

# **ACADEMY SCHOOL DISTRICT**

## ***SUSTSAINABILITY MANAGEMENT PLAN***

# INTRODUCTION

**Statement of importance:** Academy District 20 has institutionalized sustainability into all decision making processes to ensure the district makes healthy, productive, fiscally responsible and environmentally intelligent decisions. It is the responsibility of all administrators, faculty, staff, and students to ensure sustainability is a part of our culture.

**Academy District 20** serves +22,000 students in 31 schools with more than one million square feet and 500 acres. Current practice suggests D20 spends \$14/student more than a similar district (D11). If left unchecked the AY13/14 utility cost is expected to be \$4M. Sustainability, which is broadly defined as any practice that optimizes the triple bottom line: environmentally sound, socially just, and economically viable, is expected to cut these costs and improve the educational environment for all of D20.

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# DEFINING SUSTAINABILITY

Employing sustainability in district decision making implies that activities in the district are environmentally sound, socially just, economically viable, and will continue for generations. The district sets an example as an environmentally safe and healthy learning environment that is clean, free of environmental hazards, and in good repair. By design, sustainability influences environmental, social, and economic goals of the district and community. A sustainable culture inculcates themes such as, living within environmental limits and incorporating sustainable thinking into all decision making.

## Sustainable Facts

- ° Schools spend more money on energy than any other expense except personnel (If left unchecked, the AY13/14 utility cost is expected to be \$4M).
- ° In 2007, the American taxpayers spent greater than 35 billion on school construction.
- ° If the nation's schools cut energy costs by 25%, the savings would be approximately 1.5 billion which could pay for 30,000 new teachers.
- ° The average 34 watt florescent bulb uses about \$7.24 worth of electricity each year based on normal use.
- ° Turning off lights in one classroom for one hour keeps over two pounds of pollutants out of the environment.
- ° Each computer uses approximately \$34 of electricity each year of which 75% is the monitor.

## Triple Bottom Line (TBL)/People•Planet•Profit

This philosophy was first used in 1989 by John Elkington, co-founder of a consultancy focused on sustainability. TBL is an ongoing process that helps a district stay on track toward operating in a more balanced manner. People • refers to human capital. Providing employees and all people affected by the facilities they work in and around a safe and healthy environment. It has also been defined as fair and just treatment of employees. Planet • refers to natural capital. Efforts must be made to minimize the district's environmental footprint. Activities such as recycling, use of alternative energy, and green cleaning are good examples. Profit • refers to making an honest profit using elements of sustainability to offset recurring escalating costs in areas of utilities and maintenance of equipment. Profit (cost avoidance) gained from projects like retro commissioning and lighting retrofitting may be redirected into other areas to support the primary mission of the district: education.

## **Triple Bottom Line for Facilities Departments**

- ° (People) Building occupants – provide indoor air quality that meets all standards with preventive maintenance and ensure a healthy, productive working environment.
- ° (Planet) Environmental Requirement – institute plans and inspections programs in accordance with all local, state, and federal mandates.
- ° (Profit) Finances – Capture cost avoidance through utilities and resource conservation while managing stressed budgets

## **Triple Bottom Line for Schools**

- ° (People) Human capital – Provide employees with fair and just treatment, which includes a healthy, safe and productive working environment
- ° (Planet) Natural capital – Minimize the district's environmental footprint
- ° (Profit) Financial capital - Use sustainability to offset recurring costs in utilities and maintenance equipment

# **SUSTAINABILITY MANAGEMENT SYSTEM (SMS)**

An SMS is designed to move an organization systematically toward sustainable decision making, which ensures choices meet the needs of the present without jeopardizing the ability of future generations to do the same. It focuses attention at all levels of environmental, economic, and social issues. The SMS employs a Sustainability Management Plan (SMP) to create efficiencies and identify consistencies among programs.

## **SMP Benefits**

- Highlights successes and best practices of existing internal sustainability efforts.
- Provides a methodology to use resources strategically – directly communicating to all constituents (e.g., taxpayers) that the district is operating efficiently and constantly looking to identify opportunities to lower costs and improve performance.
- Postures the district to capitalize on emerging opportunities.
- Creates efficiencies and consistency among school programs, such as recycling and sustainable education.
- Sets an example for the community in environmental stewardship.

# SUSTAINABILITY MANAGEMENT PLAN

## Sustainability Statement Defining the Intent of the Plan

Academy district 20 will utilize, to the extent economically and practically feasible, sustainability principals to achieve a healthy, productive, fiscally responsible, and safe environments for students, staff, parents, and the community. The district will seek to preserve natural resources while balancing social, economic, and environmental issues using sustainability as a framework for decision making and operational principals. The district's sustainability policy is designed to (i) increase education and awareness throughout the district, (ii) identify existing and proposed district policy and guidance for improvement, and (iii) institutionalize sustainability gains in the district culture. The focus for AY 13/14 sustainability goals, segmented into 4 broad opportunity categories identified in the Sustainability Program Plan are as follows:

## AY13/14 Goals

1. Enhanced sustainability leadership
  - a. Develop/implement sustainability tools designed to educate schools on their utility use and resource conservation (Goal: 90% of schools publishing utility and resource metrics on-line to enable comparison and encourage accountability)
2. Increased sustainability training, awareness and recognition
  - a. Create and implement a sustainable teacher training program for curriculum support (Goal: Partner w/local higher education institutions to create sustainability focused education modules ready for classroom integration - 3-5 modules each for elementary, junior high and high school curriculum)
3. Enhanced resource conservation
  - a. Reduce utility consumption (Goal: 1.5% reduction in utility consumption for more than 90% of district facilities; plan developed to achieve by AY14/15 in remaining 10%)
4. Improved waste diversion and recycling
  - a. Decrease cafeteria waste stream by enhanced recycling programs (Goal: reduce cafeteria waste products by 10% via staff/student education and partnering with food services contractor.)

## Common Long Term Goals

- Implement a plan to save 10-15% in energy annually (\$200K - \$400K/yr)
- School incentive program – educate teachers that are project champions using school sustainability toolkits with new concepts integrated throughout the curriculum
- Maximize funding sources via 5-year financing plan (e.g., Governor’s energy office, rebates, etc.) to include a district energy manager and comprehensive staff training
- Build sustainability curriculum modules with the assistance of groups such as Colorado Alliance for Environmental Education, National Energy Education Development, and the Colorado Energy Science Center
- K-12 Integrated Sustainability Learning standards that describe what students should know at each level should also be considered

**Identify Key Statistics** *(Insert Survey Data and Benchmarks Here, offered as a service through the current GEO Grant)*

As a tool to inform SMP goals and strategies, a baseline inventory will be compiled from district utility records, other databases, high-level assessments of select district buildings, and staff input, to characterize the district environmental footprint and practices related to sustainability. A table may be developed that will illustrate the resource (gas, electric, water), quantity (amount of use), cost and greenhouse gas emissions. The baseline may also include vehicle fleet fuels, solid waste, and recycling.

## Measurements of SMP within Energy Management

*(How are we going to measure success)*

- kBtu/square foot and or per student reductions in energy use for individual schools
- Percent reduction in energy use district wide
- Number of schools qualifying for ENERGY STAR® status
- Once benchmarks are established, school administrators can begin becoming greener and more sustainable while also cutting costs

## Possible Short Term Opportunities

*(Best Practices for each included in GEO document, Appendix I)*

- Facilities
- Custodial
- Food Service
- Utilities Management
- Grounds Care
- Develop guidelines for new construction and maintenance

## **Possible Long Term Opportunities**

(Identify Best Practices for each)

- Resource Conservation
- Green House Gas Emissions
- Integrated Environmental and Sustainability and Learning Standards
- Transportation

## **Possible Sustainable Strategies** (Choose based on Key Stats)

- Composting of organic waste from food service program
- Water wise landscaping
- Water use reduction
- Mechanical and electrical system commissioning
- Renewable power strategies
- Material reuse
- Local food use
- Alternative transportation
- Maximize open space
- Site development

## **Recommend** Methods to Accomplish Goals

- Provide training materials to district personnel with respect to methods to reduce consumption and a list of district best practices. (Select from GEO SMS for schools, Appendix I)
- Assure all computer labs are shut down when not in use
- Train custodial staff to begin transitions period for lighting shut down at the end of the school day and to have all area lighting off unless utilized or being cleaned
- Train kitchen staff in correct heat up times for equipment and run only essential equipment

**Building Awareness** and Teams (develop mechanism for regular participation and feedback)

- Identify champions at individual schools
- Create a sustainability pledge at each school
- Provide quarterly energy consumption reports to schools that compare to the same month the previous year
- Identify environmental clubs and science programs that teach environmental science
- Communicate metrics and results

# Institute a Board Policy or Administrative Procedure for Sustainability

## **Board Policy**

For present and future generations, sustainability seeks to emulate nature through the creation of balance among social, economic, and environmental issues. Using sustainability as a framework for decision making and operations the district will; involve students in sustainability project determination, celebrate district sustainability successes, and be committed to environmental stewardship.

## **Sustainability Policy**

- We will support our educational mission by providing and operating physical spaces that promote health, productivity, and safety of all students.
- We will reduce life cycle costs by conserving energy and natural resources
- We will balance educational, financial, and environmental issues in our daily decision making, planning, and goal setting.
- We will consider and incorporate relevant aspects of sustainability into all future policies
- We will serve as a community leader in sustainability and partner organizations to further our common goal
- We will include sustainability education at each opportunity in the curriculum

# Plan Implementation

**SMP Implementation** – This will be the final step in SMP creation and once these are committed to by the district the plan may be implemented as a Sustainability Management System.

1. Define the program's long and short term goals
2. Document the needed on-going District involvement and resource requirement to sustain sustainability
3. Empower the participants and those charged with implementation of the program
4. Commit to a program by others for ongoing awareness, the evaluation of progress indicators, and the education of all stakeholders.
5. The program should be a repeatable system guided by specific, measurable, realistic and timely goals. The initial phase includes verification of opportunities and strategies identified by the stakeholder group. (People from initial meeting)
6. Year one recommendations and goals, initiate energy management program and organization, high performance design guidelines, create tools and processes to facilitate the development of site specific goals and action plans

Identify potential sustainability practices across all departments, (SMS for School Districts, Appendix I) organizing future actions into operational categories, assigning needed resource. The majority of opportunities are related to district departments and academic programs with the implementations to be embraced by each.

## Major Areas of Recommended Short Term Focus

- Food Service
- Curriculum
- Building Maintenance
- Transportation
- Solid Waste Management
- Reduce Utility Consumption by 1.5%
- Evaluate Capital Project Opportunities (i.e. lighting retrofits)

# Plan Implementation Continued

**SMP Continuation** – The sustainability program must move beyond resource conservation and basic compliance with best practices into areas such as high performance design and construction, focused recognition programs, accountability for performance, resource allocation and redirection, curriculum development that supports sustainability

## Ideas for Long Term Focus

- Develop a 5-year energy related capital project portfolio
- Convert all water heaters/boilers to 98.5% efficient, condensing type units
- Develop replacement schedule for synthetic turfs for new athletic fields for replacement of sod fields
- Empower building custodial staff to assist energy management policy or administrative procedure
- Turn off parking lot and building lights when schools are not in session, during breaks, and late evenings/early mornings

# Appendix I