

# Superintendent Procedure 6810SP Natural Resources Conservation



Approved by: s/Larry Nyland Date: 9/20/17

Dr. Larry Nyland, Superintendent

This procedure implements School Board Policy 6810 and is the long-term resource conservation management plan for the District.

## Introduction

The Seattle School Board strives to create healthy and comfortable learning and working environments for students, staff, and the Seattle community. The focus of the natural resources conservation program is long-term, sustainable measures and practices that reduce consumption of natural resources and seek out alternative energy and green technologies. By reducing the District's use of natural resources, a greater amount of the District funds can be spent for supporting student learning and excellence. Additionally, conservation lessens negative impacts on our environment. Wasting resources contributes to many environmental problems such as global warming, water pollution, acid rain, etc. When we conserve energy and water, reduce solid waste, and utilize green alternatives, we help reduce and prevent environmental damage.

A successful natural resources conservation program welcomes and relies upon active participation by all members of the school community. Responsibility and authority for implementing the natural resources conservation management plan lie at all levels of the District. Resource conservation begins with the design of the buildings and landscaping, and continues through the daily operation and maintenance of the schools. Seattle Public Schools seeks to model environmental stewardship to the staff, students, and the Seattle community, linking conservation, the environment, and our role in determining the future health and well-being of people, the environment, and the planet.

### 1) Heating, Cooling, and Ventilation (HVAC) & Mechanical Equipment

- a) Normal operating schedule for mechanical heating, cooling and ventilation (HVAC)
  - i) Monday – Friday HVAC schedules are based on staff contract work times and school start/end times.
  - ii) After school, HVAC is provided for academic and District scheduled events only.
  - iii) HVAC systems shall not heat or cool during non-school hours, during school breaks and holidays, and in unoccupied areas unless it is necessary for freeze or equipment protection.
  - iv) Exceptions to the HVAC operating schedule may be made for events outside of the normal operating hours through the District building rentals system. Rental fees may apply. See Superintendent Procedure 4260SP: Use of School Facilities.
  - v) Fan cooling is allowed during occupied times.

- vi) For heating, cooling or fans after hours, a building use permit is required.
- b) HVAC set points during scheduled occupied periods – these set points mean that actual temperatures may be within +/- 2 degrees
  - i) Classroom and office area set points are 68 degrees heating. Where available, 76 degrees mechanical cooling, 74 degrees economizer cooling.
  - ii) Lunchroom and auditorium set points are 65 degrees heating. Where available, 76 degrees mechanical cooling, 74 degrees economizer cooling.
  - iii) Gym and hallway set points are 62 degrees heating. Cooling is not commonly provided.
  - iv) Temperature settings in classrooms with motion sensor integrated HVAC should have heating set points reduced by 3 degrees and cooling set points increased 3 degrees during the normal operating schedule when the room becomes unoccupied. The motion sensor will turn the system back to occupied temperatures when a person enters the room.
  - v) Exceptions to the HVAC set points are made for those with special needs as noted in their 504 documents.
- c) Portable space heaters are a potential fire hazard, can trip our breakers, and use a significant amount of energy. Only spaces that do not meet District standard HVAC set points, during the normal operating schedule, from the building's HVAC systems may be permitted to have a space heater. All heaters must meet District safety requirements. Approved space heaters shall be shut off during unoccupied hours and while unattended. Please note: space heaters are not rated to be used with extension cords and should be directly plugged into the wall.
- d) Thermostats, radiators, unit ventilators, supply and return air vents and other HVAC equipment shall not be tampered with and shall have a minimum of three feet of unobstructed space around them to ensure adequate airflow and temperatures.
- e) All school activities, including summer school and before and after school activities, should minimize resource use by consolidating activities into the fewest possible number of buildings, building areas, and rooms. Consolidation will allow for the fewest number of rooms to be conditioned which will reduce cost and resource use.
- f) Circulating pumps, fans, boilers, etc. shall be turned off during unoccupied periods of evenings and weekends except as needed for freeze protection.
- g) Water heaters shall be turned off during extended school breaks, where feasible.
- h) Staff should properly shut down and unplug smaller District refrigeration units such as milk coolers, reach-ins, ice chests and ice machines during breaks of four consecutive weeks or more. Food from these units should be consolidated and placed into walk-in units, where available.

## **2) Lighting**

- a) Indoor lighting
  - i) Everyone is responsible for turning off lights in unoccupied areas. Lighting should not be left on overnight. Emergency lighting will remain on automatically per building code.
  - ii) String lights, lamps, and other decorative illumination not integral to the school building shall only use energy efficient bulbs (LED or compact fluorescent). Always follow best practices for fire safety.
  - iii) Photo cells, lighting controls and occupancy sensors should remain clear and unobstructed.

- b) Outdoor lighting
  - i) Outside lights shall be off during daylight hours.
  - ii) Plan after school and weekend events that require lighting to be located together on the main floor and close to the outside doors, to minimize the need for communal lighting (hallway, stairwell, exterior.)
  - iii) For lighting after hours, a building use permit is required.
- c) Photocells and lighting control requirements are found in the District Technical Standards.
- d) Interior walls and ceilings should be of a light color to improve the light quality of the teaching and learning environment.

### **3) Composting, Recycling, Waste Reduction and Waste Disposal**

- a) Everyone using District buildings shall minimize use of natural resources with the goal to reduce waste generation and encourage reuse and shared use of resources.
- b) Everyone shall make sure that all materials discarded are sorted into the correct container or dumpster.
- c) Everyone shall sort waste into three types, as required by the City of Seattle.
  - i) Compost goes in the green containers labeled “compost” (e.g. food waste, food soiled paper, and yard waste).
  - ii) Recycling goes in the blue container labeled “recycling” (e.g. clean paper, bottles, cups, milk cartons).
  - iii) Garbage goes into the grey/black/white container labeled “landfill” (e.g. plastic wrappers and dirty containers).
- d) New composting programs must be pre-approved by Facilities Operation and be developed using the Resource Conservation Guidelines. No new program may be started before all planning aspects are complete and the impacted parties are provided an opportunity to participate in program design.
- e) Materials that meet the legal definition of “confidential records” shall be destroyed in accordance with Washington State RCW 40.14.
- f) All hazardous materials and waste shall be handled in a safe and lawful manner. No hazardous materials or wastes shall be poured down drains, onto the ground, or into waterways.
- g) Printing and copying
  - i) All District staff should minimize paper and copier use.
  - ii) All staff shall be able to scan and send documents electronically instead of printing hard copies, and print and copy on double-sided paper to reduce paper waste. Training videos are available to staff.
  - iii) Double-sided and black-and-white printing should be set as the default for copiers and printers whenever possible to avoid wasting ink and paper.
- h) Toner cartridges for networked printers/copiers/scanners should be recycled.

### **4) New construction and remodels**

- a) Buildings and grounds shall be designed and constructed to minimize the use of resources in accordance with Seattle School District Board Resolution No. 2012/13-12.
- b) Building design choices shall be made to recognize the life cycle cost. This analysis shall include identifying the operations and maintenance budget prior to construction.

- c) All new construction and major remodels shall follow state and City building codes and Washington Sustainable Schools Protocol.
- d) The Capital Department shall follow their technical design standards and provide annual reports to the School Board on natural resource conservation measures employed in capital projects.
- e) All Capital projects shall have a corresponding Owners Project Requirements document, such as those identified by the U.S. General Services Administration.
- f) District Technical Standards shall be followed for all new construction and major remodels.
- g) Prior to construction, Design teams shall provide operations and maintenance staff model resource usage, including energy use index (EUI) and construction and operations solid waste analysis. Presentations shall be reviewed by the Facilities Department at schematic design, design development, and construction document stages.
- h) The District shall follow the guidelines of the City of Seattle's most current energy code, where applicable.
- i) Design teams shall collaborate with the local electricity, natural gas, water/sewer, solid waste and storm water utility companies, the City of Seattle, and other agencies to reduce the use of resources in construction, operation, and maintenance of schools.
- j) Design teams shall assist the District in maximizing grants and rebates for conservation. The District shall include in the bid documents a requirement to provide all necessary conservation –related data to utility partners prior to and post construction.
- k) Capital projects shall utilize third party commissioning of building systems in accordance with technical specifications. Systems shall operate at, or exceed, design specification objectives.
- l) All contracts, RFPs, bid documents, etc. that involve the building envelope, HVAC system, lighting system, or irrigation system shall be reviewed by the Mechanical/Electrical Coordinator to assess resource conservation measures.
- m) Design teams shall review and analyze actual utility use compared to expected utility use one year, two years, and five years after construction is complete and the building has been accepted by the District. Design teams shall document finding, present them to the Facilities Department and include lessons learned in future project planning.

## **5) Ongoing Maintenance Operations and Procurement**

- a) When maintenance is required to fix broken equipment, the repair shall maintain the functionality of the systems and/or equipment as they were designed unless the design is found to be faulty. The District Computerized Maintenance Management System (CMMS) shall be utilized to optimize the efficiency and life of mechanical systems operating in the buildings.
- b) The District shall tune-up buildings at least once every 5-years in accordance with City of Seattle Ordinance #124927. The tune-up shall optimize energy and water performance by identifying no- or low- cost actions related to building operations and maintenance, including but not limited to major building systems for mechanical, electrical, lighting, and water.
- c) District Technical Standards shall be followed for all maintenance, operations, and procurement.

- d) The District should evaluate the cost effectiveness of procuring high efficient and green products and equipment.
- e) Maintenance and operations staff shall partner with the local electricity, natural gas, water/sewer, solid waste and storm water utility companies, the City of Seattle, and other agencies to reduce the use of resources in the operation and maintenance of schools, and to maximize utility grants and rebates and incentives.
- f) The District should purchase recycled content and environmentally preferable supplies when the cost and functionality is equivalent to other supplies.
- g) All vending machines shall operate with the non-essential and advertising lighting disabled.
- h) All vending machines shall be put into low power mode when not in use.
- i) Handwashing faucets should be set to run for ten seconds (see also WAC 246-366-060).

## **6) Conservation outreach and training**

- a) Annual training opportunities should be provided for District staff members with responsibilities over the utility resources, including Senior Leadership, Custodial and Nutrition Services staff, Principals, and Maintenance staff.
- b) The District shall set five-year conservation goals for energy, water, and solid waste. Progress shall be reported on annually by the Facilities Department. District goals shall be based on local, state-wide, and national conservation benchmarks whenever possible.
- c) The District shall calculate annual and long-term avoided utility costs. As we continue to minimize our use of resources, we shall continue to reinvest in conservation to take advantage of opportunities to build additional conservation capacity.
- d) The District shall benchmark energy use annually through ENERGY STAR® Portfolio Manager for all buildings 20,000 square feet and larger. This data is publically available through the City of Seattle Energy Benchmarking Ordinance #125000.
- e) The District agrees to pass along part of the utility savings to the schools in a shared savings program intended to allow schools to invest in resource conservation to achieve additional and continued savings.
- f) Annual utility data shall be provided to principals, building custodians, and other senior staff.
- g) Principals are responsible for sharing these data and reminding occupants about the Natural Resources Conservation Procedures.

## **7) Occupants of offices and classrooms equipment-operating responsibilities**

- a) Everything plugged into a school or office outlet draws power and therefore uses public resources.
- b) All office and classroom electrical equipment (sound systems, speakers, computer *monitors*, fans, phone chargers, etc.) shall be turned off each night and during all weekend and extended non-occupied times.
- c) Networked devices such as District printers/scanners, computers and projectors shall stay on but should be switched into low power mode when not in use.

- d) The District may provide pre-approved appliances in shared areas for the use of staff, these appliances may include communal refrigerators, microwaves and coffee makers.
- e) All appliances used in the District must be located in communal spaces and available for shared use. Individual appliances may not be installed unless they are providing ADA accommodation or have been preapproved by Facilities Operations.
- f) All items plugged into outlets shall be National Underwriters Laboratories tested and labeled and all label instructions shall be followed by the user.
- g) Everyone is responsible for turning off lights and closing windows, doors, blinds, and drapes at the end of the day.
- h) All staff are responsible for taking action to shut down their rooms before extended breaks. A shutdown checklist will be provided.

## **8) School Grounds and Gardens**

- a) School gardens
  - i) All proposed gardens or any sort must be preapproved for Facilities Operations and follow operational guidelines.
- b) Landscaped areas and lawns
  - i) Shall be irrigated only during the first two year planting establishment periods.
  - ii) Shall not have automatic timers on irrigation systems unless the area is being established.
  - iii) Shall be planted with native plants appropriate for specific site conditions, preferentially use drought tolerant species in drier areas.
  - iv) Shall evaluate soils and location to select the appropriate planting material for each space.
- c) Athletic and play fields
  - i) Natural turf (grass) fields shall only be irrigated if they are part of the Seattle Parks – Seattle School District Joint Use Agreement and they have a functioning mechanical irrigation system. Irrigation schedules shall be calculated based on the need of the soil and vegetation.
  - ii) Fields that are not part of the Seattle Parks – Seattle School District Joint Use Agreement shall not be irrigated unless the area is being established for the first two years after planting.
- d) All irrigation shall be scheduled for cooler times of the day to avoid evaporation, unless extreme weather conditions require additional irrigation.
- e) Leaf fall from trees shall be left to compost in place or is mulched on-site whenever possible.
- f) Integrated Pest Management shall be used to manage all school grounds in accordance with Superintendent Procedure 6895SP: Integrated Pest Management.

## **9) Transportation and Anti-idling**

- a) All vehicles on and adjacent to school property should be operated to minimize idling to reduce fuel use and air pollution.
- b) Vehicles shall not be warmed up by idling and engines shall not be left running when not on the road.
- c) All operators of District contracted busses shall receive training to minimize fuel use and reduce pollution.

- d) When purchasing vehicles the District shall give preferential consideration to vehicles with the most fuel efficacy considering a life-cycle cost analysis of every purchase.

Approved: September 2017

Revised:

Cross Reference: School Board Policy No.6810