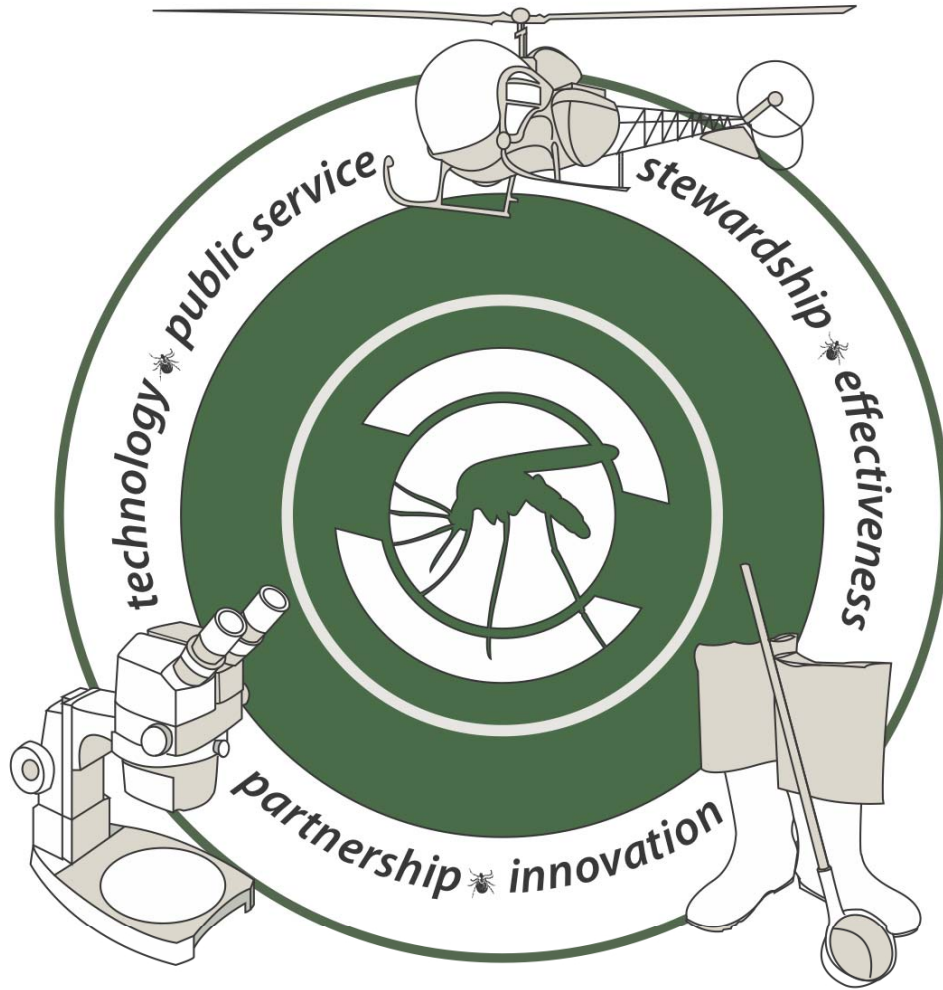


Sustainability 2013



mmcd
METROPOLITAN MOSQUITO CONTROL DISTRICT

Contents

Our Mission, Vision and Values 2

A Message from our Executive Director 3

Executive Summary 4

Opportunity Areas

 Reducing Energy Usage 5

 Reducing Waste 8

 Renewable Energy 10

 Social Responsibility & Wellness 12



Sustainability

For the Metropolitan Mosquito Control District, sustainability means meeting the needs of the present without compromising the ability of future generations to meet their needs.

Our Mission

To promote health and well being by protecting the public from disease and annoyance caused by mosquitoes, black flies, and ticks in an environmentally sensitive manner.

Our Vision

To be the leading abatement district in the world.

Our Values

We value integrity, trust, cooperation, respect, and competence in our interactions with colleagues and customers.

A Message from our Executive Director

Dear Friends,

Sustainability is an important part of who we are at the Metropolitan Mosquito Control District (MMCD). Since 1958, we have been an organization with a strong commitment to the environment and the citizens we serve. Ongoing impacts from decreasing natural resources and climate change have served to deepen our commitment to sustainability and social responsibility.

In 2013, MMCD focused efforts towards establishing a sound sustainability strategy, and formed a steering committee to assist in guiding staff's efforts. We identified key opportunity areas and small groups worked to establish specific sustainability goals in each of these areas.

Achieving our sustainability objectives and improving environmental performance requires innovation and commitment from all MMCD staff. As you read this report I hope it will become apparent to you how important these initiatives are to everyone within our organization.

Sustainability is a journey, not a destination. I believe public sector organizations have an obligation to conserve limited resources, and MMCD is constantly looking for ways to become more sustainable and improve environmental performance. On a more personal level, I want to leave my daughter and future generations the resources and ability to meet their ever-expanding needs. Simply stated in this Native American proverb I believe:

**"We do not inherit the earth from our ancestors;
we borrow it from our children."**

I am very proud of our staff's efforts and the progress we have made. We will continue on our sustainability journey because it strengthens our organization, makes us better equipped to deal with change and puts us in a better position for long-term success.

Thank you for your interest in MMCD and our sustainability efforts.

James R. Stark
Executive Director

Executive Summary

MMCD's Sustainability Steering group was assembled to set up a framework for incorporating sustainability principles into the organization. As preparation, team members were asked to review guiding documents from Clarke Mosquito Control and other organizations and to consider areas within MMCD where sustainability practices could be applied. This group's overarching theme will be to document current sustainability efforts and to examine the economic, environmental, and social impacts of sustainability on the District going forward.

This group chose to focus on five opportunity areas: 1) reducing energy usage; 2) reducing waste; 3) identifying and using renewable resources; 4) social responsibility/health and wellness; and 5) developing a guiding document for the District that can be updated each year.

MMCD assembled all staff in January 2013 to discuss our sustainability initiatives. At the meeting, members of our focus area subgroups gave updates on their activities. Invited speakers from both the private and public sector (Lyell Clarke, President and CEO of Clarke Mosquito Control and Cathy Moeger, Minnesota Pollution Control Agency, respectively) described their experiences implementing sustainable business practices.

Group members discussed current District practices we already consider sustainable such as our recycling efforts, using energy-saving lights, using E85 in District vehicles, etc. Staff identified a need to quantify these efforts and share the results, and to make sure all District employees, including inspectors, approach their jobs with sustainability as part of their mindset going forward. Staff also agreed that sustainability initiatives adopted by the District must include specific, measurable objectives that are positive, forward-looking, and strengthen the District over the long term.

Focus Area Groups

Reduce Energy Usage

This subgroup focused on two projects: ensuring that lights are on only when required and ensuring computers are on only when necessary. A fuel usage group was also organized under the directive "As an organization, be more fuel efficient."

Reduce Waste

The focus of this group was to increase recycling with-in each facility and to examine our major waste stream, 40 lb material bags, and find a way to reduce or eliminate them in the future.

Renewable Energy

The Renewable Energy group focused on education through websites and tours of other organizations using renewable energy.

Social Responsibility and Wellness

In 2013, this group focused efforts on surveying all staff on volunteering efforts inside and outside of work. Other areas of focus were local food drives and plans in 2014 for a blood drive.

Reducing Energy Usage

The Reduce Energy Usage group focused on reducing MMCD's overall energy consumption. The group began by reviewing MMCD electricity and fuel consumption and considering ways to reduce energy usage. Two projects were chosen for 2013, both involved specific ways to reduce electricity consumption in day-to-day operations. The goal was to reduce MMCD electricity usage by 10% overall. The ultimate plan is to learn how to relate this to carbon footprint values.

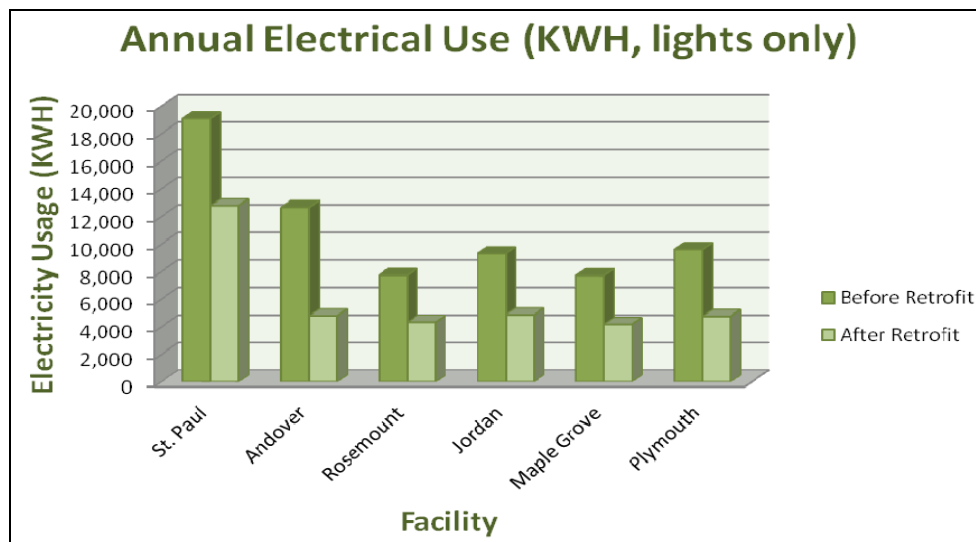
Electricity

Project 1- Lighting as needed

Baseline Information: Past electricity usage records were gathered and the number and type of light switches at each facility were tallied to determine how many were manual, automatic, or had 24-hour security features.

Strategy: Retrofit companies evaluated lighting and automatic light switch options for each facility. The projected energy savings was compared with the expense of the retrofit to determine if costs could be recouped in a timely manner. The St. Paul facility was evaluated first, followed by all other facilities.

Project Status: All facility evaluations were completed by June 3, 2013. The projected electricity savings is shown in the chart below:



Current (lights only) electricity usage is 66,105 KWH per year. After the retrofit, projected usage should drop to 35,699 KWH per year. That means a potential energy savings of 30,406 KWH (46%) per year. The net cost of the retrofit, after rebates is estimated at \$33,293.28

Based on these projected savings, the District moved forward with lighting retrofits at facilities in St. Paul, Andover, Rosemount, Jordan, Maple Grove, and Plymouth. A retrofit of the Oakdale facility is being considered as part of new lease and upgrade negotiations.

Work Remaining: As of October 2013, lighting retrofits at all facilities are complete. By the end of 2013, the goal is to assemble baseline energy usage data for each facility to accurately document the impact of the lighting retrofit.

Project 2- Computers on as needed

Baseline Information: Past electricity usage records were reviewed and the number and type of computer at each facility were tallied. Network records of amount of time computers were on and using electricity were assessed.

Strategy: The plan is to evaluate the computer situation at each facility factoring in the number of computers, their age, operating system, network, and potential for OS upgrade, and write and install an automatic shutdown script (Windows 7 and XP) at each facility after network and operating system upgrades are completed.



Project Status: In April 2013, a special effort was made to remind staff to turn computers off overnight and when not in use. As of July 2013, all network upgrades were completed and work continues on operating systems upgrades at all facilities.

Work Remaining: Complete operating system upgrades will be completed at each facility. Automatic shutdown scripts for all computers that do not need to stay on to support data updates, transfers, or essential network or IT functions will be written, installed, and activated. We will assemble baseline IT energy usage data for each facility and monitor post-retrofit energy usage to document the impact of the changes.

Relevant questions to answer would be whether we could detect a decrease in the time computers were on when not in use. Additionally, can we detect a decrease in electricity usage related to computer upgrades, including a decrease in the number of monitors associated with networks?

Fuel Efficiency Work Group



During 2013, the District established a work group to help find ways to do the same amount of work while driving fewer miles and using less fuel. That group has been using problem solving techniques to answer some fundamental questions about how we use fuel in day-to-day operations. This work group's stated goal is "As an Organization, Be More Fuel Efficient." The workgroup's continuing objectives are to 1)

measure amount of fuel used to complete mandatory tasks; 2) have fuel efficient drivers; 3) use the most fuel efficient vehicles to do work; 4) assign workload using fuel efficient strategies; and 5) promote a fuel efficient culture

Ongoing Projects

- Review vehicle features needed to complete operations
- Measure vehicle specific and overall fuel usage
- Review amount of overall work comprised by each task

Near term Tasks

- Develop "Efficient Driver" training and feedback to foster fuel efficient driving
- Develop measurement system that includes GPS information and driving behavior (pilot study of Forward Thinking GPS recorders)

Long Term Tasks

Review work assignments

- Use highest mileage vehicle available
- Minimize driving distance
- Minimize number of vehicles required

Review staff training

- Provide regular feedback about fuel efficiency and driving behavior
- Provide real time mileage information

Review new vehicle technology

- Replace old vehicles with higher MPG models
- Move away from the "big truck" paradigm – incorporate new vehicle technology (e.g., hybrids) into fleet



Future Plans

At the end of 2013, we plan to revisit our idea list to determine how to expand successful projects and which new projects to start. We want to design a project to reduce fuel usage and plan to start by reviewing the results of fleet management (fuel) cards and other vehicle-related information (e.g., the operation costs of leased versus District-owned vehicles including miles driven and vehicle-specific gas mileage).

Reducing Waste



The Reducing Waste group's mission is to reduce the waste stream in all processes and to share the techniques, processes, and experience of all facilities as they find ways to reduce waste.

A waste stream is defined as a material that is not recycled, re-used, or composted. If material is brought to a landfill or incinerated, we defined it as part of the waste stream.

Baseline Information: All facilities have both recycling and garbage information that can be used for comparison to any new or upgraded process implemented.

Strategy: To increase recycling within each facility by allowing each facility to creatively encourage and promote recycling throughout the year by discovering what works best in their particular region. Municipalities have different recycling rules and different vendors, so it works best to allow each facility to set unique goals.

Maple Grove Facility: The goal in 2013 for the Maple Grove process team was to reduce the number of trash pickups through a change in how we manage our control material bags. The number one source of "trash" generated at the Maple Grove facility is 40 lb material bags used in helicopter larviciding operations. In the past the process involved rolling 7 empty bags and stuffing those into an 8th bag; then placing those bags into the dumpster for collection. During a typical brood, we would fill the dumpster in one day. The team decided to see if handling the bags differently would make a difference.



Through the problem solving process, we came up with multiple possible solutions, ranging from shredding the bags, using a compactor, to finding a recycling vendor that could take the bags. Because we did not want to raise costs, we decided that laying the bags flat would save space, and be efficient if done correctly. One of the first tasks was to find or build a place to put the bags after emptying them. We discovered a convenient tool already at the landing site in the equipment cages we all have on our trucks! Each full size equipment cage can hold between 160-180 bags (10-12 loads) leaving plenty of room in the bed of the truck to haul other items. During our most productive days, we could fill 2 cages using vehicles already on site.

The way in which bags were placed in the dumpster was also a problem. We found that if we took the time and stacked the bags in the dumpster, we could fit more bags as opposed to tossing them in haphazardly. We found it easy to put all the bags into the dumpster no matter how much air work was done if we stacked them in an orderly fashion. We compared the total number of material bags generated during "air work weeks" and the number of dumpster pickups for 2011, 2012, and 2013 to see if our changes made a difference (see table).

The average number of bags per dumpster pickup was increased by 45% from 2012, and 30% from 2011.

Year	# Material Bags	# Dumpster Pick ups	Avg. bags/pick up	Recycle pick-ups
2011	7113	14	508	15
2012	6769	17	398	16
2013	5847	8	730	20

When talking with inspectors we learned that where they live has a big impact on what they feel they can recycle. For example, some communities still do not allow plastic film bags to be recycled; some communities only recycle Type 1 and 2 plastics. We are working to educate staff on all the materials we are allowed to recycle at each local facility. The number of recycling pick-ups also increased in 2013 from previous years.

North Facility set up a “free” table where staff could leave items for others to reuse.

Rosemount facility installed recycling mobiles and a sustainability board. The mobiles allowed staff to actually see what can be recycled instead of using pictures on the wall.

Jordan facility recycled 4,100 lb of paper in 2013, compared to 2000 lb in 2012. Recycling containers increased from 6.96 gallon containers in 2012 to 8.96 gallon containers in 2013. In addition, staff donated 35 lb of aluminum cans for the Deep Portage Learning Center in 2013.

Future Plans

In 2013, options to the 40 lb control material bag were discussed. Mark Smith and the Maple Grove Process Team problem solved and developed the goal for 2014: no ground work *Bti* bags. The process steps are completed, and the group is looking at options for storage and distribution. The belief is problems and solutions learned from groundwork in 2014 will lay basis for other opportunities to reduce 40 lb bag usage in 2015.



Renewable Energy

The “Renewable Energy” group focused on education. The team has reviewed a variety of renewable energy avenues: solar, fuel cells, wind, biomass, geothermal, and water power. We catalogued areas where MMCD currently uses renewable energy sources (i.e. E85 fuel) and outlined areas where MMCD has the most potential to utilize renewable energy in the future (i.e. building modifications). Many renewable energy projects need significant capital to finance, so in the short term, we focused our attention on educating our team on the various options by investigating existing renewable energy projects in our communities. To determine project potential going forward, we recorded baselines of energy consumption (gas and electricity) for each of our seven facilities based upon the three previous years (2010-2012).



The group contacted various state, county, and city representatives to explore the types of renewable energy projects done in our community. Through these contacts, we learned about local projects (e.g. windmills in North St Paul, DNR solar panels in Afton, passive solar in St Paul), options in purchasing “green power” blocks through energy companies, successful and less successful endeavors, and possible grants to aid in financing projects. Our team found many educational opportunities MMCD could use to increase knowledge in this area. The team is investigating becoming members of or learning from the following groups:

1. Climate and Renewable Energy Steering Team (CREST) – Minnesota DNR
2. Minnesota Renewable Energy Society (www.MNRenewables.org)
3. Minnesota Community Solar (www.mncommunitysolar.com)
4. Clarke – Private industry with renewable energy initiatives (www.clarke.com)
5. Hennepin County initiatives (www.hennepin.us/coolcounty)
6. Minnesota PCA – IPPAT – Governmental Sustainability/Living Green
7. Windustry (www.windustry.org)
8. Century College – Continuing Education in Renewable Energy/Solar
9. Minnesota Department of Commerce (www.mn.gov/commerce/energy/)
10. Minnesota Department of Transportation – Fleet Management

Tours done in 2013

- Windmill at North St Paul’s Public Works
- Solar array at MN DNR’s Afton State Park
- Passive solar array at St Paul’s RiverCentre
- MPCA EcoExperience at MN State Fair

The Renewable Energy group is also researching opportunities to work with other government entities on projects. Facilities with close proximity to other governmental agencies (e.g. Rosemount and North facilities) might be able to share expenses and both take advantage of renewable energy opportunities. Our team will review data to focus initially on projects with the greatest return on investment.

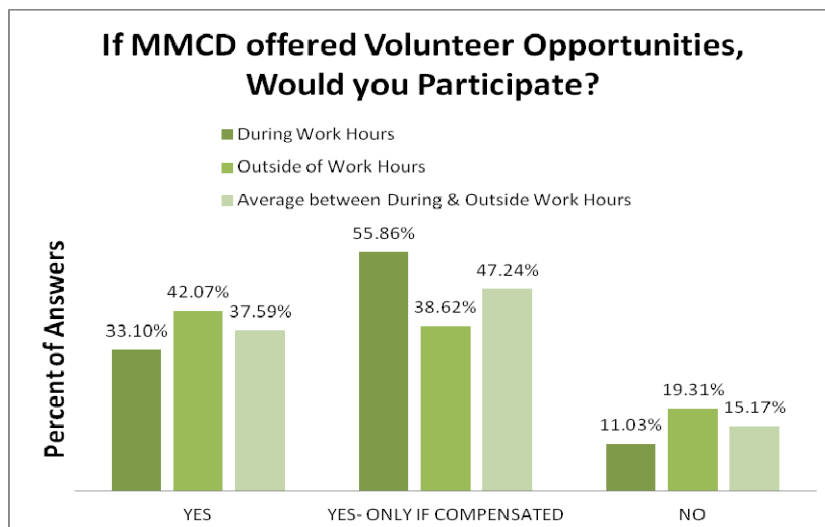
Social Responsibility and Wellness

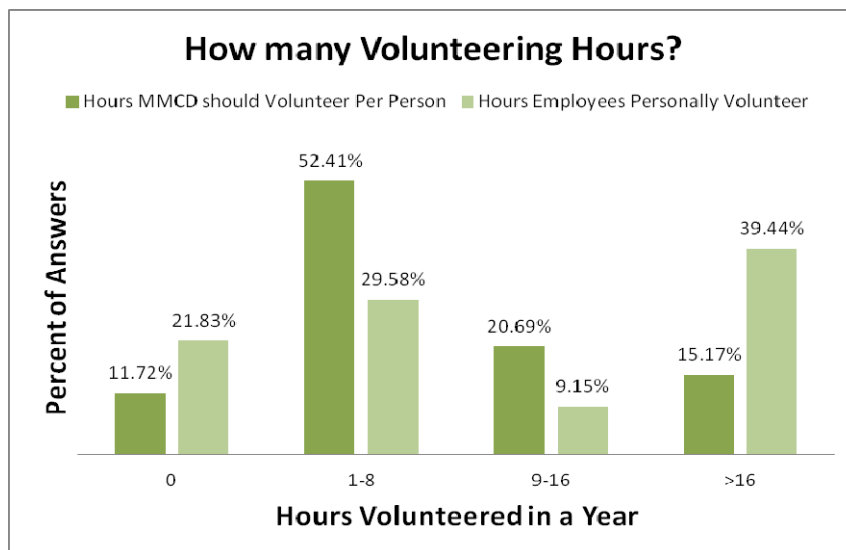
At MMCD, we define social responsibility as how we give back to and take care of our community. Our community includes the citizens of our seven-county metro service area, but also state, national, and international perspectives.

Baseline Information: We began by determining what MMCD currently provides for its employees (such as sick time reimbursements for health and wellness programs) and the greater community relating to these five focus areas: environmental sustainability, health and wellness, philanthropy, workplace ethics, and ethical sourcing.

Strategy: We brainstormed ideas that would fit our focus areas. For instance, in the area of Environmental Sustainability we explored volunteer opportunities in community-related projects such as Adopt-A-Road or Adopt-A-River. For Health and Wellness we looked at raising money for “Nothing But Nets”, a program that provides bed nets to people living in malaria endemic areas. In the area, of Philanthropy we asked staff for ideas and organizations about which they would be interested in getting more information. We also began to look at Ethical Sourcing as a way to promote use of “Green” maintenance and cleaning products.

We administered a short survey to staff to gain a better understanding of employees’ views about volunteering individually and through groups both during and after work hours. A total of 145 staff completed the survey. Results of the survey are shown in the graphs below. The first graph represents what percent of people would volunteer if the opportunity was provided by MMCD. Nearly 40% of our employees would volunteer without being compensated. The second graph depicts how many hours of volunteering are reasonable to expect from our employees. Although most staff currently is volunteering over 16 hours in their own time, they believe less than 8 hours is right for our organization.





Status: Using the survey results, we picked projects that could be done by staff outside of regular work hours. Many employees want to volunteer and many already do, but questions remain about work-directed volunteering and how that can be separated from the community service we already provide. To that end, we settled on two projects where we felt we could make a difference.

First, we organized a food drive for Neighborhood House in St. Paul and donated 210 pounds of food. Also, our Rosemount facility set up a collection point for food items to be donated to a Dakota County food shelf. Second, we explored options for an employee blood drive and set the 2014 donation date: March 26, 2014.

Going forward, the group will develop a comprehensive Volunteer Plan for 2014, taking into account all we've learned this year.



Members of the Sustainability Groups

Reducing Energy Usage

Aubrey Soukup, Brian Feldhake, Jake Rounds, John Walz, Jon Litchy,
Jon Peterson, Stephen Manweiler, Tom Pexa, Wendy Prow

Reducing Waste

John Walz, Jim Stone, Brian Feldhake, Tom Pexa, Mark Smith, Loren Lemke

Renewable Energy

Mark Smith, Eva Knudsen, Jim Stark, Kirk Johnson, Stephen Manweiler, Jon Peterson

Social Responsibility and Wellness

Loren Lemke, Mike McLean, Eva Knudsen, Jim Stone, Carey LaMere,
Aubrey Soukup, Kirk Johnson, Shannon Ward, Wendy Prow, Molly Nee,
Lauren Anderson, Tyler Head, Carol Mertesdorf, Max Renner

IPPAT Participation

MMCD is also a member of the Minnesota's Interagency Pollution Prevention Advisory Team (IPPAT). IPPAT was created by governor's executive order as a way to reduce hazardous waste generation. Now housed in the MN PCA, it has grown to include efforts to reduce waste, prevent pollution, improve efficiency, and reduce energy use in public buildings and to provide a forum for sharing sustainability practices.