

# City of DeKalb

## Sustainability Plan

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**Prepared by:** Citizen Environmental Commission and Sustainability Plan Citizen Task Force

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### Introduction

According to the United Nations Bruntland Commission of 1983, sustainability is “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” In short, sustainability is both a philosophy and a practice that seeks to manage finite resources in a way that is both beneficial to current and future generations. It protects, preserves, and restores the natural, social and economic environment so as to enhance life for all.

The City of DeKalb Sustainability Plan is designed to put sustainability into practice on a local level and has evolved into a strategic planning document for the Citizen Environmental Commission (CEC). It is a citizen-initiated, forward-looking document with broad-based input from all areas of the community. The plan is meant to be a living, dynamic guide to aid policy makers, organizations, businesses, and residents in making the City a more vibrant, resilient, and sustainable community that provides a high quality of life for current and future residents. Because of its dynamic nature, the plan will be adjusted and reviewed regularly by the CEC to assure it is always up to date.

### Our Mission

It is the intention of the CEC to provide a guide of sustainable goals, actions, and practices that will preserve, restore, and develop all of DeKalb's vital community resources, thereby enhancing the quality of life for present and future generations.

### Background/Process

The process of creating a sustainability plan for DeKalb began with a public forum in October of 2011. Over forty citizens attended a presentation by the Elgin Sustainability Coordinator, who shared the process the City of Elgin followed in the creation of its Sustainability Plan. After the public forum a proposal for the creation of a City of DeKalb Sustainability Plan was brought forward by a commissioner of the DeKalb CEC. The Commission voted to create a plan and assigned a citizen task force to create a draft and bring it back to the full commission for editing and approval. The Sustainability Plan Task Force was created and held its first meeting in April of 2012.

One of the first actions of the Task Force was to interview members of city staff in all departments, members of the business community, local citizens, Northern Illinois University students and staff, leaders of the DeKalb Park and school districts, and other groups. An article was published in the local

newspaper announcing the creation of the Task Force and inviting interested citizens to participate in the creation of the plan. Three members of the CEC and twenty citizens started work on the plan.

The Task Force divided into working groups with each group focusing on a specific area of the City's environment. The convener of the task force reported monthly to the full Commission. Also links to the draft in its formation were sent to the entire Commission soliciting input from the beginning of the process.

The first completed draft was presented to the CEC for input at the March 2014 meeting. Feedback given at the meeting was taken back to the Task Force and adjustments were made to the document. The draft was then sent to the Commission for further comment. A revised draft was then submitted to the full Commission for approval. This draft was then further edited and submitted to City staff for additional comments and recommendations.

The full plan was then placed on the City of DeKalb website, public library, and social media for public review. Final adjustments were made to the document at the September 2014 meeting. The final draft was voted on in October by the CEC and presented to the City Council for final review and approval on November 10, 2014.

## Areas Covered In the Sustainability Plan

- City Operations
- Air Quality
- Green Economy Development
- Alternative Energy
- Food Security and Healthy Living
- Natural Environment
- Housing and Urban Design
- Solid Waste
- Transportation
- Water Resources

Each area lists goals prioritized according to recommended *short* (0-3 years), *medium* (3-6 years), and *long-term* (more than 6 years) completion times. It is expected that the goals of the document will be revisited on a regular basis, updated in accordance with priorities completed and adjusted to accommodate new goals that may arise.

Several of the goals referred to in this plan are general on purpose. This is to provide flexibility when referring to some level of promotion of an environmental issue. The word *promote* is used intentionally in this plan to provide flexibility for decision-makers. The various levels of promotion include education, incentives (e.g. financial), and regulation. Deciding on the level of promotion at the time of writing this document was intentionally vague since goals and decision-makers change over time. The CEC chose to leave it open until specific policy is set in the future.

# Recommendations

## City Operations

**Goal 1: Improve communication of environmental policies to City staff, local residents, and business owners.**

### *Short Term*

1. Implement a practical mechanism for communicating environmental policies and expectations to City employees.

### *Long Term*

2. Identify cost savings that could be realized through the hiring and/or appointment of a City employee to manage environmental policies. These savings would be cost shifted to this new employee line.

**Goal 2: Increase usage of sustainable practices in City-owned and operated facilities.**

### *Short Term*

1. Reduce the use of paper at all levels of operations. Use best practices for “green” printing and print in minimal font type, such as Garamond.
2. Store documents electronically instead of in paper form wherever feasible.

### *Medium Term*

3. Take steps to join a green purchasing network.

*Definition: A green purchasing network is a network of buyers dedicated to socially responsible and environmentally sustainable purchasing.*

4. Use no or low VOC paints and adhesives.

*Definition: Volatile organic compounds (VOCs) are gases emitted from certain solids or liquids. VOCs include a variety of chemicals some of which may have short- and long-term adverse health effects.*

5. Require the use of “green” cleaning products and reusable cloths for cleaning, including in Requests For Proposals.

**Goal 3: Improve fuel efficiency in all City-owned and operated vehicles.**

### *Short Term*

1. Establish a “no-idling” policy for City-owned non-public safety vehicles.

*Definition: Idling is running an engine that is powering a vehicle when it is not moving. Idle reduction is a rapidly growing trend in the U.S. federal, state, and local fleet policies. Each year idling uses up several billion gallons of fuel and contributes significantly to the transportation sector’s portion of yearly greenhouse gas emissions.*

### *Long Term*

2. Where viable, replace City vehicles and machines with sustainable, fuel-efficient alternatives as they are retired. The savings should be realized in long-term fuel and energy reductions (the budget should reflect return on investment (ROI) for purchases made that cost more than the standard purchase).

## **Goal 4: Identify improvements needed and steps required to increase energy efficiency in City-owned buildings and other facilities.**

### *Short Term*

1. Conduct an energy audit to establish a baseline of energy use by City departments. The audit should include measuring the current energy use from alternative sources, publishing the data before and after each energy audit for City government buildings, and updating energy conservation measures taken in annual state of the City reports.

*Point of Pride: The police station is already in compliance.*

2. Adopt high efficiency lighting standards for all new city-owned construction and renovations to the extent feasible.

### *Medium Term*

3. Analyze new major capital improvement projects to ensure that the most cost effective and environmentally sound energy conservation measures possible are included. An example of a national standard from the Association for the Advancement of Sustainability in Higher Education can be found here: <http://www.aashe.org/wiki/climate-planning-guide/conservation-and-efficiency.php>.
4. Take steps to conserve energy and water use in City-owned facilities by emphasizing the use of water-conserving plumbing fixtures, electronic thermostats, and motion-sensor lighting in all City buildings.

### *Long Term*

5. Invest in alternative and renewable energies and create policies to curb energy consumption in all areas of City operations.

## **Air Quality**

### **Goal 5: Enhance Air Quality within the City of DeKalb.**

#### *Short Term*

1. The CEC will encourage residential use of high (premium) efficiency stoves, furnaces, and fireplaces through the use of promotional materials and other means. These materials will be available in the Community Development Department, the Crime Free Housing Division or Police Department, on the City website, and possibly in stores that sell these appliances.
2. Evaluate the feasibility of an ordinance that bans smoking in outdoor public locations, such as restaurant patios.
3. Consider the passage of a city-wide ordinance that prevents unnecessary vehicle idling.

### **Long Term**

4. Encourage and implement the necessary infrastructure that leads to and makes use of cleaner fuels, e.g. compressed natural gas (CNG), biodiesel, ethanol.

*Definition: Compressed natural gas is methane stored at high pressure and can be used in place of gasoline, diesel, and propane.*

## **Green Economy Development**

*Definition: A green economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.*

### **Goal 6: Improve the Sustainable Economy in DeKalb.**

#### **Short Term**

1. Recruit and promote businesses engaged in the green economy, such as solar energy, alternative fuels, and others.

*Information: The City can work with partners like the DeKalb County Economic Development Corporation, Illinois Green Business Association, and Illinois Department of Commerce and Economic Opportunity to develop promotion and recruitment tools to effectively target companies that are involved in the green economy.*

2. Promote local businesses and institutions that are taking steps to become environmentally friendly. Build awareness about opportunities in the local green economy by highlighting the actions taken by local businesses to implement environmentally responsible policies.
3. The CEC and other applicable groups on sustainability issues will work together to create a DeKalb Businesses Going Green Award and implement a “Green Leaf” program that would involve residents selecting and ranking local businesses for their green practices.

#### **Medium Term**

4. The CEC will establish means for local community businesses to share periodically the measures they are taking to become more environmentally conscious in their operations. These means may include the City website and guest editorials in local newspapers.

#### **Long Term**

5. The CEC will work with the City’s Economic Development staff and Chamber of Commerce to build a digital information hub to provide resources for job seekers and employers, as well as training and grant opportunities, in the green economy.
6. Encourage the use of appropriate vacant or abandoned property for business incubator space.

*Definition: Incubator space is designed to accelerate the growth and success of entrepreneurial companies through an array of business support resources and services that could include physical space, capital, coaching, common services, and networking connections.*

## Alternative Energy

**Goal 7: Promote, adopt policies, and provide resources and incentives to increase energy efficiency and the use of alternative energy city-wide.**

### *Short Term*

1. Pass a city-wide solar ordinance that applies to all zoning classifications.
2. Provide through public forums, presentations, the City website, and government access television information about energy audit processes for homes and businesses, and encourage home and business owners to have energy audits. Provide resources for property owners about energy efficiency and savings.

### *Medium Term*

3. The CEC will collaborate with relevant groups to provide educational materials, resources, and learning opportunities about alternative and renewable energy for residents and businesses.

### *Long Term*

4. Encourage residents and businesses to increase use of renewable energy.

## Food Security and Healthy Living

**Goal 8: Support adequate food security for all residents of DeKalb and ensure all residents have access to healthy food.**

### *Short Term*

1. Support and encourage better connections between local farmers and businesses within the City. Increase communication between the County, City, Chamber of Commerce, University of Illinois Agricultural Extension, DeKalb Farm Bureau, and other appropriate entities to meet this end.
2. Continue support for existing community gardens and collaborate with DeKalb County Community Gardens (DCCG) to locate and establish more gardens (including fruit and nut trees) on vacant property.

### *Medium Term*

3. Work in partnership with local food providers and agencies to identify and develop strategies for eliminating food insecure areas and “food deserts” inside DeKalb.

*Definitions: Food security is defined by the World Health Organization as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life.” More information can be found online at <http://www.who.int/trade/glossary/story028/en/>.*

*A food desert is a geographic area where affordable and healthy food are not easy to find locally, particularly for those without access to an automobile. Food deserts can be found primarily in the northwest and southeast sections of DeKalb.*

4. Promote food security, taking into consideration the rights of citizens to access food security for themselves and their families without infringing on the rights of others.
5. Provide information to the public regarding seed gathering and seed exchange networks. Provide education and encourage seed preservation and diversity in local and residential gardens and markets.

#### *Long Term*

6. Explore the development of a regional food hub, commercial kitchen, and processing facility in DeKalb. This initiative would partner with existing resources and initiatives (food banks, food pantries, community meal sites, educational institutions, etc.).

### **Goal 9: Take measures to enhance the health and well-being of all citizens through community education.**

#### *Short Term*

1. In partnership with the CEC, create a central page on the City of DeKalb's website that serves as a collection for all "green related" information and resources. Link to the DeKalb County "Go Green" website.

*Information: DeKalb County "Go Green" is an initiative to lead in the conservation of water, energy, and natural resources in the county. More information is available online at <http://dekalbcounty.org/GoGreen/index.html>.*

2. In partnership with Live Healthy DeKalb County, promote community-based education on nutrition and healthy food preparation by announcing fresh food preparation and cooking educational opportunities on the local City Government access channel.

## **Natural Environment**

### **Goal 10: Promote the restoration and preservation of natural environments in DeKalb.**

#### *Short Term*

1. The CEC will design fliers and website content for the City planning department to provide to private property owners regarding incentives and educational programs focused on habitat preservation and restoration.

#### *Long Term*

2. Establish appropriate vegetative buffers with native plants on public lands adjacent to the Kishwaukee River and other local bodies of water. Examples of areas are local parks and golf courses along the river.

*Definition: Vegetative buffers are areas of land maintained in permanent vegetation that help control air, soil, and water quality, along with other environmental problems. Also called buffer strips, these buffers trap sediment and can enhance filtration of nutrients and pesticides by slowing down runoff that could enter local surface waters.*

### **Goal 11: Promote community education regarding the benefits of natural environments and their conservation and protection.**

### Short Term

1. The CEC will coordinate with local academic institutions and the University of Illinois Extension Office to provide programs informing residents of the benefits of using native plants in landscaping and reducing fertilizers, pesticides, and other lawn chemicals.
2. Provide property owners with information on sustainable property maintenance practices, such as resource efficient landscaping maintenance and cleaning supplies. Examples of sustainable property maintenance practices can be found online at [http://www.wbdg.org/design/optimize\\_om.php](http://www.wbdg.org/design/optimize_om.php).

### Medium Term

3. Present community information on the impacts of run-off from washing cars at home.

*Information: Impacts of washing cars on the environment are caused when water entering storm drains, unlike water that enters sanitary sewers, does not undergo treatment before it is discharged into our waterways. When cars are washed on streets and driveways, the dirty water eventually winds up in rivers, streams, creeks, and lakes. More details about the environmental impacts of car washing can be found online at [http://cfpub.epa.gov/npstbx/files/KSMO\\_CarWashing.pdf](http://cfpub.epa.gov/npstbx/files/KSMO_CarWashing.pdf).*

### Long Term

4. The CEC will initiate a conservation program for the home and lawn to publicly acknowledge homeowners who establish effective conservation measures on their property.

*Information: The Conservation@Home program run by The Conservation Foundation is an excellent example of a program to encourage and recognize homeowners. Details of the Conservation@Home program can be found online at <http://www.theconservationfoundation.org/page.php?PageID=82>.*

## Housing and Urban Design

### **Goal 12: Develop residential zoning, building codes, and ordinances for new and existing buildings to increase energy efficiency and environmental sustainability.**

*Information: Buildings are one of the heaviest consumers of natural resources and account for a significant portion of greenhouse gas emissions. Buildings use 40% of raw materials globally and represent 73% of U.S. electricity consumption. To counter the negative effects of construction, the Leadership in Energy and Environmental Design (LEED) rating systems promote the design and construction of buildings that emphasize environmental sustainability. Illinois is one of the top ten states registered and certified as a LEED locale as of June 2012. The CEC, the Planning and Zoning Commission, and City staff will work together to establish guidelines that support sustainable construction.*

### Short Term

1. Follow the 2013 recommendations made to the City by America in Bloom judges. These recommendations will promote beautification of commercial, residential, and industrial areas of the City.
2. Investigate the establishment of codes for new developments that surpass the current State of Illinois Energy Code. This can be accomplished by encouraging standards equivalent to LEED certification and R standards.

3. Increase public awareness of the benefits and maintenance of native plants through community education for public and private properties.

*Information: Landscaping with native wildflowers, grasses, and trees improves the environment. Natural landscaping brings a taste of wilderness to urban, suburban, and corporate settings by attracting a variety of birds, butterflies, and other animals. Once established, native plants do not need fertilizers, herbicides, pesticides, or watering, thus benefiting the environment and reducing maintenance costs.*

#### **Medium Term**

4. Encourage the planting of a greater variety and number of native trees and plants than current codes require.
5. Encourage developers to use 'linked development' that connects new residential or commercial development projects to either a housing or commercial redevelopment project in an older neighborhood.
6. Promote the use of permeable paving in commercial parking and pedestrian areas, as well as encourage its use in residential driveways.
7. Expand mixed-use development to require both local shopping and commerce in subdivisions to reduce automobile use.

*Definition: Mixed-use development is a development that combines two or more different types of land uses, such as residential, commercial, employment, and entertainment uses, in close proximity.*

8. Allow future housing developments to be of increased density where appropriate.

*Information: Increased density housing works in urban areas that are close to public transportation, shopping, and employment. It encourages walkability of neighborhoods and reduces the environmental impacts to these areas such as air and water pollution.*

9. Encourage developers to include environmentally-friendly features in homes.
10. Encourage adaptive reuse of existing residential, business and industrial structures to limit the need for new construction.
11. Develop a strategy to limit light pollution within the City.

#### **Long Term**

12. Establish a permitting process and encourage the construction of private "greywater" and rainwater systems.

*Definition: Greywater is wastewater generated from hand basins, showers, and baths.*

13. When feasible consider ordinances that provide financial and/or other incentives for builders and developers who choose to follow LEED specifications.

## Solid Waste

**Goal 13: Promote a zero-waste policy for the City of DeKalb, and align and coordinate the City guidelines and policies with any County zero-solid waste ordinance or solid waste plan.**

### *Short Term*

1. Adopt a policy that promotes deconstruction, as opposed to demolition, of any buildings public or private. Emphasize reuse and re-purposing of as much material as possible.

*Definition: Building deconstruction is the environmentally-friendly process in which the various parts of the building are dismantled piece by piece in an attempt to save and reuse as many of the building's components as possible.*

2. Work with organizers to ensure that recycling containers are provided for public events.
3. Encourage the use of reusable bags or containers wherever appropriate.

### *Medium Term*

4. The CEC will coordinate with the Chamber of Commerce a waste exchange program that provides undervalued waste or by-product streams from one facility that other facilities can use. This can provide new revenue, savings, and environmental protection.

### *Long Term*

5. Investigate the potential for a permanent central recycling facility within the City for non-curb-side recyclable materials, such as polystyrene and household hazardous waste, as well as a composting facility in cooperation with DeKalb County.
6. Coordinate with the Zero-Waste Task Force of DeKalb County and the City's Crime Free Housing Program to provide support for recycling at businesses and apartment buildings within DeKalb city limits.
7. Investigate requiring a letter of credit or other surety for new commercial or industrial developments involving potentially hazardous materials. This is meant to provide funding for cleanup of hazardous waste if the company ceases local operations.

## Transportation

**Goal 14: Integrate alternative means of transportation within the City.**

### *Short Term*

1. Increase the frequency of shuttles between DeKalb-NIU and the existing Elburn Metra Station.

### *Medium Term*

2. Implement a "complete streets" program to improve connectivity of existing bike paths and pedestrian walkways, including widened walkways, to accommodate bicyclists and pedestrians. Secure pedestrian and bicycle paths to improve safety and a sense of security.

*Definition: Complete streets are streets for everyone. They are designed and operated to enable safe access for all users. People of all ages and abilities are able to safely move along and across streets in a community, regardless of how they are traveling. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations. More details about complete streets programs can be found online at <http://www.smartgrowthamerica.org/complete-streets>.*

3. Expand bus routes to include areas that are currently underserved and increased hours of operation.
4. Require new developments and re-developments to include networks and infrastructure that provide alternate transportation modes for residents and employees.
5. Establish better integration of the existing Huskie line and TransVac systems.
6. Cooperate with DeKalb-Sycamore Area Transportation Study (DSATS) to increase bike paths between DeKalb and other communities, such as Cortland and Malta.

#### **Long Term**

7. Support further extension of the Metra train lines.

### **Goal 15: Promote transportation efficiency and alternate forms of transportation.**

#### **Short Term**

1. Provide preferred parking for energy efficient vehicles, such as motorcycles, hybrid/electric cars, and vehicles that use primarily renewable energy sources.
2. Install more bike racks city-wide and on city buses.
3. Allow for the addition of bike lanes when street expansion projects occur. (Refer to the Illinois Bike Transportation Plan published by the Illinois Department of Transportation. <http://www.illinoisbikeplan.com/>)
4. Continue to monitor and adjust for improved traffic light synchronization in cooperation with the DeKalb-Sycamore Area Transportation Study (DSATS).

#### **Medium Term**

5. Establish a city-wide bike sharing program in partnership with Northern Illinois University.
6. Develop a strategy to become more bike friendly and recognized by groups such as the League of American Bicyclists.
7. In collaboration with Northern Illinois University create an on-line transportation hub that facilitates connectivity for ride sharing, car sharing, etc.

#### **Long Term**

8. In cooperation with private vendors investigate the construction of fueling stations for vehicles powered by renewable fuels.

9. Consider the life-cycle costs of pavement materials during project design.

*Definition: Life-cycle (or whole-life costs) refer to the total cost of ownership over the life of an asset. This is also commonly referred to as “cradle-to-grave” or “womb-to-tomb” costs. Costs considered include not only the financial costs but also the environmental and social costs.*

10. Increase free flow traffic conditions.

*Definition: Free flow traffic conditions are when traffic moves continuously without unnecessary stopping time. These mechanisms for moving traffic reduce fuel consumption and travel delays.*

## Water Resources

### Goal 16: Increase water conservation within the City of DeKalb.

#### Short Term

1. Promote educational opportunities encouraging water conservation.

#### Medium Term

2. Collaborate with the DeKalb Sanitary District to study the potential for reclamation of effluent from the existing treatment facility for non-potable uses.

*Information: Non-potable water use reduces potable water demands and the need for additional supply facilities. Non-potable water can be used for irrigation and toilet flushing*

#### Long Term

3. Evaluate the feasibility of creating a non-potable water distribution system throughout the City or portions of the City.
4. Evaluate the possibility of requiring the construction of a non-potable facility in conjunction with new commercial and/or residential development.

### Goal 17: Identify and increase future water supply sources.

#### Medium Term

1. Investigate increased use of shallow aquifers for potential reduced energy and waste streams that may result.

*Information: The energy required to pump the water to the ground surface is proportional to the well depth, with shallow wells requiring significantly less energy. The treatment required for shallow wells also typically consumes less chemicals and produces less hazardous waste streams than those required for deep wells.*

2. Evaluate the environmental impact of radiological and chemical wastes generated from existing deep well operations.

*Information: The radium removed during the treatment process is a hazardous waste stream. Typical wastewater treatment processes result in significant amounts of radium being collected within the biosolids, which are then land applied to farm fields. The EPA regulates how much radium*

can be discharged per field, and once the limit is reached the field can no longer be used for biosolids disposal, increasing land application costs over time as more distant fields must be used. The chloride waste stream from the softening process is also extremely difficult and costly to remove from wastewater since it is not removable with conventional biological treatment methods.

#### **Long Term**

3. Investigate distant surface water or shallow well sources as possible supply alternatives or supplemental sources of drinking water.

*Information: The deep aquifer predominantly utilized by the City extends across a large swath of the Midwest encompassing nearly all of Iowa, the northern portions of Illinois and Missouri, the southern half of Wisconsin as well as portions of Minnesota, Michigan, and Indiana. In many more urban areas, the deep aquifer is the only viable source of local supply. The population growth within the region has resulted in steadily declining water levels within the aquifer. Shallow aquifers are more local in nature with local sources of recharge, making them a more manageable and potentially dependable long-term water source. Although shallow aquifers within City limits are of fairly limited yield, higher capacity shallow aquifers have been identified by the Illinois State Water Survey near where DeKalb, Ogle, and Lee counties meet, as well as further north within the Rock River Valley. More information can be found at <http://www.isws.illinois.edu/wsp/figures.asp?id=7&pg=wsground> and [http://pubs.usgs.gov/ha/ha730/ch\\_a/qif/A020.gif](http://pubs.usgs.gov/ha/ha730/ch_a/qif/A020.gif).*

4. Cooperate with neighboring communities on future water supply projects to maximize environmental benefits while realizing improved economies of scale.

### **Goal 18: Improve storm water management ordinances and policies to improve water quality and manage water retention.**

#### **Short Term**

1. Collaborate with other municipalities and the County on overlapping problems, studies, and recommendations as they relate to storm water management.

#### **Medium Term**

2. Require private property owners and contractors to manage storm water runoff and soil erosion, minimizing or preventing runoff from residential, agricultural, and/or construction areas.

#### **Long Term**

3. Restore water channels and floodplains on government-owned property, such as the NIU north 40 and DeKalb Park District facilities adjacent to the river. Collaborate with the DeKalb Soil and Water Conservation District to provide education and incentives to private property owners to do the same in order to control storm water runoff.