

## **Energy Efficiency Audit of the 2009 Update of the Recreation Chapter of Master Plan**

The ARRA Energy Efficiency Conservation Block Grant through the New Hampshire Office of Energy & Planning provided funding for this project.

In regard to energy efficiency, the audit looked at the public survey comments, assessments of parks, facilities and fields, current status and needs, and recommendations contained in the 2009 Update of the Recreation Chapter of the Master Plan. The purpose is to provide energy efficiency recommendations to the City of Dover for use in their Sustainability Plan.

### **Section 1: Purpose**

1. Add goal – Setting model for sustainable stewardship of parks, fields and facilities through best management practices and national standards for energy use and conservation, product selection, facility design and maintenance

### **Section 2: Introduction**

1. Include reference to National Recreation & Parks Association. This Association represents park and recreation agencies and provides goals, standards and national accreditation process. The relevancy to energy is their standard 7.9 for Environmental Sustainability.

*The [City of Dover] should have an established environmental sustainability policy that addresses energy conservation, environmentally preferable purchasing, water conservation/quality protections and sustainable design/construction of buildings and facilities.*

By using the national standards and accreditation process within the City of Dover it may move forward several of the primary recommendations included in the 2009 Update to the Recreation Chapter, particularly for maintenance, operations, capital financing, and communications.

### **Section 3: Public Participation**

1. Table *What Parks and Facilities do people use* indicates that of 34 listed properties the first eleven on the list are used by 59% to 31% of respondents. Three are neighborhood schools, four are in downtown, one is next to a neighborhood school, two are at the same site near City boundary, and one is between downtown and commercial center.

- The energy aspect is to focus on the connectivity of the parks and facilities.
- a. The energy objective is to get residents and visitors walking and biking to the parks and facilities.
  - b. Provide a map in the Recreation Chapter of parks and facilities, showing aerial photos of each location and facility.
  - c. Include a ½ mile walking distance parameter around each location to show connectivity.
  - d. Create page on Recreation website that illustrates the connectivity of parks and facilities (also other primary attractors in City). Use Metro website in Portland, Oregon as model. They have a description of each park and facility.
2. What is missing in the Recreation Chapter is the sidewalk and bike trail infrastructure of the City. This is definitely part of your City's recreation inventory, both for fitness walkers and cyclists, and for mobility to home, work, shop, and play. The energy objective is to get residents out of their cars and walking and biking, and to keep visitors in the City for longer duration.
- a. Create page on Recreation website that describes walks, such as Downtown Mills, Riverwalk, Nature walk in downtown, Neighborhood history, and Fitness 3/4/5 mile walks.
  - b. Use Metro website in Portland, Oregon as model. They describe walks and include attractions, length, number of strides, difficulty, etc. Market your existing sidewalks and buildings, parks, rivers, etc.
3. Table *How do people know about it* shows the City website at 35%. This is a very energy efficient way to market the City's parks, facilities, programs and events. It is a key priority recommendation in the Recreation Chapter.
4. Table *What are the biggest needs regarding Dover's parks and facilities* shows that 53% of respondents would like to improve what already exists, and almost 40% would like better maintenance.

The energy objective is to focus on creating standards and best management practices that are integrated throughout the City's park and recreation system. That starts to create the efficiencies in purchases, maintenance practices, and support longterm capital improvements, shorter-term equipment purchases, and planning for programs and events. The National Recreation & Parks Association can provide the necessary structure for development of these processes within the City.

#### **Section 4: Parks, Fields, and Facilities**

1. The National Recreation and Parks Association provides links to national standards for type of park, program, facility by population. For example, one ice rink per 100,000 population within 30 min to 1 hour drive. Some states also have these population-derived standards.

The sustainable energy aspect is to know by location, type, and population where the City meets adopted standards and where there is unmet needs. By reviewing these standards, the City would be able to objectively make decisions about development and design of new facilities, marketing of facilities and programs, additional facilities and locations, etc.

2. Electricity, heating, cooling, lighting, water, irrigation, stormwater maintenance and operational costs are not clearly indicated, nor is it clear whether the updates to parks and facilities incorporated energy efficiency, and conservation measures and products.

The sustainable energy aspect would be to have a database of each facility and park with detailed information about energy, conservation measures connected to City policy and standards. For example, there are lumination standards for ball fields, and the policy could be to install lighting meeting these lumination standards with specified lighting fixtures and bulb type. Another example could be the replacement of shower and bathroom facilities with low flow fixtures powered by solar.

Creating a budget that documents various City costs for maintenance and operation costs could help build support for annual and capital budgets. For instance, a budget could have the following categories by hour: mowing, trimming and litter removal; general outdoor maintenance; general indoor maintenance; gardens and forestry; etc.

3. Adopt a spot program could incorporate xeroscaping practices and design to minimize use of irrigation water. It might be an appropriate appreciation gift to provide the Adopt a spot volunteers with education events focused on xeroscaping, use of native plants, control of invasive species, garden and landscape design, minimizing herbicides and pesticides, prairie style green space rather than lawns. Each of these topics adds value to energy conservation goals and creates quality garden and park space.

## **Section 5: Observations**

1. To use quotes from this section: *Dover is at a point in time where it can become a city ahead of the curve, setting the standard, and reaching its potential in this area. ....There is a definite consensus that Dover should maintain and improve what it has before expanding current or building new parks, fields, and facilities....Experience has proven that deferrals of maintenance and repair always result in larger projects and greater costs... that said preventive maintenance should be the focus.*

By creating the sustainable energy policy, standards and practices, Dover should be able to be proactive and achieve its greatest potential for the benefit of its residents and visitors.

## **Section 6: Recommendations**

1. Support from the public exists for maintenance of existing trees and shrubs and planting of new trees. An urban forestry program for installation of trees, regular maintenance and pruning, replacement, eco-friendly selection of trees and shrubs for City properties, increased participation in Tree City USA, Arbor Day, and incorporation of shade trees in parks and along streets supports energy sustainability through cooling, air quality and onsite water retention.

Additionally, this type of green program could be expanded to look at energy use at facilities and parks via use of green roofs, pervious surfaces, and stormwater management through rain gardens.

2. Include policy for use of recycled materials at playgrounds, streetscape furniture. Several cities, such as Boston, have programs that standardize the look of City's purchases for these public amenities and equipment. The energy policy could also include purchase of local products to decrease shipping costs and support local business.
3. In many municipalities, community gardens are associated with parks and recreation programs. It was interesting to note that no community gardens were listed as part of the inventory for Dover. Location of community garden spots in historic neighborhoods of Dover where rental properties and smaller lots are prevalent would provide residents ability to produce a small amount of food, exercise, socialize and save energy. Compost bins could be located at a community garden.
4. Emphasize the use of native trees, shrubs and perennial plants as a policy standard.
5. Emphasize the use of passive cooling at parks, fields, facilities (shade trees).
6. Provide bike racks at parks, schools, and facilities to encourage use of bicycles.
7. Provide dog park or dog friendly locations so that residents can walk to location in more densely developed neighborhoods without lawns. Some towns have dog parks that are out of developed areas and residents need to drive to dog park.
8. Establish an annual evaluation process based on policies, standards, and best practices for energy sustainability. Examples are: conservation of water at pools, energy use and savings at ball fields, pools, tons of recycled trash, compost.
9. Just a note: no mention of off road biking though it was a public request. No mention of horseback riding on any City properties or conserved lands.

## **Appendix B: Adopt a Spot Locations**

1. It is rather surprising the number of adopt a spot locations in the City and the type of work listed, such as mowing, trimming. As mentioned previously, given the number and visibility of some of these sites, it seems that an “appreciation for your efforts” outreach and education program could help to build sustainable practices into the adopt a spots. For instance, highlighting use of native species, or planting trees for shading of a bench.
2. Having so many adopt a spot locations in prominent locations takes the impetus from the City and places it with volunteer individuals, businesses and other entities. While this practice may have benefits, it could make it more challenging for establishing consistent policies and standards.

### **Appendix G: Public Input for *any additional comments or suggestions***

1. Please note the following public comments from the 2009 update that support energy sustainability policy and practices:

*One of the biggest inhibitors to my usage of parks is the need to drive to one versus walking. We have beautiful neighborhoods but no sidewalks or sidewalks that are in poor repair, which inhibit one’s ability to safely travel from home to downtown or to the parks. I live within walking distance to downtown Dover and yet find I have to drive due to safety issues. I have several parks within walking distance. The investment in good pedestrian walkways would pay great dividends later down the road as congestion in downtown decreases, people become aware of their neighborhoods and how they look, and increase their interaction with their neighbors who they see on the road.*

*Every child in Dover deserves a safe, well-equipped, age-appropriate place to play without having to drive miles to get there.*

*It would be nice to have more bike/running /walking paths that connect the various recreational areas without having to always use the main roads downtown.*

*It would be nice to have some shade areas (passive cooling) at the Shaw’s Lane fields.*

*More playgrounds with shaded areas need to be built.*

*We have two cool playgrounds and Willand Pond Park in walking distance from our house, and it is very difficult to get to them without sidewalks. More and more people would use these parks if sidewalks were available.*

*Love to see some equipment in the shade for hot days.*

*With regard to the arena and pool Dover needs to recognize that these facilities attract a great deal of outside traffic which represents big \$\$ for local businesses.*

City of Dover  
Strafford Regional Planning Commission  
Energy Technical Assistance & Planning for New Hampshire Communities

*These facilities have a long and storied history of service not just to Dover but to the seacoast community.*

*Would love to plant more trees in town, emphasize native species, and encourage some downtown merchant to take a chance on a green roof.*