

San Bernardino Sustainability Master Plan Task Force Meeting

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May 30, 2012

AECOM

Agenda

- Introductions
- Recap of project to date
 - Regional GHG Reduction Plan
- Review inventory, projections and potential reductions
- Review community measures for the Plan
 - Water, Green Infrastructure, Transport/Land Use,
 - Do we have the right list of measures on the table?
 - Any to remove (and/or add)?
- Next steps

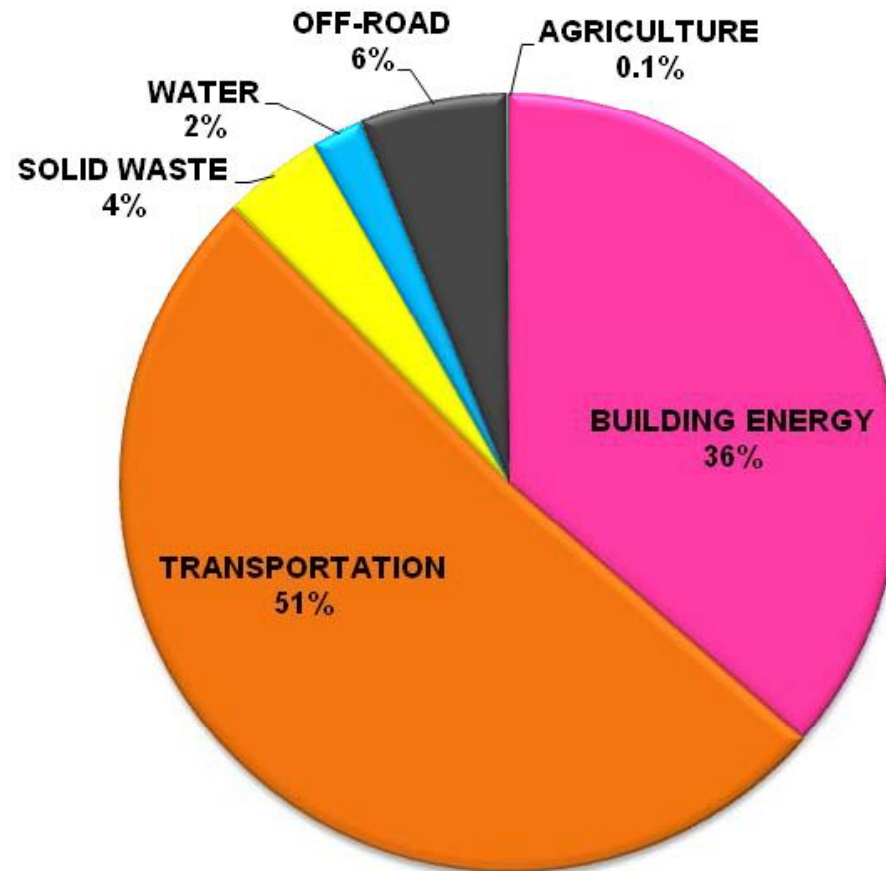
Recap and regional GHG Reduction Plan Update

- SB involved in regional plan to align with neighbors, take advantage of CEQA document.
- SB hired AECOM to provide tailored approach and get stakeholder input
- Delayed by issues with inventory which is now complete
- Suite of measures have been developed that participating cities can select, along with quantification tool
- SB wants to use Regional Quantification tool aligned with measured developed specifically for the City by AECOM / task force / city input
- Ignore quantification on matrix document.

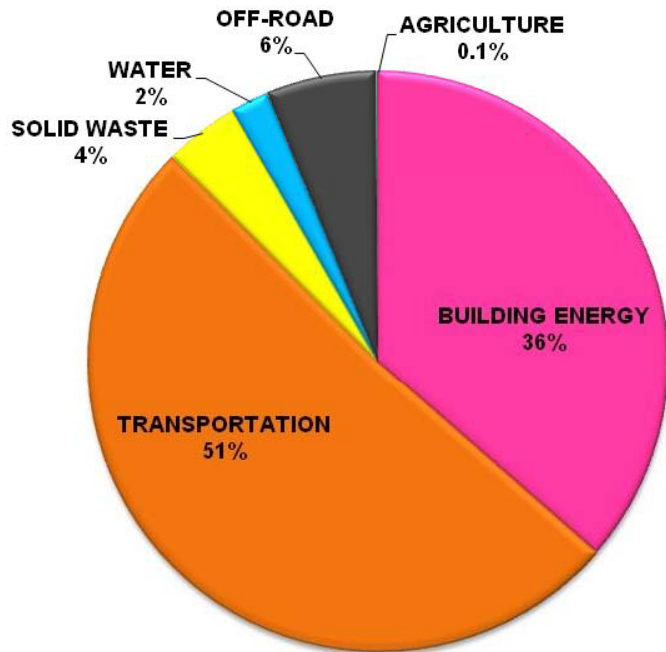
Baseline Community Emissions Inventory

2008






Baseline Community Emissions Inventory (2008) - Jurisdictional



Baseline Jurisdictional Community Inventory (2008)

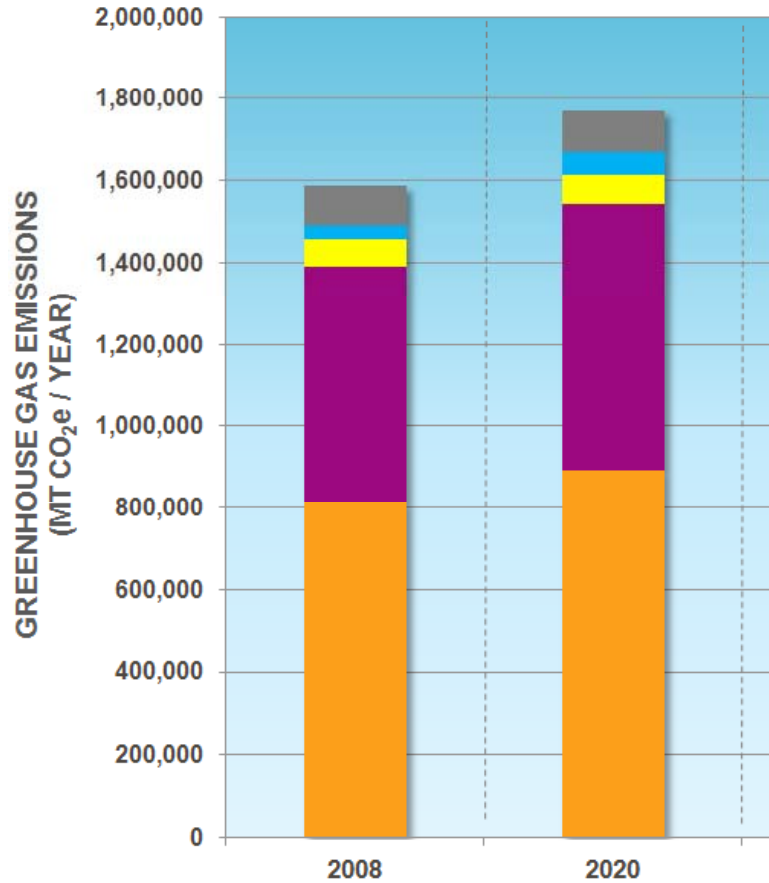







- Transportation accounts for over half of emissions
- Transportation and Energy combined account for nearly 90% of emissions
- Over 1.5 million megatons of CO₂ equivalent emissions in 2008

<u>Emissions Sector</u>	<u>2008</u> <u>MT CO₂e PER YEAR</u>
 Energy	578,446
 Water	33,855
 Waste	66,492
 Transportation	810,577
 Off-Road	96,602
Agriculture	1,909
Total Emissions	1,587,881

2020 Community Emissions Projections and Reduction Target

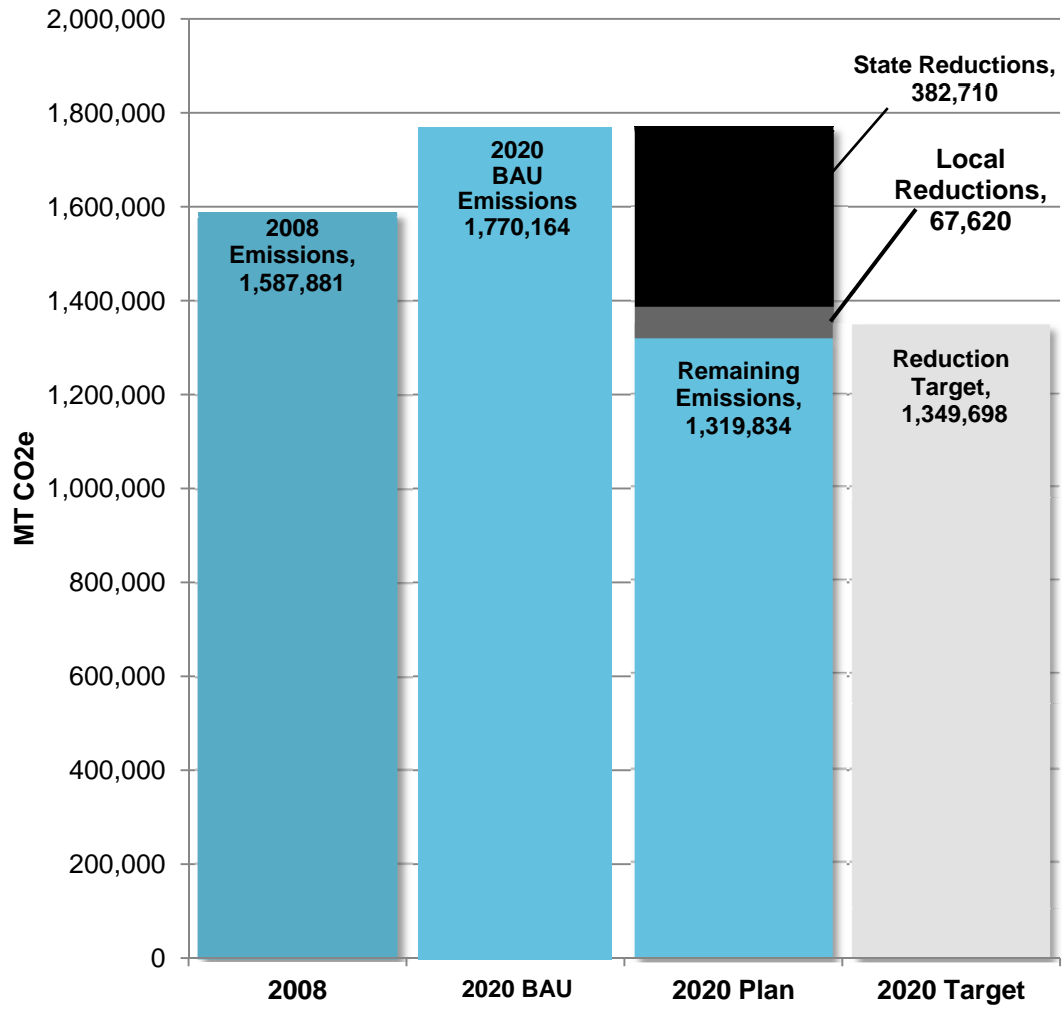
2020 Community Emissions Projections



<u>Emissions Sector</u>	<u>2008</u> <u>MT CO₂e PER</u> <u>YEAR</u>	<u>2020</u> <u>MT CO₂e PER</u> <u>YEAR</u>
 Energy	578,446	649,988
 Water	33,855	55,265
 Waste	66,492	72,386
 Transportation	810,577	891,216
 Off-Road	96,602	100,337
Agriculture	1,909	973
Total Emissions	1,587,881	1,770,164

GHG projections and reductions

GHG Reduction Plan Summary



Your Reduction Target is Equivalent to:

- 420,466 MT CO2e of Reductions by 2020
- 1,349,698 MT CO2e Emissions in 2020
- 107.1% Percent of Reduction Goal Achieved
- 29,865 Reductions Achieved Beyond Target

GHG Reduction Measures

STATE ACTIONS

State Actions and Associated Emissions Reductions

- Pavley+Low Carbon Fuel Standard
222,577 MT CO₂e / Year
- Renewable Portfolio Standard
91,944 MT CO₂e / Year
- Other State Actions
68,189 MT CO₂e / Year
- Total of State Actions
382,710 MT CO₂e / Year
- State Actions Provide **85%** of Jurisdiction's Reductions

LOCAL ACTIONS

- Water
 - Green infrastructure
 - Transportation / Land Use
-
- Do we have the right list of measures on the table?
 - Any to remove (and/or add)?



WATER

GREENHOUSE GAS REDUCTION POTENTIAL PER SECTOR

ACTION AREA	ICON	PERCENT OF TOTAL REDUCTION	GHG REDUCTION POTENTIAL
STATE AND FEDERAL ACTIONS		85.0%	382,710
ENERGY		8.8%	39,415
WATER		1.4%	6,299
WASTE		0.8%	3,681
TRANSPORTATION AND LAND USE		1.7%	7,813
OFF ROAD		2.3%	10,413



WATER

Regional GHG Reduction Plan Measures (includes Wastewater Treatment *and* Water Conveyance)

- Wastewater-1: Methane Recovery
- Wastewater-3: Recycled Water
- Water-2: Renovate Existing Buildings
- Water 3: Water-Efficient Landscapes

Total Estimated Reductions: 6,299 MT CO₂e

Goal W1: Reduce water use in community

Measures

- Achieve the State mandated per capita water demand reductions through implementation of demand management measures in Urban Water Management Plan (20% by 2020)
- Encourage building owners and tenants to improve indoor water efficiency (through working with SBMWD and their rebate program)



Goal W1: Reduce water use in community

Measures

- Encourage property owners, tenants, and managers to reduce landscape water consumption. (Note that SBMWD is working with Parks and Recs regarding use of sprinklers in Parks, LT replacement of infrastructure)
- Maximize the use of recycled water
Note that SBMWD has the Clean Water Factory project in progress: to use recycled water for irrigation and recharge of the Bunker Hill Basin)



Goal W2: Reduce wastewater-related emissions

Measures

- Improve efficiency of wastewater pumping and treatment facilities (SBMWD is in discussion with ESCo e.g. lighting upgrades and a fuel flexible hybrid CHP pilot project.
- Evaluate the potential for renewable or combined heat and power generation systems upgrades at wastewater treatment facilities. Solar projects include:



	Site Total [kW]	Energy Output [MWh/year]	Households Offset	Metric Tons CO2
1 WRP	1,558	2,522	151	1,238
2 19th St	105	188	11	92
3 Antil	397	706	42	347
4 Cajon	601	459	28	225
5 Lytle Creek	121	215	13	105
6 Medical Center Reservoir	155	275	17	135
7 Newmark	320	569	34	280
8 Palm and Kindle	30	54	3	27
	3,287	4,988	299	2,449



GREEN INFRASTRUCTURE

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GREEN INFRASTRUCTURE

- Land Use 1 (BE): Carbon Sequestration:
 - Establish a carbon sequestration goal of 10,000 tons of carbon dioxide per year through urban forestry efforts, city-wide tree planting goal, or tree preservation goal
 - Requirement to account for trees removed and planted as part of new construction and/or establishing a goal and funding source for new trees planted on city property.

Total Estimated Local Reductions: 148 MT CO₂e

Goal GI-1: Maximize carbon sequestration

Measures

- Expand urban forest and landscapes (e.g. street trees, and trees on private lots) in order to sequester carbon.
- Restore natural habitat for ecological purposes and, where compatible with ecosystem function, manage for additional carbon sequestration.



Goal GI-2: Increase local food production

Measures

- Support the implementation of community gardens.
- Support the creation of small organic farms and farmers markets.





TRANSPORTATION & LAND USE

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TRANSPORTATION & LAND USE

- Transportation-1:
Sustainable Communities Strategy



Total Estimated Local Reductions: 7,813 MT CO₂e

Goal T1: Reduce single-occupancy vehicle trips

Measures

- Develop outreach and education campaign to encourage San Bernardino residents and employees to increase use of low carbon transportation methods.
- Develop voluntary transportation demand management program specifically looking at car and van pooling incentives
- Reduce student-related vehicle trips through enhanced coordination with school districts, and safe routes to school



Goal T2: Promote alternative lower-carbon fuels

Measures

- Partner with regional agencies to encourage use of alternative vehicles.
- Provide infrastructure for alternative fuel vehicles, e.g. priority parking spaces for electric vehicles, require electric charging stations in new development



Goal T3: Improve public transit service

Measures

- Work with transit agencies to enhance public transit conditions and increase ridership
- Engage in regional transit infrastructure projects to ensure community benefits from future service expansions.



Goal T4: Enhance pedestrian & bicycle infrastructure

Measures

- Improve the pedestrian environment to encourage walking as a viable travel mode in the City.
- Expand bicycling infrastructure to encourage bicycling as a viable travel mode in the City.
- Ensure adequate bicycling parking at commercial and civic uses.





OFF ROAD

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OFF ROAD

- **Off Road1: Construction Equipment:**
 - Establish a goal such that a percentage of construction equipment utilizes alternative fueled or electric equipment. This could be implemented through discretionary approvals and permitting for new projects. Potential goals might be:
 - 75% to 25% of equipment projects used within the City
 - Achieving the goal will require close coordination with the air district which sets air quality related requirements on construction vehicles and also provides mitigation options related to construction vehicles through VERA programs which may overlap with this measure.

Total Estimated Local Reductions: 9,763 MT CO₂e



OFF ROAD

- Off Road 2: Idling Ordinance:
 - Adopt an ordinance that limits idling time for heavy-duty construction equipment beyond CARB or local air district regulations and if not already required as part of CEQA mitigation. Recommended idling limit is 3 minutes. Encourage contractors as part of permitting requirements or City contracts to submit a construction vehicle management plan that includes such things as: idling time requirements; requiring hour meters on equipment; documenting the serial number, horsepower, age, and fuel of all onsite equipment..

Total Estimated Local Reductions: 650 MT CO₂e

Next Steps

Next Steps

- Refine Goals, Measures and Actions
- Finalize Greenhouse Gas Reduction Estimates
- Prepare Administrative Draft SMP
- Prepare Public Review Draft
- Task Force and Public Input Meeting - July 11th
- Public Review Period
- Prepare Final SMP
- City Council Hearing

