

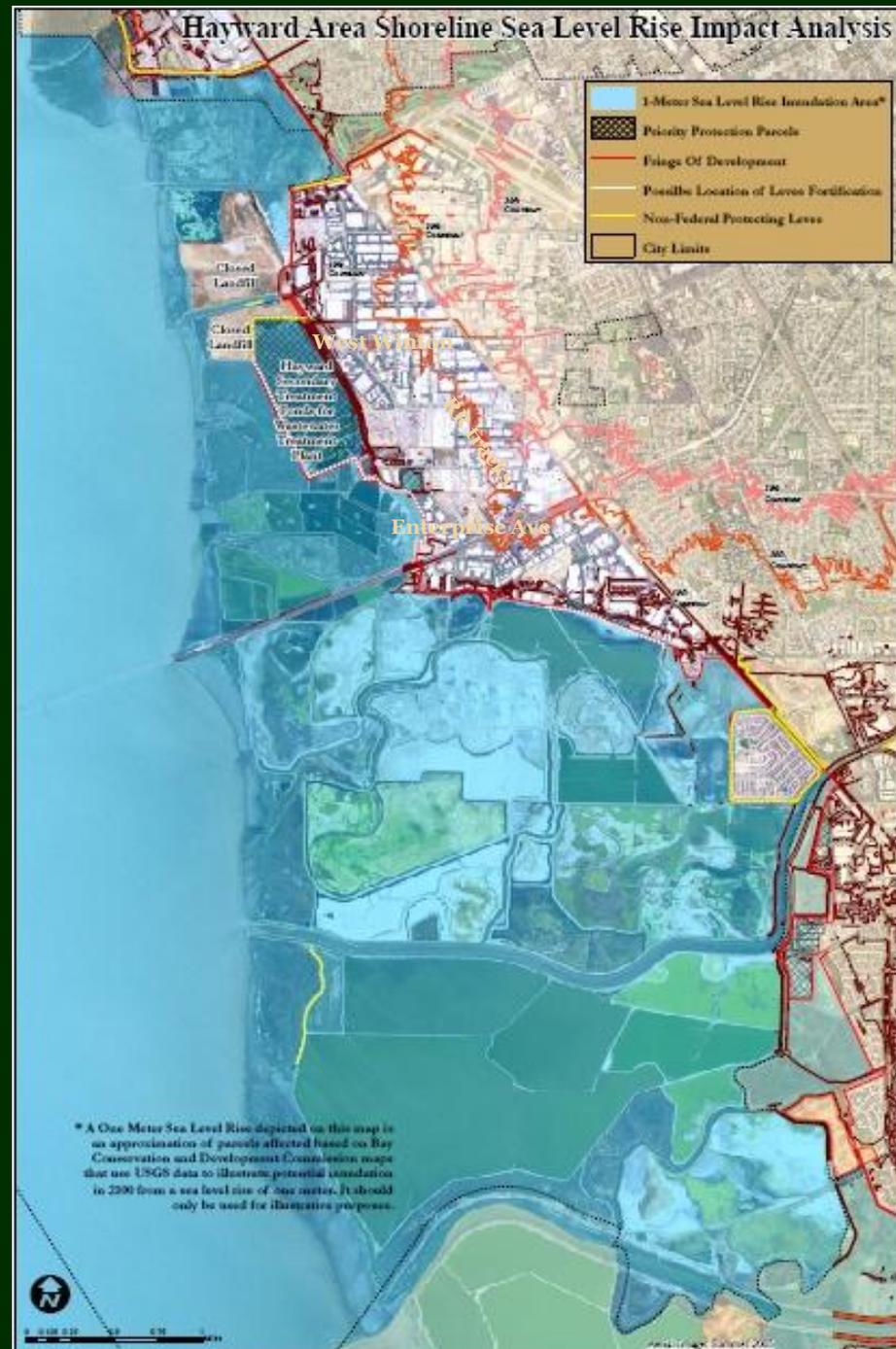
CITY OF
HAYWARD
HEART OF THE BAY

City Council
July 28, 2009

Outline

- Background
- Emissions Inventory
- Public Involvement
- Strategies & Actions
- Implementation
- Next Steps

Potential Sea Level Rise and Impacts on Hayward's Shoreline



Climate Action Plan

1. Conduct a local emissions inventory and forecast of greenhouse gas emissions.
2. Develop an emissions reduction target.
3. Prepare an action plan to achieve the target.
4. Implement the approved action plan.
5. Evaluate, monitor and review progress in meeting the stated targets.

CAP Development Process

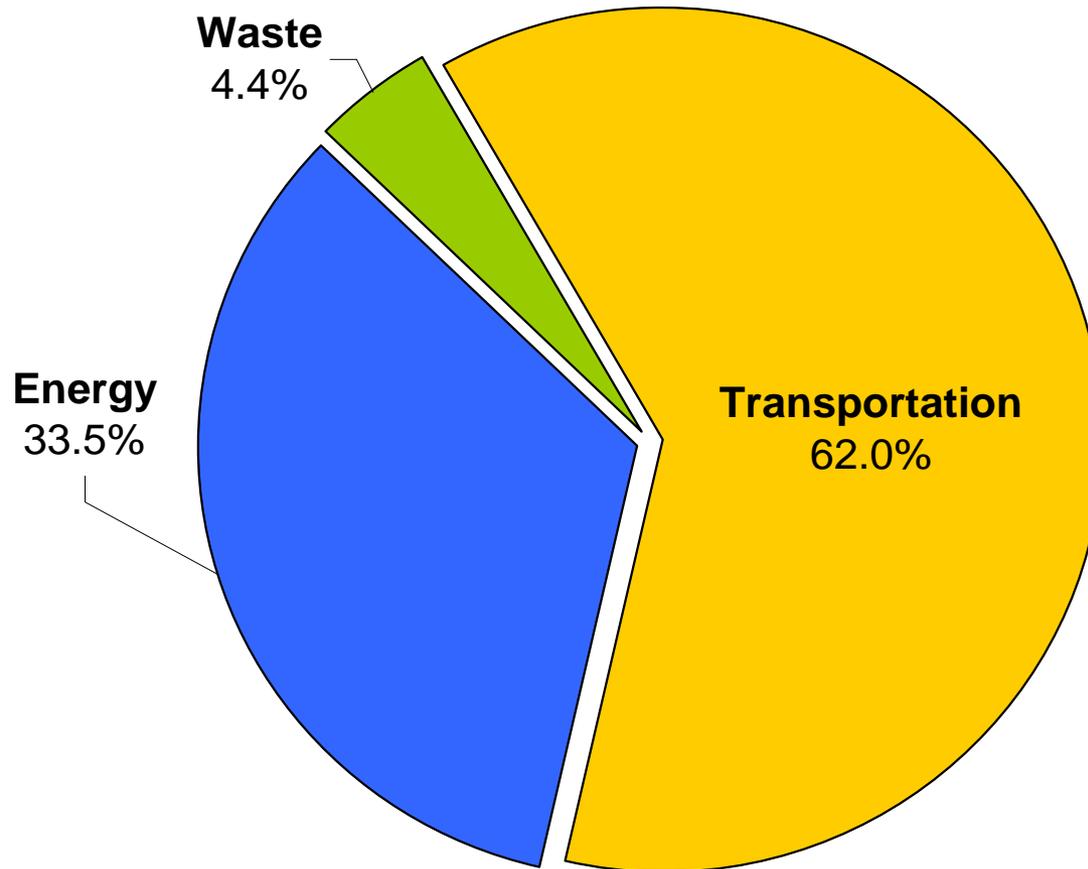
- Identify GHG reduction measures
- Prepare draft Climate Action Plan
- Review draft Climate Action Plan
- Prepare final Climate Action Plan

Hayward's Greenhouse Gas Emissions Inventory

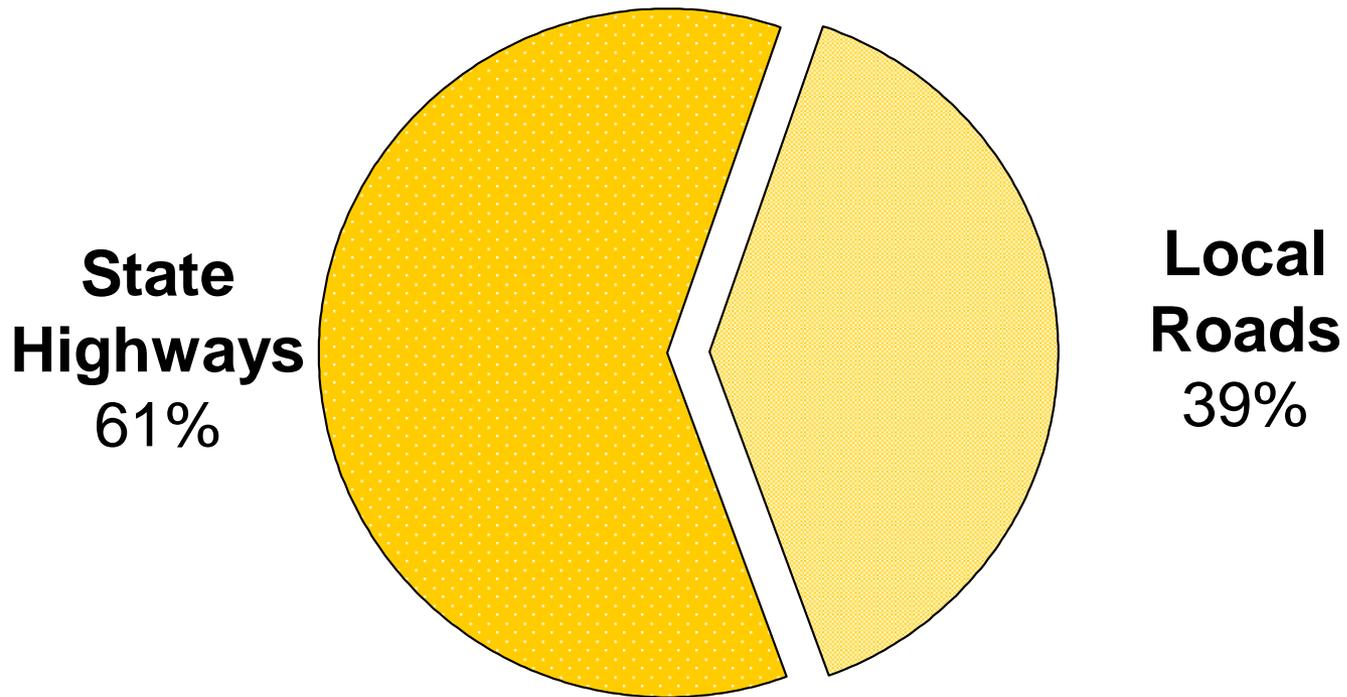
- Hayward's emissions totaled 1,183,274 metric tons of equivalent carbon dioxide gases in 2005.
- Inventory includes emissions data from residential, commercial, industrial, transportation, and waste sectors.

Hayward's Emissions

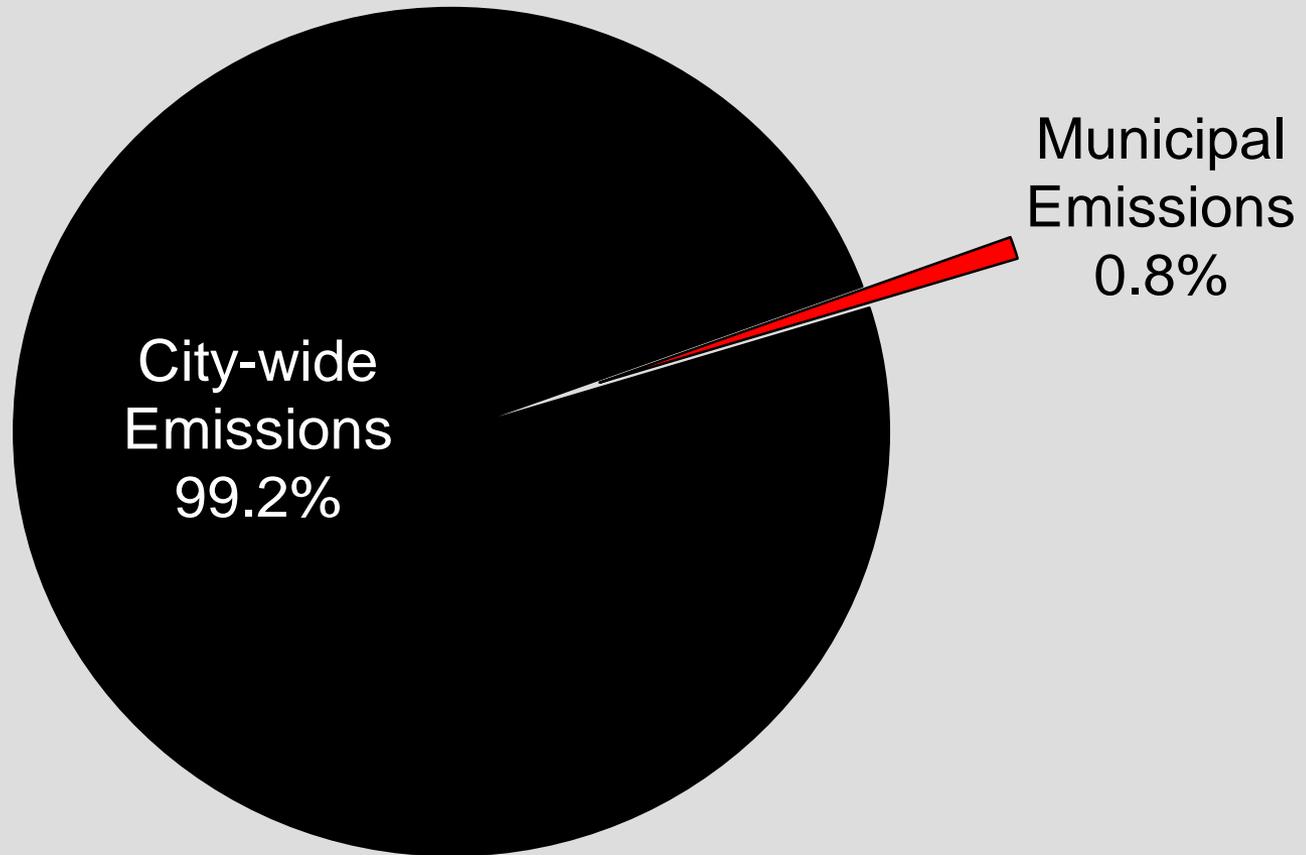
Hayward City-Wide GHG Emissions - 2005
total emissions = 1.18 million metric tons CO₂e



Transportation Emissions



Municipal Emissions



State Reduction Targets

In 2005, Governor Schwarzenegger issued Executive Order # S-3-05, which established a greenhouse gas reduction target of 80 percent below 1990 levels by 2050.

Assembly Bill 32, the California Global Warming Solutions Act of 2006, requires the State's greenhouse gas emissions to be reduced to 1990 levels by 2020.

Recommended Targets

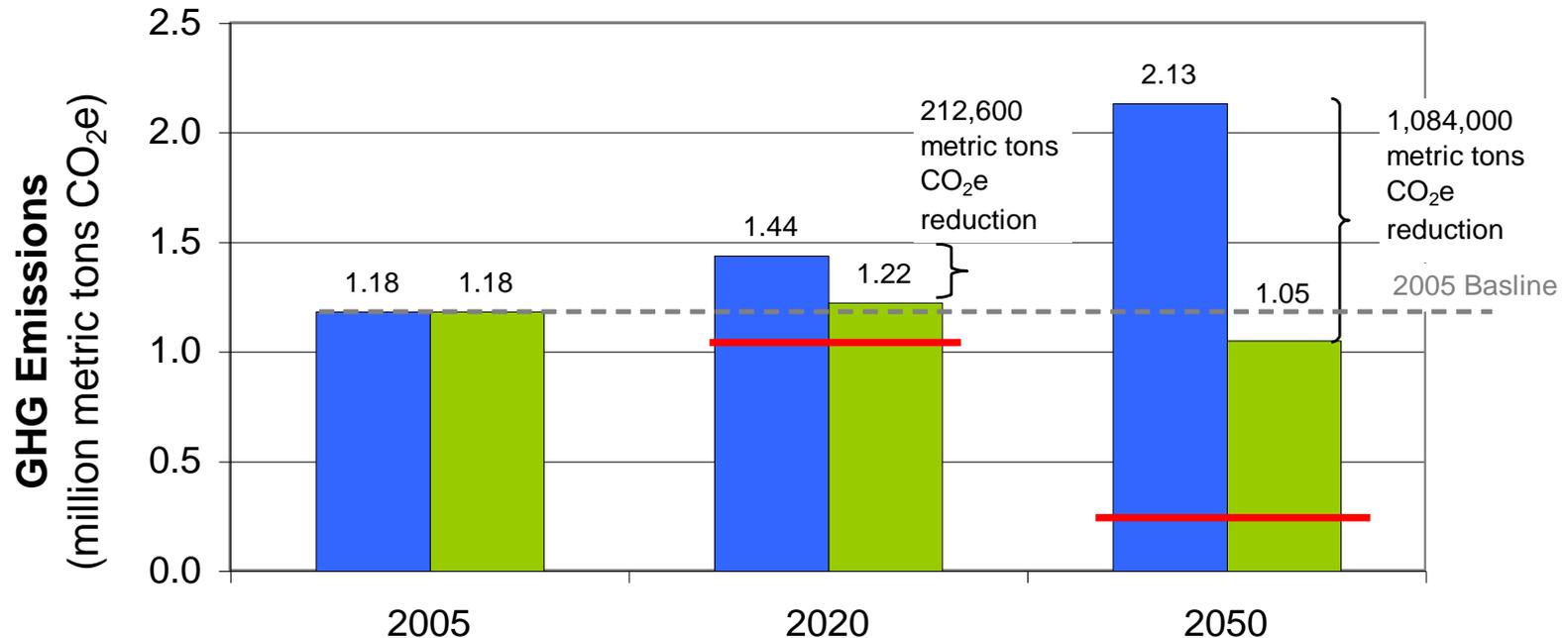
- **6 % below 2005 levels by 2013**
- **12.5 % below 2005 levels by 2020**
- **82.5 % below 2005 levels by 2050**

Jurisdiction	Target
Oakland	36 % < 2005 by 2020
Berkeley	33% < 2000 by 2020
Sonoma County	25% < 1990 by 2015
San Francisco	25 % < 1990 by 2017
San Leandro	25% < 2005 by 2020
Union City	30% < 2005 by 2020
City of Alameda	25 % < 2005 by 2020
Emeryville	25 % < 2004 by 2020
Fremont	25 % < 2005 by 2020
Palo Alto	15 % < 2005 by 2020
Albany	25 % < 2004 by 2020
Foster City	25 % < 2005 by 2020
Chico	25 % < 2005 by 2020
San Jose	35 % < 1990 by 2020
Menlo Park	15 % < 2005 by 2020
Marin County	15 % < 2000 by 2020
San Rafael	15 % < 2005 by 2020
San Carlos	15 % < 2005 by 2020

Emissions Projections & Targets

Hayward Emissions Projections With and Without CAP Programs

Scenario 1



■ Estimated emissions with no CAP implementation

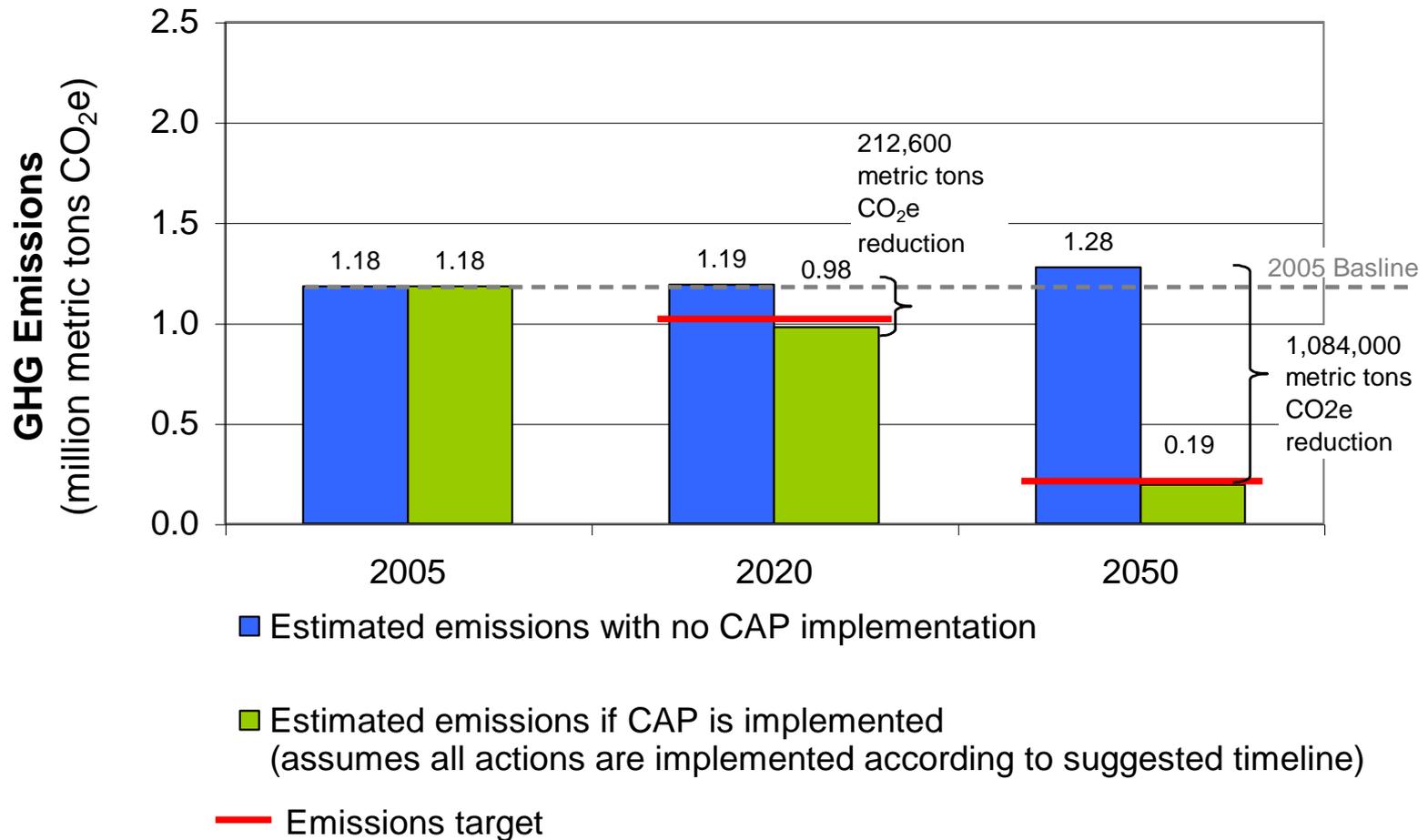
■ Estimated emissions if CAP is implemented
(assumes all actions are implemented according to suggested timeline)

— Emissions target

Emissions Projections & Targets

Hayward Emissions Projections With and Without CAP Programs

Scenario 2



Emissions Reductions Necessary to Meet 2050 Target

- Reduce VMT of passenger vehicles 30%
- Reduce VMT of diesel vehicles (heavy trucks) by 10%
- Increase fuel economy of passenger vehicles to 75 mpg
- Increase fuel economy of diesel vehicles to 11.5 mpg
- Supply 100% of electricity from renewable sources
- Reduce electricity consumption to 65% below BAU
- Reduce natural gas consumption to 50% below BAU
- Eliminate emissions from methane produced from waste

Strategies to Reduce Emissions



- Strategy 1 – Land Use and Zoning to reduce VMT
- 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



Strategy 7 – Sequester Carbon



Strategy 8 – Climate Change Adaptation



Strategy 9 – Engage and Educate Community

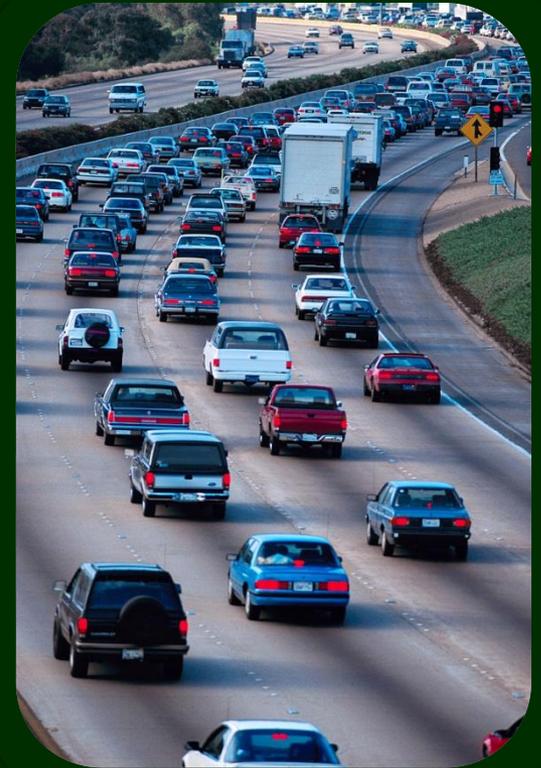
Strategy 1 – Transportation & Land Use

- **Transit-Oriented-Development**
- **Update Circulation Element**
- **Commuter Benefits**
- **Affordable Housing**



Strategy 2 – Transportation – Decrease GHG

- Incentives to purchase low carbon vehicles
- Advocate for alternative and low emission fuels



Strategy 3 – Energy - Existing Buildings

- Residential Energy Conservation Ordinance (RECO)
- Commercial...CECO
- Home Energy Monitors
- Financing



Strategy 4 – Energy – New Buildings



- **Green Building Ordinance – Private**



USGBC
NORTHERN
CALIFORNIA

- **Green Building Ordinance – Municipal**

Strategy 5 – Renewable Energy

- Add renewable energy requirement to Green Building Ordinance
- Financing
- Community Choice Aggregation



Strategy 6 – Waste & Recycling

- Food Scraps collection began this year
- Commercial Recycling
- Ban certain materials



Strategy 7 – Carbon Sequestration

- Enhance Wetlands
- Plant Trees

Strategy 8 – Adaptation

- Sea Level Rise

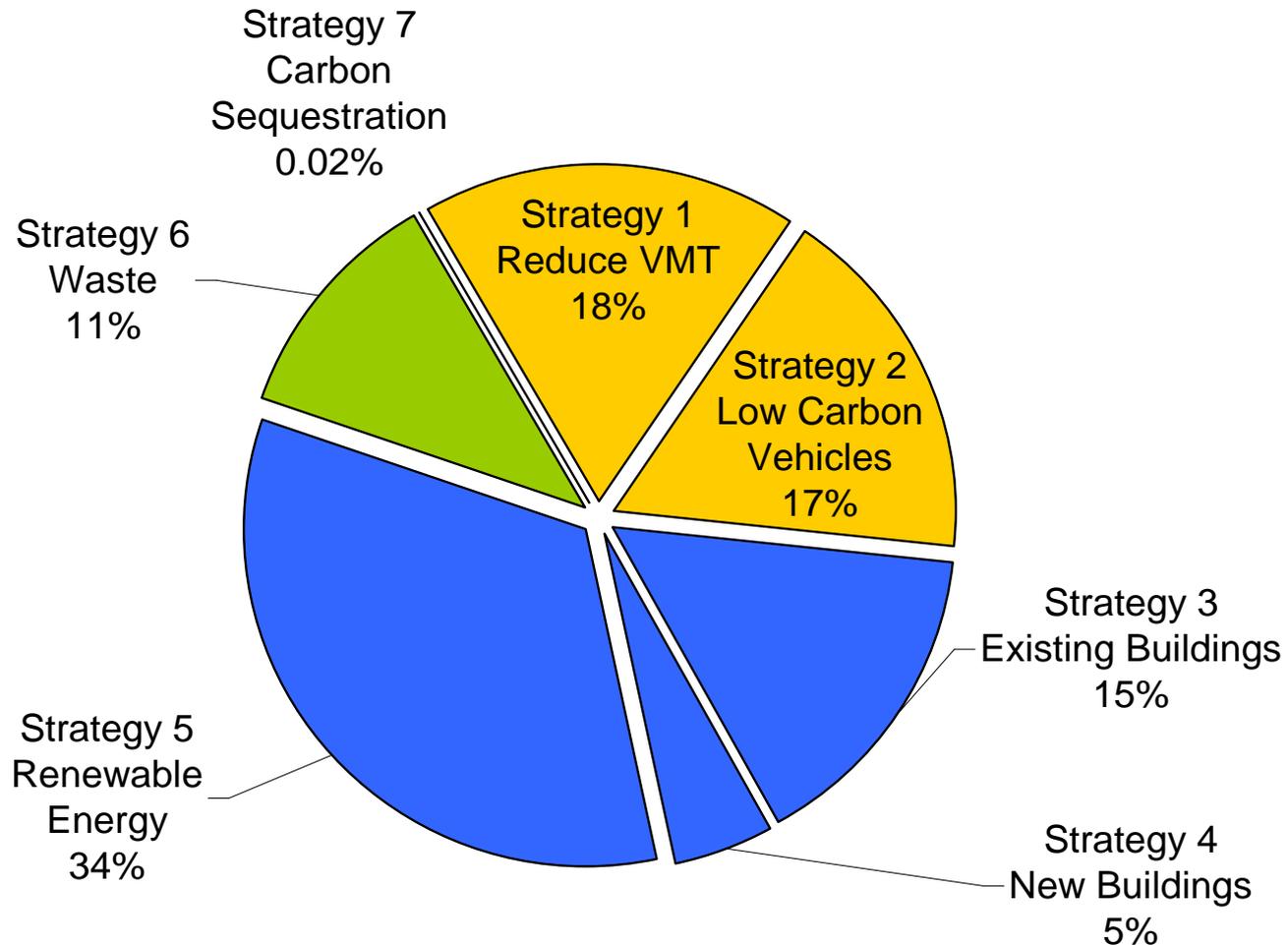
Strategy 9 – Engage & Educate Community

- Green Business Program
- Green Portal
- Involve Schools



Emissions Reductions

Percent Share of 2050 Emissions Reductions



Prioritizing Actions

Community-wide Actions

Action Number	Short Description	ease of implementation (weighting factor = 2)					time to full implementation (weighting factor = 1)					potential emissions reductions (weighting factor = 4)				cost (weighting factor = 3)					Priority							
		1. Human resources required to develop and implement program 1 = more than average 2 = average or less than average	2. Does Hayward have direct control over program? 1 = doesn't have direct control 2 = has direct control	3. Does the program have stakeholder support or opposition? 1 = stakeholder opposition 2 = stakeholder support or neutrality	4. How much voluntary community participation is needed? 1 = high level 2 = no or low level	5. Are there additional benefits that might help the program gain stakeholder support? 1 = no 2 = yes	unweighted & unweighted score (maximum score = 10)	unweighted & unweighted score (weighting factor = 1.0) (maximum score = 10)	weighted score (weighting factor = 2) (maximum score = 20)	1. Does the city expect that stakeholder opposition will delay the design and implementation of the program? 1 = yes 2 = no	2. How long will it take reach maximum annual emissions savings? 1 = over ten years 2 = five to ten years 3 = five years or less	3. Can the program be developed and initiated within a year? 1 = no 2 = yes	unweighted & unweighted score (maximum score = 7)	unweighted & unweighted score (weighting factor = 1.40) (maximum score = 10)	weighted score (weighting factor = 2) (maximum score = 10)	Community-wide Actions What are the estimated emissions reductions in 2050? 1 = less than 1,000 MTCO2e 2 = 10,000 - 100,000 MTCO2e 3 = over 100,000 MTCO2e	unweighted & unweighted score (maximum score = 2)	unweighted & unweighted score (weighting factor = 3.32) (maximum score = 10)	weighted score (weighting factor = 4) (maximum score = 40)	1. Is long-term funding in place? 1 = no 2 = yes		2. Are there additional investment costs? 1 = yes 2 = no	3. Are administrative costs expected to be relatively large in relation to other actions? 1 = yes 2 = no	4. Will the program result in cost savings to residents, businesses, or the City? 1 = no 2 = yes	unweighted & unweighted score (maximum score = 6)	unweighted & unweighted score (weighting factor = 1.20) (maximum score = 10)	weighted score (weighting factor = 3) (maximum score = 30)	weighted score (weighting factor = 40) (maximum score = 40)
Action 1.1	enroll businesses in providing computer benefits programs	2	2	2	1	2	9	9	88	2	1	2	5	7.1	7.1	1	1	3.3	33.3	1	1	1	2	5	6.3	18.9	57.2	36
Action 1.2	enroll businesses in establishing car share / bike share programs	2	1	1	1	2	7	7	84	1	1	2	4	5.7	5.7	1	1	3.3	33.3	1	2	2	2	7	8.8	26.3	50.3	33
Action 1.3	update parking policies to encourage reduction in vehicle travel	1	2	1	2	1	7	7	84	1	1	2	4	5.7	5.7	1	1	3.3	33.3	1	2	2	1	6	7.5	22.5	55.5	38
Action 1.4	expand transit services to encourage reductions in vehicle travel	1	1	2	2	2	8	8	86	2	1	1	4	5.7	5.7	2	1	6.7	26.7	1	1	1	1	4	5.0	15.0	63.4	30
Action 1.5	continue to implement bike master plan	2	2	2	1	2	9	9	88	2	1	2	5	7.1	7.1	1	1	3.3	33.3	1	1	2	1	5	6.3	18.9	57.2	37
Action 1.6	Develop and implement pedestrian master plan	1	2	2	1	2	8	8	86	2	1	2	5	7.1	7.1	1	1	3.3	33.3	1	1	2	1	5	6.3	18.9	55.2	39
Action 1.7	update the Circulator Element of the General Plan to evaluate expansion of appropriate modes of transit	2	2	2	1	2	9	9	88	2	1	2	5	7.1	7.1	2	2	6.7	26.7	1	1	2	1	5	6.3	18.9	70.6	25
Action 1.8	prioritize traffic flow management practices to reduce idling time	1	1	2	2	2	8	8	86	2	2	2	7	10.0	19.6	2	1	6.7	26.7	1	1	2	1	5	6.3	18.9	71.4	22
Action 1.9	encourage high density, mixed-use, smart-growth development in areas near public transit stations	2	1	2	1	2	8	8	86	2	1	2	5	7.1	7.1	2	2	6.7	26.7	1	1	2	1	5	6.3	18.9	68.6	27
Action 1.10	align zoning policies to minimize vehicle travel	2	2	2	2	2	10	10	29	2	1	2	5	7.1	7.1	2	2	6.7	26.7	1	2	2	1	6	7.5	22.5	76.3	9
Action 1.11	increase availability of affordable housing for people employed in Hayward	2	2	2	2	2	10	10	29	2	2	1	6	8.6	8.6	2	2	6.7	26.7	1	1	2	1	5	6.3	18.9	74.0	13
Action 1.12	encourage filling local jobs with local residents	1	1	2	2	2	8	8	86	2	1	1	4	5.7	5.7	2	2	6.7	26.7	1	1	1	1	4	5.0	15.0	63.4	31
Action 2.1	provide incentives for low-carbon vehicles and low-carbon fuels	2	2	1	2	2	9	9	88	1	1	2	4	5.7	5.7	3	1	10.0	49.0	1	1	1	2	5	6.3	18.9	82.5	5
Action 2.2	collaborate the state and federal government on policies that promote low-carbon vehicles and low-carbon fuels	2	1	2	2	2	9	9	88	2	2	1	5	7.1	7.1	3	1	10.0	49.0	1	2	1	1	5	6.3	18.9	83.9	4
Action 3.1	develop and implement Residential Energy Conservation Ordinance for single-family homes	1	2	1	2	2	8	8	86	1	1	2	4	5.7	5.7	2	2	6.7	26.7	1	2	1	2	6	7.5	22.5	70.9	23
Action 3.2	develop and implement Residential Energy Conservation Ordinance for multiple-family homes	1	2	1	2	2	8	8	86	1	1	2	4	5.7	5.7	2	2	6.7	26.7	1	2	1	2	6	7.5	22.5	70.9	24
Action 3.3	develop and implement Commercial Energy Conservation Ordinance	1	2	1	2	2	8	8	86	1	1	2	4	5.7	5.7	3	3	10.0	49.0	1	2	1	2	6	7.5	22.5	84.2	3
Action 3.4	actively participate in low-income weatherization programs	3	1	2	2	2	10	10	29	2	2	2	6	8.6	8.6	2	2	6.7	26.7	2	2	2	2	8	10.0	30.0	85.2	2
Action 3.5	promote a voluntary commitment for businesses and residents to reduce energy consumption	2	2	2	1	1	8	8	86	2	1	2	5	7.1	7.1	2	2	6.7	26.7	1	2	2	2	7	8.8	26.3	76.1	10
Action 3.6	promote use of home energy monitors	1	2	2	1	1	7	7	84	2	2	2	6	8.6	8.6	2	2	6.7	26.7	1	1	2	2	6	7.5	22.5	71.7	21
Action 3.7	energy efficiency financing program for single-family homes	2	2	2	1	2	9	9	88	2	1	2	5	7.1	7.1	2	2	6.7	26.7	2	1	2	2	7	8.8	26.3	78.1	6
Action 3.8	offer energy efficiency financing program for	2	2	2	1	2	9	9	88	2	1	2	5	7.1	7.1	2	2	6.7	26.7	2	1	2	2	7	8.8	26.3	78.1	7

Top 5 Actions

- Action 3.9 Energy Efficiency Financing program for commercial buildings
- Action 3.3 Commercial Energy Conservation Ordinance
- Action 3.7 Energy efficiency financing program for single-family homes
- Action 3.8 Energy efficiency financing program for multiple-family homes
- Action 5.2 Renewable energy financing program for commercial buildings



Implementing the Plan

City participation and leadership:

- Establish a Climate Action Management Team
- Hire a Sustainability 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

Measurement and Evaluation

Why measure and evaluate?

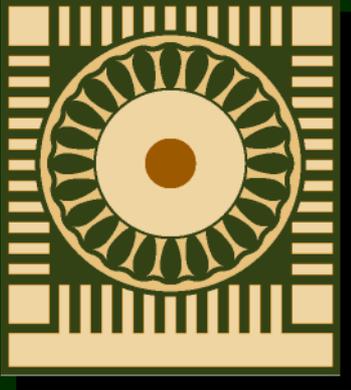
- Enables informed decisions about future program priorities, funding, scheduling and a need for change to program designs
- Ensures accountability to community
- Prepares City for possible future emissions reporting requirements (*State agencies now prepare annual reports*)

What to measure and when?

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

Planning Commission & Staff Recommendation:

- Find the Climate Action Plan exempt from CEQA
- Approve the Climate Action Plan



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