

***Schaumburg Park District  
Green Light Sustainability Plan  
March 2009***

***INTRODUCTION***

Sustainability has emerged as a global environmental theme and a major business imperative for the 21<sup>st</sup> century, dramatically influencing thinking and policy making. It is essential that the District become known as a benchmark and role model for the best sustainable practices in the area.

Environmental Sustainability is defined as meeting our needs today while ensuring that future generations can continue to meet their needs. Sustainability means long term cultural, ecological and economic health and vitality. Environmental Sustainability is a process that maintains and enhances economic opportunity and community well being for every segment of society while protecting and restoring the natural and social environment upon which people and economics depend. Sustainability so defined calls for actions which are ecologically sound economically viable, and socially just and humane.

As a public institution, the District has an ethical and social obligation to safeguard a critical public resource – the natural environment. The District also has a duty to establish physical environments and organizational practices that are conducive to the health and well being of its citizens.

The Environmental Sustainability Plan is a dynamic document intended to ensure the District can continue to meet its current and ongoing environmental, social, and economic needs without compromising the future for succeeding generations. The rationale for developing this plan includes consideration of environmental issues as sustainability is a concept that ensures a higher quality of life for current and future generations. The metrics or measurements of progress are intended to be part of an annual report to inform the District on how well the plan is achieving its desired effect. The plan is a working document that should be updated as new technologies and procedures are developed.

The Environmental Sustainability Plan confirms the District's commitment to leadership in the advancement of sustainable practices that manage land use for long term benefits, reduce dependency on nonrenewable fuels, reduce consumption of resources without offsetting benefits, and improve our impact on the environment.

The plan's success will be achieved by following the key functional areas and strategies within each. Note that the point or credit system is not intended to create competition between facilities or as an incentive it is simply meant to act as a progress report on sustainability within the facility or site.

- **FACILITY OPERATIONS**

Establish the Sustainable Facility Management System using the USGBC LEED EB V2 criteria to accomplish the following:

- Benchmark performance against comparable institutions utilizing the EPA Energy Star program.
- Conserve energy.
- Conserve water resources and minimize wastewater disposal.
- Minimize and, where possible, eliminate the use of harmful substances.
- Ensure the correct and proper disposal of all substances.
- Minimize waste generation through reduction, reuse and recycling.
- Minimize noise, light, and odor pollution.
- Address environmental concerns in all planning and landscaping decisions.
- Provide procurement procedures that adhere to the principles of the sustainability plan.
- Complete regular audits of the Sustainable Facility Management System.
- Develop and maintain a database and approval process of products, and service suppliers meeting sustainable criteria.

*SUSTAINABLE FACILITY MANAGEMENT* is a process of integrating people, facilities, and business in an organization that optimizes economic, environmental, and social benefits of sustainability. (FEA 2009)

The United States Green Building Council (USGBC) and its Leadership in Energy and Environmental Design (LEED) program over the past twelve years have become the premier source and influence for sustainable buildings. USGBC and LEED have changed the way buildings are constructed and maintained. The Sustainable Facility Management System is taken from LEED EB V2 which is the existing buildings product of LEED and modified to meet the needs of the District.

## ***SUSTAINABLE FACILITY MANAGEMENT SYSTEM***

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### **EXTERIOR FACILITY MANAGEMENT**

#### **1. EXTERIOR MANAGEMENT PLAN**

##### *INTENT*

Establish maintenance practices that have the lowest possible effect on the environment while supporting the facility.

##### *ACTIONS*

Establish low impact maintenance plans and practices that address as many of the following as possible

- Maintenance equipment
- Plantings
- Landscape waste
- Irrigation
- Fertilizer and pest control
- Snow removal
- Exterior cleaning
- Painting, sealants and shell maintenance

*QUANTIFICATION*

For each of the above plans 1 credit or point will be awarded.

*STRATEGIES*

Develop low impacts plans utilizing practices that include reducing the use of power equipment, native plantings, integrated pest control, exterior cleaning practices, and reducing yard waste through mulching. Utilize low VOC paints and sealants in maintenance practices.

**2. RESTORING EXTERIOR OPEN SPACE**

*INTENT*

Conserve existing natural areas while restoring areas other than building footprint to natural ecologically appropriate open space.

*ACTIONS*

Provide native or adaptive vegetation or other ecologically appropriate features such as rock gardens, water bodies or other natural landscapes.

*QUANTIFICATION*

For each 25% increase in natural areas other than the building footprint per facility will be awarded 1 credit.

*STRATEGIES*

Provide site survey showing areas that can be adapted to natural plantings including but not limited to excess asphalt areas, turf areas, and annual beds.

**3. REDUCE ROOF HEAT ISLAND EFFECT**

Heat island effect is when the surface temperatures are higher than surrounding areas due to dark, non reflective surfaces, elimination of trees and vegetation, coupled with waste heat from automobiles and air conditioners.

*INTENT*

Reduce heat island effects.

*ACTIONS*

Install vegetated roof areas where appropriate, or install Energy Star compliant roofing with a minimum emissivity of 0.9.

*QUANTIFICATION*

For each 50% of Energy Star rated roof installed or for each 25% of vegetated roof installed over the total roof area 1 credit will be awarded.

*STRATEGIES*

All new roof areas will at a minimum meet Energy Star and LEED ratings. Vegetated roof will be added as practical.

**4. REDUCE LIGHT POLLUTION**

*INTENT*

Reduce light trespass from the facility and site to improve night sky access.

*ACTIONS*

Establish base line calculations for light infiltration at the property lines and infiltration to the night sky.

*QUANTIFICATION*

Each 10% reduction of light infiltration at the property line or to the night sky will receive 1 credit.

*STRATEGIES*

Reduce light infiltration through the use of shields, fixture aiming, and use of direction fixtures.

**WATER MANAGEMENT**

**5 WATER USAGE BASELINE**

*INTENT*

Maximize fixture efficiency to reduce the burden on supply, energy, and waste systems.

*ACTIONS*

Establish base line of fixture potable water usage to be calculated as 120% of the water usage from 100% of the total fixture count that would meet the Energy Policy Act of 1992.

*QUANTIFICATION*

One credit or point will be given for calculated documentation of the aforementioned base line for each facility.

*STRATEGIES*

Reduce potable water usage through the use of automated controls and use of fixtures that exceed the Energy Policy Act of 1992.

**6 WATER USE REDUCTION**

*INTENT*

Reduce the water usage through maximizing water fixture efficiency, thereby reducing water usage and energy consumption.

*ACTIONS*

Establish strategies and systems that will produce a reduction of potable water usage based on the levels established in Water Minimum Efficiency. These reductions shall be shown by calculations.

*QUANTIFICATION*

For each 5% reduction by calculation or actual meter reading from the baseline 1 credit will be given.

*STRATEGIES*

Reduce fixture usage through the use of automatic controls, high and ultra high efficient controls and fixtures. Ongoing public education will also produce reductions

**7 CREATE WATER EFFICIENT LANDSCAPE**

*INTENT*

Limit and/or eliminate the use of potable water for landscape irrigation.

*ACTIONS*

Eliminate or reduce the need for irrigation. Use high efficiency irrigation such as drip irrigation, use non potable water such as rain or lake water.

*QUANTIFICATION*

Each 25% reduction of potable water use for irrigation will be given one credit per facility.

*STRATEGIES*

Create native climate tolerant plantings. Incorporate the use of high efficiency irrigation, the use captured rain or lake water.

**ENERGY MANAGEMENT**

**8 FACILITY COMMISSIONING**

*INTENT*

Verify that all building systems are performing as designed and meet the sustainability requirements and needs of the facility.

### *ACTIONS*

- Establish a sequence of operations that includes original design and current facility needs for the HVAC system.
- Complete commissioning on all systems to verify the systems are operating within the sequence of operations.
- Repair or upgrade any system deficiency listed in the commissioning plan.
- Systems to be included in the plan are HVAC, controls, electrical, plumbing, roof, and envelope.

### *QUANTIFICATION*

Each action completed will receive one credit with a maximum of 3 credits per facility.

### *STRATEGIES*

The key to the commissioning section is the sequence of operations which must be updated to reflect changes in the operation or technologies that have changed since construction.

## **9 OZONE PROTECTION**

### *INTENT*

Comply with the Montreal Protocol which reduces ozone depletion from the use of Freon in refrigeration and cooling equipment.

### *ACTIONS*

- Verify that there is no equipment within the facility containing CFC's
- Document all equipment within the facility containing HCFC's
- Begin phase out of all equipment containing HCFC's and replace with equipment using HFC's

### *QUANTIFICATION*

Verification that there is no equipment containing CFC's will be awarded 1 credit. For each 50% of equipment with HCFC's replaced 1 point will be given.

### *STRATEGIES*

Specify that all new equipment brought into the facility will contain HFC refrigerant.

## **10 INCREASE ENERGY PERFORMANCE**

### *INTENT*

Increase energy performance to eliminate excessive energy usage.

### *ACTIONS*

Establish energy performance levels using EPA Energy Star performance rating. If facility does not qualify under Energy Star calculate usage using alternative method prescribed by LEED EB.

*QUANTIFICATION*

Every 3 point increase in the performance rating will be given 1 credit to a maximum of 3 credits.

*STRATEGIES*

Eliminate excessive energy use through energy saving strategies and use of energy efficient equipment replacements as units are replaced.

**11 FACILITY OPERATIONS STAFF TRAINING**

*INTENT*

In order to support the sustainable initiative establish an ongoing training program geared toward sustainability for all facility operations staff.

*ACTIONS*

Establish education program for operations staff that maintain the facility. The program should have at least 10 hours of training per year.

*QUANTIFICATION*

Over 12 month period 1 credit will be given for each 10 hours of training for all operations staff with a maximum of two credits.

*STRATEGIES*

In order to achieve the maximum facility performance staff needs to be trained in sustainable disciplines to ensure maximum performance.

**12 FACILITY OPERATIONS SYSTEMS MAINTENANCE**

*INTENT*

Develop and implement an appropriate maintenance system including preventative maintenance that ensures performance measures of all systems over the life of the facility.

*ACTIONS*

- Establish complete preventative maintenance program.
- Establish complete predictive maintenance program.
- Have update facility condition assessment with up to date FCI.
- Establish complete custodial program including assignments.

*QUANTIFICATION*



Documentation of all programs including in house and contractual man power needs will receive one credit.

*STRATEGIES*

Establish performance standards and man power requirements to support these programs. Document all programs using acceptable national standards.

**13 FACILITY SYSTEMS MONITORING**

*INTENT*

Have in place appropriate monitoring systems and protocols to insure the desired level of performance over the life of the building.

*ACTIONS*

Install monitoring systems to monitor the temperature, humidity, and CO2 levels within the occupied spaces.

The system to include:

- Continuous monitoring of equipment and indoor conditions within the facility.
- Alarm functions for areas that are out of range and/or require repair.
- System that will ensure prompt repairs of alarm notifications.

*QUANTIFICATION*

Establishment of all three of the above actions will receive one credit.

*STRATEGIES*

Use automated systems to monitor and log facility equipment performance.

**14 SUSTAINABLE FACILITY COST IMPACTS**

*INTENT*

Document facility costs before and after facility upgrades to show cost impacts of sustainable improvements.

*ACTIONS*

- Provide facility operation cost data for past three years.
- Track facility operation cost on an ongoing basis.

*QUANTIFICATION*

Provision of three years of facility costs will receive one credit. One credit will also be awarded for each year's trend.

*STRATEGIES*

Track building costs to establish the impacts of the sustainable initiative and ROI.

## **15 FACILITY EQUIPMENT COMPLIANCE**

### *INTENT*

Establish policies that ensure that any item (ie: personal coffee pot, fans, kiln) brought into the facility is capable of operating within the facility, and the item has the least amount of energy use possible.

### *ACTIONS*

Establish policies for the following:

- Approval process for any new equipment or energy user that is brought into the building prior to the purchase.
- Restricting use of any personal equipment that generates heat or excess energy.
- Establish standard kitchen equipment for all kitchen not including concession stands.

### *QUANTIFICATION*

Once the policies have been established one credit will be awarded.

### *STRATEGIES*

The policies are not intended to limit new equipment into the facility but to ensure sustainable performance and continuity within the facility. The policies are intended to limit the impacts of personal equipment on the facilities energy usage.

## **FACILITY OPERATIONS RESOURCES**

### **16 WASTE REDUCTION**

### *INTENT*

Establish current waste stream production volume and minimum source reduction and recycling of the current waste stream.

### *ACTIONS*

Conduct a waste stream audit to establish a current facility waste baseline that identifies the types of waste being generated at the facility. Identify opportunities for source reduction and diversion. Create a waste reduction policy that reduces the waste stream through purchasing strategies, collection equipment, and ongoing education.

### *QUANTIFICATION*

One credit will be awarded for completion of the actions described.

### *STRATEGIES*

Develop strategies that reduce the waste stream through reduction, reuse, and recycling. These strategies should include purchasing strategies, reuse and education of staff and patrons.

## **17 FACILITY RECYCLING**

### *INTENT*

Reduce the amount of waste from the facility that is sent to landfills for disposal.

### *ACTIONS*

- Establish a staff and patron recycling program that addresses all possible recyclable items.
- Provide on site recycling centers for ease of use.
- Collect and recycle all batteries, lamps, and ballasts.
- Establish recycling policy and educational plan.
- Create quarterly reports that demonstrate the changes in the waste stream

### *QUANTIFICATION*

For each 10% diversion of materials from landfills to recycling/reuse centers one credit will be given to a total of 5 credits.

### *STRATEGIES*

Establish recycling centers within the facility to make recycling as easy as possible. Utilize square footage recommendations for recycling centers needed. Encourage staff and patron recycling through educational programs.

## **18 LIGHTING MERCURY REDUCTION**

### *INTENT*

With the increased use of compact fluorescent lamps it has become necessary to establish program to reduce the amount of mercury being brought into the facilities.

### *ACTIONS*

- Calculate average mercury content of lamps using calculations specified in LEED EB V2.
- Maintain the mercury content to less than 80 picogram per lumen hour.

### *QUANTIFICATION*

Upon reaching less than 80 picogram for all lamps within the facility 1 credit will be awarded.

### *STRATEGIES*

Establish a purchasing standard that keeps the weighted average below 80 picograms. This action is of health benefit to staff and patrons in case of lamp breakage.

## **19 PROJECT WASTE REDUCTION**

### *INTENT*

Divert construction waste and debris from going to landfills. All products possible will be diverted to reuse and recycling centers.

### *ACTIONS*

Develop a construction waste management specification covering any future building construction/renovation.

### *QUANTIFICATION*

For each 25% of documented construction waste that has been diverted will be awarded 1 credit up to a total of 4 credits per project.

### *STRATEGIES*

Develop a construction specification that identifies haulers, salvage and recycling strategies and processes. This specification should also include the documentation required from the contractor.

## **20 ALTERNATIVE MATERIALS**

### *INTENT*

Reduce the environmental impact on materials used in maintenance and upgrades of the facility.

### *ACTIONS*

Purchase products within the following criteria:

- 70% salvaged materials from offsite.
- 10% post consumer or 20% post industrial material.
- At least 50% rapid renewable materials.
- Forest Stewardship Council (FSC) certified wood.

### *QUANTIFICATIONS*

Each 10% of total purchases during the calendar year based on dollar value will be awarded one credit to a maximum of 3 credits.

### *STRATEGIES*

When purchasing materials specify that they must meet at least one of the appropriate requirements.

## **21 IAQ COMPLIANT PRODUCTS**

### *INTENT*

Eliminate the negative IAQ impacts from materials used in the operation of the facility.

#### *ACTIONS*

Purchase products that conform to the following guidelines:

- Adhesives & sealants – SCAQMD #1168, Bay Area Air Quality Mgt District Regulation 8, Rule 51.
- Paints and coatings – Green Seal GS-11
- Carpet – CRI Green Label Plus Carpet
- Carpet Cushion – CRI Green Label
- Composite panels – contain no urea-formaldehyde resins.

#### *QUANTIFICATIONS*

One credit will be awarded for 30% of the annual purchases that meet the guidelines to a maximum of 3 credits.

#### *STRATEGIES*

Purchase products that meet the requirements to reduce VOC's being brought into the facility.

## **22 CLEANING PRODUCTS**

#### *INTENT*

Reduce the environmental impacts of cleaning chemicals and consumable products such as paper and garbage bags.

#### *ACTIONS*

Purchase products that confirm to the following guidelines:

- Cleaning products – Green Seal GS-37 if applicable, if not applicable use California Code of Regulations maximum allowable VOC levels.
- Disposable paper and trash bags – U.S. EPA Comprehensive Procurement Guidelines.

#### *QUANTIFICATIONS*

One credit will be awarded for 30% of the annual purchases that meet the guidelines to a maximum of 3 credits.

#### *STRATEGIES*

Purchase products that meet the sustainability requirements of the facility.

## ***INTERIOR FACILITY MANAGEMENT***

### **23 OUTDOOR AIR & EXHAUST SYSTEMS**

#### *INTENT*

Establish minimum IAQ to enhance the indoor air quality and well being of staff and patrons. Provide additional outside air ventilation and provide monitoring systems to sustain the long term comfort levels.

*ACTIONS*

- Maintain outside air ventilation systems to comply with ASHRAE 62.1-2004 or if not feasible supply at least 10 CFM per person.
- Increase outdoor air ventilation rates to at least 25% greater than the minimums required in ASHRAE 62.1-2004
- Install permanent monitoring system that has minimum temperature, CO<sub>2</sub>, and humidity monitoring capabilities.

*QUANTIFICATIONS*

Completion for each one of the three actions will receive one credit for a maximum of three credits.

*STRATEGIES*

Insure the ventilation systems are delivering the maximum amount of outside air to ensure staff and patron health through a series of visual inspections, airflow calibrations, test and balance operations, and constant monitoring.

**24 TOBACCO SMOKE CONTROL**

*INTENT*

Minimize exposure of building occupants to Environmental Tobacco Smoke.

*ACTIONS*

Smoking has been banned in buildings for some time by Illinois law. The law requires 15 feet between smoking areas and entrances. This control will locate exterior smoking areas at 25 feet away from building entries, outdoor air intakes, and operable windows where appropriate.

*QUANTIFICATIONS*

One credit will be given for adoption and enforcement of the action per facility.

*STRATEGIES*

Adopt and enforce the smoking ban and 25 foot ruling.

**25 CONSTRUCTION MANAGEMENT PLAN**

*INTENT*

Prevent IAQ problems resulting from facility construction/renovation projects.

*ACTIONS*

- Comply with SMACNA IAQ Guideline for Occupied Buildings Under Construction 1995.
- Protect on site absorptive materials from moisture.
- Install air filters with a minimum MERV 8 rating at all return air grills.
- Replace all filters prior to occupancy.
- Conduct a one week flush using 100% outside air prior to occupancy.

*QUANTIFICATIONS*

For each construction project in excess of \$150,000 that the actions are followed one credit will be awarded up to three maximum credits.

*STRATEGIES*

Specify containment strategies, housekeeping, sequencing and IAQ testing during construction.

**26 REDUCE AIR DISTRIBUTION PARTICULATES**

*INTENT*

Reduce the particulate matter that impacts air quality, health, building finishes, and systems that affects facility staff and patrons.

*ACTIONS*

Install in all air intakes and returns MERV 8 or greater air filters to trap particulates.

*QUANTIFICATIONS*

Once the MERV 8 filters have been installed and have at least two changes one credit will be awarded.

*STRATEGIES*

Install and maintain air filters with a rating of MERV 8 or greater.

**27 THERMAL COMFORT COMPLIANCE**

*INTENT*

Provide a thermal comfort environment that supports the occupants of the facility.

*ACTIONS*

Comply with ASHRAE Standard 55-2004, Thermal Conditions for Human Occupancy.

*QUANTIFICATIONS*

Upon written compliance with the standard one credit will be awarded.

*STRATEGIES*

Ensure that the facility and systems design are rated to provide the performance required under ASHRAE 55. In act systematic testing of the actual performance of the systems.

**28 IAQ PRACTICE**

*INTENT*

Enhance the IAQ of the facility by optimizing performance of the HVAC system and correcting IAQ as they become apparent.

*ACTIONS*

Implement an IAQ management program based on the EPA'S Building Air Quality: A Guide for Building Owners and Facility Managers

*QUANTIFICATIONS*

Upon completed documentation of the program and twelve months of system evaluations one credit will be awarded per facility.

*STRATEGIES*

Establish an IAQ program that optimizes best practices to ensure proper air quality and prevention of future problems including moisture accumulation and mold.

**29 GREEN CLEANING**

*INTENT*

Reduce exposure of staff and patrons to hazardous chemicals, biological, and particulate contaminants which impact the facility environment.

*ACTIONS*

Establish cleaning policy that addresses:

- Sustainable cleaning systems.
- Sustainable cleaning products.
- Chemical concentrates and dilution systems.
- Proper training of personnel in the hazards of the cleaning environment.
- Use of non antimicrobial hand cleaning soaps.

*QUANTIFICATIONS*



Publishing of an environmental cleaning policy that establishes criteria for all of the actions will be awarded one credit.

*STRATEGIES*

The policy should address all of the actions including but not limited to cleaning product, hard floor coatings, concentrated cleaning systems, and training.

**30 GREEN CLEANING EQUIPMENT**

*INTENT*

Reduce exposure of staff and patrons to hazardous chemicals, biological, and particulate contaminants which impact the facility environment.

*ACTIONS*

Establish cleaning equipment policy that specifies the following:

- Vacuum cleaners – Meet the requirements of the Carpet & Rug Institute Green Label Testing Program.
- Hot Water Extraction – Must have sufficient power to completely dry in 24 hours.
- Powered Equipment – Must have devices to capture fine particulates and operate at less than 70dba.
- Automated Scrubbers – Must have variable speed feed pumps to optimize chemical usage and contain gel batteries.
- Powered equipment to be ergonomically designed to minimize noise and operator fatigue, and shall have rubber bumpers to reduce damage.
- Establish log of all powered custodial equipment. Log shall include all manufacturer specifications, maintenance, date placed in service, inspection and maintenance schedules.

*QUANTIFICATIONS*

Upon completion and implementation of the cleaning equipment policy one credit will be awarded.

*STRATEGIES*

Maintain a policy for the use of custodial equipment that maximizes reduction of building contaminants. The policy also provides for evaluation of the custodial equipment in use.

• **GROUNDS OPERATIONS**

**1. NATIVE PLANTING IN PLACE OF MOWED TURF**

Identify areas in parks and at Schaumburg Golf Course to replace

mowed turf with native plantings and develop long range plan to phase in plantings.

#### *CONDITION STATUS*

Currently the park district owns approximately 1100 acres of property of that 700 acres are mowed on a weekly basis, and 250 acres are maintained as native areas now. Along with mowing, the parks are sprayed for dandelions in the spring and a general fertilizer application is put down in the fall. Athletic fields golf courses and facilities are sprayed and fertilized regularly.

#### *INTENT*

To decrease the amount of mowed turf throughout the district saving labor, fuel, and maintenance on mowing equipment. Allowing time to better maintain other areas in the parks such as sign beds, playground areas, landscape beds, and tree maintenance while decreasing pollution.

Increase awareness and acceptance for the benefits of native planting areas.

#### *ACTIONS*

1. Select location for large scale native plantings in park sites.
2. Develop a survey to assess public attitudes and opinions about native landscapes surrounding selected park sites.
3. Design and budget for native planting areas utilizing native prairie and or wetland wildflower and grass species which will provide displays of blooming plants throughout growing season. Design will include appropriate maintenance controls.
4. Continue to expand and develop native planting areas at Schaumburg Golf Course.

#### *QUANTIFICATIONS*

Receive 1 credit for every 1000 sq ft of park land converted to native plantings.

#### *STRATEGIES*

Design and install large native planting areas in detention, non high use park sites and assess public attitudes and opinions about native plantings.

## **2. PATRON RECYCLING IN PARKS**

Identify high use park sites for recycling and expand the recycling program at Schaumburg Golf Club and at the same time increase the public awareness of recycling program.

*CONDITION STATUS*

Currently the park district has 103 park sites several of them host a large numbers of athletic events that would be targeted for a recycling program.

*INTENT*

To increase public awareness of recycling program in parks.

*ACTIONS*

1. Select locations for recycling at high use park sites each year.
2. Develop public awareness of recycling in parks.
3. Include Food Service recycling at Schaumburg Golf Club.

*QUANTIFICATIONS*

Receive one credit for every park included in the recycling program.

*STRATEGIES*

Start program on limited basis and expand program base on initial results. Determine if recycling program in parks will be beneficial by amount of garbage pickup on a daily routs (decreases) and expand program based on initial program.

**3. ALTERNATIVE PAVING**

Identify areas in parks and at facilities that would benefit from permeable paving.

*CONDITION STATUS*

Currently the park district has 21 paved parking lots. Identify areas of lots and pathways that can be converted to alternative paving methods.

*INTENT*

To reduce amount of paved areas throughout the district and reduce amount of storm water runoff of hard paved surfaces. To increased water quality and reduction of heat released from standard paving. (heat island effect)

*ACTIONS*

1. Identify locations that alternative paving would be beneficial to replace existing standard paving.
2. Design any new parking areas within the district with permeable paves. New installation would be more cost effective due to the reduction of underground drainage for storm water retention.

#### *QUANTIFICATIONS*

For each 100 sq ft of alternative paving installed at existing site one credit will be awarded. For every 1000 sq ft of new paving one credit will be awarded.

#### *STRATEGIES*

Design any new parking lot installations with alternative paving as an alternate on bid document and investigate existing parking areas to be changed to alternative paving when budget allows.

### **4. REDUCE VEHICLE FUEL CONSUMPTION**

Reduce fuel consumption through implementation efficient procedures and the purchase of alternative fuel vehicles.

#### *CONDITION STATUS*

Currently the park district has vehicles that run on regular gas or diesel fuel. When available purchase alternative fuel vehicles to replace existing vehicles. This can expand into off road vehicles (i.e. Mowers or Utility carts) in the future as technology improves.

#### *INTENT*

To reduce the amount of fuel required to run existing fleet.

#### *ACTIONS*

1. Establish a base line for fuel consumption per vehicle.
2. Reduce vehicle idle time.
3. Establish efficient schedule.
4. Explore options for alternative fuel vehicles and purchase as available.

#### *QUANTIFICATIONS*

A ten percent (10%) reduction per vehicle in mpg will receive one credit and for each alternative vehicle purchased one credit will be received.

#### *STRATEGIES*

Explore alternative fuel vehicles and expand program as new alternate fuel vehicles are developed for other uses

## **5. NATIVE PERENNIAL GARDEN BEDS**

### *INTENT*

Increase awareness and acceptance of native landscapes and native vegetation through the use of small native perennial gardens placed in high traffic areas around facilities and within parks and increase acceptance appreciation for the benefits and aesthetics of the native plant landscaping.

### *ACTIONS*

1. Select locations for native perennial bed installation.
2. Design native perennial beds with aesthetics as the primary goal, utilizing native prairie and/or wetland wildflower and grass species which will provide displays of blooming plants throughout the growing season. Design should include appropriate erosion and weed control barriers, surface mulch, etc.
3. Establish regular maintenance of all native perennial beds to control weeds.

### *QUANTIFICATIONS*

For every bed installed one credit will be awarded.

### *STRATEGIES*

Design and install perennial garden beds in highly visible areas near facilities and at various park sites.

## **6. NATIVE LANDSCAPE MANAGEMENT PLANS (AREAS & GARDENS)**

### *INTENT*

Develop long-term management plans for all native landscaped areas in order to promote native plant and animal diversity, ecosystem functions (i.e. erosion control, goose control, flood control, etc.), and aesthetics.

### *ACTIONS*

1. Develop written management plans for all existing native landscape installations within the district.
2. Identify sites where new native landscape installations are planned or proposed during the next three years and develop written management plans for these areas.
3. Research and/or develop assessment tools to use in evaluating sites.

### *QUANTIFICATIONS*

Annual assessments should be conducted within each landscape installation which will help to determine the effectiveness of

management efforts. The Floristic Quality Index (FQI) commonly used to assess the quality of native plant communities should be used as a standard metric. For each increase in FQI of 5 points, 1 credit will be awarded.

#### *STRATEGIES*

Establish written management plans for each site that outline the goals of each landscape installation and prescribe management strategies and schedules which will help to achieve the stated goals.

### • **Education**

#### **1. INTERNAL COMMUNICATION & EDUCATION**

##### *INTENT*

Insure that staff persons in all departments are aware of and understand the intent and components of the District's Green Plan so that they may contribute to its success AND so that they are able to convey this understanding to the public.

##### *ACTIONS*

1. Develop a written general orientation to the District's Environmental Policy and Green Plan for all staff.
2. Develop more specific staff training on various Green Plan components to be included as part of the annual training schedule for appropriate staff.
  - a. General Green Plan Overview & Rationale – Supervisors & Reception/Clerical Staff
  - b. Facility Operations & Energy Conservation – Facilities Staff & Building Managers
  - c. Parks Operations/Natural Resource Management – Parks & Nature Center Staff
  - d. Education – Communications & Nature Center Staff
3. Provide Green Plan Updates at General Staff Meetings.
4. Provide periodic environmental tips and suggestions to all staff via the e-newsletter and Intranet.
5. Insure that 100% of existing and new full-time staff has received a general orientation to the Green Plan by spring, 2010. Insure that all existing and new part-time staff has received a general orientation to the Green Plan.

##### *QUANTIFICATIONS*

One credit per employee orientation and one credit awarded per action completed.

##### *STRATEGIES*

Develop comprehensive training programs that deal with the Green Plan in its entirety as well as its components and see that these training programs are implemented and evaluated on a regular basis.

## **2. PUBLIC EDUCATION & INTERPRETATION**

### *INTENT*

Seek to increase public awareness of the District's Green Plan as well as the benefits provided to the community from increased environmental responsibility.

### *ACTIONS*

1. Develop a written interpretive plan that outlines methods of conveying information to the general public in various settings (i.e. facilities, parks, nature areas, media outlets, etc.)
2. Develop signage for use in facilities to convey information on the District's sustainable initiatives.
3. Develop a web page dealing specifically with the District's Green Plan.
4. Offer green lifestyle programs to the general public.

### *QUANTIFICATIONS*

One credit will be awarded for each action item completed.

### *STRATEGIES*

Develop an education and interpretation program that will include a variety of means of conveying information on the District's Green Plan to the general public as well as providing patrons with information on green lifestyles and ways that they can participate in creating environmentally sustainable homes, businesses and communities.