

Climate Change: Local Progress & Opportunities

Barbara Fukumoto
SunnyvaleCool.org
barbf53@aol.com



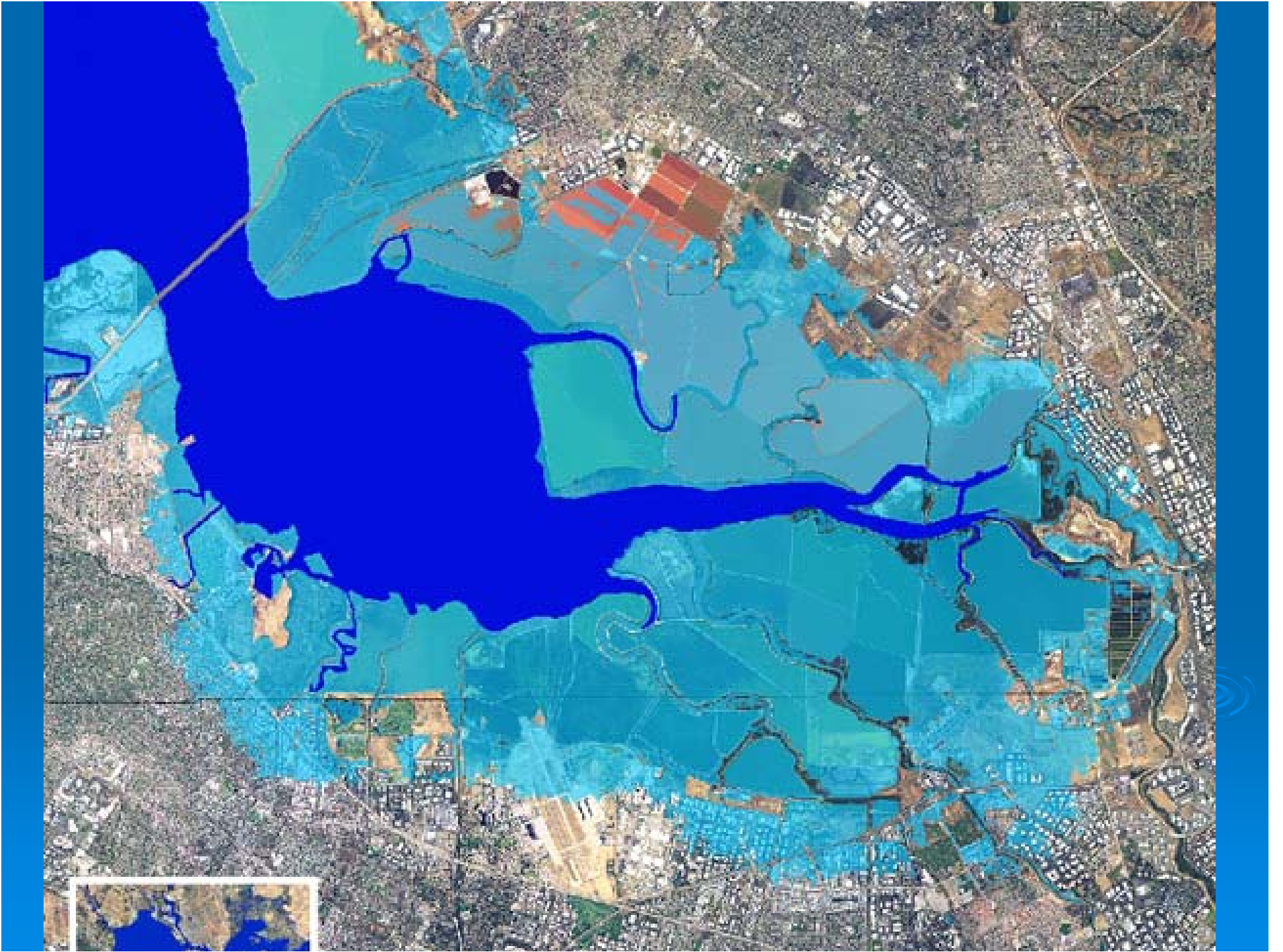
Democracy is not a spectator sport.











SOME SCIENCE (& YOUR RESPONSE)



American Geophysical Union Statement on Climate Change, 12/2003

"Human activities are increasingly altering the Earth's climate. These effects add to natural influences that have been present over Earth's history. Scientific evidence strongly indicates that natural influences cannot explain the rapid increase in global near-surface temperatures observed during the second half of the 20th century."

American Geophysical Union, 2003

“Atmospheric carbon dioxide concentrations have increased since the mid-1700s through fossil-fuel burning and changes in land use, with more than 80% of this increase occurring since 1900. Moreover, research indicates that increased levels of carbon dioxide will remain in the atmosphere for hundreds to thousands of years. It is virtually certain that increasing atmospheric concentrations of carbon dioxide and other greenhouse gases will cause global surface climate to be warmer.”

NASA

In the 10,000 years before the Industrial Revolution in 1751, CO2 levels rose less than 1%.

Since then they have risen by 37%.

<http://climate.jpl.nasa.gov/quiz/quiz1.cfm>

NASA

85% of all human-produced CO₂ comes from burning coal, natural gas, oil and gasoline.

<http://climate.jpl.nasa.gov/quiz/quiz1a.cfm>

NASA

Humans produce more than 30 billion tons of carbon dioxide each year.

Forty to 50 percent of the carbon dioxide stays in the air, thirty percent is dissolved in the oceans.

<http://climate.jpl.nasa.gov/quiz/quiz3a.cfm>

Intergovernmental Panel on Climate Change Report, December, 2007

“There is very high confidence that the net effect of human activities since 1750 has been one of warming. Most of the observed increase of global average temperatures since the mid-20th century is very likely due to observed increase in observed anthropogenic GHG concentrations.”

National Science Academies of Brazil, Canada, China,

France, Germany, India, Italy, Japan,
Mexico, Russia, South Africa, UK and US.

2009

...climate change is happening even faster than previously estimated; global CO2 emissions since 2000 have been higher than even the highest predictions, Arctic sea ice has been melting at rates much faster than predicted, and the rise in the sea level has become more rapid.

NASA

The Average American adds 20 tons of carbon dioxide to the atmosphere each year.

The average European: 14 tons per year.

The average Indian: 1 ton per year.

A sustainable way of life: no more than 2 tons per year.

<http://climate.jpl.nasa.gov/quiz/quiz6a.cfm>

“What we will do in the next two, three years will determine our future...This is the defining moment.”

**Rajendra Pachauri, Chairman
UN Intergovernmental Panel on
Climate Change
Nobel Peace Prize Recipient
(November, 2007)**

Where do you fit?

- Concerned about climate change and acting to reduce your emissions.
- Concerned, but unsure about what to do
- Concerned, but resigned
- Concerned, but afraid of the expense
- Unconvinced that there is a climate problem

Reasons for concern

- **Natural inertia—difficulty of change**
- **Urgency and scale needed**
- **Powerful vested interests and their lobbyists**

BUT



**For myself, I am an optimist—
it doesn't seem to be much
use being anything else.**

Winston Churchill

Hope begins in the dark, the stubborn hope that if you just show up and try to do the right thing, the dawn will come. You wait and watch and work: you don't give up.

Anne Lamott



Progress

Specific Reasons for Hope



Progress at all levels:

- **New federal administration--
early action.**
- **State, regional, local
government action**
- **The grassroots**
- **Local action in our schools**
- **The Internet**

Federal Action

- Fuel efficiency standards
- Permission to CA to regulate GHG from vehicles
- Budget and stimulus \$
- First climate change bill to pass either house

State Actions

- CA laws
- Attorney general's law suits
- Behind the scenes planning
- <http://coolcalifornia.org/>

Regional Action

- **Air District: CO2 added; curriculum, tax**
- **Local cities measuring CO2 and creating climate protection plans**
- **Collaborative**
- **Regional non-profits: Joint Venture Silicon Valley, Sustainable Silicon Valley, Silicon Valley Leadership Group, Interfaith Power and Light Working Group, Acterra and Sierra Club Cool Cities Teams.**

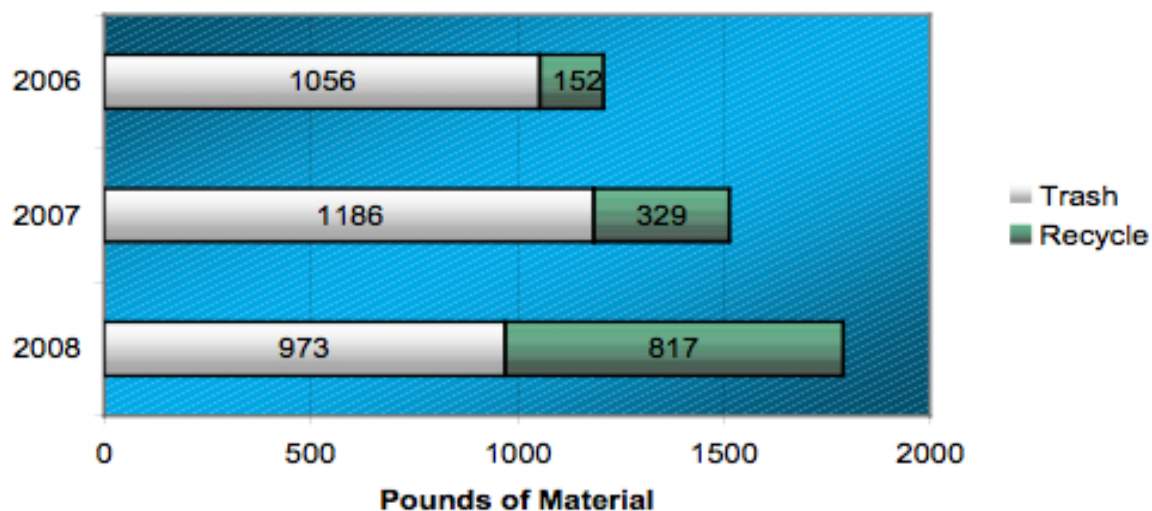
Sunnyvale

- **Schools**
- **Businesses**
- **Churches**
- **Grassroots**
- **Government**

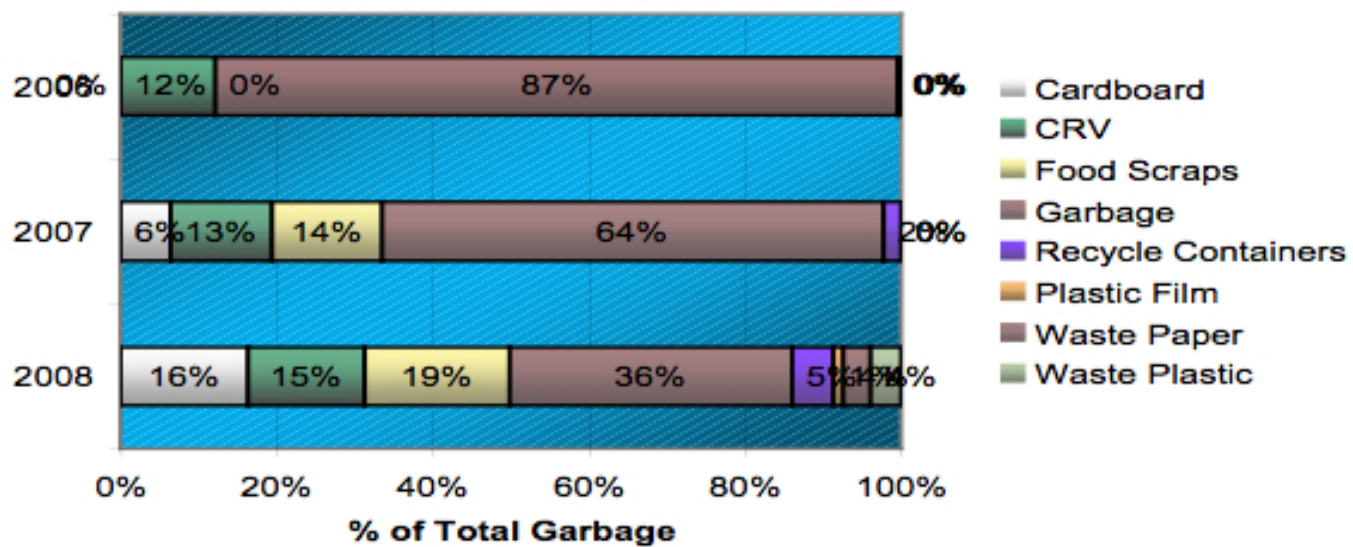
Sunnyvale Schools

- **School Districts installing solar**
- **Environmental Science classes at HS**
- **Cumberland: Green Business Certified**
- **Stockmier and Cumberland have Safe Walks to School programs**
- **Ellis, Cherry Chase and Cumberland entered City waste reduction contest**

HHSMB Activities Garbage Generation Comparison By Year



HHSMB Garbage Breakdown



Sunnyvale Business

- 30 Certified Green Businesses
- Chamber of Commerce and Downtown Association reducing waste at public events.
- Yahoo <http://green.yahoo.com/>
- AMD's solar
- Nature's Best Cleaners

Sunnyvale's Churches

- **Green Business Certified**
- **Solar panels**
- **Interfaith Power and Light**
- **Request to Council for Climate Action**

Grassroots

- **Sunnyvale Sustainable Gardens**
- **Democratic Club**
- **Interfaith Power and Light**
- **Acterra and its Green @ Home program**
- **Sierra Club Cool Cities Team**

Local Government

- **Corporate City**
- **Materials disposal**
- **Building Codes--Moylan**
- **Water use**
- **Land use**
- **Transportation**

Sunnyvale Government

- **Corporate City:** --Direct Control—Doing it for years. EE to save \$--Carbon Audit, Climate Action Plan, landfill gas capture, LED's, staff recycling, solar, green team
- **Materials:** Zero Waste Goal, pay as you throw, high community recycling rate
- **Comprehensive Green Bldg Code (3/09)**
- **Water use:** reclaimed water, City bottled water use limited, individual metering of multi-family homes

More Local Gov't Action

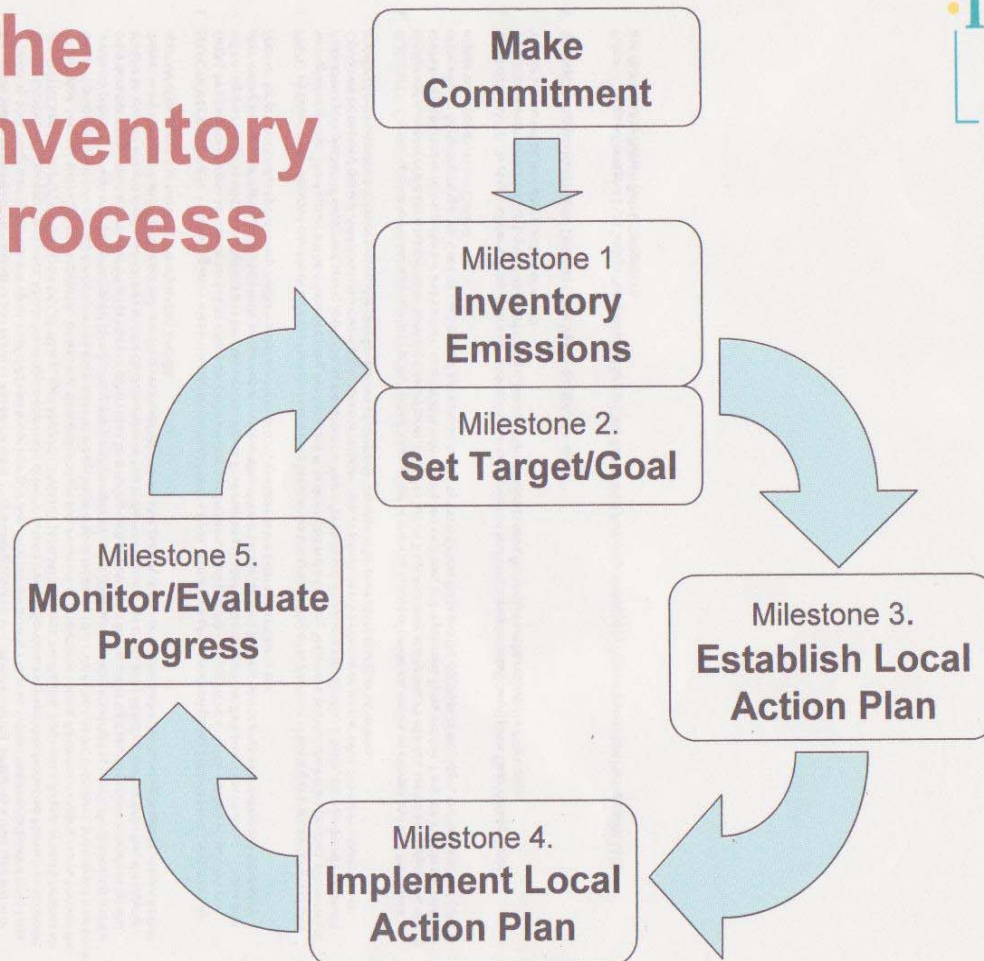
- **Reducing Solar Permitting Fees and streamlining solar permitting process (12/07)**
- **Hiring a full-time sustainability coordinator (10/08)**
- **Educational efforts: Earth Week Events, Walkability Workshop (09)**

A Foundation for Climate Action

- **Visioning Festival, (Fall 06)**
- **Sustainable Silicon Valley Pledging Partner (9/07)**
- **Mayor's Climate Protection Agreement (9/07)**
- **Community Carbon Inventory (coming soon)**
- **GHG reduction targets (coming soon)**
- **Climate Action Plan (coming soon)**

A systematic, metrics-based approach to reducing GHG

The Inventory Process



Opportunities



Climate Protection is *everybody's* business.

**Future generations depend on us all
to**

- 1. pay attention, inform ourselves**
- 2. minimize our own carbon footprints**
- 3. help make climate protection a top government priority.**

Inform Ourselves

- Learn a little every day
- Check out reputable web-sites
- Subscribe to Sunnyvale Cool Newsletter
- Watch some movies: Heat, Food, Inc.

Shrink your carbon footprint

- Drive less
- Eat less meat
- Make your home more energy efficient—stimulus dollars available!!

**In order to solve the
climate crisis, we have to
solve the democracy
crisis.**

Al Gore, 3/08



Doing Democracy

We need to lead from the grassroots.

Not fair to expect elected reps to get too far out in front of the people.

We need to convince all levels of government that addressing climate change is a top priority of ours.

Local Opportunities

- Land Use and Transportation revision
- Climate Action Plan
- Council Election in November

Huge Federal Opportunity

Strengthen Waxman-Markey
Climate Bill: American Climate
and Energy Security Act (ACES)



**There are no
passengers on
spaceship Earth. We
are all crew.**

Marshall McLuhan