LakeCounty

Strategy for a Sustainable Lake County

An Action Plan for Integrating Sustainability into County Operations

2015 Update

Lake County
Illinois

Executive Summary

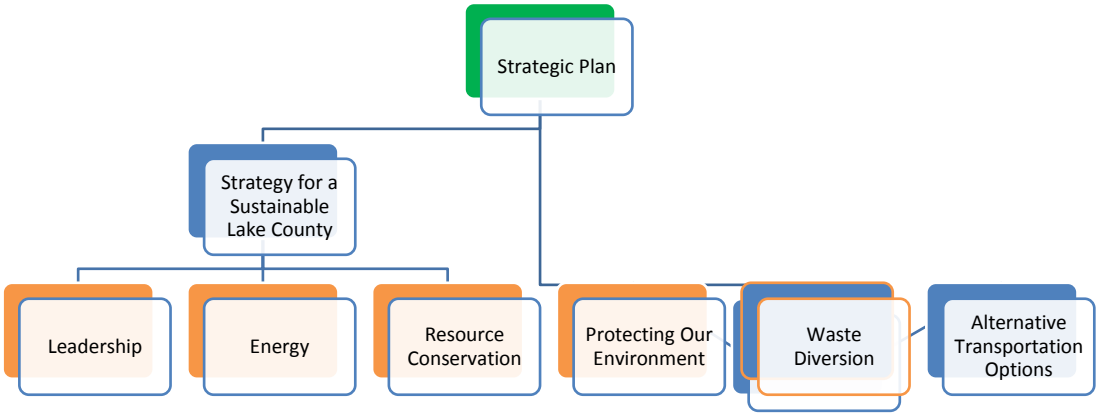
This plan provides a collaborative strategy for further integrating environmentally sound, economically feasible sustainable practices into Lake County government decision-making and operations. In this context, sustainability practices seek to strike a balance among environmental, economic and societal needs without adversely impacting future generations' ability to achieve the same balance.

In Lake County, sustainability means using resources wisely to create cost savings opportunities and promote efficient workspaces and programming. During the first phase of this action plan, we asked our employees to inventory best practices both within their departments and from other county governments. The 12-member Action Team then organized the data around six program areas, as outlined in the graphic on the next page. The Sustainability Coordinator organized the Action Team, provided staff support, facilitated group meetings, compiled metrics, reported best practices and drafted the plan's framework and timeline.

The outcome of this collaborative effort is this *Strategy for a Sustainable Lake County Action Plan for County Operations*. The plan recommends specific actions for integrating sustainability on a comprehensive basis into County operations. Each chapter of the plan is devoted to a separate program area and addresses the following components:

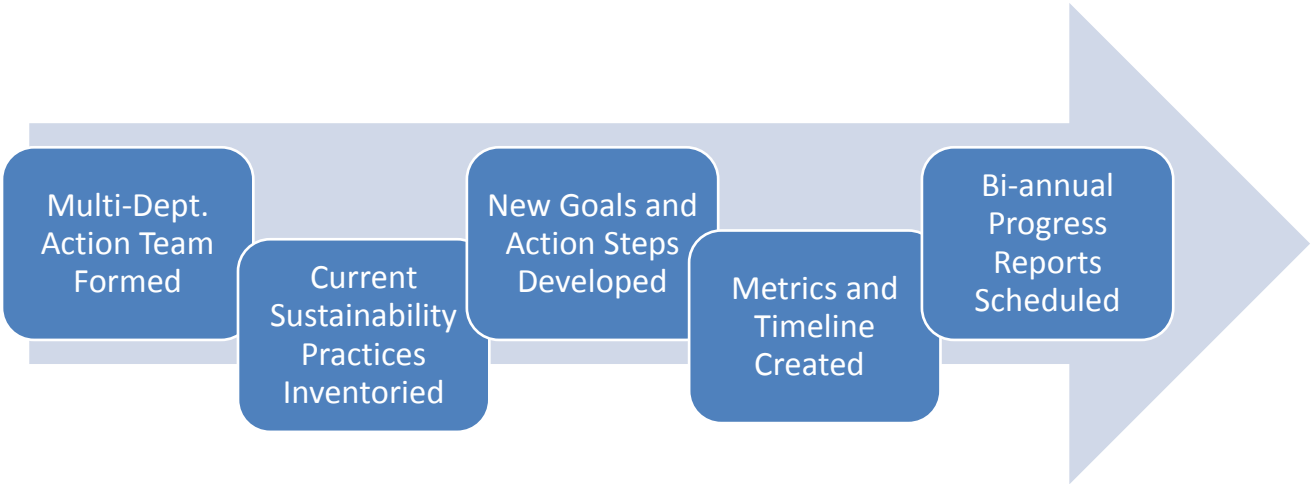
Values: This plan adheres to the County's four overarching values in all of its operations: fiscal responsibility, exceptional service, leadership and environmental stewardship. All recommendations and subsequent actions in this plan will be responsive to these values.

Sustainability Goals: The Lake County Strategic Plan (adopted July 2013 and updated in 2015) includes sustainability as a value and a goal. Promoting a sustainable environment means preserving the health of natural resources and drinking water through *the "widespread use of sustainable and environmental management practices, effective storm water management and the enhancement and rehabilitation of lakes, wetlands and other fragile ecological systems."* In turn, departments have more detailed subject-matter plans with goals and strategies. The following chart shows the relationship of these documents to each other.



Metrics: Measures of success were developed as a way to review progress and effectiveness in meeting the plan's goals. In some cases, targets are specific, one-time accomplishments; in other cases, they are general resource efficiencies and benefits.

Accountability: As depicted in the graph below, much has been done to implement sustainability into County operations. Moving forward, the Action Team will convene annually to review and reassess the Strategy for a Sustainable Lake County, taking into account changes in Board policies and directives, and best management practices for sustainable local governments. Additionally, the Board will receive a bi-annual sustainability update and metrics report highlighting department progress and achievements.



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Acknowledgments:

This plan was made possible by the Lake County Board and the contributions of employees representing departments, divisions and agencies, including:

County Administrator's Office; Finance Administration; Facilities; Health; Planning, Building & Development, Public Works; Stormwater Management Commission; SWALCO; Transportation

Leadership

Guiding Principles

- Lake County has a responsibility to balance fiscal, environmental and social considerations into its operational decision making processes.
- Lake County encourages its public and private sector partners to adopt similar measures by implementing and highlighting sustainability best practices in its operations.
- Lake County serves as an example for other local governments by encouraging office efficiencies, and increasing employee participation and decision-making in sustainability initiatives.

Sustainability Goals

- Research and develop alternative options for sustainability performance measurement programs; recommend a sustainability certification program.
- Communicate triple bottom line (fiscal, environmental and social) benefits of sustainability initiatives in County operations to municipalities, community stakeholders, businesses and residents.

Current Successes

- County Board adoption of the Sustainability Chapter to the Lake County Regional Framework Plan
- County departments finalize update to Strategy for a Sustainable Lake County
- Initiation of 3 pilot programs in alternative transportation, waste diversion and employee gardens

Action Plan Leadership

1. Research advantages of joining 5 regional sustainability collaborative efforts to address cross-jurisdictional planning and implementation initiatives.
2. Research sustainability rating systems and provide recommendations on costs and benefits.
3. Establish at least three pilot programs to demonstrate best practices in sustainability to provide scalability and replicability.
4. Increase number Employees for Earth (E4E) Green Team programs.
5. Implement Sustainability Chapter to the Lake County Regional Framework Plan.
6. Promote Lake County sustainability initiatives.
7. Participate in College of Lake County's Lake County Green and similar outreach & education events.

Measures of Success Leadership

1. Research completed and recommendations made based on advantages and value-add to the County in participating each recommended regional collaborative effort.
2. Sustainability rating and reporting system adopted.
3. Establish at least three programs that model best practices in sustainable land use and development including, but not limited to:
    - Promotion of native landscaping best practices at Lake County demonstration facilities;
    - Work with developer community to identify incentives to promote the use of conservation of non-residential development best practices during the development review process; and,
    - Promotion of recently created local food regulations, such as beekeeping, chicken coops, and hoop houses.

Energy

Guiding Principles

- Increase energy efficiency and reduce energy use for optimal performance.
- Increase energy diversity, reduce greenhouse gas emissions and promote community resiliency.
- Incorporate sustainable land use, energy efficiency, water conservation and waste reduction in County development projects.
- Educate employees and the community at large of the benefits of sustainable land use and development, energy efficiency design and renewable energy use can promote job creation, resource conservation and cost savings.

Sustainability Goals

- Optimize efficient energy use by facility type.
- Track and report energy use in County facilities and set a goal to reduce greenhouse gas emissions from County operations.
- Research and develop options and recommendations for renewable energy investments for County facilities.

Current Successes

- The County Tower energy efficiency retrofit project reduced electric use by 1,790,000 kilowatt hours per year, thus avoiding 1,234 tons of greenhouse gas emissions
- The County highlighted the success of its Tower retrofit project through creation of outreach materials emphasizing the benefits of energy efficient work spaces

Action Plan Energy

1. Research county-level energy policies and plans; present findings and recommendations.
2. Develop an energy management control system with weather and performance measurement reporting features.
3. Continue to inventory and audit buildings and rooftops to find potential energy performance improvement and renewable investment opportunities.
4. Research opportunities to request bid alternates for renewable energy in future energy supply procurements; present recommendations.
5. Create a greenhouse gas inventory, tracking and reporting system to document emissions reductions from County buildings.
6. Collaborate with departments (including Human Resources, Communications and IT) to develop an education and recognition campaign for energy conservation efforts at all County facilities.

Measures of Success Energy

1. Energy policy and plan recommendations presented.
2. Energy management control system developed.
3. Inventory completed; baseline energy usage intensity established by facility.
4. Renewable energy procurement recommendations presented.
5. Greenhouse gas inventory completed; tracking and reporting on a yearly basis.
6. Provide yearly recognition for energy efficiency upgrades.

Resource Conservation

Guiding Principles

- Promote responsible use/reuse of raw and processed materials through efficient use of resources.
- Educate department buyers on existing opportunities to evaluate and select environmentally preferred, products and services.
- The County can use its buying power and joint purchasing ability to increase demand for environmentally preferred products and services.
- Green procurement practices offer many benefits, including economic development, local job creation, resource conservation, waste reduction and pollution prevention.

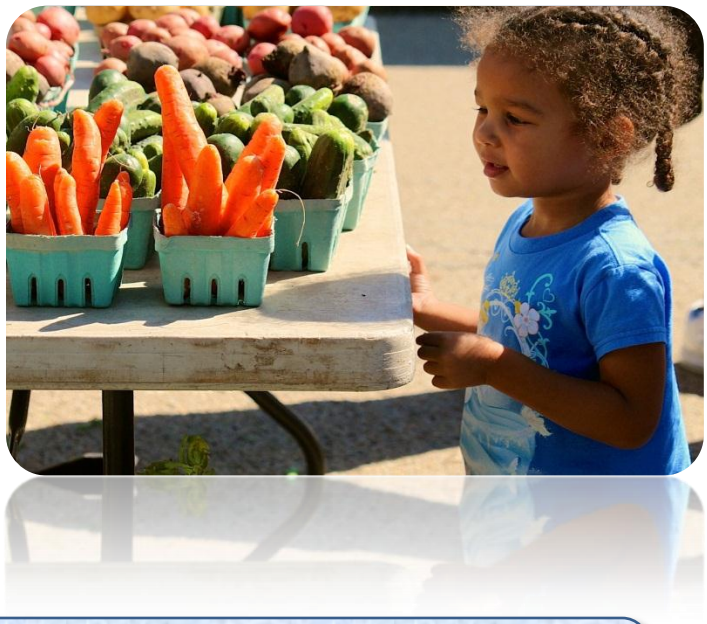
Sustainability Goals

- Continue to include the Sustainable Purchasing Statement in requests for proposals.
- Continue to support Lake County economic development by connecting locally sourced products and services to County bidding processes.
- Implement office efficiency education and pilot programs to encourage waste reduction and resource conservation.

BUY LOCAL.
BUILD LOCAL.
WORK LOCAL.

Current Successes

- Implemented tracking of joint purchasing contracts
- Included the Sustainability Purchasing Statement in all Requests for Proposals
- Successfully launched a procurement training program for all County department buyers, highlighting 15 best practices in sustainable purchasing



Action Plan — Resource Conservation

1. Educate and train department buyers on existing environmentally preferred products (EPPs) and services.
2. Increase the number of local vendors awarded contracts.
3. Promote the use, re-use or re-purposing of surplus equipment and supplies and track the number of auction lots by commodity type.
4. Increase spending on locally sourced products and services.
5. Research use of reduced or recycled packaging by adding language to Requests for Proposals terms and conditions.

Measures of Success — Resource Conservation

1. Provide 2-3 annual education opportunities and report survey results.
2. Report the number of EPPs procured from at least five vendors.
3. Report results from bi-annual auction of surplus equipment.
4. Increase the amount of local procurement by 5% per year or 25% by 2020.
5. Report findings and market trends on reduced or recycled packaging.

Protecting Our Environment

Guiding Principles

- Maintain a healthy network of ecosystems and working landscapes to increase resiliency, decrease risk of flooding and prevent degradation of water ways and costly restoration efforts.
- Protect natural systems to provide an abundance of benefits including carbon sequestration, flood and erosion control, water quality, nutrient processing, soil fertility, wildlife habitat and air quality.
- Promote easy and safe access to local parks, open spaces and recreational facilities to enhance County residents' quality of life.

Sustainability Goals

- Through watershed planning, sustainable site design standards and installation of enhanced nutrient removal technology, protect and restore Lake County's open spaces and waterways.

- Maintain clean, healthy air and contribute to regional air pollution solutions by establishing a schedule for building energy audits, fleet management and exploring methods to measure and reduce the County's carbon footprint.

Current Successes

- Installation of eBNR technology at the Mill Creek Water Reclamation Facility and the Vernon Hills Water Reclamation Facility
- Incorporation of 72 green infrastructure projects into County transportation and stormwater management operations
- Implementation of stream restoration projects for the Aptakisic Creek and Round Lake Drain
- LCHD published its first Air Quality Report

Action Plan Protecting Our Environment

1. Develop a green infrastructure workflow analysis for County projects.
2. Complete an inventory of green infrastructure on County projects.
3. Identify at least three sources of funding for green infrastructure.
4. Incorporate at least five native plantings into County landscape projects.
5. Provide at least five green infrastructure outreach and education opportunities.
6. Explore and establish baseline monitoring metrics for the Des Plaines River.
7. Incorporate green infrastructure in at least 10 future projects.
8. Develop a Class A bio-solid from County waste water treatment process.
9. Install enhanced bio—nutrient removal (eBNR) technology in all County-owned wastewater treatment facilities.
10. Increase lineal feet of restored stream banks by 5% annually, or 25% by 2020.
11. Facilitate the implementation of at least 4 watershed work group action plans.
12. Evaluate the expansion of and develop model language for park dedication requirements.

Measures of Success Protecting Our Environment

1. Completed green infrastructure workflow analysis.
2. Completed inventory of green infrastructure.
3. Identification, drafting and submission of grant funding for green infrastructure.
4. Incorporation of native plantings into County landscape projects.
5. Increased number of outreach and educational opportunities for best management practices in sustainable land use development, watershed protection and open space preservation.
6. Established baseline monitoring metrics for the Des Plaines River.
7. Green infrastructure installed in at least 10 County projects.
8. Class A bio solid product developed and marketing options explored.
9. Installed eBNR in all wastewater treatment facilities.
10. Increased lineal feet of restored stream banks in County watershed areas by 2500 feet in 2015 and as grant money allows in following years.
11. Implementation of at least 4 watershed work group action plans.
12. Adoption of model regulations that encourage expansion of park dedication requirements within residential subdivision developments.

Waste Diversion

Guiding Principles

1. Effective outreach and education is critical to a successful waste reduction and recycling program.
2. "Reduce, reuse and recycle" is the core educational message for all County operations.
3. An integrated waste management program will promote a holistic and planned approach to waste reduction in County facilities.

Sustainability Goals

4. Support Lake County's 60% Recycling Task Force goals by employing a waste reduction strategy for all County buildings.
5. Incorporate County deconstruction recycling language into County demolition contracts.
6. Pursue a voluntary franchise pilot program in an unincorporated Lake County community and report on feasibility results.

Current Successes

- County Board adoption of a construction and demolition debris recycling ordinance
- County employee green team initiation of a Mini Bin Pilot Program, which increased the recycling rate by 15%
- Mini Bin Program expansion to the Sheriff's Office and Administration Tower in Waukegan
- In partnership with SWALCO, installation of a clothing bin in Libertyville and collection of over 3,723 pounds of material in the first year
- Amendment of the Solid Waste and Recycling Ordinance to require that haulers provide recycling services and include it in the cost for service in areas not covered by a municipal or township franchise

Action Plan — Waste Diversion

1. Create an integrated waste management program that includes hauler contract language requesting that the hauler develop a method to, and provide bi-annual reports on, estimates of the amount of county waste, recyclables and organic material collected.
2. Incorporate the Lake County construction and demolition debris recycling ordinance requirements into county deconstruction requests for proposals (RFP) and contracts.
3. Track amount of C&D recycling debris is diverted from landfills.
4. Explore food scrap collection and composting for specific County operations.
5. Amend hauler licensing ordinances to to incorporate at least 3 sustainability best management practices.
6. Explore inclusion of multi-family units in new or extended franchise contracts.
7. Evaluate and enforce compliance with hauling ordinance Pay as You Throw option.
8. Promote or require recycling through County's business licensing process.
9. Expand mini bin program throughout County departments.

Measures of Success — Waste Diversion

1. Adoption of a waste management plan for County facilities.
2. Incorporation of C&D debris recycling requirements in County RFPs.
3. Increase by 5% annually the C&D debris diverted from County projects.
4. Development of a County facility food scrap collection pilot program.
5. Waste hauling contract amended to incorporate at least 3 sustainability best management practices.
6. At least three contracts identified and communities approached to include multi-family units in waste hauling franchise.
7. Annual PAYT compliance and enforcement report developed.
8. Recycling options added to at least 5 commercial franchise contracts.
9. Mini Bin program expanded to at least 3 County departments per year.

Sustainable Transportation Options

Guiding Principles

- Lead by example in planning and implementing investment in sustainable transportation choices.
- Conserve fuel usage and reduce emissions.
- Encourage sustainable transportation choices by providing infrastructure to connect non-motorized travel users to destination points.
- Identify innovative means of funding transportation infrastructure improvements that encourage sustainable travel practices.

Sustainability Goals

- Continue to improve the fuel efficiency of the County fleet through right-sizing vehicles, route coordination and efficient driving training.
- Research and consider joining the Illinois Green Fleets Program.
- Improve local air quality by continuing to make congestion mitigation a top priority.
- Conserve resources through repurposing of roadway construction materials and employing bid language that encourages responses with sustainable goods and services.
- Research and identify performance measurements for sustainable transportation improvements.
- Conduct outreach to municipalities to increase the miles and connections of non-motorized pathways by 10% by 2025.

Current Successes

- Introduction of an electric vehicle pilot program to test the technology's effectiveness in County operations
- Collection of over 3,575 cubic yards of recycled roadway material, 3,805 gallons of reused motor oil and 485 gallons of used anti-freeze were in 2014
- Installation of two roundabouts and other congestion reduction technologies, reducing greenhouse gas emissions in Lake County by an estimated 219 kilograms per year
- Installation of seven signal coordination and timing projects since 2013, improving traffic flow, reduced hourly delay times and fuel consumption of an estimated 185,000 gallons per year, or 1645 metric tons of greenhouse gas emissions per year

Action Plan Sustainable Transportation

1. Explore and employ bid language that encourages inclusion of recycled material in at least 10 roadway project requests for proposals.
2. Continue incorporation of adaptive, or real-time, signal controls where appropriate to optimize travel times and mitigate congestion.
3. Track and report use of PASSAGE tool as a behavior change mechanism.
4. Conduct local agency outreach for every roadway project to offer 80% funding for sidewalk connections related to the project.
5. Reconvene the Vehicles Standards Committee at least 4 times per year to research and consider joining the Illinois Green Fleets program.
6. Research shared use mobility and employee commute options; present recommendations.
7. Track and report County fleet use of alternative fuel vehicles and corresponding reductions in fuel costs and greenhouse gas emissions.
8. Continue research into benefits of alternative fuels for County fleets.

Measures of Success Sustainable Transportation

1. Recycled material bid language incorporated into at least 10 RFPs.
2. Increased number of adaptive, real-time signal controls.
3. Increased number of PASSAGE app users and website visits.
4. Increased outreach opportunities regarding connections funding by 10% annually.
5. Vehicles Standards Committee convened 4 times per year; researched benefits to the County; recommendation made regarding joining the Illinois Green Fleets program.
6. At least 15% of County employee travel was conducted via alternative transportation options including telecommuting for meetings.
7. Reduced departmental fuel costs by 15% and reduced GHG emissions by 5% per year.
8. Analysis completed and recommendations presented on benefits of alternative fuel vehicles for County fleets.

Plan Goal	Action Item	Department(s)	Target Year	Measures of Success
Leadership	Research joining regional, collaborative sustainability efforts	CAO - Sustainability	2015	Recommend 5 collaborative efforts based on advantages to County
	Research & develop options & recommendations for a sustainability rating system	CAO - Sustainability	2015	Recommendation of local government rating system
	Establish best practices pilot programs for scalability and replicability	CAO - Sustainability & Green Team	2018	At least 3 pilot programs initiated by 2018 - Mini Bin Program expanded in 2015
	Increase number of E4E Green Team programs	E4E Green Team	2020	Increase membership by 10% per year
	Implement Sustainability Chapter of the Regional Framework Plan	PBD, DOT, SMC, CAO	2020	Program Management plan, timlineand; 3-5 action steps completed
	Promote Lake County sustainability initiatives	Sustainability & Communications	2015-2020	25% increase in number of annual social and print media sustainability items
	Participate in Lake County Green and similar outreach & education events	CAO, SWALCO	2015, 2017	Report number of events & attendees
Energy	Research & develop options & recommendations for a county-level energy policy and plan	FAS, Facilities, Sustainability	2016	Energy policy & plan recommendations presented
	Develop an energy management control system	Facilities		Energy management control system created
	Inventory & audit buildings/ rooftops for upgrades & renewable energy options	Facilities	2020	Inventory completed; baseline energy usage intensity documented by facility
	Research & develop options & recommendations options renewable energy procurement	Sustainability, Purchasing, FAS	2015	Renewable energy procurement recommendations presented

	Develop a greenhouse gas inventory, tracking and reporting system	Facilities, CPM, Sustainability	2016	Inventory completed; tracking & reporting on a yearly basis
Plan Goal	**Action Item**	**Department(s)**	**Target Year**	**Measures of Success**
	Develop a facility energy performance education & recognition program	Facilities, Communications	2016	Provide yearly recognition for energy efficiency upgrades
Resource Conservation	Educate & train department buyers on existing EPP products/services	Purchasing, Sustainability	2015-20	Provide 2-3 annual education opportunity and report survey results
	Increase the number of local vendors awarded contracts	All Departments	2015-20	Report the number of EPPs procured from at least 2 vendors
	Promote use, re-use & re-purposing of surplus equipment; track auction lots	Purchasing, E4E Green Team	2015-20	Report results of bi-annual auction of surplus equipment
	Increase the spend on locally sourced products and services	All Departments	2015-20	Increase the amount of local procurement by 5% per year or 25% by 2020
	Research, develop & recommend RFP language options to encourage vendor reduction of product packaging	Purchasing	2020	Report findings and market trends on reduced or recycling packaging
Protecting Our Environment	Develop a green infrastructure workflow analysis for County projects	Stormwater Mgmt Comm (SMC)	2016	Completed workflow analysis & list of recommendations
	Complete an inventory of green infrastructure on County projects	SMC, Health, DOT, Sustainability	2015	Completed inventory of green infrastructure
	Identify at least 3 sources of funding for green infrastructure	Sustainability	2016	Three or more grant opportunities identified drafted and submitted
	Increase incidence of native planting incorporation into County projects	Facilities, DOT, SMC	2016- 20	Track number of native plantings incorporated into County projects

	Increase outreach and education regarding green infrastructure	SMC, Health, DOT, Sustainability	2015-20	Increase the number of outreach opportunities for GI by 25%
Plan Goal	**Action Item**	**Department(s)**	**Target Year**	**Measures of Success**
	Explore & establish baseline metrics for nutrients in the Des Plaines River	SMC, Health, DOT, Sustainability	2018	Baseline metric established; 2020 goal set; yearly monitoring & reporting
	Incorporate green infrastructure into at least 10 future projects	DOT, SMC	2020	At least 10 County capital projects feature green infrastructure installations
	Produce a Class A bio-solid from County waste water treatment processes	Public Works (PW)	2018	Class A bio-solid developed and marketing options explored
	Install eBNR in all wastewater treatment facilities	PW	2018	All wastewater facilities equipped with eBNR equipment
	Increase by 5% per year lineal feet of restored stream banks	SMC, Health, PW, Sustainability	2020	Increase by 2500 feet in 2015 and as grant money allows in following years
	Facilitate implementation of 4 watershed work group action plans	SMC, Health, PW, Sustainability	2020	County technical assistance on at least 4 implementation steps
	Evaluate expansion of subdivision park dedication requirements; develop model language	Planning Building & Development (PBD)	2018	Model park dedication requirements developed and adopted for subdivisions
Waste Diversion	Create a waste & recycling management plan for County facilities	SWALCO, FAS Sustainability	2015	Adoption of waste management plan for County facilities
	Incorporate C&D ordinance language into County RFPs & contracts	Purchasing, Construction	2016	Increase in construction & demolition debris diverted from County projects
	Track the amount of C&D debris being diverted from County landfills	PB&D	2017	Tracking mechanism identified and employed;
	Explore a county food scrap collection program; make recommendations	SWALCO, Facilities,	2016	Implementation of a county facility food scrap collection pilot program

		Sustainability		
Plan Goal	**Action Item**	**Department(s)**	**Target Year**	**Measures of Success**
	Amend hauling ordinance to include commercial food scrap collection	SWALCO, CAO, PBD	2020	Hauling ordinance amended
	Include recycling options for multi-family units in franchise contracts	CAO, PBD	2020	Recycling options part of franchise contracts or on-site recycling provided
	Evaluate/Enforce compliance with hauling ordinance re PAYT option	PBD	2016-20	Annual PAYT compliance and enforcement report
	Promote or require recycling through business licensing process	PBD	2016	Number of business licenses processed after 2016
	Develop an outreach waste diversion campaign in County offices	SWALCO, E4E Green Team, FAO	2016	Expand mini bin pilot to full adoption; reduce office waste use by 15%
Sustainable Transportation	Explore & employ bid language to include recycled roadway material	DOT, Purchasing	2016	Quantity of roadway material recycled; number of RFPs w/ bid language
	Continue incorporation of adaptive signal controls	DOT	2020	Decrease in vehicle delay times and related gas/GHG emissions metrics
	Track and report PASSAGE tool usage as a behavior change mechanism	DOT, CPM	2015-20	Increase in number of app users and PASSAGE website visitors
	Reconvene Vehicle Standards Committee to research green fleets policy & program	DOT, Purchasing, Sustainability	2015	Vehicle Standards Committee reconvened; recommendations presented
	Research shared use & employee commute programs; recommendations	DOT, Sustainability	2015	At least 15% of County employee travel conducted via alternative transportation or telecommuting
	Track and report County fleet use of alternative fuels	Fleet Management	2015-20	Reduced department fuel usage by 15% and reduced GHG emissions by 5%/year

Plan Goal	**Action Item**	**Department(s)**	**Target Year**	**Measures of Success**
	Continue research into benefits of alternative fuels for County fleets	DOT, Sustainability	2017	Analysis completed and recommendations presented

Next Steps

The Strategy for a Sustainable Lake County is intended to be an adaptive plan that will be responsive to new ideas, strategies, technologies, partnerships and available resources. The goal is that each year's review and adaptation of the plan will help Lake County achieve its goal of Protecting Our Environment. Major updates to the plan will occur every five years, led by the Sustainability Coordinator. The Sustainability Action Team will provide bi-yearly updates on progress to the Lake County Board.

To obtain additional information on Lake County's sustainability initiatives:

http://www.lakecountyil.gov/green