

Local governments and natural resources

Interview with Bob Hollis, California Resource Recovery Association



Special districts throughout California engage daily in providing focused, effective, and efficient services to their constituents. As awareness increases on the finite nature of resources in this state and throughout the world, districts continue to devote attention to the most efficient ways to operate – both in terms of the services they provide to constituents and the way they utilize, conserve, and recover natural resources.

The California Resource Recovery Association (CRRA) is an association dedicated to promoting waste reduction, recycling, pollution prevention, and the use of sustainable materials. California Special District asked Bob Hollis, member of the CRRA Board of Directors to outline the relationship between local governments and natural resources and provide innovative ideas for how districts throughout the state may operate as “greenly” as possible.

What is CRRA’s mission and what goals does the association aspire to achieve?

The ultimate goal of both the California Resource Recovery Association and the California Integrated Waste Management Board (CIWMB) is “zero waste”, meaning that everything currently going into landfills would be diverted back into the materials stream and be efficiently utilized for its highest and best use. Some people argue that achieving true “zero waste” is impossible, yet in mainstream corporate culture “zero defect” and “zero accident” goals are common-place. In my opinion zero waste is more of

a journey than a destination; it is a philosophy of “continuous improvement” applied to the management of currently discarded or poorly utilized – i.e. “wasted” – resources.

What have been some of CRRA’s achievements in California?

The CRRA was founded in 1974. It is the oldest and largest state recycling association in the United States and it was instrumental in founding the National Recycling Coalition. CRRA members have helped shape recycling policy in California for more than three decades. The CRRA facilitates ideas coming together from different perspectives including those of federal, state, and local government agencies, private industry, and non-profits, then formulates policy ideas that are frequently adopted. In 2006 the CRRA policy committee developed the Resource Management Act, and in March of 2007 the CRRA organized a policy workshop in Sacramento that launched a new Technical Council focused on keeping organics out of landfills and studying the positive impact recycling can have on reducing green house gases such as methane. The CRRA annual conference attracts people from all over the United States and has been used as a model for greening other conferences including the U.S. Olympics. In 2006 more than 600 people attended the CRRA conference in San Jose, and the total amount of trash produced for the entire event was only 4.7 pounds. The CRRA event greening guidelines as well as a “zero waste toolkit” for communities is posted on the CRRA web site at www.CRRA.com for use by anybody working to reduce waste by

● CSDA Annual Conference & Exhibitor Showcase

Resources

CSDA is planning to collaborate with the California Resource Recovery Association to teach us all how to weave the management of all resources into our daily lives and into our special district operations.

CONFERENCE HIGHLIGHT

Throwing an item "away" is a common expression in our culture, but when one considers the finite nature of the planet, there is no "away".

conserving resources. The CRRA was recently awarded a grant to develop a state-wide training and certification program for California recyclers and will be developing the program through the remainder of 2007. Any person in California interested in learning more about resource conservation can join a CRRA technical council or a CRRA local chapter free of charge.

Explain the association's Resource Management Act.

The Resource Management Act (RMA) was developed with input from state agencies, non-profit recyclers, commercial recyclers and consultants with expertise in waste reduction. It lays out a path to improving the way resources are managed in California. It is available for review on the CRRA policy web page at www.CRRA.com.

What methods does CRRA advocate for conserving and recovering California's resources?

The CRRA advocates for sound recycling policies that result in the highest and best use of post-production and post-consumer materials. In other words, finding the best place to use any material commonly referred to as "waste" that has more value than can be captured by being burying it in a landfill or burning it in an incinerator is a step in the right direction. Throwing an item "away" is a common expression in our culture, but when one considers the finite nature of the planet, there is no "away". Eliminating waste is a far better long-term option than putting it in a big pile and covering it with dirt.

What is the importance of ensuring resources are used as efficiently as possible?

The earth's resources are finite. With a rapidly growing global population that has increased from approximately 2.5 billion people in 1950 to more than 6 billion people in 2007 we all must do what we can to conserve the earth's limited resources. A shortage of resources can lead to wars, disease, poverty and the extinction of entire species. Resources are frequently consumed or wasted in the pursuit of maximizing short-term financial profits, while the long-term needs of human societies are ignored. For example, rain forests are being cut down at rapid rates for such things as lumber and cattle grazing while causing the loss of unstudied species of plants that could hold the cure for cancers or other diseases, and reducing one the greatest sources of oxygen on the planet, (second only to ocean phytoplankton).

In your experience, how involved have local governments been in areas of resource conservation and recovery?

Some local government agencies have adopted zero waste goals and have implemented plans to achieve those goals, while others are having trouble meeting the California requirement of 50 percent diversion from landfills that was mandated by Assembly Bill 939. Local government agencies failing to meet the 50 percent diversion rate are subject to potential fines of \$10,000 per day. The State of California announced last year that it has achieved the goal of 50 percent diversion statewide, while some communities such as San Francisco report a diversion rate of nearly 80 percent.

What are some common, practical steps special districts may take to "green" their communities?

Special districts can adopt green building standards such as those endorsed by the US Green Building Council LEED program, implement sustainable landscaping practices which minimize the need for fertilizers, herbicides and watering, use recycled water for plant irrigation, educate residents on local recycling

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Natural resources [continued]



programs and drop-off locations, adopt smart growth development plans that minimize commutes to offices, retail stores and schools while protecting open space corridors and wetlands.

They can also consider local ordinances to reduce the use of pesticides, plastic bags and Styrofoam in fast food packaging, and encourage the community to use reusable shopping bags. Another major source of pollution is dog excrement. Providing disposal options in parks and other high traffic pet areas can help reduce this problem.

Districts with authority over roads or light-rail transportation can also identify opportunities to use Tire Derived Aggregate (TDA) and Rubberized Asphalt Concrete (RAC) products in their construction projects. The CIWMB had \$2.5 million in grant money available for RAC projects in the 2006/2007 fiscal year. Districts that are trying to identify funds for future road projects would be well-advised to visit the CIWMB web site to research grant opportunities.

Does CRRA have a program or a plan for how a special district can take recovery and recycling down to a more personal level — for instance, implementing strategies in their own district offices?

Everybody has a role to play in reducing waste and it can start at their own desk. District staff members can review their environment and do a personal audit to

seek ways to reduce waste starting by looking in their own trash can. Examples of things that can be done on a personal level include using a low-energy laptop instead of a high-energy desktop computer, reducing paper use by storing documents electronically and printing on both sides of a piece of paper when possible, using 100 percent post consumer recycled paper when needed, turning off computers and printers when they are not being used, setting wall paper backgrounds on CRT monitors to a dark color, eliminating the use of non-rechargeable batteries, switching over to all fluorescent light bulbs, optimizing computer settings for maximum power savings, bringing a coffee mug to work rather than using disposable cups, packing a lunch at home using a reusable transport container rather than buying fast food, making sure that their car tires are properly inflated to maximize vehicle MPG and using synthetic oils in their vehicles when possible, since synthetics don't have to be changed as often, and getting oil changes at a professional facility instead of doing them at home in their garage or driveway. Commuters can also consider buying carbon offsets to reduce their "carbon footprint." The CRRA now includes the cost of carbon offsets in its annual conference registration fees.

A major soft drink manufacturer recently announced a plan to replace all of the water it uses to produce its cola products. In conjunction with the announcement the company stated that it takes 250 liters of water to make one liter of cola due to the large amounts of water needed

to produce sugar. Other reports indicate that it takes 600 gallons of water to produce one quarter pound of beef, and 165 gallons of water to produce a quarter pound of chicken. Due primarily to packaging, the fast-food industry is the second largest source of litter behind only the tobacco industry. San Francisco, Oakland and Santa Monica require restaurants to use recyclable or compostable takeout food packaging. So even the choices we make for lunch every day can have a significant impact on the environment. The best option from an environmental perspective is a diet based primarily on locally and organically grown fruits and vegetables.

District offices can also consider eliminating bottled water and other single-serve packaged items such as sugar packets, plastic drink stirrers, and Styrofoam or paper cups, and using automatic light sensors that will turn off lights

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Everybody has a role to play in reducing waste and it can start at their own desk.

when there is no motion in a room. At Carnegie Mellon University they have installed motion detectors on vending machines. The display lights on the vending machines only come on when there is motion in the room, leading to a reported cost savings of \$500 per year.

One of the areas of tremendous concern when it comes to managing our resources is technology. In Monterey, we have a district that manages e-waste. What has your experience been in the area of e-waste management and what can our special districts do to more effectively manage this resource?

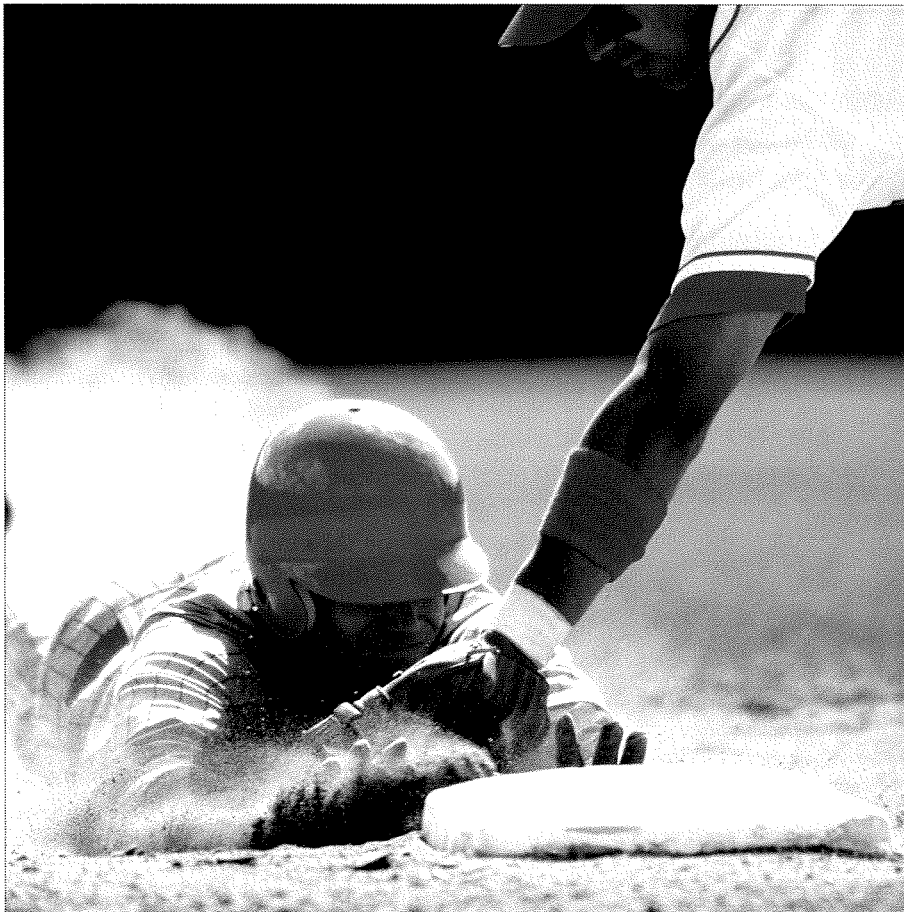
Electronic waste often includes heavy metals such as lead and mercury that can lead to long-term human health problems. The CIWMB has an excellent electronics recycling web site at www.eRecycle.org. The site provides important information for consumers, manufacturers, retailers and recyclers. It includes a directory of locations in every county in California for recycling batteries, computers, monitors, DVD players, VCR's and other products covered by the Electronic Waste Recycling Fee that went into effect in January of 2005. When consumers purchase a covered electronic product a fee of \$6-10 is added to the purchase price. These funds are then deposited into the State of California Electronic Waste Recovery and Recycling Account and used to compensate collectors and recyclers. The CIWMB reports that Monterey has improved from a 23 percent diversion rate in 1994 to a 67

percent diversion rate in 2004. If they can achieve similar rates for electronic products it would be quite an accomplishment. It is estimated that 75 percent of old computers are sitting in homes and garages because people simply do not know what to do with them. So the biggest challenge to electronics recycling seems to be educating consumers. Anything special districts can do to promote the CIWMB eRecycle.org web site should contribute to positive results for their electronics recycling programs.

As you know, CSDA is made up of a plethora of special districts. When you think about cemetery districts, how does the issue of conservation, recycling, zero-waste management affect them — or does it?

Cemeteries have significant landscaping and lawn maintenance requirements and can become greener by implementing sustainable landscaping practices. For example, caretakers can use native and drought tolerant plants to reduce water needs, they can maintain a taller grass height to facilitate Co2 conversion to oxygen, plant native trees around parking areas to shade cars, use mulching mowers to reduce trimmings and replace nutrients in the soil, eliminate the use of fertilizers and pesticides that can enter the watershed, use electric or push mowers to reduce green house gas emissions that result from burning petroleum based

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Natural resources [continued]

fuels, and create composting programs for flowers and other organic waste. Most people are surprised to learn that while a gallon of gasoline weighs only approximately six pounds, when burned in a car engine it results in an average of 19 pounds of green house gasses due to the chemical reaction that occurs in the atmosphere after the exhaust leaves the tail pipe. So if a large vehicle gets only 19 mpg it could be creating one pound of green house gas for every mile it is driven. Increasing fuel economy and reducing fossil fuel consumption is not just about saving money and conserving the world's depleting oil supply, but also about reducing green house gasses. Since most electricity is produced by burning coal, another fossil fuel that produces green house gasses, it is equally important to reduce electricity consumption wherever possible. The El Dorado Hills Community Services District recently brought in a team of goats to eliminate weeds from an overgrown lot. This reduced both the consumption of fossil fuels and the production of green waste.

Can you give us a specific example of how fire districts can involve themselves in the "greening process?"

Fire departments are often involved in hazardous waste and electronic waste collection. Removing these products from residential homes and getting them into state approved recycling and

disposal sites is a significant community service. Fire fighters are also often the first responders to auto accidents and could carry oil and fuel sorbents to the sites of accidents to help keep hydrocarbon fluids from running off the road and into the watershed. Fire departments could further help the community by including instructions for handling green waste when sending letters to property owners regarding cutting fire breaks, educating the community regarding landscaping with drought tolerant native plants that will not be as likely to dry out and become a combustible fuel, and by adopting green building standards for new fire stations. Fires put a tremendous amount of pollution into the air, and vast quantities of water are used to put them out. Anything that helps prevent fires is helping to protect and conserve our natural resources. Fire departments are truly on the front lines when it comes to resource conservation.

Obviously, water districts have a major role to play in the world of conservation management and management of a very important California resource. What is the most pressing issue with California's water from the CRRA perspective?

It's hard to identify one single water issue that is the most pressing from a solid waste management perspective, but a couple of things that come to mind immediately are issues related to plastic grocery bags, and storm water and urban run-off pollution or "SWURP". Most people do not realize that more hydrocarbon water contamination comes from water runoff over hard surfaces such as parking lots and driveways every month than came from the Exxon Valdez spill. Water agencies can help educate the community by asking residents to use commercial car washes rather than washing vehicles in their driveways, communicating the importance of proper disposal of hazardous waste such as old containers of oil and gasoline, reminding residents to have leaking seals on their cars repaired, and maintaining emergency oil spill kits for first responders in case of a hydrocarbon contamination incident. Last year the State Legislature passed Assembly Bill 1224 which mandated plastic bag recycling programs in grocery stores that distribute them, and San Francisco banned them in 2007. Plastic bags can't be processed through most Materials Recovery Facilities and often cause problems for recyclers. Bags are often picked up by the wind and end up in rivers, streams and oceans causing problems for fish, marine mammals and birds.



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Using artificial fertilizers such as nitrogen and phosphorus can lead to eutrophication, the overstimulation of plant growth that can clog streams and ponds. Enhanced plant growth or algae blooms can result in lower oxygen content when the plants die and decompose, thus causing native species to die. Recent studies indicate that even run-off from herbicides and pesticides that claim to be safe are depleting amphibian populations. Ninety-nine percent of earth's water is contained in saltwater oceans, frozen in the polar ice caps, evaporated into the atmosphere or otherwise inaccessible. That leaves only one percent of the water on the planet available as drinking water. Estimates are that more than 240,000,000 gallons of oil are disposed of improperly each year. That's the equivalent of two Exxon Valdez spills per month. Considering that one quart of oil can create a two-acre slick and that one gallon of oil can contaminate up to one million gallons of water, anything water agencies can do to reduce storm water run-off oil pollution would be tremendously helpful to the environment. As more attention is paid to this important issue, new technologies are being developed and adopted to prevent and respond to hydrocarbon contamination problems in the watershed. For example, there is a new oil spill clean-up agent developed from a NASA spin-off technology that is currently going through the licensing process in California that is made from 100 percent soy. Water districts can visit the Dept of Fish and Game Oil Spill Prevention and Response (OSPR) web site to learn more about emergency oil spill response plans. The important thing for everybody to remember when it comes to water pollution is that eventually we are all "downstream."

Waste management districts certainly have an important role to play in recovery... can CRRA provide specific recommendations for our waste management districts to implement?

Waste management districts can also adopt zero waste goals, change their names to "Resource Management Districts" and educate residents, producers and businesses on alternative options to landfills.

One specific thing they can do is site new composting facilities and stop using organic "green waste" as Alternate Daily Cover (ADC) in landfills. Most green waste can be composted and worked back into the soil to fertilize crops. When it is added to a landfill it eventually decomposes resulting in the production of methane, a problematic green house gas.

They can also make sure that fleet vehicles are well-tuned, have properly inflated tires, and have optimized routes to reduce fuel consumption, and they can explore options to capture and utilize methane gas generated from landfills. ■

Bob Hollis has served on the CRRA Board of Directors and currently serves as both an advisor to the organization and as Co-chair of the CRRA Development and Communications Committee. Hollis is the founder of Carnegie Partners, LLC, an executive search and consulting firm specializing in environmental management. He also serves on the boards of Conservation Value and Universal Remediation, Inc. and as a member of the California Integrated Waste Management Board Electronics Waste Advisory Group. He is an elected board member and past-president of the Springfield Meadows Community Services District and is a member of the CSDA Education and Membership committees. His educational background includes a B.S. in Industrial Management from Carnegie Mellon University, post-graduate studies in business and liberal arts at The University of Chicago, and graduate studies in Environmental Management at Harvard University. If you would like more information on conserving resources in your special district Bob can be contacted at (916) 941-9053 or by email at rhollis@CarnegiePartners.com.

The CRRA will have a booth at the 2007 CSDA Conference in Monterey, and welcomes the opportunity to help educate special districts in resource conservation and recovery at the local level.



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