

Metropolitan Mosquito Control District  
**Sustainability Report**  
**2017**



## **Our Values**

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

**Our Vision**  
**To be the leading abatement district in the world.**

## **Sustainability**

For the MMCD, Sustainability means meeting the needs of the present without Compromising the ability of the 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.



## 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. This is reflected by our Mission Statement.

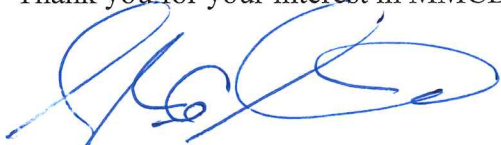
The Metropolitan Mosquito Control District's mission is to promote health and well-being by protecting the public from disease and annoyance caused by mosquitoes, black flies and ticks in an environmentally sensitive manner.

Ongoing impacts from decreasing natural resources and climate change have served to deepen our commitment to sustainability and social responsibility. 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.

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. Each year thereafter we have built upon work in previous years and added new projects. Notable projects in 2017 have built upon efforts to decrease our trash volume through a combination of recycling, composting (organics collections) and purchasing changes. We also have evaluated energy usage by District computer equipment to determine if simple steps could save significant amounts of energy.

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.



Stephen A. Manweiler  
Executive Director

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## **Executive Summary**

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MMCD assembled a Sustainability Steering group to set up a framework for incorporating sustainability principles into the organization. This group's overarching theme is to document current sustainability efforts and to examine the economic, environmental, and social impacts of sustainability on the District going forward.

This group focuses on five opportunity areas: 1) reducing energy usage; 2) reducing waste; 3) identifying and using renewable resources; 4) promoting social responsibility and the health and wellness of our employees; and 5) compiling a guiding document, or Annual Report. In 2017, an additional area was added to focus on next steps in sustainability.

### **Opportunity Area Goals:**

#### **Reduce Energy Usage**

We are exploring strategies to save electricity by encouraging teleconferencing for meetings, by providing training with webinars and by developing scripts to automatically shut down computers outside of work hours.

We continue to review our vehicle fleet with the goal of minimizing fuel usage while maximizing the amount of work completed for each mile driven. To achieve this long-term goal, we are exploring how we can use better training for vehicle operators including better matching of vehicles to types of work.

#### **Reduce Waste**

We are working to reduce our waste stream through more effective recycling practices, increasing organics composting, and by adopting reusable bulk control material containers.

#### **Renewable Energy**

We are exploring renewable energy such as solar and wind generation to determine when and if such sources can provide cost effective replacements for current fossil fuel derived energy.

#### **Social Responsibility and Wellness**

We are focusing on volunteering efforts inside and outside of work and on the health and wellness of our employees.

#### **Guiding Document/Annual Report**

We are focusing on documenting our sustainability efforts.

#### **Sustainability – Next Steps**

We are focusing on turning our sustainability initiatives into a sustainability culture.

# Reducing Energy Usage

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The Reducing 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. In 2013 the group focused upon reducing electricity usage and continued these efforts in 2014. In 2014 the group started a review of hybrid vehicles as a way to reduce fuel consumption. These evaluations continued in 2015. In 2015 the group also developed a tool to estimate how much fuel could be saved by participating in meetings via teleconference. In 2016 the group tested a device that can measure energy usage by District equipment to develop a way to estimate potential energy savings achievable using automatic computer shutdown. In 2017 the group used this device to measure energy use by computers in four power configurations.

## Reduce Electricity

### Project 1- Evaluate energy use of computers to estimate potential savings achieved by automatic shutdown

**Baseline Information:** In 2017 we tested an inexpensive device (Belkin Conserve Insight™ Energy Monitor) to help determine the best way to measure baseline and other energy use levels of computers and other District equipment. The device plugs into a power outlet (Figure 1). It measures the energy usage (in watts) of the equipment plugged into it (Figure 2). We chose this device because it can measure energy in several ways including watts, the cost of operation, and the amount of carbon dioxide (CO<sub>2</sub>) produced to generate the electricity consumed. The device includes a 5-ft cord connected to a display. It has a socket electrical rating of 120V~/15A/60Hz/1800W. The maximum watts displayed equals 1800 and the maximum operating cost in dollars displayed equals 9999.

The device measures energy in watts, both instantaneous use and a 45-minute average use. We converted watts to kilowatt hours (kilowatt hours = (watts\*hours)/1000) to compare measured power use by computers to energy use on District electric bills, thereby estimating the magnitude of power savings compared to overall usage.

**Strategy:** Two devices were used on two computers, one with one monitor and the other with two monitors. Both computers and monitors were plugged into a power strip that could be turned off completely to essentially “unplug” the computers. Four different power states were defined: (1) everything turned on, (2) computer in “sleep” mode, (3) computer and monitor off but power strip on, (4) everything including the power strip turned off.

We measured energy usage in these four power states for a week, switched devices and measured energy usage for another week. Each device gave the same reading for each of the two computer setups verifying that we could compare energy usage measured by different devices.

For ten weeks (end of September through mid-December) the time the computer was turned on and off was recorded each workday. We used these records to determine how many hours per week the computers were turned on so we could calculate weekly energy usage in kilowatt hours.

The number of remaining hours each week was used to estimate potential additional energy usage if the computer was in each of the three remaining power modes.

Our initial goal was to determine how much energy we could save by turning off computers instead of leaving them on in sleep mode 24 hours per day. Significant savings might justify training staff to turn off their computers and development of a script to automatically turn off computers.

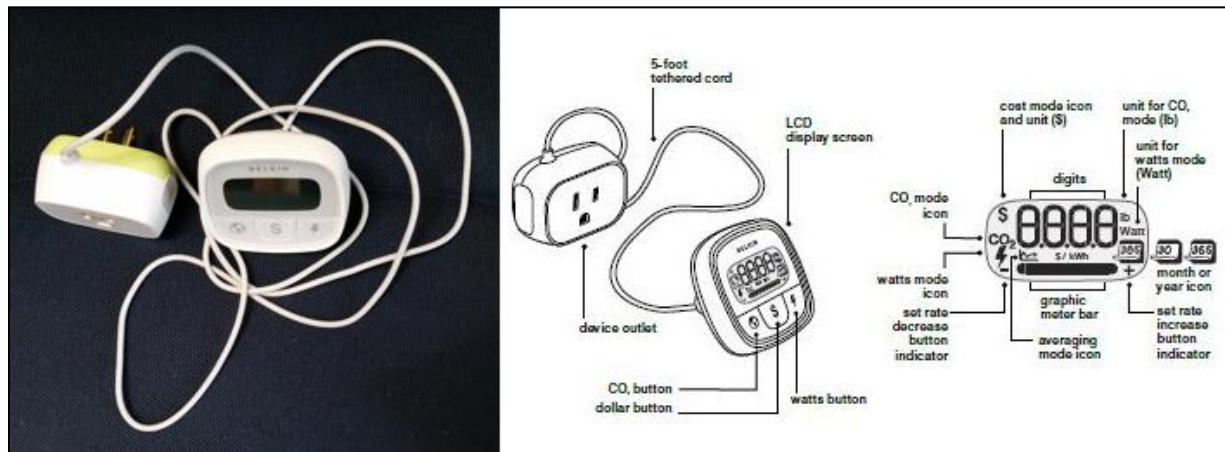


Figure 1 Belkin Conserve Insight™ Energy Monitor – Features and Output.

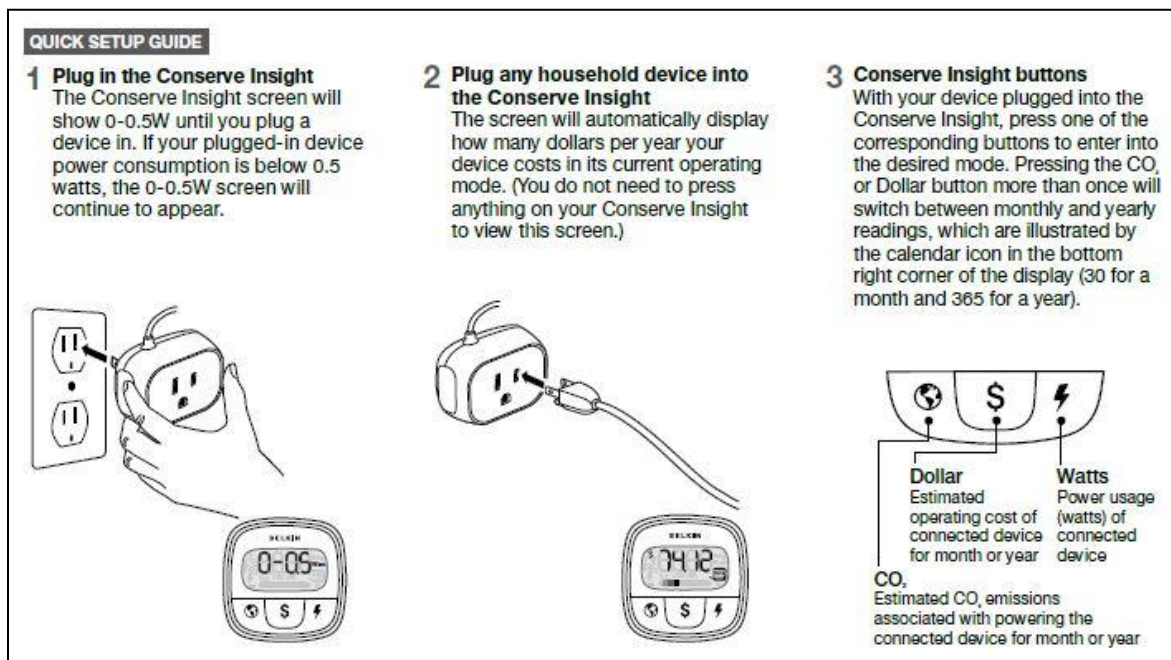


Figure 2 Belkin Conserve Insight™ Energy Monitor – Use.

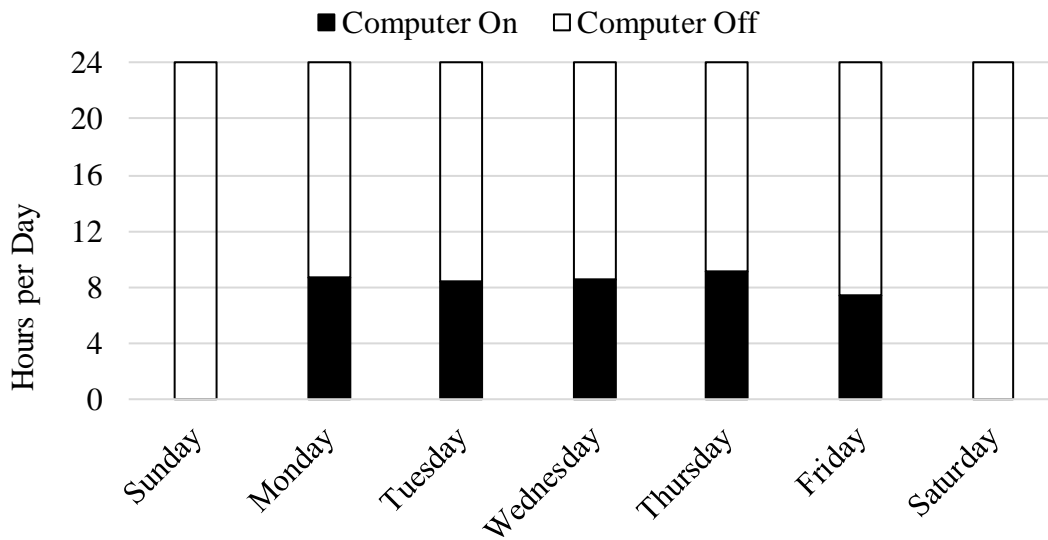
**Project Status:** In the first test the device was used to measure the energy used by HP desktop computers with one or two monitors. The HP computer with one monitor used 42.5 watts when

all were activated. With this computer in sleep mode and monitor on, power usage dropped to 22 watts. Power usage dropped to 4.2 watts when the computer was shut down and monitor was turned off (power strip was left on). Turning off the power strip (effectively unplugging the computer) reduced power usage to 0.5 watts (Table 1). The computer with two monitors used more energy, 68.8 watts, when turned on. Sleep mode dropped energy usage to 39.3 watts. Turning everything except the power strip off dropped consumption to 1.7 watts. Turning off the power strip dropped consumption to 0.5 watts (Table 1).

Table 1. Power in watts and kilowatt hours used by computers with one or two monitors.

Computer Status	Computer + 1 Monitor		Computer + 2 Monitors	
	watts (average)	kilowatt-hours (per 60 min)	watts (average)	kilowatt-hours (per 60 min)
Computer & Monitor On	42.5	0.0425	68.8	0.0688
"Sleep" Mode	22.0	0.0220	39.3	0.0393
Computer & Monitor Off	4.2	0.0042	1.7	0.0017
Power strip off	0.5	0.0005	0.5	0.0005

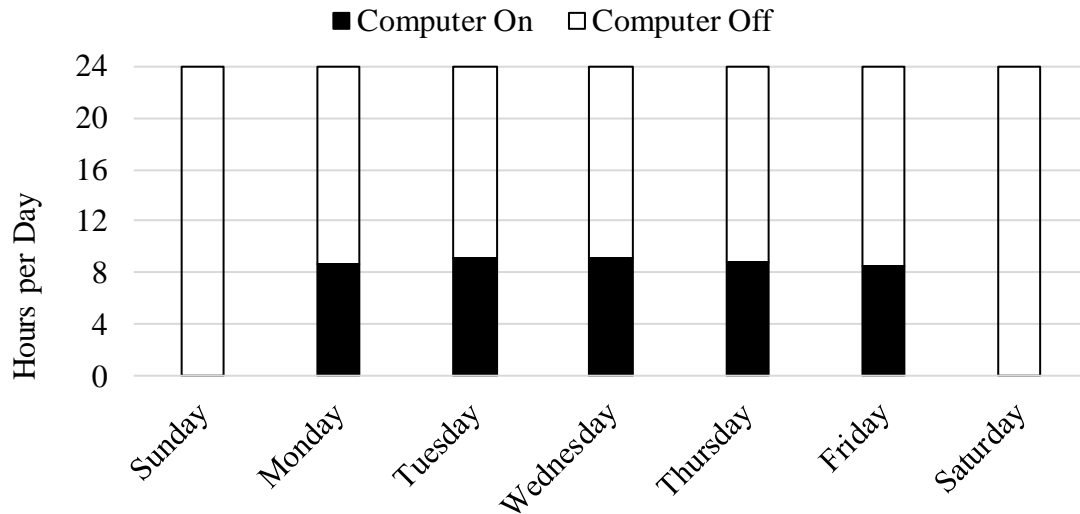
The computer with one monitor was used an average of 8.43 hours each day from Monday through Friday for a total of 42.16 hours (25%) per 168-hour week (Figure 3). Daily use of the computer with two monitors was very similar, an average of 8.85 hours each day from Monday through Friday for a total of 44.26 hours (26%) per 168-hour week (Figure 4).



**Computer On** 42.16 hours (25%) of 168 hours per week

Figure 3 Daily hours of computer use (Sunday through Saturday) each week (computer with one monitor).





**Computer On** 44.26 hours (26%) of 168 hours per week

Figure 4 Daily hours of computer use (Sunday through Saturday) each week (computer with two monitors).

Each week the computer plus one monitor used 1.79 kilowatt hours during the 42.16 hours it was turned on (Figure 5). Leaving the computer in “sleep” mode the remainder of the week resulted in total power usage of 4.56 kilowatt hours (Figure 4). Turning the computer and monitor off (power strip on – i.e., still plugged in) reduced power usage by 2.24 kilowatt hours (49.1%) to a total of 2.32 kilowatt hours per week. Turning the power strip off (effectively unplugging the computer) reduced power usage by an additional 0.47 kilowatt hours (another 10%) to 1.85 kilowatt hours used per week.

Each week the computer plus two monitors used 3.05 kilowatt hours during the 44.26 hours it was turned on (Figure 5). Leaving the computer in “sleep” mode the remainder of the week resulted in total power usage of 7.91 kilowatt hours (Figure 5). Turning the computer and monitor off (power strip on – i.e., still plugged in) reduced power usage by 4.65 kilowatt hours (58.8%) to a total of 3.25 kilowatt hours per week. Turning the power strip off (effectively unplugging the computer) reduced power usage by an additional 0.15 kilowatt hours (another 2%) to 3.11 kilowatt hours used per week.

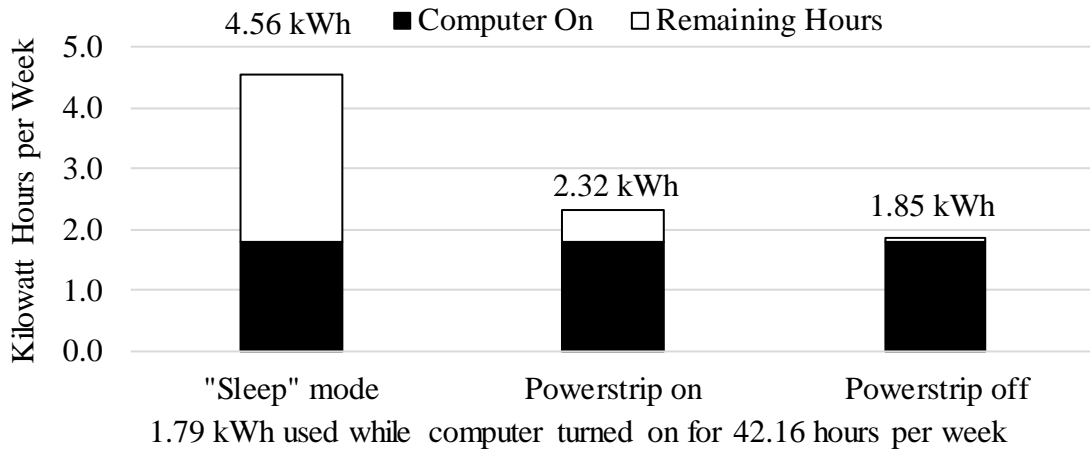


Figure 5 Energy use (kilowatt hours) each week of the computer with one monitor while turned on and off in “sleep” mode or with the power strip only on or off the remainder of the week.

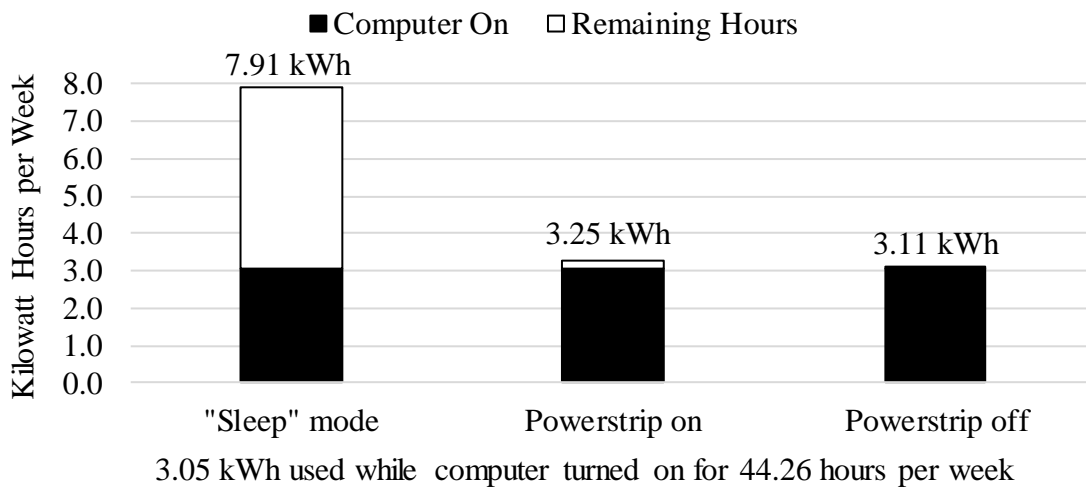


Figure 6 Energy use (kilowatt hours) each week of the computer with two monitors while turned on and off in “sleep” mode or with the power strip only on or off the remainder of the week.

These results strongly suggest that turning off computer while not in use (compared to leaving them in “sleep” mode) can significantly reduce energy used by computers. We need to document whether staff currently turn off their computers when not in use or leave them running in “sleep” mode. Reminding staff to turn off their computers when not in use should help. A failsafe could be a script that automatically turns off the computer.

**Work Remaining:** In 2018 we plan to try to relate power use measurements to power consumption values in the computer and monitor specifications. If these values are comparable or clearly relatable, we can use them to estimate power usage by computer-monitor configurations in use District-wide. Estimates of potential power savings compared to total

power consumption by District facilities will help us decide if further work with computers is justified.

## Project 2- Quantify mileage saved by teleconferencing

**Baseline Information:** Assume no mileage (or fuel) savings if everyone drives to meetings. In 2015 two employees developed a spreadsheet tool to document all meeting members who participated remotely (via teleconference). Beginning on April 23, 2015 the Sustainability Team documented who participated via teleconference at each field facility. Participation in five meetings via teleconference saved about 743 miles of driving which equates to about 31 gallons of fuel with a value of almost \$79. In 2016 both Computer Support (CSDM) and Sustainability teams used the spreadsheet. Together teleconferencing by these teams saved about 4,578 miles of driving which equates to about 187 gallons of fuel with a value of almost \$379. On average, District vehicles are driven between 5,000 to 11,000 miles per year. Teleconferencing saved about 42-92% as many miles of driving as are driven annually by a District vehicle. The 153 staff hours saved equals nearly four 40-hour workweeks worth of time.

**Strategy:** In 2017 two teams, CSDM and Sustainability, used the spreadsheet to document participation via teleconference. More teams were encouraged to use the spreadsheet but none did.

**Project Status:** In 2017, the CSDM team documented participation via teleconference for six of six meetings (Table 2); the Sustainability team did so for twelve out of twelve meetings (Table 3).

In 2017 participating via teleconference in CSDM (Table 2) and Sustainability (Table 3) meetings saved about 143 staff hours and about 4,209 miles of driving which equates to about 171 gallons of fuel with a value of almost \$374. These savings are very similar to those achieved by the CSDM and Sustainability teams in 2016.

Table 2 Estimated mileage, fuel and staff time savings accrued by all District employees participating in eight CSDM meetings via teleconference.

Team	Date	Total Miles Saved	Average miles/gal	Average			# staff tele-conferencing	Staff Hours Saved
				Fuel Saved (gal)	Daily Fuel Price	Dollars Saved		
CSDM	02/28/17	277.4	23.9	11.59	\$2.09	\$24.23	9	9.61
CSDM	03/28/17	277.4	23.9	11.59	\$2.05	\$23.76	9	9.61
CSDM	05/01/17	277.4	23.9	11.59	\$2.25	\$26.08	9	9.61
CSDM	08/10/17	277.4	23.9	11.59	\$2.20	\$25.50	9	9.61
CSDM	10/18/17	277.4	23.9	11.59	\$2.30	\$26.66	9	9.61
CSDM	12/12/17	244.0	25.1	9.74	\$2.41	\$23.46	7	7.89
<b>Totals</b>		<b>1631.0</b>		<b>67.69</b>		<b>\$149.70</b>	<b>52</b>	<b>55.93</b>

Table 3 Estimated mileage, fuel and staff time savings accrued by all District employees participating in twelve Sustainability meetings via teleconference.

Team	Date	Total Miles Saved	Average		Daily Fuel Price	Dollars Saved	# staff tele-conferencing	Staff Hours Saved
			Average miles/gal	Fuel Saved (gal)				
Sustainability	01/11/17	233.4	25.5	9.15	\$1.49	\$13.63	7	7.65
Sustainability	02/08/17	233.4	25.5	9.15	\$2.09	\$19.12	8	8.34
Sustainability	03/15/17	233.4	25.5	9.15	\$2.05	\$18.75	6	5.88
Sustainability	04/19/17	277.4	23.9	11.59	\$2.09	\$24.23	9	9.32
Sustainability	05/17/17	155.0	25.1	6.17	\$2.25	\$13.88	4	5.22
Sustainability	06/14/17	277.4	23.9	11.59	\$2.25	\$26.08	7	7.94
Sustainability	07/12/17	188.4	23.5	8.02	\$2.20	\$17.65	6	7.74
Sustainability	08/09/17	111.0	29.8	3.72	\$2.20	\$8.19	3	4.24
Sustainability	09/20/17	233.4	25.5	9.15	\$2.45	\$22.41	6	6.19
Sustainability	10/18/17	277.4	23.9	11.59	\$2.30	\$26.66	11	11.06
Sustainability	11/15/17	233.4	25.5	9.15	\$2.50	\$22.87	9	9.34
Sustainability	12/19/17	124.0	27.9	4.44	\$2.41	\$10.71	3	4.53
<b>Totals</b>		<b>2577.6</b>		<b>102.87</b>		<b>\$224.17</b>	<b>79</b>	<b>87.47</b>

**Work Remaining:** In 2018 we plan to continue to push other teams to use and document teleconferencing. We recognize that teleconferencing does not work for all teams or circumstances; however, teleconferencing should be used when appropriate.

### Project 3- 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. Between 2015 and 2017 we continued to integrate and evaluate more fuel-efficient vehicles into MMCD’s fleet. We continued with overall projects initiated in 2013:



#### 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

### 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

We had planned to purchase 12-14 smaller trucks (Colorado or Canyon vehicles) in 2017 but were hindered by budget constraints. Instead we bought fewer larger trucks.

**Work Remaining:** In 2018 we plan to continue to improve the District’s budget situation. To make available more vehicle models (especially hybrids such as the Prius V) we may explore ways to purchase vehicles not available through the Minnesota State Contract or difficult to secure through sealed bids. This plan will augment purchases through the Minnesota State Contract.

## **Potential Reducing Energy Projects in 2018**

### **Energy savings by automatically shutting down computers**

In 2018 we plan to try to relate power use measurements to power consumption values in the computer and monitor specifications. If these values are comparable or clearly relatable, we can use them to estimate power usage by computer-monitor configurations in use District-wide. Estimates of potential power savings compared to total power consumption by District facilities will help us decide if further work with computers is justified.

### **Encourage remote participation in meetings and training via teleconferencing and webinars**

Mileage and staff time savings achieved in 2017 indicate that we should continue to encourage and document both participation via teleconference in all applicable District meetings and webinars for all applicable District training in 2018 and beyond.

### **Increase fuel efficiency of District fleet**

Fuel savings achieved by hybrid vehicles means we should slowly integrate these kinds of vehicles into our fleet. We plan to actively research other hybrid vehicles and potentially attractive technologies to evaluate which might help us continue to improve the fuel efficiency

and versatility of our fleet. To make available more vehicle models (especially hybrids such as the Prius V) we may explore ways to purchase vehicles not available through the Minnesota State Contract or difficult to secure through sealed bids. This plan will augment purchases through the Minnesota State Contract.

## Reducing Waste

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The Reducing Waste group's mission is to reduce the waste stream in all processes and to share the techniques, processes, and experiences 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.

2017 was a very successful year for all facilities. Composting became the norm throughout the District with all facilities reporting the widespread use of composting organic material. Facilities used the compost either in their own gardens or in the case of Rosemont to help in their prairie restoration project.

### Organics Recycling at the Saint Paul Main Office

In late 2016, organics recycling bins were added at the Saint Paul Main Office to several meeting rooms and the lunchroom along with 'paper towel only' bins in restrooms. These organics are collected into a 90-gallon bin and taken weekly by a commercial hauler. 2017 was the first full year of this larger-scale organics recycling. When comparing the amount of trash in the dumpster from 2016 to 2017, this recycling contributed to a 45.2% reduction in trash.



### Control Material Bag Recycling



In 2017, we continued to reduce the amount of control material containers that enter our waste stream. Due to the District using over 40,000 bags annually, these control material bags have been our biggest source of waste. We continue to work with our vendors to find new ways to eliminate packaging waste. We continued to convert more of our materials to bulk containers or find new innovative options. One manufacturer continues to take back all of our empty bags for future reuse of those materials. Since pesticide bags have limited use in recycled products, the manufacturer is collecting the empty bags and is working with a recycler to develop a method to reuse the raw materials. We returned over 42,000 bags (each bag weighs approx. 0.46 lbs) which saved approximately 19,320 pounds of trash from entering our waste stream. It is currently our goal to reuse the raw materials and create reusable pallets that they could use to ship our control materials. These new pallets would replace the current wood pallets.

The District continues to return pallets to vendors for reuse and recycles cardboard packaging and shrink wrap from all shipments. MMCD also uses reusable containers to transport materials from the bulk containers to field in order to reduce packaging that goes to the field and avoids any accidental loss of packaging in the environment.

The District recycles all plastic control materials jugs through the national Ag Container Recycling Council (ACRC) program. All jugs are collected, triple rinsed and shipped to a recycling center for reuse. The District also assists other agencies to recycle their containers by being a collection point for the ACRC program. Nationally, this program has collected and recycled an estimated 125,000,000 pounds of empty containers since its inception in 1992. MMCD is proud to be properly recycling pesticide containers in this program since 1995.



### **Bulk Tote Containers for Control Materials**

The District continues to move towards using more reusable bulk containers in our operations. Utilizing these larger totes (1,000, 1,600 & 2,000 lb), we create less container waste and our staff spends less time & effort handling waste products. In 2017, we purchased Natular G30 granules (75,200 lbs), Altosid pellets (50,000 lbs), MetaLarv granules (2,000 lbs), VectoBac 12-AS Liquid (1,584 gallons) and mineral oil (825 gallons) in bulk containers. These purchases allowed the District to reduce the number of individual containers (4,829 units) and removed them from the waste stream.



Vendors are assisting us to use bulk totes in our operations. One manufacturer is working with the District to use a new pump system to apply VectoBac 12-AS Liquid. This truck-mounted system allows employees to apply the liquid from bridges to the rivers. This reduces the time to make these applications, eliminates the jugs, reduces lifting of containers, and decreases the amount of time our employees are on highway right of ways. This safety aspect reduces the exposure our of employees to possible traffic incidents.





## Renewable Energy

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The “Renewable Energy” group continued to expand their knowledge on regional renewable energy projects. In 2017, the team continued to focus on solar energy, local solar educational/promotional support groups, and reviewed projects in the metro area.



Due to financial restrictions, the aspects of building projects, such as converting some of District’s power usage to solar, has been inhibited. Although any building modifications may be on hold, the District still actively reviews the solar industry and is keeping up on the latest trends.

There are options that are being reviewed to examine this question that would still allow the District to utilize renewable energy sources without directly investing in solar power equipment within our facilities. At this time, explored options (i.e. buying power generated by renewable sources) are more expensive than current sources. We will continue to watch pricing so we can revisit options when our financial situation changes.



Community solar projects continue to grow in our region. The option of local solar gardens is intriguing because our organization could participate in a local community project and still benefit directly from generating solar energy. MMCD would purchase solar panels that would be part of a larger project. MMCD would own the equipment but the project would be managed by the solar garden managers. The

investment could be sold at later date. MMCD would receive credits from the solar array which would ultimately reduce our energy cost. These credits would be respective of the energy produced by the number of the panels we own. MMCD would also benefit by not having to manage a solar system at our facilities and the all of the related costs of installing, maintaining, and operating solar panels on our buildings or grounds. More information can be found at [www.cleanenergyresourceteams.org/solargardens](http://www.cleanenergyresourceteams.org/solargardens)

MMCD purchased electric backpacks to evaluate these units for use in our operations. At this time, the electric backpacks currently cannot produce the required droplet size for our control materials. We will continue to work with these units to find an operational niche in which we can utilize a non-gasoline backpack.



Wind generated energy is another possibility for the District. The team reviewed larger windmill projects but there is also a large financial outlay for those projects. Small-scale windmills are becoming more affordable and technology is continually improving. Partial energy replacement by small wind generators may be a smaller investment and a good first step towards renewable energy.



The group will meet to discuss the above options and further research opportunities to utilize renewable energy sources. We plan to continue learning from other organization's experiences to develop our own quality renewable energy program. Our team will continue to review current data to focus on projects with the greatest return on investment and understand what is the best option to recommend for our organization.

## Social Responsibility and Wellness

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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.

### 2017 Activity Highlights

**4<sup>th</sup> Annual Shoe Drive:** MMCD employees donated 149 pairs of shoes to Fishing for Life, an organization in charge of collecting, handling and transporting shoes to Haiti. We also donated 29 pairs of gently used hip waders and boots to their annual sportsmen's garage sale. The money received from the sale goes directly to children in our community and wounded warrior support.

**Food Shelf:** District employees conducted a fifth annual summer food drive. 854 lbs of donated food items went to Neighborhood House in St. Paul including 650 lbs from the East Region during their own food drive challenge. After discussing food insecurity and how to make a difference no matter how small or large the donation, each crew collected donations separately until a final weigh-in. The crew with the largest donation won a free lunch from the ROM.



**Newsletter:** Continuation of a newsletter on sustainability is now in its fourth year. [RESources](#) contains topics about: reusing, reducing, recycling, volunteering opportunities, hazardous waste disposal, air quality, what is happening in the world of sustainability, and health and wellness for our employees.

**Free Tables:** All facilities now have a “Free Table” where employees can place items they no longer want or need that others may have a use for.

**Unwanted Eyeglasses Collection:** 28 pairs of glasses were collected and donated to the MN Lions Eyeglass Recycling Center that distributes them to the poor in developing countries.

**Hotel Shampoos, Soaps and Toiletries:** Over 22 lbs of toiletries were collected and donated for homeless veteran's shelters.

**Vegetable Gardens:** The vegetable garden at the Plymouth facility produced a variety of food used at the facility and even enough to take home. The North facility will be putting in a vegetable garden in the spring of 2018.



**Trapped Rodents:** Over 1000 rodents collected during our Tick Distribution Study were donated to the Wildlife Science Center to help feed raptors in captivity.

**Prairie Plantings:** Two prairie planting projects were started this year. The Rosemount facility is redoing the prairie on the front end of their property and the Saint Paul Main Office is revamping the east slope property. Turf grass, invasive trees and weeds were removed to create habitat that reduces the need for mowing, eliminates erosion and creates habitat and food for insects, including pollinators and birds.



Pretreatment



After tree removal and herbicide treatment



Soil tilled for planting



Seed and seed blankets in place

## Plans for 2018

We plan on continuing and upgrading the programs from 2017, while also looking for new opportunities to assist our communities and enhance the health and wellbeing of our employees. Some of the new activities are, but not limited to:

- Winter clothing drive for Joseph's Coats
- School supply drive
- Book drive for Books for Africa
- Walking club/contest
- Potluck get togethers for staff
- Funding for door prizes for contests relating to sustainability
- Stretching posters
- Off-site RFT seasonal party
- 2 meetings yearly for seasonal staff to participate in an open forum

## Sustainability – Next Steps

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In 2013 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 documents from Clarke Mosquito Control (Clarke) and other organizations and to consider areas within MMCD where sustainability practices could be applied.

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 seasonal staff, 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.

Between 2013 and 2017, we have implemented many new measures to enhance sustainability initiatives. In 2017 we also felt that we needed to go farther. Sustainability is larger than saving energy or recycling more. Sustainability really becomes a way of life, a way of doing business, a way of delivering services to our community to keep it healthy in the long term.

The District’s values that include integrity, trust, cooperation, respect and competence all relate to a sustainable lifestyle. The District’s vision that it will be the best mosquito abatement program in the world naturally includes long-term sustainable operations.

### From Sustainability Initiatives to Sustainability Culture

MMCD staff explored growing from sustainability initiatives to a sustainability culture in several ways. We reviewed how other agencies were approaching this expansive transition in terms of both methods and ideas generated via these methods. Lyell Clarke led Clarke through a process called “Appreciative Inquiry” at summits it held in 2012 and again in 2016. The Appreciative Inquiry process includes four aspects.

1. Strength-based approach to organizational change.
2. “Brainstorming on steroids.”
3. Large group identifies “Opportunity Areas.”
4. Small groups develop action plans to adopt new initiatives.

Clarke (led by CEO Lyell Clarke) did the following:

- Lyell asked Clarke employees to take a leap of faith with him to try new things – have faith that everyone can work out the details as they go along.
- Clarke involved all employees – certain employees took the lead but all employees were brought into the process.
- Clarke’s 2016 summit vision was “From Sustainable to **Flourishing**.”

Clarke has employed “Partnering to Accelerate Change.” Clarke states that they are dedicated to serving as a trusted partner in the mosquito control and aquatic habitat management industries, and they work with their stakeholder partners to help them achieve this goal. They choose, with care, whom they work with, aligning with partners that share Clarke’s core values and are equally intent on forging a sustainable future. Their collaborative partnerships with suppliers and customers around the world are critical to all elements of our sustainability efforts—social, environmental and financial. The benefits of developing a sustainable supply chain include improved risk management, reduced environmental impact and enhanced standards for social and labor practices. These enable Clarke to be more resilient and reliable as a company, while having a positive impact on the communities in which they directly operate.

Clarke invited MMCD staff to participate in both the 2012 and 2016 summits. Through these summits and ongoing collaboration with Clarke, MMCD garnered ideas that helped us develop our own sustainability initiatives. In April 2017 MMCD invited Clarke employees to tour MMCD and further discuss operations including sustainability issues. A very lively and passionate discussion took place from which MMCD staff concluded the following about Clarke’s approach.

- Cost efficiency is a primary concern (Clarke is a private company).
- Clarke strongly supported ideas proposed by employees.
- Clarke’s vision was strong.
- Clarke fostered very open communication amongst all participants.

How can MMCD incorporate some of these techniques and ideas?

- Make them an integral part of all aspects of MMCD.
- Strongly encourage employee participation, harnessing all the passion within MMCD.
- Make sure MMCD’s vision is clear.
- Clearly communicate and support ideas.
- Continue to applaud and rally around even the small accomplishments to support buy-in by all employees.
- Set in place a clear process to share ideas and communicate them.
- The process should be a proposal and response protocol including documentation.

MMCD staff concluded that we need to harness/engage employee passion – focus on the District vision to be the best mosquito control District in the world including long-term sustainable operations.

We determined that we need to develop a process through which new ideas can be heard and recorded, a process through which new innovations can be nurtured, evaluated, and developed.

- Document ideas (a written proposal).
- Determine which other employees/teams should become involved to leverage specific expertise needed to evaluate the idea, meet legal requirements and bring more employees into the process to further develop the idea.

## Next Steps in 2018

### Review Mission, Vision and Value Statement

**Next steps:** We plan to review these District guiding statements with the following in mind.

Clarke's movement from sustainability to flourishing is their way of describing how they are making sustainability an integral part of their operations. MMCD needs to choose a similar descriptor of our sustainability culture goal, perhaps from sustainability to "thriving."

Our core goal as an organization is to be sustainable while meeting our mission objectives.

**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.

Maybe say we want to take "environmentally sensitive" to the next level and be "environmentally responsible."

MMCD exists to "provide cost-effective service to create a better life for all in both the short and the long term."

Perhaps our **vision** should expand to "Being the leading abatement program in the world using sustainable methods." We may know that sustainability plays a role in being number one, but does the average person? Or our seasonal staff?

**Sustainability initiative:** Meet the needs of the present without compromising the ability of future generations to meet their own needs. Should we aim to make our world better for future generations?

**Values:** Integrity, Trust, Cooperation, Respect, Competence. How do these refer to making the quality of life as good as possible for all involved into the foreseeable future?

Sustainability protects resources for future generations and saves us money and resources (cost effective use of taxpayer dollars).

### Encourage all staff to participate in the process

**Next steps:** We believe that we can foster a sustainability culture at MMCD in a way analogous to how we have created our safety culture. We plan to convene two meetings (one in May 2018 and one in August 2018) to promote participation by all interested employees including seasonal staff. At the May 2018 meeting we can review proposals for upgrading the District's Mission, Vision and Values statements to reintroduce staff to MMCD's sustainability culture and solicit feedback from all participants about how to proceed. At the August 2018 meeting we can solicit feedback about how ideas proposed in May have worked out including successes, problems and ideas for improvements and growth.

## **Process through which new ideas can be heard and recorded**

**Next steps:** In 2017 one of MMCD's in-house Effective Management employee groups decided to focus on innovation, specifically how to promote and document innovation. This group has proposed a series of staff communications including all-employee webinars and an electronic forum to stimulate discussion and documentation of innovative ideas. We plan to explore and develop these methods in 2018.

## **Create a multi-year goal to create our sustainability culture**

**Next steps:** Summarize the experiences in 2018 including the outcome of actions that originated with the May and August 2018 meetings and propose further actions for 2019. Include these in our 2018 Guiding document (Annual Report).



# Members of the Sustainability Groups

December 2017 (facilitators underlined)

## Reducing Energy Usage

Aubrey Soukup, Monica Wickelgren, John Walz,  
Jon Peterson, Stephen Manweiler, Matt Giesen

## Reducing Waste

John Walz, Monica Wickelgren, Matt Giesen, Kathy Beadle, Mark Smith,  
Loren Lemke, Andrea Vollmuth

## Renewable Energy

Mark Smith, Eva Knudsen, Kirk Johnson, Stephen Manweiler, Jon Peterson,  
Molly Nee, John Walz, Jennifer Crites

## Social Responsibility and Wellness

Eva Knudsen, Carey LaMere, Mike McLean, Loren Lemke, Molly Nee, Kathy Beadle,  
Andrew Moua, Aubrey Soukup, Kirk Johnson

## Guiding Document (Annual Report)

Mike McLean, Carey LaMere, Molly Nee

## Sustainability Culture – Next Steps

Stephen Manweiler, Eva Knudsen, Andrea Vollmuth, Monica Wickelgren,  
Kathy Beadle, Jennifer Crites, Loren Lemke

## Seasonal Staff Members

Hannah Filkins, Tyler Davis, Nathan Meyer