

Monterey Regional
Waste Management District

2012 ANNUAL REPORT

The Next 60 Years



It's a Small Planet, Recycle!

General Manager's message:

The Next 60 Years - Managing Waste as a Resource



October 2012 marked the conclusion of our 60th Anniversary Year. Over these six decades, the infrastructure to reduce, reuse, recycle and safely manage and dispose of waste has been successfully built. In 1983, the District began operation of its landfill gas to energy project – one of the first in the nation. Today, that project produces 5 megawatts of locally produced power, which is used on-site and the excess is fed to the local utility grid.

During this past year, the District Board took another important step to advance diversion and conversion of “waste” to energy, by authorizing development of an Anaerobic Digestion (AD) compost pilot project. The project is being developed in cooperation with Zero Waste Energy of San Jose, and will be one of the first such projects in the United States to digest food scraps and other urban organics, harvest the resulting methane, and convert it to electricity. This 3-5 year pilot will allow the District to evaluate the future role of AD in our organics management program.

Two other significant projects are also underway. One is a cooperative effort with member agencies to competitively bid franchise agreements for the collection of recycling and solid waste. This will serve to update existing contracts with state-of-the-industry services and ensure that residents and businesses receive the best programs and value when current agreements expire in 2015. The other initiative is to proceed with the design of an estimated \$17 million improvement project to our Materials Recovery Facility (MRF). These MRF improvements would add new capacity to process waste and divert recyclables originating from commercial businesses and apartment buildings. This project would position the District to dramatically reduce landfill disposal, capture more organics for energy production, and ensure compliance with the State's 75% diversion goal.

These initiatives represent just a few of the many opportunities available to seek out partnerships as we look toward the next 60 years of cost effectively managing waste as a resource in the region. We appreciate the strong support of the community in the mission of the District. Our success begins with the dedicated efforts of our residents and businesses, and we thank you for all you do to reduce, reuse and recycle.





MRWMD Employees

The District is proud to employ a diverse and dedicated staff of 116 employees who uniquely contribute to the success of the many MRWMD program and service areas including: Materials Recovery Facility, Last Chance Mercantile, Household Hazardous Waste, Landfill Gas Renewable Energy Project, Scales, Landfill Operations, Equipment and Repair, Finance, Administration, Education and Recycling.

A Tribute to Two Dedicated MRWMD Employees

In 2012, two long time District employees, Ed Lopez and Curtis Marshall lost their battles with cancer. They served their country and their community; each serving in the military, before giving a total of 36 years of dedicated service to the District. Having worked alongside them and appreciated their diligence and commitment, we believe Ed and Curtis would agree with Theodore Roosevelt's statement: "*Far and away the best prize that life has to offer is the chance to work hard at work worth doing.*"



Years of Service:
April 1990 – May 2011

Ed Lopez, Lead Heavy Equipment Operator

In his 21 years of operating equipment for the MRWMD, Ed Lopez held an exemplary record for performance and safety. As a lead operator, he was recognized by the MRWMD Board at his retirement for his diligence and conscientious performance, "even under difficult circumstances, and inclement weather." He was recognized by a coworker of 20 years as "the best operator he had ever seen." His manager shared that "I am a better man for knowing him. He recognized the potential in others, and supported their efforts." Perhaps another coworker's statement about Ed's service sums it up best, "He went out each day and got the job done."



Years of Service:
January 1996 – March 2012

Curtis Marshall, Maintenance Supervisor

Over his 15 years of service to the District, Curtis Marshall was promoted three times. He served as a Maintenance Supervisor for 13 of those years.

Curtis took pride in responding to the diverse and dynamic needs of day-to-day operations. His work included overseeing a site crew and the general maintenance needs around the 475-acre site. Other duties ranged from assisting with the landfill gas collection system, to responding to immediate needs such as removal of unexploded ordinance, to literally putting out fires, and even rescuing and fostering abandoned kittens found on site.

For his dedication and diligence during his 15 years of service, he was recognized by management and staff with two Jonathan Livingston Seagull awards, two Charlie Benson awards, six Superior Attendance and five Perfect Attendance awards. As one of his coworkers commented, "Curtis was dedicated to his work, responsive, and always taking care of business. He had a huge presence at the District and is greatly missed."

Board of Directors

Our nine-member Board includes a representative from each of the municipalities within the District boundaries, one to represent unincorporated Monterey County within the District, and a "director-at-large" representing the Pebble Beach Community Services District. Board Members are appointed for four-year terms.

Leo Laska, Chair (since January 2007) Pebble Beach <i>Appointed January 2004</i>	Dennis Allion, Vice Chair (since July 2012) Del Rey Oaks <i>Appointed January 2011</i>	Sue McCloud, Vice Chair (through June 2012) Carmel-by-the-Sea <i>Appointed May 1998</i>	Gary Bales Pacific Grove <i>Appointed April 1969</i>
David Pendergrass Sand City <i>Appointed July 1999</i>	Libby Downey Monterey <i>Appointed January 2007</i>	Bruce Delgado Marina <i>Appointed February 2009</i>	Ian Oglesby Seaside <i>Appointed January 2009</i>
Jane Parker Monterey County <i>Appointed January 2009</i>			Rob Wellington Legal Counsel

November 2011 – October 2012 Board of Director

November 2011

Held a public hearing to consider a 2.4% cost of living increase to the disposal fee, from \$47.00 per ton to \$48.25 per ton, and to the green waste fee from \$23.00 per ton to \$23.50 per ton, effective January 1, 2012. A Fact Sheet outlining the need was provided to District customers, City Managers and staff prior to the public hearing. Board consensus was to utilize the additional revenue to fund expenditures to maintain and improve District infrastructure, and to meet State mandates affecting operations. The fee increases were approved by a 6-3 vote.

December 2011

Reviewed a letter from Monterey County Board of Supervisors Chair Jane Parker encouraging the District and Salinas Valley Solid Waste Authority to enter into joint discussions to consider potential cooperation, collaboration, and partnership options in order to better serve Monterey County with a more efficient solid waste management system. General Managers of both agencies have begun meetings to initiate discussions related to the suggestions.

January 2012

Authorized a Pilot Demonstration Anaerobic Digestion (AD) Project with Zero Waste Energy, LLC. The pilot project will process 5,000 tons per year of organic material, such as food scraps and yard waste, and extract methane to produce renewable energy. The Project will allow the District to evaluate the future of AD on a commercial scale.

February 2012

Directors Ian Oglesby and Bruce Delgado representing the Cities of Seaside and Marina were recognized with three-year service awards, and Director Libby Downing representing City of Monterey was recognized with a five-year service award.

Staff presented a Preliminary Materials Recovery Facility (MRF) Upgrade Options Report for MRF improvements capable of recovering up to 75% of the mixed commercial and multi-family waste stream. The District's current 16-year-old MRF sort line equipment will need to be replaced and upgraded.

March 2012

Approved an agreement to lease a landfill gas (LFG) utility flare at a six-month rental cost of \$63,433. The flare will allow staff to conduct a field test to determine if there is enough additional LFG to support a fifth engine/generator and to provide for continued landfill operations regulatory compliance.

Authorized a contract for a waste characterization study at a cost not to exceed \$34,635. Data compiled from the study will be used to optimize plans for MRF improvements and to assess the MRF residue for its potential to generate methane.

April 2012

Adopted a Resolution of Appreciation in Memory of District Site Supervisor Curtis Marshall who had worked at the District for 15 years, and passed away on March 27, 2012.



Planting for the next 60 years. Board members are joined by Assemblyman Monning in planting a native oak tree commemorating the District's 60th Anniversary Year.



Directors Bruce Delgado, Libby Downey and Ian Oglesby receiving service awards from Board Chair Leo Laska.

Highlights

Accepted and authorized distribution of a Final Draft Model Franchise Agreement (MFA) and an Issues Summary to member agencies. The MFA is a template for use by member agencies when current franchise agreements expire in 2015.

May 2012

Authorized staff to proceed to prepare design plans and specifications to upgrade the MRF to include replacement of existing Construction & Demolition sort line, and installation of a new sort line to process mixed commercial and multi-family waste at an estimated cost of \$17 million. Authorized inclusion of the capital cost in the FY 12-13, Preliminary Budget. The proposed upgrades will increase MRF efficiencies and community diversion levels, divert additional organics from the waste stream for conversion to renewable energy, and reduce landfill disposal more than 50,000 tons annually.

June 2012

Authorized purchase of an incline conveyor assembly for the MRF wood line in the amount of \$197,055.

Adopted Resolution 2012-04 approving the FY 12-13 Final Budget including \$20,275,000 in revenues, operating expenses of \$19,213,000, capital outlay of \$7,387,000 and principal payments on bond and lease obligations of \$625,000. Unrestricted cash (from prior years) of \$3,804,000 will be used to fund the cash shortfall (primarily due to construction cost of the new Landfill Module 5 liner). Staff will continue to implement cost saving measures and search for areas of revenue enhancement.

Staff reported on the implementation of AB 341 and mandatory commercial recycling, and the Board authorized the distribution of the AB 341 Implementation Plan to member jurisdictions.

September 2012

Received a report on the Landfill Gas (LFG) Energy Facility Operations and plans for Facility Improvement including options to handle excess LFG. The Board authorized installation of a new blower/flare at an estimated cost of \$1.8 million to provide backup and stability whenever one of the LFG engine/generators is off-line.

Approved an agreement with HF&H Consultants not to exceed \$143,109 for services to coordinate the Franchise Agreement Procurement Process on behalf of participating member agencies. This will provide member agencies with the opportunity to receive bids for a state-of-the-industry recycling and waste collection contract while ensuring the best service and value for residents and businesses.

October 2012

Reviewed and accepted FY 11-12 annual audit that included an "unqualified" opinion, the highest level of assurance an agency can receive.

Adopted a Resolution supporting Extended Producer Responsibility (EPR) which shifts the financial burden for management of regulated products, such as household batteries and fluorescent bulbs from local government to the producers.

Summary of MRWMD Diversion for Member Agencies

FY 11-12 Tons	Carmel	Del Rey Oaks	Marina	Monterey County	Monterey	Pacific Grove	Pebble Beach	Sand City	Seaside
Tons Accepted	10,779	1,779	19,289	96,870	45,421	16,839	13,863	2,679	31,583
Tons Diverted									
Asphalt / Concrete	1,035	114	1,694	7,652	4,910	1,418	2,123	201	3,218
Greenwaste Composting	2,262	213	1,891	14,018	4,969	3,340	3,790	280	2,034
MRF Diversion	2,163	236	2,714	14,276	5,501	2,483	2,564	557	4,055
Misc. Recycling	3	1	15	4,027	13	3	1	1	4
Food Scrap Composting				8	322	33	169	49	
Biosolids Composting				3,452	68				24
Total Tons Diverted	5,463	563	6,314	43,432	15,783	7,277	8,647	1,089	9,334
% Diverted	51%	32%	33%	45%	35%	43%	62%	41%	30%
Tons Landfilled	5,315	1,216	12,975	53,437	29,638	9,562	5,216	1,591	22,249
% Landfilled	49%	68%	67%	55%	65%	57%	38%	59%	70%

The table above does not include tons from curbside and commercial recycling programs. This "source separated" material is processed at the Materials Recovery Facilities operated by Waste Management Inc., and Monterey City Disposal Service.

Public Education and Outreach



In 2012, the efforts of the Public Education department staff reached approximately 5,000 local residents, industry professionals, and students ranging from preschool to university. For example:

- High school biology students made the connection between "their" waste and renewable energy.
- Elementary students learned the impact of litter on marine mammals.
- Residents learned how to compost at home.
- International professionals visited to understand how an "integrated" waste management system works.

With a staff of two, a particular focus over the last year has been to leverage the District's outreach through partnerships with "like-minded" organizations such as: The Offset Project, Save the Whales, NOAA's Ocean Guardian School Program, Citizens for a Sustainable Monterey County, Surfrider, MEarth, the Monterey County Business Council, and the CSUMB Service Learning Program.

Public Education Program by the Numbers:

Tours Provided	57
Tour Attendees (including 1,382 students)	1,493
School Presentations and Events	27
Presentation and Event Attendees	2,418
Special Events (hosted, attended or supported)	139
Special Event Attendees	881



New Landfill Module Engineering Project

Work commenced in the summer of 2012 to construct a new 23-acre landfill cell or “module” at a cost of \$4.4 million. This module is the 5th of 16 permitted modules on the 470-acre MRWMD site. The central feature of the module is an engineered composite liner system consisting of a 2-foot thick compacted clay base layer, overlain by a 60-mil thick high-density polyethylene geomembrane. Placed directly over the composite liner is a leachate collection and removal system consisting of a 1-foot thick sand drainage layer and a series of perforated HDPE pipes bedded in gravel and wrapped in geotextile, which conveys leachate from the liner floor to a sump where it can be removed by a pumping system. A 2-foot thick layer of bio-solids and green waste mix will be placed over the sand drainage layer to further protect the liner from damage during placement of the first layer of waste.

When completed in 2013, Module 5 will have a waste capacity of approximately 5,000,000 tons and a service life of approximately 15 years (to the year 2028). The \$3.5 million cost of the Module 5 liner project is being paid from the District's accumulated cash reserve.



Anaerobic Digestion Compost Pilot Project



The District has been working cooperatively with Zero Waste Energy (ZWE) to support the installation of a 5,000 ton per year “SmartFerm” anaerobic digester on the MRWMD site. The unique characteristic of the SmartFerm system is that it is modular. Individual digester units are linked together above an underground “percolate tank” which re-circulates liquid from the digesters above. The anaerobic digestion process that takes place inside the digesters creates methane gas, which is trapped inside a chamber that inflates above the digester. An engine generator consumes the methane gas as fuel to produce electricity. This project will produce 150 kilowatts of electricity that will be sold to the neighboring Monterey Regional Water Pollution Control Agency to help offset their electrical demand. As such the project is a public-private-public partnership.



The feedstock for the digesters will be a blend of food scraps and landscape trimmings. The project will allow for experimentation with ground and unground landscape trimmings, and varying percentages of food scraps and other organic materials. When operational in January of 2013, this will be the first SmartFerm system operational in the U.S. Similar projects are under construction in Sacramento and San Jose.

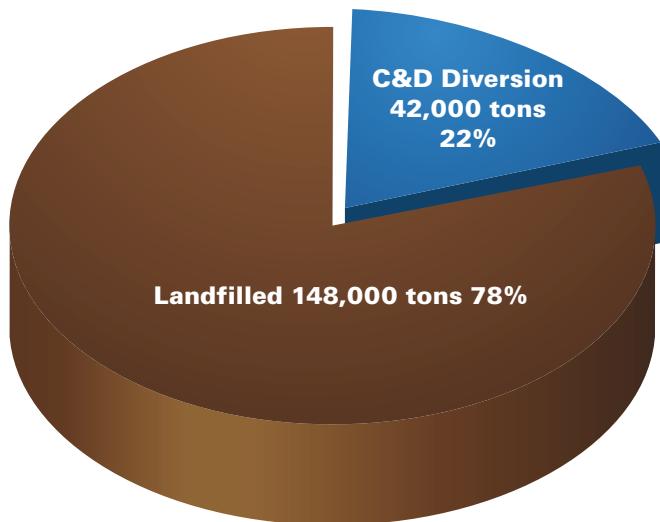
Proposed Materials Recovery Facility Improvement Project

The 17 year-old District Materials Recovery Facility (MRF) provides essential publicly-owned community infrastructure for waste reduction, reuse, and recycling. Since the MRF came on-line in 1996, more than 1.1 million tons of construction and demolition (C&D) material have been diverted from landfill disposal. During that time local diversion rates (as measured by CalRecycle) increased from an average 28% in 1995, to an average 71% today. A state-of-the-industry facility when it opened in 1996, the equipment is now antiquated and fatigued. The facility was originally designed to add a second processing line at a later date. This MRF Improvement Project would refurbish the existing C&D line and install a new state-of-the-industry commercial mixed waste processing line.

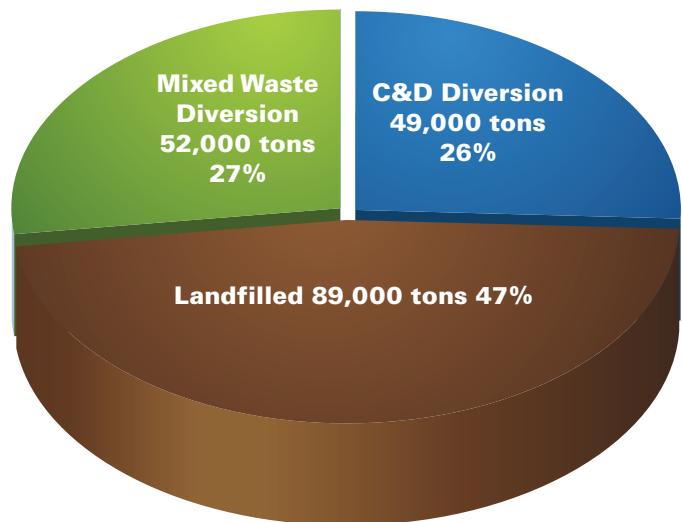
When the Board of Directors approved the current MRF design and capital outlay in 1992, they ensured the future needs and requirements of the District would be met. Just as the current MRF has served member jurisdictions well since it came on-line in 1996, the MRF Improvement Project is designed to do the same for the next generation.



**Existing
C&D MRF Diversion
and Tons Landfilled**



**Proposed
C&D and Mixed Waste
MRF Diversion and Tons Landfilled**



Landfill Gas Renewable Energy Project

The District's landfill gas to energy project has been producing electricity from waste since 1983. Today, the project's four engine generators provide approximately 5 megawatts of clean renewable power, meeting all of the District's own power needs and supplying electricity for nearly 4,000 homes. Methane and carbon dioxide gases are byproducts of the slow decomposition of refuse in the landfill. The District's landfill gas system collects 750 million cubic feet of gas per year (about 50% methane and 50% carbon dioxide) from buried refuse. The engine generators consume the landfill gas as fuel to produce enough energy to power all the operations on site while sending approximately 4.5 megawatts of surplus electricity back into the local utility grid. State and federal authorities classify the electricity generated by the project as renewable or "green" energy.



Last Chance Mercantile

The District's long commitment to reuse is embodied today by the Last Chance Mercantile, a reuse store in operation since 1991 located adjacent to the Household Hazardous Waste Collection Facility.

The District's keen eye for "salvaging" reusable materials dates from 1953 when cardboard was first diverted from incoming loads. Later, salvaged and reusable goods were collected during operating hours and auctioned off in monthly public events that became legendary. Today, the Last Chance occupies an 8,000 sq. ft. storefront and a 2-acre paved yard for salvaged lumber, building materials, landscaping supplies and a wide range of durable goods. Last Chance Mercantile operations include a convenient drop-off location for reusable goods and electronic waste recycling, and the beverage container redemption center.

The Value of Reuse at LCM

Customer Transactions	71,629
Sales Generated	\$778,077
Full-time Staff Employed	11
Facebook Fans	1,750

Household Hazardous Waste Collection



The District's Household Hazardous Waste (HHW) Collection Program began in 1987 and was one of the first permanent programs in California. District residents may turn in hazardous items such as household batteries, fluorescent light bulbs, paints, varnishes, pesticides, cleaners, and used motor oil at no charge six days a week. A unique aspect of the program is the "drop and swap" component with the Last Chance Mercantile. Reusable products such as paint that are turned in at the HHW program are made available free of charge at the Last Chance. On average, one-third of the materials received in the HHW program are able to be reused in the drop and swap program, which significantly reduces program costs. During FY 11-12, more than 523,000 lbs. of hazardous materials were turned in.

FY 11-12 Visits to HHW by Jurisdiction

Monterey	1,681
Mty. Co (In District)	482
Marina	1,410
LCM, MRF, CESQG*	448
Pacific Grove	999
Moss Landing	150
Seaside	864
Big Sur	121
Carmel	598
Pebble Beach	114
Carmel Valley	593
Sand City	88
Castroville	519
Del Rey Oaks	88
TOTAL VISITS	8,155

* Includes HHW intercepted at Last Chance Mercantile and Materials Recovery Facility, and HHW turned-in by business small quantity generators.

Service Area

The District covers a total of 853 square miles. District jurisdictional boundaries include the cities of Carmel-by-the-Sea, Del Rey Oaks, Marina, Monterey, Pacific Grove, Sand City, Seaside, and the unincorporated areas of Big Sur, Carmel Highlands, Carmel Valley, Castroville, Corral De Tierra, Laguna Seca, Moss Landing, Pebble Beach, San Benancio, and Toro Park. The population currently served is approximately 170,000.

Financial Information

Income

Source of Funds	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	Budgeted FY 2012-13
Disposal Fees	\$13,125,000	\$12,642,000	\$14,323,000	\$14,323,000	\$15,470,000
Material Sales	\$1,568,000	\$1,788,000	\$1,959,000	\$2,006,000	\$1,795,000
Landfill Gas Power	\$1,905,000	\$3,360,000	\$3,245,000	\$2,789,000	\$2,800,000
Other Revenue ^A	\$594,000	\$526,000	\$429,000	\$363,000	\$345,000
Total Income	\$17,192,000	\$18,316,000	\$19,956,000	\$19,481,000	\$20,410,000

^A Income from investment earnings, rents/leases, operational services, HHW fees, and finance charges.

Expenditures

Use of Funds	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	Budgeted FY 2012-13
Operating Expenses ^B	\$14,603,000	\$14,973,000	\$15,890,000	\$16,706,000	\$16,593,000
Acquisition of Fixed Assets	\$1,175,000 ^C	\$1,388,000	\$1,211,000	\$2,078,000	\$7,387,000 ^D
Debt Reduction (Principal)	\$1,579,000	\$1,774,000	\$1,701,000	\$1,783,000	\$625,000
Total Expenditures	\$17,357,000	\$18,135,000	\$18,802,000	\$20,567,000	\$24,605,000 ^E

^B Non-cash expenses such as amortization/depreciation and closure/post closure expenses are not included.

^C In addition, the District committed to a \$1,050,000 lease/purchase of equipment.

^D The Acquisition of Fixed Assets includes the design and construction of the Landfill Module 5 Liner (\$3.5 million) and the purchase of a D9R Bulldozer (\$1.1 million)

^E In FY 12-13, the District budgeted using Cash Reserves in order to pre-fund major capital improvements.

Cash Reserve

Total Cash and Cash Equivalents	<u>June 30, 2012</u>
	\$11,785,000
Restricted Cash and Cash Equivalents	
Revenue Bonds Trustee Fund	\$(1,147,000)
Landfill Closure and Post Closure Care Costs	\$(964,000)
Environmental Impairment Fund	\$(1,000,000)
Bond Rate Stabilization Fund	\$(500,000)
	\$(3,611,000)
Total Unrestricted Cash and Cash Equivalents	\$8,174,000
Budget Designation of Unrestricted Cash, 20% Cash Operating Expense Reserve	\$(3,319,000)

Unrestricted cash reserves are maintained to pre-fund major capital improvements as noted in Footnote D above.

June 30, 2012

\$11,785,000

\$(1,147,000)

\$(964,000)

\$(1,000,000)

\$(500,000)

\$(3,611,000)

\$8,174,000

\$(3,319,000)

\$4,855,000

Operating Schedule

Landfill Disposal Site

Monday – Friday 6:30 a.m. – 5:00 p.m.
 Saturday..... 8:00 a.m. – 4:30 p.m.

Beverage Container Buy-back Center

Monday – Friday 10:00 a.m. – 4:00 p.m.
 Saturday..... 9:00 a.m. – 3:00 p.m.

Last Chance Mercantile

Monday – Friday 8:00 a.m. – 5:00 p.m.
 Saturday..... 8:00 a.m. – 4:30 p.m.

Administration Building

Monday – Friday 8:00 a.m. – 5:00 p.m.

Closed on Sundays and these holidays: Memorial Day, 4th of July, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day and New Year's Day.

Household Hazardous Waste

Monday – Friday 8:00 a.m. – 5:00 p.m.
 Saturday..... 8:00 a.m. – 4:30 p.m.

Mission Statement

It is our mission to provide the highest quality, cost-efficient, integrated waste management services to the greater Monterey Peninsula, while preserving our environment and protecting public health through the reduction, reuse, recycling, and safe disposal of our wastestream.



Monterey Regional Waste Management District

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Find us on Facebook

Monterey Regional Waste Management District saved the following resources by using 531 pounds of Sakura Silk, made with 100% de-inked recycled fiber and 50% post-consumer waste, processed chlorine free, designated Ancient Forest Friendly™ and manufactured with electricity that is offset with Green-e® certified renewable energy certificates: 3 Trees, 1311 Gallons of Water, 1 Million BTUs of Energy, 83 Pounds of Solid Waste, 291 Pounds of Greenhouse Gases. Calculations based on research by Environmental Defense Fund and other members of the PaperTask Force.

