



SUSTAINABILITY ACTION PLAN
VILLAGE OF SHOREWOOD, WISCONSIN

Adopted by the Village Board of Trustees 6/18/2012

VILLAGE OF SHOREWOOD
SUSTAINABILITY ACTION PLAN

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I. INTRODUCTION

The environmental and social impacts of Village operations are significant. The Village requires significant amounts of oil, coal and natural gas to run facilities, provide emergency services, plow snow, and haul solid waste. Sustainable community development is a solution for lessening the impacts from this fossil fuel dependency, and at the same time ensuring that Shorewood continues to prosper economically and strives for social equity.

The purpose of this Sustainability Action Plan is to document the action steps for the Village of Shorewood in its efforts to adopt and implement sustainability in long-range planning, policy efforts, and daily operations.

As the Shorewood Village Board considers new policy initiatives and Village staff search for new ways to make day-to-day operations more efficient, coordinating a document to provide guidance is needed. This plan would help prioritize where the Village should focus their efforts.

This action plan describes the results of recent planning activities by the Staff Sustainability Committee, Sustainability Task Force, Village staff, Village Board, and interested residents. The resulting document aims at raising awareness about sustainability in local government, establishing a baseline for various efforts and activities, and laying out the action steps and priorities necessary for achieving this broad vision in the future.

A. Shorewood's Sustainability Efforts

In 2005, the Village of Shorewood participated in a visioning process to develop an image of what the community would be in the future. Village residents and Trustees participating in the process viewed Shorewood in 2015 as “an ecologically responsible community with a commitment to protecting the environment.” This priority was re-affirmed when members of the community gathered in 2009 to update the Vision 2015 plan.

Over the years, the Village has implemented programs and completed projects that may be considered sustainable. Some of these are highlighted on the following page.

Shorewood's Sustainability Initiatives Highlights Over the Years...

- Prepared and adopted a parks plan – the Comprehensive Outdoor Recreational Plan (2007).
- Established an active Parks Commission in 2008; Shorewood is one of the few municipalities in the Milwaukee area with an active Parks Commission.
- Became one of the first Wisconsin communities to completely install LED traffic signals
- Funded and approved a detailed plan for the management of the Milwaukee River bluff (from E. Capitol Drive to the Village's south border) (2009)
- Manages a pesticide-free lawn maintenance program on all Village-maintained turf areas.
- Re-established the Conservation Committee (2007).
- Funded and completed a bike study which lays out plans for safe bike routes throughout the Village (2008).
- Completed an Ecological Study and Management Plan for Atwater Beach (2009).
- Adopted the Village of Shorewood Comprehensive Plan (Smart Growth) 2030 (January 2011)
- Conducted a detailed engineering study of the Atwater Park bluff to protect the bluff. Summer workers have been hired for Atwater Park and part of their duties is to work on maintaining the bluff vegetation.
- Distributed reusable shopping bags to Shorewood residents (2008, 2012).
- Funded a comprehensive sewer utility plan designed to reduce inflow and infiltration throughout the sewer system and increase sewer capacity.
- Established a program to incorporate more native plants into the Village landscaping.
- Designed and engineered a Green Alley project in the 4500 block of East Oakland.
- Installed bike racks and recycling receptacles throughout Capitol Dr. and Oakland Ave. as part of streetscaping projects. Bike lanes and stormwater filtration basins were also installed along Capitol Dr.
- Implemented a GIS system which allows for better tracking of resources such as street trees, sewers, etc. (2007).
- Installed several solar light tubes at Public Works offices and garages (2010).
- Adopted an extremely strong Shoreland Zoning Ordinance to protect and preserve the Milwaukee River bluff.
- Implemented the Indoor Clean Air Act.
- Implemented and helped fund the rain garden and rain barrels program with Milwaukee Metropolitan Sewerage District (MMSD) to promote downspout disconnection in the combined sewer area; adopted a separated sewer area downspout disconnection ordinance in 2010.
- Updated winter operations equipment to reduce the amount of salt required to maintain winter streets.
- Established an active Pedestrian and Bicycle Safety Committee (2004) The Village funded a pedestrian safety study and is implementing many recommendations as opportunities arise (2005)
- Shorewood was one of the first communities in the state to implement a curbside recycling program. The Village also offers Christmas tree recycling and an electronic recycling program.
- Distributed reusable thermoses and lunch bags with Shorewood logo to all staff as employee appreciation gifts.
- Established annual "Green Clean" village-wide recycling event.

Although Shorewood has been completing projects that could be considered sustainable for some time, an organized movement to adopt an action plan was only recently initiated. Members of the Shorewood Conservation Committee convened a task force to focus specifically on sustainability and developing a sustainability plan for the Village, a goal outlined in the Vision 2015 Plan. The task force researched different models and approaches to sustainability and recognized *The Natural Step* as a commonly applied framework for communities, both in Wisconsin and around the world.

The Sustainability Task Force completed study group sessions both around the UW-Extension's *Toward a Sustainable Community: A Toolkit for Local Government* and *The Natural Step for Communities*, a guidebook by Sarah James and Torbjorn Lahti. In November 2009, the task force recommended an *eco-municipality* resolution to the Village Board, recognizing sustainability principles and the four system conditions as prescribed in *The Natural Step*. The task force also recommended a 25x25 resolution, supporting the State of Wisconsin's efforts in achieving 25% of its energy from renewable resources by the year 2025. Both resolutions were approved unanimously by the Village Board on November 2, 2009. Village staff participated in a half-day work session on sustainability and *The Natural Step* on March 15, 2010.

The Village Manager established a staff sustainability committee to oversee the development of a sustainability action plan. The Sustainability Task Force also played an advisory role to the staff committee in creating the plan. The resulting Sustainable Shorewood Action Plan was completed and adopted by the Village Board in 2009.

B. Sustainability and The Natural Step Model

Sustainability has been defined in many ways; however, the most common is: "Using resources in ways that meet our needs without compromising the ability of future generations to meet their own needs" – U.N. Brundtland Commission Report, 1987. Sustainability is referred to as a whole systems approach addressing the environment, social equity, and the economy, which are also known as the three "E's" or the "triple bottom line." Sustainability emphasizes the importance of balancing the well-being of all three in every decision making process.

On November 2, 2009, the Village of Shorewood Board of Trustees adopted an *eco-municipality* resolution that supported sustainability principles and identified *The Natural Step* as the preferred model for achieving greater sustainability in local government and the larger community. *The Natural Step* (or "TNS") is a scientifically based, socially-just model with a

proven track record. Many other Wisconsin communities are implementing the principles and methods of *The Natural Step*, affording us the opportunity to share strategies and successes with nearby, similar communities.

The Natural Step model was developed in Sweden in 1983 by a group of scientists led by Dr. Karl-Henrik Robèrt. His work led to the development of a framework of four system conditions and a four step planning process to systematically effect positive change. The successful efforts of city planner Torbjörn Lahti to apply these methods in Övertorneå, Sweden marked the beginning of what became known as the “eco-municipality” movement.

The Natural Step’s system conditions define the framework through which Village programs and practices can be reviewed and modified in order to become a more sustainable organization. On the next page, the four system conditions are expressed as defined by the American Planning Association’s *Planning for Sustainability Policy Guide*:

Condition	Reason	Guiding Objective	Type of practices
<p>1. In sustainable society, nature is not subject to systematically increasing concentrations of substances extracted from the Earth's crust.</p>	<p>Once these heavy metals are out of the earth (cadmium, lead, mercury, phosphorus and fossil fuels), they are here to stay. Many of these substances or their emissions are known to be toxic. They are accumulating in nature and human society at levels far greater than their natural occurrence.</p>	<p>Eliminate our community's contribution to fossil fuels dependence and to wasteful use of scarce metals and minerals.</p>	<p>Transit and pedestrian-oriented development; development heated and powered by renewable energy; mixed use development; public transit, alternatively fueled municipal fleets; incentives for organic agriculture that minimizes phosphorus, petrochemical fertilizers and herbicides.</p>
<p>2. In sustainable society, nature is not subject to systematically increasing concentrations of substances produced by society.</p>	<p>Human society is manufacturing synthetic chemicals faster than these chemicals can be broken down. The US Environmental Protection Agency (EPA) lists over 70,000 chemicals that are in common use. Synthetic chemicals accumulate in the human body (EPA reports every citizen's fatty tissue contains at least 700 chemical contaminants). There is no practical way to study all the possible interactions of these chemicals.</p>	<p>Eliminate our community's contribution to dependence upon persistent chemicals and wasteful use of synthetic substances</p>	<p>Healthy building design and construction that reduces or eliminates use of toxic building materials; landscape design and park maintenance that uses alternatives to chemical pesticides and herbicides; municipal purchasing guidelines that encourage low - or non-chemical product use.</p>
<p>3. In sustainable society, nature is not subject to systematically increasing degradation by physical means.</p>	<p>Human activity is breaking down natural systems (land, water, forests, soil, ecosystems) faster than they can renew themselves. These natural systems are our life-support systems (vegetation produce oxygen, absorb carbon dioxide and food). Demand for fresh water is exceeding demand.</p>	<p>Eliminate our community's contribution to encroachment upon nature (e.g. land, water, wildlife, forests, soil, and ecosystems).</p>	<p>Redevelopment of existing sites and buildings before building new ones; building "from the inside out" development and infrastructure policies; open space, forest and habitat preservation; reduced water use and recycling of wash water; sewage treatment by plants.</p>
<p>4. In sustainable society, people are not subject to conditions that systematically undermine their capacity to meet their needs.</p>	<p>The basic human needs (air, water, food, shelter) should take precedence over luxuries. Within our community, needs include a means of a livelihood, mobility, equal treatment, equal access, safety, participation in decisions that affect our lives, the right to peaceful enjoyment of life and a connection with nature.</p>	<p>Meet human needs fairly and efficiently.</p>	<p>Affordable housing for a diversity of residents; locally based business and food production; using waste as a resource; eco-industrial development; participatory community planning and decision making.</p>

C. Eco-Municipalities

As previously mentioned, the Village of Shorewood Board of Trustees adopted an *eco-municipality* resolution in November 2009 which endorsed sustainability and *The Natural Step*. An *eco-municipality* is defined as a city, village, town, county, or region that aspires to develop an ecologically, economically, and socially healthy community for the long term, using *The Natural Step* framework for sustainability as a guide, and a democratic, highly participative development and decision-making process as the method from *Toward a Sustainable Community: A Toolkit for Local Government*. This systems approach is critical to the Village's long-term success because the approach helps to raise awareness of sustainability, works to integrate the goals and actions across departments within the organization, and helps to develop a common language and shared understanding. This systems approach should reduce the likelihood of conflict and competition among individual actions and avoid duplication of efforts.

The adoption and implementation of *The Natural Step* framework and this Sustainability Action Plan will stimulate a shift toward becoming an eco-municipality. These efforts will also promote products and services that support greener, more sustainable lifestyles throughout the community. Adopting *The Natural Step* framework will help brand the Village of Shorewood as a "green community" and the Sustainable Shorewood initiative, thereby increasing its visibility and helping attract future businesses, residents, and visitors to the area.

II. ELEMENTS

This chapter outlines an action plan for four sections of municipal operations – Energy and Natural Resources, Purchasing and Materials, Land and Infrastructure, and Education and Outreach. Each section is organized by short-term (0-4 years), mid-term (5-9 years) and long-term (10+ years) priorities. The descriptions below derive from *The Natural Step for Communities* by Sarah James and Torbjorn Lahti.

- **Energy and Natural Resources**

Carbon dioxide and other greenhouse gases, including sulfur and nitrogen dioxide, are building in the Earth's atmosphere beyond normal levels due, in part, to the burning of fossil fuels. An average of 23,000 pounds of carbon dioxide is emitted annually from each American home (U.S. Environmental Protection Agency). Communities, particularly those in colder climates – like Shorewood – have become heavily dependent upon burning fossil fuels for heat and power. Approximately 90% of all energy used by homes in the U.S. powers heating/cooling equipment and water heaters.

This section highlights initial actions, large and small, aimed at lessening the Village's dependence on fossil fuels and moving towards alternative and local sources of energy as well as protecting the Village's precious natural resources. The specific goals include: reducing the energy demand and natural resource impacts of Village facilities and reducing the energy demand and natural resource impacts of the Village's fleet vehicles.

- **Purchasing and Materials**

While recycling rates are improving in some parts of North America, U.S. citizens waste or cause to be wasted nearly one million pounds of materials per person, per year; the total annual flow of waste, including wastewater, is 250 trillion pounds. This waste includes materials such as carpets, Styrofoam, discarded food, carbon from carbon dioxide and manufacturing waste. Added to these considerations are the increasing burdens for local governments in dealing with waste: rising costs and problems of waste disposal, closing of landfills, stricter incineration regulations and managing disposal of hazardous substances.

Like most communities, Shorewood has adopted a mandatory recycling program. But dealing with waste also means changing patterns of consumption. Goals highlighted include: prioritize purchasing green/sustainable products; use materials in manners that are mindful to the environment; and, materials are disposed using environmentally friendly methods.

- **Land and Infrastructure**

As a fully developed community, Shorewood relies on careful planning when it comes to redevelopment projects and capital improvements in order to make the best use of available land and resources. Planning documents like the Village's Central District Master Plan (2006), Comprehensive Outdoor Recreation Plan (2007), Milwaukee River Site Restoration Plan (2009) and Comprehensive (Smart Growth) Plan 2030 (2010) all provide a roadmap for ensuring the sustainability for Shorewood's business district, neighborhoods and natural spaces. This section of the Sustainability Action Plan deals with the following specific goals: incorporate sustainable practices for streets and sidewalk construction and maintenance; incorporate sustainable practices for wastewater collection; address the environmental impacts of past and future development projects; ensure that the Village addresses the infrastructure needs for sustainable forms of transportation; and, maximize use of the Village's open space and recreation areas.

- **Education and Outreach**

Education about what sustainability means and how local actions connect to global trends is key to local official endorsement, municipal staff participation and widespread community agreement on the goal of a sustainable community. This section involves moving beyond the day-to-day operations of the Village and promoting an understanding of sustainability into the culture of the organization and surrounding community. The goals of this section include: increase community knowledge of Village sustainability initiatives and promote efforts within the community; promote sustainable activities into business and commercial activities; and increase staff knowledge base and awareness of sustainability initiatives.

A. Energy and Natural Resources

Goal: Reduce the energy demand and natural resource impacts of Village facilities.

Short-term (0-4 years)

- Establish baseline data of energy usage by conducting a detailed energy audit of all Village facilities.
- Implement the priority recommendations of the energy audit.
- Explore “performance contracting” with qualified firm in effort to invest in energy saving projects.
- Participate in Energy Efficiency Community Block Grant (EECBG) program or other grant programs offering funding for energy efficiency projects.
- Install programmable thermostat controls in order to limit excess energy usage.
- Install motion sensors in bathrooms and other appropriate offices and meeting rooms.
- Install sufficiently insulated garage doors at Department of Public Works (DPW) garages.
- Replace low efficiency windows at Police building with Energy Star efficient windows.
- Replace all existing signs in Village buildings with LED exit signs.
- Set a standard policy for computer “sleep modes” and walk-through to configure all computers to meet this setting.
- Develop and issue policy to all staff on energy savings, such as powering off computers printers and lights before leaving the office for the day.
- Investigate the use of smart power strips and similar technologies to help reduce phantom power.
- Encourage downspout disconnections where feasible.

Mid-term (5-9 years)

- Replace all appliances with Energy Star rated appliances.
- Replace low efficiency windows in all village buildings with Energy Star efficient windows
- Install water efficient plumbing fixtures in Village facilities.
- Review and establish new benchmarks for energy reduction in Village facilities.
- Install energy efficient parking lot lights in municipal lots.

- Install solar energy technology at each of the municipal buildings.
- Install solar light tubes at remaining Village facilities where appropriate.
- Explore the incorporation of a geothermal system into Village facilities.
- Conduct energy audits on a recurring basis.
- Implement priority recommendations of audits.

Long-term (10+ years)

- Install photovoltaic, wind and other alternative fuels for back-up of electrical systems in buildings.
- Purchase renewably produced electricity through utility providers.
- Install energy efficient street and park lighting throughout the Village
- New construction and major remodels of Village-owned facilities meet or obtain leadership in Energy and Environmental Design (LEED) certification and/or energy star rated.
- Reach 25% renewable energy use by 2025.

Goal: Reduce the energy demand and natural resource impacts of the Village fleet vehicles.

Short-term (0-4 years)

- Establish baseline data for Village fleet vehicle energy consumption.
- Consider purchase of bio-diesel whenever its cost is the same or less than ultra-low sulfur diesel.
- Regularly track trends in bio-diesel production, technology advancements, and cost; especially to encourage the purchase and use of cellulosic bio-diesel.
- Follow anti-idling regulations/ Incorporate anti-idling technology for Village vehicles.
- Evaluate how well vehicle and equipment maintenance practices eliminate the potential discharge of hazardous or toxic materials into the environment.

Mid-term (5-9 years)

- Conduct a GHG (Greenhouse Gas) emissions audit to establish baselines on the Village emissions level.
- Convert to electric parking checker vehicle.

- Convert to electric DPW watering vehicle.

Long-term (10+ years)

- Convert to electric or hybrid DPW and police fleet as technology advancements make this feasible
- All fleet vehicles use energy that is renewable.

B. Purchasing and Materials

Goal: Prioritize purchasing green/sustainable products.

Short-term (0-4 years)

- Create rules for purchasing and contracting that considers environmental impacts.
- Consider environmental impact and local producers, when writing bid documents.
- Purchase less single-use items and disposable utensils.
- Eliminate the use of styrofoam.
- Create inventory master list of purchased products
- Identify more environmentally friendly product alternatives for purchasing.
- Identify opportunities for locally purchased materials.
- Convert to purchasing electronic versions of journals/magazines instead of paper copies.
- Investigate the adoption of a Village-wide policy on fixture purchases and replacements to reduce water waste in existing and new Village facilities.
- Use low voc paints in all Village facilities.
- Develop a “full cost accounting” policy, where the full costs and benefits of the decision are weighed (ie. costs are estimated for the long term impacts of the decision, hidden costs, externalities, overhead and indirect costs are included).

Goal: Use materials in manners that are mindful to the environment.

Short-term (0-4 years)

- Require two-sided printing whenever possible.
- Promote more efficient printing of email data.
- Implement a “paperless” Village Board packet program, allowing significant reductions in paper use and transportation costs for delivering the packets.
- Implement an e-billing program for bills sent to residents electronically.
- Save used paper (with non-sensitive information) for “scratch paper” to be used for note-taking or printing on printers that do not offer back-to-back printing capabilities.
- Combine wastes from personal trash cans into one receptacle at the end of the day, reducing the use of trash bags and volume of trash.
- Have an informal reuse program for office furniture.
- Collect and reuse large boxes at Village Hall (i.e. establish a used box area).
- Promote that police uniforms are dry-cleaned in environmentally friendly manner., i.e organic dry cleaning.
- Transition to paperless accounts payable processes.
- Switch to paperless timesheets.
- When building, remodeling or adding an addition to public buildings, the village considers using sustainable materials .i.e repurposed items or materials containing recycled content.
- Consider hiring green companies for services i.e janitorial, exterminators.

Mid-term (5-9 years)

- Purchase a dishwasher for the employee lounge to help encourage use of reusable cups and dinnerware.

Goal: Materials are disposed using environmentally friendly methods.

Short-term (0-4 years)

- Collect baseline information and establish systems to monitor what types of materials and quantities are recycled and landfilled to determine current recovery rate and set future targets and to encourage residents and employees to help meet waste reduction goals.
- Set annual goals for employee recycling.
- Formalize an employee electronic recycling policy/program and ink cartridge and batteries recycling policy.
- Provide information to staff on what products can be recycled through internal newsletter and staff Intranet page.
- Promote composting with the Village and ensure that composting efforts meet Village code.
- Consider food composting bins for employee food waste.
- Continue promotion of Senior Resource Center flea market for reuse of items in the community.
- Ensure karts and recycling bins are available in all parks and public spaces.
- Provide large recycling bins.
- Set village-wide recycling goals.

Mid-term (5-9 years)

- Coordinate donation locations for reuse of goods and materials in Shorewood.
- Evaluate/consider a municipal composting program.
- Consider a residential recycling awards program for residents who recycle most of their disposals.
- Explore pay-as-you throw garbage program.

C. Land and Infrastructure

Goal: Incorporate sustainable practices for streets and sidewalk construction and maintenance.

Short-term (0-4 years)

- Inventory and evaluate current materials for environmental friendliness.
- Perform cost benefit analysis of alternative construction materials.
- Evaluate how well streets and roadways maintenance practices help keep pollutants from entering waterways.
- Consider alternatives to salt (sodium chloride) for the treatment/prevention of ice on sidewalks and entry ways to Village facilities.

- Recycle asphalt from Village paving and roadway projects.
- Utilize storm-water Best Management Practices (BMP's) whenever possible in roadway construction,

Goal: Incorporate sustainable practices for wastewater and stormwater collection and treatment.

Short-term (0-4 years)

- Implement a stormwater pollution prevention plan.
- Recommit to inlet marking program.
- Develop community educational tools.
- Develop BMP list and specifications for future project incorporation.
- Enhance existing sanitary sewer maintenance program through funding commitments.
- Implement priorities of the Comprehensive Sanitary Sewer, Stormwater and Drainage Facility Plan.

Mid-term (5-9 years)

- Develop green/blue roof incentive programs for residents.
- Review codes for parking lot development/reconstruction to limit amount of stormwater runoff.
- Continue implementation of recommendations of the Comprehensive Sanitary Sewer, Stormwater and Drainage Facility Plan.

Goal: Address the environmental impacts of past and future development projects.

Short-term (0-4 years)

- Ensure that state and local erosion and sediment control BMP's are met during projects.
- Support continued education of inspectors in BMP's.
- Develop erosion application specifying BMP's.
- Encourage reuse and recycle of building materials in private and municipal construction.
- Explore reduction on Village fees associated with reuse and recycle efforts.
- Create an inventory of potential Brownfield sites and develop remediation plans.

- Incorporate green-space into future redevelopment planning efforts.
- Encourage use of sustainable building materials, practices and designs.
- Extend Business District Green Leaf award to new construction. (Sustainable development)

Mid-term (5-9 years)

- Develop deconstruction policies and tools.
- Incentivize people to utilize sustainable building materials, practices and designs.
- Review code to promote sustainable practices.

Goal: Ensure that the Village meets the needs for sustainable forms of transportation.

Short-term (0-4 years)

- Evaluate bike racks at every school and business area.
- Support walking and biking by providing bike route maps in various locations throughout the Village.
- Identify key locations to construct shelters at bus stop locations to make bus stops more accommodating to users during all seasons.
- Monitor parking requirements and continue to implement “Right Size” Parking strategies.
- Identify opportunities for high density parking structures to replace single-level surface lots; collaborate with regional stakeholders to maintain and advance regional public transportation system
- Continue the development of a “walking bus” or other similar method for safely getting kids to school without having to drive.

Mid-term (5-9 years)

- Construct high density parking structures considering “green” design techniques (i.e. solar power, green roof).
- Evaluate costs of public plug-in stations for electric vehicles and related policies.
- Promote shared transportation opportunities by initiating a car share program.

Long-term (10+ years)

- Explore feasibility of trolley/street-car through business district.

Goal: Maximize use of the Village's open space and recreation areas.

Short-term (0-4 years)

- Implement short-term components of the Atwater Park Master Plan (2010).
- Implement short-term recommendations of the Village's Outdoor Recreation Plan (2007).
- Gather public input on parks recreation uses through an online survey.
- Develop a preferred list of appropriate native tree and landscaping species based on drought tolerance, appearance, solar friendliness (as appropriate), carbon dioxide (CO₂) uptake, and other site specific factors for street trees.
- Evaluate the accessibility of parks to those with disabilities.
- Collaborate with other communities on the Milwaukee River Greenway Plan (2010) implementation.
- Provide community educational kiosks in areas that are being improved or tested.
- Promote sustainability education at block parties.

Mid-term (5-9 years)

- Consider installation solar-powered trash and recycling compacting receptacles at all parks and public building entrances.
- Implement Outdoor Recreation Plan (2007) and Milwaukee River Bluff Plan (2009) recommendations for Oak Leaf Trail and park connectivity
- Consider the placement of community gardens in municipal parks and open places; Implement a native landscaping program for Village's public spaces.
- Update the Village Outdoor Recreation Plan.
- Manually remove invasive species from natural areas and parks using volunteers.
- Install water-efficient irrigation systems for parklands and turf areas, and landscape and Village beautification sites, when possible, and use practices, such as retrofits, to improve irrigation efficiency of older systems.

D. Education and Outreach

Goal: Increase community knowledge of Village sustainability initiatives and promote efforts within the community.

Short-term (0-4 years)

- Maintain and improve the sustainability web page on the Village website to promote sustainability activities.
- Work with the Conservation Committee to continue “Green Clean” as an annual spring event.
- Promote compliance of ordinances relating to natural lawns and right-of-way plantings.
- Publicize sustainability initiatives in Village newsletter and magazine publications.
- Promote sustainability achievements on Village website and social media platforms (Facebook and Twitter).
- Tie sustainability efforts into any Village marketing and branding programs.
- Provide educational materials on green block parties.

Mid-term (5-9 years)

- Develop energy efficiency/retrofitting component to the Neighborhood Loan Program.
- Create GIS layer of locations and information about green projects throughout the Village.
- Incorporate sustainability related achievements into Village Welcome/Walking kits for new and prospective residents.
- Quantify successes and link to a decrease in tax levy (send with tax bill insert).
- As part of the approval process, require special events to provide recycle receptacles (i.e. block parties).

Goal: Promote sustainable activities into business and commercial activities.

Short-term (0-4 years)

- Support and promote the Green Leaf Program and other efforts with the Conservation Committee and Business District, Community Development Authority that promote sustainability within the business community.

- Highlight the sustainability activities of businesses in Village publications (Shorewood Today magazine, Village Manager's Memo, etc.).
- Consider Code updates to require design review for garbage enclosures to ensure adequate space for recycling containers and ease of access for hauler trucks.

Mid-term (5-9 years)

- Engage stakeholders in discussion on Village-wide program (e.g. outreach, incentives, etc.) to promote eliminating the use of Styrofoam take-out packaging, non-durable dinnerware, and plastic shopping bags.

Goal: Increase staff knowledge base and awareness of sustainability initiatives.

Short-term (0-4 years)

- Incorporate sustainability policies into the employee handbook.
- Feature sustainability efforts of employees into the internal newsletter and Village Manager's Memo.
- Provide a Village sustainability web site provides a "one stop" resource for information on Village projects and information related to sustainability.
- Ask for ideas and feedback with the sustainability action plan; incorporate new ideas into the plan.
- Incorporate Sustainability Action Plan into management strategic planning.
- Promote carpooling to and from work and to offsite meetings and conferences.

Mid-term (5-9 years)

- Develop awards/recognition program to acknowledge efforts.
- Partner with educational institutions such as UW-Milwaukee's Sustainability office to gain a further understanding of energy and resource implications.
- Incorporate Sustainability Action Plan into vision plan updates.
- Develop a sustainability-related book/public art event.

Long-term (10+ years)

- Incorporate sustainability goals into employee goals and performance evaluation.

Goal: Engage the Village Board into sustainability efforts.

Short-term (0-4 years)

- Provide recurring updates on the plan to Trustees along with other project/implementation plans.
- Provide a copy of the Sustainability Action Plan to all newly elected Trustees.
- Develop a policy/checklist for considering the triple bottom line (environment, social equity and economy) in policy decisions.

Mid-term (5-9 years)

- Implement and evaluate policy/checklist for using triple bottom line in policy decisions.

IV. IMPLEMENTATION (Review and Update every five years)

Full Implementation Plan is Attached

Goals and Actions	Timeline	Responsible Dept(s)	Natural Step Condition
A. Energy Use			
B. Purchasing and Materials			
C. Land and Infrastructure			
D. Education and Outreach			

Glossary

Alternative fuel vehicles: vehicles that operate on fuels other than gasoline or traditional diesel. Alternative fuel vehicles include those that operate using compressed natural gas (CNG), liquid natural gas (LNG), propane, electricity, hybrid of gasoline and electricity, biodiesel and hydrogen.

Eco-municipality: An eco-municipality aspires to develop an ecologically, economically and socially healthy community for the long term. The eco-municipality becomes the driving force for involving citizens and sectors of the larger community in the process of becoming a sustainable community. Eco-municipalities collaborate with other organizations and communities regionally, nationally, and internationally to learn from and assist each other.

Environmentally preferable: a product, service, activity or process that has a lesser or reduced effect on human health and the environment when compared to other products, services, activities or processes that serve the same purpose.

Full-cost accounting: a method of accounting where the full costs and benefits of the decision are weighed (ie. costs are estimated for the long term impacts of the decision, hidden costs, externalities, overhead and indirect costs are included).

Green: for the purpose of this document, green is used as shorthand to refer to any environmentally preferable product, activity, service or process.

Greenhouse gasses: Gasses in the atmosphere which reduce the loss of heat into space. Human-induced emissions of greenhouse gasses are believed to be a main driver of current global temperature increases and increasingly erratic weather.

LEED™ certification (Leadership in Energy & Environmental Design): A rating system developed by the United States Green Building Council (USGBC) that sets definitive standards for what constitutes a green or environmentally preferable building. The certification system is self-assessing and is designed for rating new and existing commercial, institutional, and high-rise residential buildings. It evaluates environmental performance of the entire building over the building's life cycle. LEED certifications are awarded at various levels (certified, silver, gold, and platinum) according to a point-based scoring system.

Native species: plant or animal species native to the southeastern Wisconsin bioregion.

Renewable resources: natural resources that have an unlimited supply (such as solar radiation) or that can be renewed indefinitely if ecosystem health is maintained (e.g. fisheries or forests).

Sustainability: A state in which society does not systematically undermine natural or social systems within the biosphere. Achieving sustainability would happen when the four system conditions of The Natural Step are met.

System Conditions: Four conditions for achieving sustainability. The conditions are stated in the negative to create the constraints within which creativity can flourish. They are:

In a sustainable society, nature is not subject to systematically increasing:

- Concentrations of substances extracted from the earth's crust
- Concentrations of substances produced by society
- Degradation by physical means
- and people are not subject to conditions that systematically undermine their capacity to meet their need

Systems-thinking: An approach to problem-solving that assumes that the individual problem is part of a much larger system. The intent is to solve the problem in a way that does not create further problems down the road. This approach is particularly important in complex systems where we do not always understand the inter-connection between parts.

The Natural Step Framework: A planning and decision-making framework that allows individuals to understand the root causes of unsustainability and then move strategically toward sustainability.

Triple Bottom Line: In practical terms, triple bottom line accounting means expanding the traditional reporting framework to take into account ecological and social performance in addition to financial performance.

Urban villages: mixed-use developments in walkable, livable and transit-oriented districts that balance the need for sufficient density to support convenient, high-frequency transit service within the scale of the adjacent community.