



City Council & Planning Commission

Joint Work Session

10 March 2009

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HDR

Presentation Major Topics

- Hayward's baseline GHG inventory
- Hayward's GHG emissions reduction targets
- Strategies to reduce emissions
- Prioritizing actions to implement
- Implementing the Climate Action Plan
- Measurement and verification

Climate Action Plan Development Process



1. Perform baseline GHG inventory



2. Recommend a GHG reduction target



3. Work with community to identify GHG reduction measures most appropriate for Hayward



4. Prepare draft Climate Action Plan

In progress

5. Review draft Climate Action Plan

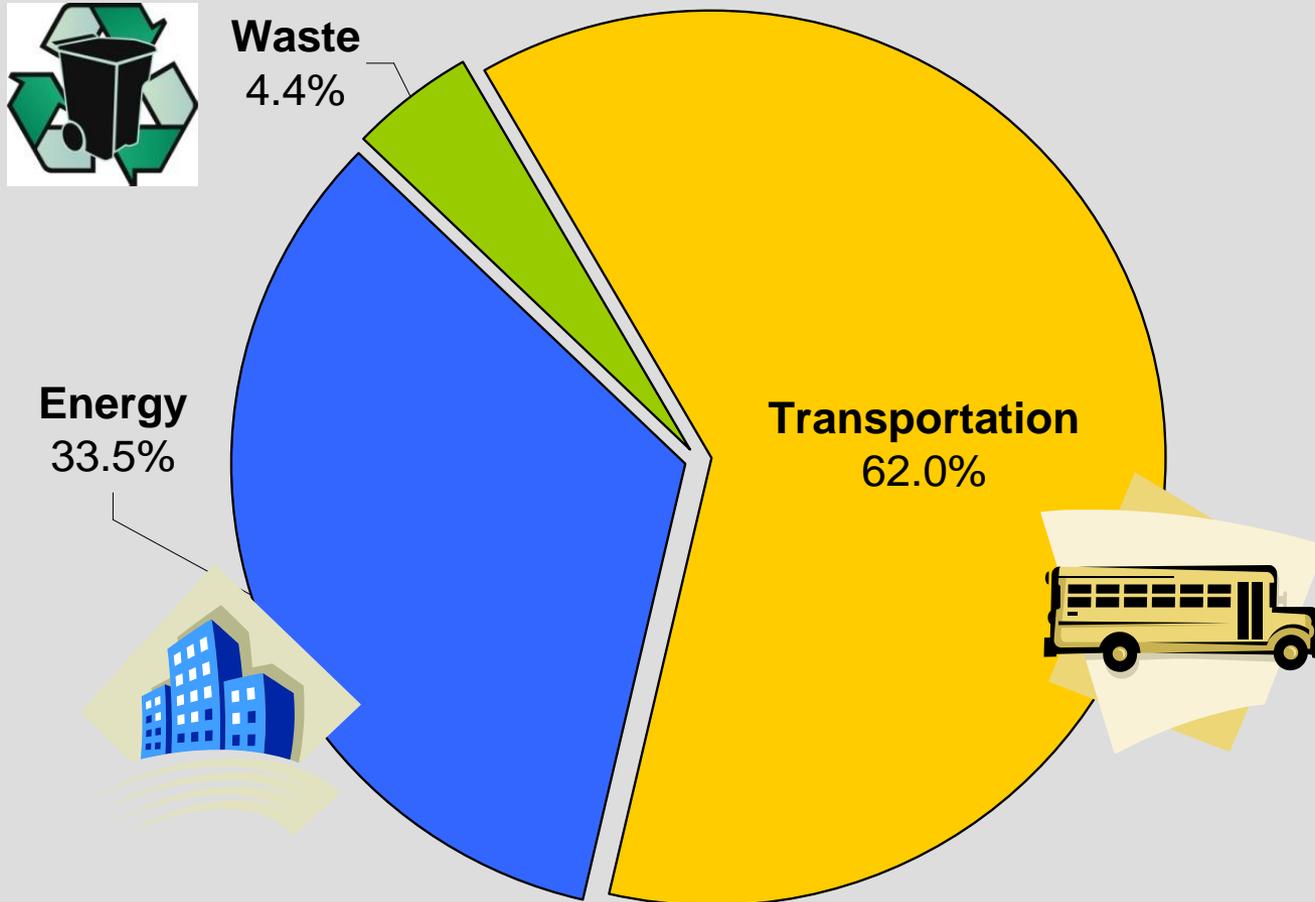
6. Prepare final Climate Action Plan

7. Implement Climate Action Plan

8. Periodically review progress and adjust programs as necessary

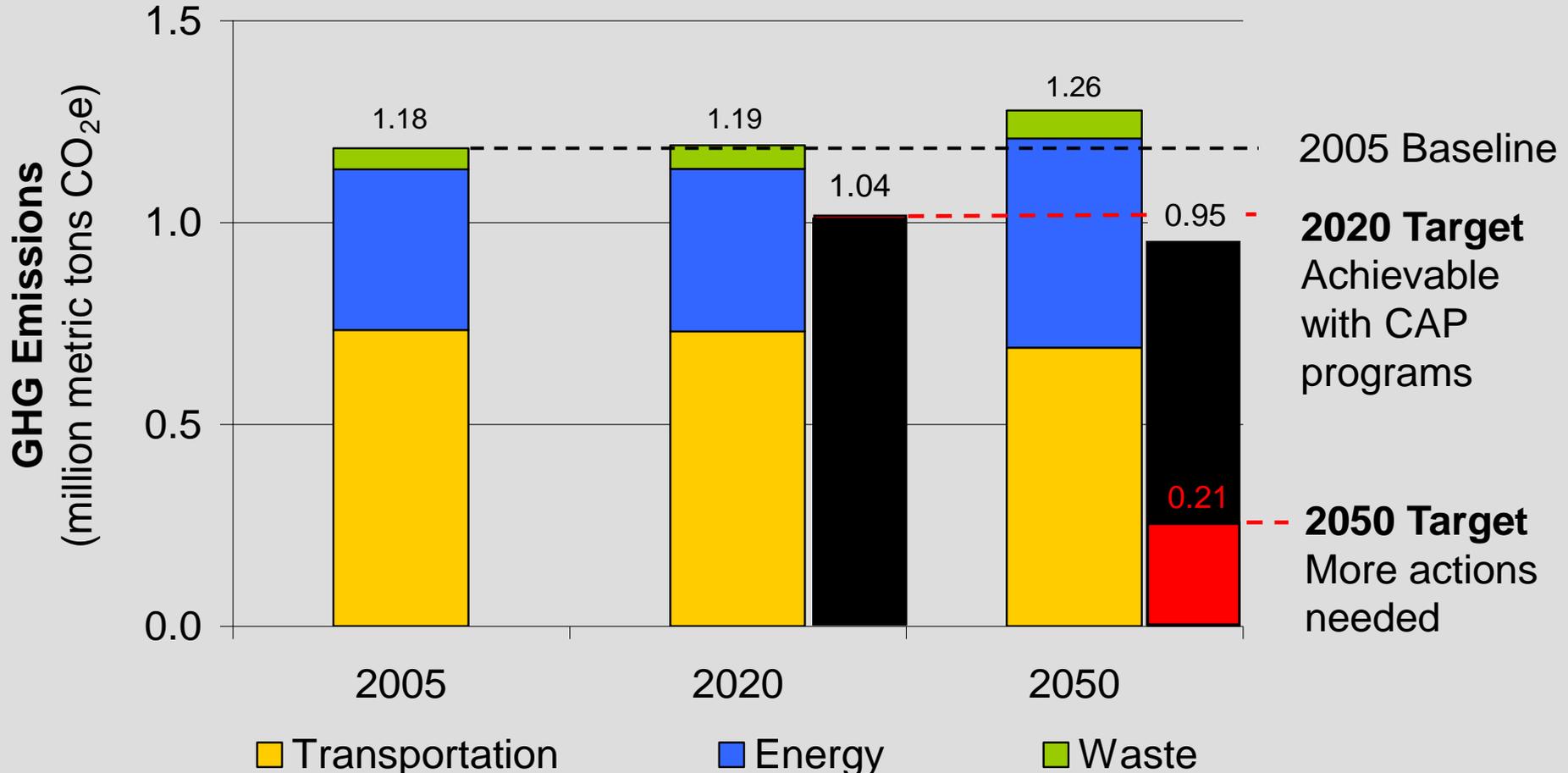
Hayward's Community-wide GHG Emissions in 2005

Hayward City-Wide GHG Emissions - 2005
total emissions = 1.18 million metric tons CO₂



Emissions Projections & Targets

City of Hayward Projected GHG Emissions 2005 - 2050



How to Achieve 2050 Emissions Targets

- Implement all actions in the CAP according to recommended program goals and timing
- Increase program goals to make programs even more aggressive whenever possible
- Play an active role in collaborating with state and federal government:
 - Increase renewable electricity generation
 - Reduce carbon-intensity of vehicle fleet (higher fuel economy standards and lower carbon fuels)
- Utilize new technologies and techniques to reduce and/or sequester greenhouse gases

Strategies to Reduce Emissions



Strategy 1 – Land Use and Zoning to reduce vehicle miles traveled

Strategy 2 – Low carbon-intensity vehicles



Strategy 3 – Reduce energy use in existing buildings

Strategy 4 – Reduce energy use in new buildings

Strategy 5 – Increase amount of renewable electricity



Strategy 6 – Increase recycling and organic material diversion

Strategies to Reduce Emissions (continued)



Strategy 7 – Sequester Carbon



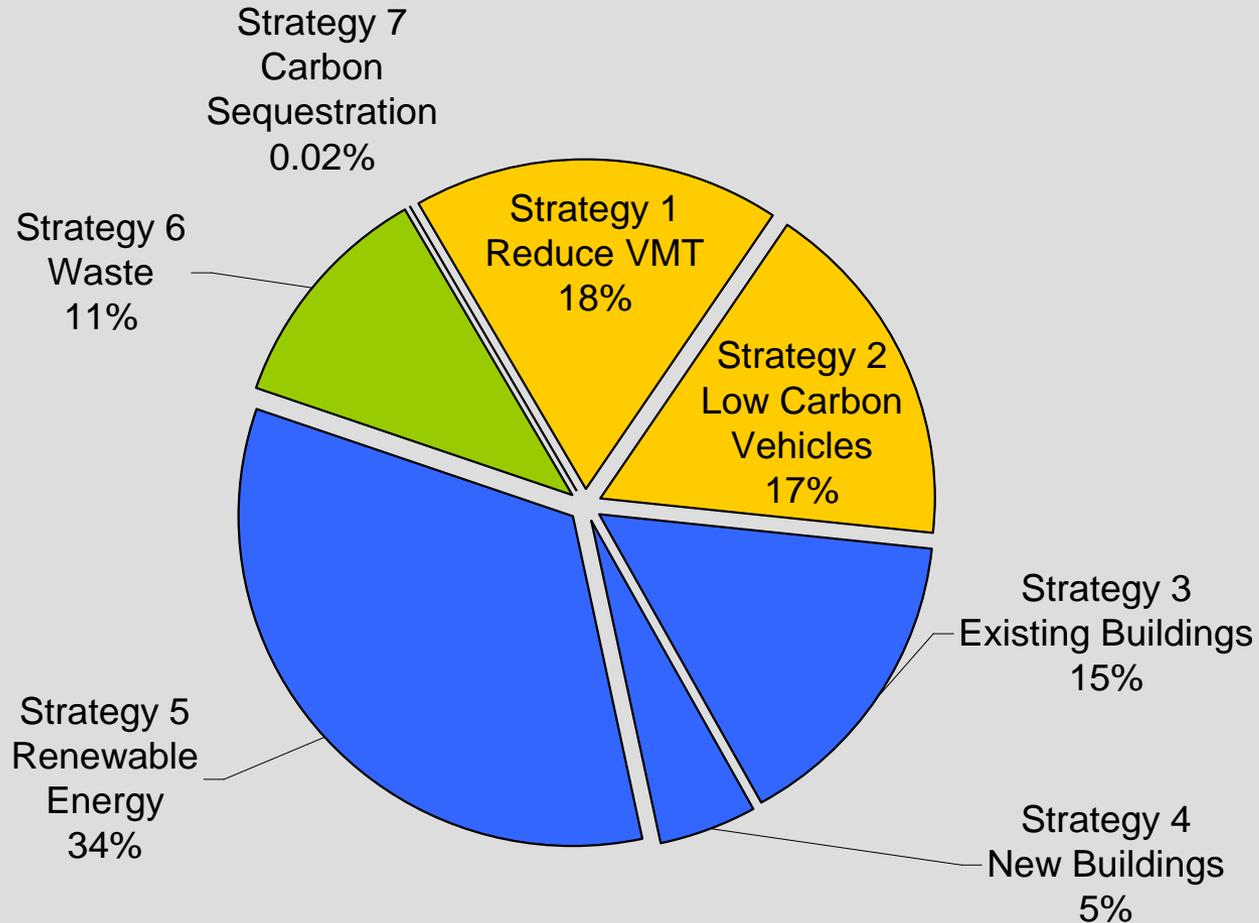
Strategy 8 – Climate Change Adaptation



Strategy 9 – Engage residents and businesses

Emissions Reductions

Percent Share of 2050 Emissions Reductions



Prioritizing Actions to Implement

Goals of Prioritizing Actions:

1. Achieve emissions reductions in shortest time possible
2. Maximum financial benefits to City, residents, and businesses
3. Minimize costs
4. Avoid or overcome barriers to implementation

Actions in the CAP were prioritized based on the following criteria:

1. Estimated emissions reductions
2. Cost to implement
3. Ease of implementation
4. Time to full implementation

1. Potential Emissions Reductions Calculated

- Estimates of emissions reductions were calculated based on the best-available data and calculation methods
- Estimations assume that:
 - recommended program goals are achieved
 - programs are implemented according to the proposed timeline

2. Cost to Implement

Questions to guide evaluation:

1. Is there long-term funding in place to develop and implement the program?
2. Are there investment costs associated with the program such as construction costs or costs to establish funding for loan programs?
3. Are the administrative, or operation and maintenance costs of the program expected to be large as compared to other City programs?
4. Will the program result in cost savings to residents or businesses within a reasonable timeframe?

3. Ease of Implementation

Questions to guide evaluation:

1. Human resources required?
2. Does Hayward have direct control over program?
3. Does the program have stakeholder support or opposition?
4. How much voluntary community participation needed?
5. Are there additional benefits that might help the program gain stakeholder support?

4. Time to Full Implementation

Questions to guide evaluation:

1. Does the City expect that stakeholder opposition will delay the design and implementation of the program?
2. How long will it take reach maximum emissions savings?
3. Can the program be developed and approved within a year?

Top Priority Actions to Reduce Community-wide Emissions

Action Number	Short Description	Priority
Action 3.8	offer energy efficiency financing program for commercial buildings	1
Action 5.2	offer solar financing program for commercial buildings	2
Action 3.6	energy efficiency financing program for single-family homes	3
Action 3.7	offer energy efficiency financing program for multiple-family homes	4
Action 6.7	prefer waste management strategies that maximize the useful value of waste streams	5
Action 6.3	improve construction and demolition debris program	6
Action 5.3	add solar requirement into private development green building ordinance	7
Action 6.6	encourage waste reduction	8
Action 3.3	develop and implement Commercial Energy Conservation Ordinance	9
Action 3.2	develop and implement Residential Energy Conservation Ordinance for multiple-family homes	10
Action 3.1	develop and implement Residential Energy Conservation Ordinance for single-family homes	11
Action 6.2	increase participation in food-scrap collection programs	12
Action 5.1	offer solar financing program for residential buildings	13
Action 1.4	expand transit services to encourage reductions in vehicle travel	14
Action 6.1	increase participation in recycling programs	15

Top Priority Actions to Reduce Municipal Emissions

Action Number	Short Description	Priority
Action 3.9	upgrade streetlights to LEDs	1
Action 2.3	procure fuel-efficient and low-carbon fuel vehicles for municipal fleet	2
Action 3.11	audit city buildings and identify energy savings opportunities	3
Action 3.10	prepare and implement energy conservation plan for municipal buildings	4
Action 2.4	negotiate alternative-fuel and fuel economy requirements into new contracts and franchise agreements	5
Action 6.9	implement food scraps collection programs in city buildings	6
Action 5.5	audit city buildings and identify buildings best-suited for solar	7
Action 5.6	maximize renewable generation on municipal property	8
Action 4.3	continue to implement municipal green building ordinance	9
Action 7.2	maximize carbon sequestration on municipal property	10

Implementing the Plan

City participation and leadership:

- Establish a Climate Action Management Team
- Create a Climate Action Coordinator position
- Show leadership by reducing municipal emissions
- Ensure accountability by reviewing progress on annual basis

Community participation:

- Encourage business and civic group participation
- Encourage residential developers, multi-family building owners and residents participation

Ongoing Measurement and Evaluation

Why measure and evaluate?

- Enables informed decisions about future program priorities, funding, scheduling and a need for change to program designs
- Ensures accountability to community
- Prepares City for possible future emissions reporting requirements
(State agencies now prepare annual reports)

What to measure and when?

- Full emissions inventory every three to five years
- Evaluate emissions reduction programs on annual basis

Next Steps

- Community Meeting – March 19, 2009
- Prepare Final CAP – April 2009
- Planning Commission Review – May 2009
- City Council Review – July 2009