



CHAPTER

4 CONCLUSION

The City of Citrus Heights Greenhouse Gas Reduction Program (GGRP) recommends 19 *primary* measures that allow the City to meet its communitywide greenhouse gas (GHG) emission reduction target for 2020. *Supporting* measures described in the GGRP do not affect attainment of the target directly, but many do contribute to the performance of the *primary* measures. The recommended measures are capable of achieving a 13.7% reduction from baseline 2005 GHG emission levels by 2020. In addition to reducing GHG emissions in the community, the measures described in this plan also improve overall quality of life in the community.

If GHG reductions anticipated from statewide implementation of AB 1493 and Low Carbon Fuel Standards (LCFS) are considered, the combined effect of the City's GHG reduction measures and these statewide actions would be a 24.5% reduction from 2005 levels. While statewide reductions alone are nearly sufficient to achieve the City's target, their effects are not certain, and implementing them is an action beyond the City's control. The City accepts that it has a fair share responsibility to implement GHG reduction measures addressing communitywide emissions within its control, above and beyond statewide reductions. Thus, the recommended GGRP measures outline a path to achieving the GHG reduction target without relying on statewide reductions.

To monitor effectiveness of the measures in reducing GHG emissions, the City has identified indicators that will be used to demonstrate progress and performance of the plan relative to the reduction target on an annual basis, in conjunction with the State-required annual report to City Council on progress implementing the General Plan. This regular check-in will also allow the plan to be modified and new measures considered if necessary in the future.

The GGRP favors incentive-based approaches to reducing GHG emissions, as opposed to regulatory mandates. The intent of these approaches is to promote high levels of community participation and, working with stakeholders and utilities, to provide adequate incentives to achieve emission reductions. This approach also considers the fact that the City is largely built out, so that opportunities to achieve communitywide GHG reductions by imposing conditions of approval on new development are limited. After at least three annual monitoring reports, staff shall prepare a report analyzing whether the GGRP is on track to achieve the reduction target. If the report concludes the GGRP is not on track to achieve the reduction target, the

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report shall include recommendations regarding potential new or revised measures to: a) encourage more aggressive implementation, b) include new and/or modified non-binding measures, and/or c) modify certain non-binding measures to be mandatory if supported by available funding and technical assistance. The report shall also consider updated guidance that has been provided by agencies or working groups in the region with respect to such measures.

Additionally, within three months of adoption of the GGRP, the City will develop a checklist of potential mitigation measures based on mandatory and non-binding GGRP measures. The City will use this checklist in evaluating applications for discretionary entitlements in accordance with CEQA Guidelines Section 15183.5.

Table 4-1 identifies progress indicators to be used in monitoring implementation and reduction effectiveness of the recommended *primary* measures.

**Table 4-1
GHG Reduction Measures and Progress Indicators**

Measure		GHG Reduction Potential (MT CO ₂ e)	Progress Indicators	Target Year
Transportation and Connectivity				
Measure 3-2.A	Develop rideshare infrastructure to facilitate participation by those travelling from Citrus Heights to major employment centers such as Downtown Sacramento or Roseville.	1,230	i. 1% increase in rideshare mode from 2005.	by 2015
			ii. 2% increase in rideshare mode from 2005.	by 2020
Measure 3-4.A	Create infrastructure to promote use of low-carbon and alternative fuel vehicles.	12,210	i. Install 700 new electric charging stations.	by 2020
			ii. 1,500 new hybrid vehicles purchased within in the community	
			iii. 1,500 new electric vehicles purchased within the community	
Measure 3-5.A	Maximize pedestrian and bicycle use through high-quality design, enhanced infrastructure, and enforcing bike and pedestrian travel rights.	3,730	i. 1.5% increase in bike + pedestrian mode from 2005.	by 2020
Measure 3-6.A	Conduct a public transit gap study analyzing strategies to increase transit use and funding sources for transit improvements. Work with regional transit agencies to provide bus route coverage to underserved areas.	2,490	i. 1% increase in transit mode from 2005.	by 2020
Measure 3-7.A	Improve fuel-efficiency of the City fleet by purchasing low or zero-emission vehicles when vehicles are retired from service. (Public safety vehicles are exempted from this requirement.)	40	i. 5 existing City vehicles replaced by hybrids.	by 2018
Measure 3-7.B	Provide financial incentives to encourage ridesharing and/or public transit use among City employees.	60	i. 8.5% reduction in employee commute trips based on flexible timing, rideshare programs.	by 2010
SUBTOTAL		19,760		
Energy Efficiency and Renewable Energy				
Measure 4-2.B	Collaborate with utility companies to provide financial incentives/rebates for residential and commercial buildings to upgrade from inefficient water heaters to solar water heaters.	8,670	i. 30% of total residential (new and existing) units install solar water heaters.	by 2020
			ii. 20% of total commercial (new and existing) properties install solar water heaters.	

**Table 4-1 (con't.)
GHG Reduction Measures and Progress Indicators**

Measure		GHG Reduction Potential (MT CO ₂ e)	Progress Indicators	Target
Measure 4-2.C	Create a community-wide Solar Power program and remove physical and code barriers to support installation of solar panels in commercial and residential districts.	11,700	i. PV installed on 250,000 sq.ft of commercial rooftops, and 5% of total residential (new and existing) rooftops.	by 2015
			ii. PV installed on 500,000 sq.ft of commercial rooftops and 10% of total residential rooftops.	by 2020
Measure 4-3.A	Develop a Residential Energy Benchmark program to assist homeowners to identify voluntary retrofit opportunities and funding options to increase building energy performance by 30% from baseline.	5,730	i. 10% of existing housing units participating in the Residential Energy Benchmark program, with 5% achieving 30% increase in building energy performance.	by 2015
			ii. 20% of total housing units participating in the Residential Energy Benchmark program, with 15% achieving 30% increase in building energy performance.	by 2020
Measure 4-3.B	Develop a Commercial Energy Benchmark program to assist business owners to identify voluntary retrofit opportunities and funding options to increase building energy performance by 30% from baseline.	1,490	i. 10% of total commercial properties participate in the Commercial Energy Benchmark program, with 5% achieving 30% increase in building energy performance.	by 2015
			ii. 15% of total commercial properties participate in the Commercial Energy Benchmark program, with 10% achieving 30% increase in building energy performance.	by 2020
Measure 4-3.D	Develop an Energy Efficient Upgrade program for residents and business owners to promote upgrades from inefficient appliances, lighting and roofing to Energy Star certified systems.	10,080	i. 20 incandescent bulbs replaced with CFLs per housing unit. (669,500 bulbs)	by 2020
		796	ii. 5,000 residential refrigerators upgraded to Energy Star models	
		390	iii. 5,000 dishwashers upgraded to Energy Star models	
		265	iv. 5,000 clothes washers upgraded to Energy Star models	
		35	vi. 500 water coolers upgraded to Energy Star models	
		90	vii. 1,000 computers and monitors upgraded to Energy Star models	
		130	viii. 500 copy machines upgraded to Energy Star models	
		93	ix. 1,000 exit signs upgraded to LED	
		459	x. 1,500,000 square feet of roof area replaced with Energy Star cool roofs.	

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GHG Reduction Measures and Progress Indicators**

Measure		GHG Reduction Potential (MT CO ₂ e)	Progress Indicators	Target
Measure 4-3.E	Collaborate with local utility companies and adjacent cities to accelerate smart-grid integration in the community.	3,160	i. Smart grid technology available to 30% of total households	by 2020
			ii. Smart grid technology available to 40% of total households	
Measure 4-5.A	Collaborate with SMUD to increase the use of green energy within City facilities.	10	i. Finish PV installation (32Kwh panels producing 11,680 Kwh of electricity annually) on City Hall by December 31, 2010.	by 2010
Measure 4-5.B	Reduce energy consumption in City buildings by 40% from baseline.	215	i. Install energy efficient appliances and upgrades in City Hall to reduce energy consumption by 40% from 2005.	by 2020
Measure 4-5.C	Improve lighting efficiency and decrease energy consumption in public spaces.	544	i. Replace 75% of citywide street lights to LED (3,134 lights 2007 to 2015).	by 2015
			ii. Replace 100% of citywide street lights to LED (4,179 lights 2015 to 2020).	by 2020
SUBTOTAL		43,857		
Water Efficiency and Conservation				
Measure 5-1.A	Work with the water agencies to develop plans to implement SB 7 to achieve a 20% reduction in urban water demand by 2020.	4,030	i. Achieve 10% reduction in total water consumption.	by 2015
			ii. Achieve 20% reduction in total water consumption.	by 2020
SUBTOTAL		4,030		
Waste Reduction and Diversion				
Measure 6-1.A	Establish a 2020 waste reduction target of 75% below 2005 levels and work with the County, neighboring cities and other organizations to create a low-waste plan and provide public education regarding low-waste strategies and implementation.	18,880	i. 75% reduction from 2005 per capita waste generated	by 2020
SUBTOTAL		18,880		
Green Infrastructure, Public Health and Safety				
Measure 7-1.A	Enhance the City's urban forest and other green infrastructure to reduce building energy use, improve comfort, augment neighborhood aesthetics, improve stormwater quality, and maximize carbon capture and storage.	740	i. 1,500 new shade trees planted on private property.	by 2020
			ii. 2,500 new shade trees planted on public property and rights-of-way.	by 2020
SUBTOTAL		740		
TOTAL GHG EMISSION REDUCTION		87,267		

Note: The progress indicators are based on the assumptions used to calculate GHG reduction potential of the primary measures. Appendix B documents the assumptions used for progress indicators and GHG reduction calculation.

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