

MOUNDS VIEW PUBLIC SCHOOLS

ENERGY SAVINGS GUIDELINES

ESTABLISHED ENERGY CONSERVATION ITEMS

1. Established temperature set points for heating season. Day time heating set point is 70 – 72 degrees, evening, weekend and holiday heating set point is 66 – 68 degrees.
2. Established temperature set points for cooling season. Day time cooling set point is 76 – 78 degrees, evening, weekend and holiday cooling set point is 78 – 80 degrees.
3. Occupancy sensors that control the mechanical systems and lighting in the classrooms. Occupied mode – lights turned on and the mechanical systems operating at the established set point for day time use. Unoccupied mode – lights turn off and the mechanical systems operate at 1/3 of the set point.
4. Alternate fuel source for the boilers. The main fuel source is natural gas, with the alternative fuel source being fuel oil. We are involved with the curtailment control program through Xcel Energy, switching from natural gas to fuel oil when demand is high. With this ability, we are receiving our natural gas at a reduced rate. We are also involved with the peak control program through Xcel Energy. Within this program we receive our electricity at a reduced rate and upon notice from Xcel Energy we cut back to the minimal kilowatt hours established by Xcel Energy.
5. All of the lighting has been changed from T12 lamps to T8 lamps. This reduces the amount of energy required to illuminate all of the classrooms, offices and meeting areas.
6. Establish VFD's (Variable Frequency Drives) on all of the larger electric motors powering mechanical systems. The VFDs protect the motors from overheating when there is a power outage and will also save energy during start up, not allowing the motors to energize to full power immediately.
7. We have communicated to staff members that all classroom doors must remain closed to maximize the efficiency of the mechanical systems.

8. Replaced all water cool compressors with fan cooled at the secondary schools. These systems are more efficient and had an annual savings of approximately 12 million gallons of water annually.
9. All sites have had testing and balancing done for the HVAC system balancing air flow to the required standard for each space. This requirement is based upon a 15 CFM (Cubic Feet Per Minute) the OSHA standard per occupant.
10. We do an annual tune up of all boilers and chillers to maximize their efficiency and apply for all applicable rebates.
11. We have established smaller off-season boilers to accommodate the needs for the pool areas and domestic hot water. In doing so this allows us to shut down our primary boilers during cooling seasons.
12. Notification to staff members to shut off computers when not in use.
13. We are now members of the Energy Star Program Team and will be aggressively working within their criteria to obtain energy star ratings throughout the district.

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FUTURE ENERGY CONSERVATION INCENTIVES

1. We are in the process of doing exterior envelope upgrades. This entails replacing all of the original single pane glass windows and non-insulated windows and door frames. We are replacing them with insulated glass and insulated window and door frames. We are also evaluating the exterior envelope brick and tuck pointing which are being replaced on an as-needed basis. All rebates have been and will be applied for.
2. Re-roofing: sequentially as we re-roof any of the sites we have been establishing a new insulated base to meet industry standards.
3. All new electric motors: as we replace the motors throughout the district we have been identifying the maximum efficiency possible "motor replacement, controls and VFD's where applicable."
4. Mechanical replacement exhaust air handling units: we have done a district wide evaluation of all our existing mechanical units and will be sequentially replacing them based upon their age, their efficiency and their condition.
5. We are in the process of reviewing all of the gym and cafeteria lighting throughout the district and will be replacing them depending on their age and conditions with updated, more efficient lighting. All rebates will be applied for.