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## Sustainability Task Force

A Committee of the Chico City Council  
Vice Mayor Schwab, Chair

**Meeting of March 3, 2008 – 3:00 p.m. to 5:00 p.m.**

Council Chamber Building, 421 Main Street, Conference Room No. 1

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### AGENDA

1. **Committee Updates** -
  - a. ICLEI audit - Sustainability Measure Checklist
  - b. SCORE inventory
  - c. Sustainable Building - Continued discussions regarding possible tiered building/development fees based on sustainability.
2. **Proposal to Not Purchase Single Serving Plastic Water Bottles** - Consideration of a recommendation to the City Council to prohibit using City funds to purchase single serving bottles of water. The ban will also apply to city-funded or sponsored events.
3. **Other Updates**
  - a. Sustainable Business Partnership Conference - Jim Goodwin
  - b. Keep California Beautiful Projects - Ann Schwab/Scott McNall
  - c. City Livability/Green California Leadership Awards - Linda Herman
4. **Business from the Floor** – Members of the public may address the Committee at this time on any matter not already listed on the agenda, with comments being limited to three minutes. The Committee cannot take any action at this meeting on requests made under this section of the agenda
5. **Adjournment** – The meeting will adjourn no later than 5:00 p.m. The next meeting of the Sustainability Task Force is scheduled for March 17, 2008 - unless cancelled. All meetings are held from 3:00 p.m. – 5:00 p.m. in Conference Room No. 1.

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### Members:

Jason Bougie  
Jim Goodwin  
Dr. Scott G. McNall  
Jim Stevens

Kristin Cooper - Carter  
Ken Grossman  
Jim Pushnik  
Scott Wolf

Tom DiGiovanni  
Amelia Gulling  
Tami Ritter  
Julian Zener

Chris Giampaoli  
Jon Luvaas  
Ann Schwab, Chair

Consideration of recommendation to Council to prohibit purchasing single serving bottles of water using city funds. The ban will also apply to city-funded or sponsored events.

## **Bottled Water**

### **Why people drink bottled water:**

7% taste

11% other

12% Worried about tap water safety and substitute for other beverages

35% Substitute for other beverages

35% Worried about tap water safety

(Source: American Water Works Association Research Foundation, 1993)

## **Environment**

### **Packaging detrimental to the environment**

Annually 1.5 million barrels of oil are used to produce plastic water bottles.

Worldwide some 2.7 million tons (2.4 million metric tons) of plastic are used to bottle water each year, according to Earth Policy Institute (EPI).

The plastic most commonly used is polyethylene terephthalate (PET), which is derived from crude oil.

"Making bottles to meet Americans' demand for bottled water requires more than 1.5 million barrels of oil annually, enough to fuel some 100,000 U.S. cars for a year," Earth Policy's Institute's Arnold said.

### **Shipping detrimental to the environment**

In 2006, the equivalent of 2 billion half-liter bottles of water were shipped to U.S. ports, creating thousands of tons of global warming pollution and other air pollution. In New York City alone, the transportation of bottled water from western Europe released an estimated 3,800 tons of global warming pollution into the atmosphere. In California, 18 million gallons of bottled water were shipped in from Fiji in 2006, producing about 2,500 tons of global warming pollution.

### **Waste detrimental to the environment**

Most bottled water comes in recyclable high quality PET plastic bottles in demand by recyclers, only about 13 percent of the bottles we use get recycled. (80 percent of plastic bottles are simply thrown away.) In 2005, 2 million tons of plastic water bottles ended up clogging landfills instead of getting recycled. – Natural Resources Defense Council

About 86 percent of plastic water bottles in the U.S. become garbage or litter, according to the Container Recycling Institute in Washington, D.C.

In 2005, 2 million tons of plastic water bottles ended up clogging landfills instead of getting recycled. – Natural Resources Defense Council.

Plastic debris in the environment can take between 400 and 1,000 years to degrade. Thanks to its slow decay rate, the vast majority of all plastics ever produced still exist

## **Economy**

Bottled water is thousands of times more expensive than tap water? Compare \$0.002 per gallon for most tap water to a range of \$0.89 to \$8.26 per gallon for bottled waters.

Consumers...pay three times as much per gallon of bottled water as they do for gasoline.

-Howard, Brian C. Message in a Bottle. The Environmental Magazine!

If the water we used at home cost what even cheap bottled water costs, our monthly water bills would run \$9,000.

-Fishman, Charles. US: Message in a Bottle. Fast Company, July 6, 2007.

Americans pay three times as much for bottle water than gasoline. An average Cal Water (Chico's water service) customer could get 1,000 gallons of tap water for the same \$2 paid for a gallon on bottled water.

Most of this extra cost is driven by transportation and packaging.

## **Social Justice**

### **Bottled water no healthier than tap water**

Bottled water is often no healthier than tap water, but it can be 10,000 times more expensive, says Emily Arnold, a researcher with the Washington D.C.-based nonprofit EPI.

The Natural Resources Defense Council, which carried out a four-year review of the bottled water industry, concluded "there is no assurance that just because water comes out of a bottle, it is any cleaner or safer than water from the tap."

The New York City-based action group (NRDC) added that an estimated 25 percent of bottled water is "really just tap water in a bottle—sometimes further treated, sometimes not."

In theory, bottled water in the United States falls under the regulatory authority of the Food and Drug Administration. In practice, about 70 percent of bottled water never crosses state lines for sale, making it exempt from FDA oversight.

The federal government requires far more rigorous and frequent safety testing and monitoring of municipal drinking water.

Tap water must meet stricter and more frequent requirements than bottled water.  
- Environmental Protection Agency. Total Coliform Rule: A quick Reference Guide, November 2001.

On the other hand, water systems in the developed world are well-regulated. In the U.S., for instance, municipal water falls under the purview of the Environmental Protection Agency, and is regularly inspected for bacteria and toxic chemicals.

While public safety groups correctly point out that many municipal water systems are aging and there remain hundreds of chemical contaminants for which no standards have been established, there's very little empirical evidence which suggests bottled water is any cleaner or better for you than its tap equivalent.

Government and industry estimates indicate that about 25 percent to 30 percent of the bottled water sold in the United States comes from a city's or town's tap water -- sometimes further treated, sometimes not. One IBWA expert reportedly estimated in 1992 that 40 percent of the bottled water was derived from tap water. The percentage of bottled water derived from tap water may be rising, because some major bottlers have begun to sell new brands of water derived from city tap water.

## **Packaging harmful**

Plastic water bottles are not recommended for reuse due to the possible leaching of chemicals.

- Food and Water Watch.

## **Sources:**

<http://www.nrdc.org/water/drinking/bw/bwinx.asp>

[http://news.nationalgeographic.com/news/2006/02/0224\\_060224\\_bottled\\_water.html](http://news.nationalgeographic.com/news/2006/02/0224_060224_bottled_water.html)

<http://lighterfootstep.com/5-reasons-not-to-drink-bottled-water.html>

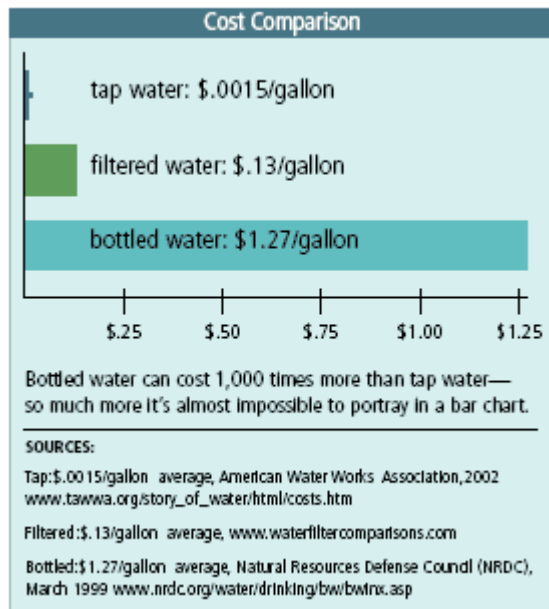
<http://www.aschico.com/?Page=1085>

## Sierra Club's fact sheet on bottled water.

[http://www.sierraclub.org/committees/cac/water/bottled\\_water/](http://www.sierraclub.org/committees/cac/water/bottled_water/)

What Are the Issues?

**Advertising Hype.** On the shelves of grocery stores, bottled water proliferates. New labels appear overnight claiming purity. In 2002, Americans paid \$7.7 billion for bottled water and sales continue to increase.



It's an amazing new fad, one of the most successful advertising hypes in recent history. Advertising for bottled water suggests that drinking water in plastic can make you thin, sexy, healthy, affluent, and environmentally responsible. Water bottles have become a fashion accessory.

These ideas have a source, and it's not a mountain spring. Giant multinational companies like Nestle, Coke, and Pepsi are making a fortune on bottled water. In the U.S. a sip of bottled water costs on average 1,000 times a sip of water from the tap.

**Environmental Justice.** In Michigan, Nestle received \$9.6 million in tax breaks to site their Ice Mountain bottled water plant in Mecosta County. Yet in Detroit more than 20,000 families have had their water shut off because of inability to pay their water bills when the state refused to provide a subsidy. How do such policies measure up to the United Nations declaration "The human right to drinking water is fundamental to life and health"?

**How safe?** Many people think bottled water is safer than tap water. There is no such guarantee. The Environmental Protection Agency (EPA) has strict water quality standards for tap water, but the EPA does not oversee bottled water. Bottled water sold across state lines is regulated by the Food and Drug Administration (FDA). The FDA interprets EPA clean drinking water regulations and applies them selectively to bottled water. While the FDA requires water sources to be “inspected, sampled, analyzed and approved,” it only has one inspector so the industry does the inspecting. Nor do the FDA regulations prevent bottling companies from drawing water next to industrial sites, underground storage tanks, or dumps.

In Pennsylvania, the state health department tested the water and found high levels of coliform bacteria after a man reported getting sick from drinking bottled water. In California, an independent lab tested for hundreds of different chemicals in 38 brands of California bottled water. Two samples had arsenic contamination, six had chemical byproducts of chlorination, and six had measurable levels of the toxic chemical toluene.

So consumers should not assume that bottled water is safer than tap water. In fact Coca Cola’s Dasani and Pepsi’s Aquafina are tap water coming from places like Queens, NY and Jacksonville, FL with some additional treatment.

**Ecosystems.** Nestle prefers to market water from springs. The pumping can have a significant environmental impact, sucking water from underground aquifers that are the source of water for nearby streams, wells, and farms. In Mecosta County, a judge has ruled that Nestle must stop pumping from a site that is threatening the surrounding ecosystem. Nestle has at least 75 spring sites around the country and is actively looking for more.

**Plastic Hazards and Waste.** What about the bottles themselves? Every year about 1.5 million tons of plastic go into manufacturing water bottles for the global market, using processes that release toxics such as nickel, ethylbenzene, ethylene oxide and benzene. In the U.S. alone 1.5 million barrels of oil are consumed in making the bottles. Most bottles end up in landfills, adding to the landfill crisis.

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## Taking Action

The Sierra Club has just [published a brochure](#) which we will be happy to provide to any group or chapter which wants to join the campaign to discourage the use of bottled water.

- Use pitchers of water at your Club and community events?

- Use containers that you can refill with tap water when you are away from home
- If there is a problem with water quality in your community, use a good quality water filter which is much cheaper than bottled water and does not produce mounds of plastic waste. The average cost of filtered water is \$0.13/gallon compared to \$1.27 for bottled water.
- Advocate for adequate funding and good public management of municipal water systems.
- Monitor unusual land purchases near to natural springs

E magazine reports: "When Good Morning America conducted a taste test of its studio audience, New York City tap water was chosen as the heavy favorite over the oxygenated water O2, Poland Spring and Evian." Do a blind taste test with your friends and see what they choose.

Look at the bottled water labels on your local grocery shelves. Do they say where the water comes from? If so, see what you can find out about the environmental quality of the water and the environmental impacts of the pumping.

Talk with your municipal waste authority to find out how plastic bottles are disposed of. If they are incinerated, research what chemicals might be released. If landfilled, how close to capacity is your landfill?

If the bottles are recycled, can you track where they actually go? What use is being made of the recycled plastic bottles?

Go to [www.epa.gov/safewater/dwinfo.htm](http://www.epa.gov/safewater/dwinfo.htm) to get copies of reports to the EPA from your water and sewer authority. How often do they report? What are the findings?

Are there any limits as to how much water a water company can extract from any given site in your state? How springs and groundwater are protected by your state and community? Are there ways these protections should be strengthened?

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#### Resources for More Information

E Magazine, Sept/Oct 2003, "Message in a Bottle," by Brian Howard:  
[www.emagazine.com](http://www.emagazine.com)

Centre for Science and Environment: [www.cseindia.org](http://www.cseindia.org)

Natural Resources Defense Council: [www.nrdc.org/water/drinking/bw/bwinx.asp](http://www.nrdc.org/water/drinking/bw/bwinx.asp)

PBS/Point of View Borders: [www.pbs.org/pov/borders/2004/water](http://www.pbs.org/pov/borders/2004/water)

Environmental Protection Agency Local Drinking Water Reports:  
[www.epa.gov/safewater/dwinfo.htm](http://www.epa.gov/safewater/dwinfo.htm)

*Water Follies, Groundwater Pumping and the Fate of America's Fresh Waters*, by  
John Glennon, 2002, Island Pre



## **SF Mayor Newsom Bans City Bottled Water Purchases**

SAN FRANCISCO (BCN) — Mayor Gavin Newsom Friday issued an executive order to permanently phase out the purchasing of bottled water by the city and county of San Francisco.

The region's water delivery system, produced from snowmelt stored in the Hetch Hetchy Reservoir and flowing down the Tuolumne River, produces among the safest, purest drinking water in the nation, Newsom wrote in the directive.

By contrast, the bottled water industry has had profound negative environmental effects, Newsom said, its plastic bottles requiring oil to produce, and releasing one billion pounds of carbon dioxide into the atmosphere each year. More than a billion plastic water bottles end up in California landfills annually, he said, taking 1,000 years to biodegrade and leaking toxic additives into the groundwater.

"Over the last decade, San Franciscans have responded to marketing campaigns to purchase bottled water and record amounts of bottled water have been purchased by San Franciscans at the expense of the environment," Newsom wrote.

Beginning July 1, all city departments and agencies will be prohibited from purchasing single serving bottles of water using city funds, unless an employee contract specifies usage. The ban will also apply to city contractors and city-funded or sponsored events.

By Sept. 30, all city departments or agencies occupying city or rental properties will have completed an audit to determine the viability of switching from bottled water dispensers to bottle-less water dispensers that use Hetch-Hetchy supplied water.

By December 1, all city departments will have installed bottle-less water dispensers, according to Newsom's order.

Waivers will be granted to by the San Francisco Public Utilities Commission based on legitimate engineering, health and fiscal concerns, Newsom said.

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Please take a look at this list and highlight/mark the measures that have already been **implemented**, those that are **underway**, and those that seem **not applicable**.

### ICLEI Suggested Emissions Reduction Measures

#### Building-Related Energy

##### **Municipal Building Energy Efficiency & Conservation**

- Conduct an energy audit of municipal facilities
- Implement an energy tracking and management system
- Implement green or reflective roofing
- Improve water pumping energy efficiency
- Install a central irrigation control system
- Install ENERGY STAR appliances
- Install ENERGY STAR copiers
- Install ENERGY STAR monitors
- Install ENERGY STAR printers
- Install ENERGY STAR water coolers
- Install energy-efficient exit sign lighting
- Install low-flow toilets
- Install occupancy sensors
- Institute a lights-out-at-night policy
- Perform energy-efficient lighting retrofits
- Perform heating, cooling and ventilation system retrofits (e.g., chillers, boilers, fans, pumps, belts, fuel-switching from electric to gas heating)

##### **Community Building Energy Efficiency & Conservation**

- Implement tidal power project
- Adopt strict residential or commercial energy code requirements
- Community education (e.g., energy efficiency challenge, green business program)
- Community energy efficiency rebate program *PG4E*
- Distribute free CFL bulbs and/or fixtures to community members
- Implement a low-income weatherization program *PG4E*
- Implement district heating and cooling
- Implement time-of-use or peak demand energy pricing
- Install energy-efficient cogeneration power production facilities
- Install solar water heating at community swimming pool
- Launch an "energy efficiency challenge" campaign for community residents
- Offer a halogen torchiere lamp exchange to community members

- Offer an LED Christmas light trade-in to community members
- ✕ Promote energy conservation through campaigns targeted separately at residents and businesses *PG&E*
- Promote green building practices through a local ordinance or green building program
- Promote participation in a local green business program
- Promote the purchase of ENERGY STAR appliances and office equipment
- ✕ Promote water conservation through conservation ordinances
- ✕ Promote water conservation through technological means (eg. distribution of conservation devices to community)
- Remove or replace woodstoves and fireplaces with EPA rated woodstoves

#### **Outdoor Lighting**

- ✕ Install energy-efficient traffic lights
- ✕ Install energy-efficient street lights (e.g., high pressure sodium)
- Decrease average daily time street lights are on

#### **Renewable Energy**

- ✕ Purchase green electricity from solar, geothermal, wind or hydroelectric sources
  - Purchase green tags / renewable energy certificates
- ✕ Install solar panels on municipal facilities
  - Promote community clean energy use through green power purchasing or on-site renewable technologies
  - Offer incentives to foster solar PV installations in the community
  - Implement a form of community choice aggregation
  - Install solar water heating at community swimming pool

#### **Transportation**

##### **Vehicle Fuel Efficiency**

- ✕ Limit idling of municipal or community vehicles *underway*
- Parking and restricted lane incentives for LEVs (low emitting vehicles) and hybrids
- ✕ Promote community purchases of compact and hybrid vehicles
- ✕ Limit idling of local transit buses and school buses *BLAG*
- ✕ Purchase fuel efficient (e.g., hybrid) and/or smaller fleet vehicles
- ✕ Retire old and under-used vehicles *Underway*
- ✕ Utilize fuel-efficient vehicles (e.g., scooters) for parking enforcement

##### **Alternative Fuels**

- Alternative fuels (e.g., local fueling stations, incentives)
- Enforce electric vehicle recharging facilities in new large parking facilities
- ✕ Initiate a community biodiesel purchasing coop or fueling station *in process*
- ✕ Alternative Fuels (e.g., biodiesel, ethanol, CNG)
- ✕ Utilize biodiesel in municipal fleet *in process*

- Utilize compressed natural gas in municipal fleet
- Utilize electric vehicles in municipal fleet

#### **Trip Reduction / Transportation Demand Management**

- Allow bikes on trains/busses
- Improve bicycle transit (e.g., synch bicycle trails with transit, bike lanes, storage facilities)
- Develop park and ride facilities
- Public transit education & campaigns (e.g., car-free promotion days, guides to transit use)
  - Encourage community car-sharing
  - Encourage local buses and taxis to convert to alternative fuels by subsidizing fuel conversion equipment costs
  - Encourage telecommuting by community by offering services online or on the phone at reduced rates compared to in-person visits
  - Expand local or regional bus service in range and / or frequency *B-Line*
  - Implement bus rapid transit or shuttle programs
  - Install new light rail systems
- Institute a "safe routes to school" program
- Pedestrian Traffic (e.g., slow street traffic, improve sidewalks and safety, pedestrian-only areas)
  - Promote car-pooling, telecommuting and the use of mass-transit by community members
  - Provide free bicycles for public use
  - Provide high school students with complementary bus tickets - *Reduced Rate*
  - Encourage car-pooling or van-pooling by municipal employees
  - Encourage telecommuting by municipal employees
  - Encourage use of mass-transit by municipal employees *Employee Bus Pass*
  - Implement a police on bicycles program *& Rangers*
  - Provide free bicycle loans for municipal staff use

#### **Other Transportation-Related Measures**

- Financing (e.g., local transit impact development fees, gas tax)
  - Improve traffic signal synchronization
  - Promotion/informative campaign on 'How to Get Around'
- Road Management (e.g., congestion pricing, synchronize traffic lights, restricted lanes)

#### **Recycling & Waste**

- Energy from waste (e.g., landfill methane recovery, energy from waste/biofuels)
  - Establish system for reuse or recycling of construction and demolition materials
- Establish / expand recycling programs in the community
- Implement solid waste reduction program through creation of reuse facilities / programs *Habitat Restore*
- Waste diversion (e.g., recycling, organics and yard debris collection, demolition standards)
- Establish / expand recycling programs in municipal facilities

Implement environmentally preferable purchasing program recycled paper, etc (energy efficient appliances are ignored here)

Install an anaerobic digester at the wastewater treatment facility - Will be in expansion project

Ban plastic bags in stores

Bring your own bag campaign - state campaign

Compost wastewater sludge study underway

**Land Use**

Foster downtown neighborhood development

Institute growth boundaries, ordinances or programs to limit suburban sprawl

Institute programs to preserve open space

Plant trees for energy savings

Target new development to brown field sites

Transit-oriented / downtown development (e.g., transit-oriented development plans, growth boundaries, zoning) in process

Urban heat island mitigation (e.g., reflective surfaces, shade trees)

- Use asphalt grindings in alleys and shoulder grading

- Use cold foam asphalt

- Purchase recycled plastic benches/outdoor furniture

- Reuse grindings and chips in City parks/greenways