

Appendix 4

Compliance with Bay Area Air Quality Management District Guidelines

The City of Walnut Creek developed this Climate Action Plan to meet the requirements of the Bay Area Air Quality Management District's (BAAQMD) criteria for a qualified greenhouse gas reduction strategy as defined in the district's updated California Environmental Quality Act (CEQA) Air Quality Guidelines. The remainder of this appendix describes in detail how the City's Climate Action Plan satisfies the requirements of BAAQMD's guidelines on the standard elements of a qualified GHG reduction strategy and will allow future development projects to determine that a project has a less than significant impact on GHG emissions so long as it is in compliance with the City's GHG Emissions Reduction Strategy.

The BAAQMD establishes the following minimum elements in its guidelines for a greenhouse gas reduction plan:

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic range.
- Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable.

- Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Monitor the plan's progress.
- Adopt the greenhouse gas reduction strategy in a public process following environmental review.

GREENHOUSE GAS EMISSION QUANTIFICATION

The first component of a qualified GHG reduction strategy is to complete an inventory of all GHG emissions within a specific geographic boundary. Walnut Creek's GHG inventory uses a baseline year of 2005 and inventories carbon dioxide (CO₂), nitrous oxide (N₂O), and methane (CH₄) emissions from activities within the jurisdictional boundary of the City of Walnut Creek. The inventory was prepared by ICLEI, Local Governments for

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Sustainability (ICLEI), in 2009 following the Local Government Operations Protocol and best management practices for calculating and reporting community-wide and government operations emissions. The emissions sources calculated in the baseline inventory include residential, commercial, and industrial electricity and natural gas use, on-road transportation, energy use associated with water, certain off-road equipment use, and solid waste by compiling activity data like kilowatt hours of electricity, vehicle miles traveled (VMT) on state and local roads, or tons of waste disposed and converting them into metric tons of carbon dioxide equivalents (MTCO_{2e}). Emissions from waste disposal were calculated using a methane recovery factor of 85% for the County of Contra Costa.

This GHG Emissions Reduction Strategy includes revisions to the baseline community-wide GHG inventory to comply with BAAQMD guidance. Revisions included the following:

- The methodology for calculating VMT and associated emissions was updated. Countywide highway vehicle miles traveled were updated and applied to the City using the proportion of county highway miles that fall within the city.
- Emissions associated with water were calculated and added to the inventory to account for the energy for water supply and conveyance, water treatment, water distribution, and wastewater treatment. Energy use for water-related activities was calculated using Northern California averages provided by the California Energy Commission¹ and the average water split for indoor and outdoor

water use reported by the Natural Resources Defense Council.²

- Off-road emissions from construction activities and lawn and garden equipment were added to the inventory. These emissions are provided on a countywide level by the California Air Resources Board Offroad 2007 Software. Construction emissions were appropriated based on Walnut Creek's proportion of building permits in the baseline year. Lawn and garden equipment emissions for the city were calculated assuming the proportion of total households.
- BART emissions were added to the inventory. The total number of trips and trip lengths with Walnut Creek as an origin or destination were determined using BART monthly ridership report for August 2010 and the distance between stations. Data for 2005 is not available, and 2010 data was used as a proxy. Weekday, Saturday, and Sunday trips were summed to determine a weekly and annual number of trips and annual passenger miles traveled to or from Walnut Creek. Total annual passenger miles were multiplied by a passenger mile coefficient provided by BART for 2008. Half of each trip was attributed to Walnut Creek (the other half of the trip would be attributed to the origin or destination outside of the City).³

The City did not include stationary point source emissions from industrial activities. These emissions are not prevalent in Walnut Creek. Any such emissions are likely well documented in other inventory programs and outside of the City's ability to influence.

¹ November 2005.

² Natural Resources Defense Council 2010.

³ BART 2008, BART 2010.

GROWTH FACTORS & FORECASTS

In addition to completing an inventory of GHG emissions, the City has projected how these emissions will continue to grow if community activities do not change, but the city's population, housing, employment, and vehicle miles traveled (VMT) continue to grow. These emissions have been projected for each sector out to the years 2020 and 2030 to be consistent with the target years set in Assembly Bill (AB) 32. Projecting these emissions out to 2020 and 2030 relies on the Association of Bay Area Governments (ABAG) projections of housing, population, and employment within the city by 2020 and 2035, and the Metropolitan Transportation Commission's (MTC) county-specific growth estimates of VMT for Contra Costa County.

The following growth indicators were used to forecast emissions:

- Residential energy: growth in households forecast in the Association of Bay Area Governments (ABAG) 2009 projections
- Commercial and industrial energy: growth in jobs forecast in the ABAG 2009 projections
- Vehicle miles traveled: growth in vehicle miles traveled for Contra Costa County in the Metropolitan Transportation Commission Travel Forecasts Data Summary⁴
- Waste: growth in population forecast in the ABAG 2009 projections
- Construction emissions: the city's proportion of new countywide household growth forecast in the ABAG 2009 projections

⁴ Metropolitan Transportation Commission December 2008.

- Lawn and garden equipment emissions: the city's proportion of total countywide households forecast in the ABAG 2009 projections
- Water: growth in population forecast in the ABAG 2009 projections and forecast water consumption per capita provided by the Contra Costa Water District⁵ and the East Bay Municipal Utilities Water District⁶
- BART emissions: the city's growth in service population (residents and jobs).

These growth projections are then applied to each emissions sector to determine future emissions levels under a business-as-usual scenario. These forecasts are summarized in **Chapter 3**.

REDUCTION TARGET

The City of Walnut Creek has set an emissions reduction target of 15% below 2005 levels by 2020, which is consistent with the State's direction to local governments in the AB 32 Scoping Plan and would equal achieving 1990 emissions levels by 2020. The target will be achieved through a combination of local, regional, state, and federal actions and programs, including programs that have not yet been developed. Achieving the reduction target will also rely on community participation and engagement in these programs.

In addition to AB 32, California has adopted and started to implement several state-level programs that will impact local GHG emissions. In order to effectively determine the emissions reductions that will need to be implemented at the local level to meet the City's

⁵ 2009.

⁶ 2009.

emissions reduction target, the impact of state-level programs has been incorporated into an adjusted business-as-usual forecast. The state-level programs included in this adjusted forecast include the Renewable Portfolio Standard (RPS), updates to Title 24 Energy Efficiency Standards, California Solar Initiative Rebates, and the implementation of AB 1493, the motor vehicle fuel efficiency standard, referred to as the Pavley Standard. The impact of these state programs is described in **Chapter 5** and **Appendix 5**.

REDUCTION MEASURES

This Climate Action Plan demonstrates how the City will achieve its GHG emissions reduction target through the implementation of CAP strategies. All measures are captured in **Chapter 4** and **Chapter 5**.

Emissions reductions were quantified for three different years: 2010, 2020, and 2030. Emissions reductions for 2010 have been quantified to demonstrate the *actual* emissions reduction progress that the City has already made in implementing measures in the Climate Action

Plan, while the 2020 and 2030 emissions reductions are the *potential* reductions that will be achieved through the implementation of these measures over the next several years.

APPLICABILITY TO NEW DEVELOPMENT PROJECTS

In addition to quantifying the emissions reductions associated with each strategy in the Climate Action Plan, BAAQMD guidelines recommend that the City clearly specify the measures in the Climate Action Plan that new construction projects must implement to demonstrate compliance with the City’s GHG Climate Action Plan and determine that the project’s operational GHG emissions are less than significant by complying with a qualified GHG emissions reduction strategy. To ensure that each new construction project complies with the City’s Climate Action Plan, the City will adopt measures the Climate Action Plan identifies to integrate Climate Action Plan implementation in project development and review.

Growth Indicator	Source	2005	2010	2020	2030
Population	ABAG	66,200	68,300	72,900	77,400
Households	ABAG	31,050	32,230	34,160	36,450
Daily VMT (County of Contra Costa)	MTC Travel Forecast Data	19,764,813	20,594,387	22,843,127	24,671,393
Employment	ABAG	54,830	54,510	58,170	65,880

IMPLEMENTATION AND MONITORING

This Climate Action Plan recommends monitoring and updates of the emissions inventory and reduction measures a minimum of every 3 to 5 years. Each department assigned with implementation responsibilities will support this ongoing process. The City will delegate a

department responsible for annual reports to the City Council and to monitor progress in achieving Climate Action Plan targets. Upon finalization of the Administrative Draft Climate Action Plan, the City will develop a Microsoft Excel-based tool to monitor and evaluate CAP implementation progress. Staff will use this tool to report on progress to date both qualitatively and quantitatively

on an annual or quarterly basis. Should the City find that the reduction measures are not achieving their intended GHG reductions, the City will add additional voluntary and mandatory strategies, or consider making existing voluntary strategies mandatory, in order to achieve the City's reduction target. .

As Walnut Creek continues to implement additional programs that reduce GHG emissions, the Climate Action Plan will be updated accordingly. Additionally, as new technologies are developed and more thorough research on the effectiveness of certain emissions reduction measures is released, the potential emissions reductions to be achieved for each measure will be revised.

PUBLIC PARTICIPATION

Community participation has been an integral component as the City has developed its sustainability strategy and Climate Action Plan. The City held a Farmers' Market outreach event in 2009 and a Town Hall workshop in 2011 that involved the community in the Climate Action Plan. Additional details can be found in **Chapter 1**. The City also has ongoing sustainability outreach programs outlined in **Chapter 5** that support Climate Action Plan implementation.

ENVIRONMENTAL REVIEW

To be updated as necessary before adoption of the Climate Action Plan.

Prior to adoption of this Climate Action Plan, the City will initiate an environmental review process to comply with the requirements of the California Environmental Quality Act. The City will complete a General Plan Environmental Impact Report (EIR) Addendum to the General Plan Final EIR (General Plan EIR) that the City adopted on December 9, 2005. This EIR assesses the potential environmental consequences of the Walnut Creek General Plan 2025, which was adopted April 4,

2006. The Final EIR identified significant impacts and mitigation measures for the General Plan

The General Plan EIR Addendum addresses the environmental effects of the Climate Action Plan in light of the previous environmental review in the General Plan EIR. Implementation of the proposed Climate Action Plan will address climate change impacts associated with increases in greenhouse gas emissions that were not previously considered in the General Plan EIR.