

Our choices regarding how we travel, build, and operate within our community can all contribute to increased greenhouse gas (GHG) emissions. Emissions from various daily activities get trapped in our atmosphere, and in return, trap heat on the planet. A human activity-enhanced greenhouse effect is generally accepted to be one of the primary causes of global climate change.

The City of Citrus Heights Greenhouse Gas Reduction Plan (GGRP) addresses major sources of GHG emissions in the community that cumulatively contribute to global climate change. The City's approach to addressing GHG emission reductions includes:

- completing a baseline GHG emissions inventory and projecting future emissions;
- identifying a communitywide GHG reduction target;
- preparing a GHG reduction plan to identify strategies and measures to meet the reduction target;
- identifying targets and reduction strategies in the General Plan and evaluating the environmental impacts of the GGRP in the General Plan EIR; and
- monitoring effectiveness of reduction measures and adapting the plan to changing conditions.

In 2008, the City of Citrus Heights joined other Sacramento County communities in preparing a GHG emissions inventory. Following certain adjustments that better characterized Citrus Heights' local conditions and jurisdiction, the baseline inventory indicated that the community released 543,727 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) emissions in 2005. The communitywide baseline inventory reported emissions under different source-sectors, including transportation, off-road mobile sources (e.g., lawnmowers, boats), residential and commercial energy use, solid waste disposal, water use, and wastewater treatment. Below is the percent breakdown of emissions related to the various sectors:



Under a business-as-usual scenario, communitywide GHG emissions would increase by approximately 2.3% between 2005 and 2020 to accommodate the General Plan's 2020 population of 92,949. If the City and community residents and businesses continue to operate in the same way as today, the communitywide emissions would be 556,396 MT  $CO_2e$  by 2020.

On February 17, 2010, the Citrus Heights City Council recommended a communitywide reduction target of 10% to 15% below 2005 baseline emission levels by 2020. The Citrus Heights GGRP recommends communitywide strategies and measures that can collectively reduce GHG emissions approximately 87,267 MT  $CO_2e$  emissions per year (equivalent to a 13.7% reduction below 2005 levels) and achieve the City's adopted emission reduction target.

City government recognizes its role and leadership potential in efforts to reduce the community's carbon footprint. The City has already taken a number of steps to reduce GHG emissions since the 2005 baseline inventory – such as synchronization of traffic signals, installation of LED street lights, and design and construction of a high-quality, energy and water efficient Community Center. However, City actions alone cannot achieve Citrus Heights' adopted emission reduction target. Community involvement and participation are essential to successful implementation of the GGRP. Ultimately, an individual's everyday actions will guide the larger effort of community-wide GHG emissions reduction.







Statewide reductions from implementation of Assembly Bill (AB) 1493, Low Carbon Fuel Standards (LCFS) and the Renewable Energy Portfolio Standard (RPS) were also considered during the development of the GHG emission reduction target and GGRP measures. Together with the effects of AB 1493, LCFS and the RPS in Citrus Heights, the recommended measures in the GGRP would enable a combined reduction of 145,677 MT CO<sub>2</sub>e/year, or about 24.5% below 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.



GHG reduction measures in this plan are grouped within seven strategy areas – community leadership and engagement, land use and community design, transportation and connectivity, energy efficiency and conservation, water efficiency and conservation, waste reduction, green infrastructure, and public health and safety. The GHG reduction measures were developed by (a) evaluating existing community conditions, (b) identifying emissions reduction opportunities within the City, (c) reviewing best practices from other jurisdictions and organizations, and (d) incorporating state and regional laws, guidelines, and recommendations. The recommended GGRP measures are grounded in actions directly influenced by the City and rely on community participation. After considering a wide range of potential measures, recommended measures were selected based on the following criteria:

- What is the implementation cost to the City along with private costs and savings?
- Is it technically possible to implement the measure?
- Would the community support and adopt the measure?

 Does the measure create any additional community benefits (e.g., quality of life, jobs, improved health) beyond reducing GHG emissions?

The GGRP includes two types of measures: *primary* and *supporting* measures. *Primary* measures generate directly attributable GHG reductions based on current technology, empirical studies and available data. The GGRP recommends 19 *primary* measures that collectively meet the City's target of 10 to 15% below 2005 levels. A number of *supporting* measures have also been included. These measures are not quantifiable at this time, but they facilitate and support the reduction potential of the *primary* measures. Below is the estimated reduction potential of the recommended *primary* measures in the plan:

- Transportation and Connectivity 19,760 MT CO<sub>2</sub>e/year (6 primary measures)
- Energy Efficiency and Conservation 43,857 MT CO<sub>2</sub>e/year (10 primary measures)
- Water Efficiency and Conservation 4,030 MT CO<sub>2</sub>e/year (1 primary measure)
- Waste Reduction 18,880 MT CO<sub>2</sub>e/year (1 primary measure)
- Green infrastructure, Public Health and Safety 740 MT CO<sub>2</sub>e/year (1 primary measure)

In addition to reducing GHG emissions in Citrus Heights, the strategies described in this plan will also result in other community benefits, such as:

- Improved Air Quality Cutting GHG emissions can reduce air pollution.
  Less pollution allows for cleaner air and healthier families.
- Increased Energy Independence Reducing GHG emissions related to energy produced from non-renewable sources can reduce our reliance on imported and expensive fossil fuels.
- Creating Healthier Neighborhoods By designing complete streets that connect neighborhoods to commercial areas and public spaces, the City can support alternative transportation modes such as walking and biking – both of which can have positive effects on community health by promoting outdoor activities and exercise.
- Creating Local Jobs Many strategies recommended in this plan can stimulate new jobs in the community, along with vocational training for energy efficiency retrofits, installing and maintaining renewable energy technologies, and installing water-conserving landscaping.
- **Saving Money** Importantly, using less energy and water can translate into utility bill savings for residents and businesses.





The City of Citrus Heights GGRP represents the City's best attempt at responding to the need to reduce GHG emissions through municipal operations and community activities. Federal and State policies and requirements regarding climate change are continually evolving to meet the challenges and effects of a rapidly changing climate. Over the next decade, new GHG reduction technology and ways to measure GHGs are also likely to develop. To remain effective, the GGRP will be updated periodically (approximately every 3 years). During these updates the City may also investigate new measures that have not been recommended currently due to financial or technical constraints to determine their future applicability.

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