ENERGY AND WATER CONSERVATION

~~The Governing Board is committed to reducing the district's demand for electricity and water in order to help conserve natural resources and to save money to support other district needs. To that end, the Board shall establish goals to help reduce the district's energy and water consumption.~~

~~The Superintendent or designee shall establish an energy efficiency program which shall include specific strategies designed to help the district use energy more efficiently and to help~~

The Governing Board recognizes the importance of minimizing the district's use of natural resources, providing a high-quality environment that promotes health and productivity, and effectively manages the district's fiscal resources. To that end, the Superintendent or designee shall develop a resource management program which includes strategies for implementing effective and sustainable resource practices, exploring renewable and clean energy technologies, reducing energy and water consumption, minimizing utility costs, reducing the amount of waste of consumable materials, encouraging recycling and green procurement practices, and promoting conservation principles to ensure that funds intended for student learning are not diverted to cover energy costs.

As part of the energy efficiency program, the Superintendent or designee shall develop an emergency action plan to address actions to be taken in the event of power outages in schools, both during and after school operations. The action plan shall also address the role of staff, students and parents/legal guardians in helping to conserve resources and other activities to help the district meet energy reduction goals.

(cf. 3516 – Emergencies and Disaster Preparedness Plan)
(cf. 3516.5 – Emergency Schedules)

The Superintendent or designee shall analyze the effect of a utility rate increase on the district's budget. He/she shall develop and implement any necessary contingency plans.

(cf. 3100 – Budget)

The superintendent or designee shall regularly inspect district facilities and operations and make recommendations for maintenance and capital expenditures which may help the district reach its energy and water conservation goals.

ENERGY AND WATER CONSERVATION (continued)

(cf. 7111 – Evaluating Existing Buildings)

The Superintendent or designee shall make every effort to identify funding opportunities and cost-reducing incentive programs to help the district achieve its conservation goals.

The Superintendent of designee shall periodically report to the Board on the district's progress in meeting ~~energy and water use reduction goals~~ **the resource management program**.

~~*Legal Reference: (see next page)*~~

Legal Reference:
EDUCATION CODE
41422 School term or session length, failure to comply due to disaster
46392 Emergency conditions; ADA estimate
PUBLIC RESOURCES CODE
25410-25421 Energy Conservation Assistance

Management Resources:
CDE MANAGEMENT ADVISORIES
0118.01 California's Energy Challenge
0706.90 Water Conservation Advisory, 90-09
0222.90 Average Daily Attendance Credit During Periods of Emergency 90-01
WEBSITES
CSBA: http://www.csba.org
California Department of Education, Facilities Division, Energy Challenge: http://www.cde.ca.gov/facilities/energyefficiency
California Energy Commission: http://www.energy.ca.gov/
Alliance to Save Energy: http://www.ase.org/

ENERGY AND WATER CONSERVATION

The district's energy emergency action plan shall, at a minimum, address the following:

1. Procedures for student and staff safety during power outages.

2. Methods to ensure administrative control of operations during power outages.

3. Procedures to protect equipment that may be damaged by power outages, such as computers and pumps.

4. Procedures to establish a clear, effective communications system with staff, students and parents/legal guardians.

5. Guidelines for coordination with local fire, police and utility providers.

(cf. 3516 – Emergencies and Disaster Preparedness Plan)

The Superintendent or designee designates the following position as **the manager** ~~coordinator~~ of the district's energy tracking, reporting, and conservation efforts:

Assistant Superintendent of Business ~~Services~~ **and Operations**

District and school-site plans to conserve resources shall address energy and water use at each site, including plans for:

1. Reducing energy use during high-peak hours

2. Shutting down lights and equipment when facilities are not in use

3. Upgrading each site's preventative maintenance schedule for emergency lighting, generators, exit lighting, and other safety related equipment.

4. **Following the District's Energy Conservation Program (Exhibit A)**

ENERGY AND WATER CONSERVATION (continued)

The following operations shall also be reviewed in order to ensure that they further the district's energy and water conservation goals:

1. Educational programs
2. Classroom and building management and maintenance
3. Food services and equipment maintenance
4. Landscaping selection and irrigation
5. Transportation services and maintenance
6. New construction
7. Administrative operations
8. Use of facilities by outside groups

~~To enlist the support which is essential to achieving the district's energy and water conservation goals, the principal at each site shall:~~

~~1. Solicit input from staff, students, and parents/legal guardians related to district energy and water use~~

~~2. Develop strategies designed to ensure cooperation from students and staff in all conservation efforts~~

~~3. Recognize those who reduce energy and water use~~

ENERGY AND WATER CONSERVATION

San Leandro Unified School District

ENERGY CONSERVATION ~~PLAN~~ **PROGRAM**
~~2001-2002~~
2012

~~The Board of Education is committed to adopting an Energy Conservation Plan that will result in a ten (10) percent reduction in energy consumption. All employees will be responsible for implementing the following guidelines in classrooms, offices, and other work areas as appropriate beginning with the 2001-02 fiscal year.~~

The Governing Board has engaged Energy Education, Inc. (Energy Education) to use its expertise to develop and implement a comprehensive conservation program across the district. The Superintendent or designee shall oversee the efforts of Energy Education and an Energy Education Specialist (district employee) in the implementation of the conservation program.

General:

The district is committed to and responsible for a safe and healthy learning environment. To complement the district's energy management program, the organization shall develop and implement a preventative maintenance and monitoring plan for its facilities and systems, including HVAC, building envelope, and moisture management.

To ensure the overall success of the district behavior-based energy conservation program, the following areas will be emphasized:

1. **A designated campus Administrator will be accountable for energy conservation on his/her campus with Energy Education Specialist teams conducting energy audits and providing timely feedback.**
2. **All personnel at each campus are expected to make a positive contribution to maximize energy conservation and produce real energy savings.**
3. **Energy Education will implement its energy conservation program primarily through an energy management team led by the Energy**

ENERGY AND WATER CONSERVATION (continued)

San Leandro Unified School District
ENERGY CONSERVATION ~~PLAN 2001-2002~~ **PROGRAM 2012**

Education Specialist(s) in accordance with "Energy Guidelines" that will be adopted by administration and will define the "rules of engagement" for our energy program.

4. **Accurate records of energy consumption and cost will be maintained by the Energy Education Specialist for each campus to provide verifiable performance results on the goals and progress of the energy conservation program.**

- **Classroom doors shall remain closed when HVAC is operating. Doors between conditioned space and non-conditioned space remain closed at all times (i.e. between hallways).**

- **Proper and thorough utilization of data loggers will be initiated and maintained to monitor relative humidity, temperature, and light levels throughout the organization's facilities to ensure compliance with organization guidelines.**

- **All exhaust fans should be turned off daily.**

- **All office machines (copy machines, laminating equipment, etc.) shall be switched off each night and during unoccupied times. Fax machines should remain on.**

- **All computers should be turned off each night. This includes the monitor, local printer, and speakers. Network equipment excluded.**

- **All capable PC's should be programmed for the "energy saver" mode using the power management feature. If network constraints restrict this for the PC, ensure the monitor "sleeps" after 20-minutes of inactivity.**

ENERGY AND WATER CONSERVATION (continued)

San Leandro Unified School District
ENERGY CONSERVATION ~~PLAN 2001-2002~~ **PROGRAM 2012**

~~Heating and Air Conditioning~~

Cooling Season Occupied: 74ºF

Unoccupied Set Point: 85ºF

Heating Season Occupied Set Points: 68ºF

Unoccupied Set Point: 55ºF

~~Heating and Air Conditioning Systems will be set at 68º for heating and 78º for cooling.~~

- ~~The system will be turned on one hour before the work day and shut down at the close of the work day~~
- ~~Close individual classroom and office doors when the heating/air conditioning equipment is in operation~~
- ~~Thermostats will have locking covers and should not be adjusted above or below the specified settings~~
- ~~Under no circumstances will air conditioning be utilized in classrooms during the summer months unless the classrooms are being used for summer school or year-round school~~
- ~~Perform scheduled maintenance on units including cleaning burners and air conditioner coils, replacing and cleaning air filters, and checking ducts and pipe insulation for damage~~

Air Conditioning Equipment

The district has limited building space that is air conditioned. However, where it exists the following apply:

1. **Occupied temperature settings shall NOT be set below 74°F.**

ENERGY AND WATER CONSERVATION (continued)

San Leandro Unified School District
ENERGY CONSERVATION ~~PLAN 2001-2002~~ **PROGRAM 2012**

2. **During unoccupied times, the air conditioning equipment shall be off. The unoccupied period begins when the students leave the area at the end of day. It is anticipated that the temperature of the instruction room will be maintained long enough to afford comfort for the period the staff remains in the instruction room after the students have left.**
3. **Air conditioning start times may be adjusted (depending on weather) to ensure instruction room comfort when instruction begins.**
4. **Ensure outside air dampers are closed during unoccupied times.**
5. **Ceiling fans should be operated in all areas that have them.**
6. **Relative humidity levels shall not exceed 60% for any 24 hour period.**
7. **Air conditioning should not be utilized in facilities during the summer months unless the facilities are being used for summer school or year-round school. Air conditioning may be used by exception only or in those facilities that are involved in team-cleaning.**
8. **In all areas which have evaporative coolers such as shops, kitchens and gymnasiums, the doors leading to halls which have air conditioned instruction rooms or dining areas should be kept closed as much as possible.**
9. **Where cross-ventilation is available during periods of mild weather, shut down HVAC equipment and adjust temperature with windows and doors. Cross-ventilation is defined as having windows and/or doors to the outside on each side of a room.**
10. **Ensure dry food storage areas are maintained within code requirements. Typically, this is 55F-75F temperature and 35%-60% Relative Humidity. Utilize loggers to verify.**

ENERGY AND WATER CONSERVATION (continued)

San Leandro Unified School District
ENERGY CONSERVATION ~~PLAN 2001-2002~~ **PROGRAM 2012**

Heating Equipment

1. **Occupied temperature settings shall NOT be above 72°F.**
2. **The unoccupied temperature setting shall be 55°F (i.e. setback). This may be adjusted to a 60°F setting during extreme weather.**
3. **The unoccupied time shall begin when the students leave an area.**
4. **During the spring and fall when there is no threat of freezing, all steam and forced air heating systems should be switched off during unoccupied times. Hot water heating systems should be switched off using the appropriate loop pumps.**
5. **Ensure all domestic hot water systems are set no higher than 120°F or 140°F for cafeteria service (with dishwasher booster).**
6. **Ensure all domestic hot water re-circulating pumps are switched off during unoccupied times.**

Lighting

1. **All unnecessary lighting in unoccupied areas will be turned off. Staff should make certain that lights are turned off when leaving the instruction room or office when empty. Utilize natural lighting where appropriate.**
2. **All outside lighting shall be off during daylight hours.**
3. **Gym lights should not be left on unless the gym is being utilized.**
4. **All lights will be turned off when students and staff leave for the day. Custodians will turn on lights only in the areas in which they are working.**
5. **Refrain from turning lights on unless definitely needed. Remember that lights not only consume electricity, but also give off heat that**

places an additional load on the air conditioning equipment and thereby increases the use of electricity necessary to cool the room.

Water

1. **Ensure all plumbing and/or intrusion (i.e. roof) leaks are reported and repaired immediately.**
2. **Grounds watering should only be done between 4am-10am. Do not water during the heat of the day, typically between 10am – 8pm.**
3. **When spray irrigating, ensure the water does not directly hit the facility.**
4. **Consider installing water sub-meters on irrigation and cooling tower supply lines to eliminate sewer charges.**

Energy Education Specialist

- **The Energy Specialist provides regular (at least semi-annual) program update reports to the Board.**
- **The Energy Education Specialist performs routine audits of all facilities and communicates the audit results to the appropriate personnel.**
- **The Energy Education Specialist is responsible for either directly or indirectly making adjustments to the Organization's Energy Management System (EMS), including temperature settings and run times for Heating, Ventilation and Air Conditioning (HVAC) and other controlled equipment.**
- **The Energy Education Specialist provides monthly energy savings reports to the Superintendent and facility administrators detailing performance results**

Employees

- **The facility administrator is responsible for the total energy usage of his/her facility**

ENERGY AND WATER CONSERVATION (continued)

San Leandro Unified School District
ENERGY CONSERVATION ~~PLAN 2001-2002~~ **PROGRAM 2012**

- **Every person is expected to become an "energy saver" as well as an "energy consumer"**
- **Each staff member is responsible for implementing the guidelines during the time the he/she is present in their work area**
- **The custodian is responsible for control of common areas, i.e. halls, cafeteria, etc.**
- **Since the custodian is typically the last person to leave a facility in the evening, he/she is responsible for verification of the nighttime shutdown**

~~Lighting~~

~~**All unnecessary lighting in unoccupied areas will be turned off and lighting in occupied areas will be reduced as appropriate.**~~

- ~~Exterior security lighting will be turned off during daylight hours~~
- ~~All staff members in school buildings during non school hours or other buildings during non-work hours should turn lights on only in the specific area in which they are working~~
- ~~Occupancy light sensors will be installed in seldom used rooms~~

~~Equipment~~

~~**Turn off all equipment at the end of the workday.**~~

- ~~Copy machines, laminating equipment, computers (except for any network servers that must be left on) and other office machines should be turned off by the office staff each night~~
- ~~All classroom computers (except for any network servers that must be left on) should be turned off each day at the end of the last class~~

ENERGY AND WATER CONSERVATION (continued)

San Leandro Unified School District
ENERGY CONSERVATION ~~PLAN 2001-2002~~ **PROGRAM 2012**

- ~~The night custodian at each site will be responsible for a complete and total shutdown of the facility when closed each evening~~

Student Involvement

- **If possible s**elect a student "energy team" to monitor no cost measures and track overall energy performance on a monthly basis
- Include energy conservation instruction as appropriate

Low Cost Improvements

- ~~Replace incandescent exit signs with screw in LED (Light Emitting Diodes) lamps.~~
- ~~Continue to replace T-12 fixtures with more efficient T-8's and electronic ballasts.~~
- Continue to replace Mercury vapor fixtures in gyms or outdoors with metal halide, high–pressure sodium or T-8 or T-5 high-output fluorescents.
- When replacing old HVAC units, install ENERGY STAR labeled equipment.