

3520 A

Energy Conservation Standards

Regulation

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I. PURPOSE

The purpose of this regulation is to establish the energy conservation standards which will be used in District facilities.

II. PEAK CONTROL ENERGY DAYS

All employees and students will comply with energy reduction procedures during peak control energy days. Energy reduction levels will be met in order to fulfill contractual agreements with the Utilities.

III. LIGHTING OPERATIONAL STANDARDS

- A. Facilities users whether staff or not shall minimize the use of overhead area lighting by operating only necessary lighting groups and utilizing task lighting if required
- B. Lighting will be turned off in any area that is unoccupied, except for gymnasiums, corridors, stairwells, and exits as required by code, or where necessary to maintain an appropriate level of safety.
- C. Lighting in secondary buildings will remain off until 90 minutes before school starts and lights will be shut off 90 minutes after school ends, except in areas occupied with early morning events, evening events, or other scheduled activities.
- D. Lighting in elementary buildings will remain off until 90 minutes before school starts and lights will be shut off 60 minutes after school ends, except in areas occupied with early morning events, evening events, or other scheduled activities.
- E. Hallway lights shall remain off on Saturdays, Sundays, Holidays and Summer months when school is not in session, or when no duly authorized permit is in place for the facilities use.
- F. Natural sunlight should be used in place of electrical light when available, depending on area use and specifications.

G. Lighting levels will be maintained in accordance with the Illuminating Engineering Society (IES) of North America standards:

Task Area	Foot-candles
Corridors/ Stairways / Restrooms	10-20
Storage Rooms	10-20
Conference Rooms	20-50
General Offices	50
Classrooms	50
Cafeterias	50
Gymnasiums	30-70
Parking Areas (uncovered)	1-2

H. IES lighting standards will be assessed and maintained through de-lamping.

I. Gymnasium lights will be turned off if the area will be unoccupied for a period in excess of 30 minutes. During periods of the year when physical education classes are outside, the gymnasium lighting will be limited to walk-through lighting and other minimal lighting requirements.

J. After school hours, all classroom and office windows will be closed and blinds/shades will be drawn to $\frac{3}{4}$ the distance from the top of the windowsill.

K. Night custodians should turn lights on only in their work area.

L. Task lighting and overhead lighting for conference rooms, printers, other equipment and supply rooms should be turned off when leaving the space.

M. General office lighting should always be turned off at the end of the day by the last employee to leave, or whoever may be assigned that duty.

IV. TEMPERATURE CONTROL OPERATIONAL STANDARDS

A. On regular school days, temperatures will be maintained for the entire building 30-45 minutes before the start of school until 30-45 minutes after dismissal. Special consideration will be given to certain preschool and special education classrooms when appropriate.

B. Classroom, office, and common areas of all district facilities shall not be mechanically heated to a temperature greater than 68 degrees or mechanically cooled to a temperature less than 78 degrees.

C. Permissible ranges of temperature measured at four feet above floor level are established as follows:

<u>Areas</u>	<u>Occupied</u>		<u>Unoccupied</u>	
	<u>Heating Season</u> <u>(degrees F)</u>	<u>Cooling Season</u> <u>(degrees F)</u>	<u>Heating</u> <u>Season</u> <u>(degrees F)</u>	<u>Cooling</u> <u>Season</u> <u>(degrees F)</u>
Classrooms (grades K-12)	68-70.	76-78.	63	83
Gymnasiums & Locker Rooms	65-70	76-78	63	83
Offices	68-70.	76-78.	63	83
Shop Rooms	65-70.	76-78.	63	83
Halls	65-70	76-78.	63	83
Kitchens & Cafeterias	65-70.	76-78.	63	83

D. District personnel shall:

1. Maintain all space temperature regulating equipment to set points established by the district as listed above.
2. Coordinate all scheduled activities into as few mechanically conditioned areas within a building as possible and use naturally conditioned areas of the building when establishing room schedules.

E. Engineering staff may be working in spaces during officially “unoccupied” periods of the year.

1. In the event that their work involves scrubbing or cleaning and extracting water from carpets, the necessary fans and air treatment will be used in order to prevent the growth of mold and to hasten the drying process.
2. Engineers in Charge will notify the District Operating Center to operate the air handling units necessary for these purposes.

F. Night setback temperature during heating season of 63 degrees Fahrenheit will be set 30-45 minutes after dismissal time until 30-45 minutes before school starts and during weekends and breaks or vacation periods, with the exception of areas with early morning events, evening events, or other scheduled activities.

G. Staff and students are encouraged to dress appropriately for the season.

- H. Main boilers will remain off during the summer season with the exception of :
 - 1. boilers that are connected to swimming pools,
 - 2. buildings where VAV Systems exist, and
 - 3. buildings where reheat coils exist.
 - I. Windows should be kept closed during the heating season and when air conditioning units are in operation.
 - J. Doors should be closed in unoccupied areas/classrooms.
 - K. Exterior doors and inner vestibule doors shall not be blocked open unless there is a delivery in process.
 - L. Swimming pool temperatures will be set at no higher than 82 degrees.
 - M. Window Air Conditioning units used for comfort cooling purposes shall be turned off when the room is unoccupied, and when the temperature is controlled according to the setpoints listed above in Paragraph IV.C.
- V. VENTILATION OPERATIONAL STANDARDS**
- A. Staff will not obstruct ventilation/return air ducts or unit ventilators.
 - B. Ventilation systems will be controlled to maintain the correct amount of air based on occupancy.
- VI. SCHEDULING OPERATIONAL STANDARDS**
- A. Early morning events, evening events, or other scheduled activities will be concentrated to the minimal number of wings within a building.
 - B. Large areas such as auditoriums and gymnasiums should not be used for small groups unless necessary. Use of these areas will be coordinated with the maintenance staff to reduce energy use during unoccupied times.
- VII. COMPUTER AND OFFICE EQUIPMENT OPERATIONAL STANDARDS**
- A. All School District employees shall make an effort to minimize energy use by the office equipment they use, within the bounds of reasonable working procedures.
 - B. Computer monitors will be set with a 15-minute sleep mode.
 - C. Computer monitors should be shut off when not in use.

- D. Each computer shall be configured for operation of power management features unless these features demonstrably impair the machine's necessary functions.
- E. Before disabling power management features, every effort shall be made to establish proper function with the aid of Information Technology staff.
- F. Electronics and office equipment for individual use shall be switched off at the end of each workday unless machines are involved in department support processes that are necessary beyond normal working hours.
- G. Electronics and office equipment, with the exception of computers, should be unplugged if not in use for three or more school days.
- H. In the case of shared equipment, such as printers, every effort will be made for the last user to switch devices off upon leaving at night. This does not apply to machines, such as fax machines, which must remain active after business hours.
- I. Office and classroom televisions will be unplugged over the summer unless used for summer school.

VIII. MECHANICAL SYSTEMS OPERATIONAL STANDARDS

- A. District staff shall:
 - 1. Optimize the use of morning warm up and night setback controls, adjust unoccupied setback temperatures to no less than 82 degrees during cooling season and no more than 62 during the heating season and minimize outside air intake while maintaining Indoor Air Quality Standards.
 - 2. Stagger start times of all HVAC equipment by no less the 5 minutes and schedule HVAC equipment start times so that temperature set points are reached no more than 45 minutes prior to student arrival
 - 3. Install thermostat guards to prevent cold weather start-up and lock out/ Tag Out non-essential mechanical cooling systems at the motor disconnect
 - 4. Operate Auditorium and Gymnasium HVAC equipment on timers and prohibit non-occupied operation of ventilation and cooling systems when possible.
- B. The building Engineer in Charge (EIC) is required verify proper controls settings and schedules.

IX. POWER USE OPERATIONAL STANDARDS

- A. Vending Machines
 - 1. Machines for the sale of refreshments (juice, water, etc.) will be unplugged during the summer when not in use.

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2. Machines shall be delamped.

B. Kitchens

1. Appliance and equipment “on” times will be as close as possible to the actual use.
2. Ventilation fans should be used in concurrence with oven use.
3. Refrigerator and freezer doors should remain closed as often as possible.
4. Unused kitchen equipment will be unplugged during the summer.
5. Frozen food will be consolidated during the summer.
6. Upright freezers and walk-in coolers will be emptied, propped open, and unplugged during the summer.

X. WATER OPERATIONAL STANDARDS

- A. Thermostats for hot water heaters will be set so water delivery temperature at all sinks will not exceed 110 degrees F.
- B. Thermostats for hot water heaters that service kitchens will be set at 180 degrees F.
- C. Water drips will be fixed as soon as possible.
- D. Efficient water practices will be considered during ground irrigation.

XI. OTHER ENERGY USE AND CONSERVATION PLANS

Each District facility shall create a plan to address energy use and conservation not otherwise covered by this regulation including, but not limited to, how and when personal electronics are used, and compliance with fire code requirements for all electricity using equipment, energy efficiency of communal equipment such as refrigerators, beverage makers, and small appliances.

Cross References:

MPS Policy 3520 (Energy Use)