Why Climate,
Why Health,
and Why California?
Eleven of the last twelve years (1995 -2006) rank among the 12 warmest years in the instrumental record of global surface temperature (since 1850)"
Decreasing California Snowpack

**Historical Average (1961–1990)**

- 100% remaining

**2070–2099**

- **Lower Warming Range**
  - Drier Climate
  - 40% remaining

- **Medium Warming Range**
  - Drier Climate
  - 20% remaining

Legend:

April 1 snow water equivalent (inches)

- ~0
- 15
- 30
- 45
Increasing Extent of Greenland Seasonal Ice Melt

1992  
2002  
2005

Federal health agents are in Chicago trying to determine the contributing factors to the more than 500 deaths related to the heat in July. Coffins containing the bodies of unclaimed victims were loaded on a truck by a Cook County morgue worker this summer for a mass burial.
Los Angeles Civic Center – Trends in Max and Min Temperatures and Diurnal Temperature Range (1876-2002)

Los Angeles Civic Center – Trends in Max and Min Temperatures and Diurnal Temperature Range (1876-2002)

- Average Maximum Temp increased 1.67°C (3.06°F)
- Average Minimum Temp increased 4.00°C (7.05°F)
- DTR narrowed 2.33°C

Ground Level Ozone

Levels increase in late afternoon as traffic and temperature peak.
10 Worst Cities for Air Quality

- Sacramento, Calif.
- Fresno, Calif.
- Bakersfield, Calif.
- Riverside, Calif.
- Louisville, Ky.
- Nashville, Tenn.
- Knoxville, Tenn.
- Atlanta, Ga.
- Charlotte, N.C./Rock Hill, S.C.
- Houston, Texas

Source:
Environmental Protection Agency
Why the Health Sector?
US Health Care Expenditures as Percent of GDP Projections

Persons employed in health service sites: United States -- 2005

- All employed civilians: 141,730,000
- All health service sites: 14,052,000
  - Hospitals: 5,719,000
  - Nursing care facilities: 1,848,000

http://www.cdc.gov/nchs/data/hus/hus06.pdf#summary
Of the 4,800,000 new jobs in the US 2000-2005

- 1.8 million were in Health Care -- 40%

http://www.cdc.gov/nchs/data/hus/hus06.pdf#summary
Electricity Consumption by the Health Care Sector

- Acute Care facilities consume nearly twice the energy annually of an average commercial building –
- 6% of total US annual energy

“The institutions of health care have enormous power to do good or harm to the natural environment and to increase or diminish carbon emissions.”

Anna Coote, *What Health Services Can do About Climate Change* BMJ 2006;332:1343-1344
Kaiser Permanente...

- Nation’s 5th largest stand-alone construction company

- $11 billion real estate portfolio: more than 62 million sq ft, and the largest in California

- $27 billion* building program: one of the largest construction programs in the history of American health care

- >50% capital spend increase from 2004-2006*

* 2006-2014 Facility Capital Expenditures (Forecasted)
Why California?
California’s Challenges and Leadership: Air Pollution
Human studies using blood lead as the measure of exposure have found health effects at lower and lower blood lead levels.

Blood lead levels defining lead poisoning (μg/dL)

NHANES II, III, 99+

Year

Blood Lead Levels (mg/dL)
0 2 4 6 8 10 12 14 16 18

- lead paint Ban 1976
- can solder phase-out Begins 1978
- unleaded gasoline Introduced 1979
- lead & copper Rule 1991
- can solder ends 1992
- leaded gas ends 1996

2.7 2.0
California vs. Rest of US: Adult Cigarette Consumption
1984 to 2004

California State Board of Equalization (packs sold) and California Department of Finance (population). U.S Census, Tax Burden on Tobacco, and United States Department of Agriculture. Note that data is by fiscal year (July 1-June 30).
Lung Cancer Incidence: California vs. Rest of U.S.
1988-2003

Rate per 100,000

U.S. minus CA (SEER) ↓ 4%
California ↓ 21%

Note: Rates are age-adjusted to the 2000 US population.
Source: California Cancer Registry, California Department of Health Services. Prepared by the California Department of Health Services, Cancer Surveillance Section.

*SEER includes 14 cancer registries from across the U.S.

American Cancer Society, CA Division and Public Health Institute, CA Cancer Registry, California Cancer Facts and Figures 2007, September 2006.
California’s Challenges and Leadership: Pesticides
One Billion Pounds of Pesticides are Used in California per year (25% of US Total)
Farm worker and pesticide worker protection standards
Pesticides
And Death
Amid Plenty
Cancers Claim Youth
Of the San Joaquin

By Michael Weisskopf
Washington Post Staff Writer

McFarland, Calif.—For most of his 14 years, Mario Bravo lived a childhood idyll, racing bicycles and rummaging cotton fields for jack rabbits, until doctors found a lump under his right arm.

The diagnosis last August was liver cancer, and by Thanksgiving, he was dead.

Mario was the 16th childhood cancer victim and the ninth to die since 1975 in this rural town of 6,000 people. Half the cases were diagnosed from 1982 through 1985, eight times the number expected for a town of McFarland's size during a four-year period.

Tina Bravo holds photo of son, Mario, who died of liver cancer at age 14.

McFarland, California Cancer Cluster
State recalls watermelons — pesticide use suspected

BY DON LATTIN

While hundreds of thousands of Independence Day picnickers were munching away on the biggest watermelon-consuming day of the year, health officials ordered the fruit off counters. More than 80 people in three states — including at least five Bay Area residents — became ill of watermelon apparently contaminated with a "highly toxic" pesticide.

"It would be hard to pick a worse day for this to happen," said Pete Weisser, spokesman for the state Health Department in Sacramento.

Dr. Kenneth Kizer, director of the state Department of Health Services, ordered watermelon sales stopped to guard against further illness. But he nursing supervisor, said three Oakland residents — Jessie and Nannie Thomas and Zenobia Harris — were admitted complaining of stomach pains, blurred vision, overall aging and excessive salivation. They ate a melon bought at the Lucky Supermarket at 106th Avenue and MacArthur Boulevard in East Oakland.

Last night, 13-year-old Heidi Hampton and her grandmother, Ruby Lytle, of San Jose, were admitted to that same hospital after eating a watermelon bought from a Fry's Supermarket in Milpitas. They reported similar symptoms. All five were treated and released.

No one could be reached for comment at the Oakland and Milpitas stores last night. Lucky executives also were unavailable. Workers at two...
Children Take in More Air, Water and Food Per Pound Than Adults

2 times resting air intake

3 times skin absorption

3 times water intake

3 - 4 times food intake

Bearer, CF. Future Child 1995;5(2):11-26
Increasing concern about Children’s Exposures
This 1993 NAS IOM Report Led to the US Food Quality Protection Act of 1996
Pesticide Risk May Be Higher in Children
Citing ‘Potential for Concern,’ Panel Calls for More Stringent Federal Exposure Standards

By Carole Sugarman
Washington Post Staff Writer

A long-awaited report released yesterday has found serious scientific and regulatory deficiencies in the way the federal government assesses the health effects of pesticides on infants and children.

The study, conducted by a committee of the National Academy of Sciences (NAS), concludes that far too little is known about how such chemicals affect the young, and that there is “potential for concern” that some children may be ingesting unsafe amounts of pesticides.

It recommends that when adequate data on a given chemical are lacking, “there should be a presumption of greater toxicity to infants and children.” In such cases, the NAS panel called for exposure standards 10 times more stringent than would normally be applied.

But the study emphasizes that parents should not reduce their children’s consumption of fruits and vegetables.

“The single most important point is that the current system for regulating pesticide residues for foods in the United States needs to be fundamentally restructured so that health concerns become the priority, especially when it comes to children,” said pediatrician Philip J. Landrigan, chairman of the NAS

mental policy at Yale University and a consultant to the NAS committee, urged the environmental group to refrain from preempting the NAS report with its own study. Wargo called the environmental group’s study “primarily a piece of advocacy, not yet a work of science.” Richard Wiles, the author of the environmental group’s study, was formerly the project director for the NAS report.

Industry and environmental groups reached for comment yesterday supported the academy’s recommendations, as well as the administration’s commitment to reducing pesticide use.

“The academy’s recommendations are very good news for consumers and the industry,” said Jeff Nedelman, a spokesman for the Grocery Manufacturers of America. “It will help us achieve our goal of eliminating detectable residues in food.” The National Agricultural Chemical Association said in a statement: “We will work with everyone to further strengthen the food safety system.”

Wendy Gordon, program director for Mothers and Others for a Livable Planet, an environmental group, said that the agencies’ joint announcement “signals a real change in direction.”

NAS panel chairman Landrigan, of the Mount Sinai School of Medicine in New York City, said he was “very pleased” that the administration appeared to support the panel’s findings. But he expressed concern that “the remedies proposed by the agencies are vague promises for actions for the future” and said he “didn’t see anything that spoke to the here and now.”
Recommendations of NAS Pesticides in the Diets of Infants and Children report -- 1993

- Establish Tolerances (legal residue limits) for food that reflect children’s dietary patterns and exposure
Recommendations of NAS *Pesticides in the Diets of Infants and Children* report -- 1993

- Regulate chemicals that have common toxicologic Action as a group
  - More than 25 chemicals that inhibit cholinesterase are permitted as residues in food
  - EPA regulated each of these individually without recognition that multiple pesticides having similar toxicologic effects may be present in diet
Recommendations of NAS *Pesticides in the Diets of Infants and Children* report -- 1993

- Put in place an extra safety margin for children (ten fold)
The IOM NAS *Pesticides in the Diets of Infants and Children* report led to

- Food Quality Protection Act of 1996
Food Quality Protection Act of 1996 -- 2006 update

• The 10-year study—
  – Focused on the effects pesticides may have on infants; gave the EPA broad authority to study pesticides.

• Examined 1,100 pesticides and nearly 10,000 "tolerances," or maximum allowed amounts, of pesticides on various crops.

• EPA has nearly finished
  – Approving 5,237 existing tolerances
  – Modifying 1,200 others
  – Revoking 3,200
Cholinesterase-inhibiting pesticide use --
California 1995 to 2005

http://www.cdpr.ca.gov/docs/pur/pur05rep/trends05.pdf
Pesticide Use – California Proposition 65 chemicals “known to cause reproductive toxicity”

http://www.cdpr.ca.gov/docs/pur/pur05rep/trends05.pdf
Pesticides as Toxic Air Contaminants
California Use 1995 to 2005

http://www.cdpr.ca.gov/docs/pur/pur05rep/trends05.pdf
Use Trends of “Reduced-risk” Pesticides

California 1995 to 2005

http://www.cdpr.ca.gov/docs/pur/pur05rep/trends05.pdf
Contra Costa Farm Stands & Farmers' Markets

Farmers' Markets

**Concord:** Todos Santos Plaza, Tuesdays (year round) 10 a.m. - 2 p.m., Thursdays (May-Oct) 4 - 8 p.m.

**Danville:** Railroad at Prospect Avenue, Thursdays (May-Sept) 4 p.m. - 8 p.m., Saturdays (year-round) 9 a.m. - 1 p.m.

**El Cerrito:** El Cerrito Plaza, San Pablo at Fairmont Avenue, Tuesdays and Saturdays 9 a.m. - 1 p.m.

**Martinez:** Court Street and Main Street, Thursdays (May-Nov) 10 a.m. - 2 p.m., Sundays (May-Oct) 10 a.m. - 2 p.m. through October

**Orinda:** Avenida de Orinda, 2 blocks north of Safeway, Saturdays (May-Nov) 9 a.m. - 1 p.m. through November

**Pinole:** City Hall Parking Lot, Plum and Prune Street, Saturdays (May-Nov) 9 a.m. - 1 p.m.

**Pittsburg:** Railroad and 6th Street, Saturdays (May-Nov) 9 a.m. - 1 p.m. ERT

Fruits and Vegetables are always in season
Support local farmers; buy your fresh fruits and vegetables at these local markets.
School Gardens

Exercise, Learning, Cooperation, Fun, and

It Tastes good