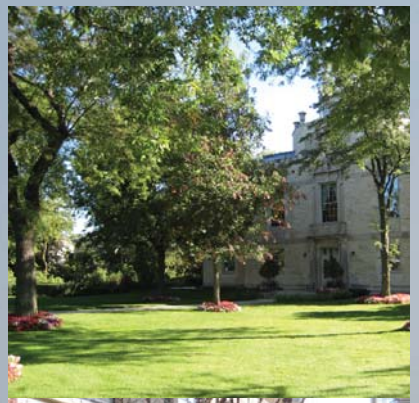

# **Highland Park** Community Sustainability Strategic Plan

*August 23, 2010*

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## Introduction from Mayor Michael D. Belsky

Fellow Highland Park Residents:

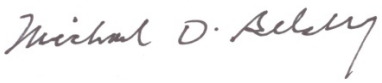
Nearly three years ago, I convened a group of representatives from across the community and formed the Green Initiatives Alliance. This Alliance is an intergovernmental collaboration and its efforts are dedicated to promoting a sustainable way of life in Highland Park. I did so out of inspiration from and in solidarity with mayors across the United States who said the time to address climate change is now. Since that time, more than 1,000 mayors across the country have joined me in pledging to reduce their emissions by 7% below 1990 levels by 2012. We did so out of recognition that climate change and other environmental issues threaten the quality of life we enjoy.

While the diligence of a growing, dedicated network of Alliance partners has given new visibility and meaning to sustainability, our greenhouse gas emissions have continued to grow. In fact, to meet our climate commitment, Highland Park must reduce its emissions by 25% in three short years. While this goal remains achievable, it will undoubtedly require all of the community's talent, commitment and persistence.

I encourage each member of the Highland Park community to lead by example and take personal responsibility out of concern for the greater good. Only by being accountable can we succeed. As Mayor, I am committed to providing leadership by example, and I recognize that the City's example rings hollow without dedication from residents and businesses in the community.

Inscribed above the entrance to City Hall is the phrase, "The salvation of the community is watchfulness of the citizen." Living by these words requires us to remain mindful of our environmental impacts and their effects on the well-being of present and future generations. By taking action through the City's Sustainability Plan and making a dedicated commitment to a better future, we can hold ourselves accountable and enrich the quality of life in Highland Park.

Sincerely,



Michael D. Belsky
Mayor, City of Highland Park

## Introducing Highland Park's Sustainability Plan

**Methodology** This Plan summarizes data collected from the City of Highland Park, Park District of Highland Park, School Districts 112 and 113 (including North Shore Academy), the Highland Park Library, Moraine Township, the Solid Waste Agency of Lake County (SWALCO), Commonwealth Edison and North Shore Gas. This quantitative data is captured in a set of indicators, referenced throughout and included in the Appendix of this document. The indicators provide a means of measuring current performance and future progress toward the goals outlined in the Plan.

Qualitative feedback also comprises an important component of the Plan that reflects community perceptions and preferences. Community input includes perspectives from a public survey and visioning session conducted as part of the Plan development process. Perspectives also include information from a year's worth of meetings of the Highland Park Green Initiatives Alliance, and three Central Business District Master Planning sessions, in addition to consultations with City and Park District staff, City Commissioners and Highland Park residents.

**Structure** The resulting vision frames the Action Plan presented here and addresses the key indicators that constitute the baseline condition of Highland Park. Based on those indicators and recent trends, the Plan sets community-wide targets for 2030 and interim targets linked to Five-Year Plans divided into four phases. The interim targets help to shape priorities and track progress toward the 2030 targets identified in the Plan, and have been identified in conjunction with each respective goal objective. For the complete list of implementation activities by phase, refer to Appendix VI at the end of this document.

**Why 2030?** The 2030 timeframe was chosen to allow some creativity in the visioning process and in realizing that major changes in Highland Park will likely take time. Major benchmarks include the City of Chicago's *Climate Action Plan* (2020), Chicago Metropolitan Agency for Planning (CMAP)'s *GO TO 2040* (2040). A 2030 time horizon takes middle ground in balancing creativity and a sense of urgency, particularly with interim five-year targets.

**Primary Plan Objectives** Throughout the Sustainability Plan, a variety of objectives provide policy direction and include metrics to track progress concerning Highland Park's 10 Sustainability Goals. Some of the most ambitious and defining objectives presented in the Plan include:

- **Energy & Built Environment:** Improve building energy efficiency by 50% by 2030 and source at least 50% of its heat and power from sustainable energy sources by 2030
- **Mobility:** Decrease household vehicle miles traveled to 50% below 2008 levels by 2030
- **Materials:** Increase recycling rates by 50% by 2020 and reduce household waste generation by 50% below 2008 by 2020
- **Water:** Reduce water consumption community-wide by 30% below 2008 levels by 2030
- **Ecosystems:** Increase habitat by 100 acres by 2020 and achieve 30% market share for local and organic produce by 2030 through direct farmer-to-consumer sales and grocery stores

## Executive Summary

The City of Highland Park, Illinois, a community of nearly 32,000 residents situated along the shores of Lake Michigan, is home to the largest retail economy in Lake County and the world-renowned Ravinia Festival. The City has demonstrated its leadership in sustainability by founding the Green Initiatives Alliance ("The Alliance") to help the City meet its commitment under the U.S. Conference of Mayors' *Climate Protection Agreement*. In signing the Agreement, the City committed to reduce its greenhouse gas emissions by 7% below 1990 levels by 2012. *The Alliance* was recently recognized by both the U.S. Conference of Mayors and the Northwest Municipal Conference for excellence in sustainability.

**10 Sustainability Goals** The City, its business partners and residents developed a vision and 10 Sustainability Goals and accompanying Community Pledge to guide community-wide sustainability initiatives over the next twenty years. The 10 goal areas identified include: Community Engagement, Governance, Green Economy, Energy & Built Environment, Mobility, Materials, Water, Ecosystems, Culture and Legacy. A summary of the key action items contained in the plan follows.

**The human factor** The Volunteer Pool of Highland Park and League of Women Voters exemplify the civic-minded values of Highland Park residents, who join numerous Highland Park students in service to the community. In this difficult financial time, such civic engagement remains crucial to the success of Highland Park's transition to sustainability. Through an innovative blend of incentives for conservation and green building and impact fees to reduce the environmental impact of the build environment, the City emphasizes a self-funding approach to sustainability initiatives. Equally, the City stresses a public-private partnership through the Chamber of Commerce and Downtown Alliance by incorporating sustainability into Highland Park's real estate and retail economy. To address Highland Park's mobility needs, car sharing, bike and pedestrian traffic will complement Highland Park's extensive public transportation network in developing a Complete Streets plan to supplement the City's Central Business District Master Plan.

**Human-Nature Interaction** Highland Park's Sustainability Plan stresses a need for public infrastructure and space to work in concert with natural systems to manage stormwater, provide habitat and food. Building on Highland Park's strong recycling programs and innovative commercial refuse franchise, the City plans to reduce waste generation further through a bottle bill and composting pilot programs. By encouraging conservation, leak detection and controlling erosion, the City is committed to preserving and improving water quality and abundance. As a regional destination for the arts and home to over 200 historic buildings, the City is committed to sustainable event management and historic preservation by preserving the character of the community. Finally, the City has developed *Conditions for Success* that will guide the community in pursuing the City's 10 sustainability goals and defining the legacy Highland Park will leave for future generations.

Overall, the City's Sustainability Plan strives to: 1) leverage school involvement and volunteer participation to enhance cost effectiveness and build community support for sustainability, 2) coordinate governance activities through sustainability staff, commissions and a more defined Alliance role, 3) achieve deeper collaboration across City departments and with the business community and 4) employ a blend of incentives and impact fees to fund sustainability efforts on energy, water, materials, mobility and ecosystems. A goal-by-goal summary of key actions follows.

### Goal 1: Community Engagement

- **10% for 10 in 2010 Initiative:** Secure pledge commitments from 10% of Highland Park households and businesses to take the City's Community Sustainability Pledge by the end of 2010
- **Curriculum:** Devote 60,000 instructional hours to sustainability curriculum across Highland Park District 112 schools, Highland Park High School and North Shore Academy by 2012

- **Action plans:** Engage students to work with parents to develop family action plans to track energy, water and material use and share related experiences and lessons learned while encouraging students to present recommendations for greening Highland Park's school to City government
- **Volunteering:** Encourage residents to commit 10,000 hours Citywide to sustainability by 2014
- **Community education:** Develop general interest, green business and technical education through publicly-available, community-supported CoffeeTalk, ShopTalk, Ask an Expert programming
- **Centers of action:** Establish the Highland Park Public Library and Heller Nature Center as points of reference, organization and mobilization for community-wide sustainability initiatives

**Goal 2: Governance**

- **City Staff:** Designate a team of City Staff, led by a Sustainability Coordinator, to report on and coordinate sustainability initiatives and transition to full-time Coordinator position by 2014
- **Commissions/Alliance:** Strengthen the Green Initiatives Alliance by developing a reporting structure through Commissions and research the possibility of establishing a 501(c)(3) organization with a Board of Directors
- **Collaboration:** Engage the GIS Consortium and Northwest Municipal Conference to assemble leaders in Highland Park to discuss the expansion of sustainability initiatives to a regional level
- **Joint procurement:** Leverage City buying power and decrease the incremental costs of environmentally preferable goods by partnering with Deerfield, Northbrook and other communities
- **Funding mechanisms:** Create a community-wide charitable fund and tiered utility rates and fuel taxes by 2012 to encourage self-funding of sustainability initiatives

**Goal 3: Green Economy**

- **Certification:** Develop a green business certification in partnership with the Chamber of Commerce, Downtown Alliance and for local businesses by 2012 based on the Andersonville Development Corporations' EcoAndersonville Initiative in Chicago
- **Roundtable:** Engage local businesses in developing strategies for promoting local green businesses and building identity in a way that makes Highland Park a green retail and services destination
- **Development guidelines:** Build on the success of the Central Business District Master Plan process and adapt concepts for use in other districts throughout Highland Park
- **Statements of performance:** Require Energy Star Statements of Performance to develop facility-level baseline energy, water and material efficiency and promote high-performance buildings
- **Market mechanisms:** Develop a local tradable permit system for energy, water and material efficiency in collaboration with the Chicago Climate Exchange

**Goal 4: Energy & Built Environment**

- **Energy audits:** Offer 500 free audits through City staff and hire vendors to provide additional audits
- **Municipal buildings:** Retrofit existing boilers to a minimum of 95% efficient boilers and perform solar thermal audits for existing buildings by 2015 and adopt LEED standard for new construction
- **Green building:** Achieve reductions in energy, water and material efficiency against Statements of Performance by phasing in LEED requirements for new and existing construction through 201
- **Small-scale renewables:** Install 50kW of solar PV on City facilities by 2012 and 500 3kW residential installations by 2015, with a goal of 7 million kilowatt-hours of renewable generation by 2030
- **Utility-scale renewables:** Perform feasibility studies of an offshore wind farm, lake cooling and biomass-fired heat and power plant by 2030

## Goal 5: Mobility

- **Complete Streets:** Engage the public and the Active Transportation Alliance to develop a Community Plan to promote a safe, low-emission intermodal transportation system by 2011
- **Survey:** Circulate a survey to Hospital and Park District employees to identify options for reducing fuel use among Highland Park's two largest employers
- **Car sharing:** Introduce car sharing at every train station and in every business district by 2015
- **Parking:** Increased bike parking and introduce designated plug-in and solar charging stations
- **Neighborhoods:** Use retail mix, zoning and parking requirements to decrease vehicle miles traveled

## Goal 6: Materials

- **Packaging/serviceware:** Introduce a City bottle bill and implement a polystyrene container surcharge by 2012 to address the City's leading source of municipal solid waste generation
- **Organics:** Introduce composting pilot programs through the proposed residential refuse franchise and existing commercial franchise, with an emphasis on special events and restaurants, by 2012
- **Paper:** Introduce 100% recycled, FSC-certified paper purchasing requirements in 2011
- **Building materials:** Encourage the prevention of building waste, use and reuse of durable, non-toxic building materials through a construction and demolition waste ordinance by 2011
- **Textiles/furniture:** Develop a virtual bulletin board for charitable donations
- **Toxics:** Aerosol-based pesticide ban by 2012 and create a household hazardous waste (HHW) drop-off center by 2013

## Goal 7: Water

- **Rates:** Introduce tiered water rates in Highland Park to fund enhanced leak detection by 2012 and explore the increase of the City's stormwater fee to further improve stormwater management
- **Rain barrels:** Provide discounted barrels available to the public throughout 2010 and 2011 to reduce potable water use for irrigation (Highland Park's leading use) and help prevent residential flooding
- **Landscaping:** Provide expert advice from City, Park District and partners to the public to promote holistic approaches to water conservation that include native landscaping and drainage schemes
- **Domestic water:** Offer rebates for WaterSense fixtures and Energy Star appliances before introducing Code requirements for new plumbing fixtures
- **Leak detection:** Pursue enhanced leak detection to reduce system losses to 4% or less

## Goal 8: Ecosystems

- **Sensitive areas:** Protect sensitive ravine areas through ecological management zones by 2012
- **Ravines:** Develop a ravine protection ordinance based on existing guidelines and Ecological Management Zone designations by 2015
- **Forests:** Perform GIS mapping through the Public Works Department, Park District and The Alliance to monitor the health, extent and diversity of Highland Park's urban forest
- **Food:** Introduce organic milk and produce in school lunch vendor contracts, support community gardens and direct trade through farmers' markets
- **Habitat:** Sell native plants at cost to public and encourage integrated pest management to support biodiversity and provide 100 additional acres of natural areas in Highland Park by 2020

## Goal 9: Culture

- **Special events:** Introduce sustainable event management guidelines for Ravinia Festival, Taste of Highland Park, Port Clinton Art Festival and other City-sponsored events by 2012
- **Vendors:** Encourage special event food vendors to offer local and organic products through a refundable deposit and introduce an off-season farmers' market at Ravinia Park
- **Recycling:** Recruit community volunteers to recycle at the Ravinia Festival
- **Historic preservation:** Preserve all presently-identified contributing buildings in Highland Park
- **Transportation:** Encourage wider use of bike, pedestrian and transit by event patrons

## Goal 10: Legacy

- Strike a balance between community-wide consumption and productive capacity
- Instill science-based, action-oriented stewardship in City management, school curriculum and throughout the Highland Park economy
- Incorporate environmental best practices into infrastructure, services and cultural events
- Avoid drawing down aquifers and importing energy from the electricity grid on annual basis
- Maintain healthy, functional and diverse ravine, forest and prairie ecosystems
- Protect Lake Michigan as a viable freshwater source by controlling erosion and invasive species
- Maintain Highland Park's architectural heritage through historic preservation and zoning

## Highland Park's 10 Sustainability Goals

***As a partnership among residents, businesses, community institutions and units of government and as an example to communities worldwide, Highland Park is committed to preserving and enhancing the quality of life, human health and natural areas throughout the City. Looking to 2030, it is agreed that these partners will:***

**Goal One: Engagement**

- Establish education and volunteerism as hallmarks of an engaged, productive community and key components in shifting the community to a more sustainable way of life

**Goal Two: Governance**

- Strengthen Highland Park's nationally-recognized leadership in green governance by continuing to stimulate inclusive public dialogue through the Green Initiatives Alliance, giving a compelling voice to transformation through City Council Advisory Commissions and supporting accountability in, and positive contributions to, sustainability in action

**Goal Three: Green Economy**

- Sustain vibrant, dynamic business districts throughout the community that respect human and natural resource bases while creating jobs and improving the quality of life. Make Highland Park a hub for sustainable enterprise that leverages the community's knowledge and financial capital

**Goal Four: Energy & Built Environment**

- Leverage all opportunities to reduce the use, cost and impact of building energy use through aggressive deployment of energy efficiency, renewable energy and district energy technologies community-wide

**Goal Five: Mobility**

- Satisfy the community's mobility needs with an efficient, safe and accessible intermodal transportation system that relies heavily on public transit, biking, pedestrian traffic, car sharing and clean fuels

**Goal Six: Materials**

- Achieve efficiency and prosperity through infrastructure, services and procurement policies that encourage smart design and enable the widespread use of durable and non-toxic products, recycling, composting and reuse

**Goal Seven: Water**

- Act as responsible stewards of the quality and abundance of the surface and groundwater resources Highland Park shares with its neighbors through conservation, stormwater management and other water quality initiatives

**Goal Eight: Ecosystems**

- Nourish the productive capacity of the North Shore by preserving habitat for threatened and endangered species, promoting the health and diversity of local animals, plants and microorganisms, practicing responsible land use and supporting sustainable local and community agriculture conservation

**Goal Nine: Culture**

- Preserve an inherited legacy of diverse and abundant cultural and natural assets that solidify Highland Park's future as an enduring destination for arts and recreation and enrich the experience of Highland Park for residents and visitors while supporting local businesses

**Goal Ten: Legacy**

- Create a model sustainable community out of a commitment to preserve the legacy given generously to us and passed along to future generations with care and pride by encouraging a long-term perspective that embraces these goals, while adapting to a changing natural environment and evolving human needs

## Community Sustainability Pledge

By working together and taking simple steps starting today, Highland Park can avoid 20,000 tons of greenhouse gas emissions and save 15 million gallons of water over the coming year. The following pledge challenges residents, businesses, and institutions in Highland Park to do their part in achieving this goal.

"I pledge to set an example in my household or business out of a commitment to a healthy, productive community. I make this commitment as my positive contribution to Highland Park through the community's 10 Sustainability Goals."

- **Legacy:** In my daily decisions, I will consider that all of my actions have an environmental, financial and social impact now and on resources available to future generations. I will integrate these concerns into my shopping and commuting routines as well as my civic involvement in the community.

- **Volunteering:** I will volunteer at least 3 hours of my time to sustainability-related programming, mentorship or implementing sustainability-related projects at home, work or worship.

    - If one member of each household in Highland Park honored this commitment, Highland Park would have the equivalent of 18 full-time employees dedicated to sustainable living.

- **Energy:** I will reduce my natural gas use by 5% by sealing drafts and changing my furnace filter every six months. At the same time, I will save 725 kilowatt-hours of electricity by switching six incandescent bulbs to compact fluorescent or LED lamps.

    - If each household in Highland Park honored this commitment, Highland Park would reduce greenhouse gas emissions by more than 11,400 tons of carbon dioxide equivalent.

- **Mobility:** I will reduce vehicle fuel consumption by 8% by properly inflating my vehicle tires, combining trips, and utilizing transit (Metra and/or PACE), biking or walking whenever possible.

    - If each household honored this commitment, Highland Park residents would save nearly a million gallons of gasoline and reduce nearly 8,600 tons of carbon dioxide equivalent.

- **Water:** The number one use of water in Highland Park is landscaping. To do my part to protect Lake Michigan, I will harvest rainwater for landscaping by installing and maintaining a rain barrel of at least 40 gallons in size.

    - If each household honored this commitment, Highland Park residents would save over 15 million gallons of drinking water (enough to supply all of Highland Park's schools for a year).

**Success stories (2000-2010)**

- *Student presentations on vermiculture and service learning through habitat restoration*
- *Project Citizen civic sustainability program at Elm Place School*
- *Training of North Shore Academy students and faculty to deliver energy audits*
- *Introduction of AP Environmental Science at high school level*

**Intended Outcomes (2010-2030)**

- *Engage students to help drive sustainability community-wide*
- *Deliver 60,000 instructional hours of sustainability curriculum in Highland Park schools by 2012*
- *Develop general interest and professionally oriented sustainability programming for residents and businesses, and engage the business community to host seminars*
- *Establish community Centers of Action at the Public Library and Heller Nature Center, and an online portal to enhance accessibility of sustainability-related information and programming*

CHILDREN ENJOYING A PARK DISTRICT OF HIGHLAND PARK DAY CAMP

## Goal 1: Community Engagement

***Establish education and volunteerism as hallmarks of an engaged, productive community and key components in shifting the community to a more sustainable way of life***

***Lead Agencies:*** City Manager's Office, Environmental Commission, Highland Park Public Library, School District 112, Highland Park High School, North Shore Academy, Park District of Highland Park

***Key partners:*** *City of Highland Park Departments of Public Works and Community Development, District 112 Go Green! Coordinators, Highland Park High School Environmental Club, League of Women Voters, North Shore Academy Green Alliance Club, School PTAs and PTOs, Volunteer Pool of Highland Park*

**Igniting a Passion for Sustainability**

Set against a backdrop of a challenging economy, this Plan envisions a successful transition to sustainability rooted in a cost-effective, results-driven approach to achieving outcomes that address urgent social and environmental issues and enhance the quality of life in Highland Park. Highland Park's transition to sustainability, in process and result, belongs to all of Highland Park: its residents of all ages, its businesses and government. Embracing this opportunity to shape the community's development over the next twenty years will require a willingness to learn, adapt, give and teach. Technology alone cannot make Highland Park a sustainable community; nor can simply writing a check, though technology and funding both can help facilitate the transition to sustainability.

Only human ingenuity, cooperation and resolve to focus on the social and environmental impact of daily life along with finances can effectively leverage resources for sustainable development and secure a proud legacy. Education and volunteerism have played integral roles in developing Highland Park into the desirable community that it is today. Both education and volunteerism not only exemplify community priorities, but are important tools for building community bonds among neighbors and improving quality of life on the road to a sustainable future. While that journey may appear daunting, the priorities and tools associated with this Plan are designed to identify specific actions that boil the transition down into simple steps that residents, businesses and government can take today and in the future.

Highland Park's community engagement revolves around five related, action-oriented objectives: Inform, Inspire, Empower, Connect and Track. These objectives lend structure to the many education and volunteer efforts that underpin Highland Park's sustainability efforts. The diagram at right illustrates the process of empowering the community with resources and monitoring the effectiveness of those resources in inspiring action and measurable progress toward Highland Park's 10 Sustainability Goals.

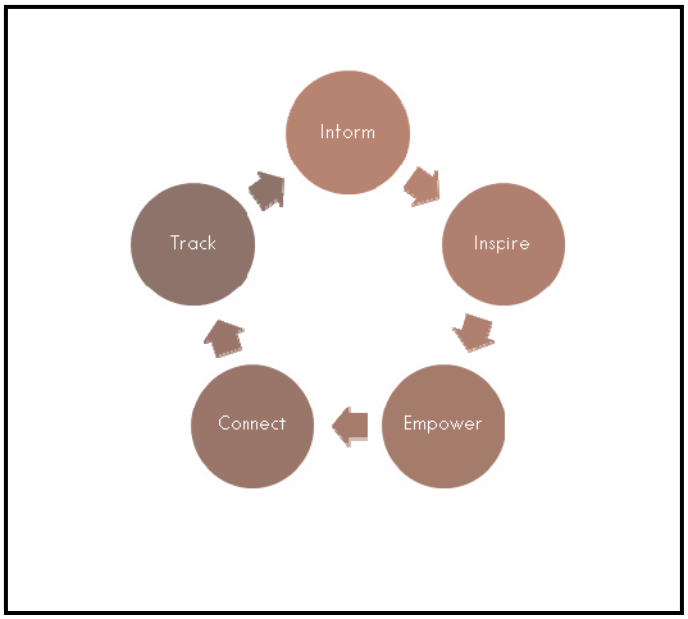



**Figure 1. Highland Park's Engagement Process**

**10% for 10 in 2010 Initiative.** Only by relaying a clear message with a defined path of action can the community succeed in solidifying its role as a model sustainable community. In an effort to build awareness and secure commitment to act, Directors of City Departments and Agencies will introduce Highland Park's 10 Sustainability Goals and Pledge on Public Access Television. In calling on 10% of Highland Park households and businesses to take the Community Sustainability Pledge in 2010, Department Directors will outline how their departments and programs can help and provide tips for residents. Tips for residents will include short demonstrations on how to perform the actions cited in the Community Sustainability Pledge. The City will also use public access programming to publicly recognize ongoing model sustainability efforts being undertaken by residents and businesses to encourage the sharing of best practices throughout the community. As part of the 10% for 10 in 2010 Initiative, the City will actively recruit 10 Sustainability Ambassadors to further this

mission and help track the impact of the pledge commitments.

- **Action - Awareness:** Through its *10% for 10 in 2010 Initiative*, the City of Highland Park challenges 10% of households and businesses to take the *Community Sustainability Pledge* (see page 6) and seeks 10 Sustainability Ambassadors community-wide by the end of 2010. Beginning no later than January 1, 2011, Sustainability Ambassadors will be trained to share best practices and track results among pledge-takers and encourage greater participation. Overall, the City is committed to achieving community-wide Plan recognition of 50% by the end of 2010 and 75% by the end of 2011. Results will be measured through random year-end community surveys.

**Objective 1.1 (Inform)*: Engage Highland Park's students in supporting the success of Highland Park's 10 Sustainability Goals through curriculum and service learning opportunities***

Planting the seeds for the transition to sustainability starts with education. Together, parents, teachers and City government can help ensure that these seeds are planted from day one in Highland Park schools, at home and in the community. For students from the age of five, Highland Park's schools play a pivotal role in the intellectual development and social organization of thousands of students across the community. In Highland Park schools, students learn not only how to read, add and speak in public, but they learn how to respect and help one another and serve the community.

ACADEMY FOR GLOBAL CITIZENSHIP STUDENTS IN CHICAGO LEARN ABOUT ORGANIC GARDENING

Students often compel parents to embrace technology and change in a non-threatening way and persuade parents to abandon bad habits ranging from smoking to throwing recyclables in the trash. Students lend enthusiasm and refreshing possibilities for Highland Park's future and role in a global context as they develop. Often underestimated, students offer valuable resources in addressing today's critical social, environmental and economic realities. Many Highland Park students will go on to top colleges and universities and enjoy successful careers. By 2030, some will have returned to the community to raise families. No matter where they settle, today's students represent Highland Park's legacy. Today's students need access to knowledge and opportunities to serve and participate as partners in Highland Park's transition to sustainability.

By signing the Illinois Sustainable Schools Compact, Elm Place School and Highland Park High Schools have demonstrated leadership by example. As signatories, the schools have pledged to incorporate sustainability in their curriculum, operations buildings and grounds [1].

In addition to their participation in this important statewide initiative, both District 112 and Highland Park High School report regularly on their sustainability initiatives as members of Highland Park's Green Initiatives Alliance.

**K-8 Curriculum** In the classroom, Patricia Castro's 4th grade class is leading by example with its demonstration of composting and vermiculture. North Shore Academy faculty and students are receiving training from ComEd to perform

energy audits for community residents through service learning projects. In March, Elm Place's 7th Grade class presented its Project Citizen ideas for sustainability solutions for Elm Place to a panel that included Mayor Belsky, Councilwoman Terri Olian, District 112 Assistant Superintendent Lubefeld, Lake County Community Health Director Mark Pfister and Congressional candidate Dan Seals.

**High School Curriculum** As part of Highland Park High School's ongoing efforts to incorporate sustainability into its curriculum, HPHS students currently receive nearly 30,000 hours of sustainability related instructional time. Enrollment in Advanced Placement (AP) Environmental Science for HPHS seniors quickly reached 160 students. As with other AP classes, students can receive college credit that can encourage HPHS graduates to pursue Environmental Science at the college level. An additional 60 students participate in the school's EcoAdventure curriculum.

- **Action – Curriculum**

  **Phase 1 (2010-2014):** By 2012, Highland Park schools (District 112, Highland Park High School and North Shore Academy) will deliver 60,000 instructional hours related to sustainability. This curriculum specifically includes District 112's Project Citizen program, North Shore Academy's energy auditor classroom training and HPHS's AP Environmental Sciences and EcoAdventure curriculum. Highland Park schools will expand enrollment in existing classes and identify opportunities for incrementally incorporating sustainability into lesson plans.

  **Phase 2 (2015-2019):** By 2015, Highland Park schools will increase the number of instructional hours dedicated to sustainability to 75,000 hours by reviewing curriculum development on a comprehensive basis.

  **Phase 3 (2019-2024):** By 2019, Highland Park schools will develop a strategic sustainable curriculum plan for the next five years, in support of Highland Park's goal of providing 100,000 instructional hours related to sustainability.

  **Phase 4 (2025-2029):** By 2024, Highland Park schools will build on successes and lessons learned to develop a needs assessment and set of curriculum priorities for the fourth and final phase of this Plan.

**K-8 Service Learning** Through impactful curriculum and service learning opportunities, Highland Park Schools have already embarked on the journey toward sustainability. Across District 112 schools, nearly 4,000 students participated in service learning. Of those, about 30% participated in service learning with an environmental or sustainability theme. By helping to clear buckthorn and other invasive species, students from Sherwood and Red Oak Schools are learning first-hand how they can work together with classmates to help restore Highland Park's native ecosystems.

**High School Service Learning** HPHS students expanded on their in-class sustainability initiatives through extracurricular organizations and service learning. In just one year, the HPHS Green School Initiative grew to 50 students. The fruits of these experiences include the development of a biodiesel lab that produces 600 gallons of clean fuel from vegetable oil each year, creating a turtle and butterfly sanctuary, redesigning the school's courtyard and submitting a green planning proposal to the Department of Community Development.

- **Action - Service Learning:** In collaboration among school service learning coordinators and Highland Park's Volunteer Pool, Highland Park Schools will also dedicate 30,000 service learning hours to sustainability by 2012 and 50,000 hours of service learning by 2020.

**Objective 1.2 (Inspire):** ***Promote open dialogue about and ownership of 10 Sustainability Goals, Targets and Pledge among residents, businesses, institutions and City employees and encourage participation in the Community Pledge and related activities***

While students represent Highland Park's future, the adult members of the community bear responsibility for purchasing decisions and routines in Highland Park's households, businesses and City government today. While students can share information with their parents and present their points of view to City government and school leadership, adults must act.

Developing a personal connection to Highland Park's 10 Sustainability Goals and a sense of community ownership remain critical to the success of sustainability initiatives in Highland Park. For that reason, this Plan focuses on bringing education to busy residents and professionals in a relaxed, yet thought-provoking, setting that encourages dialogue and sustainable decision-making. Such programming will be delivered through three media: *sustainHP Exchange, CoffeeTalk* and *ShopTalk*.

**sustainHP Exchange:** Every quarter, the Highland Park community will have an opportunity to listen to and pose questions to Highland Park leaders and external experts in a moderated discussion of a topic related to Highland Park's 10 Sustainability Goals. The civic-minded *Exchange* will provide attendees direct input in shaping sustainability initiatives within Highland Park institutions and applying lessons learned and best practices from thought leaders outside the community. Sessions will be recorded and available through public access and as streaming video through the City's sustainability website. Follow-on discussion, facilitated by Highland Park's Sustainability Ambassadors, will encourage extended dialogue concerning the topics presented.

- **Action:** The City will hold two *sustainHP Exchange* sessions in 2011, three sessions in 2012 and quarterly sessions in 2013 and thereafter. The City aims to reach at least 50 participants in 2011, 150 participants in 2015 and 250 participants in 2020. The final session of each year will feature a *State of Sustainability* address by a Highland Park City official.

**CoffeeTalk:** For a less formal and more intimate discussion, the community can attend the *CoffeeTalk* series while supporting local coffee shops and restaurants. The *CoffeeTalk* host business will outline its own environmental initiatives and highlight the sustainable products and services they offer. Presented jointly by the Chamber of Commerce, Downtown Alliance, Business and Economic Development, and Environmental Commissions, invited speakers will focus on general interest, consumer-related issues including sustainable retail and food choices.

- **Action:** The City will hold two *CoffeeTalk* sessions in 2011 three sessions in 2012 and quarterly sessions in 2013 and thereafter. The City aims to reach at least 25 participants in 2011, 50 participants in 2015 and 100 participants in 2020.

**ShopTalk:** Quarterly *ShopTalk* sessions will infuse a business-centric, technically-minded perspective on sustainability and an opportunity for business-to-business networking. The Department of Community Development and Chamber of Commerce will collaborate with professional organizations to secure continuing education credit for the sessions offered. *ShopTalk* sessions will encourage broad participation and increased exposure for Highland Park green businesses throughout the North Shore and will focus on durable goods, design, construction practices and professional services. These ninety-minute sessions are intended to help professionals incorporate sustainability into their business practices, encourage those considering sustainability-related careers and build a referral network in the Highland Park community.

- **Action:** The City of Highland Park challenges Highland Park professionals to participate in at least 1,000 hours of professional education by 2013 and 5,000 hours by 2015. This Plan also looks to professional organizations to develop their own sustainability-related continuing education initiatives in support of Highland Park's 2020 community-wide goal of 10,000 hours of professional education for Highland Park residents.

**Objective 1.3 (Connect):** ***Provide physical and virtual resources community-wide to inform and track sustainability efforts***

Despite the prevalence of virtual, Internet-based resources, there is no substitute for physical locations as resources to support action and build community in the process. By serving as a community example through practices and periodic action challenges, community institutions will play an important role in Highland Park's transition to sustainability. By bringing the community together, Centers for Action can connect individual efforts with broader ones, build community and provide a model for sustainability education and awareness, inside Highland Park and beyond.

- **Action - Heller Nature Center:** By designating the Park District's Heller Nature Center as a Center for Action, the Park District of Highland Park will increase the number of visitors and volunteers from 13,000 in 2008 to 20,000 by 2025. The City will partner with the Park District and Highland Park schools to increase opportunities for hands-on learning at Heller Nature Center that appeal to curious students and interested adults alike. The City looks to community volunteers, especially parents, to help support the goal of delivering bi-monthly sustainability programming by the end of 2013.

- **Action - Highland Park Public Library:** Through programming like *No Impact Man* in October 2009 and with over 200 sustainability-related titles, the Highland Park Public Library is a natural, bike and transit-friendly choice. The City is committed to providing bi-monthly programming at the Library and working with the Library to develop a sustainability resource section by 2013.

Collaboration with community sustainability resources in and around Highland Park will help to broaden the impact and breadth of sustainability efforts in Highland Park. The Chicago Botanic Garden Center for Green Technology and Peggy Notebaert Nature Museum in Chicago, Glenview's Evelyn Pease Tyner Center, Ryerson Woods, Evanston Ecology Center have played integral roles in providing education and building a network of concerned residents and will be key partners in a network of sustainability-minded institutions across northeastern Illinois and beyond.

**Objective 1.4 (Track):** ***Improve public awareness and accountability of sustainability initiatives, impacts and choices and framework and ongoing support for residents, businesses and institutions through the You Count! We Count! campaign and pledge***

With the help of Highland Park's students, accountability in community efforts to reduce greenhouse gas emissions, waste generation and water consumption can help demonstrate that the actions of households and businesses across the community do make a difference. While aggregate data is already available through North Shore Gas, ComEd, the Department of Public Works and SWALCO, data on a household level is not readily available from all sources. While improving data quality, the You Count! We Count! Campaign can initiate a community-wide dialogue about efficient energy, material and water use and the support of sensitive habitat and ecosystems. This data will inform the efforts of the Green Initiatives Alliance and the independent efforts of its members in support of Highland Park's 10 Sustainability Goals.

Beginning no later than January 1, 2012, Highland Park schools will begin integrating the Highland Park's Sustainability Goals into the curriculum and students will benefit from a hands-on experience that will also help Highland Park's households and businesses become more sustainable in their everyday operations.

- District 112 will develop an online energy, material, water use and habitat support survey for students to complete with the assistance of their parents and will provide supplementary web-based resources for parents and students through the survey site. Based on the data collected, students and parents will develop a family action plan for addressing household consumption and will report back on progress and challenges encountered. The information collected and plans created will reduce the environmental impact of Highland Park's households.

- Building on Elm Place School's Project Citizen model, students from Elm Place, Edgewood and Northwood Schools will work with faculty and administration to analyze school operations and make recommendations on how to improve energy, material, water efficiency and habitat support. Students will present their recommendations to the Green Alliance and measures identified will be considered for implementation.

- In coordination with North Shore Academy's efforts to provide energy audits for Highland Park's senior residents, North Shore Academy students will track how their energy audits and measures improve energy efficiency for the senior residents they serve and provide a report to the Green Initiatives Alliance.

**Objective 1.5 (Empower):** ***Transform public interest into action that has a lasting impact on Highland Park and fosters a lifestyle of health and sustainability through individual action and community volunteer efforts***

As rain gardens at Elm Place Elementary School and Highland Park High School demonstrate, intergenerational volunteer efforts provide students with mentoring and adults with a sense of accomplishment. A contribution of just one hour per household each year would result in 10,000 hours of volunteer effort. That effort would be equivalent to hiring a sustainability department of five full-time staff members and would save over $250,000 every year.

- **Action - Adult Volunteering:** By committing 10,000 volunteer hours to sustainability by 2014, Highland Park residents and businesses can help ensure success in the transition to sustainability. Volunteer hours also include do-it-yourself home and business projects related to sustainability. With the help of the Volunteer Pool of Highland Park and Chicago Wilderness, the community will increase volunteerism for sustainability to 20,000 hours by 2020 and 30,000 hours by 2030, as tracked by the Green Initiatives Alliance through participating Commissions.

In order to provide structure and technical expertise to volunteer efforts, two means of assistance will be offered: the *serveHP Network* and *Ask an Expert* initiatives.

**serveHP Network:** The *Network* will facilitate collaboration among School Service Learning Coordinators, Go Green! Committee staff and students, the Green Initiatives Alliance, the Volunteer Pool of Highland Park and affiliated City Commissions. Together, *Network* collaborators will organize and sponsor service days based on Goal Areas. To the greatest extent possible, events will be coordinated with other organizations including member organizations of Chicago Wilderness. Sponsorship and participation by local businesses will also be promoted through the Chamber of Commerce, Downtown Alliance, Rotary and Kiwanis organizations.

- **Action:** The Highland Park community will dedicate 10,000 hours of community service hours to achieving Highland Park's 10 Sustainability Goals by 2014.

**Ask An Expert:** The *Ask An Expert* series will provide quarterly, seasonally-appropriate training on sustainable practices through City forestry, community development, natural areas and stormwater experts. The training provided will include installation of rain barrels, creation of habitat with native plants and weatherization that helps residents and businesses lead by example in supporting Highland Park's 10 Sustainability Goals. At the same time, the series will strengthen the connection between City departments and community needs and challenges.

- **Action:** The City of Highland Park will educate business owners and City staff by April 2011 and will implement quarterly community-wide programming by July 2011 with a goal of to educating 100 residents in the first year. Participating in such events will count toward business pledges for professional education. By the end of 2012, the City will have educated at least 200 participants.


HIGHLAND PARK CITY HALL

## Goal 2: Governance

***Strengthen Highland Park's nationally-recognized leadership in green governance by continuing to stimulate inclusive public dialogue through the Green Initiatives Alliance, giving a compelling voice to transformation through City Council Advisory Commissions and supporting accountability in, and positive contributions to, sustainability***

***Lead Departments/Agencies:*** *City Manager's Office, Mayor and City Council*

***Key Partners:*** *Park District of Highland Park, Elementary School District 112, High School District 113, North Shore Academy, Highland Park Public Library and Moraine Township*

**Success stories (2000-2010)**

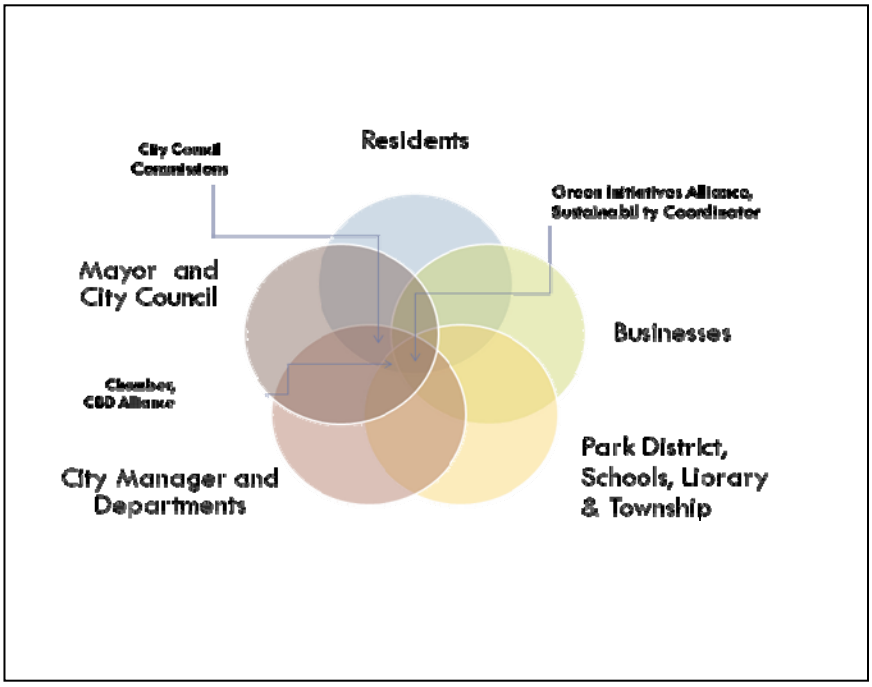
- *Founding of Green Initiatives Alliance*
- *Recognition by Northwest Municipal Conference and the U.S. Conference of Mayors for leadership in sustainability*
- *Launch of Sustainability Masterplan and CBD Masterplan*

**Outcomes (2010-2030)**

- *Promote four City staff to sustainability positions*
- *Strengthen Green Initiatives Alliance, consider 501(c)(3) organization status with Board of Directors, and assign responsibilities to Commissions and Task Forces*
- *Identify joint green purchasing opportunities in collaboration with Deerfield and Northbrook*
- *Identify opportunities for collaboration through the GIS Consortium and Northwest Municipal Conference*

As one of more than 1,000 participating communities across the United States, Highland Park has chosen to lead by example by signing the U.S. Conference of Mayors' Climate Protection Agreement. By signing, the City has committed to reduce its greenhouse gas emissions by 7% below 1990 levels by 2012. This commitment to climate protection exemplifies Highland Park's leadership on sustainability in governance. While the community has taken the first step of making a commitment, the challenge of implementation remains. This Plan clarifies, in detail, how Highland Park units of government will collaborate and build community participation in Citywide sustainability efforts.

Founded in 2008, the Highland Park *Green* Initiatives Alliance has served as a monthly forum to outline recent progress and new initiatives related to sustainability in Highland Park. From its inception, the Alliance has included all of Highland Park's units of government. Alliance members include representatives from the City Manager's Office, City Departments, City Council, Park District, Elementary School District 112, High School District 113, Public Library and Moraine Township.




Intergovernmental collaboration through the Alliance has served as a foundation for the City's environmental initiatives. Since its founding, the Alliance has grown to include the Solid Waste Agency of Lake County (SWALCO), Highland Park Chamber of Commerce, Downtown Alliance, Highland Park Hospital and a number of interested citizens. In 2009, the Alliance was recognized for excellence by both the US Conference of Mayors and the Northwest Municipal Conference. In partnership with the broader community, the Alliance will continue to play a pivotal role in implementing the sustainability plan outlined here. In that effort, the Alliance is committed to remaining a model for transparency and inclusion as Highland Park honors its commitments.

**Figure 2. Highland Park's stakeholder interaction**

As illustrated in the figure above, Highland Park's Green Initiatives Alliance provides a nexus for all of Highland Park's stakeholders. The City actively encourages participation by residents and businesses by reinforcing that the Alliance serves the public as a forum for new ideas and a window into governance related to sustainability. Equally, the Alliance will focus on broadening participation by residents and businesses, particularly through a new Sustainability Coordinator and sustainability team.

**Objective 2.1 (Coordinate): Identify a sustainability team of City staff to facilitate Plan implementation**

The City of Highland Park has proudly maintained a long history of cross-functionality in its operations. In the interest in heightening such interdepartmental cooperation and following the lead of other progressive North Shore communities like

Evanston and Northbrook, Highland Park will hire or assign a Sustainability Coordinator. Under the Direction of the City Manager's Office, the Coordinator will focus and augment outreach efforts, while sharpening a focus on measuring progress toward the goals of this Plan.

The Sustainability Coordinator will manage the City's internal sustainability initiatives and provide decision-making support through policy analysis, best management practices and recommended strategies to meet Highland Park's 10 Sustainability Goals. The Coordinator will also lead a team of three fellow sustainability staff, who will share responsibilities for achieving the Goals. Outside City government, the Coordinator will represent the community in collaborating with fellow sustainability coordinators and Chief Sustainability Officers in other communities and the private sector.

- **Action-Sustainability Coordinator:** The City of Highland Park will promote an internal candidate to assume the responsibilities of Sustainability Coordinator on a part-time basis by no later than January 1, 2011. In the interim, the City may engage consultants, college-level interns and Highland Park students to aid in the transition to a fully City-managed program. By January 1, 2014, the City will convert the Sustainability Coordinator position to a full-time position.

Implementing a community-wide sustainability program requires both breadth and depth of knowledge as well as flexibility to manage emergent City service requests. Until a full-time coordinator is hired, the City will spread responsibilities among the Coordinator and a team of three additional staff. Recognizing the specialized talents of many of Highland Park's staff, the City will promote three internal candidates to support the Sustainability Coordinator in plan implementation activities.

The three staff promotions will include an Education & Outreach Coordinator, Technical Services Coordinator and Volunteer Coordinator. The Education & Outreach Coordinator will assume responsibilities for working with teachers, administrators, PTAs, PTOs and students to identify opportunities to green curriculum. The Technical Services coordinator will collaborate with the Departments of Community Development and Public Works to disseminate practical information on how residents and businesses can incorporate sustainable practices and incorporate stakeholder feedback. The Volunteer Coordinator will work with Highland Park Schools, the Park District and Volunteer Pool of Highland Park to connect volunteers with projects toward achieving the community volunteering goals set forth in the Plan.

- **Action-Sustainability Team:** The City of Highland Park will identify Education & Outreach, Technical Services and Volunteer Coordinators on a part-time basis by no later than January 1, 2011. By August 1, 2011, the City will review the roles and responsibilities of the Sustainability Team in order to determine the most effective structure for the 2012-2014 period. The team will collaborate with the Sustainability Coordinator to generate a five-year Plan update by January 1, 2015, annual updates to track progress made and progress needed and an internal portal for consolidating information to be reported in the each update and external resources for volunteers and funders.

**Objective 2.2 (Consult): Expand and formalize the consultative capacity of the Green Initiatives Alliance through the delineation of responsibilities and heightened collaboration with Commissions and Task Forces**

In addition to enhanced collaboration between the Alliance's City Staff Liaison and the Sustainability Coordinator, the Green Initiatives Alliance will assume a more formal, defined mission. The Alliance will assume responsibility for tracking progress toward Highland Park's 10 Sustainability Goals through existing Commissions and Task Forces, in partnership with

other Alliance members. As outlined below, the Commissions and Task Forces will submit monthly updates on performance within their respective goal areas.

- **Action – Commission assignments:** The City will assign each of the community's 10 Sustainability Goals to Highland Park Commissions and Task Forces and will incorporate monthly reporting into the Alliance's meeting agendas no later than June 30, 2010. The Alliance will prepare subsequent quarterly and annual progress reports for each Goal.
    - **Engagement:** City Manager's Office, Environmental Commission, Library Board of Trustees, School District 112, Highland Park High School, North Shore Academy, Park District of Highland Park
    - **Governance:** City Manager's Office, Mayor and City Council, Park District of Highland Park, School District 112, Highland Park High School, North Shore Academy, Highland Park Public Library, Moraine Township
    - **Green Economy:** Business & Economic Development, Downtown Alliance, Environmental Commission, Highland Park Chamber of Commerce, Highland Park Hospital, Park District of Highland Park
    - **Energy & Built Environment:** Department of Community Development, Housing Commission, Plan Commission
    - **Mobility:** Department of Public Works, Highland Park Hospital, Intra-City Parking Commission, Traffic Commission
    - **Materials:** City Manager's Office, Chamber of Commerce, Ravinia Festival Community Relations Commission, Solid Waste Agency of Lake County (SWALCO)
    - **Water:** Department of Public Works, Environmental Commission, Lakefront Commission
    - **Ecosystems:** Environmental Commission, Lakefront Commission, Park District of Highland Park
    - **Culture & Legacy:** Cultural Arts Commission, Design Review Commission, Historic Preservation Committee, Ravinia Festival Community Relations Commission, Zoning Board of Appeals, Park District of Highland Park

**Objective 2.3 (Engage): Heighten collaboration with other like-minded communities**

From schools to infrastructure and policy goals, Highland Park shares many values and interests with its neighbors, especially Deerfield and Northbrook. Both through direct collaboration and through channels including the Metropolitan Mayors' Caucus, Northwest Municipal Conference and GIS Consortium, the City of Highland Park will pursue joint purchasing and information sharing in support of regional sustainability efforts. The City will also continue to partner with other suburban municipalities to advocate for the inclusion of hybrid buses in PACE's fleet.

- **Action:** The City of Highland Park will submit a priority list of sustainability related data sets to be considered by the GIS Consortium for future inclusion by June 30, 2011. Possible data sets include traffic flow, ravine health, pervious surfaces, heat islands and flood control.

- **Action - Sustainability Summit:** Highland Park will extend an offer to host a sustainability summit to assemble leaders from the Northwest Municipal Conference to discuss opportunities for collaboration across the Conference's member communities by September 30, 2011.

- **Action:** The City of Highland Park will collaborate with the villages of Deerfield and Northbrook to develop a list of joint green procurement opportunities and ordinances. Highland Park will complete its internal list by January 1, 2011, with a goal of establishing a pilot program by January 1, 2012.

**Objective 2.4 (Fund): Develop innovative, lasting mechanisms for funding sustainability programming and initiatives through 2030**

While the engagement and civic participation initiatives cited here highlight human and knowledge resources available to support the Plan's implementation, funding is often a limiting factor. When sustainability efforts compete with essential services in a down economy, cities can have their nascent sustainability ambitions derailed. Clearly this challenging environment and these bold ambitions demand innovation driven by a commitment to the community's sustainability vision and 10 Sustainability Goals.

The Highland Park community's richness in financial know-how presents a significant opportunity to harness the forces of innovation. Throughout 2010, the City will engage with Highland Park residents, businesses as well as representatives of State and Federal government to develop a responsible, results-oriented funding plan that minimizes tax and fee impacts. The model will focus on four key areas of development, which include: 1) grants, buy-downs and corporate gifts, 2) personal and in-kind contributions, 3) innovative financing and 4) fiscal measures.

- **Action:** Highland Park's Sustainability Coordinator will investigate opportunities related to the funds and programs enumerated below. Grants, buy-downs and corporate gifts during the first five-year phase of Highland Park's Sustainability Plan (2010-2014) will play a critical role in stretching scarce City funds and developing pilot programs. The Sustainability Coordinator will work with the Departments of Community Development, Finance and Public Works to integrate sustainability initiatives into City capital and operating budgets as early as possible in order to reserve matching funds required by prospective grantors.

    - *Department of Commerce and Economic Opportunity Renewable Energy Program*
    - *Illinois State Treasurer: Cultivate Illinois Loan Program*
    - *ComEd Energy Challenge*
    - *Chicago Metropolitan Agency for Planning (CMAP) grants*
    - *Community Development Block Grants (CDBG)*
    - *Energy Efficiency Community Block Grants (EECBG)*
    - *USEPA and Department of Energy green manufacturing grants*
    - *U.S. Treasury Section 45 tax credits and Section 1603 grants*
    - *Private foundation grants*
    - *Corporate gifts*

- **Action – Sustainability Fund:** By January 1, 2012, the City will establish a 501(c)(3) not-for-profit community-wide sustainability fund and appoint a Board of Directors through the Green Initiatives Alliance. The Fund will build on the success of the Highland Park Community Land Trust, which funded the construction of Highland Park's first LEED-certified buildings, to attract prospective donors to sustainability efforts in Highland Park. Such a fund will also help to channel investment quickly and effectively in the areas of greatest need across a variety of City agencies and community organizations. Since many grantors look to leverage contributions from others, a community-wide fund will provide needed matching funds and enhance the likelihood of grant success. Given that volunteer efforts and in-kind pledges can often count toward matching funds for grant submissions, there is a financial incentive to encourage and track many of the engagement activities mentioned in *Section 1*. Structures and programs of relevance to the City's efforts to secure personal and in-kind contributions include matching funds,

grant opportunities, especially ones that may involve grants to private organizations and the Evanston Climate Fund.

- **Action - Innovative financing:** Though more complex than conventional financing, innovative financing options can play a selective role in supporting sustainability in Highland Park. Innovative financing has proven particularly effective for renewable energy systems and larger capital expenditures. These types of finance generally rely on tax equity and supplemental revenue streams like carbon credits or renewable energy credits to create unique financial structures.

    - The Illinois Finance Authority (IFA) offers conduit financing that can conserve the City's debt limit or 'volume cap,' based on future revenues. IFA options currently include Environmental and Alternate Revenue Bonds and will likely include PACE bonds in the near future, contingent on the passage of pending legislation.
    - PACE bonds and Tax Increment Financing districts (TIFs) rely on collecting special tax assessments to pay for improvements in special service area (SSAs) or, in limited instances, through Local Development Corporations.
    - Lease-back financing or design-build-operate-own-transfer (D-BOOT) agreements typically involve an investor taking ownership of an asset to claim a tax credit and leasing the asset back at a discounted rate.
    - Environmental markets define a commodity like a ton of carbon or megawatt-hour of electricity and establish a monetary value for each unit; examples include the Chicago Climate Exchange and Illinois Solar Energy Association's renewable energy aggregation program.
    - Energy cooperatives established under Section 1382(a)(2) of the Internal Revenue Code can also be advantageous for large scale energy generation initiatives.

While grants can help offset the cost of sustainability initiatives, grant-writing requires staff time and often cash matches, while providing an uncertain outcome. Incentives can definitely help in changing behavior, but incentives require a funding source. This leads to a discussion of taxes and fees to cover any remaining costs. So-called "fee-bates" have been especially popular. Fee-bates are generally applied to all businesses at a uniform rate to encourage behavior change. In turn, businesses that exceed a performance threshold receive a rebate at the expense of those who underperform. Consumer-oriented fiscal measures include tax exemptions and time-of-use or seasonal rates. Examples include Chicago's tax exemption for car sharing and ComEd's time-of-use pricing for electricity. Environmental riders on utility bills and franchise fees, similar to Highland Park's refuse franchise, offer other means of generating revenue to support sustainability, as does on-bill utility financing for energy efficiency upgrades.

- **Action-Motor Fuel:** Effective January 1, 2012, the City will implement a one cent per gallon surcharge on every gallon of motor fuel dispensed in Highland Park. Based on 2008 demand, this would generate approximately $220,000 and would fund the introduction of car sharing to Highland Park, along with improvements to bike and pedestrian infrastructure.

- **Action-Electricity:** Effective January 1, 2012, through Commonwealth Edison, the City will assess a one cent per kilowatt-hour charge for residential energy use of more than 1,000 kilowatt-hours per month to fund energy efficiency and renewable energy initiatives. Residential fees collected will fund more than $320,000 in residential efficiency programs. The assigned threshold of 1,000kWh per month will shrink at a rate of 5% per year. For retail businesses, the City will assess a surcharge of $1.00 per kilowatt of peak electrical demand. Businesses that

can demonstrate Energy Use Intensity of 75% or less of the Energy Star Target finder values can receive a property tax credit in the amount of the fees collected.

- **Action-Natural Gas:** Effective January 1, 2012, through North Shore Gas, the City will assess a ten cent per therm charge for residential energy use in excess of 100 therms per month to fund energy efficiency and renewable energy initiatives. For retail (non-food) businesses, a ten cent surcharge per therm will be applied to each therm beyond a 200 therm per month threshold. For restaurants and grocery stores, the monthly threshold will be 1,000 therms per month. The assigned thresholds will shrink at the rate of 5% per year.


HIGHLAND PARK THEATER AND CENTRAL AVENUE STREETSCAPE

## Goal 3: Green Economy

***Sustain vibrant, dynamic business districts throughout the community that respect human and natural resource bases while creating jobs, improving the quality of life and making Highland Park a hub for sustainable enterprise***

***Lead City Agencies/Departments:*** Business and Economic Development, Downtown Alliance, Environmental Commission, Highland Park Chamber of Commerce

***Key Partners:*** Highland Park Hospital, Park District of Highland Park

**Success Stories (2000-2010)**

- *Residential Recycling rates in top 10% of SWALCO communities*
- *Commercial refuse franchise negotiated to improve commercial recycling*
- *Shop Local! Highland Park promotes local business*

**Outcomes (2010-2030)**

- *Develop a green business certification and recognition program for Highland Park businesses*
- *Inaugurate a green business roundtable*
- *Develop a tradable allocation system to encourage energy, material and water efficiency in commercial buildings*

**Doing well by doing right** Striking a balance between social well-being, economic development and environmental protection represents the central sustainability challenge facing Highland Park and communities worldwide. Climate change skeptics have vocally dismissed costs of action on sustainability, particularly on climate change, as damaging to the economy. As the Chicago Climate Action Plan illustrates, investing in sustainability not only reduces risk to our infrastructure in the long-term, but can promote economic development in the short term. This is evident through initiatives like Chicago's Waste-to-Profit Network, which has not only kept thousands of tons of materials out of landfills, but has saved participating businesses $17 million. While the issues of energy, water and material use follow in greater detail throughout the balance of this Plan, this section lays a foundation for providing economic incentives through planning, development and services.

**A day in the life of Highland Park** Each day the average Highland Park household generates a 30-pound bag of waste, consumes 266 gallons of water, 5 gallons of gasoline, enough natural gas to fill six 80-gallon gas storage tanks and enough electricity to keep a two-person sauna running all day and night. Highland Park residents, business and institutions can mitigate these impacts through energy, water and waste reduction efforts. The City of Highland Park will continue to lead by example in city planning by encouraging similar consciousness in residential and commercial operations and projects. Improving the energy, material and water efficiency of the Highland Park economy can stimulate job opportunities and create wealth while improving the quality of life that drives a robust and resilient local economy.

**Figure 3. Highland Park's daily per household energy, water and waste impact**

**Objective 3.1 (Retail economy): Support Highland Park's retail businesses in introducing sustainable products and adopting sustainable business operating practices**

Given the importance of retail goods to fulfilling household needs, generating business opportunities and needed sales tax, the transition to sustainability in Highland Park must include the retail economy. More specifically, both challenge and opportunity lie in decoupling such prosperity and quality of life from energy, material and water use. In 2009, Highland Park's retail economy generated nearly $1.25 billion of economic activity and accounted for more than 37% of the General Fund tax revenues that fund City services. This Plan articulates a policy of responsible consumption that allows consumers to make informed purchasing decisions by encouraging businesses to offer sustainable merchandise and recognizing and promoting their efforts to do so.

**Green Business Certification** Building on the 10% for 10 in 2010 Initiative, the City of Highland Park will develop a Green Business Certification for businesses to allow them to demonstrate their commitment to sustainable products and operations. Recognition can help responsible businesses achieve improved visibility and leverage their commitment as a competitive advantage at little or no cost. Green business certification and recognition programs, such as the EcoAndersonville initiative in Chicago can also help businesses incorporate sustainability into their everyday operations. Equally, the certification of green businesses promotes consumer confidence and education through an unbiased, third-party assessment of environmental claims made by businesses. In turn, consumers can make informed choices to support environmentally proactive businesses. Nationally recognized certifications through organizations like the Green Restaurant Association can provide a means of benchmarking progress toward sustainability against other communities. Designations like Fair Trade City can also demonstrate a City-wide commitment to socially responsible business practices.

The Highland Park Chamber of Commerce and Downtown Alliance have begun an exchange on local purchasing and green business promotion with the Andersonville Chamber of Commerce and Development Corporation in Chicago. The Andersonville Chamber's EcoAndersonville green business rating system has been recognized as a national model and one that may form the basis for an emerging Highland Park certification. Creating a network of aligned businesses through collaboration with the Highland Park Chamber of Commerce and Downtown Alliance can also build a larger presence and opportunities for joint purchasing in Highland Park and across the North Shore. By pooling purchasing power, businesses can access sustainable materials at more affordable prices in a way that improves the likelihood of their wider adoption.

- **Action - Certification:** The City of Highland Park will partner with local business owners and not-for-profit organizations like the *Green* Restaurant Association, Andersonville Chamber of Commerce, Chicago Sustainable Business Alliance, Highland Park Chamber of Commerce and Highland Park Restaurant Association to support the introduction of a formal Green Business Certification by January 1, 2012.

Similar to the Shop Local! Highland Park Initiative, participating businesses will be given window decals to note their pledge participation and residents will receive a bright blue reusable canvas bag with an abbreviated pledge commitment and Goal Areas. This initiative, funded by Commercial Refuse Franchise fees, will allow pledge-takers to display and practice their commitment, while serving as a barometer of public support. The City will work with local businesses to develop point-of-purchase displays that indicate how products and services sold can help satisfy pledge-takers' commitments. For example, energy conserving devices will bear a number "3" to correspond with Goal 3: Energy and Built Environment. The display will include the goal and brief description of its benefits.

**Materials** Despite recycling efforts that rank among the best in Lake County, nearly 60% of material throughput, or materials placed in refuse collection, in Highland Park residences ends up in landfills. Highland Park's innovative Commercial Refuse Franchise, offers insight in to how Highland Park's businesses, residents and government can collectively develop innovative solutions to reduce waste generation, while saving businesses money and generating revenue to fund community-wide sustainability efforts. By making recycling more widely available and offering recycling and waste collection through a single vendor, recycling rates have already risen sharply since the January 2009 introduction and January 2010 full implementation of the franchise, which has helped to reduce the material impact of the retail economy. Building on the success of the Refuse Franchise as a model and the talents of Highland Park High School students, success can also be achieved in improving energy and water efficiency.

**Energy** Commercial electricity use accounted for nearly one quarter of all greenhouse gas emissions in Highland Park in 2008. Sustainability assessments for Highland Park businesses performed by Highland Park High School students will lay the groundwork for improving the energy efficiency of Highland Park's retail businesses. Data collected will help identify appropriate cost-effective measures that retail businesses can undertake. By decreasing utility costs, Highland Park's retail businesses can improve both their financial and environmental performance.

**Water** In 2008, Highland Park businesses consumed more than 217 million gallons of water. In 2012, the Highland Park Department of Public Works will introduce a tiered water billing system that provides appropriate incentives to commercial customers to reduce consumption. Driven by the fees collected, the Department of Community Development will administer a property-tax based fee-bate program for Highland Park businesses based on energy, water and material consumption.

**Objective 3.2 (Knowledge Economy): Support Highland Park's service businesses in delivering sustainable services and adopting sustainable business operating practices**

> *Now that the Internet has put abundant information and powerful tools in everyone's hands, innovation is often driven from the bottom up. The ideas that power our next generation of growth are just as likely to originate in a coffee shop as in the laboratory of a big corporation.*
>
> *--Eric Schmidt, Chairman and CEO, Google (Washington Post; February 2010) (9)*

Much like retail businesses, office-based organizations can impact the environment both through the products they consume in operation and the services they provide to their clients. While electrical consumption may come from copiers instead of cash registers, the premise is the same. By delivering knowledge, Highland Park's office-based service businesses can directly impact the decision-making of their clients and can assist in their transitions to sustainability. Providing service businesses with sustainability options for their clients can multiply the benefits of their knowledge across their client bases. In addition, many Highland Park residents who are employed in the service economy work outside Highland Park. By adopting sustainable practices in their workplaces, Highland Park's service professionals can expand their influence well beyond the borders of Highland Park.

This Plan itself offers service professionals a way of addressing their clients' needs through a lens of sustainability, whether in providing legal services, financial services, project management or anything in between. Just the same, applying some of the themes here in context may pose a challenge to project managers on urgent deadlines. Assembling a network of professionals interested in sustainability to begin and sustain the conversation of how to incorporate sustainability on the fly can help to instill sustainability into the decision making process.

- **Action-Resource:** As an extension of the *ShopTalk* sessions presented in the Engagement section of this Plan, the Department of Community Development will collaborate with the Highland Park Chamber of Commerce to sponsor a Green Business Roundtable to address opportunities challenges that service professionals face in incorporating sustainability in their practices. The Roundtable will launch on or before June 30, 2012. In connection with the Roundtable, the City will initiate development of a virtual discussion group and will seek moderators from the business community to support the group on a day-to-day basis.

As mentioned in the Engagement Section of this Plan, Highland Park High School students will be available to supplement the knowledge base of the City and Chamber in service to local businesses through sustainability assessments. The assessments will follow the format of this Plan and provide detailed recommendations for how businesses can adopt sustainability in their services and operations.

**Objective 3.3 (Real Estate & Property Management): Encourage the operation, maintenance and development of high-performance residential, commercial and institutional buildings community-wide**

With real estate valued at more than $8 billion, the built environment plays an integral role in the Highland Park economy. Aside from providing homes for residents and businesses and driving wealth creation, Highland Park's built environment accounted for approximately two-thirds of community-wide greenhouse gas emissions in 2008. Property taxes also represent the second most important source of tax revenue to support the delivery of City services. Given Highland Park's relatively mature building stock, many building systems and shells operate less efficiently than they could. Investing in green building improvements will only help reduce the environmental impact of Highland Park's built environment, but can reduce operating costs for owners and generate economic opportunities for home supply and skilled trades businesses. According to the Appraisal Institute, efficiency upgrades can also support wealth creation by boosting property values by as much as $13 for every $1 decrease in utility bills.

**Character and Density** Investing in existing buildings can also help maintain the rich architectural heritage that distinguishes Highland Park from other communities. Maintaining that heritage lends appeal to residential and commercial development. Transit-oriented communities, who have preserved their architectural heritage with historic districts, including Oak Park, Evanston and the Andersonville neighborhood of Chicago, have witnessed significant investment and growth as a result. By restricting building height to 45 feet, the City has also discouraged the development of high-rise structures that often build momentum to demolish existing buildings in favor of vertical development. At the same time, this restriction also results in a higher ecological footprint per resident due to lower population density.

- **Action-Sustainable Design Guidelines:** In addressing tension between objectives of historic preservation and increased density, particularly in the downtown or Central Business District (CBD), Highland Park has engaged the community to develop a comprehensive CBD Masterplan. This Plan and the CBD Masterplan will drive the introduction of Sustainable Design guidelines for the CBD by January 1, 2014, and adaptation of the model across Highland Park's business districts.

**Green Building and LEED** The most widely-recognized means of encouraging sustainable building methods in existing buildings and new construction in the United States is the Leadership in Energy and Environmental Design (LEED) standard. The U.S. Green Building Council (USGBC) developed the standard by consensus among architects, engineers and aligned green building professionals. LEED addresses six main impact areas that include: 1) Sustainable Sites, 2) Water Efficiency, 3) Energy & Atmosphere, 4) Materials & Resources, 5) Indoor Environmental Quality and 6) Innovation & Regional Credits. The latest LEED 2009 family of standards includes Existing Building and New Construction standards, in addition to standards for homes, interiors, building shells and a pilot for neighborhood development.

Through the introduction of impact fees for so-called 'tear-downs' in the residential building stock have helped to preserve the historic nature of Highland Park's homes. At the same time, the impact fees have funded high-quality, green and affordable housing in the form of the award-winning, LEED-Gold certified Hyacinth Place development. In November 2009, eleven townhomes at Hyacinth Place became the first LEED certified buildings in Highland Park (7). A variety of local contractors and participated in the design and construction of the homes, which underscores the local economic opportunities related to green building.

**LEED Related Ordinances** As of December 2009, 138 U.S. cities, 36 counties and 28 towns throughout the United States had implemented ordinances requiring LEED certification of some type. (4). On October 26, 2009, the City of Evanston adopted LEED-Silver certification as a minimum requirement for City construction and new commercial and multi-family construction of 10,000 square feet or larger. Financial penalties for non-compliance will be assessed on a sliding scale. Evanston joins other Illinois cities including Chicago, Northbrook, Normal and Yorkville in implementing LEED requirements through a municipal ordinance. Illinois and the states of Hawaii, New Jersey, Ohio, Pennsylvania and Washington have also adopted statewide LEED standards for school construction (5).

Though the majority of LEED Ordinances govern new construction, little new commercial development is forecast over the next five years in Highland Park. As a result, the introduction of LEED for new construction (LEED-NC) ordinance would be limited in its potential to reduce Highland Park's greenhouse gas emissions, water consumption and site disturbance in the short term. Instead, much of the reductions required to meet Highland Park's commitments under the U.S. Conference of Mayors' Climate Protection Agreement will come from existing buildings, which LEED's Existing Building Operations and Maintenance (EBOM) Standard addresses. In the midst of a challenging economy, Highland Park seeks a low-cost and enforceable compliance alternative to LEED certification as the basis of achieving Highland Park's 10 Sustainability Goals.

**Markets Meet Regulation.** The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standard 189.1 has emerged as a LEED-based vehicle for promoting high performance green buildings, which was developed in collaboration with the USGBC and approved in 2009. The Standard accommodates incorporation into City building codes and ordinances by adopting a minimum requirement approach as opposed to a rating system. Given its applicability to only buildings of three or more stories and current zoning regulations, Standard 189.1's relevance in Highland Park will essentially be limited to the Central Business District. Highland Park's approach to the promotion will rely on a market-based approach that draws on LEED, Standard 189.1, Energy Star and HERS building rating systems and will be supported as necessary by progressive codes and ordinances.

- **Action-Commercial Building Approach:** Based on the LEED-EBOM Standard, which includes a reference to Energy Star, the City of Highland Park proposes a tradable allowance system for existing commercial buildings in Highland Park. Building on the work of Highland Park High School students, as assisted by Department of Community Development and Department of Public Works staff and, baseline inventories for participating businesses will be prepared by no later than January 1, 2012.

- **Action-Statements of Performance:** Energy Star Statements of Performance will form the basis for energy and water consumption reporting under the program and will be required for all businesses in the Central Business District as of January 1, 2012, and all businesses of greater than 7,500 square feet by January 1, 2014.

- **Action-Tradable Commercial Allocations:** In collaboration with the Downtown Alliance and the Chicago Climate Exchange, City reduction targets will be weighed against Standard 189.1 in informing the rules of a tradable permit allocation system for CBD businesses. By no later than June 1, 2012, the City will develop guidelines for a pilot program in collaboration with the Chicago Climate Exchange for a pilot period through the end of 2014. The City will facilitate an initial auction of allowances and will establish a floor for allocation prices.

- **Action-Trading Platform:** A trading system to support the program will go live no later than June 1, 2012, and will include energy and water. Waste commodities will be added to the program by January 1, 2013.

    - Water deliveries (100 cubic feet); Storm and sanitary sewer releases (100 cubic feet); electricity, natural gas and refrigerants (100 tons of carbon dioxide equivalent); Renewable energy credits (1,000 kilowatt-hours) and hardscape (impervious area units of 350 square feet); municipal waste (tons) construction and demolition waste (tons).

- **Action-Program Review**: By January 1, 2014, in consultation with the Downtown Alliance, the Departments of Community Development, Finance and Public Works will review the Tradable Commercial Allocation Program to determine its effectiveness in meeting the City's Phase 1 Sustainability Goals and make recommendations as to whether to extend or amend the pilot program. Recommendations will include the rules governing participation in the program, the commodities traded under the program and related price signals.

- **Action-Alternative Taxation:** As part of its 2014 program review, the City will identify opportunities for shifting commercial taxation to a consumption basis from a valuation basis and legal precedents for doing so on a commercial and residential pilot based on the Home Energy Rating System (HERS).

- **Action-Code Review:** As part of its 2016 and 2019 Code Reviews, the Department of Community Development will review the effects of the Tradable Allowance Program to determine whether the pool of allowances should be further constrained to achieve Highland Park's 10 Sustainability Goals.

FORT SHERIDAN TOWNHOMES, PROSPECT PARK HOME, PORT CLINTON

## Goal 4: Energy & Built Environment

***Leverage all opportunities to reduce the total amount, cost and impact of building energy use through aggressive deployment of energy efficiency, renewable energy and district energy technologies community-wide***

***Lead Department/Agency:*** Department of Public Works, Department of Community Development, Housing Commission, Plan Commission

***Key Partners:*** *Moraine Township, School District 112, School District 113, Park District, Library*

**Success Stories (2000-2010)**

- Declining residential natural gas consumption
- Completed community-wide baseline emissions inventory

**Outcomes (2010-2030)**

- *Install 50kW of solar electric systems by 2012*
- *Source 1% of community's energy demands from renewable sources by 2012 and 5% by 2015*
- *Introduce a series of LEED-inspired ordinances to improve the energy efficiency of both existing buildings and new construction*

**Aspirations (2010-2030)**

- *Source 25% of the community's energy needs from renewable sources by 2025*
- *Construct an offshore wind farm and biomass-powered combined heat and power plant by 2030*

**Climate Protection Agreement** Out of the City's commitment to proactively addressing climate change, Mayor Belsky signed the U.S. Conference of Mayors' Climate Protection Agreement in 2005. Along with Evanston, Lake Forest, Northbrook, Waukegan, Wilmette and Chicago, and more than 1,000 Mayors from all 50 States and Puerto Rico, Highland Park pledged to reduce emissions to 7% below 1990 levels by 2012 and support a national emissions trading system (10). The U.S. Conference of Mayors honored the City's Green Initiatives Alliance with designation as a community best practice in June 2009 (11). Despite this progress, without immediate action, Highland Park stands to miss its 2012 emissions reduction target. Community-wide efficiency gains of 25% for electricity and 10% for natural gas will be required to meet such an ambitious target.

**Highland Park Emissions Profile** The profile of greenhouse gas emissions in Highland Park follows national trends that point to the predominance of building energy use in community-wide emissions. In 2008, building energy use in Highland Park produced 66% of community-wide greenhouse emissions. This compares with 32% of community-wide emissions from transportation, 2% from refrigerants and 1% from waste and wastewater. For this reason, Highland Park's climate protection initiatives will focus primarily on reducing building energy use across commercial, residential and government sectors.

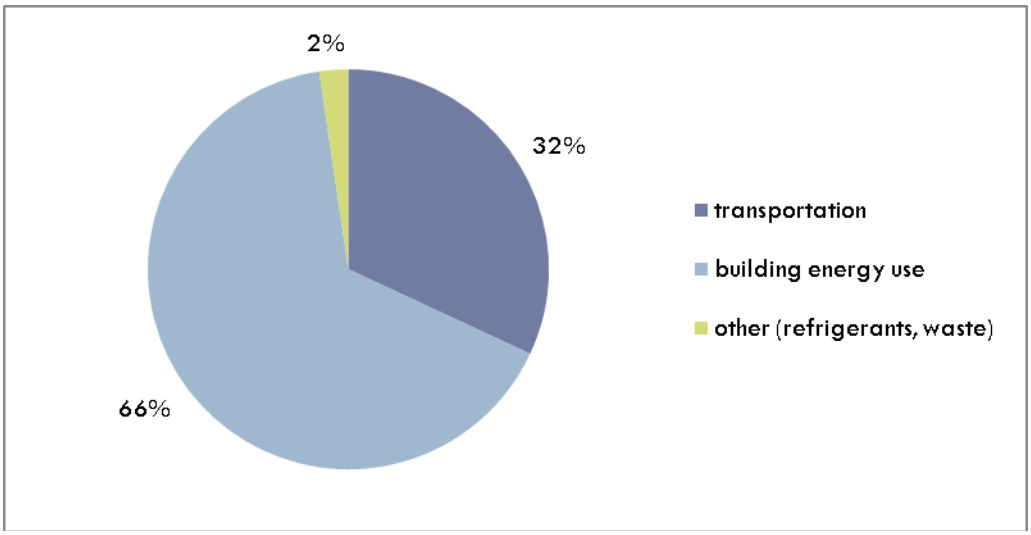



**Figure 4. Highland Park's daily greenhouse gas emissions by use (2008)**

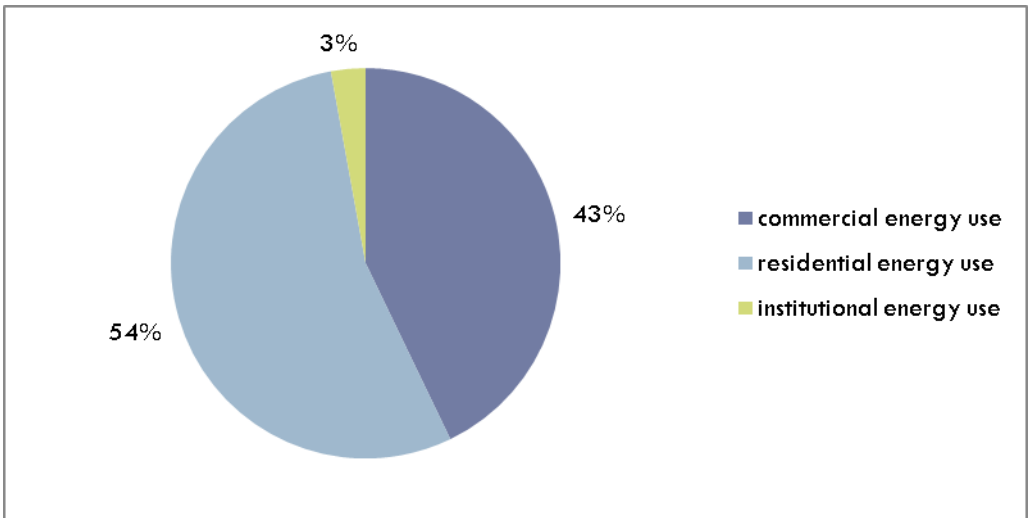



**Figure 5. Highland Park's building energy use emissions by sector (2008)**

- **Commercial:** Within the built environment, commercial electricity use represented the single largest greenhouse gas emissions source in Highland Park. Electricity use in the commercial sector represented 54% of community-wide electricity use and 24% of community-wide emissions in 2008. Commercial natural gas use accounted for 18% of community-wide use and 4% of community-wide emissions. Together, aggregate commercial electricity and natural gas and energy use accounted for 42% of community-wide emissions in Highland Park.

    - **Action:** The City will leverage ComEd Energy Challenge funds to guide Highland Park's commercial emissions reductions and energy efficiency efforts. These efforts will focus on electricity use, as projections indicate that commercial electricity rose quicker than any other energy use between 1990 and 2008.

- **Residential:** Residential electricity proved to be the second leading source of greenhouse gas emissions in Highland Park's built environment. Highland Park's residential use accounted for 43% of community-wide electricity use and 18% of total emissions. In 2008, residential accounts used 76% of natural gas community-wide or an average of 1,753 therms per household. Residential natural gas use accounted for 17% of community-wide emissions as the third largest source of greenhouse gas emissions in Highland Park's built environment. Overall, aggregate residential natural gas and electricity energy use accounted for 35% of community-wide emissions.

    - **Action:** The City will provide 500 free energy audits to residents on a first-come, first-served basis and will hire a vendor to perform additional audits by January 1, 2014.

**Government** The leading source of government emissions in 2008 was natural gas use, which accounted for 5% of community-wide use and 1% of total emissions. While this represents a small percentage of community-wide emissions, a 5% share of use remains at the high end of generally accepted ranges of 3-5% for communities nationwide. At the same time, government electricity use trended well below the national average in accounting for 0.5% of community-wide electricity use and 0.2% of emissions. Overall, aggregate government natural gas and electricity energy use accounted for 1.2% of community-wide emissions.

- **Action:** By January 1, 2015, the City will retrofit all boilers to a minimum efficiency of 95% and perform solar thermal feasibility studies on all facilities in order to reduce natural gas use and related emissions.

**Objective 4.1 (Efficiency): Improve building energy efficiency by 50% by 2030 through the maintenance, construction and renovation of Highland Park's built environment**

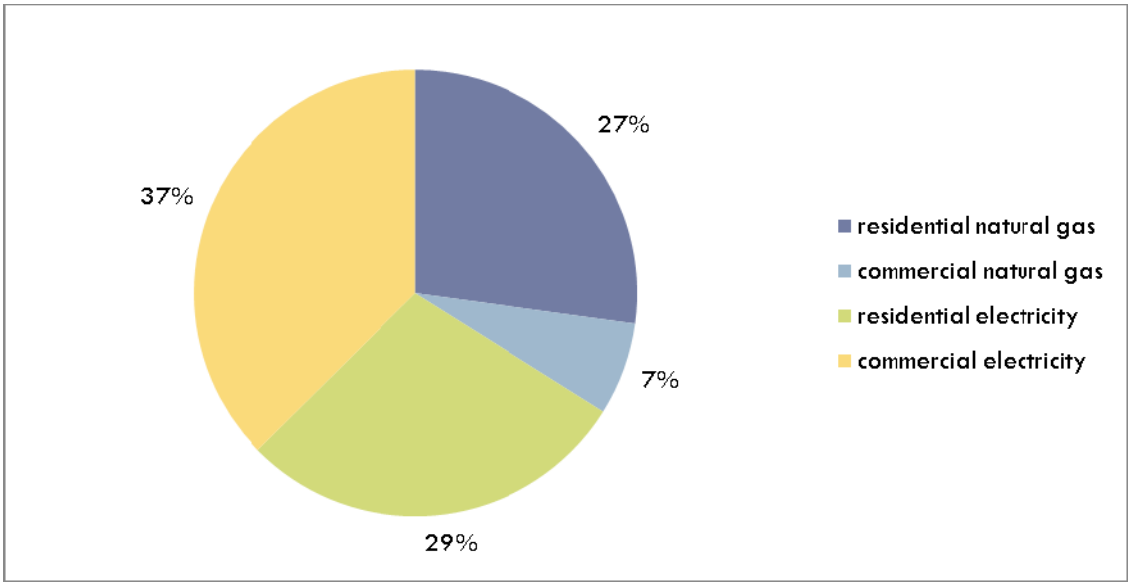



**Figure 6. Highland Park's residential and commercial energy use emissions by fuel (2008)**

**Leadership by Example:** Highland Park's built environment energy strategy focuses heavily on improving energy efficiency and sharpening account-level strategy across the community, especially during the first five-year phase of the Plan through 2014. This priority arises from the simple fact that energy efficiency often delivers the most cost-effective emissions reductions available.

- **Action:** Out of a commitment to green, high-performance buildings as a means of reducing emissions and stimulating the green economy in Highland Park, existing municipal buildings will obtain LEED certification for Existing Buildings Operations and Maintenance (EBOM), or its equivalent, by January 1, 2014
  - The City will earn LEED Energy and Atmosphere Credits EA1, EA2.1 and EA6 requiring the following:
    - Achieving an Energy Star rating of 80, or 30% below the median value by building type
    - Sustainable transportation for 25% of trips to work site[1]

- **Action:** By January 1, 2016, the City of Highland Park will increase certification ratings to LEED-Gold for all existing municipal buildings. The same requirements will apply to all commercial buildings by January 1, 2018, and all residential buildings by January 1, 2020.

[1] Note: The City will also pursue the following non-energy related credits: Sustainable Site Credits SS2-6 Credits, Water Efficiency Credits WE1-3, Materials and Resources Credits MR1-7, and Indoor Environmental Quality Credit IEQ1.1, 2.1, 3.1, 3.3, and 3.6

- As an interim step toward LEED certification and a means of better understanding strategic energy efficiency and renewable energy opportunities in Highland Park, Energy Star Statements of Performance will be required for all commercial and governmental buildings by no later than April 1, 2011. Community Development staff and partners will provide the necessary certification to the first fifty participants in the program.

    - For commercial office properties, LEED-Commercial Interiors (LEED-CI) may be used and the requirement takes effect upon the first lease turnover following January 1, 2011. The LEED rating requirement comes with a target of 20% of rentable square footage certified by January 1, 2014, and will increase by 20% each year through January 1, 2018. The requirement will apply to each building owner or management company across the total square footage owned or managed by each entity.

**Building a new future:** As of January 1, 2013, all new commercial and municipal construction and substantial renovations must achieve a LEED-Gold rating for New Construction (LEED-NC) for all owner-occupied new construction.

- **Action - Municipal Construction:** In order to support the development of high-performance, green buildings in Highland Park and building on the success of the Hyacinth Place development, the City of Highland Park commits to achieving LEED-Gold certification or higher on all municipal and City-financed construction as of January 1, 2013. In doing so, Highland Park will join the elite company of Asheville, Costa Mesa, Dallas, Fort Collins, Portland, Scottsdale, Durham County, North Carolina and Multnomah County, Oregon. In the interest of achieving continuous progress, Highland Park will require LEED-Platinum certification for new facilities as of January 1, 2015.

- **Action - Commercial Construction:** All commercial properties of 7,500 square feet or greater will be subject to a LEED-Silver standard as of January 1, 2012. The commercial certification requirement will increase to LEED-Gold as of January 1, 2014, and to LEED-Platinum on January 1, 2016.

- **Action - Residential Construction:** While most ordinances affect only commercial and municipal construction, San Francisco's Green Building Ordinance of August 2008 requires proof of green building practices for all construction, including residential development. In Highland Park, LEED-Silver new residential construction and substantial renovation will be required as of January 1, 2013, with LEED-Gold phased in on January 1, 2015, and LEED-Platinum required as of January 1, 2017.

**Innovation** A number of cities also specify that specific 'points' be achieved within LEED to reflect local priorities that typically relate to energy, waste and water issues within the LEED rating system. In Northbrook's case, a project can receive a permit rebate of up to 40% and an additional 5% rebate for meeting specific stormwater and water use LEED credits (SS6.1, SS6.2, WE1.1, WE2 and WE3.1) (8).

**Incentives** Municipalities have employed a wide variety of innovative strategies to promote green building. Many communities including Northbrook, Evanston and Chicago offer expedited permitting and permit rebates. In Chicago and Rock Island, green building improvements can receive funding through Small Business Improvement Funds generally reserve for façade repair.

- **Action-Incentives:** Through the Department of Community Development, the Green Initiatives Alliance, Housing and Plan Commissions, the City will investigate the potential for using these credits as the basis for additional incentives.

**Objective 4.2 (Renewable Electricity): Source 25% of Highland Park's electricity needs from renewable energy sources by 2025**

While energy efficiency can sharply reduce energy use and can be implemented quickly, efficiency cannot meet all of Highland Park's energy needs or deliver the emissions reductions required to meet its Climate Protection Agreement target. Renewable energy, in the forms of heat and electrical power from the sun, wind, wave, and earth can reduce the environmental impact of Highland Park's energy demand.

A wide array of clean, renewable energy technologies can help Highland Park meet its energy needs without relying on conventional fossil and nuclear fuels. Many can be readily installed on residential and commercial rooftops. As technological advances push system prices down, higher grid energy costs shorten payback periods and State law requires electricity production from renewable sources, renewable energy will almost certainly witness substantial growth in Illinois over the next twenty years.

Highland Park will lead in the adoption of renewable energy as part of a balanced and effective greenhouse gas emission reduction strategy. The strategy will include a blend of technologies, optimized to achieve maximum production and reliability at the lowest long-term cost to residents, businesses and City government. Equally, the technology mix will focus on smaller, so-called "distributed" energy technologies at the onset and rely on more sweeping changes in infrastructure as it comes time to replace existing infrastructure.

**Small Scale Energy:** Distributed energy technologies like solar electric panels (also known as photovoltaic or PV), solar thermal collectors, building-integrated wind turbines and ground source heat pumps are scaled appropriately for use on nearly any type of building. For these reasons, such types of systems can be deployed rapidly as they generally do not require special zoning or transmission interconnection permission. Especially during the first five year phase of this Plan, through 2014, small, proven renewable energy technologies will figure prominently in Highland Park's emissions reduction efforts.

- **Action:** The City government has established a goal of producing 5% of the community's heat and power from renewable sources by 2015, on the way toward 25% of heat and power by 2025. While generating 5% of power from renewable energy might not sound significant, such an initiative would rank Highland Park among the top cities for generating renewable energy in the United States. Much of the City's early efforts will focus on developing new financing options, aggregating demand to reduce cost and effective use of installation labor.

**Residential:** Meeting the 2015 residential renewable energy target of 5% of use will require the identification of 500 sites for installing 3 kilowatt rooftop solar electric or PV systems. The City will work to:

- Cultivate interest in renewable energy among homeowners
- Act to aggregate work to reduce the installed costs of such systems and provide long-term financing options for systems through tax bills
- Consider hiring dedicated installation staff to assure quality and reduce the tax impact of system installation and guarantee the purchase of renewable energy credits produced

To meet the Plan's 2030 target of producing 7 million kilowatt-hours of renewable energy from home-based systems, 2,500 residential systems will be identified. Of those, the City targets 2,000 installations of at least three kilowatts.

**Commercial:** Meeting the 2015 commercial renewable energy target of 5% of use will require the identification of sites with a combined capacity of 1,500 kilowatts. Commercial systems will be eligible for Tax Increment Financing. As of January 1, 2015, a renewable energy component will be added to commercial LEED requirements. By 2030, all new construction must be designed as net-zero energy buildings, in line with the American Institute of Architects 2030 Challenge.

**Government:** Highland Park's units of government will collaborate to perform a renewable energy assessment of their facilities and will install 50kW of solar PV capacity no later than January 1, 2012. Leading candidates for systems include the Highland Park Public Library, downtown parking garages, Highland Park High School and Water Treatment Plant.

- By December 31, 2011, the City's Department of Community Development will hold a roundtable on renewable energy promotion that will bring together suppliers, installers, designers, finance professionals and other code officials to develop best practices for catalyzing adoption of renewable energy. Recommendations will be brought to the Department of Community Development and the Housing and Plan Commissions for action.

While home-based sources of renewable energy generation can be rapidly deployed, larger systems can deliver greater economies of scale. Given that much of Highland Park's early renewable energy efforts will focus on solar energy, the addition of an offshore wind farm could help diversify energy supplies at a relatively low cost.

- **Action-Wind power:** The City will generate 16 million kilowatt-hours of energy, community-wide, by 2029 from utility scale wind power generation. Over the next ten years, the City will commission a feasibility study and related engineering studies help this development become a reality. Major project milestones include: two years of wind speed data collection, system design study, system engineering, Environmental Impact Assessments, Permitting and Licensure, and Financing and Construction.

YANNELL RESIDENCE LEED FOR HOMES PILOT, CHICAGO

**Objective 4.3 (Renewable Heat Sources): Source 75% of heat and one-third of power requirements from combined heat and power systems connected to a central district heating and cooling loop by 2030**

Combined heat and power systems can more than double a power plant's net efficiency by converting exhaust into useful heat. The heat recovered needs a channel for distribution, though, which is often lacking, especially since many conventional power plants are isolated from other buildings. Chicago's McCormick Place's *TriGen* power, heating and cooling plant offers a prime example of how facilities are successfully harnessing waste heat through existing technologies.

While prevalent across many U.S. college campuses, district heating systems have not gained as much traction for commercial and residential applications in towns with populations less than 100,000. Today's prominent examples of district heating include Chicago's downtown thermal loop and St. Paul, Minnesota's, wood-fired thermal loop, but nothing stands in the way of scaling this technology for use in Highland Park. Both Chicago's and St. Paul's systems provide heating and cooling. While Chicago's system is powered by natural gas, St. Paul's wood-based (biomass) system is one of a very small number of systems powered by renewable energy. Other examples include Toronto, Canada's, district energy, which uses lake water to cool downtown commercial and government buildings.

Just outside the world-renowned glass factories of Orrefors and IKEA headquarters, a municipal utility in the Swedish town of Växjö integrated the concepts of combined heat and power, district heating and renewable energy. The plant, fueled by pelletized sawdust, bark and branches from logging, satisfies nearly all of the heating and power needs of the town of 56,000 and marked a significant milestone in pursuing public commitment to be fossil-free by 2010. While it will likely miss its target, which was perhaps the most aggressive of any community of a population less than 100,000, emissions from heating and power generation have dropped more than 85% since 1980.

**Infrastructure** Building on the innovative examples of Växjö, St. Paul and Toronto, Highland Park will aggressively pursue the construction of a biomass-powered combined heat and power plant on the property of the former Solo Cup factory by 2025. The site features excellent rail and road access for biomass deliveries and offers one of the closest non-park sites to the Central Business District and population center. A modular approach to design can be taken, with heat production to follow electricity production as thermal loop infrastructure is constructed.

Possible routes for the east-west backbone of the proposed thermal loop connected to the plant would run east down Central Avenue, while possible north-south routes include Sheridan Road, Green Bay Road and St Johns Avenue. The resulting construction also provides an opportunity to create dedicated bike and transit infrastructure on the public way that can reduce emissions further. Developing demand for biomass in Illinois could also spur markets across Wisconsin and Illinois and help keep energy dollars and jobs in the Midwest.

- **Action:** Deliver 75% of heating requirements and 100 million kilowatt-hours of electricity by 2030 from a biomass-powered combined heat and power plant connected to a community-wide district thermal loop.

**Objective 4.4 (Renewable Financing): Employ innovative financing structures to maximize investment leverage and reduce cost**

Lack of capital can doom ambitious infrastructure projects such as those described here. Avoiding such pitfalls requires creative thinking and financing that takes full advantage of tax credits, grants and other sources of external funding mentioned in the governance section of this Plan. Key elements of financial innovation incorporated into this plan include:

- A trading system for green building permit allocations that rewards early adopters of energy efficiency, green building and renewable energy and internalizes the price of carbon

- Bulk-purchasing initiatives for energy efficiency and renewable energy technologies
- Public and private leasing structures for renewable energy systems
- The prospect of a municipal utility cooperative to provide long-term financing and community-ownership of renewable energy infrastructure, similar to the model that built the Danish wind power industry
- Financing of energy efficiency and renewable energy systems through utility bills (on-bill financing)
- Shifting taxation from property value to energy consumption

**Financing and implementation** In order to stimulate investment in renewable energy, the City of Highland Park will create a community-wide *REpower* fund for funding renewable energy installations. The fund will create a mechanism for receiving tax exempt donations from individuals, corporate gifts and foundation grants and will focus on meeting targeted rates of return, based on a set installed cost. The funds will serve residential, commercial and municipal installations throughout Highland Park through loans and grants.

WIND TURBINE GENERATORS; MAUCERI RESIDENCE, CHICAGO

- **Action:** The City will support strengthening the State of Illinois' PACE bond legislation to allow Highland Park residents to access the financial tools that have contributed to California's success in deploying renewable energy.

- **Action:** Through the City's Sustainability Coordinator, the City will also offer grant-writing assistance and information on State and Federal incentives to residents and businesses.

## Goal 5: Mobility

***Satisfy the community's mobility needs with an efficient, safe and accessible intermodal transportation system that relies heavily on public transit, biking, pedestrian traffic, car sharing and clean fuels***

***Lead Department/Agency:*** Department of Public Works, Highland Park Hospital, Intra-City Parking Commission, Traffic Commission

***Key Partners:*** *Active Transportation Alliance, Moraine Township, Park District, PACE, Metra*

**Success stories (2000-2010)**

- *Development of a Greenways Plan that expanded the extent and quality of trails and sidewalks Citywide*
- *Bike rack installation initiative in the Central Business District*
- *Increased visibility of crosswalks in the Central Business District*

**Outcomes (2010-2030)**

- *Develop Complete Streets Community Plan by 2012*
- *Implement car sharing programs in every business district by 2015*
- *Construct bike station adjacent to downtown Metra station by 2015*
- *Decrease vehicle miles traveled per household to 50% below 2008 levels by 2030*

**Aspirations (2010-2030)**

- *Convert to zero-emissions municipal vehicles fleet, including passenger and heavy duty vehicles, by 2030*

Mobility options connect Highland Park residents with each other and with destinations within and outside Highland Park. From Ravinia to Lake Michigan to the office and visiting relatives, an opportunity lies in lessening the impact of staying connected and productive. In 2008, more than 22 million gallons of motor fuel were dispensed in Highland Park, which means vehicles produced more than 207,000 tons of carbon dioxide equivalent, or a third of all community-wide emissions. As such, Highland Park's sustainability strategy gives high priority to addressing emissions from mobility.

Highland Park boasts one of the most extensive commuter rail and bus networks of any suburban Chicago municipality and the Skokie Valley and Green Bay Trials that traverse Highland Park attract cyclists from throughout the region. Cyclists can now connect with commuter rail, but not during peak travel periods, which reflects progress made and yet to come. Despite this infrastructure, the average Highland Park household logged 19,527 vehicle miles traveled in 2008, which is one-third higher than the Lake County average. As in communities throughout the North Shore, many residents view car ownership as a necessity, given a lack of awareness of other viable mobility options.

- **Transit** In addition to providing a convenient, low-emissions mobility option, commuter rail has been shown to boost the values of adjacent homes and retail office space by between 5% and 10% (1). In higher income communities, premiums can be even higher as ridership increases. Within a half-mile of transit, home values can increase by 1.5% for every 100 feet closer to the center of transit-oriented development (2).

- **Biking** Among residents and many visiting cycling enthusiasts, bike and pedestrian infrastructure also affects the amenity value of property in Highland Park and offers sustainable transportation opportunities. Allowing for greater bike and pedestrian access can ease congestion and create a more pleasant and relaxed retail experience. At the same time, bike and pedestrian access can reduce wear and tear on the public way and encourage a sense of community, while reducing greenhouse gas emissions from local trips.

Highland Park's sustainable mobility strategy focuses on providing low emissions alternatives to an unsustainable reliance on car ownership to connect people and destinations. This is not to say that cars will become irrelevant in Highland Park, but effective use of greener public and private vehicles underpins the community's four-pronged mobility strategy. The four focus areas include 1) Bike and pedestrian traffic, 2) Car sharing, 3) Clean fuels and vehicles and 4) Public transportation.

**Objective 5.1 (Listen): Survey community to inventory current mobility preferences and opportunities for promoting use of environmentally preferable modes of transportation**

By changing the focus of the Traffic Commission to a broader intermodal approach, City government will encourage a 'complete streets' approach to mobility planning. This change acknowledges that a sustainable transportation system must accommodate bikes, pedestrians, private vehicles and public transportation. By extension, the public way and streetscape must operate in a way that provides safe, clearly defined and well-maintained access to all users. In that process, the perspective of all users can form a consensus around a mobility network that works for the entire community.

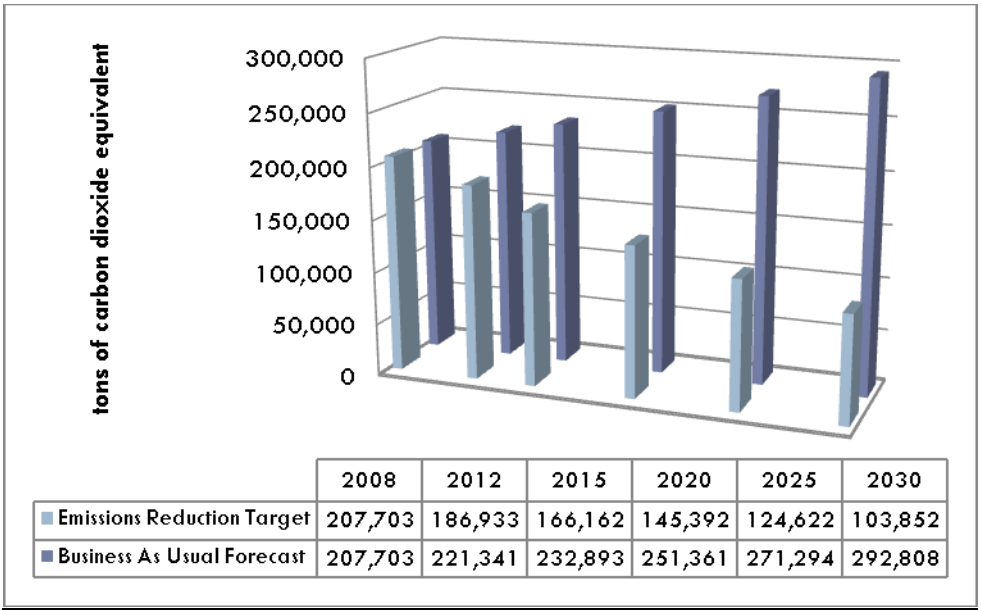
- **Action:** Throughout 2010, the City government will sponsor a series of workshops similar to the recent CBD Master Planning process to develop community-focused priorities in a Complete Streets program. In concert with the Active

Transportation Alliance, Metra and car sharing organizations, Highland Park will produce a Complete Streets Community Plan by January 1, 2012.

Based on the community average of 19,527 vehicle miles traveled and average commuting distance of 20 miles each way, local trips and commuting account for a nearly equal share of vehicle miles traveled (VMT). Given that many longer distance trips involve holiday and business travel that residents cannot influence, and based on available data, Highland Park plans to balance focus between local trips and commuting. More quantitative data concerning mobility needs within that total mileage will also help inform policy and planning priorities around biking, pedestrian, vehicular and transit uses.

- **Action-Mobility Survey:** With the help of Highland Park High School students and in partnership with the Highland Park Hospital and Park District of Highland Park, the City's Traffic Commission will develop and circulate a mobility questionnaire by January 1, 2011, to better understand how residents use the means of transportation available to them. This will also form a basis for tracking ongoing emissions reduction progress and policy recommendations of the Traffic Commission.

**Objective 5.2 (Promote): Meet community mobility needs while decreasing vehicle miles traveled per household to 50% below 2008 levels by 2030**




| | 2008 | 2012 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|---|
| Emissions Reduction Target | 207,703 | 186,933 | 166,162 | 145,392 | 124,622 | 103,852 |
| Business As Usual Forecast | 207,703 | 221,341 | 232,893 | 251,361 | 271,294 | 292,808 |

**Figure 7. Highland Park's transportation emissions target vs. forecast (2008-2030)**

For the first five year phase of the Plan, Highland Park's efforts will focus on improving safety and visibility for bikers and pedestrians, particularly in the Central Business District and on Sheridan and Green Bay Roads, which are both popular cycling routes. Bike parking at key destinations including public schools, Metra stations and the Highland Park Library will also figure prominently in the City's efforts to promote bike and pedestrian traffic as a significant transportation mode.

Upon the completion of the Complete Streets Community Plan in 2011, efforts will turn to establishing *Safe Routes to School* (established by the Federal Highway Administration) and connectivity of schools and attendance areas through bike and pedestrian infrastructure. By promoting accessible routes and encouraging parents to walk or bike with their children to school, the community can reduce emissions while promoting healthy, active transportation and parental involvement. For

adult residents and cycling tourists, improvements to on-road and trail signage will be improved. The Traffic Commission will provide recommendations for improving east-west bike and pedestrian connections between Lake Michigan, the Green Bay Trail, Skokie Valley Trail and public parks to the Traffic Commission.

- **Action – Bike station:** In addition to bike and pedestrian-friendly modifications of the public way, the City government will construct a bike station located adjacent to the downtown Metra station. This will shorten the overall commute time for those who walk to transit and provide those who drive to transit a zero emission alternative. At the same time, a bike station can also attract bike commuters and bike tourists to Highland Park and support green economic development.

- **Action - Bike and pedestrian traffic:** Establish bike and pedestrian traffic as the preferred means of mobility for in-town trips by 2020 through the connection of existing infrastructure, addition of bike parking and improved signage.

The City will debut car sharing in partnership with a car sharing organization. The service will allow Highland Park residents to hire cars by the hour, with gasoline and insurance included. The primary focus during the first five years of the program will be on providing an alternative to a second car and providing mobility to zero car households. Commercial use of car-sharing will also be encouraged, especially for businesses whose employees would intend to commute via transit but presently require personal transportation to travel off-site during the work day.

- **Action - Car sharing:** The City and its car sharing partner will bring car sharing to each Metra station by June 1, 2011, achieve subscribership of 5% of households by 2012 and offer car sharing in every business district by 2015 while increasing subscribership by 4% per year to 2030

- **Action-City planning:** The City, through the Traffic Commission, will generate recommendations for enhanced transit-oriented development strategies as they relate to car sharing and retail mix throughout 2011. Such strategies will specifically include density bonuses for car-sharing and reserved, preferred or discounted parking. By promoting a balanced retail and service mix in each business district, residents can benefit from more one-stop shopping and keep more tax dollars in their neighborhoods.

Approaching the beginning of the second five-year phase in 2015, car sharing efforts will place greater emphasis on adding pick-up and drop-off locations to meet growing subscribership. At a minimum, a presence in each business district will allow residents to transport large goods from the business districts. This provides a cost advantage for local shopping. Additional attention will be paid to infrastructure planning for plug-in hybrids and fully electric vehicles.

- **Action-Zero car households:** Looking to 2020 and the Plan's third five-year phase, car sharing efforts will begin to explicitly promote zero car households once a reliable network has been established. Renewable energy components will be added to charging stations and stations will be expanded with reserved parking for such vehicles. The Traffic Commission will also provide recommendations on revisions of parking requirements and will coordinate with Plan Commission and Zoning Board of Appeals. As 2030 nears and the Plan reaches its fourth five-year phase, all car sharing fleet vehicles will be required to be zero-emissions vehicles by January 1, 2025.

In partnership with local businesses, the City government will promote the use of tax-free transit programs. Highland Park units of government will actively encourage City employees residing outside Highland Park to take public transportation. Throughout 2010 and 2011, the Department of Public Works and the Traffic Commission will generate recommendations for improving connectivity between Metra and PACE routes that serve Highland Park. As momentum builds behind high speed rail in the Midwest, Highland Park's City government will aggressively pursue high speed rail access for Highland Park as a means of promoting tourism across a larger geographic area.

- **Action - Public Transportation**: Achieve 20% public transportation commuter mode share by 2012 and increase 3% per year to 2030

**Objective 5.3 (Promote): Meet community mobility needs while decreasing emissions per vehicle mile traveled per household to 50% below 2010 levels by 2030**

Delivering more cost-effective and environmentally friendly mobility options presents an economic opportunity for local businesses. Highland Park's car dealers stand to benefit by adopting the latest automotive technologies including hybrids. At the same time, households and businesses can save money and reduce emissions by improving vehicle efficiency. The City can provide incentives to drive this development through parking regulations and vehicle registration fees.

- **Action - Vehicle Registration:** Effective January 1, 2012, the City will implement a tiered vehicle registration fee schedule that will exempt hybrid vehicles that deliver USEPA combined fuel economy ratings of 35 miles per gallon or better. The City will offer an environmental registration sticker that will help fund sustainability initiatives

- **Action - Clean Vehicles:** The requirement for an exemption will increase to a plug-in hybrid or fully electric vehicle by January 1, 2015. The City will also offer one free public charging port at designated municipal charging stations to be located in the City business parking spaces of the downtown commuter lot and the Public Works Building

    - Municipal charging stations will be developed to facilitate the conversion of the City's hybrid fleet to plug-in hybrids by January 1, 2013

    - By January 1, 2015, through the City's car sharing franchise agreement, all fleet vehicles must emit at least 50% fewer greenhouse emissions per mile than the corporate average. Vehicles sold in Highland Park will also be eligible for a local sales tax credit through 2020

- **Action-Hybrid buses:** The City will continue to work with Federal and State elected officials, the Federal Transit Administration (FTA) and Metra to support the conversion of PACE buses to a hybrid fleet by 2012.

- **Action-Hybrid and electric vehicle parking:** By January 1, 2012, the City will provide twenty reserved parking spaces for hybrid, plug-in hybrid and car sharing vehicles. This number will increase by 20 spaces annually to 2030.

- **Action-Zero emissions vehicles:** All municipal passenger vehicles and car sharing fleet vehicles will be required to be zero-emissions vehicles by January 1, 2025, and charging stations will require incorporate renewable energy components. Municipal heavy duty vehicles will be required to meet the zero-emissions requirement no later than January 1, 2030.


## Goal 6: Materials

***Achieve efficiency and prosperity through infrastructure, services and procurement policies that encourage smart design and enable the widespread use of durable and non-toxic products, recycling, composting and reuse***

***Lead Department/Agency:*** City Manager's Office, Chamber of Commerce, Ravinia Festival Community Relations Commission, Solid Waste Agency of Lake County (SWALCO)

***Key Partners:*** *School District 112, School District 113, Highland Park Chamber of Commerce, Downtown Alliance*

**Success Stories (2000-2010)**

- *Collaboration between Business & Economic Development and Environmental Commissions*
- *Passage of an inorganic phosphorus ban for fertilizers*

**Outcomes (2010-2030)**

- *Establish composting and bottle deposit pilot programs*
- *Ban sales of chemical pesticides by 2014*
- *Create purchasing collectives for environmentally preferable products by 2015*
- *Develop virtual bulletin board/wish list for charities looking for materials in Lake County*

The products on store shelves and the food on restaurant plates across Highland Park tell only the end of a story. From milk to clothes and appliances, a tremendous amount of energy and waste goes into these products from extraction, to processing and distribution. When it comes to food products, local agriculture can reduce the distance food travels and reduce spoilage, while organic agriculture can reduce chemical residues. With building materials, salvaged materials can preserve the character and charm of Highland Park's many historic homes without consuming new materials. Canvas bags and reusable mugs can also help avoid the need for disposable paper and plastic service ware, just as digital media can help reduce paper consumption. To facilitate market transformation toward sustainable material management in Highland Park, five overarching strategies include: Markets, Services, Design, Infrastructure and Procurement.

- **Markets** Purchasing targets and requirements can help build markets for environmentally-preferable products and services. Aggregating purchasing power can help to reduce the cost premiums associated with many environmentally preferable materials. The City's Commercial Refuse Franchise offers a powerful example of how aggregation can make recycling affordable Citywide.

- **Services** Aside from fixed infrastructure, services play an integral role in sustainable material management. Bottle deposit programs and service enhancements like more frequent recycling pick-ups all support goals of bolstering recycling and composting as alternatives to landfilling.

- **Design** Product and packaging design can help not only reduce the impact of products during their use, but can also reduce the energy, water and material required to bring them to store shelves. Concepts like alternative need fulfillment and Design for Environment have radically altered resource productivity for many goods. The evolution of lights from inefficient, yet warm incandescent to efficient but colder fluorescent bulbs that contain mercury to still more efficient, inviting, non-toxic LED lights attests to the power of design over material use.

- **Infrastructure** Recycling containers, compost bins and collection vehicles all help to support the sustainable management of materials in Highland Park. The City's partnerships with SWALCO and Waste Management help to shape this infrastructure and its impact on the streetscape and public way.

- **Procurement** While LEED's Materials & Resources requirements can encourage sustainable procurement for certified buildings, this requirement will be phased in and is valid only for the performance period specified in LEED, which can be as little as a week. Beyond the performance period and for those buildings not subject to LEED requirements, the City will encourage the purchase of goods through a public recognition program.

**Objective 6.1 (Waste Diversion): Increase the community-wide diversion rate by 50%, from 41.6% to 63%, by 2020 and at least 2% in absolute terms each year to 2030**

Highland Park's approach to sustainable material management focuses on seven material classes and the functions they serve. Those seven material classes include: 1) Packaging and Service Ware 2) Food and Landscape 3) Paper 4) Building Materials 5) Textiles 6) Hazardous Waste and 7) Electronics.

**Packaging and Service Ware** including plastic, metal and glass containers accounted for an estimated 15,671 tons (24.4%) of refuse community-wide in 2008. Of these, plastic waste generation grew fastest between 1990 and 2008 and is one of the fastest growing sources of waste in Highland Park. Many of these materials are already widely recycled and infrastructure is well established, though lack of use has frustrated some recycling efforts. A clear opportunity lies in avoiding unnecessary packaging and the purchase of bulk goods, concentrated detergents and avoiding single-serve containers. Increased commercial recycling will contribute to increased point-of-sale recycling in this material class.

- **Action-Incentives and fees:** In addition to the City's residential curbside recycling programs and Commercial Refuse Franchise, the City will work with grocers and restaurants through the Chamber of Commerce and Highland Park Restaurant Association to develop a local bottle deposit program and introduce a surcharge on non-recyclable crockery including polystyrene by January 1, 2012. At the same time, the City will work to encourage point-of-sale recycling facilities at quick service restaurants and support joint purchasing of more sustainable alternatives to polystyrene, including plant-based biodegradable plastic and compostable paper. The City will also issue a *No Plastic Day Challenge* to residents and business raise awareness about plastic use and disposal.

**Food and Landscape** Residues from table scraps, lawn and plant clippings accounted for 13,683 tons (21.3%) of solid waste generated. While landscape residue has been banned from landfills in Illinois for some time, food residues remain largely a category of landfill waste. New State legislation allowing commercial composting should increase landfill diversion of food residues, though infrastructure remains weak relative to infrastructure for plastics, metal and glass. Given the predominance of single family homes in Highland Park, significant opportunities exist for residential composting.

- **Action-Composting:** In partnership with SWALCO and the Park District, the City will develop a Citywide residential and institutional composting collection program and will work through the Commercial Refuse Franchise to extend the program to restaurants by January 1, 2012. The City will and School Districts 112 and 113 will lead by example in providing composting infrastructure in schools and at City-sponsored events.

**Paper** Altogether, office paper newspaper and paper packaging accounted for 12,630 tons (19.7%) of waste community-wide. Not only can recycling keep paper out of landfills, but buying recycled paper can help support recycling efforts by creating demand for recycled products. Recycled paper also eases the burden on forests. Buying paper products bearing the Forest Stewardship Council (FSC) supports sound forest management that avoids clear cutting and cutting of irreplaceable old growth forests. Promoting the purchase of environmentally preferable durable goods and high-volume commodities like paper can sharply reduce the environmental impact of economic activity. Aggregated purchasing of environmentally preferable goods can help mitigate any cost impacts and improve the likelihood of adoption.

- **Action**: As of December 31, 2010, the City will introduce a 30% recycled content requirement for all paper products purchased. The City will also work to develop a purchasing partnership with Northbrook, Deerfield and others municipalities through the Metropolitan Mayors' Caucus to encourage the use of 100% recycled content paper and FSC-certified pulp and paper products and other office supplies by July 1, 2011.

**Objective 6.2 (Development Ordinance): Develop an enhanced Construction and Demolition Waste ordinance with progressive targets and building material reuse co-op modeled after or in collaboration with Delta Institute Material Exchange**

**Building Materials** In 2008, building materials accounted for 10,759 tons (16.8%) of refuse generated in Highland Park. Since the majority of these materials include dense, inert objects like brick and wallboard, small amounts of material add up quickly and stay in landfills indefinitely. Some building materials also contain formaldehyde and asbestos, which renders them hazardous. Avoiding vinyl products and using durable materials can also help reduce landfill impacts. Highland Park's Construction and Demolition Ordinance has experienced success in diverting waste from landfill, but more can be done to reduce this waste stream further.

- **Action:** The City will promote the use and re-use of non-toxic, recycled and renewable building materials through increased special collections and permitting through C&D ordinance (fee-bate) and researching impact fee and fee waiver best practices designed to encourage sustainable material use in building renovations by the end of 2011.

**Clothing & Textiles** including carpeting, clothing and upholstery represented 6,140 tons (9.6%) of waste generated through the Highland Park community in 2008. Though often neglected, this material class offers substantial reuse opportunities through commercial carpet recycling and donation of unwanted, but useable clothes.

- **Action-Textile:** Encourage salvage and donation, while developing a carpet and upholstery recycling pilot program and a virtual bulletin board/wish list for charities looking for materials in Lake County by March 31, 2011.

**Objective 6.3 (Toxic Material Reduction): Reduce the use of toxic and non-renewable materials and encourage the use of life cycle costing and planning in the acquisition of durable goods**

**Hazardous Waste** including toxics, cleaning products and pharmaceuticals accounted for 2,764 tons (4.3%) of solid waste generated in Highland Park in 2008. A major concern arises from this waste becoming liquid waste. This concern prompted the development of Highland Park's P2D2 pharmaceutical collection program, in partnership with the Highland Park Police Department and School District 113.

- **Action-Pesticide ban:** The City and Park District will educate the public about alternatives to chemical fertilizers and pesticides in Highland Park and introduce an ordinance to ban pesticides by January 1, 2012.
- **Action-Mosquito abatement:** Petition Lake County to adopt integrated pest management in mosquito abatement operations to eliminate the use of aerosol-based pesticides citywide by January 1, 2012.
- **Action-Hazardous waste:** In collaboration with SWALCO, the City will work to establish a household hazardous waste drop-off center no later than January 1, 2013.

**Electronics** While accounting for a relatively small portion of community-wide waste generation (2,456 tons or 3.8%), electronics, or "e-wastes," often contain heavy metals and other toxics. When landfilled, these materials can leach into groundwater if landfill liners become damaged. Due to these risks and others, the State of Illinois passed a law requiring manufacturers and retailers to take back unwanted monitors, computers, televisions and printers (12). The e-waste recycling requirement took effect on January 1, 2010. Highland Park residents can drop off these materials for recycling by SWALCO on Tuesdays and Fridays from 7am to 1pm at the City's collection facility located at 1180 Half Day Road.

- **Action-Electronic waste:** The City will work with SWALCO to monitor results of take-back initiatives in Highland Park and identify opportunities for continuous improvement.

## Goal 7: Water

***Act as responsible stewards of the quality and abundance of the surface and groundwater resources Highland Park shares with its neighbors through conservation, stormwater management and other water quality initiatives***

***Lead Department/Agency:*** Department of Public Works, Environmental Commission, Lakefront Commission

***Key Partners:*** *City Manager's Office, Park District of Highland Park, School Districts 112 & 113, Public Library, Golf Courses*

**Success Stories (2000-2010)**

- Leak detection: losses reduced from 16% to 8%

**Outcomes (2010-2030)**

- Increase capacity without expanding Filtration Plant footprint; reuse entire building shell
- Reduce community-wide water consumption to 30% below 2008 levels by 2020
- Introduce residential toilet, fixture and appliance rebates for Highland Park homeowners
- Introduce revolving loan fund for commercial water efficiency projects and on-bill financing
- Reduce unaccounted for flows to no more than 4% of total water delivery volume in Highland Park through aggressive leak detection and repair

**Aspirations (2010-2030)**

- Manage 50% of stormwater onsite by 2020 with a goal of zero stormwater discharge to sewers by 2030

With Lake Michigan lapping against the sands at the foot of Highland Park's ravines, the need for water conservation might not seem apparent. A closer look reveals a region struggling to meet future water demands as a watershed and one with vast disparities in access to water resources. Since greenfield development swept through Lake County and other collar counties surrounding Chicago during the 1990s, water supplies have been stretched to their brink in many communities (13). Just months before the release of this Plan, twelve municipalities applied to the Federal government to draw water from Lake Michigan. Federally-imposed limits dictate withdrawal limits from Lake Michigan. As such, if approved, an allocation to these communities may shrink Highland Park's allocation and force the community to conserve. The City already produces water for 65,000 customers throughout Highland Park and the communities of Deerfield, Lincolnshire, Bannockburn, Fort Sheridan and others.

Two fundamental water challenges affect Highland Park, the reliance of the City water revenues on consumption and the shrinking share of water pumped in Highland Park available for local consumption. Federally mandated expansion of Highland Park's Water Filtration Plant will definitely help serve additional demand. Using advanced microfiltration technology, the plant will increase its capacity by 50% and sharply reduce chemical use without increasing its footprint.

Through stewardship of its water resources, Highland Park can meet its own needs, while serving demand for additional communities and benefitting financially from the sale of water to these municipalities. From a sustainability perspective, lake levels have hovered near historic lows over the past five years due in large part to dry summers, which have resulted in additional evaporation. This also suggests a need to reduce water consumption to avoid negative impacts on beach quality, marina developments, revenue and amenity value of lakefront property as well as the general quality of life.

**Objective 7.1(Residential Conservation): Reduce residential water use by 10% below 2008 levels by 2012 and 2% each year thereafter, with interim goals of 30% by 2020 and 50% by 2030 and a goal of zero irrigation by 2030 and interim irrigation reductions of 20% by 2012 and 60% by 2020**

Surprisingly, human consumption of water does not dominate water use in Highland Park; lawn care does. Chemical fertilizers and pesticide applications also impact surface and groundwater quality and further add to water demands for landscaping. Maintaining an aesthetically pleasing environment while decreasing the impact of Highland Park's landscape can play a leading role in sustainable water management. Residential properties make up more than 85% of Highland Park's land area, much of which is seeded with lawn. Given that, striking a delicate balance between aesthetics and water conservation will require harvesting rain water, efficient fixtures and innovation across the community to preserve the precious lake resource. Another critical dimension of landscaping water consumption lies in its tendency to drive peak demand in summer demand, which requires Public Works to operate overcapacity during the rest of year.

**Residential Use** Landscaping and domestic uses in Highland Park homes accounted for 78% or just over 1.158 billion gallons of community-wide water deliveries of just over 1.478 billion gallons in 2008. For this reason, residential water conservation emerges as the natural focus of community-wide conservation efforts. Thankfully Highland Park has success to build on in this endeavor as 2008 residential water usage in Highland Park dropped to 14.7% below the 1997-2008 City average. Equally, Highland Park's consumption remains below the national average, despite being three to five times the average domestic consumption in Germany, Norway and France. This suggests that residents have taken action to reduce demand and that more remains possible in continued reviews of best practices from across the nation and the world.

- **Action-Landscaping:** The City will introduce a tiered rate structure to encourage conservation by January 1, 2012. For residential customers, a surcharge of $0.075 per 100 cubic feet will be applied over 1.15 million cubic feet (86,026 gallons). The threshold will be reduced by 2% annually to support the City's targeted annual reductions of 2%. Additional tiers may be added to further reduce large exceedances of the City's target household use. Funds will be used to fund enhanced leak detection that will return on investment as well as water conservation efforts and public education initiatives that will help residents defray the cost of improvements.

Based on a standard lot size, it is estimated that each lawn in Highland Park requires 71,300 gallons per year.[2] Rainfall on that area should provide 37,660 gallons each year. Of that, an estimated 30% or 11,298 gallons will be lost to evaporation or runoff. This suggests that the average Highland Park lawn requires 44,938 gallons of irrigation water each year. Adjusting for losses of 8%, 48,533 gallons of water needs to be pumped to meet the needs of the average lawn's water need each year. When multiplied across 11,934 households in Highland Park, this equates to just over 580 million gallons of drinking water on lawns each year, or almost exactly half of Highland Park's residential water use [14].

Limiting the amount of hardscape or impervious surfaces like asphalt or concrete can allow a greater amount of rainwater to be harvested for irrigation. For example, assuming a similar 30% loss rate, harvesting water from rooftop runoff through rain barrels can reduce freshwater demand by up to 27,000 gallons per year. Reducing the amount of hardscape by 20%, from 750 square feet to 600 square feet, could make another 2,000 gallons of rainwater available. By harvesting only a half of this available rainwater would conserve more than 173 million gallons (187 million gallons at source) each year. Such savings would be equivalent to 80% of Highland Park's 2008 commercial water deliveries and would reduce residential water consumption by 15% and meet the City's Phase I (2014) target.

- **Action-Rain barrels:** The City of Highland Park and Park District of Highland Park will offer discounted rain barrels to Highland Park residents no later than March 1, 2011. A limited number of rain barrels will be reserved for affordable housing units and residents with persistent ponding issues.

When called to investigate flooding problems in the community, Public Works Staff found that some irrigation systems were delivering as much as four inches of rainfall equivalent in a day. Given that most Midwestern soils can only hold 0.25 to 0.50 inches of rain per hour [15], overwatering can easily overwhelm Highland Park's clay-rich soil's ability to deliver water to a lawn's roots system. Not only can overwatering waste a substantial amount of money and water, but standing water and soil saturation can have detrimental effects of lawn health and appearance. In addition, certain varieties of grass can require substantially more than others. For example, ryegrass requires 25% more water than Kentucky bluegrass, while other less common varieties require a third of the water that ryegrass does [16]. When reseeding and over-seeding, the selection of lawn type or *cultivar* can help to reduce water consumption. For residents living in ravine areas, native sea grasses can create an appealing, low maintenance, water conserving buffer that prevents runoff and protects the ravines.

- **Action:** Through the City's *Ask an Expert* program, and in collaboration with experts from the Chicago Botanic Garden and Park District of Highland Park, Public Works and Community Development Staff will provide training

[2] Based on a recommended water requirement of 1.2 inches per week for 26 weeks (March-September) and 0.7 inches per week for 8 weeks (October-November) for a reference lawn seeded with Kentucky bluegrass on a 37.5' by 125' lot, building footprint of 2000 square feet and paved/non-lawn area of 750 square feet

on sustainable landscaping for residents by January 1, 2011. The program will address appropriate types of turfgrass, irrigation, use of rain barrels and hardscape.

Promoting the use of rain barrels and rain gardens consisting of native plants can dramatically reduce the amount of water required to irrigate Highland Park's landscape. Comprehensive stormwater management requires a holistic approach to sustainable landscaping that is discussed in greater detail in the Ecosystems section of this Plan, which immediately follows this section. Many native plants, thanks to their deep roots, require less water than typical turf grass, while providing habitat, food and cover for birds, butterflies and small mammals.

**Residential domestic water use** Addressing kitchen and bath uses in Highland Park helps round out a comprehensive approach to sustainable water management in Highland Park. As with any household use, good housekeeping can help reduce water consumption. Doing simple things like not letting water run when peeling vegetables, brushing teeth and shaving can help. Many Highland Park residents have already embraced these good housekeeping routines. For those residents, changing fixtures can make financial sense while helping protect Highland Park's scarce Lake water resources.

According to a study by the American Water Works Association (AWWA), toilet use (30.9%), clothes washing (25.1%) and shower use (19.4%) together accounted for just over three-quarters of indoor water use. Adding faucets (18.2%) raises that figure to nearly 95%. Other domestic uses (2.7%), bath (2.0%) and dishwasher use (1.7%) accounted for the balance [17]. Water efficient toilets, sink fixtures and appliances can help Highland Park residents reduce water consumption at home. Since 1993, Federal standards have helped to drive down the amount of water required to flush toilets and the amount of water that sink and shower fixtures use. Given that the vast majority of homes in Highland Park were built before such Federal standards took effect, the fixtures and appliances in many homes use far more water than necessary. Replacing toilets and fixtures with Water Sense labeled products and Energy Star certified appliances simplify the process of finding models that reduce water and energy consumption.

- The AWWA study cited above identified a savings potential of 10.5 gallons per person per day for switching to Ultra Low Flush toilets that use 1.28 gallons or less per flush. Across the Highland Park community, this equates to an annual savings potential of 120 million gallons per year.
- The average household surveyed by AWWA consumed 15.0 gallons per person per day for clothes washing. Energy Star labeled clothes washing machines can reduce that quantity by 50%. A savings potential of 7.5 gallons per person per day could produce community-wide savings of 85.9 million gallons per year.
- AWWA's study also revealed that even though homes with low-flow showerheads (less than 2.5 gallon per minute flow) took a shower of 25% longer in duration on average, households with low-flow showerheads still saved an average 4.5 gallons per person per day. A community-wide conversion to low-flow shower fixtures can yield savings of 51.5 million gallons per year.

The City of Highland Park is targeting participation of 40% of households (12,500 residents) in the conversion to Ultra Low Flush toilets and low-flow showerheads and Energy Star clothes washing machines, homes in Highland Park would reduce water consumption by 103 million gallons. When combined with the outdoor water use measures, mentioned above, Highland Park residents stand to reduce residential water consumption by 25% below 2008 levels and meets the City's interim through 2016.

- **Action-Efficient fixtures:** Drawing on the example of many communities, by January 1, 2012, The City will offer a $100 toilet rebate program for Water Sense certified toilets (1.28 gallons per flush or less) that replace a toilet using more than 1.6 gallons per flush. The City will offer a rebate of $75 for Energy Star certified clothes washing machines. A $25 rebate will be offered for Water Sense faucets and dual-flush toilet conversion kits and a $10 rebate will be offered for low-flow showerheads. The rebate program is limited to $500 per household and $500,000 per calendar year and will run through December 31, 2014.

- **Action-Plumbing Code:** The City's plumbing code will require Water Sense toilets (<1.28gpf), low-flow showerheads (<2.5gpm) and Energy Star appliances in new residential construction beginning in 2013. The next scheduled code update in 2016 will consider additional measures to further reduce consumption.

**Objective 7.2 (Commercial & Institutional Conservation): Reduce commercial water use by 10% below 2008 levels by 2012 and 2% each year thereafter, with interim goals of 30% by 2020 and 50% by 2030**

**Indirect Commercial Water Use** While either not reflected in commercial water use or reflected instead in residential water consumption figures, commercial landscaping operations bear responsibility for a substantial amount of water consumption. Consistent with national consumption figures, commercial landscaping operations consume more water (directly and indirectly) than any other commercial, institutional and industrial sector. It is important to realize the economic impact of this water use as it essentially underreports water use associated with commercial activity and greening the Highland Park economy. This can happen for two primary reasons: the use of private tanks to water lawns and unmetered use.

- **Action-Landscape contractors:** As of March 1, 2011, through the City's licensure of Landscape and Lawn Care Professionals, the City will include information on water efficiency in the license renewal packet.

**Direct Commercial Water Use** In 2008, direct commercial water use was the second leading documented source of demand in Highland Park as it accounted for 15% of community-wide demand. Compared with a 1997-2008 average, 2008 commercial water use in Highland Park decreased 5%, from 229.35 million gallons to 217.80 million gallons. While Highland Park's residential water deliveries outstrip commercial deliveries by a more than a 5-to-1 margin, Highland Park's businesses can access capital in a variety of ways that improve operating results that make efficiency improvements a rational business choice. Despite these advantages, commercial water demand in 2008 contracted the least of any customer class in Highland Park.

Given the role restaurants and grocery stores play in Highland Park's retail economy, the City will focus the majority of its commercial water conservation efforts on owner-operated restaurants and grocery stores. A focus on owner-operated businesses will continue a tradition of supporting local businesses and allow for maximum program effectiveness by dealing directly with decision makers. Businesses meeting water efficiency benchmarks established by a panel of experts from the Department of Public Works, Department of Community Development and North Shore Sanitary District will be eligible for public recognition through Highland Park's new Water Smart Business program under the Green Business Certification to be developed in collaboration with the Highland Park Chamber of Commerce and Downtown Alliance.

- **Action:** In concert with local banks, the Highland Park Chamber of Commerce and the Downtown Alliance, the City will establish a revolving loan fund to provide local businesses with access short-term, no interest loans of up to $10,000 to finance the incremental cost of efficient fixtures, up to 20% of the total purchase price. The premium can be extended to 30% for equipment purchased in Highland Park or installed by Highland Park-based

companies. Applications forms will include projected savings, incremental cost and return on investment. The program will launch by January 1, 2011, and will leverage favorable depreciation schedules now available.

- **Action:** As of January 1, 2013, the Department of Public Works will allow its commercial water customers to finance water efficiency upgrades on their water bills. Depending on the availability of funds, the Department of Community Development may elect to participate in loans on a case-by-case basis for innovative applications.

**Large Private Users** Altogether, industrial and government users consumed 102.28 million gallons of water in 2008. Industrial and institutional uses represented 7% of community-wide demand in 2008, which reflects a 53% decrease below the 1997-2008 average. The largest reported decrease of 70.8% arose from Fort Sheridan's transition from an active military base to residential use.

- Among Industrial and Institutional users, golf courses consumed the most at 34.51 million gallons, down 41.4% from a 1997-2008 average of 58.85 million gallons per year.
- Industrial uses ranked as the second leading use in this category with consumption of 20.32 million gallons in 2008, down 23.9% from a 1997-2008 average of 26.69 million gallons per year.
- Fort Sheridan's water consumption, the leading use in this category for 2000, dropped to third thanks to a 70.8% reduction in use from a 1997-2008 average 60.96 million gallons per year to 17.78 million gallons in 2008. Going forward, this data will be tracked as a separate category of residential use.
- Hospital water consumption witnessed a 42.6% reduction in use from 28.29 million gallons per year average from 1997-2008 to a 2008 volume of 16.25 million gallons.
- Water consumption in schools also dropped significantly, through a 21.6% reduction in use relative to a 1997-2008 average of 17.12 million gallon per year average to 13.42 million gallons in 2008.

    - **Action-Leak detection:** The Department of Public Works will build on progress in reducing unaccounted for flows from 16% to 8% in an effort to improve system-wide efficiency and reduce unaccounted for flows to no more than 4% by 2014.

    - **Action-Plumbing Code:** The City's plumbing code will require Water Sense toilets (<1.28gpf) in new commercial construction and substantial renovations beginning with the 2013 revision of the City plumbing code, which will include a formal code review process for waterless urinals. The next scheduled code update in 2016 and successive will consider additional measures to further reduce consumption.

**Objective 7.3 (Stormwater management): Manage 15% of stormwater onsite community-wide by 2015 with an interim goal of 50% by 2020 and 100% by 2030.**

In order to preserve surface water quality, reducing run-off from lawns to Lake Michigan and the Skokie River remain high priorities. The Park District of Highland Park has pioneered natural solutions to stormwater management through a network of 24 acres of natural areas designated as stormwater best management practice measures. Altogether, these areas can divert more than 23 million gallons from the storm sewer system and home basements each year. [3] This is equivalent to

[3] Assumes an infiltration rate of 0.2 cm per minute (6) and average annual precipitation of 36.27 inches.

nearly one-and-half times the water used in Fort Sheridan each year. While substantial and in many cases strategically important based on their location, the Park District's land holdings still comprise a relatively small percentage of Highland Park's total land area. As mentioned previously in this section, homeowners especially can play a crucial role as partners in easing pressure on the City's aging stormwater infrastructure and improving surface water quality across both river and Lake watersheds.

**Green infrastructure** As mentioned previously, the use of rain barrels reduces treated water use for landscaping. In addition to that important benefit, rain barrels can offer limited while wisely managing surface water and preventing infiltration into basements and ponding that can breed mosquitoes. A transition to fully onsite stormwater management generally requires more than rain barrels to manage flow from storm events of one inch or more. For example, when connected to 2,000 square feet of roof area, a 40 gallon rain barrel will fill in less than nine minutes. All told, to manage the most significant of storms, a home of that size would require 32 rain barrels. While larger cisterns are available, their aesthetic impact on existing construction can be substantial and installation often requires a master plumber. The City recognizes that these facts limit the broad applicability of cisterns and large scale detention for Highland Park homes.

Some of the most widely applied and cost-effective measures include filter strips, drainage swales (also bioretention or bioswales) and rain gardens. Not only can such best management practices work in concert with rain barrels to reduce irrigation requirements and improve surface water quality, but they can also enhance and soften the aesthetic of the streetscape. The Chicago Department of Transportation's planted medians along boulevards throughout the City are one such example.

- Along with stormwater, filter strips can remove 70-95% of suspended solids and heavy metals and 25-65% of nitrogen and phosphorous common to fertilizer that reduces the amount of dissolved oxygen available to aquatic life. Such strips can easily be applied to driveways and commercial parking lots and generally require a minimum 1:5 ratio for optimal performance [18].

- For backyards and the public right of way between street and sidewalk, drainage swales as well as similarly narrow areas, drainage swales can effectively direct and distribute water across a property. Even in clay soils prevalent in Highland Park, drainage swales can reduce runoff by 15%, suspended solids and metals by 30-70% and 10-30% of nitrogen and phosphorous [19].

    - **Action-Funding:** The City of Highland Park will also investigate the potential for funding permeable pavement conversion and enhanced rain barrel and cistern development on residential properties by introducing a tiered Stormwater Utility Fee. In 2010, the fee was a $4.00 base fee plus a $4.00 per month per 350 square feet of impervious surface.

## Goal 8: Ecosystems

***Nourish the productive capacity of the North Shore by preserving habitat for threatened and endangered species, promoting the health and diversity of local animals, plants and microorganisms, practicing responsible land use and supporting sustainable local and community agriculture***

***Lead Department/Agency:*** *Park District of Highland Park, Lakefront Commission, Environmental Commission*

***Key Partners:*** *Department of Community Development, Department of Public Works, Chicago Wilderness*

**Success stories (2000-2010)**

- *Maintain 670 acres of high-quality parks and natural areas*
- *Amount of State or Federally-recognized natural areas nearly ten times the State average*
- *Inorganic phosphorous ban to protect surface water quality*

**Outcomes (2010-2030)**

- *Develop Ravine Ecological Management Zone and related protection ordinances*
- *Establish community-wide targets for local and organic food sales and build market through organic school lunches*
- *Establish additional transit-friendly farmers' markets and community gardens*
- *Ban retail sale and commercial application of chemical pesticides*
- *Increase the extent of wildlife habitat by encouraging sustainable residential landscaping*

Thanks to City founders and visionaries like Jens Jensen, Highland Park's public park system is one of the oldest and most biologically diverse in the State of Illinois. By staying on the cutting edge of planning, great care has been taken to restore the ecological balance of over 670 acres of woods and prairies in Highland Park. Maintaining the ecological and recreational value of these spaces will require a continued commitment to their health and success. Today Highland Park's residents and visitors continue to benefit from that foresight in the form of high-quality natural areas and beaches. More than 80% of Highland Park residents have enjoyed them at least once over the past year and nearly every resident has parkland available within a half-mile of their residence. Interpretive facilities like Heller Nature Center help educate the public about Highland Park's precious natural resources.

Natural areas have also demonstrated a capacity to increase home values. Passive parks, in particular, increased the value of adjoining properties by more than 20% [20]. For Highland Park, where the percentage of parks as recognized natural areas is ten times the State average, literature suggests an even higher premium. A significant development premium can be felt as far as 2,000 feet from each park. Given that nearly every household in Highland Park is less than a half-mile (2,640 feet) from a park or recreation area, quality natural areas can play a role in boosting property community-wide.

***Objective 8.1 (Ecological heritage)* Promote the health and biodiversity of Highland Park's iconic and ecologically sensitive significant ravines and urban forest, while maintaining appropriate access to the public**

**Ravines** The City Forester, Department of Community Development and Park District of Highland Park, along with the Lakefront and Environmental Commissions, have taken great care in preserving the community's ecological heritage. Legal and permitting protections include fees for tree removal and wetlands disturbances and a Steep Slope Ordinance that protects Highland Park's iconic ravines and the values of adjacent properties. Natural erosion from wind-driven sand and rain threaten the integrity of the slopes and can load a substantial amount of sediment into Lake Michigan. Run-off from residential properties can exacerbate such erosion and degrade surface water quality by loading nitrogen, phosphorous, metals and other solids into the Lake. Run-off sheeting down ravine slopes can accelerate slope failure and damage the urban forest situated in the ravines and habitat the forest provides, especially for migratory birds and native mammals.

- **Action-Ecological Management Zone:** In collaboration with the Lakefront Commission, Environmental Commission and Openlands, and building on best management practices from biosphere reserves and ecologically sensitive areas, the City and Park District will work to demarcate recreational, sensitive and restricted areas based on their ecological value by January 1, 2012.

- **Action-Ravine Protection Ordinance:** By January 1, 2015, the City will build on the City's existing Steep Slopes Ordinance and formalize the City's Guidelines for Living in a Ravine and Lakefront Community and lessons learned from the restoration of the Fort Sheridan ravines in introducing a Ravine Protection Ordinance that extends inland from the Lake to 50 feet inland of the ridgeline of the ravines. The Ordinance will formalize many of the guidelines with respect to plant palettes and use of buffer strips within the Ecological Management Zone.

**Forest health** In contrast to many areas in Illinois that were dominated by prairie prior to development by settlers, Highland Park's native ecosystems were dominated by forests and ravines that thrived in ecological balance. Deposition along the ravines improved offered rich soil for trees to thrive while the forest provide wind breaks and shelter the ravine bluffs from the sheeting action of rain. While impact fees have provided financial incentives to both preserve existing forest and wetlands and restore damaged and degraded areas, the health of the urban forest must be continually monitored.

- **Action-GIS mapping:** In addition to tracking health and infection threats of invasive species, the City Forester will collaborate with the Park District of Highland Park and GIS Alliance to assess forest health on an ongoing basis.

***Objective 8.2 (Responsible food Systems):* Encourage humane and sustainable agriculture, while protecting and preserving Lake County and Midwestern farmland and farm livelihoods**

In 2008, Highland Park grocery stores and restaurants saw more than $150 million spent on food and beverages. That figure equates to $9,200 in groceries and $3,500 in restaurant food per household. Needless to say, food plays an important role in Highland Park's service economy. Equally, such purchasing power can support markets for local and organic produce, meat and beverages by encouraging restaurants and grocery stores to carry local and organic produce.

Encouraging the cultivation and sale of local produce not only helps reduce the distance food travels and related greenhouse gas emissions, but often arrives fresher and benefits farmers who depend on small contracts and farmers' markets to make a living. Organic produce must not contain chemical or hormone additives, which provides a human health benefit in addition to the environmental benefits of organic fertilizers and human animal treatment. Community supported agriculture and Farmers Markets have played a key role in connecting environmentally conscious farmers and consumers, especially for organic produce. Such direct marketing and lower transportation costs allow farmers to deliver local produce at competitive prices and margins that can sustain them.

Of all food sold nationwide in 2005, only 2.5% came from organic sources. Of that total, only about 7% of organic foods sold through farmers market and direct channels (OTA, 2005), so natural food stores and grocery stores also play a critical role in supporting local and organic farmers. While organic food experienced double digit growth from 1998-2005 (OTA, 2005), a challenging economy has threatened some organic farmers, especially Midwestern dairy farmers [21] as feed and fuel costs have outstripped their pay. As a result, organic farmers face grave consequences without market support.

- **Action - Organic School Lunch:** School Districts 112 and 113 will lead by example in switching to organic milk in schools lunches by August 2011 and working with foodservice providers to provide local, organic produce when renegotiating contracts. In addition, the School Districts will collaborate with other schools through the Healthy Schools Initiative to reduce barriers to providing organic food in school lunches.
    - By exploring opportunities for bulk purchasing with Northbrook, Deerfield and other communities, Highland Park schools will look to achieve economies of scale, while expanding the market for local and organic food and beverages. The City of Highland Park will also implement a revenue-neutral fee-bate structure that rewards grocery stores and restaurants for exceeding the community-wide targets described below.

- **Action: Green Grocers and Restaurants** The City of Highland Park will work with local grocery stores and business districts to actively promote the sale of local and USDA certified organic produce in Highland Park. This promotion includes a target of achieving 5% of grocery store sales and 2% of restaurant sales from organic foods and produce grown with 150 miles by January 1, 2014.
    - These targets will increase to 20% by January 1, 2020, and 30% by January 1, 2030. Restaurants certified by the Green Restaurant Association may also be eligible for special business assistance through the Department of Community Development.

- **Action - Direct trade:** At the same time, the City will expand its Port Clinton Farmers' Market and work to establish transit-friendly farmers' markets throughout Highland Park, while promoting drop-off sites for Community Supported Agriculture. Altogether, the City aims to encourage $500,000 in sales through farmers' markets and Community Supported Agriculture by January 1, 2012.

- **Action - Community gardens:** The City of Highland Park will partner with the University of Illinois Cooperative Extension Service, Tempel, Golden Oaks, Prairie Crossings Organic Farm and other local producers to provide training to students and homeowners to encourage homegrown produce and school-raised produce that can be sold to fund school sustainability initiatives. This initiative will launch no later than July 1, 2012.

***Objective 8.3 (Habitat and biodiversity):* Increase the amount of wildlife habitat available in Highland Park by 100 acres by 2020 through backyard 'habitat bridges' to larger habitat areas and monitor ecosystem health**

By connecting habitat across the community, Highland Park can become a refuge for threatened and endangered species, particularly for birds making their migratory journey along Lake Michigan. At the same time, selection of appropriate native plants can mitigate standing water and resulting mosquito nuisance and flood risk. Equally, native plants can improve water quality by lessening dependence on chemical fertilizers and reducing potable water consumption. Successful implementation of this program would result in the addition of more habitat than all of Chicago's nation-leading green roofs combined and requires innovative and sensitive approaches to addressing destruction of native plants by deer.

- **Action - Backyard Habitat:** To support native plant populations and habitat on residential properties in Highland Park, the City government will introduce sustainable landscaping guidelines by January 1, 2012.

- **Action-Landscaping:** Highland Park's Residential Landscape Guidelines will be developed in collaboration with the Park District, Chicago Botanic Garden, National Wildlife Federation, Chicago Wilderness and the Chicago Audubon Society and will offer homeowners guidance on incorporating native plants designed to provide food, habitat and cover for key species. Highland Park's Residential Landscape Guidelines will include targets for native species as a percentage of total non-improved property area and priority areas within the community based on ecological value. This voluntary target will increase from 5% by January 1, 2015, and 10% by January 1, 2018.

- **Action-Native Plants:** Seedlings and live plants will be cultivated from existing native vegetation in Highland Park and provided at cost to minimize the cost impact both to residents and the City, while providing attractive and ecologically beneficial landscaping options. To further native vegetation and habitat development efforts, an impact fee will be assessed to properties failing to meet the target as of January 1, 2020. Revenues will fund native planting and community gardening initiatives in support of this objective.

- **Action-Biodiversity:** The Park District of Highland Park will, in collaboration with community volunteers, expand its inventory of natural systems to include floristic quality to assess biodiversity along with acreage. The first annual survey will be conducted no later than July 31, 2014. Results will be presented to the Lakefront and Environmental Commissions and will inform the development of successive five-year Biodiversity Action Plans in 2016, 2020, 2024 and 2028. The impact of the built environment, physical infrastructure and non-native and native invasive species will receive priority in the first five-year Action Plan.

***Objective 8.4 (Pest management):* Eliminate the retail sale and commercial application of chemical based pesticides no later than January 1, 2012**

Species like the West Nile Virus-carrying culex mosquito, tree-destroying Emerald Ash Borer and voracious Asian bighead carp continue to wreak havoc on local ecosystems. At the same time, employing harsh control methods can negatively affect many beneficial species. By choosing innovative, sensitive and proactive approaches both human health and ecosystems can be protected; sometimes at a financial savings.

Pesticides and chemical fertilizers pose health threats to humans and many beneficial species alike. Building Children remain especially vulnerable due to increased exposure during recreation time and the ongoing development of their delicate nervous and reproductive systems. While State law requires that application of these chemicals not occur on days when students are present, chemical residues may remain for up to 24 hours. Equally, runoff from these chemicals easily enters the storm sewer system and, as a result, our waterways. For these reasons, 122 school districts throughout Illinois have adopted Integrated Pest Management (IPM) as a means of sharply reducing or altogether eliminating chemical pesticides and fertilizers [21]. IPM strategies work to directly eliminate the food, water sources and hiding places that allow pests to thrive [22]. Such a strategic approach can often eliminate the need for spraying over wide areas or 'broadcast spraying' that can cast a plume beyond the area of application.

- **Action - Landscaping:** Through the City government's regulation of landscaping businesses serving residential customers in Highland Park, and in partnership with the Park District of Highland Park, the City will introduce a program to train landscaping professionals about sustainable lawn and yard care. Such methods will include native species, invasive management, integrated pest management and pervious surfaces
    - Information on integrated pest management will be included in landscape renewal license applications by January 1, 2011. In addition, City and Park District will collaborate with the Chicago Botanic Garden to educate homeowners to build awareness about chemical-free pest management alternatives as well, through the City's website and composting and vermiculture workshops.

- **Action - Landscaping:** In addition to landscaping, one of the most significant applications of pesticide comes from mosquito abatement. *Malathion*, one commonly used pesticide, has come under increasing scrutiny given that it can form a more toxic compound, *malaoxon*, when present in untreated water undergoing chlorination [23]. The *malathion* compound also is highly toxic to honeybees [24], which may impact pollination and diversity of plants. Naturally occurring bacteria like *bacillus sphaericus* can offer promise in controlling mosquito populations (especially the *culex* variety that carries West Nile Virus) in the larvae stage, before they can become adults [25]. Biocides of this variety can and should form the basis of integrated pest management (IPM) methods of controlling mosquitoes in Highland Park, along with strict control of standing water, which some native plants can help reduce.

The City will develop an IPM Task Force as part of the Lakefront and Environmental Commissions to discuss this issue further, in conjunction with the Park District, Moraine Township and the Lake County Department of Public Health in an effort to eliminate broadcast spraying community-wide by no later than January 1, 2016.


RAVINIA FESTIVAL MAIN ENTRANCE, HIGHLAND PARK

## Goal 9: Culture

***Preserve an inherited legacy of diverse and abundant cultural and natural assets that solidify Highland Park's future as an enduring destination for arts and recreation and enrich the experience of Highland Park for residents and visitors while supporting local businesses***

***Lead Department/Agency:*** *City Manager's Office, Park District of Highland Park*

***Key Partners:*** *Ravinia Festival Association, The Art Center, Department of Community Development, Highland Park Historical Society, Healthy Highland Park Task Force*

**Success Stories (2000-2010)**

- *More than 650,000 annual attendees at cultural events community-wide*
- *More than 13,000 volunteers and visitors to Heller Nature Center in 2008*
- *Over 2,500 family and individual members of The Art Center*

**Outcomes (2010-2030)**

- *Develop sustainable event management guidelines for City-sponsored events and partner with the Ravinia Festival to do the same*
- *Promote green vendors through resource guides for event planners, vendors and the public*
- *Encourage the sale of local and organic foods at City-sponsored events*
- *Create offseason farmers and artisan markets at Ravinia capable of funding sustainability initiatives at the Ravinia Festival and in the community*
- *Elaborate on existing historic building inventories*

**Aspirations (2010-2030)**

- *Lead a transition to zero waste events and significant reductions in the impact of food, water, shelter provided at events, while increasing public awareness about sustainability*

More than 650,000 people make Highland Park a destination for cultural programming each year at events that include the world-renowned Ravinia Festival, Taste of Highland Park, Festival of Fine Craft and Port Clinton Art Fair. In addition to seasonal outdoor events, The Art Center in Highland Park boasts more than 2,500 family and individual members who support the Center's year-round, high quality contemporary and traditional art exhibits. The Center also supports art education through Youth Art Month in February, which showcases art produced by Highland Park and Deerfield High School students. In all of these public events and venues, Highland Park has the ability to engage patrons and artists in its transition to sustainability in 'sharing the mission.' Cultural events and venues not only enhance the quality of life in Highland Park, but also contribute significantly, both directly and indirectly, to local economic development.

Throughout the year, the Park District of Highland Park delivers more than 3,000 programs across its system of 44 parks and natural areas. To support this wide variety of programming, the Park District becomes the largest employer in the Highland Park community during the summer months, when numerous summer camps provide Highland Park's youth with healthy, active opportunities for outdoor education and craft-making. No matter the season, more than 13,000 visitors and volunteers have affirmed the Park District's Heller Nature Center as a community resource for natural areas education. With more than 11 miles of bike trails in Highland Park, the Park District's bike infrastructure plays an important role in connecting communities across the North Shore as part of both the Green Bay/McClory and Skokie Valley trail systems. In addition to programs offered by the Park District, the Healthy Highland Park Task Force has led community efforts to limit the use of trans-fats and promote weight management by encouraging an active, healthy community.

***Objective 9.1 (Cultural Events & Venues):* Support a vibrant performing and visual arts culture that incorporates the City's 10 Sustainability Goals in events across the community**


THE ART CENTER, HIGHLAND PARK

With each Highland Park concert, festivals and lazy afternoon on the beach comes an opportunity to incorporate sustainability and spread the message about Highland Park's 10 Sustainability Goals. By leveraging a long history of public-private partnerships and civic engagement and working closely with the Ravinia Festival, The Art Center, vendors and patrons, the City and Park District plan to do just that. In the process, the City aims to establish Highland Park as a sustainable event destination that leverages Highland Park's cultural and natural amenities. Resources and guidelines developed by organizations like Meeting Professionals International, Blekinge University and the U.S. Environmental Protection Agency will assist in developing event-specific guidelines applicable to Highland Park's events and venues. Consistent with Meeting Professionals International's four-pronged approach to sustainable event management, the City will devise guidelines to address food, water, shelter and education needs and delivery for all City-sponsored events and those events that require special event permits from the City.

- **Action-Music:** Through the Ravinia Festival Community Relations Commission and based on *The Sustainable Music Festival: A Strategic Guide* [26] produced by Blekinge University in Karlskrona, Sweden, the City will collaborate with the Ravinia Festival Association to develop and implement sustainable event management guidelines for the Ravinia Festival by January 1, 2012, for the 2012 concert season. The guidelines developed will take inspiration from the following aspirations:

  - Produce no waste
  - Use 100% renewable energy
  - Use resource efficient transportation
  - Work with sustainable stakeholders
  - Create an atmosphere of inclusion and respect
  - Drive societal change toward sustainability

- **Action-Sustainable Public Events:** The City and Park District will collaborate to devise and implement Sustainable Event Management Guidelines for City-sponsored events by April 1, 2011. For events requiring a special event permit, the City and Park District will develop a system of incentives for sustainable event management through event permit fee schedules by January 1, 2012. By January 1, 2014, the City will require pre- and post-event impact assessments as a condition of the event permit. Vendors who fail to complete a post-event statement will forfeit a refundable deposit. As of January 1, 2016, repeatedly non-responsive vendors will not be eligible for future event permits.

- **Action-Farmers and Artisans:** Through the Ravinia Festival Community Relations Commission, the City of Highland Park will pursue the creation a joint farmers' market and art fair to benefit the sustainability initiatives at the Festival and community-wide following the 2012 concert season. The programming will help increase awareness about the arts in Highland Park and will provide local artisans and farmers a direct, year-round market. The otherwise vacant facilities will provide a transit-friendly indoor space for promoting art and sustainable agriculture in Fall and Winter months, while providing an opportunity for hosting speakers and demonstrations that captivate the imagination.

- **Action-Vendors:** In collaboration with the Highland Park Chamber of Commerce and Downtown Alliance, the City will develop a Vendor and Resource Guide to accompany the Sustainable Event Management Guidelines in order to provide event planners with a list of providers who incorporate sustainability and tips for vendors to reduce the impact of their display, while creating business opportunities for local green businesses.

- **Action-Food and Foodservice:** The City will partner with the Ravinia Festival Association to introduce an off-season farmers' market and art fair with by September 1, 2011, that can help to fund sustainability events on the Ravinia grounds and elsewhere in the Highland Park community. As of January 1, 2013, food vendors at City-sponsored events will be required to disclose nutritional information (including trans-fat content declaration) for all food items sold upon request, along with the percentage of food sourced within 150 miles and percentage of organic goods sold. By January 1, 2015, a refundable deposit will be added to permit fees and refunded to vendors who demonstrate 5% of sales from local and organic sources. Forfeited deposits will fund sustainable food purchasing and education in Highland Park's public schools. Local and organic food sales targets will increase 3% annually to 20% in 2020 and 1% annually thereafter to 30% by 2030.

- **Action-Zero Waste Events:** In a drive toward zero waste events community-wide by 2030 and as part of its engagement of the public, the City will collaborate with the Volunteer Pool of Highland Park, League of Women Voters and Highland Park High School to help monitor and facilitate recycling at public events as soon as possible based on the successful negotiation of a Residential Refuse Franchise agreement. In partnership with SWALCO, volunteer organizations will be able to apply bottle deposits for plastic, metal and glass bottles collected to an organizational sustainability fund. Overall, the City has set a target diversion rate for public events of 50% by 2012, 75% by 2020 and 100% by 2030.

***Objective 9.2 (Historic preservation):* Preserve Highland Park's architectural heritage as a pillar of its appeal as a cultural destination**

Highland Park owes a great deal to celebrated architects including Frank Lloyd Wright, Howard Van Doren Shaw, Jens Jensen and Robert Seyfarth for its more than 140 years of architectural heritage. Equally, residents of Highland Park have invested a great deal of pride and money in investing in, restoring and maintaining these architectural treasures for future generations. Frank Lloyd Wright and Highland Park resident Jens Jensen, in particular, revolutionized the human relationship with nature through the built environment and continue to impact architecture on a global scale. Both Wright and Jensen were visionaries who pioneered sustainability in practice, long before it ever had a name in concept.

From Carpenter Gothic to Prairie, Arts and Crafts and International Schools, Highland Park's architectural diversity remains largely intact thanks to a variety of ordinances and protections that encourages historic preservation and discourages demolition of significant or 'contributing' buildings in Highland Park. The City's Historic Preservation and Demolition of Dwellings ordinances provide for a review by the City's Historic Preservation Commission for all residential demolition. In the case of contributing buildings, the Ordinance provides for a review period of up to one year to assess the architectural impact of the demolition. In addition to this important ordinance, the City also levies a demolition tax and imposes impact fees on demolitions that have helped Highland Park avoid widespread tear-downs. Not only can historic preservation preserve Highland Park's architectural heritage, but it can prevent a substantial amount of demolition debris from entering landfills. The architecturally significant buildings that grace Highland Park also continue to teach lessons in the use of durable materials and innovative design that has stood the test of time and can shape the community's legacy to come.

Highland Park's four National Historic Landmark Districts (Linden Park Place Belle Avenue, Hazel Avenue Prospect Avenue, Maple Avenue Maple Lane and Ravinia Festival Districts) and three local historic landmark districts (Vine/Linden/Maple, Linden Park and Belle Avenue) afford specific protection to 223 structures throughout Highland Park. The City has conducted a series of seven surveys (Green Bay, Central East, South Central, Westside, Braeside and Bob-O-Link) of potentially historic buildings that may merit protection as local or national landmarks. Participation in the City's State-accredited landmark designation program enables residents to receive an eight-year freeze in the assessed valuation of a restored single-family residential property. The City makes simplified forms for applying for landmark status available to residents on its website.

- **Action-Inventory:** The City will continue to identify opportunities to preserve significant buildings, with a goal of retaining 100% of contributing buildings standing in 2007 in 2030.

***Objective 9.3 (Health & recreation):* Promote an active, healthy community while promoting sustainable tourism**

Building on the goals enumerated in the Mobility section (Section 5) of this plan, the Highland Park community will embrace bike and pedestrian mobility as a means of staying active and healthy. As an outgrowth of the Complete Streets Plan to be developed, the Healthy Highland Park Task Force, Traffic Commission and Park District and local bike-friendly businesses will collaborate to develop means of promoting Highland Park as a bike tourism destination. Enhancing connections among parks, natural areas and the Lake, increasing the availability of bike parking, signage and map availability along bike routes will help achieve this goal.

- **Action-Signage:** The City and Park District will identify improvements to cycling infrastructure, including on-road and path signage, to enhance Highland Park's reputation as a cycling destination by December 31, 2011. The City will pursue grant funding from the Chicago Metropolitan Agency for Planning, Illinois Department of Commerce and Economic Opportunity, Moraine Township and the Lake County Department of Transportation and will fund the balance of this initiative through voluntary contributions and business sponsorships.

- **Action-Bike Valets:** The City of Highland Park will collaborate with the Active Transportation Alliance and Volunteer Pool of Highland Park to develop a bike valet program for City-sponsored events as of April 1, 2011. Planning for the 2011 Taste of Highland Park and Port Clinton Art Fair will include accommodations for 100 bikes. Through the Ravinia Festival Community Relations Commission, the City will pursue the availability of free bike valets through State and Federal Congestion Mitigation and Air Quality (CMAQ) grants to reduce congestion and decrease the impact of Festival parking. The City will fund the balance of this initiative through proceeds from off-season farmers' and artisan markets at Ravinia. The City will work to make free bike valets available for the 2012 Ravinia concert season. The City will also investigate incentives for ticketed Metra passengers and bike valet users and surcharges on concert parking as a means of sustainable transportation to Ravinia. The City will also engage the RTA to identify additional means of encouraging the use of public transportation to Festival grounds.

## Goal 10: Legacy

***Create a model sustainable community out of a commitment to preserve the legacy given generously to us and passed along to future generations with care and pride by encouraging a long-term perspective that embraces these goals, while adapting to a changing natural environment and evolving human needs***

***Lead Department/Agency:*** Cultural Arts Commission, Design Review Commission, Historic Preservation Committee, Ravinia Festival Community Relations Commission, Zoning Board of Appeals, Park District of Highland Park

***Key Partners:*** *The Art Center, Highland Park Historical Society, Healthy Highland Park Task Force*

## *Conditions for Success: Key Outcomes in the Transition to Sustainability*

Through a community-wide collaboration among residents, businesses and government within Highland Park and collaboration with communities across the North Shore and worldwide, the Highland Park community commits itself to the continuous improvement of the quality of education, human and ecosystem health and essential services while achieving radical increases in energy, water and material resource productivity community-wide. The rationale and outcomes by which the success of this Plan will be judged constitute the contribution of this generation to the next and successive generations.

- Ecosystem protection, culture, legacy and energy, material, water productivity drive accountability and innovation in education, delivery of services and volunteer efforts that enhance the quality of life in Highland Park and work to bring community-wide consumption and production into balance.

- All students, households, businesses and civil servants apply sustainability in their respective vocations, daily routines and operations through clearly communicated, science-based and action-oriented principles and procedures supported by market signals and policies that encourage sustainability.

- Infrastructure maintained by, services provided by and cultural events sponsored or permitted by the City embody best ecological management practices, while encouraging and supporting private sector partners and residents in their efforts follow the examples set by the City.

- The community has achieved success in an ongoing effort to reduce energy, material and water consumption in line with the natural resources within Highland Park by becoming a net zero energy community and maintaining sustained positive aquifer charging by eliminating irrigation.

- Highland Park's iconic ravine ecosystems, lake and river watersheds, urban forest and prairie remain protected, undiminished, unimpaired and retain a high degree of diversity, beauty and functionality.

- Lake Michigan remains a viable freshwater source thanks to successful efforts to eliminate discharges to the Lake and to control erosion from ravines and proactive efforts to manage invasive species.

- All contributing structures in Highland Park's identified in 2010 continue to contribute to Highland Park's architectural heritage.

## Glossary of Terms

**Complete Streets:** A planning concept designed to facilitate safe access to all modes of transportation in the public way

**Density:** Refers to the population per square mile and the construction of the built environment to accommodate a greater or lesser number of people in a given area

**Greenfield development:** Construction of buildings on previously undeveloped, unimproved land

**Greenhouse Gases (GHGs):** Gases that trap heat as they prevent infrared solar radiation reflected from the Earth's surface from being transmitted through the Earth's atmosphere into space. As defined by the United Nations Framework Convention on Climate Change, these gases include carbon dioxide, methane, nitrous oxide, hydro fluorocarbons, perfluorocarbons and sulfur hexafluoride.

**Integrated Pest Management (IPM):** An ecologically based pest-control strategy that relies on natural mortality factors, such as natural enemies, weather, cultural control methods, and carefully applied doses of pesticides

**Leadership in Energy and Environmental Design (LEED):** A green building rating system devised by the U.S. Green Building Council and its stakeholders by consensus and basis for municipal building codes nationwide

**Metropolitan Mayors' Caucus:** A collaboration of 273 mayors across the six-county Chicago metropolitan area including Chicago and nine suburban municipal associations, including the Northwest Municipal Conference, to which Highland Park belongs

**Solar fraction:** The percentage of energy provided by a solar energy technology of total energy use or demand

**Sustainability:** As defined by the United Nations Brundtland Commission, "development which meets the needs of current generations without compromising the ability of future generations to meet their own needs"

**Triple Bottom line:** An expansion of the conventional financial bottom line or 'net result' to include social and environmental performance along with financial performance

**U.S. Conference of Mayors:** Nationwide association of mayors cities and towns of over 30,000 and sponsoring organization of the Climate Protection Agreement that binds signatories to reduce greenhouse emissions by 7% below 1990 levels by 2012 and to support a nationwide carbon trading regime

## Indicators and Data Collection

In the early stages of this plan, key success indicators were created to ensure progress toward the goals could be tracked quantitatively. The results of the research and analysis for the success indicators follow.

## Highland Park Community-Wide Greenhouse Gas Emissions Inventory (2008)

| Direct emissions-Motor fuel use | quantity | unit | conversion factor | unit | tCO2e | Source |
|---|---|---|---|---|---|---|
| Total motor fuel use | **22,136,698** | **gallons** | | | **207,703** | |
| Unleaded gasoline, retail | 18,665,743 | gallons | 0.0092 | tCO2e/gallon | 171,725 | Illinois Department of Revenue |
| Diesel, retail | 3,293,955 | gallons | 0.0104 | tCO2e/gallon | 34,257 | Illinois Department of Revenue |
| Unleaded gasoline, City | 100,000 | gallons | 0.0092 | tCO2e/gallon | 920 | Public Works |
| Diesel, City | 77,000 | gallons | 0.0104 | tCO2e/gallon | 801 | Public Works |

| Direct emissions-Natural gas | quantity | unit | conversion factor | unit | tCO2e | Source |
|---|---|---|---|---|---|---|
| Total natural gas use | **27,929,930.56** | **therms** | | | **148,029** | |
| Residential | 21,316,792.06 | therms | 0.0053 | tCO2e/therm | 112,979 | North Shore Gas |
| Commercial | 5,109,681.06 | therms | 0.0053 | tCO2e/therm | 27,081 | North Shore Gas |
| Government | 1,343,900.22 | therms | 0.0053 | tCO2e/therm | 7,123 | North Shore Gas |
| Industrial | 159,557.22 | therms | 0.0053 | tCO2e/therm | 846 | North Shore Gas |

| Direct emissions-Fugitive emissions | quantity | unit | conversion factor | unit | tCO2e | Source |
|---|---|---|---|---|---|---|
| Total fugitive emissions | | | | | **11,360** | |
| Refrigerants | 9,793 | tCO2e | | | 9,793 | Community Development |
| Wastewater treatment | 1,478,450,000 | gallons | 1.06 | $tCO2e/10^6$ gal | 1,567 | Department of Public Works |

| Indirect emissions | quantity | unit | conversion factor | | tCO2e | Source |
|---|---|---|---|---|---|---|
| Electricity | **411,781,029** | **kWh** | | | **283,866** | |
| Residential | 175,588,059 | kWh | 0.00068 | tCO2e/kWh | 119,400 | ComEd |
| Small Commercial | 117,055,864 | kWh | 0.00068 | tCO2e/kWh | 79,598 | ComEd |
| Large Commercial & Industrial | 111,560,549 | kWh | 0.00068 | tCO2e/kWh | 75,861 | ComEd |
| Street and Highway Lighting | 2,029,414 | kWh | 0.00068 | tCO2e/kWh | 1,380 | ComEd |
| Small Government Accounts | 34,616 | kWh | 0.00068 | tCO2e/kWh | 24 | ComEd |
| Large Government Accounts | 5,512,527 | kWh | 0.00068 | tCO2e/kWh | 3,749 | ComEd |
| Landfilled Organic Waste | 23,505 | tons | 0.164 | tCO2/ton MSW | 3,855 | SWALCO |

# Highland Park Community-Wide Greenhouse Gas Emissions Summary (2008)

**Most significant emissions sources**

| | | | |
|---|---|---|---|
| Unleaded gasoline, retail | 171,725 | tCO2e | *26%* |
| Commercial & industrial electricity | 155,459 | tCO2e | *24%* |
| Residential electricity use | 119,400 | tCO2e | *18%* |
| Residential natural gas use | 112,979 | tCO2e | *17%* |

**Per household energy use**

| | | |
|---|---|---|
| Average residential electricity use | 14,441 | kWh/household/year |
| Average residential natural gas use | 1,753 | therms/household/year |
| Motor fuel use per capita | 704 | gallons/resident |

| | | |
|---|---|---|
| **Community-wide GHG emissions** | **650,957** | tCO2e |
| of which building energy | **66%** | of total emissions |
| of which transportation | **32%** | of total emissions |
| of which refrigerants | **2%** | of total emissions |
| of which waste & wastewater | **1%** | of total emissions |
| | | |
| **GHG emissions per resident** | **20.7** | tCO2e/capita |

| **Population Data** | **2008 value** | **1990 value** |
|---|---|---|
| Residents | 31,449 | 30,375 |
| Households | 11,934 | 11,023 |

| **Mobility and Fuel Use** | **2008 value** | **1990 estimate** |
|---|---|---|
| Vehicle miles traveled per household | 19,527 | 15,317 |
| City government gasoline use | 100,000 | 187,500 |
| City government diesel use | 77,000 | 77,000 |
| Gallons of gasoline consumed, retail sales | 3,293,955 | 2,583,754 |
| Gallons of diesel fuel consumed, retail sales | 18,665,743 | 14,641,275 |

| **Building Performance and Green Building** | **2008 value** | **1990 value** |
|---|---|---|
| LEED-EBOM score, four largest City facilities (weighted average) | 40.1 | NA |

| **Sustainable land use** | **2008 value** | **State average** |
|---|---|---|
| Percentage of recreational area featuring State or Federally-recognized natural areas | 23.3% | 2.2% |
| Natural area acreage per 1,000 residents, including water | 4.11 | 2.26 |

| **Stormwater BMPs** | **2008 value** | **1990 estimate** |
|---|---|---|
| Acres Operating Under State/Federal Designation, Park District | 24 | NA |

| **Bike and Pedestrian Infrastructure** | **2008 value** | **1990 estimate** |
|---|---|---|
| Bike Parking Spaces, Ravinia | 54 | NA |
| Bike Parking Spaces, SD112 | 120 | NA |
| Bike Parking Spaces, CBD | 52 | NA |
| **total** | **226** | NA |

| | **2008 value** | **1993 value** |
|---|---|---|
| McClory/Green Bay Trail, lane miles | 5.90 | 5.90 |
| Skokie Valley Trail | 2.20 | 2.20 |
| Sidewalks Added Through Greenways Initiative | 2.76 | 0.00 |
| Trail Lane Mileage Added Through Greenways Initiative | 0.25 | 0.00 |
| **total** | **11.10** | **8.10** |
| % of surface streets | 7.1% | 5.2% |

| | **2007 value** | **2003 value** |
|---|---|---|
| Traffic Accidents (2007) | 860 | 982 |

| **Non-renewable resources** | **2008 value** | **2003 value** | **1989 estimate** |
|---|---|---|---|
| Municipal solid waste generation per capita, per day | **10.16** | **8.78** | **8.5** |
| Industrial & Special waste generation per capita, per day | **0.46** | **1.26** | **1.26** |
| Of which paper | 12,630 | 10,513 | 19,460 |
| Of which plastic | 11,344 | 9,442 | 5,042 |
| Of which metal | 3,041 | 2,531 | 3,016 |
| Of which glass | 1,286 | 1,071 | 1,037 |
| **Commodity, Office and Packaging Waste** | **28,301** | **23,557** | **28,554** |
| Building Materials (Construction & Demolition Waste) | 10,759 | 8,980 | 5,890 |
| Industrial and Special waste | 2,647 | 2,557 | 2,550 |
| Other Landscape Waste | 3,041 | 2,538 | 1,461 |
| **Construction, Landscape and Special Waste** | **16,447** | **14,075** | **8,440** |
| Organics | 10,642 | 8,882 | 6,361 |
| Textiles (carpet, clothing and upholstery) | 6,140 | 5,124 | 3,675 |
| **Food and Fiber Waste** | **16,782** | **14,007** | **10,036** |
| Inorganics (Electronics & Appliances) | 2,456 | 2,050 | 1,979 |
| Household Hazardous Waste (HHW) | 117 | 98 | 94 |
| **Hazardous and Electronic Waste** | **2,573** | **2,147** | **2,074** |

| **Reusable materials & recycling drop-off facilities** | **2008 value** |
|---|---|
| Community-wide Diversion Rate | 41.6% |
| Total Municipal Waste Recycled (SWALCO), tons | 9,640 |
| Total Landscape Waste Diverted/Composted (SWALCO), tons | 1,643 |
| **Total Municipal Waste Diverted, tons** | **11,282** |
| Total Construction & Demolition Diverted, tons | 4,105 |
| Total Other/Commercial Landscape Waste diverted, tons | 122 |
| **Total Municipal Waste Diverted** | **4,227** |

| **Water** | **2008 value** | **2000 value** | **1997-2008 average** |
|---|---|---|---|
| **community-wide water use** | **1,478.45** | **1,796.10** | **1732.67** |
| Residential Water Deliveries, million gallons per year | 1,158.37 | 1,312.37 | 1311.41 |
| Commercial Water Deliveries, million gallons per year | 217.80 | 236.49 | 229.35 |
| Golf Course Water Deliveries, million gallons per year | 34.51 | 77.76 | 58.85 |
| Industrial Water Deliveries, million gallons per year | 20.32 | 35.38 | 26.69 |
| Fort Sheridan Water Deliveries, million gallons per year | 17.78 | 79.94 | 60.96 |
| Hospital Water Deliveries, million gallons per year | 16.25 | 38.43 | 28.29 |
| School Deliveries, million gallons per year | 13.42 | 15.74 | 17.12 |

| **Private sector initiatives** | **2009 value** |
|---|---|
| Commercial Energy Efficiency Incentives | $125,000 |

| **Recycled material content** | **2008 value** |
|---|---|
| Recycled content of paving materials | **15-25%** |

## Summary of Community Feedback

Stakeholder buy-in is critical in any decision-making process, especially in order to represent the diverse interests reflected across communities. To ensure all aspects of the community were represented in this plan, a public survey and public feedback meeting was held to elicit input on the plan. That feedback has served as a cornerstone for the plan and is summarized here.

PRIORITIES AND COMMUNITY ASSETS Highland Park residents revealed that energy costs and related greenhouse gas emissions, recycling and refuse management and natural area protection and restoration were the top three areas of environmental concern throughout the community. This prioritization guided the development of the Plan's structure and tone. Equally, survey respondents noted that an engaged, well-educated community and quality education system was the community's foremost asset in promoting sustainability, while proximity to Lake Michigan and a well-developed public transit system also rated highly. Residents see natural areas not only for their aesthetic value, but also for their ability to manage stormwater, provide animal habitat and offer recreational opportunities.

*VISION* In developing a sustainability vision, incorporating sustainability into major purchasing decisions, protecting water sources and habitat figured prominently. This feedback founded the core of Highland Park's 10 Sustainability Goals, which were later expanded based on Green Initiatives Alliance's feedback. The core message advocated by public participants was that Highland Park "is continuously pursuing a waste and emissions-free community, leaving an environment richer than the one we inherited and educating all residents and businesses about their environmental impacts." Of the case studies presented at the public meeting, Santa Monica, California, generated significant interest especially in relation to community education on sustainability.

*PLAN STRUCTURE AND CONTENT* In a preferred structure for the Sustainability Plan, the public preferred a phased plan that clearly identifies specific priorities for specific time periods. Meeting participants also suggested that these modular action plans feature clear, concise, memorable messages and metrics. Background information and public education on how to meet the 10 Sustainability Goals identified in the Plan. More specifically, stakeholders recommended that public education include low-cost measures that can be implemented to affect continuous progress. Stakeholders also asserted that the inclusion of readily identifiable metrics and numerical targets in the report would make the vision and goals tangible. This approach was preferred as opposed to a more open-ended and qualitative approach, mainly out of a concern for accountability. For that reason, stakeholders also preferred a plan broken into 'elements' or goal areas to help break the plan into distinct, readily understandable segments. In addition, stakeholders expressed a strong interest in regular reports on City progress and focusing on individual accountability periodically.

*PUBLIC ENGAGEMENT* The need to educate the public on the effect of behaviors and consumption patterns on the environment was emphasized. Easy access to information and demonstrating the effects of behavior changes quickly emerged as priorities in encouraging more sustainable decision-making, as did the integration of environmental education into school curricula. Communication media, whether electronic mediums or through bulletin boards were also considered

important in messaging efforts. The example of Santa Monica, California, proved especially compelling due to its efforts on community education.

Accountability of personal and organizational actions was a pervasive theme throughout public feedback. Tracking information against metrics to demonstrate impacts was viewed as the primary means of achieving such accountability. Public meeting participants overwhelmingly favored the use of a pledge to help residents and businesses monitor success, particularly in reducing energy and water use. The City of Chicago's '*Take Five*' Environmental Pledge was identified by participants as a model. The suggestion of "You Count!" as a possible theme to reflect individual responsibility and track environmental impact data was quickly embraced by many participants. In addition, the printing of wallet-sized pledge cards was suggested, as was the posing of public challenges by government departments. As a means of leading by example, challenges to residents and businesses to turn lights off between certain hours were proposed through "leadership centers" throughout the community.

*GOVERNANCE* Public meeting participants and survey respondents advocated a balanced 'stick and carrot' approach that both mandates changes through new or amended codes and ordinances, and employs incentives to shift residents to more sustainable decision-making and consumption patterns. Mandates were also seen as driving demand for new, less costly, environmentally preferable alternatives to current products and services. The City's leadership by example was often cited as a common desire of both City staff and residents.

ENERGY A significant number of survey respondents had made lighting or insulation improvements to their homes or businesses over the past year. A larger number had performed an energy retrofit more than a year ago, which was the most often-cited reason for not having performed an energy retrofit within the past year.

MOBILITY When it comes to commuting, the majority of respondents cited increased total trip time and other schedule demands as top reasons for not taking public transportation to work. In developing a solution to encourage transit use, respondents were an even split between more frequent service and better connections or distance to transit. Some perceived, incorrectly, that transit costs more than automobile travel, which reflects an opportunity to educate the public about total commuting costs. Safe and accessible pedestrian and bike infrastructure were frequently mentioned, as there is high community interest in expanding both as modes of transportation, particularly for local trips. While more visible crosswalks were cited as steps in the right direction, many cited a lack of east-west connectivity as a major impediment to bike transportation. The possibility of eliminating automobile parking to accommodate bike lanes was raised. At the same time, the public appeared split on whether public parking, especially in the Central Business District, was sufficient.

*MATERIALS* Setting numeric targets for waste reduction was a central theme in community feedback concerning material management. This discussion flows from the overarching theme of accountability. Composting of landscape and food residue received significant attention, as did the infrastructure required to facilitate both. Specific references were also made to increasing the use of recycled paper. As with other goal areas, stakeholders indicated a strong preference for numerical reduction targets and timelines.

## Municipal Case Studies

The path to sustainability is challenging for any municipality as it requires, in most cases, a comprehensive adjustment to how the community is managed and lived in. Fortunately these are challenges that have are being addressed, with increasing frequency, in other cities around Chicagoland, around the United States, and around the world. The primary case studies used to develop this sustainability are below:

**Boulder, Colorado**

Boulder's main environmental initiatives center on recycling and efficiency. The city leads a great example by offering residents an eco-cycle center that is "a 24-hour Recycling Drop-Off Center. This [is a] free, organic waste drop-off center." In addition to their drop-off center, the city requires that "a minimum of 50% of the construction waste must be recycled." They also implement a program known as the "Green Points Program" which is used as a reward for builders who build green. The program works on a point system: "6 points for a 20% solar fraction, 12 points for a 40% solar fraction, and 20 points for a 60% solar fraction." (19)

**Burlington, Vermont**

In 1990, Burlington voters approved an $11 million bond to fund energy efficiency programs through 2002 by its municipal electric department, Burlington Electric Department (BED). Since 2003, BED customers (like all other Vermont electric customers) pay a small monthly charge that supports efficiency programs. Currently 67% of Burlington's electricity is generated through renewable energy sources. A substantial portion of Burlington's renewable energy is supplied by the McNeil Generating Station, a wood-burning plant that began operating in 1981. Seventy percent of the wood burned by McNeil comes from low quality wood and harvest residue.

- In 2000, Burlington was one of the first communities in the country to develop and approve a comprehensive Climate Action Plan. The City is currently completing a process of rewriting the Plan, involving residents and other stakeholders, and setting GHG reduction goals of 20 percent by 2020 and 80 percent by 2050.
- Through its BE3 Project, the City's Community and Economic Development Office (CEDO) offers over 125 restaurants and convenience stores a variety of free audits and services with project partner organizations that can help these business owners save money in an environmentally sustainable way.
- The City's Legacy Project launched its"No Idling"campaign in April 2007, with public outreach, education, and policy advocacy efforts to reduce unnecessary vehicle idling as a way to improve air quality and overall quality of life for everyone who lives, works, and plays in Burlington.
- The "Solar in Schools" project will "green" the schools, expand BED's renewable energy portfolio, mitigate the impact of Act 45 on BED ratepayers, and provide lease payment income to the School District in the amount of $44,000/year." (20)

**Chicago, Illinois**

Chicago's main goal is to "achieve an 80 percent reduction below its 1990 GHG emissions level by the year 2050." In order to meet this goal, the city has implemented the following programs to approach sustainability from many different fronts: waste and recycling, new and old construction, alternative fuel and alternative energy uses. The City plans to

expand their recycling program titled the "Blue Car Separate Collection Program" by the end of 2011. This will "utilize single-stream processing technologies" and simplify recycling for the city's residents and workforce. In addition to

recycling, Chicago is also embracing a "Waste to Profit Network" which will enable "more than 80 local manufacturing firms to actively seek ways in which the waste of one company can become the feedstock for another. The program has already diverted over 22,000 tons of waste from area landfills, reduced 45,000 tons of carbon dioxide and resulted in several innovative new products."

As the city is consistently expanding by constructing new buildings and reconstructing old buildings, Chicago has recently passed a city ordinance requiring "all major demolition and construction projects within the City limits to recycle a minimum of 50 percent of their waste as of 2007." In addition to recycling in construction, in "October 2007, Chicago launched the Material Exchange Website for City construction projects to facilitate the reuse of excess soil, stone, fence and construction and demolition material between City departments and sister agencies."

Additionally, Chicago has implemented plans for alternative fuels and energy uses for the city. They have "already transitioned 1,200 of its municipal fleet to alternative fuels. These vehicles are powered by 'clean' fuels such as compressed natural gas, propane, biodiesel and hybrids, [and] operate seven alternative fuelling stations to serve City vehicles." And energy use has also advanced to the use of "solar photovoltaic (PV) systems at 18 of its facilities resulting in 308 kWh of production. These installations, combined with private installations, account for more than 1.5 megawatts of generation, the largest amount in any U.S. city outside of California." (21)

**Deerfield, Illinois**

The Village of Deerfield is committed to promoting sustainability in the community, mostly through its sustainability commission and its website. The Village's sustainability page of their Community Development website provides information on projects taking place in the community as well as a guide to residential stormwater management. The Village is interested in pursuing renewable energy applications and creating a new staff position to act as a liaison between the sustainability commission and the Village Manager's Office and is currently working towards putting sustainability-minded policies in place.

All sustainable projects in Deerfield are required to go through the customary public hearing process and must be approved by the Village's planning commission and board of trustees. The Village of Deerfield does not currently have an overarching plan for sustainability though they have expressed an interest in being part of a regional network of environmentally minded communities. The Village has a number of designated bike routes, and requires bicycle storage and access provisions in certain areas. Deerfield does not have any incentives for green building or renewable energy applications, though they are working on ordinances regulating wind and solar power systems within the Village. (22)

**Evanston, Illinois**

The City of Evanston has been formally engaged in sustainability initiatives since 2007. The city implemented its main goal as a reduction in greenhouse gas emissions (GHG) to 13% below 1990 levels by the year 2012. Examples of the community's goals for reduction are as follows:

- Create and maintain functionally appropriate, sustainable, accessible high quality infrastructure and facilities
- Protect and optimize the City's natural resources and built environment, leading by example through sustainable practices and behaviors

- Coordinate and influence transportation resources to provide an improved system that is safe, integrated, accessible, responsive, understandable, efficient, and meets the needs of all people

"The Evanston Climate Action Plan includes more than 200 recommended strategies for reducing GHG emissions. When added together, the strategies have the potential to reduce Evanston's emissions by 245,380 – 403,991 $mtCO_2e$, offering a wide variety of options for meeting Evanston's 13% reduction goal of 140,104 $mtCO_2e$ by 2012. By reducing Evanston's reliance on nonrenewable energy sources and waste, the recommendations included in the plan not only offer ample opportunities to reduce Evanston's GHG emissions, but also enhance and support the three core values outlined in Evanston's Strategic Plan - economic viability, environmental sustainability and strengthening community." (23)

**Freiburg, Germany**

Sustainability has long been a focus for the city of Freiburg, Germany. For over thirty years the city has fought for the protection of the environment and in 1992, Freiburg was chosen as Germany's "Environmental Capital" for its pioneering achievements, such as the installation of an early-warning system for smog and ozone pollution, pesticide bans, recycling measures, for its transport policy and perhaps even, for its engaging green image." Some of their most recent initiatives have focused on renewable energy, recycling and improving public transit.

Freiburg's goal is to increase the energy from renewables to 10% by 2010. This cannot be achieved by solar technology alone, so the city is looking at obtaining more energy from biomass from Black Forest woodchips, and from wind power. Six 1.8 MW turbines were erected in 2003, increasing the energy from renewables to 3.9%. There are also plans to explore geothermal deep heat, which is very good in the Upper Rhine area around Freiburg. By spending its energy dollars on solar and other renewable energy technologies, these dollars are also remaining within local circulation, instead of leaving the region to purchase gas, oil or uranium elsewhere.

In addition to the economic and environmental benefits, Freiburg's citizens enjoy a pride in their city for showing this kind of leadership. Under the German federal government's 2001 Renewable Energy Law, however, energy supply companies are obliged to reimburse stored solar energy producers at a highly a subsidized price. The purpose of the law is to promote a doubling of renewable energy's share in the electricity market from 5 to 10% by 2010.

Since 2005, non-recyclable waste from the region has been incinerated at a plant in the Industrial Park, Breisgau, located 12 miles south of Freiburg. The plant practices waste disposal safety by maintaining high environmental standards. It supplies electricity to 25,000 households.

The most important objective of Freiburg's traffic and transportation policy is traffic avoidance. This is achieved by designing a compact city that can be crossed quickly and includes strong neighborhood centers. Urban development should take place along main public transport arteries and priority is given to centralized development over peripheral growth. (24)

**Madison, Wisconsin**

In 1998, Madison received a grant from the International Council of Local Environmental Initiatives (ICLEI) Cities for Climate Protection Campaign (CCP). With this grant, the city decided on a goal of a 7% reduction below 1990 levels in line with the Kyoto Protocol. They are approaching this goal by implementing changes in efficiency, fuel usage and building and land initiatives.

One of the main efficiency changes that was implemented was the "conversion of 200 red traffic signals to light-emitting diode (LED) fixtures" which should save the city over 1,400 tons of $CO_2$ and "streetlight conversion from mercury vapor and incandescent bulbs to high-pressure sodium (11,000 fixtures)." Madison also updated its sewerage plant by switching to "methane gas utilization and [their] two largest landfills for electricity and steam generation." City-wide programs were also initiated early by the "School District, City, and County participation in the EPA Energy Star Buildings Partnership" that saved 4,108 tons of $CO_2$. Another large efficiency change was the addition of the "largest wind power project (11 MW) in the eastern United States. Implemented by the local utility, MG&E, production from the 17 wind turbines began in June 1999. The wind program sold out faster than any other green power program in the U.S."

Next was the plan to help residents achieve a lower fuel usage by making other options more widely available. The city offers an "extensive bicycle program with bike racks, lockers, and over 100 miles of bikeways [and a] Metro Transit bus system with 164 buses daily." For citizens that did not have available metro-stops near their home, another option is the "Rideshare etc. program [that] operates 67 vanpools with 900 riders."

Building and land codes were also approached to keep Madison beautiful and green. The city participates in a Commercial green building program that saves 7281 tons of $CO_2$. Madison also plants 2500 trees per year and does not use pesticides in green spaces or parks. The city also began the "Sustainable Lifestyle Campaign," which launched 40 neighborhood eco-teams to work on residential sustainability. (25)

**Northbrook, Illinois**

The Village of Northbrook has decided to "go green" through a combination of passive community education and strong, though easy to abide by, governmental action. Through Village leadership role in sustainability efforts, the Village has learned key lessons regarding community engagement and practical implementation. Much of the residential involvement emanates from the Village website's "going green" page and the yearly Earth Day river restoration project which residents are encouraged to volunteer for. The ordinances that the Village has enacted to promote sustainability mainly apply to new construction projects at this time.

Northbrook's "going green" website contains vital information for residents and businesses as well as multiple links for users to access additional information on sustainability topics that the village supports, such as Earth Hour and the ComEd Refrigerator Recycling Program. The site highlights actions that the residents and businesses can take in four main areas: recycling, energy conservation, education and green purchasing. The site also provides information on rain barrel purchasing through the Village, electronics recycling, light bulb and battery recycling, and lighting retrofits. In addition the site provides a useful link with tips for private property stormwater management.

Northbrook is also pursuing sustainability through governmental action. The Village has adopted a top-down style of promoting sustainability by creating ordinances internally, providing incentives for green building. Currently all demolition and construction projects in Northbrook are required by law to recycle 50% of their waste (this ordinance has received no complaints). Building owners pursuing any LEED certification benefit from expedited permit processing and pay reduced permit fees. In addition any building pursuing LEED-platinum certification receives free permits.

The Village has also created a 'green team' which includes one staff member from each Village department which works to improve sustainability in village operations. The entire municipal fleet is comprised of high gas-mileage vehicles and the water treatment plant's energy use is 100% offset with renewable energy credits, mostly from western Illinois.

Northbrook is interested in partnering with other communities in the region on sustainability issues and continues to make great strides towards becoming a green municipality. (26)

**Oak Park, Illinois**

The Village of Oak Park has made a strong push to get residents to participate in sustainable practices and make their green reputation one of the focal points of their civic image. The Village prominently displays its sustainability credentials on the city website and has earned platinum designation for Clean Air Counts and the Metropolitan Mayors' Caucus. In keeping with Oak Park's sustainable activities the Village is purchasing Energy Star approved equipment for all municipal offices, converting traffic signals and emergency vehicle lighting systems to LED lighting and increasing bicycle racks.

In addition to the aforementioned projects Oak Park is adopting policies to use paints and cleaning products in public with buildings with low amounts of volatile organic compounds (VOCs) and constructing a green public works center, the first in Illinois to seek LEED certification from the U.S. Green Building Council. The Village is also creating a multi-modal transit station in the central downtown area that links local mass-transit systems and conducting an equipment exchange program for gasoline powered lawn care equipment.

The Village also hosted the inaugural *GreenTown* Conference in 2007 which brought more than 300 mayors, managers, municipal staff and private sector leaders to Oak Park. The municipal government is adopting the International Energy Conservation Code and is installing energy efficient induction street lights in select areas.

The Village of Oak Park is quite proud of the reputation they have garnered from being a leader in the regional sustainability arena and they continue to improve their efforts to make Oak Park a fully green community. (27)

**Växjö, Sweden**

In 1996, the City of Växjö committed to becoming a fossil-fuel free city by 2010. The City updated its environmental program in 2006 to focus on three main areas with the goal of reducing, and eventually eliminating, the use of fossil fuels in Växjö: energy efficiency, heating, and transportation. The city has split the areas into two additional goal types: goals to strive toward (e.g. stretch goals) and goals to achieve. This method helps the city to determine which aspects of the plan are most important for what they are trying to achieve.

The City has placed a heavy emphasis on encouraging behavior changes from residents and businesses to promote sustainability and fossil fuel conservation through government action. According to the city, "...we have to make it easier to live a life without fossil fuels." To that end Växjö has established programs and infrastructure in their three focus areas to make behavior changes as painless and effective as possible.

The City of Växjö's energy efficiency programs focus on individual "awareness of use," optimization of sunlight, and a mandate that contractors buying municipal owned land must build efficient buildings. For the heating focus area the city has built a 100MW combined power and heating plant that produces heat and energy from wood-chips, build small-scale district heating plants in nearby villages, and provided subsidies for homes that switch to the district heating systems, install their own biomass heating systems or add solar panels. The City's transport strategy revolves around a continuous expansion of bicycle paths, subsidies for environmentally preferable cars and the installation of a filling station that provides biogas produced at a local waste treatment plant. Växjö is on the leading edge of the sustainability movement and has been over the past decade. The strategies devised by the City of Växjö, while ambitious, serve as a model for many cities and show what can be done with solid planning and efficient execution. (28)

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## Action Plan Implementation Timelines

To assist the Highland Park community in managing its Community Sustainability Plan, a detailed timeline has been developed that includes objectives, tasks, timeframes, and organizational responsibilities for each of Highland Park's 10 Sustainability Goals.

# Goal 1: Community Engagement

Establish education and volunteerism as hallmarks of an engaged, productive community and key components in shifting the community to a more sustainable way of life

| Objective 1.1 Inform : Engage Highland Park Students and Community | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | Establish 10% for 10 in 2010 Initiative: the City of Highland Park challenges 10% of households and businesses to take the Community Sustainability Pledge. Achieve 50% community pledges by Q4 2010; 75% Q4 2011 | X | X | X | X | X | X | X | L | M | H | Q2 2010 | Q4 2011 |
| | Obtain 10 Sustainability Ambassadors community-wide by the end of 2010. Beginning no later than January 1, 2011, Sustainability Ambassadors will be trained to share best practices and track results among pledge-takers and encourage greater participation | X | X | X | X | X | X | X | L | M | H | Q2 2010 | Q4 2010 |
| | Highland Park schools will look to expand enrollment in existing classes and identify opportunities for incrementally incorporating sustainability in lesson plans | | | | | X | X | | L | M | H | Q3 2010 | Q4 2012 |
| | In collaboration among school service learning coordinators and Highland Park's Volunteer Pool, Highland Park Schools will also dedicate 30,000 service learning hours to sustainability | | | | | X | X | | L | M | H | Q3 2010 | Q4 2012 |
| | Highland Park schools will deliver 60,000 instructional hours related to sustainability. Specifically including District 112's Project Citizen program, North Shore Academy's energy auditor classroom training, and HPHS's AP Environmental Sciences and EcoAdventure curriculum | | | | | X | X | | L | M | H | Q3 2011 | Q4 2013 |
| Phase 2 (2015-2019) | Highland Park schools will increase the number of instructional hours dedicated to sustainability to 75,000 hours by reviewing curriculum development on a comprehensive basis | | | | | X | X | | L | M | H | Q1 2015 | Q4 2016 |
| | In collaboration among school service learning coordinators and Highland Park's Volunteer Pool, Highland Park Schools will dedicate 50,000 hours of service learning | | | | | X | X | | L | M | H | Q1 2016 | Q4 2018 |
| Phase 3 (2020-2024) | Highland Park schools will develop a strategic sustainable curriculum plan for the next five years, in support of Highland Park's goal of provide 100,000 instructional hours related to sustainability | | | | | X | X | | L | M | H | Q1 2020 | Q1 2022 |
| Phase 4 (2025-2029) | Highland Park schools will build on successes and lessons learned to develop a needs assessment | | | | | X | X | | L | M | H | Q1 2025 | Ongoing |

# Goal 1: Community Engagement

Establish education and volunteerism as hallmarks of an engaged, productive community and key components in shifting the community to a more sustainable way of life

| Objective 1.2 Inspire: Build Ownership of Goals | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase/5 yr block** | **Action Items** | **City** | **Park Dist.** | **Lib.** | **Mor. Twp.** | **Dist. 112** | **Dist. 113** | **Private Sector Partners** | **Environmental** | **Financial** | **Social** | **Anticipated Start Date** | **Anticipated Completion Date** |
| Phase 1 (2010–2014) | Create *sustainHP Exchange* with a target of 150 participants by 2015; interim target 50 in 2011 | X | X | X | X | X | X | X | L | L | H | Q1 2011 | Q4 2015 |
| | Hold 2 *sustainHP Exchange* sessions in 2011, 3 in 2012, and quarterly starting in 2013 | X | X | X | X | X | X | X | L | L | H | Q1 2011 | Q4 2015 |
| | Create *CoffeeTalk* with a target of 25 participants in 2011, 50 by 2015, 100 by 2020 | X | | X | | | | X | L | L | H | Q1 2011 | Q4 2020 |
| | Create *CoffeeTalk;* hold 2 sessions in 2011, 3 in 2012, and quarterly starting in 2013 | X | | X | | | | X | L | L | H | Q1 2011 | Q4 2029 |
| | Create *ShopTalk;* hold 2 sessions in 2013 with a target of 1000 hours of professional education (cumulatively) | X | | X | | | | X | L | L | H | Q1 2011 | Q4 2013 |
| | Hold quarterly *ShopTalk* sessions*;* with a target of 5000 hours of professional education (cumulatively) | X | | X | | | | X | L | L | H | Q1 2012 | Q4 2015 |
| Phase 2 (2015-2019) | Hold quarterly *sustainHP Exchange* sessions *;* With a target of 250 participants | X | X | X | X | X | X | X | L | L | H | Q1 2015 | Q4 2019 |
| | Hold quarterly *ShopTalk* sessions*;* with a target of 10,000 hours of professional education (cumulatively) | X | | X | | | | X | L | L | H | Q1 2015 | Q4 2020 |
| Phase 3 (2020-2024) | Hold quarterly *CoffeeTalk* sessions*;* with a target of 200 participants | X | | X | | X | X | X | L | L | H | Q1 2020 | Q4 2024 |

| Objective 1.3 Connect: Provide City-Wide Public Information Resources | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase/5 yr block** | **Action Items** | **City** | **Park Dist.** | **Lib.** | **Mor. Twp.** | **Dist. 112** | **Dist. 113** | **Private Sector Partners** | **Environmental** | **Financial** | **Social** | **Anticipated Start Date** | **Anticipated Completion Date** |
| Phase 1 (2010–2014) | Deliver bi-monthly programming by the end of 2013, supported by community volunteer networks | X | X | | X | X | X | | H | M | H | Q4 2013 | Q4 2014 |
| Phase 2 (2015-2019) | Provide bi-monthly programming and working with the Library to develop a sustainability resource section | X | | X | X | | | | M | M | H | Q1 2015 | Q4 2019 |
| Phase 3 (2020-2024) | Designate the Heller Nature Center as a Center for Action; with a target increase of visitors and volunteers from 13,000 in 2008 to 20,000 by 2025 | X | X | | X | X | X | | H | L | H | Q1 2020 | Q4 2024 |
| | | | | | | | | | | | | | |

# Goal 1: Community Engagement

Establish education and volunteerism as hallmarks of an engaged, productive community and key components in shifting the community to a more sustainable way of life

| Objective 1.4 Track: Improve Public Awareness and tracking of You Count, We Count! | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase/5 yr block** | **Action Items** | **City** | **Park Dist.** | **Lib.** | **Mor. Twp.** | **Dist. 112** | **Dist. 113** | **Biz** | **Environmental** | **Financial** | **Social** | **Anticipated Start Date** | **Anticipated Completion Date** |
| Phase 1 (2010–2014) | Create and Integrate "You Count, We Count!" Campaign tracking in Citywide sustainability efforts, with annual "Sustainability Metric Reports" | X | X | X | X | X | X | X | H | L | H | Q1 2012 | Q4 2029 |
| Phase 2 (2015-2019) | | | | | | | | | | | | | |
| Phase 3 (2020-2024) | | | | | | | | | | | | | |
| Phase 4 (2025-2029) | | | | | | | | | | | | | |

| Objective 1.5 Empower: Community Volunteering | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase/5 yr block** | **Action Items** | **City** | **Park Dist.** | **Lib.** | **Mor. Twp.** | **Dist. 112** | **Dist. 113** | **Biz** | **Environmental** | **Financial** | **Social** | **Anticipated Start Date** | **Anticipated Completion Date** |
| Phase 1 (2010–2014) | Log 10,000 volunteer hours by 2014 | X | X | X | X | X | X | X | H | L | H | Q1 2011 | Q4 2014 |
| | Educate business owners and City staff by April 2011 and implement quarterly community-wide programming by July 2011 with a goal of to educating 100 residents in the first year. And 200 by the end of 2012 | X | X | X | X | X | X | X | H | L | H | Q2 2011 | Q4 2012 |
| Phase 2 (2015-2019) | Log 20,000 volunteer hours by 2020 | X | X | X | X | X | X | X | H | L | H | Q1 2015 | Q4 2019 |
| Phase 3 (2020-2024) | Log 30,000 volunteer hours by 2030 | X | X | X | X | X | X | X | H | L | H | Q1 2020 | Q4 2029 |
| Phase 4 (2025-2029) | | | | | | | | | | | | | |

# Goal 2: Governance

Strengthen Highland Park's nationally-recognized leadership in green governance by continuing to stimulate inclusive public dialogue through the Green Initiatives Alliance, giving a compelling voice to transformation through advisory Commissions and supporting accountability in and positive contributions to sustainability in action

| Objective 2.1 Coordinate: Identify a Sustainability Team | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City will promote an internal candidate to assume the responsibilities of Sustainability Coordinator on a part-time basis by no later than January 1, 2011. By January 1, 2014, the City will convert the Sustainability Coordinator position to a full-time position | X | | | | | | | L | M | M | Q1 2011 | Q1 2014 |
| | The City will identify Education & Outreach, Technical Services and Volunteer Coordinators on a part-time basis by no later than January 1, 2011. By August 1, 2011, the City will review the roles and responsibilities of the Sustainability Team in order to determine the most effective structure for the 2012-2014 period. The team will collaborate with the Sustainability Coordinator to generate a five-year Plan update by January 1, 2015 | X | | | | | | | M | L | M | Q1 2011 | Q4 2014 |

| Objective 2.2 Consult: Expand Capacity of Green Alliance | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | Commission assignments: The City will assign sustainability goal areas to Highland Park Commissions and Task Forces and will incorporate monthly reporting into the Alliance's meeting agendas no later than June 30, 2010. The Alliance will prepare subsequent quarterly and annual reports | X | | | | | | | L | L | M | Q2 2010 | Q4 2029 |
| Phase 2 (2015-2019) | | | | | | | | | | | | | |
| Phase 3 (2020-2024) | | | | | | | | | | | | | |
| Phase 4 (2025-2029) | | | | | | | | | | | | | |

| Objective 2.3 Engage: Collaborate Regionally | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City of Highland Park will collaborate with the villages of Deerfield and Northbrook to develop a list of joint green procurement opportunities and ordinances; Highland Park will complete its internal list by January 1, 2011, with a goal of establishing a pilot program by January 1, 2012 | X | | | | | | | M | L | M | Q1 2011 | Q1 2012 |
| | The City will submit sustainability priority list of data sets to be considered by the GIS Consortium for future inclusion by December 31, 2012; possible data sets include traffic flow, ravine health, pervious surfaces, heat islands and flood control | X | | | | | | | M | L | M | Q2 2011 | Q4 2012 |
| | Highland Park will extend an offer to host a sustainability summit to bring together leaders from the Northwest Municipal Conference by September 30, 2011 | X | | | | | | | L | L | M | Q3 2011 | Q4 2011 |

# Goal 2: Governance

Strengthen Highland Park's nationally-recognized leadership in green governance by continuing to stimulate inclusive public dialogue through the Green Initiatives Alliance, giving a compelling voice to transformation through advisory Commissions and supporting accountability in and positive contributions to sustainability in action

| Objective 2.4 Fund: Develop Incentives for Green Initiatives | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The Sustainability Coordinator will work with the Departments of Community Development, Finance and Public Works to integrate sustainability initiatives into City capital and operating budgets as early as possible in order to reserve matching funds required by prospective grantors; during the first five-year phase of Highland Park's Sustainability Plan (2010-2014), grants and gifts will play a critical role in stretching scarce City funds and developing pilot programs | X | | | | | | | L | M | M | Q1 2012 | Q4 2014 |
| | By January 1, 2012, the City will establish a 501(c)(3) not-for-profit community-wide sustainability fund to attract prospective donors to sustainability efforts in Highland Park | X | | | | | | X | L | L | M | Q1 2012 | Q4 2014 |
| | Effective January 1, 2012, the City will implement a one cent per gallon surcharge on every gallon of motor fuel dispensed in Highland Park | X | | | | | | | H | L | H | Q1 2012 | Q4 2014 |
| | Effective January 1, 2012, through Commonwealth Edison, the City will assess a one cent per kilowatt-hour charge for residential energy use of more than 1,000 kilowatt-hours per month to fund energy efficiency and renewable energy initiatives; the assigned threshold of 1,000kWh per month will shrink at a rate of 5% per year; for retail businesses, the City will assess a surcharge of $1.00 per kilowatt of peak electrical demand; businesses that can demonstrate Energy Use Intensity of 75% or less of the Energy Star Target finder values can receive a property tax credit in the amount of the fees collected | X | | | | | | | H | L | H | Q1 2012 | Q4 2014 |
| | Effective January 1, 2012, through North Shore Gas, the City will assess a ten cent per therm charge for residential energy use of more than 100 therms per month to fund energy efficiency and renewable energy initiatives; for retail (non-food) businesses, a ten cent surcharge per therm will be applied to each therm beyond a 200 therm per month threshold; for restaurants and grocery stores, the monthly threshold will be 1,000 therms per month. The assigned thresholds will shrink at the rate of 5% per year | X | | | | | | | H | L | H | Q1 2012 | Q4 2014 |

# Goal 3: Green Economy

Sustain vibrant, dynamic business districts throughout the community that respect human and natural resource bases while creating jobs and improving the quality of life. Make Highland Park a hub for sustainable enterprise that leverages the community's knowledge and financial capital

| Objective 3.1 Retail Economy: Support Retail Sustainability Operations | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City will partner with local business owners and not-for-profits to support the introduction of a formal Green Business Certification by than January 1, 2014 | X | | | | | | X | L | L | M | Q1 2012 | Q4 2014 |

| Objective 3.2 Knowledge Economy: Support Sustainability among the Highland Park Service Industry | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | As an extension of the ShopTalk sessions, the Department of Community Development will collaborate with the Chamber of Commerce to sponsor a Green Business Roundtable. The Roundtable will launch on or before January 1, 2014 | X | | | | | | X | L | M | H | Q2 2012 | Q4 2014 |

| Objective 3.3 Real Estate Management: Encourage Development of Green Buildings | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | Energy Star Statements of Performance will form the basis for energy and water consumption reporting under the program and will be required for all businesses in the Central Business District as of January 1, 2012 and all businesses of greater than 7,500 square feet by January 1, 2014 | X | | | | | | X | M | L | M | Q1 2012 | Q1 2014 |
| | The City of Highland Park proposes a tradable energy allowance system for existing commercial buildings in Highland Park; baseline inventories for participating businesses will be prepared by no later than June 1, 2013 | X | | | | | | X | M | L | M | Q2 2011 | Q2 2014 |
| | A trading system to support the exchange program will go live no later than June 1, 2012 and will include energy and water. Waste commodities will be added to the program by January 1, 2013 | X | | | | | | X | M | L | M | Q2 2011 | Q2 2014 |
| | The City will develop guidelines for a pilot program in collaboration with the Chicago Climate Exchange for a pilot period through the end of 2014. City reduction targets will be weighed against Standard 189.1 in informing the rules of a tradable permit allocation system for CBD businesses. By no later than June 1, 2013 | X | | | | | | X | M | L | M | Q2 2011 | Q2 2014 |
| Phase 2 (2015-2019) | By January 1, 2014, the City, in consultation with the CBD Alliance, will review the Tradable Commercial Allocation Program to determine its effectiveness in meeting the City's Phase 1 Sustainability Goals and make recommendations as to extend or amend the pilot program | X | | | | | | X | M | L | M | Q1 2014 | Q4 2014 |
| | As part of its 2014 program review, the City will identify opportunities for shifting commercial taxation to a consumption basis from a valuation basis and legal precedents for doing so on a commercial and residential pilot | X | | | | | | X | M | L | M | Q1 2014 | Q4 2014 |
| | Stemming from its 2014 Code Reviews, the Department of Community Development will review the effects of the Tradable Allowance Program to determine whether the pool of allowances should be further constrained to achieve Highland Park's 10 Sustainability Goals | X | | | | | | X | M | L | M | Q1 2014 | Q4 2014 |

# Goal 4: Energy and Built Environment

Leverage all opportunities to reduce the use, cost and impact of building energy use through aggressive deployment of energy efficiency, renewable energy and district energy technologies community-wide

| Objective 4.1 Efficiency: Improve Building Energy Efficiency by 50% by 2030 | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City will provide 500 free energy audits to residents on a first-come, first-served basis and will hire a vendor to perform additional audits by January 1, 2014 | X | | | | | | | H | H | H | Q1 2013 | Q1 2014 |
| | By January 1, 2015, the City will retrofit all boilers to a minimum efficiency of 95% and perform solar thermal feasibility studies on all facilities | X | | | | | | | H | H | H | Q2 2014 | Q1 2015 |
| | All commercial properties of 7,500 square feet or greater will be subject to a LEED-Silver standard (or equivalent) as of January 1, 2015 | X | | | | | | X | H | H | H | Q1 2013 | Q4 2015 |
| Phase 2 (2015-2019) | The City commits to achieving LEED-Gold certification (or equivalent) on all municipal and City-financed construction as of January 1, 2020 | X | X | X | | X | X | X | H | H | H | Q2 2015 | Q1 2020 |
| | All commercial properties of 7,500 square feet or greater will be subject to a LEED-Gold certification (or equivalent) as of January 1, 2020 | X | | | | | | X | H | L | H | Q1 2016 | Q1 2020 |
| Phase 3 (2020-2024) | Highland Park will require LEED-Platinum certification (or equivalent) for new facilities as of January 1, 2025 | X | X | X | | X | X | | H | L | H | Q1 2022 | Q1 2025 |
| Phase 4 (2025-2029) | All commercial properties of 7,500 square feet or greater will be subject to a LEED-Platinum (or equivalent) certification on January 1, 2027 | X | | | | | | X | H | L | H | Q1 2025 | Q1 2027 |

# Goal 4: Energy and Built Environment

Leverage all opportunities to reduce the use, cost and impact of building energy use through aggressive deployment of energy efficiency, renewable energy and district energy technologies community-wide

| Objective 4.2 Renewable Energy: Source 25% of electricity from renewable energy | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City will commission a feasibility study for utility scale wind power generation (16 million kwh) by 2029; Major project milestone: Two Years of Wind Speed Data Collection (2011-2013) | X | X | X | X | X | X | X | H | M | H | Q1 2011 | Q4 2013 |
| | The City government has established a goal of producing 5% of the community's heat and power from renewable sources by 2015 | X | X | X | | X | X | X | H | H | H | Q1 2011 | Q4 2015 |
| | The City will commission a feasibility study for utility scale wind power generation (16 million kwh) by 2029; Major project milestone: System Design Study (2014) | X | X | X | X | X | X | X | H | M | H | Q1 2014 | Q4 2014 |
| Phase 2 (2015-2019) | The City will commission a feasibility study for utility scale wind power generation (16 million kwh) by 2029; Major project milestone: System Engineering (2015- 2016) | X | X | X | X | X | X | X | H | M | H | Q1 2015 | Q1 2016 |
| | The City will commission a feasibility study for utility scale wind power generation (16 million kwh) by 2029; Major project milestone: Environmental Impact Statements, Permitting and Licensure (2017) | X | X | X | X | X | X | X | H | M | H | Q1 2017 | Q4 2017 |
| | The City will commission a feasibility study for utility scale wind power generation (16 million kwh) by 2029; Major project milestone: Financing & Construction (2018-2020) | X | X | X | X | X | X | X | H | M | H | Q1 2018 | Q1 2020 |
| Phase 3 (2020-2024) | The City government has established a goal of producing 15% of the community's heat and power from renewable sources by 2022 | X | X | X | | X | X | X | H | H | H | Q1 2020 | Q4 2022 |
| Phase 4 (2025-2029) | The City government has established a goal of producing 25% of the community's heat and power from renewable sources by 2029 | X | X | X | | X | X | X | H | H | H | Q1 2027 | Q4 2029 |

# Goal 4: Energy and Built Environment

Leverage all opportunities to reduce the use, cost and impact of building energy use through aggressive deployment of energy efficiency, renewable energy and district energy technologies community-wide

| Objective 4.3 Renewable Heat: Source 75% of heat and 1/3rd of power from combined systems | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase/5 yr block** | **Action Items** | **City** | **Park Dist.** | **Lib.** | **Mor. Twp.** | **Dist. 112** | **Dist. 113** | **Private Sector Partners** | **Environmental** | **Financial** | **Social** | **Anticipated Start Date** | **Anticipated Completion Date** |
| Phase 3 (2020-2024)<br>Phase 4 (2025-2029) | Deliver 75% of heating requirements and 100 million kilowatt-hours of electricity by 2030 from a biomass-powered combined heat and power plant connected to a community-wide district thermal loop | X | X | X | X | X | X | X | H | H | H | Q1 2020 | Q4 2029 |

| Objective 4.4 Financing: Employ Innovative Financing | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase/5 yr block** | **Action Items** | **City** | **Park Dist.** | **Lib.** | **Mor. Twp.** | **Dist. 112** | **Dist. 113** | **Private Sector Partners** | **Environmental** | **Financial** | **Social** | **Anticipated Start Date** | **Anticipated Completion Date** |
| Phase 1 (2010–2014) | The City government will support strengthening the State of Illinois' PACE bond legislation to allow Highland Park residents to access the financial tools to deploy renewable energy | X | | | | | | | M | L | H | Q3 2010 | Q4 2011 |
| | Through the City's Sustainability Coordinator, the City will also offer grant-writing assistance and information on State and Federal incentives to residents and businesses | X | | | | | | | L | M | H | Q1 2012 | Q4 2029 |

# Goal 5: Mobility

Satisfy the community's mobility needs with an efficient, safe and accessible intermodal transportation system that relies heavily on public transit, biking, pedestrian traffic, car sharing and clean fuels

| Objective 5.1 Listen: Community Mobility Survey | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | Highland Park will produce a Complete Streets Community Plan by January 1, 2012. Throughout 2010, the City government will sponsor a series of workshops similar to the recent CBD Master Planning process to develop community-focused priorities in a Complete Streets program | X | X | | | | | X | L | L | M | Q3 2010 | Q1 2011 |
| | The City will circulate a mobility questionnaire by January 1, 2011 | X | | | | | | | L | L | M | Q4 2010 | Q1 2011 |

| Objective 5.2 Promote: Decrease vehicles miles by 50% below 2008 | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | Establish bike and pedestrian traffic as the preferred means of mobility for in-town trips by 2020 through the connection of existing infrastructure, addition of bike parking and improved signage | X | | | | | | | H | M | H | Q4 2010 | Q4 2020 |
| | Achieve 20% public transportation commuter mode share by 2013 and increase 3% per year to 2030 | X | | | | | | | H | M | H | Q3 2011 | Q4 2012 |
| Phase 2 (2015-2019) | Implement a Citywide car-sharing program and achieve subscribership of 5% of households by 2017, offer car sharing in every business district by 2015 and increase subscribership by 4% per year to 2030 | X | | | | | | | H | M | H | Q1 2015 | Q4 2029 |

# Goal 5: Mobility

Satisfy the community's mobility needs with an efficient, safe and accessible intermodal transportation system that relies heavily on public transit, biking, pedestrian traffic, car sharing and clean fuels

| Objective 5.3 Promote: Decrease emissions by 50% under 2010 | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City will continue to work with Federal and State elected officials, the Federal Transit Administration (FTA) and Metra to support the conversion of PACE buses to a hybrid fleet by 2012 | X | | | | | | | H | L | H | Q2 2010 | Q4 2011 |
| | By January 1, 2012, the City will provide twenty reserved parking spaces for hybrid, plug-in hybrid and car sharing vehicles. This number will increase by 20 spaces annually to 2030 | X | | X | | X | X | | M | L | H | Q1 2011 | Q4 2020 |
| | Effective January 1, 2012, the City will implement a tiered vehicle registration fee schedule that will exempt hybrid vehicles that deliver USEPA combined fuel economy ratings of 35 miles per gallon or better | X | | | | | | | L | L | H | Q1 2012 | Q4 2014 |
| Phase 2 (2015-2019) | The requirement for an exemption will increase to a plug-in hybrid or fully electric vehicle by January 1, 2015. The City will also offer one free public charging port at designated municipal charging stations to be located in the City business parking spaces of the downtown commuter lot and the Public Works Building | X | | | | | | | L | M | H | Q1 2015 | Q4 2019 |
| Phase 3 (2020-2024) | All municipal passenger vehicles and car sharing fleet vehicles will be required to be zero-emissions vehicles by January 1, 2025, and charging stations will require incorporate renewable energy components. Municipal heavy duty vehicles will be required to meet the zero-emissions requirement no later than January 1, 2030 | X | | | | | | | L | M | H | Q1 2020 | Q4 2029 |
| Phase 4 (2025-2029) | | | | | | | | | | | | | |

# Goal 6: Materials

Achieve efficiency and prosperity through infrastructure, services and procurement policies that encourage smart design and enable the widespread use of durable and non-toxic products, recycling, composting and reuse

| Objective 6.1 Waste Diversion: Increase diversion rates to 50% by 2020 | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | In partnership with SWALCO and the Park District, the City will create a residential and institutional composting collection program and will work through the Commercial Refuse Franchise to extend the program to restaurants by January 1, 2012 | X | X | | | X | X | X | H | L | H | Q1 2011 | Q4 2011 |
| | The City will introduce a 30% recycled content requirement for all paper products purchased. The City will also work to develop a purchasing partnership with Northbrook, Deerfield and others municipalities through Metropolitan Mayors Caucus to encourage the use of 100% recycled content paper and FSC-certified pulp and paper products and other office supplies by July 1, 2011 | X | X | | | X | X | X | H | L | H | Q2 2010 | Q2 2011 |
| Phase 2 (2015-2019) | Develop and implement strategy to eliminate plastic waste from landfills by 2020 | X | X | | | X | X | X | H | L | H | Q1 2015 | Q1 2020 |
| Phase 3 (2020-2024) | | | | | | | | | | | | | |

| Objective 6.2 Ordinance: Develop construction and demolition waste ordinance | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City will promote the use and re-use of non-toxic, recycled and renewable building materials through increased special collections and permitting through C&D ordinance (fee-bate) and researching impact fee and fee waiver best practices designed to encourage sustainable material use in building renovations by the end of 2011 | X | X | | | X | X | X | H | L | H | Q3 2010 | Q4 2011 |
| | Encourage salvage and donation, while developing a carpet and upholstery recycling pilot program and a virtual bulletin board/wish list for charities looking for materials in Lake County by March 31, 2011 | X | X | | | X | X | X | H | L | H | Q3 2010 | Q2 2011 |

| Objective 6.3 Toxic Materials: Reduce toxic/non-renewable material purchasing | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City and Park District will educate the public about alternatives to chemical fertilizers and pesticides in Highland Park and introduce an ordinance to ban inorganic phosphorus and pesticides by January 1, 2011 | X | X | | | | | | H | L | H | Q3 2010 | Q1 2011 |
| | Petition Lake County to adopt integrated pest management in mosquito abatement operations and develop an ordinance to eliminate the use of aerosol-based pesticides citywide by January 1, 2012 | X | X | X | X | X | X | X | H | L | H | Q2 2010 | Q1 2012 |
| | In collaboration with SWALCO, the City will work to establish a household hazardous waste drop-off center no later than January 1, 2013 | X | X | | | | | X | H | L | H | Q2 2012 | Q1 2013 |
| | The City will work with SWALCO to monitor results of take-back initiatives in Highland Park and identify opportunities for continuous improvement | X | X | | | | | | H | L | H | Q1 2013 | Q4 2029 |

# Goal 7: Water

Act as responsible stewards of the quality and abundance of the surface and groundwater resources Highland Park shares with its neighbors through conservation, stormwater management and other water quality initiatives

| **Objective 7.1 Residential Conservation: Reduce water use 10% below 2008 by 2012; 30% by 2020; 50% by 2030** | | **Responsibility** | | | | | | | **Impact** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase/5 yr block** | **Action Items** | **City** | **Park Dist.** | **Lib.** | **Mor. Twp.** | **Dist. 112** | **Dist. 113** | **Private Sector Partners** | **Environmental** | **Financial** | **Social** | **Anticipated Start Date** | **Anticipated Completion Date** |
| Phase 1 (2010–2014) | Through the City's Ask an Expert program, Public Works and Community Development will provide training on sustainable landscaping for residents by January 1, 2012 | X | X | | | | | X | L | M | H | Q3 2011 | Q1 2012 |
| | The City will introduce a tiered rate structure to encourage conservation by January 1, 2012. For residential customers, a surcharge of $0.075 per 100 cubic feet will be applied over 1.15 million cubic feet. (86,026 gallons) The threshold will be reduced by 2% annually to support the City's targeted annual reductions | X | X | X | | X | X | X | H | L | H | Q1 2012 | Q1 2014 |
| | The City of Highland Park and Park District of Highland Park will offer discounted rain barrels to Highland Park residents no later than March 1, 2012. A limited number of rain barrels will be reserved for affordable housing units and residents with persistent ponding issues | X | X | | | | | | H | M | H | Q1 2012 | Q4 2012 |
| | By January 1, 2012, The City will offer a $100 toilet rebate program for Water Sense certified toilets (1.28 gallons per flush or less) that replace a toilet using more than 1.6 gallons per flush. The City will offer a rebate of $75 for Energy Star certified clothes washing machines. A $25 rebate will be offered for Water Sense faucets and dual-flush toilet conversion kits and a $10 rebate will be offered for low-flow showerheads. The rebate program is limited to $500 per household and $500,000 per calendar year and will run through December 31, 2012 | X | X | X | | X | X | X | H | H | H | Q1 2013 | Q4 2014 |
| | The City's plumbing code upgrage will require *Water Sense* toilets (<1.28gpf), low-flow showerheads (<2.5gpm) and Energy Star appliances in new residential construction beginning in 2013 | X | | | | | | | H | L | H | Q4 2013 | Q1 2014 |
| Phase 2 (2015-2019) | The City's plumbing code will update in 2019 will consider additional conservation measures to uphold 2013 code | X | X | X | | X | X | X | H | L | H | Q3 2018 | Q4 2019 |

# Goal 7: Water

Act as responsible stewards of the quality and abundance of the surface and groundwater resources Highland Park shares with its neighbors through conservation, stormwater management and other water quality initiatives

| Objective 7.2 Commercial/Institutional Conservation: Reduce water use 10% below 2008 by 2012; 30% by 2020; 50% by 2030 | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase/5 yr block** | **Action Items** | **City** | **Park Dist.** | **Lib.** | **Mor. Twp.** | **Dist. 112** | **Dist. 113** | **Private Sector Partners** | **Environmental** | **Financial** | **Social** | **Anticipated Start Date** | **Anticipated Completion Date** |
| Phase 1 (2010–2014) | As of March 1, 2012, the City will require that all applicants attend a training session on water efficiency. Fines for non-compliance will partially fund program expenses. The remainder of program costs will be funded by an increase in the late fee for permits | X | | | | | | | H | L | H | Q1 2012 | Q4 2029 |
| | As of January 1, 2013, the Department of Public Works will allow its commercial water customers to finance water efficiency upgrades on their water bills | X | X | X | | X | X | X | H | L | H | Q3 2012 | Q1 2013 |
| Phase 2 (2015-2019) | The City's plumbing code will require Water Sense toilets (<1.28gpf) in new commercial construction and substantial renovations beginning with the 2015 revision of the City plumbing code, which will include a formal code review process for waterless urinals | X | X | X | | X | X | X | H | L | H | Q1 2014 | Q1 2015 |
| | In concert with local banks, the City will establish a revolving loan fund to provide local businesses with access short-term, no interest loans of up to $10,000 to finance the incremental cost of efficient fixtures, up to 20% of the total purchase price. The premium can be extended to 30% for equipment purchased in Highland Park or installed by Highland Park-based companies. The program will launch by January 1, 2016 | X | X | X | | X | X | X | M | H | H | Q1 2016 | Q4 2019 |
| Phase 3 (2020-2024) | The City's plumbing code will update in 2020 will consider additional conservation measures to uphold 2013 code | X | | | | | | | H | L | H | Q1 2020 | Q1 2021 |

| Objective 7.3 Stormwater Management: Manage 15% of property stormwater by 2015; 50% by 2020; 100% by 2030 | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase/5 yr block** | **Action Items** | **City** | **Park Dist.** | **Lib.** | **Mor. Twp.** | **Dist. 112** | **Dist. 113** | **Private Sector Partners** | **Environmental** | **Financial** | **Social** | **Anticipated Start Date** | **Anticipated Completion Date** |
| Phase 1 (2010–2014) | The City of Highland Park will also investigate the potential for funding permeable pavement conversion and enhanced rain barrel and cistern development on residential properties by introducing a tiered Stormwater Utility Fee. In 2011, the fee was a $4.00 base fee plus a $4.00 per month per 350 square feet of impervious surface | X | X | X | | X | X | X | H | M | H | Q1 2011 | Q4 2029 |

# Goal 8: Ecosystems

Nourish the productive capacity of the North Shore by preserving habitat for threatened and endangered species, promoting the health and diversity of local animals, plants and microorganisms, practicing responsible land use and supporting sustainable local and community agriculture

| Objective 8.1 Ecological Heritage: Promote health and biodiversity of Highland Park's natural areas | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City Forester will collaborate with the Park District of Highland Park and GIS Alliance to assess forest health on an ongoing basis | X | X | | | | | | M | M | M | Q2 2010 | Q4 2029 |
| | In collaboration with the Lakefront Commission, Environmental Commission Openlands, the City and Park District will work to demarcate recreational, sensitive and restricted areas based on their ecological value by January 1, 2012 | X | X | | | | | | M | M | M | Q1 2011 | Q1 2012 |
| Phase 2 (2015-2019) | By January 1, 2015, the City will build on the City's existing Steep Slopes Ordinance and formalize the City's Guidelines for Living in a Ravine and Lakefront Community and lessons learned from the restoration of the Fort Sheridan ravines in introducing a Ravine Protection Ordinance that extends inland from the Lake to 50 feet inland of the ridgeline of the ravines | X | X | | | | | | M | M | M | Q1 2015 | Q1 2016 |

| Objective 8.2 Food Systems: Encourage humane and sustainable agriculture | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | School Districts 112 and 113 will switch to organic milk in schools lunches by August 2011 and, with foodservice providers, to provide local organic produce when renegotiating contracts; the School Districts will collaborate with other schools through the Healthy Schools Initiative to reduce barriers to providing organic food in school lunches | | X | | | X | X | X | M | M | H | Q1 2011 | Q3 2011 |
| | The City will expand its Port Clinton Farmers' Market and work to establish transit-friendly farmers markets throughout Highland Park, while promoting drop-off sites for Community Supported Agriculture; the City aims to encourage $500,000 in sales through farmers' markets and Community Supported Agriculture by January 1, 2012 | X | X | | | | | X | M | L | H | Q2 2011 | Q2 2012 |
| | The City of Highland Park will partner with the University of Illinois Cooperative Extension Service and Prairie Crossings Organic Farm to provide training to students and homeowners to encourage homegrown produce and school-raised produce that can be sold to fund school sustainability initiatives no later than July 1, 2012 | X | X | | | | | | H | L | H | Q3 2011 | Q2 2012 |
| | The City of Highland Park will work with local grocery stores and business districts to promote the sale of local and USDA certified organic produce in Highland Park; this promotion includes a target of achieving 5% of grocery store sales and 2% of restaurant sales from organic foods and produce grown with 150 miles by January 1, 2014 | X | X | | | | | X | M | M | H | Q2 2012 | Q1 2014 |
| Phase 2 (2015-2019) | Local food procurement targets increase to 20% by January 1, 2020; restaurants certified by the Green Restaurant Association may also be eligible for special business assistance through the Department of Community Development | | X | | | | | X | H | L | H | Q1 2015 | Q4 2020 |
| Phase 3 (2020-2024) | Local food procurement targets increase to 30% by January 1, 2030; restaurants certified by the Green Restaurant Association may also be eligible for special business assistance through the Department of Community Development | | X | | | | | X | H | L | H | Q1 2023 | Q4 2029 |
| Phase 4 (2025-2029) | | | | | | | | | | | | | |

# Goal 8: Ecosystems

Nourish the productive capacity of the North Shore by preserving habitat for threatened and endangered species, promoting the health and diversity of local animals, plants and microorganisms, practicing responsible land use and supporting sustainable local and community agriculture

| Objective 8.3 Habitat and Biodiversity: Increase available animal habitat by 100 acres by 2020 | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City will introduce sustainable landscaping guidelines by January 1, 2012 | X | X | | | | | | H | L | H | Q3 2011 | Q2 2012 |
| | Inventory of Natural Systems by July, 2012 | X | X | | | | | | H | M | H | Q2 2011 | Q2 2012 |
| Phase 2 (2015-2019) | Highland Park's Residential Landscape Guidelines will include targets for native species as a percentage of total non-improved property area and priority areas within the community based on ecological value; this voluntary target will increase from 5% by January 1, 2015 | X | X | | | | | X | H | L | H | Q1 2015 | Q4 2016 |
| | Highland Park's Residential Landscape Guidelines will include targets for native species as a percentage of total non-improved property area and priority areas within the community based on ecological value; this voluntary target will increase from and 10% by January 1, 2018 | X | X | | | | | X | H | L | H | Q1 2017 | Q1 2018 |
| Phase 3 (2020-2024) | To further native vegetation and habitat development efforts, an impact fee will be assessed to properties failing to meet the target as of December 31, 2020; revenues will fund native planting and community gardening initiatives in support of this objective | X | X | | | | | X | H | L | H | Q1 2020 | Q1 2021 |

| Objective 8.4 Pest Management: Eliminate sale of chemical pesticides | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | In partnership with the Park District of Highland Park, the City will introduce a program to train landscaping professionals about sustainable lawn and yard care | X | X | | | | | | H | L | H | Q2 2010 | Q2 2011 |
| Phase 2 (2015-2019) | The City will develop an IPM Task Force as part of the Lakefront and Environmental Commissions to discuss this issue further, in an effort to eliminate broadcast spraying community-wide by July 1, 2016 | X | X | X | X | | | | H | L | H | Q1 2015 | Q1 2016 |

# Goal 9: Culture

Preserve an inherited legacy of diverse and abundant cultural and natural assets that solidify Highland Park's future as an enduring destination for arts and recreation and enrich the experience of Highland Park for residents and visitors while supporting local businesses

| Objective 9.1 Events and Venues: Support Arts that Incorpate Sustainability | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City will collaborate with the Ravinia Festival Association to develop and implement sustainable event management guidelines for the Ravinia Festival by January 1, 2012 for the 2012 concert season | X | X | | | | | X | M | L | H | Q3 2010 | Q2 2012 |
| | The City and Park District will collaborate to devise and implement Sustainable Event Management Guidelines for City-sponsored events by April 1, 2011 | X | X | | | | | | H | L | H | Q2 2010 | Q1 2011 |
| | The City will collaborate with the Volunteer Pool of Highland Park, League of Women Voters and Highland Park High School to help monitor and facilitate recycling at public events as soon as possible but no later than April 1, 2011 | X | X | | | | | X | M | L | H | Q4 2010 | Q2 2011 |
| | Through the Ravinia Festival Community Relations Commission, the City of Highland Park will pursue the creation a joint farmers' market and art fair to benefit the sustainability initiatives at the Festival and community-wide following the 2012 concert season | X | X | | | | | X | M | L | H | Q4 2012 | Q4 2014 |
| | The City will develop a Vendor and Resource Guide to accompany the Sustainable Event Management Guidelines in order to provide event planners with a list of providers who incorporate sustainability and tips for vendors to reduce the impact of their display, while creating business opportunities for local green businesses | X | X | | | | | | H | L | H | Q3 2011 | Q4 2014 |
| | The City will partner with the Ravinia Festival Association to introduce an off-season farmers' market and art fair with by September 1, 2011 | X | X | | | | | X | M | L | H | Q2 2011 | Q4 2011 |

| Objective 9.2 Historic Preservation: Preserve Highland Park's Architecture | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City will continue to identify opportunities to preserve significant buildings, with a goal of retaining 100% of contributing buildings standing in 2007 in 2030 | X | X | | | | | | M | M | M | Q3 2010 | Q4 2029 |

| Objective 9.3 Health and Recreation: Promote Active, Healthy Sustainable Tourism | | Responsibility | | | | | | | Impact | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase/5 yr block | Action Items | City | Park Dist. | Lib. | Mor. Twp. | Dist. 112 | Dist. 113 | Private Sector Partners | Environmental | Financial | Social | Anticipated Start Date | Anticipated Completion Date |
| Phase 1 (2010–2014) | The City and Park District will identify improvements to cycling infrastructure, including on-road and path signage, to enhance Highland Park's reputation as a cycling destination by December 31, 2011 | X | | | | | | | M | M | M | Q3 2010 | Q4 2011 |
| | The City of Highland Park will collaborate with the Active Transportation Alliance and Volunteer Pool of Highland Park to develop a bike valet program for City-sponsored events as of April 1, 2011 | X | X | | | | | X | M | M | M | Q4 2010 | Q2 2011 |

# Estimated Sustainability Project Budget

## Highland Park Sustainable Community Strategic Plan

| *Estimated Annual Project Budget* * | Estimated Cost | Proposed Funding Source | Existing Funds | Revenue | Balance** |
|---|---|---|---|---|---|
| **Engagement** | | | | | |
| Scholarships | $5,000 | Refuse Franchise | $5,000 | $0 | $0 |
| Speaker/programming budget ($1,500 budget per goal) | $15,000 | Refuse Franchise | $15,000 | $0 | $0 |
| Green curriculum development-Project Citizen, AP Env Science | $50,000 | Waste fees | $0 | $0 | ($50,000) |
| Pooled funding for materials, speakers and publicity | $5,000 | Refuse Franchise | $5,000 | $0 | $0 |
| | $75,000 | | $25,000 | $0 | ($50,000) |
| **Governance** [1] | | | | | |
| Develop sustainability coordinator position (incentive pay) | $10,000 | Refuse Franchise | $10,000 | $0 | $0 |
| Develop education & outreach coordinator position (incentive pay) | $5,000 | Refuse Franchise | $5,000 | $0 | $0 |
| Develop technical services coordinator position (incentive pay) | $5,000 | Refuse Franchise | $5,000 | $0 | $0 |
| Develop program/volunteer coordinator position (incentive pay) | $5,000 | Refuse Franchise | $5,000 | $0 | $0 |
| Reserve fund | $5,000 | Refuse Franchise | $5,000 | $0 | $0 |
| Consulting implementation support | $20,000 | Refuse Franchise | $20,000 | $0 | $0 |
| | $50,000 | | $50,000 | $0 | $0 |
| **Green Economy** [2] | | | | | |
| Green purchasing co-op | $50,000 | plastic bag fee | $0 | $0 | ($50,000) |
| Green business certification and recognition scheme | $50,000 | plastic bag fee | $0 | $0 | ($50,000) |
| PACE bond for renewables and energy efficiency (debt service on $5m) | $371,541 | Property tax assessments | $0 | $395,973 | $24,433 |
| Administration related to PACE program | $20,000 | 75 basis pt administrative fee | $0 | $0 | ($20,000) |
| | $391,541 | | $0 | $395,973 | $4,433 |
| **Energy** [3] | | | | | |
| PACE-funded efficiency and renewables-pass through | $1,500,000 | tax assessments | $0 | $1,500,000 | $0 |
| GHG surcharge-electricity | $0 | $0.01/kWh over 12,000kWh | $0 | $323,769 | $323,769 |
| GHG surcharge-natural gas | $0 | $0.10/th over 1,500 th | $0 | $341,312 | $341,312 |
| ComEd Energy Challenge | $0 | ComEd grant | $250,000 | $0 | $250,000 |
| Energy office (PV/thermal installer, permit reviewer, energy auditor) | $60,000 | Utility surcharge | $0 | $0 | ($60,000) |
| Energy audits, weatherization, appliance rebates | $500,000 | Utility surcharge | $0 | $0 | ($500,000) |
| Municipal renewable energy: solar schools/education | $100,000 | ComEd grant | $0 | $0 | ($100,000) |
| Solar schools rebate | $0 | ICECF grant | $0 | $90,000 | $90,000 |
| Residential renewable energy incentives ($1.75/Wp; $17.50/1,000Btu) | $225,000 | ComEd grant/utility surcharge | $0 | $0 | ($225,000) |
| | $2,385,000 | | $250,000 | $2,255,082 | $120,082 |
| **Materials** | | | | | |
| Implement bottle bill for plastic bottles | $414,813 | fee collection | $0 | $534,238 | $119,425 |
| Implement bottle bill for glass and metal bottles | $269,701 | fee collection | $0 | $302,795 | $33,094 |
| Implement plastic bag and clamshell fee | $304,285 | fee collection | $0 | $590,341 | $286,056 |
| Consumer education-point of purchase displays | $25,000 | clamshell fee | $0 | $0 | ($25,000) |
| Blue canvas bags ($2.25 per bag*11,934 households) | $26,852 | plastic bag fee | $0 | $0 | ($26,852) |
| C&D Waste (includes oversight) | $25,000 | $100/ton fee | $0 | $200,000 | $175,000 |
| Green permitting incentives and green design consultation | $150,000 | $100/ton fee | $0 | $0 | ($150,000) |
| Composting pilot (1,000 homes) | $245,000 | $100/ton fee | $0 | $0 | ($245,000) |
| | $1,460,650 | | $0 | $1,627,374 | $166,724 |
| **Mobility** | | | | | |
| 'Climate penny' gas tax | $0 | fee collection | $0 | $221,367 | $221,367 |
| Complete Streets Plan development process | $20,000 | climate penny fee | $0 | $0 | ($20,000) |
| Bike and pedestrian infrastructure initiatives | $70,000 | climate penny fee | $0 | $0 | ($70,000) |
| I-Go memberships to first 100 households (4 hours/mo.) | $32,500 | climate penny fee | $0 | $0 | ($32,500) |
| CMAP and other grant sources | $0 | grant sources | $0 | $20,000 | $20,000 |
| Four solar charging stations at $25,000/unit | $100,000 | climate penny fee | $0 | $0 | ($100,000) |
| | $222,500 | | $0 | $241,367 | $18,867 |
| **Water** | | | | | |
| Tiered rate structure | $25,000 | $0.010/gal over 85,000 gallons | $0 | $1,439,718 | $1,414,718 |
| 50% toilet rebate ($400*50%*500 toilets) | $100,000 | tiered water rates | $0 | $0 | ($100,000) |
| Rain barrel pilot ($50*1000) | $50,000 | tiered water rates | $0 | $0 | ($50,000) |
| Leak detection/repair (goal of decreasing losses from 8% to 4%) | $150,000 | tiered water rates | $0 | $0 | ($150,000) |
| Accelerated repair program | $700,000 | tiered water rates | $0 | $88,707 | ($611,293) |
| Community gardens | $150,000 | tiered water rates | $0 | $0 | ($150,000) |
| Illinois Clean Energy Association grant | $0 | tiered water rates | $0 | $60,000 | $60,000 |
| Renewable Energy Credit revenue-ISEA/Community Energy | $500 | tiered water rates | $0 | $3,900 | $3,400 |
| 50kW system for Water Plant | $300,000 | tiered water rates | $0 | $0 | ($300,000) |
| | $1,475,500 | | $0 | $1,592,325 | $116,825 |
| **Ecosystems** | | | | | |
| Native vegetation propagation | $10,000 | Plant sales | $0 | $10,000 | $0 |
| Artisan/farmers' market off-season at Ravinia | $5,000 | Sustainability fund surplus | $0 | $0 | ($5,000) |
| Organic waste collection | $25,000 | Residential franchise | $0 | $5,000 | ($20,000) |
| Organic milk purchase ($2.50/gallon premium * 10,000 gallons) | $25,000 | Fund reserves | $0 | $0 | ($25,000) |
| | $65,000 | | $0 | $15,000 | ($50,000) |
| **Culture** | | | | | |
| Sustainable event management guideline development | $20,000 | Sustainability fund surplus | $0 | $0 | ($20,000) |
| Off-season Farmers' Market at Ravinia | $10,000 | Sustainability fund surplus | $0 | $0 | ($10,000) |
| Recruit community volunteers to recycle at the Ravinia Festival | $0 | Sustainability fund surplus | $0 | $0 | $0 |
| Bike valets and sustainable mobility promotions | $10,000 | Sustainability fund surplus | $0 | $0 | ($10,000) |
| | $40,000 | | | $0 | ($40,000) |
| | ***Estimated Cost*** | | ***Existing Funds*** | ***New Funds*** | ***Contingency*** |
| ***Total Investment*** | $6,165,191 | | $325,000 | $6,127,121 | $286,930 |

# Estimated Sustainability Project Budget

HarneTech LLC
HARNESSING TECHNOLOGY

**Qualifications**

* All calculations based on current population of the City of Highland Park; all energy, material and water use metrics based on Sustainability Plan Indicators

** Balance rates are calculated as the difference between the 'Estimated Cost' and the sum of 'Existing Funds' and 'Revenue'

1 - Contingent on City's decision to involve a sustainability coordinator and to what capacity

2 - PACE bonds issuance is currently contemplated as being done through a conduit financing party and not subject to City volume cap; City can role an administrative fee into property tax assessments to cover program costs

3 - Energy costs on an escalating cost scales relative to City population and energy usage; Revenues are subject to change per annum