

 MENASHA JOINT SCHOOL DISTRICT	School District:	Menasha Joint School District 100 Main Street, Suite 300 Menasha, WI 54952 920.967.1999
	Review Date(s):	May 15, 2015; Aug 1, 2019, Oct 26, 2023
	Program Coordinator:	District Supervisor of Facilities
<i>Board Policy-7460 Conservation of Natural and Material Resources Administrative Guidelines and Procedures</i>		

I. Introduction

The increasing costs of natural energy resources coupled with the growing need to inhibit pollution, the District will implement strategies which will conserve all forms of energy used and ensure proper recycling of reusable materials.

The Board of Education directs the Superintendent to develop and implement both immediate and long-range plans to meet these concerns. The Board of Education expects that the administrative guidelines and procedures established will be properly observed by all members of the staff and strongly supported both in the educational program and in staff interactions with students.

As directed in Menasha Joint School District Board Policy 7460 on Conservation of Natural Resources, the following guidelines have been adopted and are applicable to all district personnel and facilities. The District Administration Team shall be responsible for the total energy usage of their facility and shall help implement conservation procedures as written within these guidelines. All employees are responsible for applying these guidelines and for reporting equipment problems or concerns. The District Supervisor of Facilities will maintain an energy benchmarking portfolio and track district energy use, conservation and provide direction to ensure the best operation of all district building systems.

The implementation of these guidelines will not impair the educational environment and are intended to assist with energy conservation and will enable the directing of funds towards the education of the District's students.

II. Energy Conservation

Energy conservation is not a one-time activity or project. It is an on-going responsibility, requiring daily attention and providing daily opportunities. Reducing energy usage in Menasha Joint School District helps manage utility budgets and reduce the demand for fossil fuels and generation of related air emissions.

III. District Administration

Energy conservation starts here. District Administrators are in position to provide strong leadership in the area of energy conservation. Building users, staff, and maintenance look for leadership in this area and for clear direction and purpose. The management of facilities is a difficult and complicated task. Energy conservation efforts impact the physical environment and individuals may not be completely comfortable with set temperatures, air movement, or other environmental variables. Maintenance staff may be asked to adjust the physical environment to address individual comfort levels.

District Administrators provide leadership and direction by reinforcing the policies that support energy conservation and working with faculty and building users to balance comfort with conservation. Clear communications regarding what to expect in work settings, support for energy conservation, and continued attention to energy conservation as a leadership and management responsibility can greatly improve the effectiveness of the district's energy use. Equally, lack of attention to energy conservation, poor role-modeling, and lack of support for building operational decisions can undermine the effectiveness of Board Policy 7460 Conservation of Natural and Material Resources and lead to excessive use of energy in district operations.

Recognize that energy conservation is a continuing responsibility in Menasha Joint School District and not a one-time effort to address current situations. Successful energy policies are supported visibly by administrators and are continual, building on prior successes to achieve long-term success.

IV. Faculty and All Building Users

I. Operating Guidelines for Heating, Ventilation, and Air Conditioning (HVAC) Systems:

A. Air Conditioning - The following energy conservation procedures for operating air conditioning are to be observed in all buildings:

1. **Daytime Temperature** - Shall be maintained from 71 to 75 degrees when occupied by students, teachers, office personnel, custodians, and administrators. Certain areas may vary due to design of the building and HVAC system.
2. **Night Setback** – Nightly setbacks to prescribed unoccupied temperatures will begin at 5:00 pm and end at 6:00 am Monday – Friday unless covered by an approved facility request
3. **Weekends, Summer Months & School Holiday Periods** - All air conditioning systems at all facilities shall be maintained at 82 degrees if unoccupied, except in the following areas, and under the following conditions:
 - a. Sensitive electronic equipment rooms
 - b. MHS Auditorium and Field-House during properly scheduled events
 - c. Areas where maintenance or custodial work is being performed (painting, carpet cleaning, flooring work, etc.) to insure the space is dried to prevent mold growth or other complications
4. **Doors and windows** - Are to remain closed when air conditioning units are operating.

B. Heating - The following energy conservation procedures for operating heating systems are to be observed in all buildings:

1. **Daytime Temperature** - Shall be maintained from 68 to 72 degrees when occupied by students, teachers, office personnel, custodians, and administrators. Certain areas may vary due to design of the building and HVAC system.
2. **Night Setback** – Nightly setbacks to prescribed unoccupied temperatures will begin at 5:00 pm and end at 6:00 am Monday – Friday unless covered by an approved facility request.
3. **Weekends & School Holiday Periods** - All heating shall be maintained at 55 degrees. The only exception to this is if an event is covered by an approved facility request.
4. **Doors and windows** - are to remain closed when heating units are operating.

II. Guidelines for Operating Lights

The following guidelines shall be followed when operating lights in and around district facilities:

1. **District personnel involvement** – Classroom and office space lighting shall remain on during normal school hours or whenever students are present. The exception to this rule is when using video board displays, projection system or when needed to support curriculum. After hours, staff shall be responsible for turning off lights in classrooms, work areas, and offices when unoccupied if the space has the capability to switch off. If you have issues with

your lights that affects the learning environment place a work order to have it evaluated or repaired.

2. **Lighting fixtures** - Lighting fixtures are all LED and future replacements will be LED or the latest in lighting technology and to use natural light combined with dimming solutions where possible. Light filters or covers are not allowed for general use. Any request for light filters or covers will be directed to the Special Services Department for approval prior to purchase and installation.
3. **Personal lamps** - For decorative use, personal lamps where authorized shall utilize LED lamps at the faculty members own expense and shall **not** be left on after regular hours. No personal lamps will replace the classroom lighting from being used as primary lighting when students are present.
4. **Natural lighting** - Natural lighting capabilities should be utilized when possible.
5. **Lighting Displays** - Lighting for display purposes (trophy cases, bulletin boards, etc.) shall be turned OFF at night and for summer/winter/holiday shutdown, except for special occasions and specified security purposes. When applicable, trophy cases will be de-lamped for additional savings.
6. **Seasonal lighting** – Staff may use temporary seasonal LED lighting within their spaces for accents however it will not be used to replace the room lighting as the primary light while students are present. Seasonal lighting will not be purchased or maintained by the school district.
7. **Outside Lighting** - All outside lighting shall remain OFF during daylight hours and operated using a control system or lighting sensor.
8. **Outside Security Lighting** - As required for the security of employees and the safety of the buildings, all outside security lighting will be set to turn ON at dusk and OFF at twilight.
9. **New Lighting Controls** – Whenever possible, install motion sensor lighting controls to replace switched lighting or the latest in lighting controls systems.
10. **Medical Issues** – If there are stated medical concerns from the lighting requirements the district shall address each issue on a case by case basis to determine an appropriate solution and may require a medical providers input.
11. **Illumination Levels** - Lighting to be designed such that illumination levels fall within a given range, according to the space type. Average lighting levels are not to fall below the range's lower limit and not to exceed the range's upper limit. This is to assure all spaces are adequately lit but are not over-lit. The ranges apply to all working areas in a space, and should be sustained throughout lamp life. The following foot-candle (fc) ranges are derived primarily from *Illuminating Engineering Society of North America (IESNA)* recommended levels and NCAA gymnasium lighting best practices.

Space Type * Lighting Level Range (fc)

Classroom 30 – 50
Science Lab 50 – 70
Library 30 – 50
Office 30 – 50
Computer Lab 3 – 30
Corridor / Common Space 10 – 20
Gym (recreational) 30 – 50
Gym (standard intercollegiate) 50 – 100
Gym (WIAA broadcasting) 100 – 150
Cafeteria 10 – 20

Kitchen 30 – 50
Restroom 5 – 15
Mechanical Room 20 – 50

* IESNA recommended lighting levels to be used for other space-types not listed above.

III. Guidelines for Athletic Facilities

A. Gymnasiums

1. Lighting - District personnel shall be responsible for turning OFF lights in gymnasiums when unoccupied. If a building automation or special lighting controls are installed it will be used to its maximum potential.
2. Air Conditioning – Air conditioning will be maintained between 71 and 75 degrees if occupied and 85 degrees when unoccupied.
3. Heating – Heating will be maintained between 68 and 72 degrees if occupied and 55 degrees when unoccupied.

B. Stadium Lighting

1. Lights shall be turned on 30 minutes prior to dusk for games.

IV. Additional Guidelines

A. Approved Appliances for Classrooms and Offices – These types of appliances have been approved by the district and are allowed in classrooms and offices.

- Portable CD Player/Radio
- Clock/Radio
- Weather Radio
- Desk Clock
- Electronic Picture Frame
- Adding Machine/Calculator
- Electric Pencil Sharpener
- Electric Stapler
- Desk Top Fan
- Charger for Portable Computing/Communication Device (unplug when not in use)
- Keurig style coffee maker (turned off when not in use)
- Small Microwave Ovens that are UL Listed and Energy Star rated – will be permitted, but principal and staff will be responsible for reducing the number in buildings and responsible for the cleaning of items. District is not responsible for broken items.
- Small personal refrigerator that is UL listed and Energy Star rated. Must be clean at all times with contents labeled. During summer, the refrigerator will be cleaned and unplugged. District is not responsible for broken items.

B. Prohibited Appliances for All Areas – These are devices that are low on the “green list” and are high consumers of power. In some cases, they also present safety concerns as determined by the local fire department. In other cases, they present indoor air quality issues. If utilized in the past, these need to be removed from the classroom and/or office.

Any device or appliance classified as a “resistive heat device” must be removed.

- Electric Space Heater
- Gas Space Heater

- Toaster Oven
- Hot Plate (single or multi burner)
- Electric Griddle/Fry Pan/Wok
- Residential Coffee Makers
- Coffee Cup Warmer
- Potpourri Warmer
- Electric Candle/Warmer
- Scented Oil Warmer
- Scented Plug-In Air Freshener
- Incandescent or Fluorescent Bulb Type Lamp
- Incandescent or Fluorescent Bulb Type Holiday Lighting
- Lava Lamp
- Electric Blanket/Heating pad
- Electric Foot Warmer

During the school year the District will perform random inspections to ensure compliance with these guidelines. During these inspections, any prohibited appliance will be identified and removed immediately with notice provided to the room occupant. When a prohibited appliance is removed by the District during the school year, the owner will have three days to arrange pick up with the maintenance shop. If arrangements are not made to pick up prohibited appliances, they will be discarded.

Any appliance supplied by the District for support of instruction, health, and/or athletic activities or deemed necessary by the principal/director will be exempted from these guidelines. These exempted appliances must be approved by the Director of Business Services or his/her designee. Staff-break rooms and work rooms may contain a large refrigerator and a commercial coffee maker for staff use only.

- C. Placement of Furniture** - In order to provide proper operation of thermostats and sensors, furniture, equipment and electronics shall not be placed in front of or in close proximity of heating fins, coils or diffusers.
- D. Business Machines/Technology** - Business machines, such as computers and/or monitors, copiers, printers and any other applicable office machinery shall be turned off when circumstances are appropriate. All district computers will be set to go to “sleep” after a long period in nonuse. However, if warm-up and start-up procedures are time consuming or complex, machines with hibernation function may remain on. The MJSB Technology Department will be involved in making these decisions.
- E. Energy Awareness** – Director of Business Services and Supervisor of Facilities shall provide energy awareness initiatives in the District. The principal/director shall provide energy management procedures to his/her staff and be involved in periodic energy conservation inspections for compliance.
- F. Building Automation System** - As new buildings are designed and older systems replaced, an building automation system (BAS) will be installed to control the HVAC system.
- G. Heaters/Boilers** - Temperature of hot water heaters/boilers shall be set as follows:
1. Water heaters for kitchen utensil and equipment sanitation shall not exceed 125 degrees.
 2. Other domestic water heaters shall not exceed 110 degrees.
 3. All heater temperatures shall follow health department regulations.

H. Pumps - Hot water circulating pumps shall be examined on a unit-by-unit basis to determine necessity of daily use. Pump will be operated only for a period of specific demand.

I. Energy Audit/Reporting – Internal energy usage audits and random inspections will be conducted each year at every facility and periodic usage reports will be made to each principal/director.

J. Opportunities - Any logical or practical opportunities to conserve resources via adjustments to or limited usage of equipment and lights should be addressed appropriately. Energy use habits should be examined and adjustments made as needed.

K. Computer Server Room Temperatures –

a. Recommended Computer Room Temperature

- i. Operating expensive IT computer equipment for extended periods of time at high temperatures greatly reduces reliability, longevity of components and will likely cause unplanned downtime. Maintaining an ambient temperature range of 68° to 75°F (20° to 24°C) is optimal for system reliability. This temperature range provides a safe buffer for equipment to operate in the event of air conditioning or HVAC equipment failure while making it easier to maintain a safe relative humidity level.
- ii. It is a generally agreed upon standard in the computer industry that expensive IT equipment should not be operated in a computer room or data center where the ambient room temperature has exceeded 85°F (30°C).

b. Recommended Computer Room Humidity

- i. Relative humidity (RH) is defined as the amount of moisture in the air at a given temperature in relation to the maximum amount of moisture the air could hold at the same temperature. In a data center or computer room, maintaining ambient relative humidity levels between 45% and 55% is recommended for optimal performance and reliability.
- ii. When relative humidity levels are too high, water condensation can occur which results in hardware corrosion and early system and component failure. If the relative humidity is too low, computer equipment becomes susceptible to electrostatic discharge (ESD) which can cause damage to sensitive components.

V. Other Facilities and Infrastructure

Exterior Lighting: Evaluate the amount of exterior lighting provided around facilities and on the grounds. Lighting is required for safety, security and way finding and can be accomplished with energy-efficient fixtures. Lighting for purposes other than safety, security and way finding should be assessed and reduced as appropriate.