Faces of Sustainability: San Francisco County

The Faces of Sustainability series highlights how residents of the San Francisco Bay Area are making their community a better place to live, protecting their natural environment, and conducting business in ways that promote quality of life for subsequent generations.

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San Francisco victorians

Bay Area Counties

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Today, more people live in urban environments than rural ones for the first time in history, a trend that is expected to accelerate. San Francisco is one of the major cities pioneering innovative approaches to meet the economic, social, and environmental challenges of urban sustainability.

In November 1996, San Francisco published the San Francisco Sustainability Plan, which was created in six months through a process that involved 400 citizens, business people, nonprofits, and public agencies. The San Francisco Board of Supervisors subsequently passed a resolution supporting the plan, and called on every department and agency in San Francisco to use it as an advisory policy document in all of their decisions. This fast-paced participatory planning effort, fueled by the group's enthusiasm, reflects the type of innovation that is the hallmark of successful sustainability efforts.

The Plan's adoption coincided with voter approval of an amendment to the City Charter to form a new Department of Environment (now SF Environment) whose central mission is to create a sustainable San Francisco, setting the stage for a coordinated local sustainability effort. Since 1997, SF Environment has worked toward a sustainable San Francisco on numerous fronts. This article details these practices along with several other initiatives by other agencies and groups that are transforming San Francisco into a more sustainable city.

Integrated Pest Management

The Integrated Pest Management Program has eliminated use of the most dangerous substances and reduced overall pesticide and herbicide use by more than 67 percent since the city adopted the Ordinance in 1996. In place of toxic chemicals, 400 hungry goats and tons of corn meal mulch prevent weeds from taking over city parks and watersheds, giant heaters kill termite colonies deep inside of building walls, and donut-shaped devices floating in city ponds release mosquito-eating microorganisms. As a result, the city has minimized the use of toxic chemicals in San Francisco's parks, and both the public health risk and toxic load on the local

and global environment have been reduced.

The Municipal Green Building Pilot Project and Ordinance

This ordinance, adopted in Spring 2004, set the LEED Silver Standard as the basis for all new municipal construction or major renovation. The city uses cost-benefit analysis to demonstrate how long-term operational savings, including reductions in reduced energy, water, and maintenance costs, can offset capital costs. One exemplary building in development is the new Academy of Sciences in Golden Gate Park. "Of the 10 green building pilot projects underway in San Francisco, the Academy of Sciences is the one of which SF Environment is most proud," said Mark Palmer, Green Building Coordinator of SF Environment. "The building will be itself an exhibit–of sustainability–reflecting the highest environmental ideals of the Academy, and surpassing all current and proposed green building standards for the City of San Francisco."

Green design uses many cutting-edge technologies that produce environmental and economic value. Lighting and mechanical systems can use 30-50 percent less energy than is required by the already stringent California Energy Code. Spectrally tuned windows capture and reject solar heat as needed. Generous window areas with light shelves and shading devices allow natural light to penetrate to the interior of the building while reducing interior glare and cooling loads along with electricity consumption. Shading devices are clad with solar electric panels or building-integrated photo-voltaics that generate electricity and reducing dependence on fossil fuels. A raised floor ventilation system increases energy efficiency and allows occupants to control heating, ventilating, and cooling at each workstation. Sustainable, durable, non-toxic, and recycled-content building materials protect natural resources and enhance indoor air quality. Construction and demolition waste management plans can divert 90% or more of the waste material from the landfill to recycling.

Precautionary Principle

In 2003, San Francisco adopted the Precautionary Principle, an alternative to current business-as-usual thinking that uses a risk-assessment model as a guideline for decision making for city departments. The Precautionary Principle holds that if an activity threatens harm to human health or the environment, precautionary measures should be taken even if cause and effect cannot be established irrefutably by the time the action must be taken. One of San Francisco's first systematic applications of the Precautionary Principle is a new precautionary purchasing ordinance, adopted in June 2005, that provides a framework for replacing a wide range of toxic cleaning products with less

San Francisco Planning and Research Association (SPUR) is a local, independent non-profit organization that aims to "Promote new thinking about cities and nature; plan not just for urbanism, but for ecological urbanism." Its Green Building and Codes Subcommittee is removing barriers in the San Francisco Building Code to the design of resource efficient, high performance buildings. The Sustainable Economic and Community Development Subcommittee is working to create a dynamic green industries sector in the San Francisco economy, hosts presentations by leading innovators, and researches best practices in other cities. The Green Landscape and Infrastructure Subcommittee is exploring policy proposals for public expenditures designed to advance substantially sustainability in San Francisco.

harmful alternatives, assuring citizens that the city spends money in line with its environmental priorities.

Recycling and Composting

San Francisco's core recycling programs, including the "Fantastic Three" three-cart recycling program, the most successful of its kind in the nation, now serve nearly 150,000 residences and over 2,000 businesses. The program provides three carts for curbside pickup: blue for paper, bottles and cans; green for food scraps, yard trimmings and other compostable material; and black for trash. San Francisco diverted 63 percent of all waste stream materials from going to landfills in 2002, up from 52 percent the year before.

The city's food scrap compost program, now the most successful of any city in the country, diverted nearly 60,000 tons of organic waste in 2001. Sunset Scavenger Company and Golden Gate Disposal & Recycling Company take more than 300 tons of organic material each day to a compost facility near Vacaville where it is turned into finished compost that includes high levels of nitrogen and other nutrients that benefit plants. The finished compost goes to commercial nurseries, companies that blend and bag planting mix and potting soil, area farms, and to landscapers and landscape supply yards.

Union and City Partnership

San Francisco's International Federation of Professional and Technical Engineers (IFPTE) Local 21 initiated an innovative management partnership with the city in response to Mayor Gavin Newsom's challenge to city employees to reinvent local government as a way to solve the budget crisis of 2004. The partnership fundamentally addresses the fiscal challenge that San Francisco faces from the shift in public finance to local jurisdictions and concomitant reduction in federal and State tax revenue support for local public services. San Francisco's Union-City Partnership (UCP) will use collaborative problem-solving and performance-based incentives to reduce costs and promote service improvements.

As one of the pilot departments to UCP, SF Environment injected sustainability into the core governing and operating structure of the partnership with a threefold purpose. First, define how and which sustainability practices can immediately and directly reduce general fund costs (or increase revenues) and improve service quality, then initiate the most promising approaches. Second, educate others about how sustainable approaches can offer new and supplemental options for reducing costs and improving quality. Third, identify the ways in which sustainability practices can fundamentally strengthen the local economy and set the stage for reinventing local government finance.

> *"The UCP initiative is* ***good government*** *at its best, utilizing* EXISTING RESOURCES *to save money and improve services, And who better to* ***identify*** *those efficiencies than the employees who handle the* DAY-TO-DAY RUNNING ***of this city"***
>
> **— Gavin Newsom,**
> Mayor, San Francisco

Tapping Unlimited Solar Energy

In 2004, the San Francisco Board of Supervisors unanimously approved legislation to utilize the state's "Community Choice" law, allowing San Francisco residents and businesses to switch to a new power supplier for electricity service and to finance a network of renewable energy and energy conservation projects.

The Energy Independence Ordinance directs the city to solicit proposals for new electricity providers to supply power to San Franciscans beginning in 2005. The goal is to make conservation technologies a standard component of the city's electricity service so that they serve one-fourth of the city's power needs by the end of the decade through green power including solar photovoltaic installations, wind turbines, efficiency and conservation installations, and hydrogen technologies. The conversion, say proponents, will protect residents and businesses against increasingly volatile natural gas prices, assist in closing power plants that cause breast cancer and childhood asthma, and make the city a leader in the global effort to stop climate change.

Local Food Network

According to Warren Karlenzig, Chief Strategy Officer at SustainLane, the redevelopment of the San Francisco Ferry Building and Ferry Market Plaza by Wilson Meany Sullivan developers created an unparalleled hub for establishing and strengthening an urban-centered local food economy–a core component of any sustainable city. With about 30 to 40 percent of the Ferry Building products grown or sourced locally (and close to 100 percent sourced locally at the Ferry Plaza Farmers' Market), the Ferry Building is a national model for building local food systems. This direct distribution model provides local and global benefits. A local food system reduces the use of fossil fuels for food transport and storage, significantly reducing greenhouse gas production. Furthermore, organic produce and organic meat eliminate or dramatically reduce run-off and drift of pesticides–one of the leading sources of water and air pollution in California. And it provides a rich opportunity for people to come together for celebrating such a basic aspect of human experience–eating for enjoyment, connection to the larger natural system, and energy replacement.

The Path Ahead

San Francisco's experience shows the daily work, public leadership, and transformational initiatives needed to produce the systemic change leading to urban sustainability. Advocacy and leadership in government and citizen groups alike produce the bold, innovative, and feasible political, regulatory, and financial commitments required for success. As such change accelerates, the new business opportunities of a sustainable

> *"This* ENERGY INDEPENDENCE *ordinance will offer a kind of insurance against wildly fluctuating* ***energy prices*** *and permanently reduce the amount of power San Franciscans need to buy from* THE GRID. *We can work towards closing the city's polluting power plants and make the city comply with the* ***Kyoto Treaty,*** *all at the same rates PG&E charges–now I call that* A BARGAIN."
>
> — **Tom Ammiano,**
> Board of Supervisors

economy will likewise increase.

San Francisco's sustainability initiatives – its solar power and green building initiatives in particular– are stimulating the systemic change required to achieve the goal of urban sustainability. Recognizing San Francisco's efforts, the United Nations chose San Francisco to be the host city for World Environment Day 2005 under the theme Green Cities: Where the Future Lives. As San Francisco continues to pioneer new social, economic, and environmental practices, other cities can look to it for new models and inspiration.

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Sustainability Resources in San Francisco County

Refer to the following selected information resources to learn more about sustainability in San Francisco County.

SF Environment
(415) 355-4700
www.sfgov.org/site/environment

Sustainability Plan
http://temp.sfgov.org/sfenvironment/aboutus/policy/sustain/
http://www.sustainable-city.org

Precautionary Principle Ordinance
http://sfgov.org/site/frame.asp?u=
http://www.sfenvironment.com

Public Power Initiative
www.local.org

CUESA
(Center for Urban Education About Sustainable Agriculture)
(415) 291-3276
www.ferryplazafarmersmarket.com

SustainLane.com
(415) 308-4994
www.sustainlane.com

SPUR
(San Francisco Planning and Urban Research Association)
(415) 781-8726
www.spur.org

"Sustainable Redevelopment for San Francisco,"
William Eisenstein: www.spur.org/documents/010601_article_02.shtm

IFPTE Local 21
(International Federation of Professional and Technical Engineers, Local 21)
http://www.ifpte21.org/ifpte2_latestnews.shtml

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Bay Area Alliance for Sustainable Communities
www.bayareaalliance.org