

Turning Waste Into **RESOURCES**



RECYCLE
REDUCE
REUSE

ANNUAL REPORT 2013



Monterey Regional Waste Management District

REMARKS

Message from William Merry, General Manager



***In 2013, we
achieved much
more than simply
managing "waste."***

As we reflect back on 2013, it is clear that the residents and businesses of the District have helped to advance the programs and facilities that serve this community. We have seen many individual examples of commitment to a more sustainable community, from hope for the future expressed by elementary school children on field trips, to zero waste special events, and the leadership of the business community to expand food scrap composting efforts.

In March 2013, the first dry Anaerobic Digester in California was placed into operation at the District. This German "SmartFerm" technology utilizes food scraps and yard waste as feedstock to produce renewable energy. Our "organics to energy" program is a partnership between the District, the project developer Zero Waste Energy, and our neighbor Monterey Regional Water Pollution Control Agency. The 100 kW of electricity produced by the SmartFerm is sold to the Agency to support their wastewater treatment plant power needs.

The District's Technical Advisory Committee, made up of member agency representatives, prepared a competitive Request for Proposals process to secure updated franchise hauling contracts for waste, recycling and organics when present agreements expire in 2015. This will ensure that Peninsula jurisdictions have a state-of-the-industry contract geared to State mandates and community needs for a range of services at the best cost. Since "collection" costs represent as much as 75% of the typical residential and commercial waste disposal bill, our community will benefit from the District working cooperatively with our member agencies to ensure they receive the best programs, service and value.

We have also been planning for the future to ensure adequate disposal capacity. In July 2013, construction of a 5th Landfill Module was completed and operations commenced. This \$3.6 million project is a significant investment in community infrastructure and will provide 15 years of engineered disposal capacity. With well over 150 years of remaining disposal capacity at the Monterey Peninsula Landfill, our community has a secure infrastructure for solid waste management.

We are also working hard to maintain the fiscal health of the District. With guidance from the Board, and the dedicated efforts of our 105 employees, we have taken measures to reduce costs, streamline operations and maximize efficiencies. We are proud that the District has been able to maintain the lowest tipping fees in the region for residents and businesses despite an uncertain economy.

In 2013 we achieved much more than simply managing "waste." From helping dozens of special events implement "zero waste" strategies, to producing energy from food waste, and exceeding 50% diversion each month in our Materials Recovery Facility, we are striving to make our programs more sustainable by turning "waste" into a "resource" in partnership with the community we serve.



REVISE Operating Schedule



New Operating Hours Reduce Expenses

Following a decline in tonnage experienced over the last several years along with a decrease in customer trips to our facilities, in July of 2013 we reduced the operating hours for our Last Chance Mercantile and Household Hazardous Waste collection facility. In November of 2013, we reduced our operating hours for the Monterey Peninsula Landfill. These changes were made following several years in which capital expenditures were deferred, a hiring freeze was enforced, and ultimately the implementation of a voluntary early retirement incentive program.

District staff has managed to maintain diversion and recycling levels for the member jurisdictions and continue to explore every opportunity to increase revenue, reduce costs and streamline operations. We are confident that the reduction in operating hours will allow the District to operate within its means while maintaining our programs, services and recycling efforts with minimal customer impact.

Landfill Disposal Site

Monday – Friday 7 a.m. – 4 p.m.

Saturday 8 a.m. – 4 p.m.

Last Chance Mercantile

Tuesday – Saturday 9 a.m. – 4 p.m.

Household Hazardous Waste

Wednesday – Saturday 9 a.m. – 4 p.m.

Beverage Container Buy-back Center

Tuesday – Friday 9 a.m. – 4 p.m.

Saturday 9 a.m. – 3 p.m.

Administration Building

Monday – Friday 8 a.m. – 4 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.





July 2013, members of the Board and staff cut the ribbon before the first load of waste is placed in the new Module 5 landfill cell.

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.

Dennis Allion, Chair
(since July 2013)
Del Rey Oaks
Appointed January 2004

Gary Bales
Pacific Grove
Appointed April 1969

David Pendergrass
Sand City
Appointed July 1999

Bruce Delgado
Marina
Appointed February 2009

Jane Parker
Monterey County
Appointed January 2009

Leo Laska, Vice Chair
(since July 2013)
Pebble Beach
Appointed January 2011

Sue McCloud
Carmel-by-the-Sea
Appointed May 1998

Libby Downey
Monterey
Appointed January 2007

Ian Oglesby
Seaside
Appointed January 2009

Rob Wellington
Legal Counsel

December 21, 2012

A Request for Qualifications (RFQ) was authorized to seek interest from firms to operate the Landfill Gas (LFG) to energy plant. The 5 megawatt plant supplies enough renewable power for all our site use and enough surplus energy to power 4,000 local homes. The RFQ is part of an overall District effort to find the most efficient means to carry out District operations.

January 18, 2013

A Waste Characterization Study prepared by Cascadia Consulting Group was accepted. The study focused on the recoverability of the commercial and multi-family waste now being landfilled and provided information that staff will use to determine final design plans for the Materials Recovery Facility (MRF) Improvement Project.

February 20, 2013

Received a staff report on options for reducing expenses and for raising revenue including: reducing landfill, household hazardous waste facility, and Last Chance Mercantile hours of operation. In the last five years, a 35% reduction in disposal tonnage from within the District has decreased revenues while staffing has been reduced from 140 to 105 employees.

March 20, 2013

The Board adopted Resolutions of Appreciation for 11 employees retiring under the Voluntary Employee Retirement Incentive Program approved by the Board at the November 2012 Board meeting. Their contributions have been many, greatly appreciated and their presence will be missed.

April 19, 2013

Received a report that the new Anaerobic Digester (AD) project is operational and producing electricity which is sold "over the fence" to the Monterey Regional Water Pollution Control Agency, supplying 10% of the power needs for the regional wastewater treatment plant. The feed stock for the AD project is food scraps and green waste.

Board of Director Highlights

May 20, 2013

Director Sue McCloud was presented with an award of recognition for her 15 years of service to the District Board representing the City of Carmel-by-the-Sea.

Received the Preliminary Budget for FY 2013/14 and a staff recommendation to reduce the hours of operation for District programs in an effort to reduce costs, streamline operations, and maximize efficiencies. Staff was directed to provide cost related information regarding the proposed changes for further consideration.

Authorized staff to schedule a public hearing for the June Board meeting to consider increasing the solid waste tipping fee, currently \$48.25 per ton, to \$51.75 per ton. The increase is comprised of two parts, a \$1.25 per ton (3%) cost of living adjustment; and \$2.25 per ton (4.25%) to recover the cost for unfunded State mandates. The total proposed increase would be \$3.50 per ton (7.25%), effective January 1, 2014. Staff is also recommending increases to tip fees for green waste, food scraps, drilling muds and contaminated soil, and establishment of a tip fee for clean separated sheetrock.

The Board also authorized staff to schedule a public hearing to consider a reduction in hours of operation for the Household Hazardous Waste and Last Chance Mercantile facilities effective July 1, 2013, and a reduction in hours of operation for the administrative office, scales, and main gate effective November 4, 2013. Staff is recommending the reduction in hours due to a reduction in revenues resulting from decreased refuse and reduction in staffing from the voluntary early retirement incentive (VERI) program. The District is currently providing the same level of services with 105 employees as was provided with 140 employees seven years ago.

June 26, 2013

A Public Hearing was held to consider: a 7.25% landfill tipping fee increase and other miscellaneous tipping fee increases effective January 1, 2014; and a reduction in hours of operation for several program areas. No comments were received from the public. Following the public hearing and Board discussion, the Board approved the reduction of hours of operation and tipping fee increases.

The Board adopted a Resolution approving the Final Budget for FY 2013/14 which projects \$18,745,000 in revenues, operating expenses of \$18,818,000, and net income of \$22,000. Capital outlay is projected at \$4,952,000 and

principal payments on bond and lease obligations are \$210,000. Unrestricted cash is projected to be \$2,300,057.

Following discussion and review of documents from District, Salinas Valley Solid Waste Authority (SVSWA), and Monterey County staff, the Board authorized District General Manager to participate in a process to scope collaborative approaches to solid waste management subject to acceptable terms and conditions.

July 23, 2013

A ribbon cutting was held and the first load of waste was placed at the newly constructed Module 5 landfill liner. This project brings on-line the 5th of 16 permitted modules engineered to contain waste and to protect the groundwater beneath the site. Module 5 has a waste capacity of 5,000,000 tons, approximately 15 years. Total project cost was \$3,618,000.

September 23, 2013

A five-year Agreement with the City of Marina was approved to provide emergency and fire protection services. The City has provided these services since 1974. .

October 18, 2013

Staff conducted a workshop with the Board to review local recycling rates and the proposed Materials Recovery Facility Improvement Project as background information for considering a District 75% recycling goal. Staff will return with a resolution in support of 75% recycling in the near future.



Board Chair Leo Laska and General Manager William Merry award resolutions of appreciation in March 2013 to employees retiring under the Voluntary Employee Retirement Incentive Program.

RETHINK Zero Waste is the Goal for Local Special Events

Zero waste is becoming mainstream at special events on the Monterey Peninsula. The District supports local non-profit The Offset Project to reduce waste at large events and venues including AT&T Pro Am, Monterey Jazz Festival, the Fairgrounds, Concorso Italiano, and Laguna Seca. In addition, District staff is responding to an increasing number of requests from smaller community organizations interested in creating “greener” and more environmentally friendly events. The District provides infrastructure (containers & signage) and technical assistance upon request. Events the District has supported so far this year include:

- Marina Earth Day (Marina)
- Toro Park Earth Day and Run
- St. Mary's by the Sea Antique Show
- Marina Labor Day Parade
- 21st Winemakers' Celebration
- West End Celebration
- Jewish Food Festival
- 2013 Safety Day
- Monterey County Food Safety Conference
- Carmel Rancho Days
- Del Rey Oaks Annual BBQ
- Pebble Beach Community Services District Annual Picnic
- Home and Garden Expo
- Carmel River Steelhead Association Fundraiser
- Big Sur International Marathon



Hitting a High Note on Diversion

The 2013 Monterey Jazz Festival diverted 4,000 lbs. of event food scraps and compostable materials, a 59% increase over their 2011 diversion.



Public Education

Our Public Education staff delivers programs and services that support residents and students in their efforts to reduce, reuse and recycle at home, work and school. From teaching a 5rd grade class how to audit their school waste, inspiring a high school student to pursue a degree in engineering, to supporting dozens of Special Events in their quest for “zero waste,” our efforts are wide reaching.



2013 Public Education / Outreach (January – October)

| | |
|---|-------|
| Tours: Public & Student | 60 |
| Tour Attendees | 1580 |
| Presentations & Events: Public & Student | 56 |
| Presentation & Event: Attendees | 2,537 |
| Community Events provided with Zero Waste Support | 20 |

“Visiting the District over the years has inspired me to consider a career in environmental policy.”

– AP Science Student, Carmel H.S.

REPURPOSE Last Chance Mercantile

The District's long commitment to reuse began a new chapter in 2013 with the Last Chance Mercantile partnering with local non-profit Loaves, Fishes and Computers (LFC) to sell refurbished computers. LFC's mission is "Changing Lives, One Computer at a Time." The Last Chance provides a unique sales venue for LFC to offer its low-cost computer systems with prices starting at \$119. Providing a low-income family or individual with a ready-to-use computer can help them achieve their goals of job search, career advancement, education, or life improvement. Computer systems are available in English and also dual-language for use by Spanish and English speakers in the same household. For more information, see the LFC website: www.loavesfishescomputers.org. With the help of LFC, we are pleased to expand our reduce, reuse, recycle efforts to now include refurbish and resell!



The Last Chance Mercantile

Now open Tuesday – Saturday 9 a.m. – 4 p.m.

Household Hazardous Waste Collection

Now open Wednesday – Saturday 9 a.m. – 4 p.m.

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 four 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 12-13, more than 525,000 lbs. of hazardous materials were turned in.



Visits to HHW by Jurisdiction FY 12-13

| | |
|----------------------------|--------------|
| Monterey | 1,545 |
| Marina | 1,435 |
| Carmel Valley | 1,034 |
| Pacific Grove | 1,026 |
| Seaside | 865 |
| Castroville | 531 |
| Salinas Area (In District) | 500 |
| Carmel | 159 |
| Pebble Beach | 144 |
| Moss Landing | 142 |
| Big Sur | 112 |
| Sand City | 82 |
| Del Rey Oaks | 79 |
| Carmel Highlands | 8 |
| Out-of District Area | 135 |
| TOTAL VISITS | 7,797 |



New Carpet Recycling Pilot Project

Carpet is one of the 10 most prevalent waste materials in California landfills, comprising about 3.2 percent of waste by volume disposed in 2008. With the passage of AB 2398 in September of 2010, California became the first state to establish a private-sector designed and managed carpet stewardship program.

Prior to AB 2398, carpet recycling was prohibitively expensive. The new law charges a \$.05 fee per yard of carpet sold to help offset the recycling cost. In 2013, the District began diverting carpet and padding from incoming loads of mixed waste. More than 156 tons were diverted in the first 12 months of the program. While the approximately \$65 cost per ton to recycle carpet is more than the \$48.25 per ton MRWMD disposal fee, diverting carpet from the Monterey Peninsula Landfill is the right thing to do.

Most carpet is made from nylon and other polymers derived from virgin oil. Many products can be manufactured from recycled carpets, including carpet backing, carpet fiber, carpet underlayment, and erosion control products. By initiating this program, the District is helping stimulate carpet recycling in California. Long-term, as tonnages increase the cost to recycle will hopefully decrease. In the meantime, if you are replacing carpet in your home or office, be sure to ask your supplier if they can recycle your old carpet.

New Wood Yard Incline Conveyor Reduces Maintenance Costs

All the leaves, grass clippings and prunings collected locally in green waste carts are delivered to the District for grinding into mulch which is made into compost. More than 30,000 tons of landscape debris travel up the incline conveyor that feeds our electric grinder, powered by the renewable energy we produce from landfill gas, each year. In late 2012, we installed a new incline conveyor utilizing the latest roller technology to reduce friction and wear on moving parts at a cost of \$211,000. The new technology is projected to save \$210,000 in maintenance cost over the next five years due to the improved design.



This Job is “For the Birds”

For many years, the Monterey Peninsula Landfill served as an unnatural food source for local seagulls. That all changed in 2010 when Leo Velázquez and his team of falcons and hawks came on the scene. The 13 birds of prey in Leo's flock are trained by their mere presence soaring above the landfill to deter seagulls from scavenging for food. Employed by Falcon Air Bird Abatement, the success Leo has had in chasing away seagulls with his Peregrine and Lanner falcons, and several Harris Hawks, is amazing.

Historically, falconry was a popular sport among the nobles of medieval Europe, the Middle East, and Mongolian Empire. Today it is used as a means to effectively control birds like seagulls at landfill operations like ours while creating a safer operational environment and encouraging a healthier lifestyle for the seagulls.

First SmartFerm Anaerobic Digester Operational at MRWMD

The first “dry fermentation” anaerobic digester in California, and only the second in the US, became operational at the District in March 2013. This 5,000 ton per year pilot demonstration project, operating in partnership with Zero Waste Energy, is effectively processing a blend of food scraps and yard waste to produce electricity and compost. The 100 kW of electricity produced from the methane gas released during the anaerobic digestion process is sold “over the fence” to the neighboring Monterey Regional Water Pollution Control Agency. This energy provides approximately 10% of the overall MRWPCA demand and complements their solar and biogas renewable energy portfolio. The objectives of the SmartFerm Pilot Project include evaluating the effectiveness of AD technology, and planning for the future to divert more organics from landfill disposal.



The AD facility stores methane gas in an inflatable storage bladder above the digestion chambers.



Local Restaurants Getting Greener

The Greater Peninsula hospitality industry has been instrumental in expanding food scrap compost efforts. District staff worked with businesses diverting food scraps to develop an “Organics to Energy” logo that will be used to identify their participation in the program through window decals, menus, website and social media usage. Look for this logo the next time you go out for dinner and be sure to thank participating restaurants for diverting their organics to energy and compost!

Summary of MRWMD Diversion for Member Agencies

| FY 12-13 Tons | Carmel | Del Rey Oaks | Marina | Monterey County | Monterey | Pacific Grove | Pebble Beach | Sand City | Seaside |
|------------------------------|---------------|--------------|---------------|-----------------|---------------|---------------|---------------|--------------|---------------|
| Total Tons Accepted | 10,044 | 1,705 | 19,583 | 100,503 | 44,184 | 16,341 | 13,971 | 2,296 | 30,004 |
| Diverted | | | | | | | | | |
| Asphalt / Concrete | 989 | 114 | 1,889 | 8,309 | 4,957 | 1,451 | 1,778 | 174 | 1,584 |
| Greenwaste | 2,236 | 222 | 2,057 | 15,727 | 4,691 | 3,290 | 4,209 | 195 | 2,379 |
| MRWMD MRF Diversion | 1,684 | 185 | 2,878 | 15,797 | 5,029 | 2,161 | 2,221 | 429 | 3,313 |
| Food Waste | 20 | - | - | 92 | 339 | 108 | 158 | 44 | 20 |
| Total MRWMD Diversion | 4,929 | 520 | 6,824 | 39,926 | 15,016 | 7,009 | 8,366 | 841 | 7,297 |
| % MRWMD Diversion | 49% | 30% | 35% | 40% | 34% | 43% | 60% | 37% | 24% |
| Total Tons Disposed | 5,115 | 1,186 | 12,759 | 60,578 | 29,167 | 9,332 | 5,606 | 1,455 | 22,707 |
| % Disposed | 51% | 70% | 65% | 60% | 66% | 57% | 40% | 63% | 76% |

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.

RESOURCES

Financial Information



Income

| Source of Funds | FY 2010-11 | FY 2011-12 | FY 2012-13 | Budgeted FY 2013-14 |
|----------------------------|---------------------|---------------------|---------------------|------------------------|
| Disposal Fees ^A | \$14,323,000 | \$14,323,000 | \$16,145,000 | \$14,255,000 |
| Material Sales | \$1,959,000 | \$2,006,000 | \$1,909,000 | \$1,800,000 |
| Landfill Gas Power | \$3,245,000 | \$2,789,000 | \$2,377,000 | \$2,500,000 |
| Other Revenue ^B | \$429,000 | \$363,000 | \$405,000 | \$295,000 |
| Total Income | \$19,956,000 | \$19,481,000 | \$20,836,000 | \$18,850,000 |

^A FY 2012-13 Disposal Fees increased due to an increase in Contract Waste disposal tonnage.

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

Expenditures

| Use of Funds | FY 2010-11 | FY 2011-12 | FY 2012-13 | Budgeted FY 2013-14 |
|---------------------------------|---------------------|---------------------|---------------------|---------------------------------|
| Operating Expenses ^C | \$15,890,000 | \$16,706,000 | \$16,158,000 | \$16,088,000 |
| Acquisition of Fixed Assets | \$1,211,000 | \$2,078,000 | \$4,480,000 | \$4,952,000 ^D |
| Debt Reduction (Principal) | \$1,701,000 | \$1,783,000 | \$1,373,000 | \$210,000 ^E |
| Total Expenditures | \$18,802,000 | \$20,567,000 | \$22,011,000 | \$21,250,000^F |

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

^D The Acquisition of Fixed Assets contains the design and construction of the Landfill Gas Enclosed Ground Flare and Blower (\$1.8 million) and the purchase of the Woodline Upgrade and Capital Equipment Repairs (\$1.0 million).

^E The 1998 Revenue Bonds were paid off during FY 2012-2013.

Cash Reserve

^F Expenditures exceeded income due primarily to the acquisition of fixed assets that are pre-funded from cash reserves. As of June 30, 2013 the District has reserves of more than \$8,332,000 in order to pre-fund major capital improvements, to sustain current tipping fees, and to meet state requirements for landfills. Reserves include: Environmental Impairment Fund, Closure/Post-Closure Fund, Rate Stabilization Fund, and an Unrestricted Reserve Fund.

Cash Reserve

| | June 30, 2013 |
|--|----------------------|
| Total Cash and Cash Equivalents | \$8,332,000 |
| Restricted Cash and Cash Equivalents | |
| Landfill Closure and Post Closure Care Costs | \$(1,049,000) |
| Environmental Impairment Fund | \$(1,000,000) |
| Total Restricted Cash and Cash Equivalents | \$(2,049,000) |
| Total Unrestricted Cash and Cash Equivalents | \$6,283,000 |
| Budget Designation of 20% Unrestricted Cash Reserve | \$(3,232,000) |
| Unrestricted Cash Reserve: Maintained to pre-fund major capital improvements such as the proposed \$17 million Materials Recovery Facility improvements, and sustain current tipping fees. | \$3,051,000 |

Frequently Asked Questions

Is the District my waste and recycling hauler?

No, the two haulers providing service on the Monterey Peninsula include Monterey City Disposal Service and Waste Management, Inc. The District is on the receiving end of what the two haulers collect in trash and green waste carts and dumpsters.

Does the District sort the recyclables I put out at the curb?

No, both local haulers operate their own processing facilities where they sort and market the recyclables collected in their "single stream" recycling programs.

Who gets the revenue from recycling the cans and bottles in recycling carts?

The haulers receive this revenue which helps reduce local rate increases for hauling.

Once collected, where are the recyclables (cans, bottles, cardboard, paper) sent for recycling?

Recycling is part of the global economy. Some materials, such as glass and aluminum are recycled domestically.

Other materials, such as plastic and paper are often exported to markets offshore.

RECLAIM

Turning Waste Into Resources

Last Chance Mercantile

Reuse Store, Donation Station,
Beverage Container Buy Back Center
E-Waste Recycling, Refurbished Computers



Household Hazardous Waste Facility

Household Chemicals, Batteries,
Fluorescent Bulbs Accepted & Recycled



Materials Recovery Facility

Construction and Demolition, Mattress,
Appliance, Tire, Concrete,
and Carpet Recycling



Recycled Landscape Products

Compost, Wood Chips, Rock, Sand, Topsoil

Organics to Energy

Landfill Gas Renewable Energy Facility,
Anaerobic Digestion Compost Facility,
Food Scraps and Green Waste Composting



Public Education & Outreach

Tours & Presentations, Workshops,
Small Planet School Education Programs,
Zero Waste Special Event Support



Service, Stewardship, Sustainability

It's a Small Planet, Recycle!

RESPONSIBILITY



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.

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

14201 Del Monte Blvd., Marina, CA 93933

831-384-5313 (tel)

831-384-3567 (fax)

www.mrwmd.org

www.keepmontereycountyclean.org

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.

