to residents for energy upgrades.
	2	Upgrade municipal facilities with energy efficiency & solar energy technologies	Ongoing	The City has completed installation of new solar arrays at 11 facilities and has begun converting over 4,000 streetlights to more efficient technologies.
	3	Link conversion program to local economic development	Ongoing	Through the <i>Home Upgrade, Carbon Downgrade</i> program, over \$3.9 million in sales have been generated at local appliance stores benefitting the Chula Vista economy.
	4	Adopt pre-wiring and pre-plumbing standards for solar pv & solar hot water, respectively	Completed	In 2009, the City adopted the "solar ready" ordinances. To date, 970 new residential units have complied with the new code.

Next Steps

The City will continue to implement its *Home Upgrade, Carbon Downgrade* program to promote energy efficiency and solar retrofits in the community. The City has begun to work with the California Center for Sustainable Energy and San Diego Gas & Electric to develop “Sustainable Energy Showcase Homes” throughout Chula Vista and to aggregate homeowners together in order to reduce the implementation costs for energy upgrades.

**MITIGATION MEASURE #6
SMART GROWTH AROUND TROLLEY STATIONS**

Overview

Measure #6 is intended to accomplish the remaining planning groundwork necessary to support realization of the “Smart Growth” development densities and intensities envisioned in both the General Plan and the Urban Core Specific Plan (UCSP). Specifically, the measure’s four components are focused on the areas surrounding the E Street, H Street, and Palomar Street trolley stations.

#	COMPONENTS	STATUS	PROGRESS	
CLIMATE MITIGATION MEASURE #6: Smart Growth Around Trolley Stations	1	Implementation of UCSP around E Street Trolley Station	In Progress	Staff will be presenting design proposals for E Street parcels to the City Council for consideration in 3-6 months.
	2	Initiate a H Street Corridor Study to better define redevelopment opportunities around the Trolley Station	On-Hold	The H Street Corridor Study is on-hold pending the California State Supreme Court's ruling on redevelopment authorization.
	3	Develop a specific plan for the Palomar Gateway area, including the Palomar Trolley Station	In Progress	City is currently working to complete the specific plan and its related environmental documents for City Council consideration in 9-12 months.
	4	Pursue trolley grade separation along the I-5 corridor	In Progress	Staff continues to work with SANDAG and CalTrans on pursuing trolley grade separation, which is included in the Regional Transportation Plan currently under consideration by SANDAG.

Next Steps

The City will continue to pursue “Smart Growth” development surrounding Chula Vista’s three trolley stations. Specifically, staff will work to secure funding for trolley grade separation and the H Street Corridor Study to facilitate moving forward with both projects. The preservation of the City’s Redevelopment Agency will likely be a major factor in ensuring project completion.

**MITIGATION MEASURE #7
TURF LAWN CONVERSION PROGRAM**

Overview

Because water movement and treatment requires a large amount of energy (leading to GHG emissions), Measure #7 helps residents and businesses replace turf lawn areas with “WaterSmart” landscaping. These landscape types are diverse, colorful, and attractive incorporating low maintenance and water-wise design features. Specifically, the program’s components include (1) continuation and expansion of the NatureScape program to promote water conserving and nature-friendly landscaping, (2) coupling of residential and business turf lawn replacement with the solar and energy efficiency conversion program (Measure #5), (3) converting select municipal facilities to low water use plantings and irrigation, and (4) updating various municipal landscape regulations and guidelines to comply with new state requirements and further promote outdoor water use efficiency.

#	COMPONENTS	STATUS	PROGRESS	
CLIMATE MITIGATION MEASURE #7: Turf Lawn Conversion	1	Expand the NatureScape outreach program	Ongoing	Through the program, the community now has over 332 certified "Backyard Wildlife Habitats." The City also received "Community Wildlife Habitat" designation from the National Wildlife Federation.
	2	Include turf lawn replacement in <i>Home Upgrade, Carbon Downgrade</i> program (Measure #5)	On-Hold	Current federal funding, which supports the <i>Home Upgrade, Carbon Downgrade</i> program, can not be used for turf conversions. Staff continues to explore other funding sources.
	3	Convert municipal facilities to low water use plantings & irrigation	Ongoing	The City continues to make annual investments into converting turf and irrigation at municipal sites.
	4	Update landscaping ordinances to emphasize water use efficiency	Completed	In 2010, a revised Landscape Water Conservation Ordinance was approved by City Council that creates a water budget for new or renovated landscapes and promotes water-efficient design.

Next Steps

City staff continues to pursue grants and other alternative funding sources (such as “Property Assessed Clean Energy” or PACE programs) to support the conversion of municipal, residential, and commercial landscapes to more water efficient versions.

CLIMATE ADAPTATION STRATEGIES

The following (11) strategies are designed to reduce Chula Vista’s future risks and costs from expected climate change impacts such as sea level rise, more frequent wildfires and extreme heat days, and increased stress on energy and water supplies. The measures complement one another as well as state and federal climate adaptation initiatives.

ADAPTATION STRATEGY #1 COOL PAVING

Overview

To address climate change impacts related to the urban heat island effect (hotter ambient air temperatures), Strategy #1 is intended to incorporate reflective (or “cool paving”) into all municipal projects (parking lots and streets) and new private parking lot projects over a specific size. Cool pavements refer to a range of established and emerging paving materials, which store less heat and have lower surface temperatures compared with conventional products. Specifically, the strategy’s components include performing a comprehensive study to evaluate and test multiple reflective pavement technologies and developing options (based on the study’s results) for incorporating cool pavement technologies into municipal standards.

	#	COMPONENTS	STATUS	PROGRESS
CLIMATE ADAPTATION Strategy #1: Cool Paving	1	Conduct a "cool paving" study to evaluate options	In Progress	Staff has secured funding and a consultant to perform a desktop evaluation of cool pavement options. In addition, staff is pursuing State grant funding for a demo project at Greg Rogers Park.
	2	Develop standards for incorporating "cool paving" into municipal and development projects	In Progress	Dependent on the outcome of component #1, staff will present recommendations to City Council for consideration.

Next Steps

City staff expects the desktop evaluation of cool pavement technologies to last 6-8 months. If Chula Vista is successful in securing grant funding for a demonstration site, the project would be initiated within 6 months and be monitored for 12-24 months to assess pavement performance. In addition, as City staff develops a new shade tree policy (Strategy #2) in collaboration with community stakeholders, there will be some inclusion of cool paving as an alternative approach to meeting the policy’s intent.

**ADAPTATION STRATEGY #2
SHADE TREES**

Overview

To address climate change impacts related to the urban heat island effect and energy demand, Strategy #2 is intended to incorporate shade trees into all municipal improvement projects and all private development parking lot projects. Shade trees contributing to a robust urban forest act as a natural cooling mechanism for urban areas. In addition, canopy-forming trees help reduce storm water runoff, provide habitat for wildlife, and increase property values. Specifically, the strategy’s components include (1) developing a shade tree policy for future City Council consideration, (2) amending the Municipal Landscape Manual to be consistent with the new policy, and (3) ensuring that the recently-updated Design Manual is consistent with the new policy.

#	COMPONENTS	STATUS	PROGRESS
CLIMATE ADAPTATION Strategy #2: Shade Trees	1 Develop a formal shade tree policy	In Progress	Staff has met with community stakeholders to begin drafting a shade tree policy and revising the City's approved street tree list, as appropriate.
	2 Amend the Municipal Landscape Manual to be consistent with the new shade tree policy	In Progress	Based on the outcome of component #1, the Municipal Landscape Manual will be revised, as appropriate.
	3 Ensure that the Design Manual is consistent with the new shade tree policy	Completed	As part of the new Council-approved Design Manual, new development projects must incorporate shade trees and provide at least 50% shade coverage for paved areas.

Next Steps

City staff will continue to work with landscape architects, developers, and other community representatives to finalize a formal shade tree policy, which will be presented to City Council in 2-4 months for review and consideration. Following a City Council decision, staff will immediately revise the Municipal Landscape Manual to be consistent.

**ADAPTATION STRATEGY #3
COOL ROOFS**

Overview

Strategy #3 is intended to address climate change impacts related to the urban heat island effect and energy demand by promoting “cool roofs.” Cool roofs, which are made of highly reflective and emissive material, can remain approximately 50 to 60°F cooler compared to traditional materials, thus helping to lower ambient temperatures inside and outside of buildings. This creates a more comfortable and healthy environment for building occupants and reduces energy use for air-conditioning. To accomplish Strategy #3, City staff will further evaluate cool roofing options and propose amendments to the municipal building codes for City Council consideration.

	#	COMPONENTS	STATUS	PROGRESS
CLIMATE ADAPTATION Strategy #3: Cool Roofs	1	Conduct a "cool roof" study to evaluate options	Completed	With the assistance of SDG&E, staff has completed a cost-benefit analysis of cool roof options, which was used to inform proposed building code revisions (component #2).
	2	Develop standards for incorporating "cool roofs" into building codes	In Progress	Staff will present recommendations to City Council for consideration in the next 1-2 months.

Next Steps

Based on City Council direction, staff will finalize cool roof standards within 30-days of the ordinance’s second reading. Cool roofs may also be included into an expedited permitting and processing incentive program currently being developed for new residential and non-residential buildings that exceed Title-24 (2008) by at least 30% and meet CalGreen Tier 2 standards (or equivalent LEED, Build-It-Green, or other Energy Efficiency/Green Building program).

**ADAPTATION STRATEGY #4
LOCAL WATER SUPPLY & REUSE**

Overview

Expected climate change impacts could limit imported water availability, increase utility costs for residents and businesses, and lead to higher demand for local water sources. As such, Strategy #4 is intended to educate the community about the benefits and appropriate uses of local water supplies and further integrate recycled water/onsite water reuse systems into new development. Specifically, components include (1) evaluating municipal building code options to incorporate single-source gray water “stub-outs” in new residential buildings and indoor recycled water in new commercial buildings, (2) developing an educational guide about proper gray water use, (3) creating an incentive (using external funding sources) to promote onsite water reuse, and (4) updating the City’s water-related plans to reference and promote recycled water and onsite water reuse systems.

#	COMPONENTS	STATUS	PROGRESS
1	Develop standards for incorporating gray water stub-outs (residential) and indoor recycled water use (commercial)	In Progress	Staff has begun to meet with the water districts and other relevant public agencies to discuss potential standards language and parameters.
2	Develop a gray water educational guide to help ensure proper use	In Progress	Based on the outcome of component #1, an educational guide will be created to promote the proper use of gray water and other onsite water reuse options (such as rain harvesting).
3	Create an onsite water reuse incentive program	In Progress	With the water districts, staff has developed a draft framework for an onsite water reuse incentive program. Once finalized, it will be used to solicit external funding sources for support.
4	Update water-related municipal guidelines & plans to promote gray water	In Progress	Based on the outcome of component #1, municipal guidelines will be updated to be consistent with new gray water and other water reuse policies.

Next Steps

City staff expects to present a gray water stub-out standard to City Council for consideration within 3 months. Because indoor use of recycled water is a more complex issue, a draft standard for commercial buildings is still being outlined in close coordination with the water districts. The remaining components will begin upon completion of components #1 and #2.

**ADAPTATION STRATEGY #5
STORM WATER POLLUTION PREVENTION & REUSE**

Overview

Climate change will likely alter regional precipitation patterns, thus altering water runoff and sediment movement flows through local watersheds. Because of urbanization and its associated activities, pollutants are discharged with these flows into the City’s storm drainage systems, creeks, rivers, San Diego Bay, and the ocean and reduce the beneficial uses of these water bodies for the Chula Vista community. Strategy #5 is intended to revise the City’s storm water regulations and applicable municipal codes to efficiently manage higher concentrations of pollutants in urban runoff by minimizing water waste, using natural landscapes to help drain or reuse runoff, and by ensuring that irrigations systems are properly installed and maintained.

#	COMPONENTS	STATUS	PROGRESS	
CLIMATE ADAPTATION Strategy #5: Storm Water Pollution Prevention & Reuse	1	Develop revisions to the municipal code to prohibit excessive landscape over-irrigation resulting in urban runoff	In Progress	To determine the required code revisions, staff is currently reviewing the relevant CVMC sections related to storm water and discharges to public streets.
	2	Encourage the beneficial reuse of pipe flushing water at construction sites	In Progress	Staff is currently researching potential uses of pipe flushing water at construction sites, which will help the City develop a guidance brochure for construction site managers.
	3	Develop incentives promoting Low Impact Development (LID) design concepts	In Progress	Various non-monetary incentives are being explored by staff for developers to incorporate LID features in their project designs.
	4	Conduct a feasibility study for the beneficial reuse of dry weather flow sources	On-Hold	External funding to support the feasibility study is still being identified and secured.

Next Steps

City staff expects that the landscape water runoff code revisions will be presented to City Council for review and consideration within the next 12 months. Likewise, components #2 and #3 dealing with developer guidance brochures and incentives will be completed within 12 months. The implementation of component #4 will be delayed until funding is secured.

**ADAPTATION STRATEGIES #6 & #7
EDUCATION & WILDFIRES
EXTREME HEAT PLANS**

Overview

The frequency and intensity of wildfires and extreme heat events is expected to increase due to local climate change impacts. These events could lead to greater public safety (loss of life and property) and health concerns (poor air quality and infectious disease transmittal). The strategies are designed to educate the general public and the business community about the impacts of climate change using existing City and community partner outreach mechanisms with a special emphasis on making homes more resilient to wildfires, incorporating poor air quality day notifications, and educating businesses about employee heat illness risks. In addition, extreme heat events will be added as a significant emergency to the City’s public safety plans with a special emphasis on serving vulnerable populations and supporting a robust network of energy-secured “Cooling Centers.”

	#	COMPONENTS	STATUS	PROGRESS
CLIMATE ADAPTATION Strategy #6: Education & Wildfires Strategy #7: Extreme Heat Plans	1	Expand community wildfire education	Ongoing	The City launched its new "Ready, Set, GO!" campaign, which is a comprehensive outreach program designed to promote wildfire prevention & preparedness.
	2	Revise emergency plans to include extreme heat events	In Progress	The City will be revising its Emergency Response Plan in 2012 and its section of the Multi-Jurisdictional Hazard Mitigation Plan in 2015, as appropriate.
	3	Establish a procedure for notifying the community about poor air quality & extreme heat days	Completed	City staff now receives and forwards air quality notifications from the San Diego County Air Pollution Control District through the City's Nixle community messaging system.

Next Steps

City staff will continue to implement its community education and notification programs related to wildfires and extreme heat days. Finally, the City’s public safety plans will be revised to include extreme heat events, as part of their regularly-scheduled updates over the next 3 years.

**ADAPTATION STRATEGY #8
OPEN SPACE MANAGEMENT**

Overview

Chula Vista’s open space areas include landscaped areas within developments, parks and recreation areas, and open space that has been set aside as a preserve for sensitive biological resources. In order to assess and reduce impacts associated with climate change on parks and open space and their associated ecosystems, Strategy #8 is intended to seek opportunities for the City to partner with the Resource Agencies, non-profit organizations, and/or adjacent public land managers to monitor and manage/restore ecosystems to ensure long-term habitat connectivity, species resilience, and community recreational opportunities.

	#	COMPONENTS	STATUS	PROGRESS
CLIMATE ADAPTATION Strategy #8: Open Space Management	1	Integrate climate change-related biological monitoring into Otay Ranch Preserve's Management Plan & Annual Work Plans	On-Hold	Staff has included climate change-related monitoring into the FY2012 Work Plan, but funding for Management Plan amendments & implementation is still being pursued.
	2	Update the Otay Valley Regional Park (OVRP) Concept Plan to incorporate climate-resilient design & educational guidelines	In Progress	OVRP partners have secured grant funding for 30 educational signs. As part of the new sign program, the City will work with partners on Concept Plan amendments.
	3	Convert landscaped areas in open space districts to water-saving plants, mulch, & irrigation systems	Ongoing	Recently, over 5.5 acres of open space received mulch applications and over 2,900 s.f. of turf has been converted to water-wise landscaping.

Next Steps

The City will continue working with its OVRP partners in order to finalize the proposed amendments to the Concepts Plan dealing with climate change impacts by spring 2013. Chula Vista and its partners are also pursuing grant funding to expand the network of multi-use trails in the regional park. Any new trails will be designed to be resilient to climate change impacts.

**ADAPTATION STRATEGY #9
WETLANDS PRESERVATION**

Overview

Expected local climate change impacts include precipitation variability and sea level rise that will stress riparian wetlands and estuarine wetlands, respectively. As a result, the locations where the temperature, moisture, and other environmental conditions are suitable for wetlands and their associated species will shift. In order to reduce these impacts, Strategy #9 is intended to ensure that, when preserving or restoring coastal and riparian wetland, the City take steps to incorporate adequate upland or transition habitats to accommodate shifts in wetlands coverage and help ensure public access due to sea level rise and other climate change impacts. Specifically, components include (1) evaluating the feasibility of monitoring local wetlands species ranges and abundances in response to climate change impacts, (2) incorporate wetlands “migration” in habitat management and restoration design criteria in the future Bayfront Natural Resources Management Plan (NRMP), and (3) revise the OVRP Habitat Restoration Plan and Non-native Plant Removal Guidelines to include strategies for climate change adaptation issues.

#	COMPONENTS	STATUS	PROGRESS	
CLIMATE ADAPTATION Strategy #9: Wetlands Preservation	1	Evaluate potential to monitor local wetlands' biological health to assess climate change impacts	On-Hold	Staff, in coordination with its partners, is seeking funding to support biological wetlands monitoring.
	2	Incorporate climate change & sea level rise concepts in Bayfront NRMP	In Progress	City, along with the Port & Bayfront Wildlife Advisory Group, are finalizing a RFP for a biological consultant to help lead NRMP efforts.
	3	Amend OVRP Habitat Restoration & Non-Native Plant Removal Plans to promote climate resiliency	In Progress	City has begun discussions with partners on proposed OVRP plans' amendments.

Next Steps

City staff expects that a NRMP biological consultant, who will assist in developing appropriate climate change and sea level rise concepts, will be secured in the next 4-5 months. The City will also continue working with its OVRP partners in order to finalize the proposed climate change-related amendments to the Habitat Restoration Plan and Non-Native Plant Removal Plan by spring 2013.

**ADAPTATION STRATEGY #10
SEA LEVEL RISE & LAND DEVELOPMENT CODES**

Overview

Over the next 40 years, sea level rise rates are expected to increase with local sea levels 12 to 18 inches higher than their current levels. Higher sea levels can result in increased erosion, more frequent flooding and property damage, loss of wetland habitats, and fewer waterfront public access options. As such, Strategy #10 directs the City to amend its land development codes and CEQA guidelines to incorporate climate change-related sea level rise into future development and municipal infrastructure projects’ design and review. Specifically, the components include (1) revising the grading ordinance to consider a project’s vulnerability to future sea level rise and flooding events, (2) modifying the Subdivision Manual to ensure that storm water/drainage infrastructure can address future sea level rise and flooding impacts, and (3) ensuring that environmental review and CEQA procedures are consistent with these changes.

CLIMATE ADAPTATION Strategy #10: Sea Level Rise & Land Development Codes	#	COMPONENTS	STATUS	PROGRESS
	1	Revise the grading ordinance to address increased rates of sea level rise	In Progress	Staff has created draft guidelines pertaining to sea level rise and drainage and is now presenting them to different community stakeholders for feedback.
	2	Modify Subdivision Manual to ensure proper drainage with higher sea levels	In Progress	Staff has created draft guidelines pertaining to sea level rise and drainage and is now presenting them to different community stakeholders for feedback.
	3	Ensure CEQA review procedures are consistent with new sea level-related land development guidelines	In Progress	Staff has created draft guidelines pertaining to sea level rise and drainage and is now presenting them to different community stakeholders for feedback.

Next Steps

After receiving feedback from community stakeholders and the Development Services Oversight Committee, staff will make final revisions to the proposed land development codes. Staff expects to present the proposed sea level-related guidelines to City Council for review and consideration by December 2011.

**ADAPTATION STRATEGY #11
GREEN ECONOMY**

Overview

Climate change impacts create new issues that local communities and, in particular, businesses need to address and prepare for in order to reduce future risks and costs. These issues can include higher insurance premiums due to greater flooding or wildfire risks, more expensive utility costs due to higher energy and water demand, and lower productivity due to more employee sick days from frequent extreme heat and poor air quality days. As such, Strategy #11 is designed to provide assistance and non-monetary incentives to help businesses manage climate change risks and to attract businesses that provide “green” products or services into Chula Vista. Specifically, the components include (1) revising the municipal purchasing policy to more robustly promote the procurement of “green” products and services, especially from local Chula Vista businesses, (2) revising existing business outreach programs to include recommendations on how they can reduce future climate change risks, and (3) continuing the recruitment and retention of “green” businesses and manufacturers in Chula Vista.

#	COMPONENTS	STATUS	PROGRESS
CLIMATE ADAPTATION Strategy #11: Green Economy	1	Revise "green" procurement policy & process	In Progress Staff has begun developing a new framework for implementing the City's current "green" procurement process.
	2	Modify business outreach programs to include information on reducing climate change risks	In Progress Staff has revised the CLEAN Business checklist to include info on climate adaptation strategies and will make similar revisions to the FREBE checklist as part of the CY2012 business licensing process.
	3	Continue recruiting & retaining "green" businesses	In Progress Staff continues to assist the Morgan Solar/Nyro joint venture project in establishing a local manufacturing facility by the end of the year and creating 100 green jobs.

Next Steps

By November, City staff plans to present a “local preference” procurement policy, which will include an emphasis on supporting participants in the Chula Vista CLEAN Business program. In addition, new internal procedures for implementing and tracking the City’s “green” procurement policy will be finalized by January 2012.