Survey helps bridge communication gap regarding city's environmental efforts

By LINDA GIANNELLI PRATT
City of San Diego Environmental Services Department

Two of San Diego region's most important economic activities — tourism and agriculture1 — rely on the area's exceptional climate. San Diego County ranks as the 20th largest agriculture producer in the nation, and it is clearly one of the biggest tourism destinations. That translates into more than $5 billion annually for the region. What happens if the weather becomes more extreme, for example, more days above 100 degrees and more serious storms? Is San Diego particularly vulnerable to the impacts of climate change? Yes, and here are some reasons why:

• Increasing population, and with more people comes the culture of cars, energy use and wastefulness, all of which contribute to greenhouse gas emissions, which affects the climate.

• 52 miles of shoreline, and beach erosion is ongoing.

• Significant reliance on imported energy and water.

• Vulnerable economic sectors, including agriculture and tourism.

Cognizant of these threats, city leaders have begun taking a serious look at the ramifications of a changing climate in the San Diego region. The question may be asked, "Since this is a global problem, what difference can one city's actions make?" The unanimous answer from Mayor Dick Murphy and the City Council is clear. This does not have to be a political issue, but rather an opportunity to do the right thing. San Diego's actions, and those of more than 300 cities in the United States, serve as a model for communities, businesses and individuals. Collectively, actions at the local level are making a big difference in reducing greenhouse gas emissions, a major cause of climate change. The alternative is doing nothing, and that is not acceptable.

What are the leading causes of greenhouse gas (GHG) emissions? Vehicle emissions, power plant emissions and methane gas, which is a by-product of sewage treatment and decomposition of organic materials at solid waste landfills.

The city's leading energy consumers are the massive pumps required for the water treatment and distribution system and the sewage treatment system. Therefore, water conservation saves energy, which reduces GHG created from power plants. Our reliance on imported water and energy does not remove our responsibility for the emissions created elsewhere on our behalf.

Over an eight-year period beginning in 1994, the city of San Diego succeeded in reducing greenhouse gas emissions by nearly 1.2 million tons per year by decreasing municipal energy and water consumption, improving fuel efficiency and expanding the use of methane gas from sewage treatments plants and landfills. In doing so, the city saved more than $15 million annually.

At the culmination of this period, in January 2002, Murphy and the City Council approved San Diego's Greenhouse Gas Emission Reduction Plan, later retitled the Climate Protection Action Plan. The plan establishes a climate-protection target of 15 percent reduction in GHG emissions, using 1990 as the baseline. Phase Two of the Climate Protection Action Plan, which covers the period 2003-2010, includes greater use of alternative energy sources such as solar photovoltaic panels and landfill gas, along with further improvements in energy efficiency, water conservation, fuel-efficiencies, increased recycling of solid waste, and supporting the urban forestry initiative.

Success in most of these climate-protection endeavors depends upon the involvement of local residents — whose cooperation, in turn, hinges on effective citizen outreach.

In February and March of 2004, the Sustainable Community Program of the City of San Diego Environmental Services Department surveyed residents about what they knew about local economic, social and environmental conditions. They hoped to design, with survey results in hand, a re-calibrated communication strategy-that is, to identify and reconcile gaps between public perception and reality, and to create a better outreach plan. This effort was funded by a grant from the California Public Utilities Commission.

The survey was mailed to 3,000 randomly selected addresses in each of the city's ZIP codes — with every ZIP code area receiving a number of mailings proportional to its population. Recipients completed and returned more than 600 of the mailed surveys. The survey was also made available online, and a large proportion of respondents received it in e-mail form passed along by friends or associates. Altogether, more than 1,700 respondents replied online, for an overall total of just over 2,300 — the gender of respondents was almost split in half.

It was apparent that many San Diegans are satisfied with the current level of conservation in their own homes. The facts are that we continue to increase our use of water and energy per person, and coupled with that is the ever-increasing population. We complain about the traffic more than anything else, but according to the data, we have more cars per person, and drive each of those cars farther per year.

Even more complicated to convey is how our actions all tie in with greenhouse gas emissions, and how climate change is already affecting our region.

For example, residential water use rose by four gallons per day between 1995 and 2002, and total municipal water use increased even more, by some 24 percent. Though this may not look significant at first glance, in a population of 1.2 million, it represents a staggering annual citywide increase of more than 1.75 billion gallons. At the same time, drought threatens unprecedented constrictions in future supply from the Colorado River, San Diego's primary water source. And rising temperatures cause early melting of Sierra Nevada snow packs, increasing flows during winter when existing reservoirs lack capacity to store it and decreasing needed supply during the dry Southern California spring and summer months.

Fifty percent of respondents reported satisfaction with the quality of San Diego's air; the importance of improving air quality ranked sixth out of the 11 indicators covered in the survey. Indeed, much of the city's air pollution is hard to see, especially when compared with the infa-

See **Survey** on 5

Additional Actions for the City and Residents

Sectors	City Organization	Community
Transportation	Tracking fuel-efficiency of city vehicles	Increasing carpooling and transit ridership
	Telecommuting	Improving bicycle path infrastructure
Energy	Converting more buildings to Green Buildings	Giving incentives for buying more energy-efficient appliances
	Installing solar PV energy systems (e.g., at Miramar Landfill)	Educating the public about energy conservation
Solid Waste	—	Expanding composting programs
		Expanding recycling programs

Total City Organization GHG Reductions

Project	Annual GHG Reduction (Tons CO2)
Energy Conservation	89,628
Transportation Measures	10,438
Solid Waste Measures	1,072,560
City Total	**1,172,626**

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EMS helps businesses become more environmentally responsible

By RALPH VASQUEZ
Environmental Business Solutions

As 2005 unfolds, businesses nationwide are making more concerted efforts to be environmentally responsible by going beyond standard due diligence and compliance to applicable environmental regulations.

Organizations spanning a vast range of industries — from manufacturing/industrial operations, to electronic suppliers, automotive companies, military bases, landfills, and municipalities — are implementing environmental management systems to become certified under ISO 14001.

Yet, ISO 14001 is by no means a household term. While the general scope and purpose of ISO 14001 may be understood among the general business community, organizations may be unsure of where to start or what steps to take to become certified; as well as the subsequent advantages that ISO 14001 certification can yield for the environment and for their business bottom lines.

Developed in 1992, ISO 14000 is a series of voluntary standards on environmental management tools and systems developed and maintained by the International Organization for Standardization (ISO), which is comprised of more than 100 member countries.

ISO 14001 is a standard in the ISO 14000 series that provides a specification for a complete and effective environmental management system (EMS).

As a specification standard, ISO 14001 can be used as an audit tool to evaluate whether an organization has a complete EMS in place, and specify the elements that must be in place for an EMS to be both complete and effective.

ISO 14001 helps organizations to develop and implement their own, unique environmental management systems. Each organization sets its own policies, determines its own objectives and targets, and define its own procedures. The goal of an EMS is to then help meet the organization's policy and objectives. ISO 14001 directs what elements need to be in place; however, each organization decides exactly how to define and implement those elements.

In essence, the ISO 14001 standard is applicable to any organization that wishes to implement, maintain and improve an environmental management system; be assured of its conformance with its own stated environmental policy; demonstrate conformance; ensure compliance with environmental laws and regulations; and seek certification of its environmental management system by an external third-party organization.

An EMS is basically a structure of connected elements that define how an organization manages its environmental impacts. These elements include policies, organizational structure, procedures, goals and objectives, and defined processes.

In order to be effective, all of these various elements must work together cohesively and be a part of the overall business management system. Most organizations already have some of these elements in place, but often they're not joined in a cohesive system.

ISO 14001 states that a comprehensive EMS must include the following elements or activities:

- An established environmental policy that can be communicated effectively;
- Environmental objectives and implementation plans for meeting those objectives;
- Evaluation of environmental aspects and impacts;
- Identification of regulatory requirements and evaluation of compliance with those requirements;
- Well-defined roles and responsibilities;
- Standards for any necessary training;
- Documentation of processes that affect environmental impacts;
- Control parameters that affect environmental impacts;
- Evaluation of which suppliers' goods and services affect environmental impacts;
- Action plans for emergency situations;
- Monitoring and measurement of critical environmental parameters;
- Specific guidelines on how to initiate corrective actions when problems occur;
- Ongoing maintenance of environmental records;
- Auditing procedures for the EMS to ensure it is effective, suitable, and adequate for the organization.

The best approach for most companies to implement the EMS is to begin by simply using the ISO 14001 standard to evaluate and improve current systems. Later, if third-party registration seems either necessary or desirable, systems will be functioning at optimum levels and simply will need to be audited. Following are a few recommended beginning steps:

1. Get more information. Obtain copies of ISO 14001 and ISO 14004 (the EMS guidance standard) from ISO or the American National Standards Institute (ANSI). Seek out ISO 14001 information and expertise within your own company, and from well-regarded experts.

2. Conduct a gap analysis. Compare your current systems against the requirements of the ISO 14001 standard. Use internal or external resources who fully understand the flexibility and interpretation of the standard and are familiar with the types of systems you already have in place.

3. Form a plan to improve. Based on your gap analysis, determine what elements of your current systems will need improvement in order to meet the requirements of ISO 14001. At the same time, consider how existing systems can be streamlined or integrated for improved productivity.

4. Conduct an internal audit prior to the certification audit. This may entail putting together a project matrix and a GNATT chart, which outlines "how to" steps for approaching the official certification audit. It may be helpful to seek guidance in development of any necessary documents from an environmental consultant who is well versed in the ISO 14001 standard, as well as EMS development and implementation.

Keep in mind that these guidelines primarily apply to business and municipal operations. ISO 14001 applications and certification requirements are different for military bases and other Department of Defense (DOD) installations.

For example, some DOD installations utilize the same systems, but there might be internal differences in terms of approach that don1t exactly follow the standard. Also, military bases, like some companies, may use the standard as a guideline but do not necessarily pursue certification. In other cases, military bases are shared by a number of services, so the whole installation is not necessarily under the standard.

As the business community continues to gravitate toward practices that are more environmentally responsible, ISO 14001 certification eventually will shift from a touted and prestigious achievement of select businesses, to a standard form of due diligence.

Therefore, it may prove very beneficial to take a closer look at how your business operates now to determine what may need to be implemented in the future.

Vasquez is a senior regulatory compliance specialist and head of the Storm Water Compliance Group at environmental consulting firm Environmental Business Solutions, a wholly owned subsidiary of SCS Engineers.

Source Code: 20050223rf

Case study: Ridgehaven Building

In 1996, the 73,000-square-foot Ridgehaven Building — home to the City of San Diego Environmental Services Department — was completely renovated with many cost-effective sustainable performance methodologies and technologies. As a result, the Ridgehaven Building now uses 42 percent of the energy compared to its nearly identical neighbor, yielding a saving of almost $200,000 in annual costs.

Survey

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mous brown pall that frequently hunkers in the Los Angeles basin and western Riverside County, San Diego's neighbors to the north. But the harmful pollution is here — much of it ground-level ozone generated by motor vehicle exhaust.

In 1998, for example, the San Diego Air Basin exceeded the California standard for ground-level ozone on 54 days. The number of days declined every year until 2001, when the standard was exceeded on 13 days. In 2002, the number of days increased to 15. As the temperature continues to increase, as is projected with climate change models, it will become even more difficult to reduce the ground-level ozone, which can aggravate respiratory conditions, interfere with the ability of plants to produce and store food, and damage materials such as rubber.

More than 1 million San Diego residents — children, the elderly, athletes and those with cardiovascular or chronic respiratory disease — are especially vulnerable to ozone pollution.

The city of San Diego is in the process of developing a second survey, which will more specifically focus on water, energy and public health issues. Coupled with the resulting report, a series of workshops will be held to highlight the importance of combining our efforts — government, businesses and individuals — to reduce greenhouse gas emissions.

Anyone interested in participating in the survey should contact Sustainability@sandiego.gov. To read the 2004 report, you can request a hard copy or review it at www.sandiego.gov/environmental-services/sustainable/index.shtml.

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Source Code: 20050223re

Solar project

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with the utilities for geothermal power plants. It was able to obtain $190 million in financing last summer by entering power sales agreements both with the Nevada utilities and with utilities in California, said Dan Schochet, company vice president and a member of the Nevada Task Force for Renewable Energy.

Schochet praised Nevada's renewable energy law, as did Gary Wayne, an executive with **Powerlight Corp.** of Berkley, Calif.

"Not only is the Nevada law not bad, we think it's the single best renewable energy legislation in the country," said Wayne, who is helping Colorado write regulations for renewable energy. That state is using Nevada's rules as a model.

Source Code: 20050217cl

Small-time forest owners banding together to go green

By ELIZABETH M. GILLESPIE
The Associated Press

OAKVILLE, Wash. — John Henrikson logs his own land, downing the worst wood first and letting the best stuff keep growing.

There are tall, thick alders and gargantuan maples that could line his pockets handsomely, but he leaves most of them standing — chopping down only the ones nearing the end of their life span.

"I'm not going to touch this," he said, admiring one of the red alders on his 100 acres in this tiny town south of the Capitol Forest. "This is an unbelievably healthy tree."

Like many small-forest owners who want to treat their land well, he's thought about trying to get "green certification" through the environmentally strict Forest Stewardship Council.

But he can't afford it. It can cost thousands of dollars just to get a tract of land checked out.

Soon, though, Henrikson and several other Western Washington forest owners will band together to get certified as a group. At most a five-year contract will cost him $1,000, and he won't have to worry about the hardest part: marketing his eco-friendly wood to mills.

"This is a good opportunity for me," Henrikson said. "The alternative prior to this was doing it on my own, which would be too expensive and a difficult process trying to figure out by myself."

Richard Pine, part owner of a Salem, Ore.-based timber company, decided to go it alone and get his 2,200 acres in Lewis and Thurston counties green-certified in 1999. It has cost him close to $11,000. But as a charter member of the nonprofit Northwest Natural Resource Group, Pine expects to pay about half that over the next five years.

Henrikson, Pine and other landowners aren't expecting to make a quick buck because most mills aren't yet clamoring for more green-certified wood. They see green certification as more of a rewarding seal of approval for the extra care they take logging their land than any sure economic bet.

"Making forestry profitable is a lot tougher than it used to be, but this program gives landowners a new opportunity to connect with consumers that value their work," said Ian Hanna, who will run the group certification program when it launches early next year.

Green certification is an emerging market that's gaining the most ground in cities and states like Seattle and Washington that encourage environmentally sound building techniques for big public projects.

Major retailers including Home Depot and Lowe's have buying policies that favor certified wood. Most of the flooring Starbucks now buys is green certified, and do-it-yourself furniture retailer IKEA is a big buyer, said Michael Washburn, vice president of forestry and marketing for the

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