



# City of Forest Lake Minnesota



## Sustainability Action Plan

April 2009



Prepared for: PA 8081 Capstone Course  
Humphrey Institute of Public Affairs,  
University of Minnesota Spring 2009

Team Members:  
Sara Breakiron Aultman  
Brant Birkeland  
Kirti Vardhan Das  
Sean Flannerty  
Kate Meyer  
Julie Quinn

Faculty Advisor:  
Dr. Carissa Schivley Slotterback



### ***Chapter 1: Introduction***

***Section 1.1: Background on Sustainability 6***

***Section 1.2: Plan Purpose 7***

***Section 1.3: Plan Structure 8***

***Section 1.4: Goal and Topic Areas 10***

***Section 1.5: Forest Lake Current Practices 12***

### ***Chapter 2: Internal Sustainability***

***Section 2.1: Background 16***

***Section 2.2: Sustainable Purchasing 19***

***Section 2.3: Waste Reduction and Consumption 24***

***Section 2.4: Sustainable Transportation 28***

***Section 2.5: Sustainable Energy 32***

***Section 2.6: Green Building 35***

***Section 2.7: Healthy Ecosystems 38***

### ***Chapter 3: External Sustainability***

***Section 3.1: Background 44***

***Section 3.2: Sustainable Transportation 46***

***Section 3.3: Sustainable Energy and Environmental Practices 49***

***Section 3.4: Sustainable Land Use Practices 51***

***Section 3.5: Sustainable Water Resources 53***

***Section 3.6: Public Outreach and Stakeholder Engagement 56***



### ***Chapter 4: Community Education***

***Section 4.1: Overview 63***

***Section 4.2: Sustainable Purchasing 64***

***Section 4.3 Waste Reduction and Consumption 66***

***Section 4.4: Sustainable Transportation 68***

***Section 4.5: Sustainable Energy 70***

***Section 4.6: Green Building 72***

***Section 4.7: Healthy Ecosystems and Water Consumption 73***

### ***Chapter 5: Next Steps***

***Section 5.1: Next Steps for Forest Lake 77***

***Section 5.2: Potential Funding Sources and Partners 78***

### ***Appendix A:***

***Current Internal Sustainability Practices 81***

***Current External Sustainability Practices 84***



**CITY OF  
FOREST LAKE**



# Introduction

## Forest Lake Sustainability Action Plan

# Forest Lake Sustainability Action Plan



## Chapter 1: Introduction

### Section 1.1: Background on Sustainability

#### **Current Practices**

The City of Forest Lake's endeavor to become a sustainable community in every facet from Internal City Operations, External Actions, and efforts to incorporate the public into the planning process – is notable and promising for the future of the community. This Sustainability Action Plan is comprised of additional actions the City of Forest Lake may take in the future, as City staff already has made a significant amount of effort to create a formidable baseline of sustainable City Internal Operations and External implementation tools. Examples of current Forest Lake sustainability practices are listed below; highlighting the most innovative actions the City has taken to operate in a cost-effective, environmentally sensitive and equitable manner. A comprehensive list of current sustainable internal and external practices can be found in Appendix A at the end of this document.

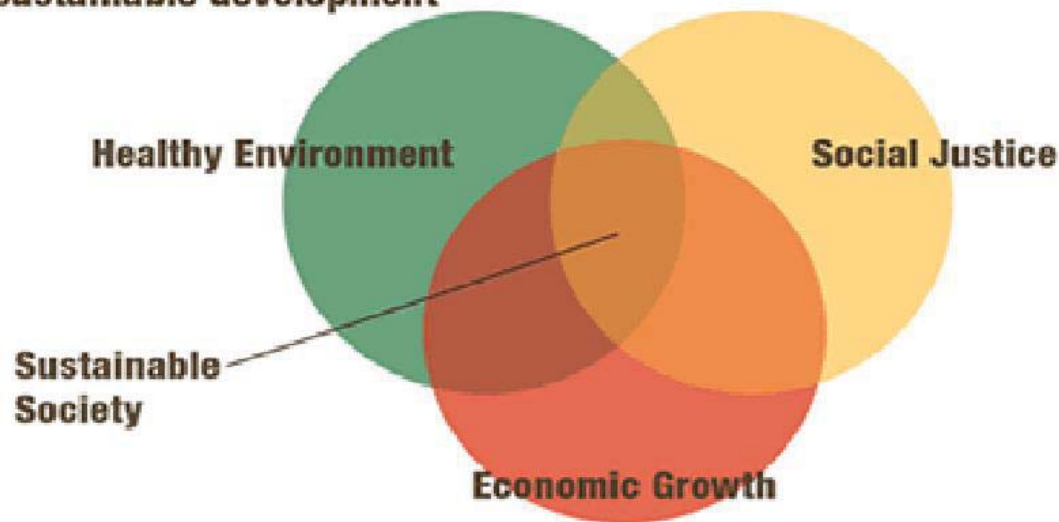
#### **Section 1.1: Background on Sustainability**

The City of Forest Lake is dedicated to its goal of becoming a sustainable city in an effort to create a healthy environment for its citizens and employees. The City adopts the United Nations World Commission on Environment and Development's definition of sustainability, which was developed in 1987 and prescribes:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

This definition of sustainability introduced the notion that there are three interconnected elements that must be balanced in order to achieve sustainability: Environment, Economy, and Equity (“The Three E’s”). The “Three E’s” often are viewed as the “sustainability triangle” or as a “three-legged stool”, supporting the concept that sustainability cannot be achieved if the three elements are not aligned. Operating under this premise, the City of Forest Lake decided to proactively pursue sustainability initiatives during a time of growing concern about issues such as climate change, air and water pollution, energy consumption, degradation of natural habitat, land development, transportation, economic growth and equal opportunity.

#### **The three components of sustainable development**



# Forest Lake Sustainability Action Plan



## Chapter 1: Introduction

### Section 1.2: Plan Purpose

#### ***Forest Lake Current Internal Practices***

##### Sustainable Purchasing

- The City uses green/environmentally-friendly cleaning supplies whenever possible.
- Several City departments recycle office supplies and outdated equipment.
- The Parks, Trails and Recreation Department uses locally grown and/or native plants for landscaping projects.
- The Parks, Trails and Recreation Department attempts to purchase locally produced products.
- The City purchases fertilizer from a local feed mill.

##### Waste Reduction and Consumption

- The Fire and Police Departments are working toward a paperless reporting process to reduce the amount of paper waste generated from daily operations.
- The Public Works Department utilizes composted organic material from the city compost site in lieu of purchasing black dirt for landscaping and building projects.

#### ***Section 1.2: Plan Purpose***

The City completed its draft 2030 Comprehensive Plan in 2008, which included input from a broad range of stakeholders. The Comprehensive Plan includes an entire chapter devoted to sustainability, which communicates the City's goal of working toward becoming a more sustainable community and provides an overarching framework for achieving this goal. The Forest Lake Sustainability Action Plan was created to fulfill two purposes: (1) to supplement the Sustainability Chapter of the Forest Lake 2030 Comprehensive Plan with specific implementation strategies that will enable the City to achieve the sustainability goals set forth in the chapter; and (2) to act as a comprehensive guide for internal city operations, external actions [related to planning and development], and as a resource for citizen education. This plan is the result of a series of collaborative meetings with City staff to identify current sustainable practices, as well as research into sustainable implementation tools that have been employed by cities around the nation and in the State of Minnesota in an effort to become more sustainable.

# Forest Lake Sustainability Action Plan



## Chapter 1: Introduction

### Section 1.3: Plan Structure

#### Sustainable Transportation

- The Public Works Department uses utility vehicles (i.e. 4-wheelers) for off-road use to reduce fuel consumption and the impacts associated with heavyweight vehicles (i.e. heavy trucks).
- The Public Works Department developed remote dumping locations to reduce the use of dump trucks for transporting waste.

#### Sustainable Energy

- The water treatment plants, City Hall and Youth Service Bureau building are temporarily removed from the power grid and utilize generators during Xcel Energy's peak demand periods to save in energy costs.
- Forest Lake is upgrading its' lighting systems to LED lights to increase energy efficiency.

#### Green Building

- The Fire and Public Works Departments currently use radiant floor heating to reduce heating costs for buildings.
- The proposed Public Safety Building housing the Police and Fire Departments will attempt to meet LEED standards and incorporate green building and sustainable design elements.

### ***Section 1.3: Plan Structure***

The Sustainability Action Plan is comprised of the five sections illustrated in the figure below. The Internal, External, and Community Education sections are the core elements of the Sustainability Action Plan. The Internal and External sections contain a series of broad goal areas that are divided into specific objectives and implementation strategies the City can employ as part of its internal operations, planning, development, and conservation initiatives. The Community Education section provides information about strategies that Forest Lake citizens may adopt in order to become more sustainable at home, at work and in the community. Raising citizen awareness about sustainability can lead to significant benefits for the economic, social, and environmental fabric of the Forest Lake community. In addition to the implementation strategies provided within each section, educational information is distributed throughout the plan in an effort to define technical terms, to explain the relevance of a particular strategy, or to provide an example of successful programs from other cities. The Sustainability Action Plan concludes with a Next Steps section that discusses future actions the City of Forest Lake may take to implement this plan, key short-term strategies for implementation, and a list of potential funding sources and partners that may be utilized. The structure of the plan is outlined in the figure on the preceding page.



# Forest Lake Sustainability Action Plan



## Chapter 1: Introduction

### Section 1.3: Plan Structure

#### Healthy Ecosystems

- The City encourages residents to plant trees through an annual tree sale to increase tree coverage and property values throughout Forest Lake. The Public Works Department encourages customers to install moisture sensors on irrigation systems to prevent over watering.
- The Fire Department traps and recovers excess water during cleaning and training exercises, to reduce wastewater runoff.
- The Parks, Trail and Recreation Department utilizes irrigation strategies that avoid excessive irrigation, such as moisture sensors to reduce overwatering during rainy periods.

#### **Forest Lake Current External Practices**

#### Sustainable Transportation

- The City requires developers to design and construct trails within proposed developments.
- Forest Lake continues to collaborate with Washington County and the Metropolitan Council to continue the express bus service from the Forest Lake transit hub to downtown Minneapolis.



# Forest Lake Sustainability Action Plan



## Chapter 1: Introduction

### Section 1.4: Goal and Topic Areas

#### Sustainable Energy & Environmental-based Practices

- Forest Lake staff requires the use of native plant materials in order to restore disturbed open spaces within the city.
- The City adopted regulations to encourage the protection of natural resources (i.e. high-value natural areas, wetlands, steep slopes, their related buffers and setbacks, and other sensitive resources) through conservation easements and deed restrictions.
- Forest Lake passed a woodland preservation ordinance to protect and enhance forest habitat for wildlife and recreation within the community.

#### Sustainable Land Use Practices

- The Forest Lake City Code requires that plans for new residential, commercial, and industrial subdivisions include provisions for the dedication of parks to meet recreation demand.
- The Parks, Trail and Recreation Department maintains an equitable distribution of parks and trails throughout the community.
- The City prepared a Downtown Forest Lake Plan outlining design requirements that promote incorporation of sustainable design principles.

### ***Section 1.4: Goal and Topic Areas***

The Internal and Community Education sections are divided into six goal areas that were formulated by assessing a variety of sustainability programs and plans throughout the country and determining the components most suited to Forest Lake's goals and community characteristics. The goal/topic areas in the External section are consistent with the goal areas defined in the Sustainability Chapter of the Forest Lake 2030 Comprehensive Plan. A brief description of each of the goal areas within the Internal and External sections is provided below:

#### ***Internal and Community Education Sections***

##### **Sustainable Purchasing**

Purchasing sustainable or 'green' products minimizes environmental impacts by focusing on products that have modified production, consumption, or disposal practices. In addition, sustainable purchasing encourages making purchasing decisions that are economically efficient and that support growth and viability of the local economy.

##### **Waste Reduction and Consumption**

Reducing waste and consumption of resources saves money and reduces environmental impacts by conserving natural resources, minimizing the need for landfills and eliminating waste byproducts that pollute the environment.

##### **Sustainable Transportation**

Choosing alternative approaches to traditional transportation modes can have a positive impact on reducing air pollution, energy consumption and oil dependence, subsequently improving quality of life for Forest Lake employees and citizens.

##### **Sustainable Energy**

Focusing on energy efficiency and renewable energy opportunities creates a diverse, stable supply of energy that preserves and enhances the environmental quality and economic prosperity of Forest Lake.

##### **Green Building**

Incorporating green building practices into new and existing structures improves the cost-effectiveness of municipal buildings and decreases the environmental impact of these facilities, which often consume large amounts of the City's energy and resources.

##### **Healthy Ecosystems**

Preserving and enhancing natural resources protects the natural beauty of Forest Lake and encourages community's prosperity and quality of life for future generations.

# Forest Lake Sustainability Action Plan



## Chapter 1: Introduction

### Section 1.4: Goal and Topic Areas

- The City amended the Comprehensive Plan and Zoning map to allow for high-density housing in a new development area where it had not existed previously.
- Forest Lake created a policy for developers to either reduce or waive city fees for planning/building application permits and park and trail dedications if they meet specific requirements for affordable housing construction.

#### Sustainable Water Resources

- The City invested over \$650,000 on infiltration and inflow reduction measures since 2004 in an effort to improve efficiencies of water supply and wastewater infrastructure systems, and to protect valuable groundwater and surface water resources.
- The City created rain gardens on four dead-end streets adjacent to Forest Lake to promote water infiltration practices.

#### **External Section**

##### **Sustainable Transportation**

Developing a transportation system that supports multiple modes including walking, bicycling, public transit and driving, can reduce congestion and provide alternative options for Forest Lake Residents. In addition, adopting sustainable transportation practices can minimize negative environmental impacts, such as air pollution and resource consumption, associated with automobile travel.

##### **Sustainable Energy and Environmental-Based Practices**

Promoting alternative sources of energy reduces dependence on fossil fuels and encourages use of clean and renewable energy sources. In addition, implementing environment-based practices considers natural resource conservation as a basis upon which to makes development decisions.

##### **Sustainable Land Use Practices**

Incorporating sustainable land use principles into Zoning Ordinances and the Comprehensive Plan encourages land uses that support alternative transportation modes, increase walkability and connectivity, and promote a sense of community.

##### **Sustainable Water Resources**

Protecting water resources ensures that lakes, streams, and wetlands are healthy for present and future generations. Promoting water conservation ensures that adequate resources will be available in the future and also can benefit individual

residents by lowering utility fees and minimizing pollution in their community.

##### **Public Outreach and Stakeholder Engagement**

Promoting Forest Lake's efforts to become more sustainable highlights the City as an innovative and forward-thinking community, and encourages residents, business owners, schools, and other community organizations to actively participate in the implementation of the Sustainability Action Plan

# Forest Lake Sustainability Action Plan



## Chapter 1: Introduction

### Section 1.5: Forest Lake Current Practices

#### **Section 1.5: Forest Lake Current Practices**

The City of Forest Lake's endeavor to become a sustainable community in every facet from internal City operations, external actions, and efforts to incorporate the public into the planning process – is notable and promising for the future of the community. This Sustainability Action Plan is comprised of additional actions the City of Forest Lake may take in the future, as City staff already has put forth a significant amount of effort to initiate sustainable practices. Examples of current Forest Lake sustainability practices are listed below; highlighting the most innovative actions the City has taken to operate in a cost-effective, environmentally sensitive and equitable manner. A comprehensive list of current sustainable internal and external practices can be found in Appendix A.

#### **Forest Lake Current Internal Practices**

##### **Sustainable Purchasing**

- The City uses green/environmentally-friendly cleaning supplies whenever possible.
- Several City departments recycle office supplies and outdated equipment.
- The Parks, Trails and Recreation Department uses locally grown and/or native plants for landscaping projects and attempts to purchase locally produced products.
- The City purchases fertilizer from a local feed mill.

##### **Waste Reduction and Consumption**

- Departments use recycled utensils as much as possible.

- The Fire and Police Departments are working toward a paperless reporting process to reduce the amount of paper waste generated from daily operations.
- The Public Works Department utilizes composted organic material from the city compost site in lieu of purchasing black dirt for landscaping and building projects.

##### **Sustainable Transportation**

- The Public Works Department uses utility vehicles (i.e. 4-wheelers) for off-road use to reduce fuel consumption and the impacts associated with heavyweight vehicles (i.e. heavy trucks).
- The Public Works Department developed remote dumping locations to reduce the use of dump trucks for transporting waste.

##### **Sustainable Energy**

- The water treatment plants, City Hall and Youth Service Bureau building are temporarily removed from the power grid and utilize generators during Xcel Energy's peak demand periods to save in energy costs.
- Forest Lake is upgrading its lighting systems to LED lights to increase energy efficiency.
- When upgrading the City's mechanical system, preference is given to energy efficient heating, ventilation, and air-conditioning systems.
- Forest Lake staff periodically conducts building energy audits to identify problem areas.



## Chapter 1: Introduction

### Section 1.5: Forest Lake Current Practices

#### **Green Building**

- The Fire and Public Works Departments currently use radiant floor heating to reduce heating costs for buildings.
- The proposed Public Safety Building will attempt to meet LEED standards and incorporate green building and sustainable design elements.

#### **Healthy Ecosystems**

- The City encourages residents to plant trees through an annual tree sale to increase tree coverage and property values throughout Forest Lake.
- The Public Works Department encourages customers to install moisture sensors on irrigation systems to prevent over watering.
- The Fire Department traps and recovers excess water during cleaning and training exercises, to reduce wastewater runoff.
- The Parks, Trail and Recreation Department utilizes irrigation strategies that avoid excessive irrigation, such as moisture sensors to reduce overwatering during rainy periods.

#### ***Forest Lake Current External Practices***

#### **Sustainable Transportation**

- The City requires developers to design and construct trails within proposed developments.
- Sidewalks and trails are required in proposed residential developments to ensure connectivity within new development and existing commercial, residential, and public areas throughout Forest Lake.
- A transit hub park and ride was constructed to create transit

options for Forest Lake residents and those in surrounding communities.

- Forest Lake continues to collaborate with Washington County and the Metropolitan Council to continue the express bus service from the Forest Lake transit hub to downtown Minneapolis.

#### **Sustainable Energy & Environmental-based Practices**

- Forest Lake staff requires the use of native plant materials in order to restore disturbed open spaces within the city.
- The City adopted regulations to encourage the protection of natural resources (i.e. high-value natural areas, wetlands, steep slopes, their related buffers and setbacks, and other sensitive resources) through conservation easements and deed restrictions.
- Forest Lake passed a woodland preservation ordinance to protect and enhance forest habitat for wildlife and recreation within the community.

#### **Sustainable Land Use Practices**

- The Forest Lake City Code requires that plans for new residential, commercial, and industrial subdivisions provide for the dedication of parks to meet recreation demand.
- The Parks, Trail and Recreation Department maintains an equitable distribution of parks and trails throughout the community.
- The City prepared a Downtown Forest Lake Plan outlining design requirements that promote incorporation of sustainable design principles.

# Forest Lake Sustainability Action Plan



## Chapter 1: Introduction

### Section 1.5: Forest Lake Current Practices

- The City of Forest Lake targeted four mixed-use redevelopment sites to reduce sprawl and automobile dependence within the community.
- The City amended the Comprehensive Plan and Zoning map to allow for high-density housing in a new development area where it had not existed previously.
- Forest Lake created a policy for developers to either reduce or waive city fees for planning/building application permits and park and trail dedications if they meet specific requirements for affordable housing construction.
- The City supports and actively promotes First Time Home Buyer programs to assist new homeowners.

#### **Sustainable Water Resources**

- The City invested over \$650,000 on infiltration and inflow reduction measures since 2004 in an effort to improve efficiencies of water supply and wastewater infrastructure systems, and to protect valuable groundwater and surface water resources.
- Forest Lake enforces an even-odd water schedule for city residents from May 15 to September 1 to conserve water resources.
- The City produced numerous ordinances to protect water resources, including a pervious paver ordinance, wetland protection ordinance, and a shoreland ordinance.
- The City created rain gardens on four dead-end streets adjacent to Forest Lake to promote water infiltration practices.



# Internal Sustainability

## Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.1: Background

#### ***Section 2.1: Background***

The Forest Lake city government plays a pivotal role in the economic, environmental, and social health of the broader Forest Lake community. Through its internal practices, the City of Forest Lake strives to be a leader in the sustainability movement by creating a community that meets the needs of current and future generations. The city wants to foster a culture of innovation and creativity to guide its internal operations by continuing current sustainable practices and investing in proactive strategies to attain its future sustainability goals. Through its sustainability initiatives, the City has a unique opportunity to lead not only the Forest Lake community in becoming more sustainable, but also to provide guidance about sustainable practices that have the potential to benefit cities throughout the Twin Cities Metropolitan Area. Forest Lake's proactive approach will enable the City to remain at the forefront of novel policies that encourage economic, environmental and social sustainability and to acquire grants and other funding resources intended to facilitate sustainable community planning. Moreover, by leading the sustainability movement in Forest Lake, the City distinguishes itself from other communities in Minnesota as a premiere destination for families and businesses seeking a healthy and vital community in which to live, work, and play. The City's current sustainability efforts in conjunction with the strategies outlined in this component of the Sustainability Action Plan are intended to promote long-term cost savings and a healthy environment for Forest Lake citizens.

In support of this overarching sustainability framework, the

subsequent sections of the Forest Lake Sustainability Action Plan will address six key topic areas necessary to promote sustainable operations within Forest Lake's seven city departments. Each of the six components is divided into a set of specific objectives and associated strategies that City departments can employ in an effort to accomplish the City's sustainability goals. When implemented by all City departments, the six components outlined in this plan will assist the City in achieving its goal of becoming a leading sustainable community that is responsive to meeting the needs of Forest Lake's current and future generations. The six sustainability components include sustainable purchasing, waste reduction and consumption, sustainable transportation, sustainable energy, and green building and ecosystems. Each of these components is introduced below in greater detail.

#### **Sustainable Purchasing**

Sustainable purchasing strategies are intended to provide the City with products and services that will allow Forest Lake to meet its needs while simultaneously reducing negative effects on employee health and the environment. Sustainable purchasing strategies strive to reduce the amount of materials sent to landfills and to promote the economically efficient use of resources. The benefits of sustainable purchasing strategies include improved ability to minimize negative environmental impacts, enhanced community and employee health and safety, reduce City liability, and decrease costs associated with product disposal. In addition, sustainable purchasing fosters partnerships with businesses and other cities dedicated to sustainability.





## Chapter 2: Internal Sustainability

### Section 2.1: Background

#### Waste Reduction and Consumption

Reducing waste and consumption is in many instances the least complicated sustainability component to implement, but it is often overlooked. Reduction of waste and consumption in internal City operations enhances the economic and environmental sustainability of the city. Embracing these practices minimizes the City's ecological footprint and its impacts on the valuable natural resources that attract businesses and residents to Forest Lake. Moreover, reducing consumption, reusing products, and recycling materials, can generate significant capital and resource savings for the City. The waste reduction and consumption strategies outlined in this plan require minimal effort on the City's part and have potential to result in a significant return through economic and environmental savings.

#### Sustainable Transportation

Transportation networks, practices, and choices have a significant impact on the sustainability of a community. By incorporating sustainable transportation practices into internal operations, the City of Forest Lake can promote an efficient multi-modal transportation system that will contribute to decreased air pollution, energy use, fossil fuel consumption, and governmental costs. In addition to the environmental benefits associated with a diversified transportation system, sustainable transportation strategies can improve the health of city employees and community residents by encouraging physical activity. Active transportation choices such as walking and biking improve physical fitness and at the same time reduce

negative environmental impacts such as air and noise pollution that are associated with vehicle travel. Implementation of strategies such as car-pooling to meetings and providing bike racks at the workplace will encourage the use of sustainable transportation modes. By modifying its own actions, the City has an opportunity to encourage other Forest Lake businesses, community organizations, and residents to implement sustainable transportation strategies of their own.

#### Sustainable Energy

Sustainable energy strategies and practices are vital to Forest Lake's internal sustainability. Sustainable energy strategies stabilize costs for the City and provide cost-saving strategies for businesses and residents throughout the community. Furthermore, sustainable energy strategies preserve and enhance quality of life for Forest Lake citizens by improving the environmental quality of the air, water, and land. Finally, with the current instability of the oil and gas markets and growing global concern regarding overconsumption of non-renewable energy sources, sustainable energy strategies will allow the City of Forest Lake to minimize its dependency on foreign energy sources and to become more self-sufficient. Sustainable energy practices require relatively low capital investment and will benefit the City and residents by providing long-term savings.

#### Green Building

Buildings and their internal systems often use large amounts of energy for heating, lighting, operations and maintenance.



## Chapter 2: Internal Sustainability

### Section 2.1: Background

The construction, operation, and maintenance of city roads and infrastructure play a pivotal role in the overall sustainability of a city. Green buildings and infrastructure are more energy efficient, encourage less reliance on non-renewable sources of energy, and generally cost less to operate and maintain than infrastructure designed without green building principles. Furthermore, green buildings provide economically and environmentally healthy places to work, encourage productive environments for City employees, and reduce demands on valuable resources.

#### Healthy Ecosystems

Protecting the quality and health of ecosystems in Forest Lake and surrounding areas is essential for encouraging long-term sustainability. The internal operations of City departments contribute to the protection and enhancement of environmental quality of water, air, land, and vegetation that helps to protect Clear Lake, Shields Lake and Forest Lake, ensuring that current and future residents, employees, and visitors to Forest Lake enjoy these amenities. In addition to the environmental and quality of life benefits associated with protection of these resources, there are economic benefits associated with maintaining healthy ecosystems. A healthy ecosystem can attract residents and visitors seeking a quality natural environment, thereby enhancing the local economy through increased tourism. The City can avoid future expenses associated with cleaning and restoring natural areas by acting in a proactive manner to protect natural resources and maintain the integrity of its ecosystems.

The remainder of this section of the Sustainability Action Plan provides details regarding strategies that Forest Lake can adopt to become more sustainable in each of the topic areas described above. Each topic area is divided into a set of objectives with a number of associated strategies. A timeframe is provided for each strategy to highlight when each strategy is intended for implementation.

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.2: Sustainable Purchasing

#### **Section 2.2: Sustainable Purchasing**

The City of Forest Lake's current purchasing practices incorporate multiple strategies that encourage economically and environmentally sustainable purchasing for City operations. Many City departments already purchase environmentally friendly or "green" cleaning products and products made from recycled materials in attempt to reduce negative impacts on the environment and conserve valuable natural resources. Furthermore, City departments participate in purchasing from the Minnesota State contract system to be as economically efficient as possible.

In addition to sustainable purchasing strategies practiced City-wide, individual departments incorporate sustainable purchasing strategies that are unique to their area of focus. As an example, the Fire Department has been testing environmentally-friendly products for training exercises, and the Parks, Trails and Recreation Department purchases recycled materials for playgrounds, buys outdoor furnishings made from recycled plastic, uses locally-grown plants for landscaping projects and attempts to purchase locally-produced products to avoid long-distance shipping. Finally, the Public Works Department purchases carbide blade edges for snow plowing and grading because of their longer usable life, uses recycled blacktop and concrete for base material on roads, plants annual rye grass for reseeding and restoration because of its low cost and fast-growing traits, purchases fertilizer from a local feed mill, and buys heat and salt resistant trees for landscaping to promote longer tree life. This section of the plan contains a series of additional

sustainable purchasing actions the city can implement in order to enhance current sustainability efforts.

#### **Objective 2.2.1: Maintain and Improve Current Sustainable Purchasing Practices.**

The City of Forest Lake already integrates sustainable purchasing practices into its daily operations and intends to continue incorporating new strategies into its operations. Innovative technologies and novel products are developed regularly, which is why it is important for the City to stay attuned to these changes and explore new possibilities to remain on the forefront of sustainable purchasing. By maintaining and improving its current sustainable purchasing practices, the City will create opportunities to save money, conserve resources, and minimize negative impacts on the environment.

**Strategy A:** *Quantify current sustainable purchasing practices to generate a base audit of current sustainable purchasing practices. **Short***

**Strategy B:** *Purchase food packaging products that are compostable and/or made from recycled products for special events and regular activities. **Short***

**Strategy C:** *Purchase washable utensils for use in municipal facilities and for special events. In situations where disposable products are unavoidable, purchase biodegradable flatware and compostable paper products. **Short***

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.2: Sustainable Purchasing

#### Green Seal

Green Seal is a non-profit organization committed to promoting use of environmentally responsible products and services by testing consumer products for effectiveness and reduced impact on the environment and human health. Green Seal certified products may be found through the Green Seal website and are marked with the Green Seal label.

#### WaterSense

WaterSense is a program sponsored by the U.S. Environmental Protection Agency (EPA) that assists consumers with choosing quality water-efficient products. The EPA provides a list of water-efficient products and labels water-efficient products with the WaterSense label. Businesses and organizations can partner with WaterSense to promote water efficiency in their operations.

**Strategy D:** Augment current green cleaning product purchases for City operations and ensure that cleaning products are certified by the U.S. Environmental Protection Agency (EPA) or Green Seal. **Short**

**Strategy E:** Explore use of alternative substances for de-icing city roads and sidewalks. **Medium**

Traditionally salt and sand have been used for de-icing surfaces such as highways, walkways, and parking lots; however, there are often negative environmental impacts associated with the use of these materials. When ice melts, salt and chemicals dissolve into the water and flow into street drains that eventually lead to lakes and streams. Environmental impacts include a reduction in oxygen levels in lakes and streams, distressed vegetation along sidewalks and roadsides, increased sediment and phosphorus levels in lakes and streams, and the introduction of toxic chemicals such as cyanide, chlorine or ammonia into water bodies. Even small decreases in water quality levels in a lake or stream significantly compromises its ability to sustain aquatic life and to be used as a recreational and functional resource for humans.

**Strategy F:** Purchase new plumbing fixtures that are WaterSense approved and develop a phasing program to replace existing plumbing fixtures with WaterSense approved fixtures. **Medium**

**Strategy G:** Develop targets and indicators that can be used as a guide to determine whether the city is meeting its sustainable purchasing goals and objectives. **Medium**

#### Objective 2.2.2: Provide Training and Educational Opportunities for City Staff Regarding Sustainable Purchasing Practices.

Creating sustainable City purchasing practices requires collective participation of all City departments. Education regarding sustainable purchasing choices will encourage incremental changes with tangible economic, environmental and social benefits. By promoting awareness of sustainable purchasing actions, City departments will have the tools necessary to make informed decisions that align with Forest Lake's sustainability goals.

**Strategy A:** Identify staff members in each department to receive training on green purchasing practices for daily operations and special events. **Short**

Training staff members about green purchasing will strengthen the knowledge base of City employees, allow trained individuals to act as a sustainable purchasing resource for fellow staff members, and promote consistent citywide purchasing strategies.

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.2: Sustainable Purchasing

#### Energy Star

Energy Star appliances use advanced technologies that save 10 to 50 percent on the amount of energy and water necessary to operate standard appliance models. Energy Star models often require a larger capital investment than standard models; however, they offset the additional costs by creating savings on utility bills. For additional information about purchasing Energy Star appliances, visit: <http://www.energystar.gov/> ENERGY STAR's free Portfolio Manager tool can be utilized as a first step to measure and improve energy performance in existing City facilities. The Portfolio Manager is a secure, online interactive tool that allows the user to track and assess energy and water consumption across buildings. The Portfolio Manager can be accessed through Energy Star's website at: [http://www.energystar.gov/index.cfm?c=evaluate\\_performance.bus\\_portfoliomanager](http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager)

**Strategy B:** *Develop a pilot education and training outreach program for sustainable procurement that can be offered to individuals in each department responsible for purchasing. **Medium***

#### **Objective 2.2.3: Encourage Purchasing Practices that Meet the “Triple Bottom Line” Essential to Sustainability (Economy, Environment and Equity).**

Businesses and organizations often refer to the concept of the “bottom line” when determining whether to invest in a product or cause. The bottom line is traditionally focused on balancing the economic costs and benefits of a decision or investment, whereas the concept of the “Triple Bottom Line” is a more holistic approach to decision-making that encourages businesses and organizations to balance the economic, environmental, and equity [or social] impacts of a decision or investment. In order to continue improving sustainable purchasing practices, Forest Lake should attempt to incorporate the principles of the “Triple Bottom Line” into decision-making processes.

**Strategy A:** *Make Energy Star mandatory with all new contracts for appliances, printers, copiers, fax machines and personal computers and develop a schedule for replacing current equipment with Energy Star equipment. **Short***

**Strategy B:** *Develop a matrix that City employees can use to assess the impact of City purchases and/or vendor contracts on the environment, economy, and social equity. **Short***

The City of Olympia, Washington, created a Sustainable Action Map (SAM) to guide the city in making sustainable decisions and policy choices. SAM is a simple yet powerful one-page decision tool that has helped the city move forward with its sustainability initiatives by providing a mechanism by which to assess the Natural, Individual, Community, and Economic (N.I.C.E.) impacts of a decision. SAM can be downloaded at: <http://www.ci.olympia.wa.us/community/sustainability/SAM/>

**Strategy C:** *Develop a municipal department-wide standard to purchase at least 50 percent environmentally friendly products. **Medium***

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.2: Sustainable Purchasing

#### Supporting Local Businesses

Supporting local businesses is economically, environmentally and socially beneficial for Forest Lake. Local businesses are beneficial to Forest Lake's economy by increasing sales tax revenues, acting as a source of innovation in products, services and techniques, attracting visitors, and creating local tourism opportunities. In addition, local businesses often provide more support to non-profit organizations than non-locally owned businesses. Local purchasing is environmentally beneficial, as it reduces the need to travel, which subsequently saves fuel, improves air quality and reduces greenhouse gas emissions. Local businesses provide social benefits to Forest Lake by generating skilled workers and providing training opportunities for entrepreneurial and managerial talent. In addition, local businesses typically have a greater alliance to their communities, provide civic leadership, and contribute to the unique identity of the community.

**Strategy D:** Change purchasing specifications to give preference to local firms that pay a living wage and share profits or ownership with workers and/or firms that are leaders in sustainable business practices. **Medium**

#### Objective 2.2.4: Promote Consistency of Sustainable Purchasing Across Municipal Departments.

A key aspect of enhancing sustainable purchasing practices in City operations is consistency among departments. Currently, individual departments engage in different sustainable purchasing practices that could be applied to all departments. The City can promote consistency through standardized purchasing procedures, centralized purchasing, and consistent sustainability language in an effort to encourage interdepartmental collaboration, information sharing, and opportunities for building citywide partnerships with suppliers.

**Strategy A:** Implement a municipal department-wide policy outlining purchasing requirements for recycled paper made from at least 50 percent post-consumer waste. **Short**

**Strategy B:** Require vendors to provide a description of their current sustainable practices and request periodic updates. **Short**

**Strategy C:** Create a centralized website containing vendor catalogs and purchasing information that can be used by employees from all City departments.

**Short**

By requesting purchasing catalogs electronically from vendors and maintaining an online library for citywide use, Forest Lake can reduce the amount of paper waste it generates and help to minimize the demand for printed catalogs from vendors.

**Strategy D:** Incorporate consistent sustainability language and criteria into vendor purchase orders.

**Short**

**Strategy E:** Develop City standards and targets for sustainable purchasing that apply to all departments.

**Medium**

**Strategy F:** Establish a Citywide purchasing team that works collaboratively to identify the most sustainable purchasing options across all departments. **Medium**

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.2: Sustainable Purchasing

**Strategy G:** *Create a centralized and bulk-purchasing program to encourage consistent purchasing practices amongst all city departments.*

**Long**

The City of Santa Monica, California has a purchasing division responsible for procuring products for individual departments and the City's central warehouse. The purchasing division works closely with the City's Environmental Programs Division to obtain guidance about purchasing products containing chemicals. Individuals in City departments contact the purchasing division for purchases over \$1,000 and can create "Quick Purchase Orders" for items under \$1,000. The City of Santa Monica maintains a central warehouse with commonly used materials such as cleaning supplies and recycled-content office paper to ensure consistent use of "green products" and to save money by purchasing in large quantities.

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.3: Waste Reduction and Consumption

#### Lifecycle Analysis

The City can use lifecycle analysis to inform city staff about sustainable purchasing and consumption decisions by evaluating where materials for a product come from, how the product is used, and what happens to the product at the end of its life. Information regarding lifecycle analysis is available through the EPA at: <http://www.epa.gov/oswer/docs/2008tribalforum/warm.pdf>

#### Section 2.3: Waste Reduction and Consumption

Forest Lake City departments are conscious about the amount of waste they produce and consumption patterns related to municipal operations. Currently, several departments recycle printer ink cartridges and actively participate in efforts to recycle products used in daily operations. The Building Management Department purchases only paper products rather than styrofoam and orders materials in bulk to reduce the amount of packaging sent to landfills. The Fire and Police Departments are working together toward a paperless reporting process to reduce the amount of paper waste generated from daily operations. The Parks, Trails and Recreation Department uses mulch produced at the city compost site for landscaping projects and reduces its fuel consumption by mowing City-owned property less often and allowing grass to grow longer. In addition, the Public Works Department utilizes composted organic material from the city compost site in lieu of purchasing black dirt for landscaping and building projects, reuses sand and gravel from street sweeping for gravel roads or deposits the materials at the city compost site, recycles truck tires for re-capping, mills blacktop on roads for repair rather than total removal, recycles concrete and black top on city roads and sidewalks, and mulches branches from tree trimming to be reused for city landscaping projects. The objectives and strategies included in this section of the plan are intended as actions the City can implement to continue decreasing its own waste and consumption.

#### Objective 2.3.1: Educate City Employees Regarding Waste Reduction Practices.

By providing education about the lifecycle of products and informing City employees of tips and practices for reducing waste, individuals and departments will be more likely to adopt a set of best management practices that will limit the amount of materials entering the waste stream. The City can accomplish its goal of reducing waste by providing ongoing education and training opportunities for its staff.

**Strategy A:** *Conduct department-specific waste measurements to determine the current amount of waste generated in each department. **Short***

**Strategy B:** *Incorporate tips and practices for reducing office waste into staff meetings and employee training sessions. **Short***

**Strategy C:** *Create a waste reduction tip sheet that can be posted at each workstation to provide a reminder of simple actions that will reduce waste. **Short***

**Strategy D:** *Formulate a training module that can be used to educate individuals about product lifecycle and implications of product creation, distribution and disposal practices. **Medium***



# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.3: Waste Reduction and Consumption

#### RAM

RAM is a 501(c)(3) nonprofit organization that promotes resource conservation through waste prevention, reuse, recycling, composting and purchasing practices that are based on cost-effective and environmentally friendly methods. Government membership costs \$150 annually and provides discounts for members on recycling equipment, conference fees, organization membership fees, and magazine and newsletter subscriptions.

#### Recycling Box

Non-RAM Members are eligible to receive a recycling box by mail from Recycling Association of Minnesota (RAM). When the box is filled with used cartridges, PDA's and/or cell phones, it can be taped shut and mailed to a recycler for free (the postage is already paid).

**Strategy E:** Develop waste reduction targets and indicators to measure the City's progress toward achieving waste reduction goals. **Medium**

#### Objective 2.3.2: Implement New Recycling Programs and Increase the Percentage of Recycled Materials used in City Operations.

Recycling and reuse of materials benefits the City of Forest Lake both environmentally as well as economically by encouraging a reduction of materials sent to landfills and by providing opportunities for reusing materials that otherwise would be purchased. In addition, waste sent to landfills costs money, whereas recycling can create an additional stream of revenue for the city. The City already incorporates recycling practices into its daily operations and can pursue additional strategies that will increase the quantity and types of materials being recycled in an effort to become more economically and environmentally sustainable.

**Strategy A:** Recycle parts and fluids generated from City fleet vehicles. **Short**

**Strategy B:** Consider becoming a Recycling Association of Minnesota (RAM) Government Member to receive updates on recycling issues, purchasing discounts and to discover new opportunities, events and meetings pertaining to recycling. **Short**

**Strategy C:** Obtain a recycling box for City offices to deposit ink jet printer cartridges, PDAs, and cell phones. **Short**

**Strategy D:** Create a deconstruction recycling program to encourage recycling and reuse of building materials rather than demolition. **Medium**

By developing a standardized approach to evaluating salvageable buildings and materials, the materials may be introduced into the market and/or recycled for use in other construction projects; thereby minimizing construction waste and material costs.

**Strategy E:** Create a uniform recycling program throughout the City that includes identical recycling repositories in all municipal buildings and on City property such as parks and trails. **Medium**

**Strategy F:** Design, construct and operate buildings using a closed-loop process or a process that results in no waste from construction activities and building operations. **Long**

The City can create a system that links local industries and processors with its own operations to develop markets for byproducts, leading to a decrease in the quantity of waste and reducing the cost of materials for buyers. A closed loop process recognizes the fact that often times the byproduct of one process can be used as an input for a different process.

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.3: Waste Reduction and Consumption

#### Bulk Purchasing

Approximately one-third of all the trash that is thrown away in the U.S. is packaging and the average American consumes about 66 pounds of packaging each year. By incorporating bulk purchasing practices and choosing products with a minimal amount of packaging, the City can reduce the amount of packaging it sends to landfills for disposal.

#### Zero Waste Program

A zero waste program will assist City departments in making sustainable consumption and purchasing decisions by providing clear and adaptable information on how to choose goods with less packaging and more potential to reuse or recycle materials.

#### Objective 2.3.3: Reduce the Amount of Waste Sent to Landfills.

Landfills are not the most economically, environmentally, or socially sustainable means for handling waste. Landfills cost a significant amount of money to create and maintain, consume large quantities of land, contribute to groundwater pollution, and create environmental justice issues if they are placed near low-income communities. Forest Lake can reduce its reliance on landfills for waste disposal by addressing how waste is generated and reducing the amount of non-recyclable, non-organic, and non-biodegradable materials that are used and ultimately sent for disposal.

**Strategy A:** Identify bulk solutions for purchasing to avoid adding packaging waste to landfills. **Short**

**Strategy B:** Create or identify a computer and electronics recycling or eco-friendly disposal program. **Short**

**Strategy C:** Use washable items, such as utensils and plates, rather than disposable items. **Short**

**Strategy D:** Create a compost bin for organic waste generated in City-operated facilities. **Medium**

**Strategy E:** Plan a zero waste program to encourage the City to work toward generating no net waste. **Long**

#### Objective 2.3.4: Reduce Office Paper Usage for Printing and Other Purposes.

As technological advances improve in availability, cost, and functionality, opportunities exist for the city to modify its operating procedures in a manner that minimizes resource consumption and waste generation. City employees can make a difference in the collective amount of paper waste generated by internal operations through implementation of small changes such as utilizing equipment in the most energy-efficient manner, reusing office paper, and reducing the amount of printing by taking advantage of electronic resources.

**Strategy A:** Encourage double-sided printing, web-based posting, and reuse to reduce office paper consumption. **Short**

**Strategy B:** Reuse office supplies to the extent possible, such as use of scrap paper from the printer for recording notes for telephone messages. **Short**

**Strategy C:** Send electronic documents to colleagues for review and comment rather than distributing paper copies. **Short**

**Strategy D:** Create a print job checklist that can be used by employees to ensure that conservation practices are employed each time the printer is used. **Short**

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.3: Waste Reduction and Consumption

#### Print Job Checklist

A print job checklist is a simple written list of steps that should be taken to use the minimum amount of resources necessary when printing. Examples of items that may be included on the checklist consist of requesting double-sided printing through printer set-up modes, activating ink-saving tools, and specifying the minimum number of pages needed for printing rather than reprinting entire documents.

#### Ink Reduction Software

Ink reduction software allows the user to reduce the amount of ink used for printing projects and still retain high quality printing resolution. Ink reduction software can help the city minimize the amount of money and resources it spends on ink and toner for office printers.

**Strategy E:** Purchase ink or toner reduction software to decrease ink usage in office printers. **Short**

**Strategy E:** Perform a baseline audit of paper use and aim to reduce system-wide use of paper products by 25 percent through conservation practices. **Medium**

**Strategy G:** Convert business processes from paper to electronic and set a transition deadline for all departments. **Medium**

City departments can work together to define processes that can be moved from paper to electronic, setting transition deadlines and standards for electronic processes. The Forest Lake Fire and Police Departments are already working toward creating a paperless reporting system to reduce paper consumption. The City can continue to take small steps toward incorporating electronic business processes, such as designing and implementing a pilot test, to determine the most effective way to transition from paper-consumptive processes.

**Strategy H:** Invest in a document imaging system for paperless record keeping and distribute electronic meeting materials for City Council and Commission meeting review. **Long**

Many document imaging systems available are user-friendly and designed to easily integrate with existing software applications. Document imaging systems allow businesses or organizations

to set up an electronic filing and document management system that can significantly decrease overhead operating costs and result in improved efficiency from traditional paper document management processes. A number of businesses offer document imaging solutions, including those that provide more traditional document management services, such as copiers and printers.

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.4: Sustainable Transportation

#### Mapping Routes

New advances in technology provide an opportunity for improving the efficiency of work-based travel and to reducing the number of vehicle trips generated by the City. In order to determine the most efficient means for travel, the City may consider creating an inventory of commonly traveled routes for work-based trips and define standard routes that should be taken in order to reduce the number of miles traveled. Technologies such as GPS and GIS may be used to determine the shortest route(s) to an intended destination, and also to track the mileage of City fleet to create a baseline audit of travel patterns. For additional information regarding a study on GIS and GPS for fleet tracking, visit: [http://www.ent.mrt.ac.lk/dialog/documents/Geoinformatics\\_final\\_compact.pdf](http://www.ent.mrt.ac.lk/dialog/documents/Geoinformatics_final_compact.pdf)

#### Section 2.4: Sustainable Transportation

The Public Works Department has been successful in implementing various strategies toward achieving Forest Lake's goal of encouraging sustainable transportation by using the existing City fleet in the most efficient manner possible. In order to accomplish regular operations in a sustainable manner, the Public Works Department uses small utility vehicles for off-road use, created remote dumping sites to reduce the use of dump trucks to transport waste, uses the smallest equipment possible to complete tasks and utilizes the ball field groomer for grading small areas within the city. The City also has made a conscious attempt to reduce vehicle trips whenever possible and to encourage efficient use of the city's existing transit hub. This section of the plan provides a framework for the City to further encourage use of sustainable transportation options.

##### Objective 2.4.1: Reduce Vehicle Trips.

A key aspect of sustainable transportation focuses on vehicle trip reduction as a result of the energy usage and air pollution associated with vehicle travel. The City of Forest Lake can make a conscious effort to minimize the number of vehicle trips generated for internal operations to reduce environmental impacts and save on fuel costs. In order to promote this effort, there is an opportunity for the City to incorporate technology such as Global Positioning Systems or Geographic Information Systems to identify efficient routes for City vehicles, encourage ride sharing and car-pooling, and promote teleconferencing and telecommuting to accomplish work-based activities.

**Strategy A:** Provide incentives that encourage City staff to carpool. **Short**

Providing incentives for City staff to carpool will encourage employees to adopt a more environmentally sustainable commute method that in turn reduces fossil fuel consumption, provides money savings, and improves air quality within the community. Examples of carpooling incentives include parking benefits such as designating spaces close to the building for carpoolers, flexible work schedules, prizes and discounts.

**Strategy B:** Create an employee ride-share program to connect employees with similar commuting patterns. **Short**

**Strategy C:** Use GIS and GPS to map city routes for work-based travel and to ensure shorter and more efficient trips. **Medium**

**Strategy D:** Explore the option of providing a city-operated High Occupancy Vehicle (HOV) to transport employees to and from work. **Medium**

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.4: Sustainable Transportation

#### Telework

Telecommuting [or teleworking] is an arrangement between employees and their employer that allows a paid employee to reduce or eliminate commuting to the office by performing job duties at home or at a location in close proximity to the employee's residence. Telecommuting is beneficial to the City, as it reduces the amount of vehicle travel on roads during peak periods and lessens environmental externalities associated with vehicle travel. Telecommute programs are flexible in that the City can designate requirements for telecommuting eligibility, the number of allowable telecommute hours, and the types of activities that may be conducted at locations outside of City facilities. The City of Saint Paul adopted Telecommuting Guidelines for its employees, which can be found at: <http://www.stpaul.gov/index.asp?NID=1120>

**Strategy E:** Encourage the use of teleconferencing to replace meetings that require employee travel whenever possible. **Medium**

By creating guidelines and standard practices for meetings held via teleconference, the City can reduce the number of vehicle trips it generates, save money, and help to reduce pollution and traffic congestion. Important considerations for adopting teleconferencing strategies include purchasing teleconferencing equipment, designating a space conducive to teleconferenced meetings, and developing guidelines and standard practices outlining the situations in which teleconferencing is most appropriate.

**Strategy F:** Explore the option of creating a telecommute or "telework" program that enables City employees to reduce commute miles by conducting work activities at a site other than a City location. **Medium**

**Strategy G:** Create a best practices guide with sustainable transportation standard operating procedures. **Medium**

**Objective 2.4.2: Explore the Use of Alternative Fuels and Fuel-Efficient Vehicles for the City Fleet.**

Alternative fuels along with improved engine design and fuel-efficient vehicles have helped decrease pollution levels in most

urban communities over the past ten years. In addition to the fact that alternative fuels can be locally manufactured, they burn cleaner than traditional petroleum fuels - in some cases up to 90 percent cleaner. The City can promote the use of alternative fuels or "green fuels" such as ultra-low-sulfur diesel and bio-diesel in an effort to reduce emissions and the negative environmental impacts associated with standard fuel vehicle travel. Furthermore, fuel-efficient vehicles, such as hybrid vehicles, are not just environmentally friendly options, but also offer substantial long-term cost savings due to improved mileage efficiency.

**Strategy A:** Set goals and targets for purchasing fuel-efficient or hybrid vehicles to add to the City fleet and/or to replace the aging City fleet. **Short**

There are several benefits associated with replacing standard vehicles with hybrid vehicles. Hybrid vehicles have better gas mileage than vehicles with traditional engines, burn less gas, and emit fewer pollution-causing emissions. Furthermore, hybrids release lower levels of carbon dioxide into the atmosphere, which many scientists believe will help to reduce global warming.

**Strategy B:** Explore the use of diesel fuel alternatives such as ultra-low-sulfur diesel and bio-diesel. **Medium**

The Environmental Protection Agency (EPA) promotes the use of alternative fuels in an effort to reduce negative environmental impacts associated with traditional fuel usage. The EPA provides

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.4: Sustainable Transportation

#### Bike to Work Week

Designating a Bike to Work Week can encourage City employees to try an alternative method of transportation that they may not have otherwise explored. The City can work toward planning the Bike to Work Week by providing information about local and regional bike routes and providing incentives for participation. Harvard University has a Bike to Work Week Planning Guide which can be found at: <http://tdc-www.harvard.edu/mink/bike/events/bw95/guide.htm#ORGANIZERS>

information and tools that identify the most environmentally beneficial alternatives to traditional fuels. For additional information, visit: <http://www.epa.gov/otaq/consumer/fuels/altfuels/altfuels.htm#fact>

#### Objective 2.4.3: Encourage the Use of Alternative Transportation Options.

Sustainable transportation is not limited to making automobile use more sustainable but also includes promoting alternative modes of transportation. Alternative transportation modes include bicycling, walking, and public transit; all of which are environmentally friendly and cost effective. Opportunities exist for the City to promote bicycling to work, especially in summer months, by providing bicycle racks and enclosed lockers, showers in City facilities and bicycling incentives. In addition, the City can encourage transit ridership by providing incentives such as discounted bus passes to employees.

**Strategy A:** Conduct a citywide audit of parking spaces and work toward no net growth of parking at City facilities. **Short**

**Strategy B:** Develop a bike to work program for Forest Lake Employees and designate a “Bike to Work Week” with employee incentives for participation. **Short**

**Strategy C:** Educate City employees through meetings and workshops about sustainable

transportation practices. **Short**

**Strategy D:** Encourage department heads to allow bikes inside the workplace or provide outdoor enclosed bike lockers for employees to use or rent. **Short**

**Strategy E:** Install bike racks outside of all City buildings to encourage employees to bicycle to work. **Medium**

**Strategy F:** Provide showering and changing facilities in City buildings for staff that bike to work. **Medium**

**Strategy G:** Investigate the feasibility of creating a City Police bike fleet. **Medium**

**Strategy H:** Explore the possibility of instituting an employee bus pass program so that City employees can use transit at a discounted rate. **Long**

#### Objective 2.4.4: Promote Economically and Environmentally Efficient Vehicle Usage.

Effective operation and maintenance of City vehicles plays a significant role in Forest Lake’s sustainability efforts. Timely vehicle maintenance can help reduce emissions as well as improve the fuel efficiency of vehicles. In addition to existing

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.4: Sustainable Transportation

#### Creating Partnership

Creation of partnerships with surrounding communities for equipment sharing can result in cost-savings for Forest Lake and provides access to heavy equipment and attachments the City may not be able to justify buying on its own. The City's relatively small size and budget makes equipment sharing attractive for saving costs and for creating opportunities for the City to build lasting relationships with surrounding communities. Several smaller cities in the Twin Cities Metropolitan Area already are successfully engaged in intercommunity equipment-sharing practices. For additional information, visit:  
[http://americancityandcounty.com/mag/government\\_sharing\\_equipment\\_saves/](http://americancityandcounty.com/mag/government_sharing_equipment_saves/)

practices the City employs to ensure efficient vehicle usage, Forest Lake will encourage shared use of vehicles whenever possible, as well as the possibility of implementing a 'no idling' policy for all City vehicles. As part of its ongoing efforts to promote economically and environmentally efficient vehicle usage, the City should conduct timely checks and maintenance of all its vehicles to improve vehicle efficiency and track emissions.

**Strategy A:** *Continue to encourage use of light vehicles for City operations by creating standard operating procedures for efficient vehicle usage.* **Short**

**Strategy B:** *Encourage shared use of equipment within Forest Lake and with surrounding communities.* **Short**

**Strategy C:** *Conduct periodic maintenance checks and emissions testing on all City vehicles to ensure vehicles are functioning properly and emitting clean emissions.* **Short**

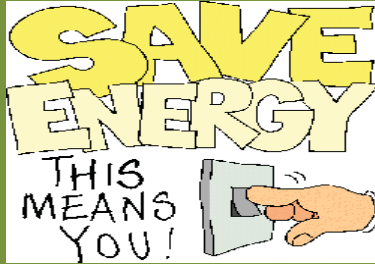
It is crucial to perform routine vehicle maintenance on City vehicles to ensure that vehicles are performing efficiently and have the cleanest emissions possible. Improperly maintained vehicles are significantly less fuel-efficient and contribute greater amounts of pollution than properly maintained vehicles. The City of Seattle, Washington developed an action plan for ensuring they have a properly maintained City fleet. Information regarding

Seattle's program is available at: <http://www.cityofseattle.net/environment/Documents/CleanGreenFleetAP.pdf>

**Strategy D:** *Collect base-line emissions data on the City fleet that can be used as a basis for determining areas necessary for improvement and to measure progress toward emissions reduction.* **Medium**

**Strategy E:** *Aim to phase out gas vehicles and incorporate electric vehicles into the City fleet.* **Long**

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.5: Sustainable Energy

#### Energy Monitoring

The City can design an energy monitoring program by designating individuals responsible for fulfilling monitoring duties, maintaining records of energy usage, and benchmarking to determine progress toward meeting energy use reduction goals. Systems are available that can help the City monitor its energy usage, such as ETAP Energy Management System (EMS), which is an intelligent energy management system that is designed to decrease energy consumption, improve efficiency and optimize energy usage with the ultimate goal of reducing costs and resource consumption. For additional information about ETAP, visit: [http://etap.com/energy\\_management\\_system/energy\\_management\\_system.htm?gclid=CNaxg7Hqt5kCFOoMDQo dJDXL6A](http://etap.com/energy_management_system/energy_management_system.htm?gclid=CNaxg7Hqt5kCFOoMDQo dJDXL6A)

#### Section 2.5: Sustainable Energy

There are a number of practices related to sustainable energy use that have been implemented across City departments. The City has attempted to reduce energy use by upgrading lighting systems to LED lights whenever possible, turning outside lights off for municipal buildings at midnight and turning down building heat during non-functioning hours. The City also has tried to improve the efficiency of energy use by conducting energy audits to identify problem areas, upgrading existing City equipment to more energy efficient equipment, replacing lift stations with more energy efficient options and switching water meters to radio read. Furthermore the City removes a subset of its facilities from the Xcel Energy grid during peak hours and operates them on generators instead to reduce energy costs. The objectives and strategies that follow provide actions City departments can employ to build on sustainable energy initiatives already in practice.

##### Objective 2.5.1: Perform Energy Monitoring and Benchmarking.

The first step toward improving energy efficiency is to identify areas in need of improvement and monitor the impact of sustainable energy practices. Benchmarking through audits will provide the City with baseline figures that inform energy goals and targets and help evaluate new efforts employed to increase sustainable energy use. Monitoring energy usage is an essential step toward measuring progress and determining whether goals and targets are achieved. Monitoring also helps to identify areas

where the City performs well and areas where the City can improve.

**Strategy A:** Explore options for setting up an energy monitoring system. **Medium**

**Strategy B:** Conduct an audit of City-owned equipment and develop a plan for phasing out old equipment by replacing it with energy efficient equipment. **Medium**

##### Objective 2.5.2: Reduce Energy Consumption in City Buildings and Facilities.

Operation of City buildings consumes a significant amount of energy; therefore, reducing energy consumption within City buildings is an essential step toward becoming more sustainable. Forest Lake already employs numerous practices intended to reduce energy consumption within municipal buildings. In addition to existing practices, the City can adopt new measures to help reduce energy consumption such as the use of motion sensor lighting, energy efficient building design and daily operational practices such as turning off lights and equipment when it is not in use.

**Strategy A:** Turn off or dim lights at City facilities during nighttime hours. **Short**



# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.5: Sustainable Energy

#### Building Orientation

Building orientation is important for capturing the benefits of solar light and heat throughout the year. By designing new buildings in a manner that takes advantage of solar energy, the City can save money and reduce its energy consumption. Furthermore, buildings designed to use natural light create healthier spaces for employees, reduce eyestrain associated with fluorescent lighting systems, increases productivity and minimizes demand on electrical systems.

#### Motion Sensor Lighting

Motion sensor lights can be used in lieu of traditional lights in areas that are not constantly used such as lavatory facilities or utility rooms. Motion sensor lights can prevent wasted electricity and conserve energy, which has benefits to the environment by reducing fossil fuel usage. Furthermore, motion sensor lights require minimal capital investment and will decrease electricity costs long-term.

**Strategy B:** *Switch off office equipment when it is not in use. **Short***

**Strategy C:** *Consider building orientation during building designing and planning processes to make use of solar light and heat. **Short***

**Strategy D:** *Set goals and targets for reducing the amount of non-renewable energy sources consumed in the operation of public facilities. **Medium***

**Strategy E:** *Install motion sensor lighting systems when possible. **Medium***

**Strategy F:** *Create an energy challenge to engage employees in the City's goal of reducing energy consumption. **Medium***

#### **Objective 2.5.3: Investigate New Technologies and Implement Pilot Programs to Explore the Effectiveness of Novel Energy Technologies.**

Technology for using energy more efficiently is continuously evolving and a number of opportunities exist for Forest Lake to improve its energy efficiency by reducing consumption. Part of the City's efforts toward reducing energy consumption will be to continuously investigate new technologies in an effort to be proactive in testing and implementing novel energy technologies. The City can design pilot programs for testing innovative technologies in an attempt to incorporate more sustainable

energy principles and to establish a reputation for being a leader in sustainable energy practices.

**Strategy A:** *Establish an Energy Star Partnership. **Medium***

Energy Star partners receive information regarding energy efficiency and technical support from Energy Star staff for improving equipment performance, reducing energy waste and energy costs, and limiting negative impacts on the environment. City facilities operate lighting, heating, air conditioning, and power for office equipment, all of which can be made more energy efficient. For additional information about becoming an Energy Star Partner, visit: [http://www.energystar.gov/index.cfm?c=bldrs\\_lenders\\_raters.nh\\_join](http://www.energystar.gov/index.cfm?c=bldrs_lenders_raters.nh_join)

**Strategy B:** *Develop an annual energy reduction challenge between City departments to raise awareness about energy consumption and motivate employees to eliminate energy consumptive behaviors. **Medium***

The City of Portland, Oregon created its City Energy Challenge Program in 1991 in an effort to reduce energy usage and save money spent on City operations. The City set a goal of increasing energy efficiency by 10 percent by the year 2010, and by December 2001, the City had already exceeded its goal. The results of the Energy Challenge Program enabled Portland to save more than 15 percent on its annual energy bills. For additional information, visit: <http://www.portlandonline.com/OSD/>

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability Section 2.5: Sustainable Energy

### Energy Efficient Equipment

Saving energy on a day-to-day basis depends to a great extent on the equipment used in buildings. Using energy efficient equipment reduces energy consumption as well as energy costs. Changes such as shifting to the use of LED lights, Energy Star appliances and use of flat screen monitors are some examples of steps the City can take to improve the energy efficiency of City-owned equipment. The City can develop a plan for replacing aging equipment with energy efficient models whenever equipment is upgraded or replaced. LCD or flat screen monitors are an example of energy efficient equipment. Flat screen monitors are half the size of CRT monitors, use significantly less energy, provide high quality resolution, and are much lighter than CRT monitors. By developing a strategy for phasing out CRT monitors, the City can decrease energy consumption and cost savings in office operations.

index.cfm?a=111734&c=42399

### Objective 2.5.4: Increase Purchase and Use of Energy-Efficient Equipment.

**Strategy A:** Continue the process of upgrading the City lighting system to Light Emitting Diodes (LED) lights. **Medium**

LED lights are extremely energy efficient and are a viable replacement option for certain traditional lighting systems (such as traffic signals, exit signs, etc.). LED lights last up to 10 times longer than compact fluorescent lights and incandescent lights, are durable, do not build up heat, are mercury free, save money, and are much more efficient than compact fluorescent bulbs or incandescent bulbs. Moreover, the long product life of LED lights reduces energy usage and will generate savings on electricity bills. For additional information about LED lights, visit [http://www.eartheasy.com/live\\_energyeff\\_lighting.htm](http://www.eartheasy.com/live_energyeff_lighting.htm).

**Strategy B:** Shift to use of T8 fluorescent lighting in fluorescent lighting fixtures whenever possible. **Medium**

**Strategy C:** Replace computer monitors with flat screen or LCD monitors. **Medium**

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.6: Green Building

#### LEED AP

LEED Accredited Professionals (LEED AP's) are professionals in the building, construction, design, and planning industries who have demonstrated a thorough understanding of green building and the LEED Green Building rating system. There are currently over 80,000 LEED AP's throughout the United States who have obtained this designation by passing an exam consisting of LEED rating criteria, and green building and design principles and theories. Having LEED AP's on staff will enable the City of Forest Lake to possess in-house knowledge of the LEED certification process and green building principles. Furthermore, the City will further its reputation as a sustainable and innovative city and set an example that other cities in the Twin Cities Metro Area can follow. The cost of the exam is \$300 for United States Green Building Council (USGBC) members and \$400 for non-members. For more information on the LEED AP accreditation process, visit: [www.gbci.org](http://www.gbci.org)

#### Section 2.6: Green Building

The City of Forest Lake has already initiated the process of integrating green building and sustainable design into the construction, operation, and maintenance of buildings and infrastructure in the community. The Fire and Public Works Departments currently use radiant floor heating in their buildings. Road projects constructed by the Public Works Department incorporate recycled blacktop and concrete as a base material and the Parks, Trails, and Recreation Department utilizes skylights to provide lighting for changing rooms in the City's beach houses. In addition, the City has conducted an ongoing analysis of energy use in public buildings according to Minnesota B3 Benchmarking requirements. Finally, the proposed public safety building that will house the Police and Fire Departments plan to incorporate Leadership in Energy and Environmental Design (LEED) principles into the building design. The green building objectives and implementation strategies provided in this section of the plan will support the City in its efforts toward becoming more sustainable in its operations.

##### Objective 2.6.1: Educate City Staff Regarding Green Building Practices.

The City of Forest Lake has identified green building and the sustainable design, construction, operation, and maintenance of buildings and infrastructure as a tool to enhance the overall sustainability of the community. Green building is a relatively new movement that is supported by excellent educational opportunities for those wishing to increase their understanding

of sustainable building design practices. The City of Forest Lake can incorporate the educational strategies listed below in an effort to increase awareness of green building within its internal government operations, as well as in the greater community.

**Strategy A:** *Identify employees within City departments as candidates to take the LEED AP certification test and set an annual timeline and goals to increase the number of LEED AP certified professionals. **Medium***

**Strategy B:** *Allocate staff time for green building training and incorporate training costs into the employee budget. **Medium***

**Strategy C:** *Ensure that at least one member of the Design Review Committee and Planning Commission has expertise in sustainable design and sustainability principles. **Medium***

**Strategy D:** *Sponsor a program to educate City contractors and vendors about principles of green building and sustainable design practices. **Long***

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.6: Green Building

#### Sustainable Construction, Operation, and Maintenance of City Infrastructure

Alameda County in Northern California created a program facilitated by the county's waste management department that provides specific regulations governing the construction and operation of county infrastructure. One of the regulations the county enacted required county projects with a total estimated cost of construction greater than \$100,000 to divert 75 percent of the asphalt, concrete, and earth debris generated by the project from landfills via reuse or recycling. Additional highlights of this program include standards and guidelines, educational outreach, and policy development guiding the construction, operation, and maintenance of the county buildings and infrastructure. For more information on the Stop Waste Program in Alameda County, visit [www.stopwaste.org](http://www.stopwaste.org) and <http://www.doi.gov/greening/buildings/Nov04FederalGreenBuildingProfiles.pdf>

#### Objective 2.6.2: Create Guidelines and Develop Green Building and Sustainable Design Standards for New City Buildings and Infrastructure.

The City of Forest Lake is currently in the process of developing policies that require the use of green building and sustainable design elements in private construction projects. In an effort to support this process and lead as an example for private sector businesses, the City of Forest Lake can develop green building and sustainable design standards for the construction, operation, and maintenance of all new city buildings and infrastructure.

**Strategy A:** *Make green building methods standard procedure by modifying Requests for Proposals (RFP's) for construction of buildings and infrastructure. **Short***

**Strategy B:** *Implement a policy to require LEED design and building standards as a baseline for all new municipal building projects. **Medium***

In order to ensure that green building principles are incorporated into new design and construction projects, the City can develop standard contract language and generate a list of designers, builders and contractors with green building and sustainable design experience. To access a directory of certified LEED AP's in Forest Lake and the surrounding area, visit <http://www.gbci.org/LEED/AP/ViewAll.aspx?CMSPageID=59>.

**Strategy C:** *Develop guidelines and standards for sustainable construction, operation, and maintenance of City buildings and properties. **Medium***

#### Objective 2.6.3: Retrofit Existing Buildings to Decrease Operations and Maintenance Costs.

The City of Forest Lake is the owner and operator of multiple buildings and extensive infrastructure networks. As construction of new City buildings and infrastructure begins to slow, there is an excellent opportunity for the City of Forest Lake to retrofit and enhance the design, operation, and maintenance of existing buildings and infrastructure. This opportunity will allow the City to experience long-term economic returns and environmental benefits by contributing a small initial investment toward retrofitting existing buildings.

**Strategy A:** *Continue Minnesota B3 Benchmarking analysis and documentation, and implement energy saving practices in all buildings according to B3 Benchmarking findings. **Short***

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.6: Green Building

#### B3 Benchmarking

A law passed by the State of Minnesota in 2002 requires benchmarking of energy usage in all public buildings larger than 5,000 square feet that have at least two sources of energy. The law was enacted for the purpose of establishing energy efficiency benchmarks and setting energy conservation goals. Additionally, the program identifies buildings in need of improvement in energy consumption levels, and provides recommendations for making improvements. The City of Forest Lake conducted preliminary B3 Benchmarking and should continue to work with the State to monitor energy consumption and set realistic goals for energy reduction in public buildings. For more information on the B3 Benchmarking program, please visit <http://www.mnbenchmarking.com>. For an online energy assessment tool provided by Xcel Energy, visit <http://www.energyprofiletool.com/xcelenergy/>, <http://www.crbt.org/handcrafted2.asp>

**Strategy B:** Utilize data collected from B3 and other energy efficiency benchmarking programs to identify buildings that have the greatest potential to improve performance. **Medium**

**Strategy C:** Identify existing systems (e.g., HVAC or stormwater management systems) or building components that may be upgraded in situations where it is not feasible to retrofit an entire existing building. **Medium**

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.7: Healthy Ecosystems

#### Diesel Particulate Matter Filters

Diesel particulate matter filters (DPF) are designed to capture particulate matter in a vehicle exhaust stream and break down harmful pollutants into less harmful components before they are emitted into the air. Aftermarket DPF's are a retrofit for diesel vehicles that reduce emissions of particulate matter, hydrocarbons and carbon monoxide by 60 to 90 percent. For more information from the EPA regarding the environmental benefits, costs of implementation, and general information about aftermarket diesel particulate matter filters, visit: <http://www.epa.gov/otaq/retrofit/documents/f03017.pdf>

#### Section 2.7: Healthy Ecosystems

A healthy ecosystem is a vital component of the overall health of a community. The City of Forest Lake and its internal departments have taken multiple steps toward developing a healthy ecosystem in the city and protecting the surrounding air, land, lakes, streams, wildlife and vegetative habitats. There are several examples of Forest Lake's current practices that relate to healthy and sustainable ecosystems. The Fire Department currently traps and recovers excess water during cleaning and training exercises. The Parks Department utilizes practices to avoid excessive irrigation, such as the installation of moisture sensors on the irrigation system. The Parks Department also uses native vegetation in parks, and gives away trees on Earth Day for community members to plant. The Public Works Department has implemented strategies that foster healthy ecosystems by encouraging water customers to install moisture sensors on irrigation systems and installing low flow toilets and urinals in its buildings. In addition, Public Works uses mowing for weed removal rather than harmful spraying techniques, and mulching is utilized to reduce the use of string trimmers. Finally, the Public Works Department instituted a no idling strategy for its vehicles to in an effort to reduce air pollution produced from vehicle emissions. This section of the plan provides a description of strategies the City can employ to build on existing efforts that encourage healthy ecosystems.

#### Objective 2.7.1: Decrease Pollution through Sustainable Operation and Maintenance of the City Fleet.

Forest Lake owns and operates multiple vehicles as part of its municipal fleet. The sustainable operation and maintenance of the fleet will allow the City to decrease pollution impacting the surrounding ecosystem and help to maintain a healthy environment in and around the community. Several strategies listed below require small financial investment and can provide substantial benefits toward protecting the City's valuable natural systems.

**Strategy A:** Place aftermarket particulate filters on city diesel vehicles to reduce pollution generated from diesel vehicle emissions. **Short**

**Strategy B:** Extend the Public Works Department's no idling policy by implementing a no idling policy for all City vehicles. **Short**

Many cities throughout the United States have implemented no idling policies for City vehicles. The City of Minneapolis has proven that such policies are possible even in cold weather climates. The policy recently enacted in Minneapolis limits idling of vehicles and other gas or diesel powered equipment to no more than three minutes in a one hour time period. Idling vehicles produce exhaust that carries a higher load of pollutants than a moving vehicle. Reducing idling is a simple and effective measure the City of Forest Lake can implement to minimize pollution and the harmful effects it has on the environment. For

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability Section 2.7: Healthy Ecosystems

### Environmentally Sensitive Vehicle Cleaning and Maintenance

The City of Santa Cruz, CA developed a Vehicle Service Facilities Best Management Practices guide for cleaning and maintenance of City vehicles and equipment. This document encompasses all aspects of environmentally sensitive and sustainable vehicle maintenance, vehicle washing and cleaning, City shop practices, and vehicle repair and painting. The best management practices found in this document can provide the City of Forest Lake with examples of effective and inexpensive practices. For more information, visit: <http://www.ci.santa-cruz.ca.us/pw/pdf/vehiclebmp.pdf>.

more information regarding the City of Minneapolis anti-idling ordinance, please visit [http://www.ci.minneapolis.mn.us/airquality/Antidlding\\_home.asp](http://www.ci.minneapolis.mn.us/airquality/Antidlding_home.asp). Additional information is available through the American Transportation Research Institute at: <http://www.scribd.com/doc/2170989/2008-Idle-Laws-by-State> and No Idling Policies at: <http://www.nrdc.org/enterprise/greeningadvisor/ta-idling.asp>

**Strategy C:** Perform a baseline audit of the City's current greenhouse gas emissions. **Medium**

**Strategy D:** Develop a strategy for environmentally sensitive vehicle cleaning and maintenance. **Medium**

### Objective 2.7.2: Decrease Pollution by Encouraging Sustainable Operation and Maintenance of City Property.

The City of Forest Lake Parks Department, Public Works Department, and other City departments already incorporate numerous strategies and actions focused on operation and maintenance practices for City property that decrease pollution. The City can enhance its current practices by implementing the following strategies across all departments in an effort to decrease pollution and increase the overall health and vitality of the Forest Lake ecosystem.

**Strategy A:** Establish a database of water consumption, wastewater run-off, chemical use, and other practices that can negatively impact Forest

### Lake's natural systems. **Medium**

With a baseline audit that includes data regarding the factors listed above, the City of Forest Lake can begin to set goals and identify indicators for successfully decreasing water consumption, polluted run-off, chemical usage, and other practices that negatively impact the environment.

**Strategy B:** Assess all playground equipment to determine whether any components are coated in lead-based paints and develop a plan for removing any lead-based paints. **Medium**

**Strategy C:** Enhance existing pest management system by developing an Integrated Pest Management (IPM) program that applies to all City property. **Medium**

Many cities throughout the country have begun implementing Integrated Pest Management (IPM) programs to decrease the use of toxic pesticides and increase the use of environmentally friendly pest management practices. For example, the City of Santa Cruz, California passed a resolution that seeks to eliminate or reduce pesticide applications on City property to the maximum extent feasible. The IPM program created by this resolution includes staff training on environmentally friendly pest management, a plan guiding implementation of the program, and development of language and practices to guide City consultants and subcontractors. Although the City of Forest Lake Parks, Trails and Recreation and Public Works Departments currently

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.7: Healthy Ecosystems

#### Tree City USA

Tree City USA is a program sponsored by the US Arbor Day foundation in connection with the USDA Forest Service. Tree City USA provides direction, technical assistance, and public direction for forestry programs in communities throughout the United States. There are currently 97 cities in Minnesota that have been designated as Tree City USA cities. For more information regarding the program, benefits of becoming a Tree City USA member, and the application process visit: <http://www.arborday.org/programs/treeCityUSA/>.

use alternative pest management techniques, a comprehensive plan or ordinance would consolidate these efforts and ensure consistent environmentally sensitive practices. For more information regarding the City of Santa Cruz IPM, visit: <http://www.ci.santa-cruz.ca.us/pw/ep/ipmpolicy.html>

#### **Objective 2.7.3: Increase Urban Forest Cover on City Property.**

The urban forests and trees in Forest Lake play a vital role in the health and well being of the city's ecosystem. Trees provide oxygen and shade, consume carbon dioxide, help prevent soil erosion and absorb stormwater before it enters into water bodies. In addition to these attributes, trees are aesthetically pleasing, provide wildlife habitat, and increase the value of the property on which they are located. The City of Forest Lake can continue to lead as an example for the broader community and work toward increasing the amount of tree cover on City property.

**Strategy A:** *Join a national urban forest planning, enhancement, or protection program such as Tree City USA. **Short***

**Strategy B:** *Inventory current urban forest on City-owned property and identify and pursue opportunities for increasing trees planted on municipal property. **Medium***

**Strategy C:** *Develop Public-Private Partnership to increase the number of trees in Forest Lake. **Medium***

A Public-Private Partnership (PPP) is a term that can be used to describe a government service or private business effort that is funded and operated through government partnership with a private sector company. Establishment of a PPP with private sector businesses could be a potentially useful strategy for increasing tree cover in Forest Lake by raising funds the City does not have through the PPP and using these additional funds to obtain and plant trees around the city to enhance the urban forest. A PPP would also strengthen relationships between the City and local businesses. To read about a PPP success story in Hartford, Connecticut, visit: [http://www.pps.org/parks\\_plazas\\_squares/info/parkuse/success\\_bushnellpark](http://www.pps.org/parks_plazas_squares/info/parkuse/success_bushnellpark)

#### **Objective 2.7.4: Reduce Water Consumption.**

A key aspect of maintaining and enhancing a healthy ecosystem is reducing the consumption of water in the daily operation of City functions as well as the maintenance and operation of City property and the City fleet. As a major consumer and water provider, the City is presented with another opportunity to lead by example and encourage sustainable water consumption strategies that can be applied to other businesses and organizations in the community.



# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.7: Healthy Ecosystems

#### “Smart” Irrigation

Instillation of irrigation systems with “smart” rain shut-off devices or moisture sensors is a simple and cost effective measure the City of Forest Lake can take to decrease water consumption. A rain shut-off device placed on an irrigation system halts irrigation in response to excessive rainfall, thus reducing the amount of water needed for irrigation. A soil moisture monitor stops irrigation once the moisture content of the soil has reached a certain threshold. Both automatic irrigation systems and moisture sensors are easy to install, are relatively inexpensive, and provide immediate returns on the initial investment.

**Strategy A:** Perform water audits in all City buildings and create a phased plan to retrofit aging appliances to low water appliances. **Short**

**Strategy B:** Educate the community by posting signs about appropriate water consumption practices. **Short**

**Strategy C:** Install an automatic irrigation system with built-in moisture sensors. **Medium**

**Strategy D:** Use non-potable water for City operations and maintenance practices such as street sweeping and cleaning stormwater inlets. **Medium**

#### Objective 2.7.5: Protect Valuable Natural Resources.

Forest Lake is home to many environmental amenities and valuable natural resources. Many of the visitors to and residents of Forest Lake have come to the city to take advantage of these amenities and enjoy the resources. The protection of Shields Lake, Clear Lake, and Forest Lake, wetlands, parks, and open spaces can help enhance the quality of life for current and future residents of Forest Lake. The strategies that follow are intended to encourage changes that will protect these valuable resources inherent to Forest Lake.

**Strategy A:** Map all City infrastructure systems with GIS (Geographic Information Systems), to enable staff to trace illicit discharges, improper connections and illegal dumping quickly and effectively. **Medium**

The City of Livonia, Michigan, has developed a program utilizing GIS technology to combat contamination of the city's ecosystem due to illicit discharges, stormwater disposal outfalls, and on-site sewage disposal systems. This program has improved record keeping, provided early identification of problem areas, likely sources of groundwater pollution, and increased coordination with the infrastructure of surrounding communities. For more information on this program and information about other cities utilizing GIS technology to reduce pollution due to municipal services please visit <http://www.rougeriver.com/proddata/catalog.cfm?category=gis>.

**Strategy B:** Perform preventative maintenance on City infrastructure and systems to reduce Nonpoint Source (NPS) Pollution. **Medium**

Nonpoint Source (NPS) Pollution is a term for polluted runoff generated from several sources that are dispersed across a large area. NPS pollution is produced as a result of rainfall or snowmelt that travels across the landscape, picking up pollutants such as fertilizers, toxic chemicals, sediments, and salt, and eventually depositing the polluted runoff into lakes, rivers, wetlands, and streams. The City can reduce the amount of NPS pollution it creates by ensuring that stormwater is managed onsite to the greatest extent possible and by reducing the amount

# Forest Lake Sustainability Action Plan



## Chapter 2: Internal Sustainability

### Section 2.7: Healthy Ecosystems

#### Native Landscaping in City Parks

The City of San Juan Capistrano, California, used native landscaping and drought resistant plants to enhance three public parks in the city. The park landscaping was native to the area and available on a year round basis. In addition to being aesthetically pleasant, the parks use much less water than conventional parks located throughout the city. The parks were designed by city planners and staff and located in public spaces throughout the city. San Juan Capistrano received national attention for their efforts from the American Planning Association and their projects have served as an educational tool for citizens and neighboring communities. For more information on San Juan Capistrano, CA and this project, visit <http://www.sanjuancapistrano.org/Index.aspx?page=638>.

of impervious surfaces allowed on City property. For more detailed information about NPS pollution, visit: <http://www.epa.gov/owow/nps/qa.html>

**Strategy C:** *Develop a plan for integrating native plant species and eliminating invasive species in City parks and open space areas.* **Medium**

**Strategy D:** *Identify and acquire environmentally sensitive lands.* **Long**



# External Sustainability

## Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.1: Background

#### ***Section 3.1: Background***

Forest Lake is committed to becoming a sustainable city by promoting economically, environmentally, and socially responsible practices in internal City operations and external operations that impact private citizens and businesses. This component of the action plan will provide a framework for incorporating sustainable actions into external practices in the City of Forest Lake. The strategies outlined in this section are organized into four broad topic areas that include transportation, energy and the environment, land use, water resources, and public outreach. These topic areas were chosen in an effort to align the sustainability implementation strategies with the key areas discussed in the Sustainability Chapter of the Draft 2008 Forest Lake Comprehensive Plan. For each of these topic areas, current sustainable practices are highlighted along with a list of objectives and implementation strategies that can be incorporated into city ordinances or the Comprehensive Plan to promote citywide sustainability.

#### **Sustainable Transportation**

Transportation is ingrained in our everyday lives; it directs where we go, how we get there, and what mode we choose to utilize. In today's society the automobile and roadways dominate the natural landscape due to the shipment of goods and services and personal transportation. As accustomed to this lifestyle as we have become, research indicates that personal vehicles are not the most sustainable mode of transportation; and as a whole, we should focus our efforts on shifting toward becoming

a more multi-modal society. Personal automobiles are not a sustainable mode of transportation because they have numerous negative impacts on human health and environmental quality. As the number of vehicle miles traveled continues to grow each year, so have nation-wide concerns regarding air pollution, oil dependency, traffic congestion and traffic accidents. As an edge community with a high percentage of resident commuters, nearly 93 percent of Forest Lake's population drives to work and approximately 46 percent of residents spend over 30 minutes traveling to work each day. In recognition of these travel patterns, Forest Lake is being proactive by taking steps to provide sustainable transportation options for citizens (U.S. Census 2000). The City focuses a significant amount of attention on pedestrian experience through provision of trails, sidewalks, and transit options within the city to increase accessibility for all residents. Section 3.2 of the action plan will further highlight the City's current sustainable transportation practices and provide strategies to enhance its sustainable transportation efforts.

#### **Sustainable Energy and Environmental-based Practices**

The topic of energy and environment combines many topics of sustainability including land use, building materials, and natural resources. Compact development is a land use pattern that promotes transit options and walkability and subsequently reduces energy usage. Green building policies can reduce energy consumption and decrease greenhouse gas emissions. Sample policies that promote a sustainable environment include incorporating natural resource data in development plans and



## Chapter 3: External Sustainability

### Section 3.1: Background

environmental protection overlays into the zoning ordinance. Section 3.3 of the action plan discusses current practices the city employs to reduce energy usage and environmental impacts, and provides a variety of future implementation strategies related to land use, buildings and natural resources.

#### **Sustainable Land Use Practices**

Land use patterns are the direct result of local government regulation in addition to community and individual preferences. Development patterns and land use choices in a community directly influence its sustainability by impacting energy usage and dictating the viability of alternative transportation modes. With land use patterns becoming increasingly spread across larger geographic areas and the automobile persisting as the primary mode of transportation, congestion and air pollution are becoming more problematic for Twin Cities residents. Section 3.4 of the action plan addresses the City's current sustainable practices and provides tools that will encourage land use patterns that foster sustainability by encouraging compact and contiguous development, preserving open space, and the developing green corridors.

#### **Sustainable Water Resources**

Water is a central feature of Forest Lake as well as a critical resource and vital system relied upon to conduct our daily lives. The landscape is dotted with lakes and wetlands that not only allow us to survive, but also provide recreation opportunities, encourage tourism and commerce, and keep our

living environment clean. Conserving water not only helps the community by reducing residents' water bills; it also minimizes pollution of this valuable resource and protects it for future generations. Forest Lake's decisions regarding sustainable management of the current water supply, wastewater, stormwater, and surface water resources within the community have the potential to benefit both current and future residents. Section 3.5 discusses the City's current sustainable water resource practices and highlights strategies that will encourage further protection of Forest Lake's water resources.

#### **Public Outreach and Stakeholder Engagement**

Communicating with the public and involving stakeholders in the process is critical to successful implementation of any plan. Forest Lake already has made community involvement a key feature of this sustainability plan by involving the public in the City's Comprehensive Planning process. Furthermore, the Comprehensive Plan recommends designating a position or group within the city government to implement, monitor, and coordinate the actions of this plan and to create a Sustainability Committee to guide the implementation of this plan. These two elements are the driving forces that will enable the actions outlined in this plan to become a reality. A variety of strategies will be undertaken to communicate the City's internal sustainable actions and the external sustainability planning activities. Promoting Forest Lake's efforts around sustainability will highlight the city as an innovative and forward-thinking community, and will encourage residents to become involved in the process making

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.2: Sustainable Transportation

#### Trails

Trails are important as they promote protection and creation of open spaces, encourage physical fitness, and protect air quality with fewer vehicles on city roads. Furthermore, community trails act as a means to protect wildlife habitat and the environment, while promoting a sense of community ownership over a shared resource that citizens can help to keep clean, safe, and of high quality. The City of Forest Lake recently created a Parks, Trails, and Open Space Plan that emphasizes the importance of community trails and creating programs and incentives to continue a high level of maintenance and improvements for the existing trail system. Moreover, Forest Lake involves the Park Board in the review process of all subdivisions and plans to create a trail maintenance program.

them active participants in Forest Lake's sustainability initiatives. Section 3.6 documents current practices and strategies intended to engage the public in sustainability efforts.

#### **Section 3.2: Sustainable Transportation**

The City of Forest Lake has developed numerous policies in an effort to create sustainable transportation options for city residents including trail and bicycle policies, transit opportunities, and focusing redevelopment in key transit corridors to support existing transit and to prepare for future transit services. In particular, the City requires sidewalks and trails throughout new developments to ensure connectivity within the development and with other important locations throughout the City. In addition, the City requires businesses to place bicycle racks at convenient locations to encourage multi-modal options. Forest Lake recently built a transit hub park-and-ride for city residents in order to facilitate use of public transit for residents commuting between Forest Lake and Downtown Minneapolis.

#### **Objective 3.2.1: Improve Connectivity and Maintenance Practices of Community Trails.**

Trail connectivity and maintenance is vital when attempting to develop a pedestrian-oriented city. The City of Forest Lake currently has an extensive trail system that attempts to connect important parts of the city. By continually updating and rehabilitating trails, Forest Lake fully supports walking and bicycling as viable alternatives to driving.

**Strategy A:** Continue to require development of trails and sidewalks to connect commercial, residential, and public areas within the city. **Short**

**Strategy B:** Create a trail maintenance program that ensures community trails will be properly maintained with sustainable recycled materials. **Medium**

**Strategy C:** Incorporate sidewalks and trails into current major road reconstruction projects such as Broadway Avenue, Broadway/Lake Intersection, County Road 83, 15th Avenue, 11th Avenue overpass, and Everton to provide alternative transportation options. **Long**

**Strategy D:** Ensure that new trails follow topographic contours to control water movement with an average grade of 10 percent, thus limiting erosion potential. **Long**

**Strategy E:** Advocate for a bike trail right-of-way along the Rush Line Corridor commuter rail line that will connect the Twin Cities to the eastern and northern portions of the Metropolitan Area. **Long**

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.2: Sustainable Transportation

#### Pedestrian Master Plan

A Pedestrian Master Plan can be used to document current pedestrian infrastructure, including sidewalks and trails. In addition to identifying existing infrastructure, this plan can map current and future facilities, provide recommendations for future improvements to maintain and expand pedestrian infrastructure, and establish an implementation program. Identifying deficiencies in pedestrian infrastructure, such as neighborhoods or commercial corridors with no sidewalks, is an important first step in developing an implementation program. A Pedestrian Master Plan also provides design guidelines for fostering development that creates walkable neighborhoods.

#### Objective 3.2.2: Increase Multi-Modal Transportation Opportunities within Forest Lake.

The provision of multi-modal transportation opportunities in Forest Lake is important to overall sustainability. Multi-modal options that include multiple forms of transportation such as walking, bicycling, and automobiles, are vital to provide options to individuals who cannot drive or choose not to drive. One key consideration is the provision of mobility for people at all stages of life - for children, adolescents, adults, and seniors. It is important to meet the needs of all citizens and recognize differences in income, age, ability, and location when planning and providing mobility options. Creating bicycle space on roadways, encouraging children to walk to school, and increasing transit options, are among the approaches that Forest Lake can use to promote multi-modal options.

**Strategy A:** Continue to promote safe bike travel by striping on-street bike lanes where construction of trails or sidewalks is not feasible. **Short**

**Strategy B:** Amend the Zoning Ordinance to require bike racks for any commercial site, non-commercial site in a residential area, and multi-family sites. **Short**

**Strategy C:** Encourage and support continued operation of the circulator bus service, which allows individuals without cars to access businesses and services.

**Short**

**Strategy D:** Create a Pedestrian Master Plan for the downtown district. **Medium**

**Strategy E:** Implement a "Sunday Streets" program, a street closure program from 7:00 AM to 2:00PM to allow residents to bike, rollerblade, walk, or do group exercise classes on a closed street. **Medium**

**Strategy G:** Set benchmarks for new trail and sidewalk development, repair and/or replacement as part of the Capital Improvement Plan (CIP) and annual budget. **Long**

**Strategy H:** Promote pedestrian safety by adjusting traffic signal timing to allow pedestrians sufficient time to cross the street, enforcing crosswalk laws, and educating the public about crosswalk laws. **Long**

**Strategy I:** Limit cul-de-sacs as an option in new residential areas to promote street connectivity and pedestrian accessibility. **Long**

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.3: Sustainable Energy and Environmental Practices

**Strategy J:** Designate Forest Lake as a “Safe Routes to School Community” and participate in the statewide and nationwide initiative. **Long**

Safe Routes to School is federal program designed with three key objectives: to enable and encourage children to walk and bicycle to school, to create a safe environment for walking and bicycling to school, and to facilitate the planning, development, and implementation of projects that will improve safety and reduce traffic and air pollution near schools. The desired outcomes of the Safe Routes to School Program are numerous, including more children walking and bicycling to and from schools, decreased traffic congestion, reduced childhood obesity, improved childhood health, and improved partnerships among schools, local municipalities, parents, and other community groups. The City of Forest Lake has acknowledged the importance of Safe Routes to School and currently has grant applications underway to obtain funding for implementing the program. For further information regarding Safe Routes to School programs and funding opportunities, visit: <http://www.saferoutesinfo.org/>  
<http://safety.fhwa.dot.gov/saferoutes/>



# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.3: Sustainable Energy and Environmental Practices

#### Native Landscaping

Native plants have unique traits that enable them to adapt to local environmental conditions and provide an ecologically valuable alternative for landscaping. There are many benefits that can be derived from native plantings; one of the most important benefits is low maintenance. Native plants have strong root systems and can survive winter frosts and summer heat waves. Furthermore, once established they require no watering or fertilization to thrive and are resistant to most pests and diseases. These characteristics lead to a decreased use of pesticides and other harmful pollutants that are deposited into stormwater systems and contribute to water quality degradation. Finally, native landscaping also can act as a food source and shelter for displaced wildlife. For a description of additional benefits associated with native landscaping, visit: [http://www.dcr.virginia.gov/natural\\_heritage/nativeplants.shtml](http://www.dcr.virginia.gov/natural_heritage/nativeplants.shtml), [http://www.plantnative.com/how\\_benefits.htm](http://www.plantnative.com/how_benefits.htm)

#### Section 3.3: Sustainable Energy and Environmental Practices

The environment is a focal issue within the City of Forest Lake. The city has taken many steps to ensure the longevity of wetlands, water bodies, and vegetation within its boundaries to preserve integrity and human enjoyment of natural resources. One policy firmly in place requires Forest Lake staff to continually review and enhance regulations to advance protection of natural resources, including woodland preservation, wetland and groundwater protection, and landscape requirements. The City also created special conservancy districts intended to provide regulatory protection for areas that contain valuable natural resources. Although energy is not a prominent feature in the Comprehensive Plan, it is an important issue for promoting sustainability in the City of Forest Lake. The energy saving practices presented below can be used to guide the city in promoting energy-efficient practices amongst citizens and businesses.

##### Objective 3.3.1: Promote Natural Resources and Open Space Protection.

A major amenity to citizens living in Forest Lake is the abundance of lakes, primarily Forest Lake and Clear Lake. To protect citizens' ability to use these lakes and enjoy other natural resources, it is necessary to develop an environmentally and sustainability-based city zoning code. This will ensure that the natural resources and amenities Forest Lake residents currently enjoy will be protected for years to come. Development of a

zoning code that is oriented toward environmental sustainability will allow developers to recognize prime natural resources that exist on their property and account for sensitive locations when planning new developments.

**Strategy A:** *Develop environmental protection overlay zones and sensitive natural environmental overlay zones as part of the Zoning Code supporting the Comprehensive Plan. **Short***

**Strategy B:** *Require that natural resource data are included in preliminary plats to identify any necessary setbacks or alignments with potential greenway corridors, as discussed throughout the Comprehensive Plan and within the Open Space section of the Forest Lake Parks, Trails, and Open Space Plan. **Medium***

**Strategy C:** *Incorporate use of incentive-based tools, such conservation easements, purchase of development rights, transfer of development rights, and land acquisition to conserve significant open space. **Medium***

**Strategy D:** *Require native landscaping for new development, redevelopment, or improved sites to reduce overall landscape maintenance costs. **Medium***

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.3: Sustainable Energy and Environmental Practices

#### Leadership in Energy and Environmental Design (LEED)

LEED was created by the U.S. Green Building Council to establish a common standard of measurement for green building design. One of the LEED objectives is to promote an integrated whole-building design and highlight environmentalism in the building industry. Environmental benefits of green buildings include enhancing and protecting ecosystems and biodiversity, improving air and water quality, and conserving natural resources. Economic benefits include long-term reduction of operating costs, enhanced building asset value, and improved employee productivity and satisfaction. Lastly, health and community benefits include improving air, thermal and acoustic environments, enhancing occupant comfort and health, minimizing strain on local infrastructure, and contributing to overall quality of life. <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1718>

#### Objective 3.3.2: Incorporate Sustainable Development Standards into Building and Site Design.

In addition to incorporating progressive environmental practices into the zoning code, Forest Lake should consider adopting sustainability standards that promote reuse of buildings, energy-efficient lighting, green building standards - such as Leadership in Energy and Environmental Design (LEED) - and renewable energy into new development and redevelopment sites. Promotion of these best practices in sustainability will reduce energy consumption, encourage green building within the city, and endorse renewable energy sources that minimize air pollution.

**Strategy A:** *Require the city to replace existing fixtures with LED lights when possible and require all new street lighting to be LED. **Short***

LED (Light Emitting Diode) streetlights are one of the latest technologies available to cities today. An LED street light is a cluster of individual units, which are highly resistant to heat, cold, and shock. Benefits of LED lights are numerous, including offering up to eight times more brightness than incandescent lamps while preventing harmful emissions that affect the environment. LED light sources are extremely energy efficient, generating a return of 50% to 80% savings and having a life span of up to 13 years (50,000 hours). Moreover, LED streetlights provide uniform brightness without glare or strobe effects that are seen in conventional street lighting, which reduces eyestrain

for both pedestrians and drivers. Finally, LED lights do not have a time delay to reach optimum brightness levels and there is no reduction in brightness or yellowing over the light life span. [http://home-electrical.suite101.com/article.cfm/the\\_benefits\\_of\\_led\\_lighting](http://home-electrical.suite101.com/article.cfm/the_benefits_of_led_lighting), <http://www.joliet-led-streetlight.com/>

**Strategy B:** *Require that industrial and commercial buildings are designed with future public interest in mind to ensure flexibility of use and reuse by current and future users whenever possible. **Medium***

**Strategy C:** *Develop a set of sustainable building and development guidelines to function as a menu of items from which developers of all new commercial, multi-family, and non-residential uses can select based upon the characteristics of their project (e.g. unit count or building size). **Medium***

**Strategy D:** *Develop a process to ensure that solar access is considered as a site plan review element. **Medium***

**Strategy E:** *Assess the feasibility of wind turbines on public and private sites in the City of Forest Lake. **Long***

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.4: Sustainable Land Use Practices

#### ***Section 3.4: Sustainable Land Use Practices***

Forest Lake currently has numerous progressive land use policies that encourage sustainable land use patterns. The city has created a conceptual open space corridor plan to develop green corridors that are intended to preserve and enhance open space. The areas targeted for inclusion in the green corridors are based on factors such as presence of water bodies, wetlands and natural areas. This section of the action plan will guide the development of green space and parks into the future so that all citizens of Forest Lake are provided with sufficient recreational opportunities. In addition to a green corridor plan, the City of Forest Lake requires master planning to achieve the open space preservation goals of the Comprehensive Plan and the implementation of the Parks, Trails, and Open Space Plan. The City's park dedication system is an effective strategy for developing and maintaining a parks and open space system. The City also has policies in place to regulate erosion by requiring conservation practices and best management practices to prevent excessive soil loss and protect water quality. Lastly, the City of Forest Lake will use a portion of municipal land south of the Forest Lake Airport to construct a new recreation and family community center as part of the Headwaters Project in an effort to provide city residents with active, passive, and natural recreational activities.

Forest Lake is very active in promoting social equity in its land use practices. This is seen through the \$700,000 Livable Communities grant to support the purchase of a site for the

Washington County Housing and Redevelopment Authority (HRA) building. The City also approved the creation of a new County Tax-Increment Financing (TIF) district for a Washington County HRA housing project to reduce the cost of housing. The City amended the Comprehensive Plan and zoning code to allow high-density housing in a new development area where it had not previously existed. Lastly, the City is working to incorporate more affordable housing units by 2030 than required by Metropolitan Council through policies within the Comprehensive Plan.

#### **Objective 3.4.1: Promote Efficient Use of Land.**

In order to protect the natural environment from encroaching development, it is necessary to promote efficient use of land. To achieve an efficient use of land, Forest Lake should consider providing incentives that encourage reuse of currently developed land, create standards for denser development, and ensure that redevelopment occurs in a manner that promotes a mix of land uses. These practices have the potential to reduce the number of greenfields converted for development and to better utilize existing infrastructure within the City.

***Strategy A: Collaborate with citizens to develop a vision and master plan to guide redevelopment along the Highway 61 corridor. This visioning process will provide detailed guidance for encouraging mixed land uses. Short***

***Strategy B: Include incentives for infill development and redevelopment in the Zoning Code. Examples***

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.4: Sustainable Land Use Practices

#### Infill Development

Infill development is the redevelopment of land within or adjacent to existing development, rather than construction of new buildings on undeveloped lands or greenfields. Infill development traditionally has been used in cities to revitalize vacant properties to a productive use. There are numerous advantages associated with infill development, such as concentrating growth in already developed areas, protecting natural areas including wetlands and steep slopes, revitalizing vacant lands or brownfields; and providing a variety of housing options near employment centers and public transit.

*of incentives are density bonuses and expedited plat review. **Medium***

**Strategy C:** *Streamline the city approval process for infill development as an incentive for developers to consider infill development over greenfield development. **Medium***

**Strategy D:** *Establish industrial development standards in the Zoning Code to ensure that land is used efficiently. These standards could include components such as mixed use development, narrower streets, smaller lots, and allowing higher density development. **Medium***

Proper development standards promote consistent architectural design, site design and visual appearance of constructed buildings. Standards include details such as setbacks, height restrictions, stormwater systems, signs and lighting. These standards act as a guide for developers and city staff when reviewing plans for new development and redevelopment. Often such standards do not replace building codes, but act as a supplement to existing codes.

**Strategy E:** *Encourage maintenance and rehabilitation of older neighborhoods and identify city improvement projects in the neighborhoods. Maintenance and rehabilitation efforts will help to ensure an economically viable housing stock and stable neighborhoods. **Long***

#### Objective 3.4.2: Promote Social Equity and Affordable Housing in Forest Lake.

The City of Forest Lake has invested a large amount of time in promoting affordable housing in the community. An Affordable Housing Task Force was created in 2007 to undertake an extensive housing study that reviewed demographics, current housing supply, and future housing demand. This task force then helped to develop goals and recommendations for affordable housing in Forest Lake. The development of extensive goals and recommendations builds on the commitment that the Forest Lake has shown toward fostering social equity and providing affordable housing.

**Strategy A:** *Adopt a citywide housing maintenance code and rental-licensing program to ensure regular maintenance of housing stock. **Medium***

**Strategy B:** *Create economic incentives to encourage conversion of existing commercial and public buildings to affordable housing stock. **Medium***

**Strategy C:** *Adopt regulations designed to encourage lifecycle and affordable housing through the Zoning Code. **Medium***

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.5: Sustainable Water Resources

#### Lifecycle Housing

Lifecycle housing provides for a variety of housing needs throughout an individual's lifetime. Such options include housing for singles, young couples, families, and empty nesters. Encouraging housing options that accommodate people's needs during their various life stages enables individuals to stay in a particular community for their entire life. To encourage lifecycle housing, the City of St. Cloud, Minnesota provides fee waivers, density bonuses, modified development standards, and streamlines and prioritizes processing. For more information: <http://www.ci.stcloud.mn.us/Legal/Code/2007/SECTION.380.pdf>

**Strategy D:** Adopt an ordinance that requires every new project receiving public funding to include affordable housing. **Medium**

While there are multiple definitions of affordable housing, the Metropolitan Council uses the definition from the U.S. Department of Housing and Urban Development (HUD) to set affordability standards. Affordable Housing is defined by the Metropolitan Council as housing that is affordable to residents making 80% of the median income. Each year the Metropolitan Council sets a price for what a household making 80% of the median income could afford for housing. Affordable Housing is an important issue because low-cost laborers may have difficulty finding a place to live near their job and lack of affordable housing increases demand on the transportation system since workers may have to travel farther to reach their job. Forest Lake has played an active role in developing affordable housing in the metro area. In 2006, the City of Forest Lake was one of the 10 top communities in the metro area developing new affordable renter-occupied units. Incentives for affordable housing are outlined in the following document:  
<http://www.metrocouncil.org/planning/housing/AffHousingRpt/AffHousingRpt2007.pdf>

**Strategy E:** Create an Affordable Housing Trust Fund for grants/buyouts/sales to increase funding for affordable housing options. **Long**

#### Section 3.5: Sustainable Water Resources

Forest Lake has demonstrated that it is progressive and proactive with protecting and enhancing water resources and has been a leader in addressing infiltration and inflow (I/I) issues. The City has invested more than \$650,000 since 2004 in an I/I reduction program to protect water resources, the environment, and allow for the efficient provision of sanitary sewer services. Forest Lake addresses the issue of water supply demand through its Water Conservation Program that lays out several approaches including a conservation water rate structure to reduce water demand, increase water use efficiency, and reduce water waste and loss in the system. The City's odd-even lawn watering schedule is a key strategy for reducing water use demand from May 15th through September 15th every year, and maintaining this program is a top priority for the Public Works Department.

The City also uses a number of sustainable strategies to manage stormwater runoff and protect surface water in the community. The City maintains a stormwater pollution prevention plan (SWPPP) that incorporates numerous BMPs for stormwater management. More recently, Forest Lake implemented a stormwater utility fee and a pervious paver ordinance in an effort to reduce stormwater runoff and improve surface water quality in community lakes and streams. A unique example of the City's efforts to improve surface water quality is the rain garden program implemented at the end of four public streets adjacent to Forest Lake. These rain gardens use native plant species, sand and permeable soils to collect stormwater runoff and allow infiltration before it reaches City lakes.

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.5: Sustainable Water Resources

#### Objective 3.5.1: Reduce Water Supply and Wastewater Demand.

Sustainable use of water resources is an important consideration for the City in its role as public water supplier for Forest Lake. The average daily demand of water that the City pumps from their treatment and water supply system has increased from an average of about 750,000 gallons per day in 1995 to nearly 1 million gallons per day in 2004. With the population growth anticipated in Forest Lake, the increasing trends in water usage and wastewater flows are expected to continue into the future. The water supply and wastewater systems put pressure on valuable groundwater resources and downstream water bodies that may be impacted by the treated wastewater. These water systems also represent major infrastructure investments that are required to build and maintain water supply and wastewater pipes, lift stations, and other facilities. To protect these water resources and to manage these systems in a sustainable manner, the following strategies are suggested as means to reduce water supply demand and wastewater volume.

**Strategy A:** Continue to target future development/redevelopment in areas served by water and sewer to limit the amount of new infrastructure that is required. **Short**

**Strategy B:** Provide members of the community with information about retrofitting plumbing fixtures (toilets, showerheads, watering systems, etc.) to reduce water usage. **Short**

**Strategy C:** Amend the landscape section of the Zoning Code to require more efficient lawn irrigation systems and use of native vegetation to reduce demands on the water supply system. **Medium**

Lawn irrigation can account for as much as 50 percent of commercial and residential water use. Various technologies can be used to reduce the amounts of water that are required to irrigate lawns and gardens. The installation of weather-based irrigation controllers on large irrigation systems help control watering schedules and modify irrigation based on current weather conditions. These types of 'smart' controls for irrigation systems have been shown to reduce lawn watering by nearly 20 percent. Rotating spray nozzles are another emerging technology that results in reduction of water use by more than 20 percent. Native vegetation is a sustainable alternative to turf grass, which requires significantly more water and more maintenance.

**Strategy D:** Work with the watershed districts to establish a rain barrel rebate program to offset a portion of lawn watering consumption. **Medium**

**Strategy E:** Implement a 'water user fee' for water utility customers that can be removed by installing low-flow fixtures and conducting a home water assessment. **Medium**

The proceeds from this fee could be applied toward funding a rebate program to help residents and businesses retrofit

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.5: Sustainable Water Resources

#### Rain Barrels

The costs of the program could be offset by the reduced costs of building additional water supply capacity as Forest Lake grows. A program of this nature also would improve surface water and groundwater quality by limiting runoff.

Medium

Example Program: The City of River Falls, Wisconsin implements a rain barrel rebate program in partnership with the local water utility where residents can obtain a \$30 rebate to install a rain barrel on their property. A rain barrel is a container that collects and stores rainwater and acts as non-potable water source for watering lawns, gardens, or washing vehicles. Storing and using rainwater reduces water consumption for these activities, which accounts for up to 40 percent of residential water use in the summer months. Rain barrels generally connect directly into a downspout that drains from a rooftop. By collecting and storing rainwater, the amount of stormwater that runs off the property is greatly reduced, which improves groundwater and surface water quality. For more information you can visit, <http://www.rfcity.org/eng/Stormwater/RainBarrelProgram/RainBarrelProgram.htm>

plumbing fixtures (toilets, showerheads, watering systems, etc.). This program would provide added cost savings by reducing the costs necessary to add additional water supply capacity as Forest Lake grows. Long

Example Program: Santa Monica, California uses a water conservation tool called the "Bay Saver Fee". This water conservation incentive fee is assessed to residential water customers for properties that have not been retrofitted with water conserving fixtures, such as low-flow toilets and water saving showerheads and faucets. Generally fixtures manufactured after 1992 are efficient enough to comply with the Santa Monica ordinance. Installing these fixtures reduces water use by thousands of gallons per year and saves hundreds of dollars per year in water bills. The fee is applied as an incentive to encourage residents to upgrade older plumbing fixtures, and the proceeds from the fee supports rebate programs for residents who upgrade their plumbing fixtures. Learn more about this tool at: [http://www01.smgov.net/epd/residents/Water/bay\\_saver\\_fee.htm](http://www01.smgov.net/epd/residents/Water/bay_saver_fee.htm).

#### Objective 3.5.2: Improve Surface Water Quality.

The built environment has a major impact on surface water quality as stormwater runoff from rooftops, roads, and other impervious surfaces transport pollutants into lakes and streams. These pollutants include fluid leaking from vehicles, toxic chemicals from commercial facilities, yard waste from leaves and pets, and heat, which can affect temperature-sensitive water ecosystems. All of these pollutants degrade the quality of water ecosystems and impair the ability to use these surface waters for

recreation and other valuable uses. Natural drainage systems improve the quality of stormwater, infiltrate stormwater into the ground, recharge groundwater aquifers, and avoid directing more pollutants into nearby lakes and streams. Furthermore, the stormwater system represents a major infrastructure investment that the city must build and maintain. To maintain the quality of life in Forest Lake, strategies should be implemented to protect and improve surface water quality in an environmentally, economically, and socially sound manner.

**Strategy A:** *Partner with the watershed districts to implement more ambitious low-impact development strategies into the stormwater code and the City's proposed design guidelines for new development.*

**Short**

**Strategy B:** *Collaborate with the watershed districts to develop and/or update shoreland and wetland protection to include minimum protective buffers around wetlands and water bodies using native vegetation. The Zoning Code should be amended to include these minimum protective buffers. **Medium***

**Strategy C:** *Develop a rain garden assistance program to help residents and businesses manage stormwater on site. The watershed districts may be able to provide technical assistance to develop rain gardens and help obtain grant funding to support projects. Amend the stormwater utility fee to allow landowners to get credit toward their fee if they*

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.6: Public Outreach and Stakeholder Engagement

#### Storm Water Utility Fee

The City of Minneapolis has a stormwater utility fee, similar to the stormwater fee that was recently adopted by Forest Lake. In conjunction with the utility fee, Minneapolis allows residents to reduce their stormwater fee by obtaining 'credits' for improving the quality of stormwater leaving their property, or by reducing the quantity of stormwater that leaves their property. Stormwater quality is improved using various Best Management Practices (BMPs) such as installing a rain garden, using pervious pavers, or installing a green roof. The quantity of stormwater can be decreased by installing BMPs that retain and infiltrate stormwater on the property. Minneapolis provides a 100 percent credit for a resident's stormwater fee if they install BMPs that are able to retain a hypothetical 100 year, 24-hour type II soil conservation service (SCS) storm event to pre-developed conditions. You can learn more about this program at: [http://www.ci.minneapolis.mn.us/stormwater/fee/Stormwater\\_Mngmnt\\_FeeCredits.asp](http://www.ci.minneapolis.mn.us/stormwater/fee/Stormwater_Mngmnt_FeeCredits.asp)

manage their stormwater on site. **Long**

**Strategy D:** Amend the Zoning Code to encourage a green roofs program for future municipal buildings and provide incentives for incorporating green roofs in new development to decrease stormwater runoff and reduce potential water quality impacts. **Long**

#### Section 3.6: Public Outreach and Stakeholder Engagement

Forest Lake regularly publishes a newsletter that is provided to citizens to keep them informed and involved about what is happening in Forest Lake. The Parks Department prepares articles for the city newsletter that inform residents about the value of open space and existing parks programming, and the City's website highlights Forest Lake's efforts toward "Going Green." The City's ongoing communication tools should be augmented and enhanced to communicate its ongoing sustainability efforts.

#### Objective 3.6.1: Inform and Engage the Community about Forest Lake's Sustainability Plan.

Through creation of the Sustainability Action Plan, Forest Lake is taking important steps to conduct its internal operations in a more sustainable way and improve the long-term sustainability of the broader community. However, changing City operations and modifying policies and ordinances is just one of the first steps

necessary for becoming sustainable. The process of becoming more environmentally, economically, and socially sustainable requires long-term effort involvement of the entire community. The actions in this section of the plan are intended to act as a catalyst for efforts of residents, businesses, schools, non-profits, and other community stakeholders to become more sustainable. The strategies below are necessary to educate the community about the plan, promote the actions the City is taking toward sustainability, and engage the entire community in the process.

**Strategy A:** Establish a Sustainability Committee composed of residents, board/commission members and City staff responsible for the implementation of the Sustainability Plan. This Committee should seek to establish a set of measurable indicators and targets to track achievement of the sustainability goals laid out in this plan. **Short**

In the City of Forest Lake 2030 Comprehensive Plan, this strategy was included as a Priority Implementation Item in order to continue to transform Forest Lake into a sustainable community. In other cities that have pursued sustainability plans, there is often a sustainability coordinator identified within city staff or a committee is formed to serve as a 'champion' for the sustainability plan and guide the implementation of strategies and actions going forward. A robust Sustainability Committee should include a cross-section of stakeholders within the community, as well as staff from across departments throughout the City to promote consistent coordination and implementation of the plan. Stakeholders crucial to the successful implementation of the



# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.6: Public Outreach and Stakeholder Engagement

plan (and therefore should be involved in the committee) include businesses, neighborhood groups, the school district, institutional organizations, non-profit groups, governmental bodies, watershed districts, and other potential partner organizations. A diverse and multi-disciplinary Sustainability Committee will create support from a wider segment of the community and improve the likelihood for successful implementation of the plan.

A critical first step for the Sustainability Committee will be to establish a set of measurable indicators that the City can use to track the progress and results toward the sustainability goals included in this plan. In order to measure the progress around these indicators, it will be necessary to establish benchmark levels for various indicators and ultimately set targets that the community wants to achieve as they pursue sustainability. A robust set of indicators, benchmarks, and targets will allow the City to report regularly on their progress including successful achievements from the sustainability plan as well as focus on areas where additional efforts are needed in order to achieve Forest Lake's stated goals.

**Strategy B:** *Establish a position or group inside city government that is responsible for implementing, monitoring, and coordinating the Sustainability Action Plan.* **Short**

**Strategy C:** *Include regular "sustainability updates" in the City's newsletter to highlight what the city is doing; what businesses and residents are doing; and provide tips for what residents can do to promote sustainability.* **Short**

**Strategy D:** *Develop a green awards program for businesses, residents, and City staff to recognize organizations that are incorporating sustainability into their daily efforts.* **Medium**

**Strategy E:** *Update the City's website to include detailed goals, objectives, and strategies from the Sustainability Plan and highlight the ongoing implementation efforts.* **Medium**

#### **Objective 3.6.2: Promote Collaboration on Sustainability.**

Initiatives through Citizen Volunteer-Based Programs. It is important that Forest Lake find ways to effectively and efficiently implement the strategies included in this Sustainability Plan. The City is faced with limited staff and financial resources to carry out its goals. A critical component of the success of this plan will be for the city to engage citizens in volunteer-based programs. This approach will engage more community members in addressing sustainability and create more citizen 'buy-in' for the Sustainability Plan. These volunteers also can provide valuable energy and time to implement the sustainability initiatives outlined in the plan.

**Strategy A:** *Facilitate formation of citizen volunteer committees to promote sustainability in the community and participate in public education and outreach activities.* **Medium**

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.6: Public Outreach and Stakeholder Engagement

#### Green Awards Program

A green awards program is a simple, cost effective approach to promoting sustainability within City operations and the broader community. Awards are available for City staff that play key roles in implementing sustainable practices within their jobs and their departments. Businesses may receive awards for innovative approaches within their operations that contribute to the sustainability goals of the City. Finally, individual citizens or organizations may be rewarded for leadership and commitment to sustainability within Forest Lake. These awards serve as a simple recognition tool to demonstrate that Forest Lake values sustainability as a goal, and that the City values the actions of these groups and individuals toward successful implementation of this plan.

#### **Strategy B:**

*Partner with Forest Lake area schools to develop student volunteer and/or academic project opportunities focused on sustainability initiatives.*

**Medium**

**Strategy C:** *Network with schools, businesses, and the community by having staff or Sustainability Committee members visit these organizations and by holding bi-annual sustainability events to increase awareness and build a broader network of support around Forest Lake's sustainability initiatives.*

**Medium**

#### **Objective 3.6.3: Educate Forest Lake Citizens about Sustainable Practices.**

Building awareness about sustainability is a major obstacle for any city that wants to create a more sustainable community. The first step in raising awareness about the concept of sustainability is to educate residents, businesses and organizations. This objective can take many forms but must focus on connecting community members with information and resources so that they will better understand sustainability. Raising awareness will provide individuals with the knowledge and tools necessary to integrate sustainable practices into their everyday lives.

**Strategy A:** *Provide residents with access to simple, science-based information for weighing the impact of consumer choices and prioritizing actions regarding*

*transportation, food, and home energy use.* **Medium**

**Strategy B:** *Build a Forest Lake Sustainability one-stop website that can be used as a central repository for sustainability information intended for the community. The "Going Green" page on the Forest Lake webpage is a great place to include educational materials, tips for residents and businesses to incorporate sustainability into their activities, and links to other partners and organizations involved in sustainability programs.* **Medium**

**Strategy C:** *Produce a sustainability calendar for Forest Lake residents and businesses highlighting monthly focus areas for sustainability and providing tips for attaining the City's sustainability goals.* **Long**

#### **Objective 3.6.4: Create a Unique Identity for the Forest Lake Sustainability Program.**

Along with raising awareness, creating a unique identity for the Forest Lake Sustainability Program can act as a 'branding effort' to engage the community and build support for the strategies in this plan. A unique identity for the program will help residents recognize the efforts that the City is undertaking and will help advertise the wide array of activities encompassed under the 'sustainability' umbrella.

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.6: Public Outreach and Stakeholder Engagement

**Strategy A:** Collaborate with a local artist or organize a youth art contest to design a Forest Lake sustainability logo that can be used in all communications and advertising. **Medium**

**Strategy B:** Create a slogan for the Forest Lake sustainability program that emphasizes the balance of environment, equity and economy. **Medium**

**Strategy C:** Host regional and/or countywide sustainability events to emphasize Forest Lake's sustainability initiatives and to develop a strong and collaborative base of community-driven efforts. **Long**

**Strategy D:** Host a single-day event designed for and by youth and young adults to communicate sustainability concepts and interactively engage attendees. **Long**

#### **Objective 3.6.5: Educate Residents about Renewable Energy Opportunities within Forest Lake.**

In addition to the strategies included in Section 3.3 of this plan pertaining to sustainable energy, the City is in a unique position to promote these types of programs and provide information to residents and businesses to improve the sustainability of their energy use and decrease their carbon footprints.

**Strategy A:** Promote the use of the Minnesota

*Energy Challenge website to engage citizens, businesses and institutions. **Short***

The Minnesota Energy Challenge is a simple, web-based tool created by the Center for Energy and the Environment (CEE) to help individuals calculate their own 'carbon footprints'. The tool allows individuals, families, and groups to better understand the environmental impacts of their lifestyle choices and educate people to reduce these impacts and save money and energy in their homes and businesses. The website asks users to provide basic information about their households and provides simple suggested changes to reduce their environmental impacts and save money. The tool also allows people to form "Teams" that track the energy and cost savings for any group (a religious congregation, neighborhood group, or a city). As of March 25, 2009, the Minnesota Energy Challenge website showed participation from 487 Minnesota cities, including Forest Lake "#44 Forest Lake - 82 members are saving \$140,487 and 613,987 lbs. of CO<sub>2</sub> (7,487 lbs. per member)". The City can promote further participation in this Challenge to engage more community awareness and involvement in sustainability. For more information or to participate in the Challenge visit: <http://www.mnenergychallenge.org/>.

**Strategy B:** Include links and information on the City's website to connect residents, businesses, neighborhood groups, cultural centers, churches, and non-profit organizations with grant funding opportunities for climate change and sustainable energy programs. **Medium**

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.6: Public Outreach and Stakeholder Engagement

#### Green Space 08

The City of Baltimore held a single-day event called "Greenscape '08" to engage youth in activities and discussions about their environment, schools, neighborhoods, and their future. The event was organized and run by volunteer youth from the City of Baltimore and staff from the Office of Sustainability, and incorporated art, music, education and games surrounding the topic of sustainability. The event was attended by more than 150 youth ranging in age from 3 to 24 years and involved volunteers from a broad cross-section of the community. More information about Greenscape '08 is available at: <http://www.ci.baltimore.md.us/government/planning/sustainability/youthoutreach.php>

**Strategy C:** Include links and information on the City's website to connect community stakeholders with information from local power companies and state agencies about possible energy retrofits for large commercial and retail buildings, and other ways to improve the energy efficiency of existing homes and buildings. **Medium**

#### Objective 3.6.6: Encourage Employers to Promote Sustainable Transportation Options for Employees.

Businesses have the opportunity to make a difference by acting as leaders in Forest Lake's efforts to become a sustainable city. The mode of transportation used by employees and the distance they must travel to reach their job has a significant impact on the environment and their quality of life. More vehicles on the road contribute to congestion, air pollution, and water pollution from stormwater runoff moving across paved surfaces. Furthermore, the time spent commuting to and from work decreases productivity and takes away from time spent with family, friends, and civic organizations. Businesses have an opportunity to take initiative and promote sustainable practices that can change employee travel behavior and decrease negative impacts associated with commuting via automobile. The benefits from a sustainable work environment include fewer absences, higher quality of life, and promotion of exercise.

**Strategy A:** Create a regional map of existing and proposed trails to increase awareness and use of

the existing trail network. Develop an outreach and education program in the community to increase awareness and use of these trail systems. **Short**

**Strategy B:** Develop and promote a local walk or bike to work program. Ideas to generate support may include a Bike to Work Day, encouraging employers to allow bicycles in the workplace by providing space for bicycle storage and shower facilities, and creating a "Commuter Challenge" to have companies compete for the highest percentage of staff who bicycle to work. **Medium**

**Strategy C:** Educate employers to consider using staggered-start work times and telecommuting options to decrease traffic congestion. **Medium**

#### Objective 3.6.7: Encourage Support of Locally Produced Products and Locally Owned Businesses.

There are significant environmental, economic, and social benefits derived from buying food products within a community and by supporting locally owned businesses. This creates positive economic activity with multiplier effects that support jobs and prosperity within the community. Locally produced food has important environmental benefits by reducing the impacts of growing and transporting food from distant places around the globe. Forest Lake is in a unique position to promote local purchasing programs and provide information to residents and

# Forest Lake Sustainability Action Plan



## Chapter 3: External Sustainability

### Section 3.6: Public Outreach and Stakeholder Engagement

#### Buying Local

Local purchasing of food, products, and services positively influences communities and overall increases total sustainability. Dane County, Wisconsin created a 'buy local' initiative, which is an online marketplace that connects consumers with local suppliers and businesses. The website provides readers with information about the value of local purchasing which supports the local economy and a member directory with local businesses and the services they provide. The website can be used by local suppliers to promote their products and highlight the benefits of selling products near their source. The website can be accessed through the following link: <http://www.danebuylocal.com/home>.

businesses that can raise awareness about locally produced products and locally owned businesses.

**Strategy A:** *Provide information to residents about community supported agriculture (CSA) opportunities by creating a link on the city website to CSA programs available throughout the state. **Short***

**Strategy B:** *Create a Forest Lake Green Map to highlight local resources that encourage sustainability such as bicycle trails, bus stops, hazardous waste disposal sites, and locally-owned businesses. **Medium***

**Strategy C:** *Develop a Forest Lake "buy local" website to connect consumers with local suppliers and businesses. **Medium***

**Strategy D:** *Initiate an independent farmer's market in Forest Lake or collaborate with surrounding communities to create a joint farmers market. **Long***

Promoting consumption of local foods can contribute to sustainability by reducing the amount of outside produce shipments into a community, as well as promoting local agriculture markets. Local foods can be promoted through encouraging resident gardens, educating citizens about community supported agriculture (CSA) programs, and having local farmer's markets. A local example is Homegrown

Minneapolis. Homegrown Minneapolis is an initiative that brings together diverse stakeholders to make recommendations to the city on how to support local foods. This initiative has focused on local food promotion in the following four areas: farmers markets; community, school and backyard gardens; small enterprise urban agriculture; and commercial use of local grown foods. For more information, visit: <http://www.ci.minneapolis.mn.us/dhfs/homegrown-home.asp>.



# Community Education

## Forest Lake Sustainability Action Plan





## Chapter 4: Community Education

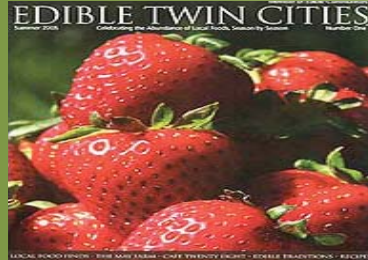
### Section 4.1: Overview

#### ***Section 4.1: Overview***

Sustainability is an important concept that encourages citizens to seek a better understanding of our environment and the impact that our day-to-day activities have on the health of our economy, environment and community. City residents often divide their time between home, work, and activities out in the community; therefore, incorporating sustainable practices into each of these areas is integral to creating a sustainable community. Individuals can adopt simple practices that collectively make a significant contribution toward overall community sustainability. Sustainability comes with many benefits for residents such as cost savings, a healthier environment and more efficient use of limited community resources. In order to assist residents with incorporating sustainable practices into their daily lives, this section of the Forest Lake Sustainability Plan provides tips for sustainability that are organized into six major categories directly impacting our community: sustainable purchasing; healthy ecosystems; sustainable transportation; sustainable energy; waste reduction and consumption; and green building.

[Note: "H" = At home; "W" = At work; and "C" = Out in the Community. The letters have been used to indicate the situation(s) to which these sustainability tips apply]

# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education

### Section 4.2: Sustainable Purchasing

#### Environmentally Friendly Paint

Some paint products emit Volatile Organic Compounds or VOCs that can negatively affect indoor and outdoor air quality and create health risks. Several manufacturers have developed paint with reduced VOCs, which is usually advertised on the paint label. Paints with less than 50 grams per liter are generally accepted as a low-VOC paints, but the lower the number the better. Keep in mind that adding colorant to a paint base contributes additional VOCs that are not factored into the amount listed on the paint label. For additional information about VOC standards, see [www.greenseal.org](http://www.greenseal.org) or [www.green-guard.org](http://www.green-guard.org).

#### Section 4.2: Sustainable Purchasing

##### **Buy locally-produced food. (H)**

Produce sold at grocery stores is often transported long distances, which is associated with the burning of fossil fuel and the production of carbon emissions. Purchasing food from farmers markets and local growers provides community members with the freshest food possible, saves energy, reduces waste generated from packing materials, and helps keep local farmers and artisan producers in business.

Forest Lake holds a Farmers' Market from June through September on Tuesday evenings from 5PM-8PM as part of the City's Arts in the Park program. In addition, Twin Cities' residents have the option to become a member of a Minnesota or Western Wisconsin based Community Supported Agriculture (CSA) farm. CSA members typically pay in advance to receive a weekly share of produce grown at their CSA farm throughout the season. The arrangement provides members with fresh, locally grown produce and provides a source of consistent revenue for farmers. More information about CSA can be found through the Minnesota Department of Agriculture website at: <http://www.mda.state.mn.us/protecting/sustainable/mfo/csa.htm>

Learn more about eating locally by subscribing to Edible Twin Cities magazine. Anyone can subscribe to this free resource by visiting the organization's website at: <http://www.EdibleTwinCities.com>

##### **Use environmentally-friendly (a.k.a. "green") alternatives to daily use products. (H/W/C)**

Look for products with the Green Seal label to identify sustainable products such as cleaning solutions, paper goods, and home improvement materials. Green Seal works with manufacturers, governments, and purchasers to develop green production and purchasing processes.

##### **Purchase environmentally-friendly paint for home improvement products. (H)**

##### **Choose cleaning products that are non-toxic, biodegradable, phosphate-free, and chlorine-free. (H/W)**

Many cleaning products contain hazardous chemicals that pollute indoor air quality and have negative effects on health. Household cleaning products that contain organic chemicals include aerosol sprays, waxes, cleansers, disinfectants and air fresheners. A study conducted by the U.S. Environmental Protection Agency (EPA) showed that levels of organic pollutants were 2 to 5 times higher inside of homes than outside of homes. For more information and tips about improving indoor air quality, see <http://www.epa.gov/iaq/voc.html>

Below are some examples of safe substitutions for chemical cleaning products:

Use a dishcloth with dish soap and baking soda to remove spots and light scratches from countertops, cupboards and walls.



# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education Section 4.2: Sustainable Purchasing

### Recycled Products

Items made from paper and plastic are often prepared from recycled materials. In addition, household furnishings, gardening tools, automotive parts, motor oil and tires made from recycled products are available for purchase.

Simmer spices such as cinnamon or cloves on the stove, or use essential oils in lieu of chemically-based air fresheners.  
 Mix 2 tablespoons of borax or washing soda with three cups of water and use the solution to clean glass.  
 Scatter dry cornstarch or baking soda over carpet before vacuuming instead of using carpet freshener.  
 Remove rug stains using borax or blot the stain with a mixture of vinegar and soapy water.  
 Eliminate mildew build-up by making a vinegar and salt paste and applying it the build-up.  
 Apply a mixture of ½ cup lemon juice to 1 cup of vegetable oil, olive oil, or mayonnaise to furniture using a rag instead of using furniture polish.

***Buy recycled products. (H / W / C)***

***Buy used products from your local thrift store. (H)***

Thrift stores often sell authentic vintage clothing, accessories and furniture at economical prices, while simultaneously encouraging reuse of materials that otherwise would be deposited into landfills.

# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education

### Section 4.3 Waste Reduction and Consumption

#### Compost Bins

Compost bins provide a means for converting organic waste (i.e., food scraps, grass clippings, or leaves) into a usable resource to reduce the amount of organic waste sent to landfills. Lowe's provides a do-it-yourself guide to building a compost bin to handle yard waste. <http://www.lowes.com/lowes/lkn?action=howTo&p=LawnGarden/compostBin.html>. The City of Forest Lake runs the Bixby Park Compost site from April through November, which accepts yard waste from residents. Information about the Bixby Park Compost can be found at [http://www.ci.forest-lake.mn.us/index.asp?Type=B\\_BASIC&SEC={BD81AF87-60A4-4BCA-83EF-94892C36F94F}&DE={D61C95CC-07B4-4692-8CB1-2E33CD2D8EFE}](http://www.ci.forest-lake.mn.us/index.asp?Type=B_BASIC&SEC={BD81AF87-60A4-4BCA-83EF-94892C36F94F}&DE={D61C95CC-07B4-4692-8CB1-2E33CD2D8EFE})

#### **Section 4.3 Waste Reduction and Consumption**

***Shop at grocery stores where you can buy in bulk. (H / C)***

Purchasing in bulk reduces the amount of packaging products sent to landfills. Natural foods grocers and cooperatives typically have a bulk purchasing section and mainstream grocery stores are beginning to offer bulk purchasing as well.

***Bring reusable bags on your shopping trips to eliminate the use of plastic bags. (C)***

***Build a compost bin for treating organic waste. (H / W / C)***

***Recycle old laptops. (H / W)***

Order a free kit from Recycling Association of Minnesota (RAM) to recycle your laptop using RAM's postage paid program. Individuals can obtain a kit that includes instructions on how to package your laptop by reusing a box from home and placing a postage-paid label for mailing to a legitimate recycler. See the RAM website for additional information: <http://www.recycleminnesota.org/>

***Recycle unused cell phones. (H / W)***

Instead of disposing your unused cell phone, recycle your phone

by selling it to Greenphone ([www.greenphone.com](http://www.greenphone.com)). Individuals can receive money for the phone and it will be refurbished and resold.

***Use natural fiber sponges instead of those made from synthetic fibers. (H)***

***Avoid purchasing and utilizing single-use items. (H / W)***

Avoid single-use items such as plastic utensils, paper plates and paper towels, which consume natural resources, are shipped, purchased, used once and deposited into a landfill. Make simple changes such as using a dishcloth instead of paper towels for cleaning and carry reusable utensils rather than disposables when you pack your lunch.

***Invest in quality items that are designed to last longer. (H / W / C)***

Choose durable products including furniture, sports equipment, tools, and toys that will last for a long time. Investing in durable products will not only save money in the long-term, but also will result in sending less waste to landfills.

***Reduce paper usage. (H / W / C)***

Begin using rags for cleaning instead of paper towels and cloth napkins instead of paper napkins. Reuse paper scraps for recording notes and messages, rather than immediately throwing

# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education

### Section 4.3 Waste Reduction and Consumption

#### Dividing Waste

Designating specific locations for different types of waste makes it easier to dispose of waste properly. Sort your recyclable waste based on your provider's requirements to ensure they are accepted. Visit the Washington County Household Hazardous Waste Facility and Reuse Room to dispose of hazardous waste such as gasoline, transmission oil, and paint thinner. The Washington County hazardous waste facility is open-year round and does not charge a fee to residents for disposal. For more information, visit: [http://www.co.washington.mn.us/info\\_for\\_residents/environment/hazardous\\_waste\\_at\\_home/household\\_hazardous\\_waste\\_facility/](http://www.co.washington.mn.us/info_for_residents/environment/hazardous_waste_at_home/household_hazardous_waste_facility/)

it away.

**Set copiers and printers to duplex (double-sided) copying and printing. (H / W)**

**Divide waste into recyclables (e.g., glass, paper, and Polyethylene terephthalate (PET) plastics), organic materials for compost, hazardous waste, and waste that requires disposal in a landfill. (H / W / C)**

**Recycle used batteries and use batteries with reduced mercury to ensure toxic substances are not released into landfills. (H / W / C)**

**Stock the office with reusable plates and utensils rather than disposables. (W)**

**Reuse newspaper, boxes, shipping "peanuts," and "bubble wrap" to ship packages. (H / W)**

**Combine bags when you are shopping rather than getting a new shopping bag for every item purchased from a different store. (C)**

**Think about the three R's- Reduce Reuse and Recycle. (H / W / C)**

Almost all products on the market require energy for production, distribution and disposal. Call the Recycling Hotline at Earth911,

enter your zip code and the hotline will identify recycling centers "for all types of recyclables" in your community. <http://earth911.com/>

**Bring your own reusable coffee cup for your daily coffee or latte. (W / C)**

**When ordering takeout, ask the restaurant staff not to include plastic silverware, napkins and packets of condiments. (C)**

**Bring reusable bags when shopping. (C)**

If you do not have a reusable bag with you, when asked whether you want paper or plastic bags, select the type you are more likely to reuse for other purposes, such as trash can liners, newspaper recycling or future shopping.

# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education

### Section 4.4: Sustainable Transportation

#### Cost to Commute Calculator

Use the Cost to Commute Calculator available through the Michigan Department of Transportation website to determine the costs associated with your commute (<http://mdotwas1.mdot.state.mi.us/public/rideshare/drivingcost.cfm>). In addition to being more economically sustainable, carpooling is more environmentally friendly than driving alone and can reduce local and regional traffic congestion.

#### **Section 4.4: Sustainable Transportation**

**Explore the option of carpooling from home to work. (H / W / C)**

**Exercise alternative transportation options by using public transit, bicycling or walking to your destination instead of using car. (H / W / C)**

Using alternative modes of transportation can save you time spent in traffic, fuel and money. By reducing weekly automobile travel by just 20 miles, you can decrease your individual CO2 emissions by 1,000 pounds per year.

**Explore work-from-home options (i.e., telecommute or telework) to reduce weekly commuting mileage. (H / W)**

**Combine errands to make vehicle trips more efficient. (H / W / C)**

Your car engine burns fuel more efficiently once it heats up. By combining errands, you can reduce the number of miles you travel, save on gasoline, and reduce negative impacts on the environment.

**Bring your vehicle in for regular pollution checks and tune-ups. (H / W)**

**Avoid allowing your vehicle to idle for more than 3 minutes. (H / C)**

Exhaust from an idling gas or diesel powered vehicle generates a higher load of pollutants than a moving car. You can help to reduce air pollution and improve air quality in the community by turning off your car when you are not moving. Turning off your engine also will save you money in the form of gas, as idling your vehicle uses more fuel than restarting it. Reduce the amount you allow your vehicle to idle by turning off your car while waiting to pick someone or while stopped at long traffic signals. In addition, scrape ice and snow off of your vehicle windows rather than allowing your engine idle to melt the snow and ice.

**When boating, limit engine operation at full throttle and eliminate unnecessary idling. (C)**

**Avoid topping off your gas tank when fueling your vehicle. (C)**

Topping off your gas tank has negative consequences for the environment and actually can cost you money, as it allows harmful gasoline vapors to escape into the air and generate pollution. For more information, visit the EPA website at: <http://www.epa.gov/donttopoff/>

# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education

### Section 4.4: Sustainable Transportation

#### Monitor Tire Pressure

Tires that are not inflated to the pounds per square inch (PSI) recommended by manufacturers require more energy to begin moving and to maintain speed. Under-inflated tires also increase fuel costs and emissions and lead to a decrease in miles per gallon (mpg), which contributes to increased air pollution and energy usage.

#### Fuel Efficiency

When choosing to buy a new car, compare different fuel consumption rates to help you decide on the type of car to purchase. Driving a fuel-efficient car can double the mileage of your vehicle, reduce greenhouse gas emissions, and make you eligible for federal tax credit. For additional information, visit: [http://www.fueleconomy.gov/feg/tax\\_afv.shtml](http://www.fueleconomy.gov/feg/tax_afv.shtml)

***Check your vehicle's tire pressure monthly.***

***(H / W)***

***Drive the most fuel-efficient car possible.***

***(H / W / C)***

***Reduce freeway speeds by 5, 10, or 15 mph to reduce your own carbon emissions, save money, conserve fuel, and increase road safety. (H / W)***

Driving at fast speeds, accelerating rapidly, and braking quickly consumes unnecessary amounts of fuel and can lower your gas mileage significantly. In addition, driving less-aggressively is safer for you and other vehicles on the road. As a general rule of thumb, gas mileage efficiency decreases at speeds above 60 miles per hour. For additional information, visit <http://www.fueleconomy.gov/feg/driveHabits.shtml>

# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education

### Section 4.5: Sustainable Energy

#### Programmable Thermostat

It is not necessary to heat your home to a comfortable temperature levels during times when it is vacant. Using a programmable thermostat makes it easy to save energy and money by allowing you to automate the times in which the heating and air conditioning system adjusts.

#### Energy Star

Energy Star appliances use 10 to 50 percent less energy and water than standard appliances. The efficiency associated with Energy Star appliances will conserve energy and save money in utility bills. For additional information, visit: [http://www.energystar.gov/index.cfm?c=appliances.pr\\_appliances](http://www.energystar.gov/index.cfm?c=appliances.pr_appliances)

#### Section 4.5: Sustainable Energy

***Put on a sweater before turning up the heat.***  
(H / W / C)

***Do not leave your heater on if you do not need it.***  
(H / W)

***Install a programmable thermostat in your home and program it to automatically reduce the temperature when you are sleeping and at work, and to set the temperature to 78°F on hot days and 68°F on cold days.*** (H / W)

***Avoid using major appliances until after 7PM.***  
(H / W)

By delaying use of large appliances and air conditioning until after 7PM, you can keep your energy costs down during summer months.

***Choose energy-efficient lighting.*** (H / W)

Compact Fluorescent Lights (CFLs) use 2/3rds less energy than standard incandescent bulbs and save money in annual energy costs.

***Retire and recycle old appliances and replace them with energy-efficient Energy Star® models.***  
(H / W)

***Clean the lint filter in your dryer after each use to allow efficient air circulation.*** (H)

***Vacuum refrigerator coils two times each year.***  
(H / W)

***Unplug major appliances when you go on vacation or travel for work.*** (H / W)

***Improve the energy efficiency of your home or office by conducting a home energy audit to determine the amount of energy used currently and to identify opportunities to reduce energy usage.*** (H / W)

Energy Star has a free Portfolio Manager Tool that is accessible on the internet and can be used to measure and improve energy performance in existing structures. [http://www.energystar.gov/index.cfm?c=evaluate\\_performance.bus\\_portfoliomanager](http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager)

***Insulate windows, doors, attics, and crawlspaces to prevent drafts.***  
(H / W)

# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education

### Section 4.5: Sustainable Energy

#### Insulation

Insulating areas adjacent to windows, doors and attics can help make your home more energy-efficient, reduce energy consumption, and save money in utility bills. When it comes time to replace a window, consider installing energy-efficient windows to save money over the long-term, and potentially receive a federal tax credit. For additional details, visit: <http://www.earthshare.org/>

#### Natural Cooling

Use a combination of open windows, shading with blinds or plants, and fans to cool your home during summer months and avoid turning on the air conditioner unless absolutely necessary.

***When replacing appliances, check for an energy efficiency label. (H / W)***

Look for appliances with a high Energy Efficiency Rating (ERR) and keep in mind that the higher the ERR, the less the appliance will cost to operate.

***Wrap your water heater in an insulated jacket. (H / W)***

***Turn off unneeded lights and appliances. (H / W)***

Energy used for lighting accounts for a significant portion of building energy usage, so remember to turn off unnecessary lights to reduce your energy consumption and save money.

***Use cold water instead of hot water to wash clothes. (H)***

Use for coldwater detergents for everyday laundry and reserve hot water for washing garments with tough stains or grease spots.

***Install a whole-house ventilating system. (H)***

Whole-house ventilating systems can cool an entire house for approximately the same price as air conditioning a single room.

***Buy power generated from renewable sources by***

***consulting with your electricity provider. (H / W)***

For information about choosing an electricity supplier offering renewable energy, visit [www.moea.state.mn.us/energy/greenpower.cfm](http://www.moea.state.mn.us/energy/greenpower.cfm) or <http://www.mnrenewables.org/>.

***Cool your home naturally instead of using the air conditioner. (H / W)***

***Make a concerted effort to educate yourself about global warming, energy sources, energy consumption and sustainability. (H / W / C)***

By staying attuned to these issues, you will have access to new information for reducing energy consumption and global warming.

***When you travel, seek out lodging that practices conservation. (C)***

***Activate the energy savings mode on your computer. (H / W)***



## Chapter 4: Community Education

### Section 4.6: Green Building

#### ***Section 4.6: Green Building***

***Use efficient construction methods and green building practices such as LEED for new home construction and renovations. (H/W/C)***

The U.S. Green Building Council provides a framework for sustainable construction and renovations that can be used to incorporate green building principles into your residence or business. For more information, visit: [http://www.greenhomeguide.org/guide\\_for\\_green\\_renovation/index.html](http://www.greenhomeguide.org/guide_for_green_renovation/index.html)

***Use pervious pavers and native vegetation areas to manage stormwater at the source on your property. (H)***

The Rice Creek Watershed District and the Comfort Lake- Forest Lake Watershed District provide technical assistance and even grant funding for sustainable stormwater management efforts. For more information, visit: <http://ricecreek.org/> or <http://www.clflwd.org/>



# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education

### Section 4.7: Healthy Ecosystems and Water Consumption

#### Water Efficient Taps

Aerators restrict water flow from the tap without reducing the water pressure, which results in savings in water consumption. For additional information regarding various styles of aerators available, visit <http://www.biggreensmile.com/products/tap-aerator-reduce-tap-flow-to-5-litres-a-minute/aqatap5l.aspx?productid=aqatap5l>

Leaky taps waste large quantities of water and cost extra in water utility fees. Be sure to check taps regularly for leaks or other deficiencies and replace worn parts as soon as possible.

#### **Section 4.7: Healthy Ecosystems and Water Consumption**

**Turn the tap off when you brush your teeth, shave, wash your face or wash dishes. (H / W)**

Reduce water consumption substantially by using a washing bowl or plugging the sink instead of leaving the tap on while washing dishes, washing your face or hands, or shaving.

**If you need to water your garden or lawn, water it early in the morning or in the evening. (H)**

Watering your lawn early in the morning or late in the evening is beneficial as the evaporation rate is the highest in the middle of the day. By avoiding this high evaporation period, you can use less water and know that the water you are using is soaking into the soil.

**Use mulch in gardens to retain moisture for longer periods, prevent weeds and improve soil fertility. (H)**

**Consider installing a water efficient tap or a tap aerator. (H / W)**

**Avoid thawing frozen foods under running water. (H)**

**Fix leaky taps. (H)**

**Keep a jug of water in the refrigerator to avoid running the tap and waiting for cold water to flow. (H / W)**

For more tips on reducing water consumption, visit the Water Wise website:

[http://www.waterwise.org.uk/reducing\\_water\\_wastage\\_in\\_the\\_uk/house\\_and\\_garden/saving\\_water\\_at\\_home.html](http://www.waterwise.org.uk/reducing_water_wastage_in_the_uk/house_and_garden/saving_water_at_home.html).

**Fill the sink and wash dishes by hand instead of using the dishwasher and you will use half the amount of water. (H / W)**

**Reduce the amount of time you spend in the shower; the average shower uses 5.3 gallons of water per minute. (H)**

**Install graywater diverters so that 'waste' water from your washing machine or sinks can be reused. (H / W)**

Graywater consists of household water drained from baths, showers, washing machines, and sinks. Graywater diverters are valves that divert water to a separate tank. Graywater diverters allow for reuse of these types of household water 'wastes' for uses such as watering the garden and flushing the toilet. Reusing graywater saves on water consumption and saves money for the homeowner.

# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education

### Section 4.7: Healthy Ecosystems and Water Consumption

#### Rain Gardens

A rain garden provides an area for stormwater runoff from roofs, driveways, and sidewalks to infiltrate into the ground before entering into lakes and streams. Rain gardens absorb runoff that would otherwise be channeled through storm drains or would run directly into surface water. By providing a location for stormwater to infiltrate, rain gardens reduce the amount of pollution entering water bodies and minimize erosion caused by water moving across the landscape.

#### **Choose native plants for your yard and garden. (H / W)**

Use native plants in your yard as much as possible to reduce watering requirements and provide food and shelter for native wildlife. For a list of native plants in Minnesota, visit: <http://www.extension.umn.edu/distribution/horticulture/components/7447z.pdf>

#### **Plant native gardens and rain gardens to protect lakes and streams. (H / W / C)**

#### **Let your grass grow longer between mowing cycles. (H / C)**

Grass is healthiest when it is maintained at a height of at least 2 ½ inches. By allowing grass to grow longer between mowing cycles, watering and fertilizing become less necessary. Not only will you reduce water, but you also will reduce environmental pollutants derived from fertilizers and herbicides.

#### **Do not pour paint thinners, household cleaners, oil or pesticides down the drain. (H / W)**

Instead of disposing of hazardous materials yourself, use them up or give them away to individuals or organizations. If you need to dispose of the products, bring them to the Washington County Household Hazardous Waste Facility and Reuse Room in Oakdale. The Washington County hazardous waste facility is open year-round and does not charge a fee to residents for

disposal. For more information, visit: [http://www.co.washington.mn.us/info\\_for\\_residents/environment/hazardous\\_waste\\_at\\_home/household\\_hazardous\\_waste\\_facility/](http://www.co.washington.mn.us/info_for_residents/environment/hazardous_waste_at_home/household_hazardous_waste_facility/)

#### **Install low-flow showerheads. (H)**

Low-flow showerheads use 60 percent less hot water than standard showerheads, which contributes to significant water and cost savings.

#### **Remove weed fragments and rinse/wipe off your boat and motor at landings to prevent the spread of Eurasian Milfoil and other invasive aquatic plant species. (C)**

Lakes are one of the Minnesota's greatest assets, and protecting water quality of our lakes is instrumental in maintaining healthy ecosystems. Lakes provide valuable opportunities for recreation; however, it is important to use them responsibly. Boaters often travel throughout the state and contribute to the spread of invasive aquatic plant species that present a threat to water quality. As a precautionary measure, be sure to check equipment used in infested waters and remove all aquatic vegetation upon leaving the lake or river. All equipment, including boats, motors, trailers, and fishing/diving equipment, should be free of aquatic plants to avoid spreading invasive species.

#### **Do not litter or dispose of waste outside of garbage receptacles to prevent contamination of water bodies. (C)**

# Forest Lake Sustainability Action Plan



## Chapter 4: Community Education

### Section 4.7: Healthy Ecosystems and Water Consumption

#### Volunteer

Find a local organization (i.e., Washington County Extension, Washington County 4-H, Wildlife Science Center, or the Warner Nature Center) that aligns with your interests and contact them about volunteer opportunities.

***Pick up pet feces and dispose of it appropriately when walking pets in order to avoid transfer of pet waste into water systems. (C)***

***Collaborate with neighbors and create coalitions around the topic of water quality and natural resource conservation to discuss what can be done to improve conditions. (C)***

***Plant trees. (H / W / C)***

There are many benefits to increasing the number of trees in our community. A few benefits include capturing carbon dioxide, creating a renewable resource, preventing soil erosion, improving air quality, cooling neighborhoods and improving aesthetics.

***Volunteer with an environmentally focused organization in the community. (C)***



**CITY OF  
FOREST LAKE**



## Next Steps

Forest Lake Sustainability Action Plan



## Chapter 5: Next Steps

### Section 5.1: Next Steps for Forest Lake

#### ***Section 5.1: Next Steps for Forest Lake***

The Forest Lake Sustainability Action Plan presents dozens of strategies the City can implement to pursue sustainable internal operations and external actions throughout the community. In order to ensure the success of this plan, Forest Lake should consider the steps outlined below:

#### **Establish a Sustainability Committee of community stakeholders and a position or group within City government that will implement, monitor, and coordinate the Sustainability Action Plan.**

These actions are an important first step to implement the Sustainability Action Plan. This group of individuals should collect baseline sustainability data to assess the City's current progress. The group can utilize the baseline audit to establish a set of measurable indicators and targets to track achievement of the sustainability objectives included in this plan. The Sustainability Committee will act as a core team of support for the Sustainability Action Plan and raise awareness about the City's sustainability movement to gain support from the broader Forest Lake community.

#### **Identify an individual City staff member that is responsible for implementing each strategy.**

In order for the Sustainability Action Plan to reach the implementation stage, the City will need to implement strategies

on a department-wide basis. This will ensure that the City makes progress toward each of the identified areas and is held accountable to the community for their actions.

#### **Follow the implementation timeline designated for individual strategies.**

The strategies are divided into three categories: short-term, medium-term and long-term. Short-term strategies should be implemented within a year, medium-term strategies in one year to five years, and long-term strategies in greater than five years. Short-term strategies require the least amount of capital investment and are the easiest strategies to implement in a short amount of time. Strategies designated as medium-term and long-term are dependent on capital costs, City budget, and the time necessary for implementation.

#### **Identify and pursue a variety of funding sources and partners to implement strategies.**

A combination of resources and funding sources are necessary to implement the Sustainability Action Plan. A general list of potential funding sources and partners is provided below. Additional research is necessary to identify specific grants and funding programs that may benefit Forest Lake. These programs are constantly in flux and new funding sources are continuously being developed to support sustainability initiatives. The list of funding sources and partners included below is categorized by topical area.



## Chapter 5: Next Steps

### Section 5.2: Potential Funding Sources and Partners

#### **Section 5.2: Potential Funding Sources and Partners**

##### **Transportation Resources**

##### **Multi-Modal Opportunities**

Transit for Livable Communities Bike Walk Twin Cities initiative – <http://www.tlcmnnesota.org/walkingandbicycling.html>  
Minnesota Safe Routes to School Grant Program - <http://www.dot.state.mn.us/saferoutes/index.html>  
Metropolitan Council allocation of Federal Surface Transportation Program (STP) flexible funding

##### **Partners**

HourCar University of Minnesota – Humphrey Institute of Public Affairs – <http://www.hourcar.org/>  
City of Hugo – <http://www.ci.hugo.mn.us/>  
Transportation Advisory Board – <http://www.metrocouncil.org/services/tab.htm>

##### **Energy Resources**

Energy-Efficiency Upgrades  
<http://www.mngreencommunities.org/>  
Xcel Energy Programs and Resources – Environmental and Energy-related Grants [http://www.xcelenergy.com/Business/Programs\\_Resources/Pages/Programs\\_and\\_Resources.aspx](http://www.xcelenergy.com/Business/Programs_Resources/Pages/Programs_and_Resources.aspx)

##### **Partners**

Center for Energy and the Environment - <http://www.mncee.org/>  
CenterPoint Energy – <http://www.centerpointenergy.com/home>  
The Green Institute - <http://www.greeninstitute.org/>

##### **Land Use Resources**

##### **General Resources**

McKnight Foundation Grant Programs – <http://www.mcknight.org/grantsprograms/index.aspx>  
Minnesota Council on Foundations – [www.mcf.org](http://www.mcf.org)  
University of Minnesota Grants – <http://granteval.umn.edu/current/>  
ICLEI: Local Governments for Sustainability – [www.iclei.org/](http://www.iclei.org/)  
Metropolitan Council, Livable Communities Demonstration Account Grant: <http://www.metrocouncil.org/services/livcomm.htm>  
United States Environmental Protection Agency Smart Growth Implementation Grants: [http://www.epa.gov/livability/2009\\_sgja\\_rfa.htm](http://www.epa.gov/livability/2009_sgja_rfa.htm)

##### **Natural Resources**

Minnesota Department of Natural Resources – Grants and Financial Assistance <http://www.dnr.state.mn.us/grants/index.html>  
Minnesota Pollution Control Agency – Environmental Assistance Grants <http://www.pca.state.mn.us/oea/sc/financial.cfm>  
Funding through the Forest Lake Capital Improvement Program



## Chapter 5: Next Steps

### Section 5.2: Potential Funding Sources and Partners

(CIP) can provide an ongoing trail improvement program  
National Arbor Day Foundation – Tree City USA <http://www.arborday.org/programs/treeCityUSA/index.cfm>  
Minnesota Tree Trust – <http://www.treetrust.org/>  
Minnesota Conservation Corps – <http://www.conservacioncorps.org/>  
USDA Forest Service – <http://www.fs.fed.us/>

#### ***Affordable Housing***

U.S. Department of Housing and Urban Development -  
Community Development Block Grants  
Minnesota Housing Finance Agency – Neighborhood  
Stabilization Program [http://www.mnhousing.gov/resources/apply/MHFA\\_007433.aspx](http://www.mnhousing.gov/resources/apply/MHFA_007433.aspx)

#### ***Economic Development***

Economic Development Administration – U.S. Department  
of Commerce Grants and Funding <http://www.eda.gov/InvestmentsGrants/Investments.xml>

#### ***Partners:***

Partnerships with Washington County  
Urban Land Institute – Minnesota Chapter  
Regional Council of Mayors

#### **Water Quality Resources**

##### ***Water Quality Grants and Programs***

Minnesota Department of Natural Resources - Water Grants  
<http://www.dnr.state.mn.us/grants/index.html>  
Rice Creek Watershed District Grants – <http://ricecreek.org/>  
Urban Stormwater Remediation Program  
Water Quality BMP Cost-Share Program  
Washington Conservation District Financial Assistance – <http://www.mnwcd.org/>  
Minnesota Pollution Control Agency –  
Local Government Assistance <http://www.pca.state.mn.us/assistance/index.html>  
Environmental Assistance Grant Program <http://www.pca.state.mn.us/grants/eagrants.html>  
Other Grants and Loans <http://www.pca.state.mn.us/grants/index.html#sustainability>

#### ***Partners:***

University of Minnesota – Extension Service <http://www.extension.umn.edu/Environment/>  
Metropolitan Council – <http://www.metrocouncil.org>  
Washington County – <http://www.co.washington.mn.us/>  
Comfort Lake – Forest Lake Watershed District <http://www.clflwd.org/programs.php>  
Rice Creek Watershed District Grants – <http://ricecreek.org/>  
Comfort Lake – Forest Lake Watershed District <http://www.clflwd.org/programs.php>



## Chapter 5: Next Steps

### Section 5.2: Potential Funding Sources and Partners

Washington Conservation District – <http://www.mnwcd.org/>

#### **Native Landscaping Resources**

##### ***Programs:***

MN Board of Soil & Water Resources – Grants and Technical Assistance <http://www.bwsr.state.mn.us/grantscostshare/index.html>

Native Buffer Cost-Share Program <http://www.bwsr.state.mn.us/grantscostshare/native-buffer.html>

Metro Blooms – Rain Garden Technical Assistance <http://www.metroblooms.org/>

Native Plant Reimbursement Grants <http://metroblooms.org/grants.php>

Rice Creek Watershed District Grants – [http://ricecreek.org/Landscaping for Clean Water Rebate Program](http://ricecreek.org/Landscaping%20for%20Clean%20Water%20Rebate%20Program)

#### **Education**

##### ***Partners:***

Congregations Caring for Creation – <http://www.c3mn.net/>  
Churches and other religious organization

Forest Lake Area Schools

Washington County

Minnesota Pollution Control Agency

Alliance for Sustainability – <http://www.afs.nonprofitoffice.com/>

#### **Building Practices Resources**

LEED & Energy-efficient Buildings:

Great River Energy: loans for LEED buildings, loans for retrofits – [http://www.greatriverenergy.com/environment/ci\\_grant\\_and\\_loan\\_program.html](http://www.greatriverenergy.com/environment/ci_grant_and_loan_program.html)

Xcel Energy Design Assistance – <http://www.xcelenergy.com/CustomerService/Pages/EnergyDesignAssistance.aspx>  
USGBC for staff training, membership resources, and LEED reference guides for training – <http://www.usgbc.org/> Minnesota Green Communities Grant  
[http://www.nextstep.state.mn.us/res\\_detail.cfm?id=1642](http://www.nextstep.state.mn.us/res_detail.cfm?id=1642)

##### ***Partners:***

Center for Energy and Environment for Energy Audits – [http://www.mncee.org/programs\\_bldgs\\_facilities/index.php](http://www.mncee.org/programs_bldgs_facilities/index.php)

Partner with Local Energy Utilities for Energy Audits

Partner with local retail venues





## Appendix A

### Current Internal Sustainability Practices

#### ***Current Internal Sustainability Practices***

##### **Sustainable Purchasing**

- The City uses green/environmentally-friendly cleaning supplies whenever possible.
- Several City departments recycle office products.
- City departments participate in purchasing from the Minnesota State contract system to improve economic efficiency.
- The Fire Department tests environmentally friendly products for training exercises.
- The Parks, Trails and Recreation Department purchases recycled materials for playgrounds.
- The Parks, Trails and Recreation Department buys outdoor furnishings made from recycled plastic when possible.
- The Parks, Trails and Recreation Department uses locally-grown and/or native plants for landscaping projects.
- The Parks, Trails and Recreation Department attempts to purchase locally-produced products to avoid cross-country shipping.
- The Public Works Department purchases carbide blade edges for snow plowing and grading because of their longer life cycle.
- The Public Works Department uses recycled blacktop and concrete for base material on roads.
- The City plants annual rye grass for reseeding and restoration because of its low cost and fast-growing traits.
- The City purchases fertilizer from a local feed mill.
- The City purchases heat and salt resistant trees for landscaping to promote longer tree life.

##### **Waste Reduction and Consumption**

- Departments attempt to use recycled utensils as much as possible.
- Departments recycle ink cartridges whenever possible.
- The Building Management Department purchases only paper products rather than Styrofoam to lessen use of non-biodegradable materials.
- The Building Management Department orders materials in bulk to reduce the amount of packaging sent to landfills.
- The Fire and Police Departments are working toward a paperless reporting process to reduce the amount of paper waste generated from daily operations.
- The Parks, Trails and Recreation Department uses mulch produced at the city compost site for landscaping projects.
- The Parks, Trails, and Recreation Department reduces its fuel consumption by mowing city-owned property less often and allowing grass to grow longer.



## Appendix A

### Current Internal Sustainability Practices

- The Public Works Department utilizes composted organic material from the city compost site in lieu of purchasing black dirt for landscaping and building projects.
- The Public Works Department reuses sand and gravel captured from street sweeping to fill gravel roads or deposit the materials at the city compost site.
- The Public Works Department recycles truck tires for re-capping, mills blacktop on roads for repair rather than total removal, recycles concrete and black top on city roads and sidewalks, and mulches branches from tree trimming to be reused for city landscaping projects.

### Sustainable Transportation

- The Public Works Department uses utility vehicles for off-road use to reduce fuel consumption and the impacts associated with heavy-weight vehicles.
- The Public Works Department developed remote dumping locations to reduce the use of dump trucks for transporting waste.
- The Public Works Department uses the smallest equipment possible (such as The Gator) to minimize fuel consumption and potential damage caused by heavy equipment.
- The Public Works Department uses the ball field groomer for grading small areas within the city.

### Sustainable Energy

- Water treatment plants, City Hall and the Youth Service Bureau building are temporarily removed from the power grid and instead use generators during Excel Energy peak periods.
- The City currently is upgrading its lighting systems to use LED lights in order to increase energy efficiency.
- City departments make an effort to keep lights off in rooms that are not being used.
- When upgrading the City's mechanical system, preference is given to high efficiency power solutions.
- City departments turn outside lights off at midnight whenever possible.
- The City is saving energy by switching water meters to radio read.
- The City periodically conducts building energy audits to identify problem areas.



## Appendix A

### Current Internal Sustainability Practices

#### Green Building

- The fire department and the Public Works Department currently use radiant floor heating in its buildings.
- Road construction projects led by the Public Works Department involve use of recycled blacktop and concrete as base material.
- The Parks, Trails, and Recreation Department utilizes sky-lights to provide lighting for changing rooms in the city's beach houses.
- The proposed public safety building that will house the Police and Fire Departments will be built to meet LEED standards, incorporating many green building and sustainable design elements.

#### Healthy Ecosystems

- The City encourages residents to plant trees through an annual tree sale.
- The Fire Department currently traps and recovers excess water during cleaning and training exercises.
- The Parks department utilizes irrigation strategies that avoid excessive irrigation, such as installation of moisture sensors to reduce overwatering or watering during rainy periods.
- The parks department uses native vegetation in parks, and provides trees on Earth Day for community members to plant.
- The Public Works Department encourages customers to install moisture sensors on irrigation systems to prevent overwatering.
- The City installed low flow toilets and urinals in its buildings to reduce water consumption.
- Mowing is used for weed removal rather than harmful spraying techniques, and mulching is utilized to reduce use of string trimmers.
- The Public Works department implemented a no idling strategy on its vehicles to reduce air pollution and enhance the local ecosystem.



## Appendix A

### Current External Sustainability Practices

#### ***Current External Sustainability Practices***

##### **Sustainable Transportation**

- Assists in managing the Hardwood Creek Regional Trail located throughout Forest Lake.
- Requires developers to design and construct trails with proposed development.
- Requires sidewalks and trails in proposed residential developments to ensure connectivity within new development and existing commercial, residential, and public areas throughout the city.
- Requires businesses to place bicycle racks at convenient locations.
- Provides adequate bicycle racks and develop supporting trails leading from the Broadway/Lake Development and along the Broadway Avenue Corridor.
- Created a shared parking ordinance to reduce impervious pavement for new development and allow an overall reduction in parking.
- Actively support Washington County on a Transit Tax to increase transit opportunities for all residents.
- Created a transit hub park and ride to create transit options for residents.
- Collaborates with Washington County and the Metropolitan Council to continue the express bus service from the Forest Lake transit hub and downtown Minneapolis.
- Attempts to focus development and redevelopment in key transit corridors to support existing transit and prepare for known future transit service.

##### **Sustainable Energy & Environmental-based Practices**

- Avoids developing trails that adversely affect ecologically sensitive areas.
- Uses native plant materials to restore disturbed open space.
- Utilizes native plant landscaping throughout the park and trail system.
- City has regulations to advance the protection for natural resources including woodland preservation, wetland protection, groundwater protection, and landscape requirements.
- Adopted regulations that encourage high-value natural areas, wetlands, steep slopes, their related buffers and setbacks, and other sensitive resources be put under easement or deed restriction while allowing the same amount of density overall for the development



## Appendix A

### Current External Sustainability Practices

- Created conservancy districts intended to provide special regulatory protection for areas that contain valuable natural resources.
- Created a woodland preservation ordinance.
- Implemented a gross density calculation for developments with natural resource areas.

### Sustainable Land Use Practices

- Produced a conceptual open space corridor plan to develop green corridors to preserve and enhance open space.
- Requires that plans for new residential, commercial, and industrial subdivisions include provisions for the dedication of parks to meet recreation demand.
- Created strict parkland dedication guidelines which do not allow wetlands, stormwater management ponds, or fragmented outlots to fulfill the requirement.
- Completed a Parks, Trails, and Open Space Plan for Forest Lake in 2003.
- Utilized a portion of the city-owned land south of the Forest Lake Airport to construct a new recreation and family community center to offer city residents active, passive, and natural recreational activities.
- Provides safe parks for residents by enforcing rules, installing lights, and patrolling parks on foot and via police cars.
- Followed regulations which meet the needs of park users as per the American Disabilities Act guidelines and requirements.
- Continues to maintain and upgrade existing park facilities including planting, lighting, and signage.
- Maintains an equitable distribution of parks and trails throughout the community.
- Designed the trail system to be accessible to people with physical disabilities.
- The Comprehensive Plan has higher densities for future residential lands than required by the Metropolitan Council.
- Prepared a Downtown Forest Lake Plan with specific associated design requirements.
- The City of Forest Lake has targeted four mixed use redevelopment sites.
- Developed strict erosion control requirements which regulate physical disturbances, requires conservation practices, and prevent excessive soil loss from adjacent land uses.
- Prepared a mining ordinance for aggregate resources within city limits.
- Created a "Right to Farm" policy to support surrounding farmsteads.
- Forest Lake actively considers the number and average wage rates of created jobs when deciding on the use of financial incentives for industrial uses to fully utilize higher skill levels of local workers.
- Created conservation design subdivisions that may be applied in remnant natural areas and greenway corridors.
- Amended the Comprehensive Plan and Zoning map to allow for high density housing in a new development area where it had not



## Appendix A

### Current External Sustainability Practices

- existed previously.
- Obtained a \$700,000 Livable Communities grant to support the purchase of the site for the Washington County HRA building and reduced cost of housing overall.
- Approved the creation of new County tax increment financing district for Washington County HRA housing project.
- Waived \$150,000 in development and building fees to reduce housing cost for Washington County HRA Project.
- Approved a 206-unit senior rental housing through issuance of revenue bonds.
- Partnered with Two Rivers Land Trust to create affordable housing options.
- Created a policy for developers to either reduce or waive city fees for planning/building application permits and park and trail dedications if they meet specific requirements for affordable housing construction.
- Continues to support and actively promote First Time Home Buyer programs to assist new homeowners entering the market for existing homes.
- Created a policy to balance renter and homeowner housing supply for life-cycle housing.
- Plans to incorporate far more affordable housing units by 2030, than required by the Metropolitan Council.

### Sustainable Water Resources

- Created proactive infiltration and inflow practices to protect water resources and the environment, and allow for the efficient provision of sanitary sewer services.
- Invested over \$650,000 on infiltration and inflow reduction measures since 2004.
- Enforces an odd-even water scheduling on city residents from May 15 to September 1 to conserve water resources.
- Created a conservation water rate structure for city.
- Maintains a Stormwater Pollution Prevention Plan (SWPPP) which incorporates numerous Best Management Practices for stormwater management and mandates a stormwater utility fee which encourages pervious surfaces.
- Created a Wellhead Protection Plan and the Forest Lake Surface Water Management Plan for the city in 2005.
- Produced numerous ordinances for residents including a pervious paver ordinance, wetland protection ordinance, and a shoreland ordinance to protect the quality of lakes and streams.
- Created a Rain Garden Program on dead-end streets near forested lands.