



# SpotLight on Maintenance

OPFMA Newsletter - Connecting Knowledge with Public Facilities' Needs!  
Fall 2014

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## Ohio Public Facilities Maintenance Association

OPFMA is a not for profit (501) (c) (3) independent educational trade organization



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### Editor's Note:

Next Edition - **December 2014**  
 Deadline to your articles  
**December 1<sup>st</sup>, 2014**  
 Follow the Publication Terms  
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## OPFMA 2014 Conference

By Wayne King, OPFMA Secretary/Treasurer

As I was reviewing the brochure for the Fall Conference to plan which sessions to sign up for, my thoughts turned to the members of OPFMA: that's you! OPFMA was organized in 1987 to be an educational association for you and other facilities maintenance people in public sector organizations. One of the ways that mission is achieved is through the workshops offered at the Fall Conference & Trade Show. It is also achieved through the various seminars and programs offered at other times of the year.

Your professional growth is important. It's important to the OPFMA Board of Trustees and it should be important to you. Each year the OPFMA Trustees and Staff assemble a program for the Fall Conference that will assist you in growing professionally. This year is no different. As you look through the brochure (the one mailed to you or the one at the OPFMA web site [opfma.org](http://opfma.org)) look through the 27 workshops offered during the conference; it's a challenge to select only five to attend - they're all great! In addition to the workshops, you will also have the opportunity to network with other facilities maintenance professionals.

At some point in your work life, you may find that you are facing a project that you could use some advice on from another facilities person who has experience in that area. What better way to get some pointers than to talk with a member about their experience on such a project. The Fall Conference is a great place to meet those people!

Plan to join us at the Fall Conference, October 20<sup>th</sup> and 21<sup>st</sup>. Make your desire to attend the conference a discussion topic with your supervisor or manager so they can appreciate your interest in going (and growing) and can also be supportive of your attendance.

You and your employer will both benefit from your continuing education since attending the Fall Conference is a great way to learn about recent developments in all aspects of facilities maintenance.

Sign up! Let's grow together! See you there!

Wayne

### OPFMA 2014 Conference & Annual Trade Show Oct 20<sup>th</sup> & Oct 21<sup>st</sup>

Attendee Registration - Final Stage!



Location: Columbus Crowne Plaza Hotel

### OPFMA 2014 Trade Show

100% of Booths and Overflow Sold Out!

### OPFMA 2014 Conference Sponsors

#### Special Appreciation

**Johnson Controls Inc.**

**Allied Environmental Services, Inc**

**Gardiner**

**Lifetime Learning LLC**

**OPFMA New Members – Welcome Aboard!**

Individual Member

- Brad Armstrong** – Ohio Dept. of Natural Resources – Facilities & Grounds Supervisor
- Rob Ross** – Perrysburg Schools – Maintenance Director
- Matt Bostian** – Beaver Local Board of Education – Supervisor Building and Grounds
- Zachary Stemen** – Spencerville Local School District – Maintenance Supervisor
- Louis Savric** – Trumbull Correctional Inst. – BMS II
- Don Richmond** – Garfield Middle School – Facilities Manager

Institutional I Member

- Mount Vernon City Schools** – **Rick Shaffer** – Director of Maintenance  
Stan Tyson, Luke Baer and Trevor Trace
- DAS Department of Administrative Services** – **David Grzechowiak**, Metro Columbus Group Facilities Manager  
Eric Hanna, Noel Rozelle, Kenneth Cope, Harry Boyer and Rodney Stewart
- New Richmond School** - **Andy Verdin** - Maintenance

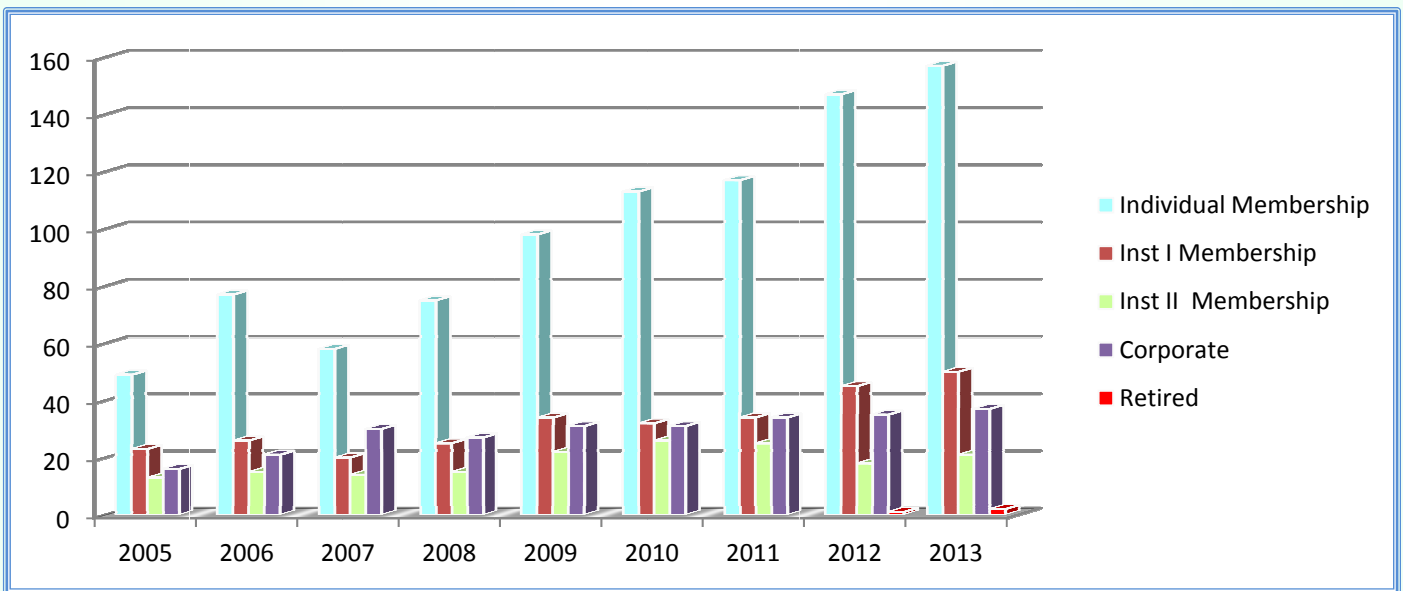
Institutional II Member

- Athens County Dept. of Job and Family Serv.** – **Gregg Oakley** – Deputy Director  
Roy Kirkendall, Jerry Moleski, Dianna Carsey and Dave Flickenger

Corporate Associate Member

- Wadsworth Service Northeast** - **Rick Wey** - Owner Direct Sales
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- Facilities Management Express** - **Katie Milantoni** - Sales and Marketing Specialist

**OPFMA MEMBERSHIP by Category 2005 through 2013**



Membership type: Institutional I - group of (4) employees; Institutional II - groups of (6); additional member added for \$25/each

OPFMA membership is on voluntarily membership. Membership dues remained unchanged since 2004.  
OPFMA members' support & participation in OPFMA educative events is encouraged and appreciated.

After 10 years, we believe OPFMA members are ready to support OPFMA membership dues adjustment in 2015!

**OPFMA Board of Trustees - Size & Composition**

**2014 Trustees for Re-election & Trustee - Candidates for Election: Term 2014 - 2016**

Membership Representation	Number of Reps	Trustees & Candidates	Position	Term's Status	2014 Election
Local Government	1 to 3	<b>Glen Vernick</b>	trustee	2013 - 15	n/a
Local Government		<b>John Cray</b>	candidate		election
Public/Private Non-Profit Higher Education	1 to 3	<b>Constantin Draganoiu</b>	trustee	2012 - 14	re-election
Public or Private Non-Profit Schools	1 to 3	<b>Ted Roseberry</b>	trustee	2012 - 14	<u>no</u>
Public or Private Non-Profit Schools		<b>Steve Heitz</b>	trustee	2012 - 14	re-election
Public or Private Non-Profit Schools		<b>Dean Sandwisch</b>	candidate		election
Libraries & Museums	1 to 2	<b>Carl Roxbury</b>	candidate		election
OPFMA Chapter	1 to 2	<b>Penny Miller</b>	trustee	2014 - 16	n/a
Retirees	1	<b>Wayne King</b>	trustee	2012 - 14	re-election
Associate Members	1	<b>Tom Hand</b>	trustee	2012 - 14	re-election
At Large Rep of Members of OPFMA	1 to 3	<b>Reuben Brown</b>	candidate		election

**ELECTION OF OPFMA TRUSTEES**

One of the items of OPFMA business session on Tuesday morning, October 21<sup>st</sup>, at the Fall Conference will be the election of OPFMA Trustees to the Board for next term (2014 -2016).

The slate of OPFMA trustees for re-election and new trustee candidates for election is displayed in the table above.

It will also be posted in the registration area (Foyer #1) at the Fall Conference along with the bios of the four new candidates. The new candidates will be provided with special name badges to help identify them during the Conference.

Each candidate brings a unique skillset with them which will complement those already on the Board. Additionally, each of them comes from a different employer group which will help OPFMA benefit from the perspectives of a broader range of public sector facilities personnel. That is important because it helps the Board set policies and develop programs that are meaningful to more facilities staff members in Ohio. That translates into continuing education opportunities that are relevant to more people, the potential for improved attendance, and the best way to keep registration fees as low as possible.

Since none of the positions are contested, ballots are not needed at this election. Voting, by OPFMA members attending the Conference, will be by affirmation at the Tuesday morning breakfast Business Meeting. Your Board recommends a vote "FOR" the slate of Trustees presented.

## The Job of a Maintenance Supervisor

By Steve Heitz, *Maintenance Supervisor, Wapakoneta City Schools*

When are you too busy to learn new methods to improve your productivity? Most maintenance personnel are asked to wear many different hats in today's ever changing world. Anyone who has spent time in this field would more than likely wonder if their job still resembles the activities they performed in their early years of employment. I, myself, have often wondered this. However, I would not like my job to remain the same every day. The biggest change I have encountered since I became a supervisor, in 1989, is the amount of time that I physically spend performing maintenance tasks such as installation or troubleshooting issues. In the early days, 90% of the day was spent "in the trenches", and now, it seems that time is spent in the office.

My day is filled with necessary meetings, planning new projects, working on previous installations that require an improvement in their outcome, meeting with a multitude of vendors and contractors, labor management issues, involvement with new committees and organizations, working with my superior who is the Director of Operations, and of course the ever increasing emphasis on safety for everyone in our facilities. Today, you troubleshoot many of our systems from a computer to diagnose the issue before going onsite to look at the equipment.

I have been very fortunate to have an outstanding team around me that enables all of us to accomplish the maintenance tasks at Wapakoneta City Schools where I am employed. They include: WCS Board of Education members, administrative team, maintenance and custodial staff, all of whom have placed a high standard on improving and maintaining our facilities.

One of the organizations with which I have been involved that has been an invaluable tool in my "tool box" is the Ohio Public Facilities Maintenance Association (OPFMA). I joined eight years ago when I signed up to take the Building Operator Certification program. I am one of the founding members of the West Central Ohio Public Facilities Maintenance Association chapter which includes eleven counties. Ours is a local chapter under the state organization. One responsibility of being chairman of West Central Chapter includes conducting meetings with a professional development topic. The list of topics for our group includes: Arc Flash Training, Indoor Air Quality, Pesticides, and Aerial Work Platforms, to name a few. The members who attend share their experiences and knowledge to help each other to become better caretakers of the facilities entrusted to our care.

In closing, we are all very busy with our jobs. However, never become too busy to let an opportunity pass by that would improve productivity.



"NO - I can't be bothered to see any crazy salesman - We've got a battle to fight!"

### Editor's note

For more info or if you want to attend one of West Central OPFMA Chapter's meetings - E-mail Steve Heitz at: [heitst@wapak.org](mailto:heitst@wapak.org)

### Common Sense solutions

- The only way to avoid being miserable is not to have enough leisure time to wonder whether you are happy or not.
- The road to success runs uphill, so don't expect to break any speed records.
- If you don't have time to do it right, when will you have time to do it over?



## The Emergence of LED Lighting as a Cost-Saving Measure for Ohio’s K-12 Schools

Aaron Brotherton, Lighting Auditor, Lighting Optimizers, USA

In today’s economy, reducing cost is becoming more and more important. With the vast improvement in light emitting diode (LED) technology, installing LED lighting is becoming a practical way to reduce energy expenses as well as operation and maintenance (O&M) expenses.

LED technology has become almost the standard when designing or retrofitting exterior lighting because of two major factors: rising electrical cost and high annual runtime hours (typically 4,000 hours per year).

Interior LED technology is a little behind the curve but is becoming more popular every day.

There are several ways to retrofit interior lighting with LED technology:

Fluorescent lighting is the most prevalent technology in K-12 schools, the common LED options are LED tube lights, LED retrofit kits, and new integrated LED luminaires, with tubes being the least expensive and new luminaires being the most expensive.

The expense related to these different options does not necessarily determine cost effectiveness.

Criteria to consider when deciding which LED option to use are annual runtime hours, the life expectancy of each option, efficacy (lumens per watt), and the utility-funded rebates available.

This table provides an overview of LED lighting options to consider.

Type of Interior LED for Standard 2-Lamp Troffer	Efficacy	Average Cost	Life Expectancy (hours)	Typical Rebate (if available)
<i>LED Linear Tubes</i>	Low	\$35/lamp	> 50,000	\$10/tube
<i>LED Retrofit Kits</i>	Middle	\$150/kit	50,000 - 70,000	\$40/kit
<i>New LED Integrated Luminaires</i>	High	\$200/luminaire	< 70000	\$50/luminaire

With respect to Ohio K-12 facilities, LED technology can be either an easy or a hard sell. Run time hours for schools average between 1,500 and 3,500 hours/year.

Schools can be nearing their fluorescent fixture lifetime, requiring replacement of many ballasts and lamps weekly while districts are paying electricity rates between \$0.06/kWh and \$0.11/kWh.

For those facilities with higher hours, higher O&M costs, and higher electricity rates, interior LEDs simply make sense. For others, the cost of LED technology is coming down monthly and will most likely be a feasible option in the next one to three years.

While capital costs are high, there are several options for procurement, including Ohio’s HB264 program and “lighting service agreements with ZERO capital outlay” through

companies like Lighting Optimizers, USA.

The **lighting service agreement with ZERO capital outlay** is similar to an HVAC or controls maintenance agreement. The customer will be set up on a quarterly, semi-annual or annual payment schedule and the provider will design and install the turn-key lighting retrofit project.

The savings that will be achieved are greater than the cost of the project, which will provide the school district with **positive cash flow** as well as improved lighting. There is no cash required upfront; some providers could provide attic stock to the District through the life of the agreement (typically 5 to 7 years).

The LED trend is starting to take form and will be the next logical step for many school districts, if not today, then in the near future.

**Editor’s Note:** For questions or more information contact: Aaron Brotherton, Lighting Auditor (937) - 877-1274

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### Leadership 101

We cannot expect people to do the right thing unless they know the right thing to do.



When declaring your rights, don't forget your responsibilities.



Employ people more for their judgment than for their talents.

## Heat Flow

By: Richard Wirtz, AAS, CMS, RCT

The purpose of measuring the temperature rise across the heat exchanger of a heat producing piece of equipment is to verify the airflow required to carry the produced heat away from the heat exchanger into the conditioned medium.

For example a forced air gas-fired furnace typically has a temperature rise rating of 30-50° F (as stated on the nameplate). This means that the air coming into the furnace (return air) will be increased between 30 and 50° F. If the return air temperature is 70° F, then the supply air temperature should be between 100° (70 + 30) and 120° F (70 + 50). If the air flow is too low then the temperature rise will be higher than the 50° F and the heat exchanger metal will be fatigued to a greater level. If the air flow is greater than required, the temperature rise will be lower. This could lead to condensing the flue gases in the chimney and lower than normal discharge temperature from the supply registers. Lower discharge temperature at the outlets could create a "drafty" condition which leads to discomfort of the occupants in the building.

The situation described above relies on the fact that the gas flow rate input has been set according to the manufacturers specifications first. If the gas rate (measured in inches of water column) is less than that required, it would produce a lower than normal temperature rise across the heat exchanger and lower discharge temperatures.

In a means to correct the situation, service personnel lower the fan speed. While this does bring the temperature rise back within the confines of the nameplate value, you have a furnace that is now running at a reduced value and will not satisfy the heating requirements of the structure at the design (coolest temperature) outdoor temperature.

Conversely, if the gas rate input is greater than the nameplate value, the furnace would be over-fired. If the additional heat generated is not absorbed by the space conditions (air or water), the extra heat goes up the chimney. An increase in the stack (chimney) temperature lowers the overall efficiency of the equipment and increases operating costs.

If you know the output value of the equipment and the temperature rise of the equipment you can determine the cubic feet per minute of airflow (CFM) value of the equipment. Let's use the formula below.

Heat output of equipment = 1.08 (a constant for sensible heat) x CFM x Change in temperature

Let's assume we have a 125,000 Btu/hr output furnace and the temperature rise is 45° F.

$$125,000 = 1.08 \times ? \times 45 \dots \text{ so}$$

$$1.08 \times 45 = 48.6$$

$$125,000 / 48.6 = 2,572 \text{ CFM}$$

If we knew the CFM value and the temperature rise, we can determine the heat output of the equipment.

Assume we have 1,000 CFM of air flow and a temperature rise of 40° F.

$$? = 1.08 \times 1,000 \times 40$$

$$43,200 = 1.08 \times 1,000 \times 40$$

This same situation also applies to boilers and chillers using air as a heat transfer medium. The proper knowledge applied and correct use of accurate instruments is the key to determining various unknown factors.

## Creating Sustainable School Environmental Health in Ohio

*Mandy Burkett, Environmental Health - Ohio Department of Health*

**The phrase** - School facilities managers, what emotions are created by the phrase, “School inspection?” Do you feel confident that the facilities you manage are in tip-top condition, or do cringe just a bit, wondering what the inspector will discover this time?

What if you could have a check list of basic steps to keep your school healthy and safe for all occupants? What if you could present this to your school board and administrators in a format that convinces them to back you on this? What if your school could receive state recognition for being a “Safe and Healthy School in Ohio”? What if the community started noticing and applauding your efforts?

This is not a dream that is out of reach! The Ohio Department of Health (ODH) is preparing an updated set of school environmental health guidelines that are just for you. These guidelines are meant to make your life easier! We are striving to make baseline implementation free or low cost; the implementation process will be user-friendly, incorporating a step-by-step format which identifies and addresses the most pressing environmental health issues.

**The purpose** - The end goal of the updated, voluntary guidelines is to assist Ohio’s nearly 4,000 K-12 schools in evaluating, improving and maintaining the environmental health of their facilities. Improved school environmental health will enhance the educational environment leading to decreased absenteeism of students and staff, stronger academic performance (including higher test scores) and long-term financial return on investment.

Over 1.75 million children and 100 thousand adults across Ohio spend their days in K-12 schools<sup>6</sup>. A growing body of research strongly supports the importance of school environmental health to both the educational success and overall health and well-being of Ohio’s school children and staff. “Poor environmental conditions can thwart academic progress by making it harder for students to concentrate, causing or exacerbating illness in students and staff, increasing absences and lost work days, and diverting school funds to pay for costly repair and remediation projects<sup>7</sup>.”

On the other hand, improvement in school environmental conditions can have significant positive impacts.

In one study “children in classrooms with higher outdoor air ventilation rates scored 14 to 15% higher on standardized tests than children in classrooms with lower outdoor air ventilation rates<sup>13</sup>.”

In addition to wellness and the advancement of the core educational mission, attention to environmental quality can improve the financial health of Ohio’s schools.

In a study of classroom ventilation rates (VRs) and student illness absences in California elementary schools, researchers estimated that “increasing classroom VRs from the California average (4 l/s-person) to the State standard would decrease illness absences by 3.4%, increase attendance-linked funding to schools by \$33 million annually, and increase costs by only \$4 million<sup>14</sup>.”

**The plan** - A statewide School Environmental Health Advisory Panel (SEHAP) was formed in January, 2014. This committee is made up of representatives from educational and public health organizations. It is facilitated by the Ohio Department of Health, Bureau of Environmental Health.

This steering committee is in the process of developing School Environmental Health (SEH) guidelines and has been meeting twice a month since January to review existing SEH resources and guidelines, plan assessment of Ohio’s current school environmental health, and develop new Ohio-specific SEH guidelines.

A draft copy of the guidelines will be completed in the next couple of months and will be made available through OSHEN (Ohio Schools’ Healthy Environments Network) for further comment. At that time stakeholder input will be gathered through a variety of methods. Electronic submission of comments will be available as well as two face-to-face meetings with a virtual attendance option. This information will be used in the final formation of the guidelines.

**The path ahead** - Upon completion of the guidelines, the Ohio Department of Health (ODH) and SEHAP will collaborate to provide at least one full day of training for educational personnel and Local Health Departments. Training will take place in each of Ohio’s five regions and will focus on the implementation of the voluntary SEH Guidelines.

The communications network, OSHEN, has been created not only to assist in the draft phase of the guidelines, but to be a vehicle for sustainability in the future. OSHEN consists of Ohio schools, major educational organizations, public health partners and other interested stakeholders throughout the State.

Through OSHEN, members will be offered opportunities for training, collaboration, mentoring and sharing of information related to school environmental health.

Webinars on topics such as stripping floors without chemicals, simple IPM, behavior-based energy consumption reduction, crime prevention thru environmental design, playground safety, eliminating clutter in the classroom and food safety basics will be made available through OSHEN.

### **Editor’s Note:**

For more information or questions contact: [Mandy.Burkett@odh.ohio.gov](mailto:Mandy.Burkett@odh.ohio.gov)

**2014 Board Meetings**

Schedule:

**Mar 27<sup>th</sup>****June 19<sup>th</sup>****Sept 18<sup>th</sup>****Dec 11<sup>th</sup>**

Board Meetings are held  
in Columbus!

**Phone-Conference**

2<sup>nd</sup> Friday of Month  
not holding  
a Board Meeting

**2014 Conference &  
Trade Show****Crowne Plaza Hotel:****Oct 19<sup>th</sup> 5:00 pm****Conf. Committee meeting**

**Oct 20<sup>th</sup> & Oct 21<sup>st</sup>**  
**Conference**  
**&**  
**Trade Show**

For newsletters' archive visit  
our website!

**[www.opfma.org](http://www.opfma.org)****2014 OPFMA Board of Trustees & Contact Information****Board of Trustees**

**Secretary/Treasurer:** **Wayne C. King**-Retirees Representative - [wcking@netzero.net](mailto:wcking@netzero.net)

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**A Note from the Editor:**

Dear reader, OPFMA publishes the "SpotLight on Maintenance" for your benefit; for serving better your interests - your feedback is of a paramount importance!

**Suggestions – Sharing Experiences – and Constructive Criticism are welcomed!** Your contribution could help other readers simply by bringing in "SpotLight" topics and ideas that are of special interest to you!

**Let Your Voice be Heard** - Just drop a note at: [editor@opfma.org](mailto:editor@opfma.org) or visit [www.opfma.org](http://www.opfma.org) and click on "Contact us" – I would be happy to bring your ideas and comments in The SpotLight!

Thank you,  
Alex

**Publication and Submission – Terms & Info**

"Spotlight on Maintenance" is the official publication of the **Ohio Public Facilities Maintenance Association**, a 501(c) (3) not for profit organization for educational and professional development of public facilities maintenance employees.

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A special edition would be added as events dictate.

All materials published are copyrighted. SpotLight on Maintenance Editor/publisher is Alexandra Schneider.

**Deadline for articles & photos submission is the 1<sup>st</sup> day of the month of publication.**

All documents must be submitted in Word format and sent as an e-mail attachment.

All photos and ads must be in JPEG format and sent as an e-mail attachment.

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