



CITY OF
ASHEVILLE

SUSTAINABILITY
MANAGEMENT
PLAN

Executive Summary



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Helping to Preserve the City of Asheville for Future Generations



EXECUTIVE

The City of Asheville's Sustainability Management Plan (Plan) emerged from ambitious City goals and initiatives to take a leadership role in both the community and the nation to address important issues of resource conservation and climate protection. The Plan allows the City to address the "call to action" regarding sustainable government operation and community development by providing an integrated approach for resource management and addressing the full spectrum of local government services, including transportation, buildings, public facilities, street lighting, water, solid waste, and land use planning. The Plan focuses on energy and greenhouse gas



SUMMARY

emission reduction solutions, best practices, and institutional/policy recommendations to improve sustainable government operations. The outcome of the Plan is a consensus-based set of sustainability goals, a comprehensive list of action items, and an implementation plan for moving forward. Provided herein is an executive summary of the Plan, for which the full document can be downloaded at <http://www.ashevillenc.gov/green>



FOCUS ON CLIMATE CHANGE



One indicator used to measure sustainability is the level of greenhouse gas (GHG) emissions. Greenhouse gases, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆), are emitted by natural and human sources and trap the sun's heat in the atmosphere, similar to a greenhouse. There is consensus among the scientific community that GHG emissions are increasing dramatically and are affecting temperature and precipitation patterns globally. Climate change has multiple and far-reaching environmental, economic, and social effects.

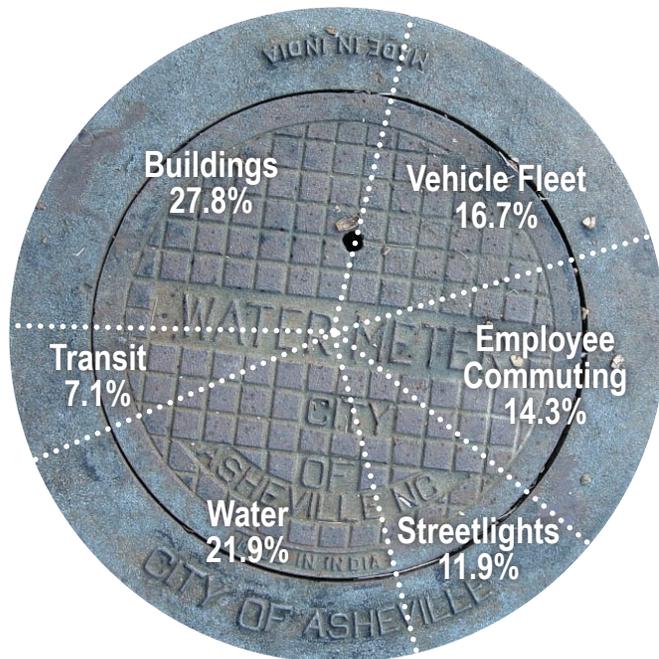
The U.S. Environmental Protection Agency (EPA) projects that the effects of climate change on the state of North Carolina could include increased temperatures in all seasons, impacts to water supply and water quality, increased incidence of flash flood events, and the loss of plant and animal species that have adapted to the State's historical climate. Accordingly, the City has taken a proactive approach to reducing emissions from City operations.

In April 2007, Asheville City Council passed a resolution committing the City to an 80 percent reduction in GHG emissions by 2050 at a rate of 2 percent each year. This presents an ambitious goal in keeping with the City's desire to be a model of sustainable operations. Asheville's commitment to this reduction goal was the principle impetus for this Plan. Because GHG emissions are, in part, the result of fossil fuel combustion, the link between energy consumption and GHG emissions in City operations is apparent. This includes electricity, natural gas, gasoline, diesel and biodiesel used in streetlights, buildings, parks, water treatment and pumping, fleet vehicles, transit buses, and employee commuting vehicles. A GHG inventory was conducted in 2001, establishing a baseline year from which reduction efforts could be measured, and were reassessed in FY 2007.





FY07 GHG Emissions from City Operations



Distribution of the City's GHG emissions

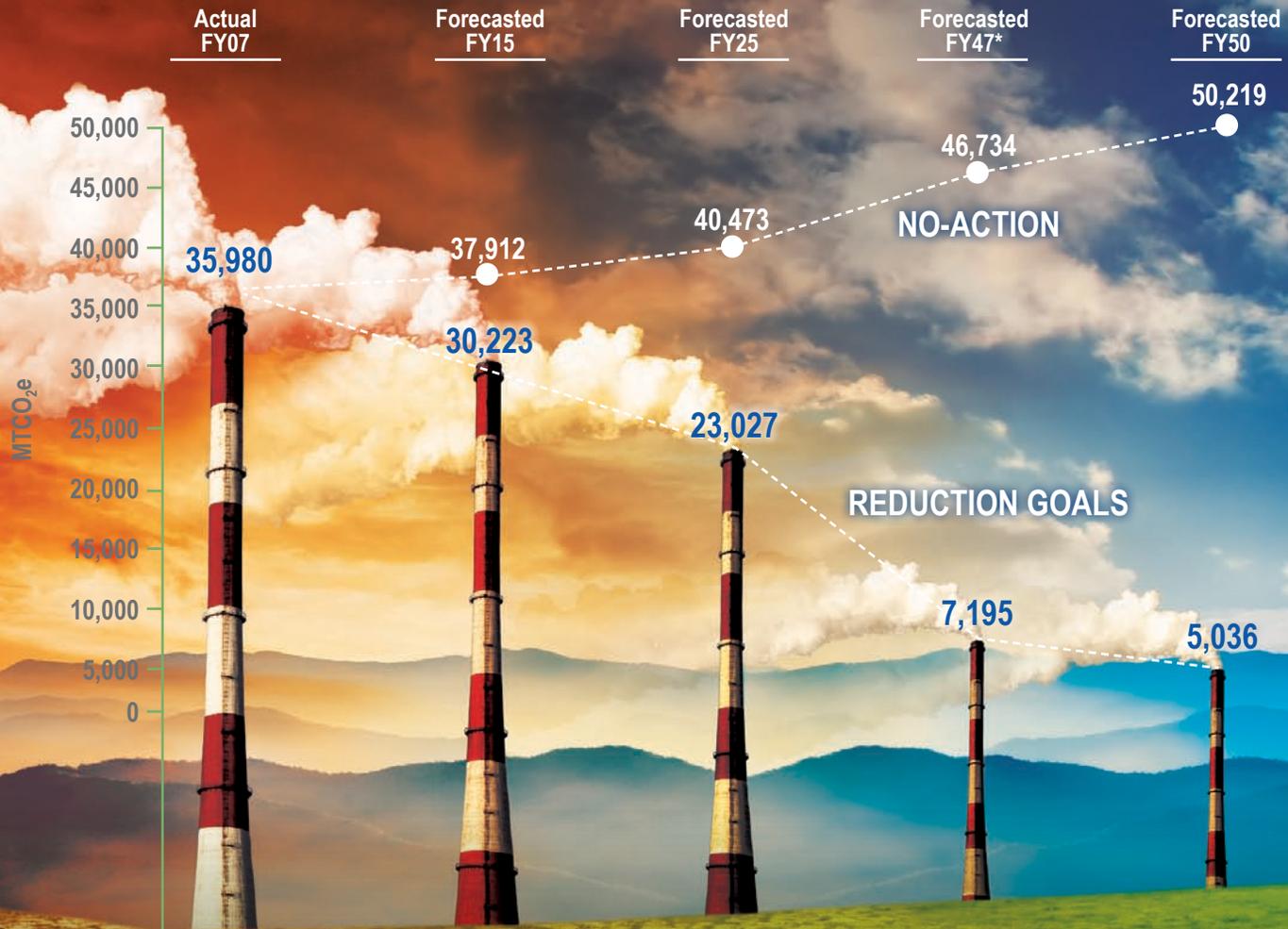
Summary of Current GHG Emissions

GHG emissions from City operations in FY 2008 were 36,216 metric tons of carbon dioxide equivalents (MTCO_{2e}), which is similar to the energy needed to power 3,295 homes or to run 6,633 passenger vehicles for one year.

The breakdown in emissions shows that City buildings are the largest single emitter, followed by water systems, vehicle fleet, employee commuting, street lighting, and the Asheville transit system.

“Reduction Goals” GHG Emissions

(2% Annual decrease from FY07)



Forecasted emissions based on achievement of the reduction goals

*FY47 is the year the 80% reduction target should be met

GHG Emission Forecast

The emission forecast compares the City’s current GHG emission growth rates with the 2 percent annual reduction goal. The difference between the two scenarios shows the gap in reductions as the annual reduction of 719.60 MTCO₂e leads to the 80 percent reduction in 2047. Accordingly, by 2050, GHG emissions in the City would decrease from 35,980 MTCO₂e to 5,036 MTCO₂e – a decrease of 86 percent.



City of Asheville's SUSTAINABILITY VISION & GUIDING PRINCIPLES

A consensus-based definition of sustainability and key sustainability principles provide the underlying foundation for the Plan and constitute a vision for Asheville's future. For Asheville, being sustainable means:

“Making decisions that balance the values of environmental stewardship, social responsibility and economic vitality to meet our present needs without compromising the ability of future generations to meet their needs.”

Accordingly, the City of Asheville strives toward sustainability in business strategy, policies and operations, and aims to demonstrate leadership to the community by the following guiding principles:

- Engaging and educating our employees and community about the challenges climate change presents, as well as driving a collaborative process to implement innovative solutions.
- Promoting inter-departmental collaboration for short- and long-term solutions to enhance the City's organizational excellence and financial efficiency.
- Modeling responsible energy management through efforts in energy efficiency and renewable energy generation.
- Addressing climate change through strategic management of our City facilities, transportation resources, water supply, infrastructure, land use planning, and solid waste.
- Supporting continued development of a diverse regional green economy.
- Measuring, monitoring and communicating the City's progress toward a defined goal set.

Focus Areas & Sustainability Goals

Every major sector of Asheville's City government has a role in advancing the sustainability vision. This vision will be realized when departments and individuals use these guiding principles to influence their actions. To build upon the vision, focus areas for improvement and strategic actionable goals were developed by the Office of Sustainability, the Sustainability Advisory Committee for Energy and the Environment, and Department Directors. These focus areas and strategic goals cut across the City's organizational structure and require interdepartmental and intergovernmental coordination.



Focus Area	Goal
Management Practices	Incorporate sustainability into the City's decision-making process
	Provide adequate resources for the implementation of sustainability programs
	Increase the City's use of environmentally preferable products & services
Employee Education	Incorporate sustainability into City communication & outreach efforts
	Increase voluntary employee energy conservation efforts through education
Greenhouse Gas Emissions	Participate in the City's energy management strategy to reduce greenhouse gas emissions
Land Use	Develop & redesign land use policies to support regional sustainable growth
	Support and redesign development projects, patterns, & building practices
Facilities	Reduce energy consumption from City facilities through demand reduction and energy efficiency
	Increase renewable energy use of City operations
	Support the Resolution for LEED® certification for new City building
Transportation	Reduce vehicle miles traveled by City employees for commuting
	Reduce total fuel consumption of City fleet vehicles
	Increase transit ridership
	Establish a long term funding strategy for public transportation
	Support the reduction of vehicle miles traveled by City residents and visitors
Water	Continue to provide clean drinking water
	Reduce water consumption by City facilities
	Reduce energy use associated with treatment and distribution
	Increase renewable energy use for water production and distribution
	Support responsible consumption of water by residents and visitors
Solid Waste	Reduce solid waste disposed at landfills from City facilities
	Increase our role as state leaders in sanitation and recycling

SUMMARY OF THE PLAN

The Plan is intended to advance the City toward meeting the overarching GHG reduction goal. The Plan is aligned with the sustainable vision and guiding principles, and utilizes the identified focus areas and goals to structure the assessment of current progress and the identification of opportunities for improvement. The Plan is organized in four sections:

Section 1: INTRODUCTION – Identifying the City’s definition and vision of sustainability is a critical first step and establishes a foundation upon which all sustainability initiatives are based. The approach for managing sustainability activities in the short- and long-term timeframes is also an important first step, and is discussed in detail. The focus areas of the Plan are introduced and sustainability goals are presented.

Section 2: ASSESSMENT – The City of Asheville recognizes that, in order to determine future sustainability actions, a comprehensive understanding of the City’s current status is needed. In response, a thorough assessment of the current conditions, programs and important contextual factors was conducted. The assessment, which is aligned with the focus areas, serves as the basis for recommendations in Sections 3 and 4.

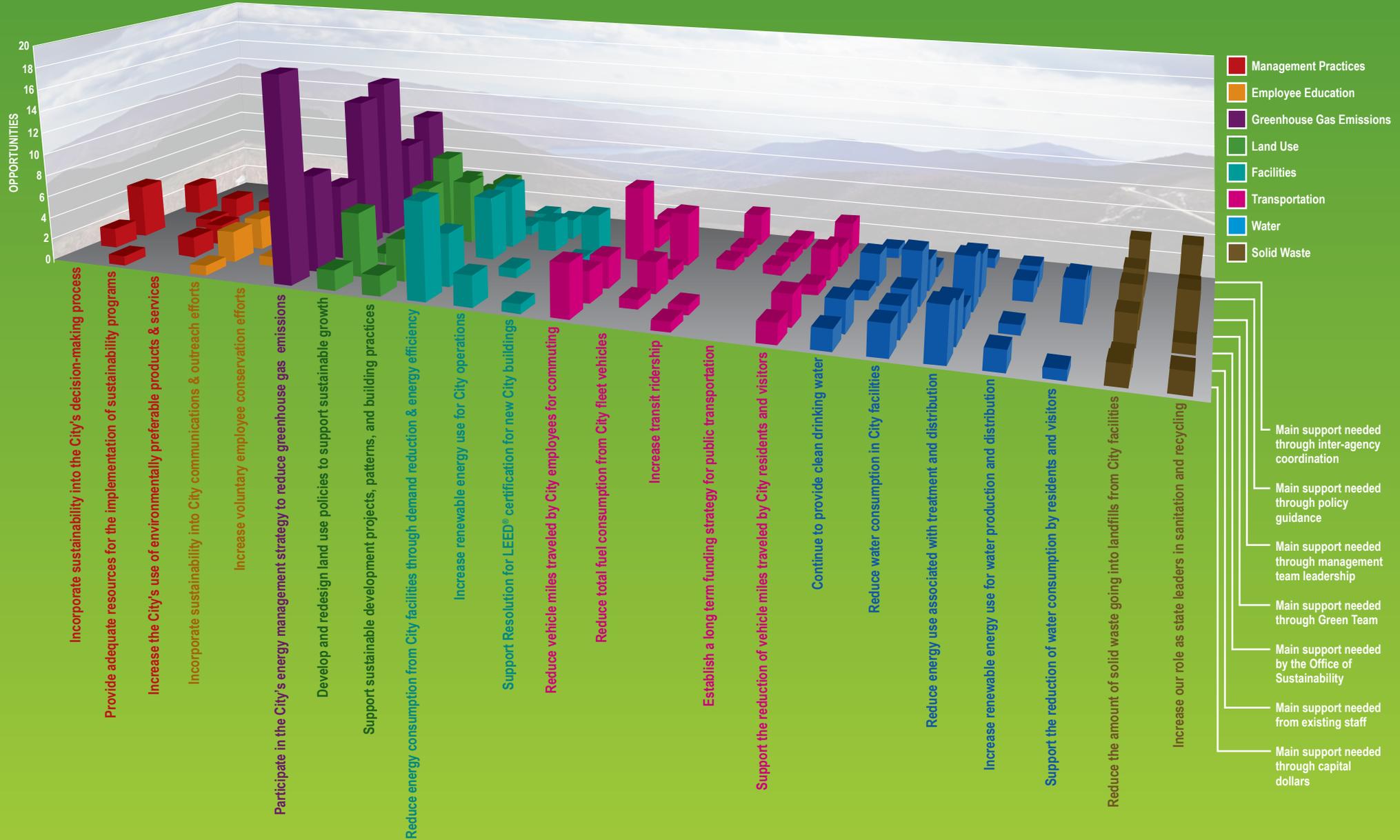
Section 3: OPPORTUNITIES – Guided by the sustainability vision, goals and current status assessment, recommendations for further action are presented for each focus area. Recommendations reflect technical analysis, industry best practices, facilitated discussions with key stakeholders, and emerging and innovative methods, all of which are tailored to address the goals and targets identified at the outset.

Section 4: NEXT STEPS – The opportunities identified in Section 3 are organized, aligned with the strategic goals, and ranked according to a variety of criteria. As a result, a list of prioritized action items that will lead to the achievement of Asheville’s sustainability goals is generated and will be used for future planning activities by the Office of Sustainability. In addition, an implementation plan that includes the establishment of metrics, targets and monitoring plans for the sustainability goals is presented.

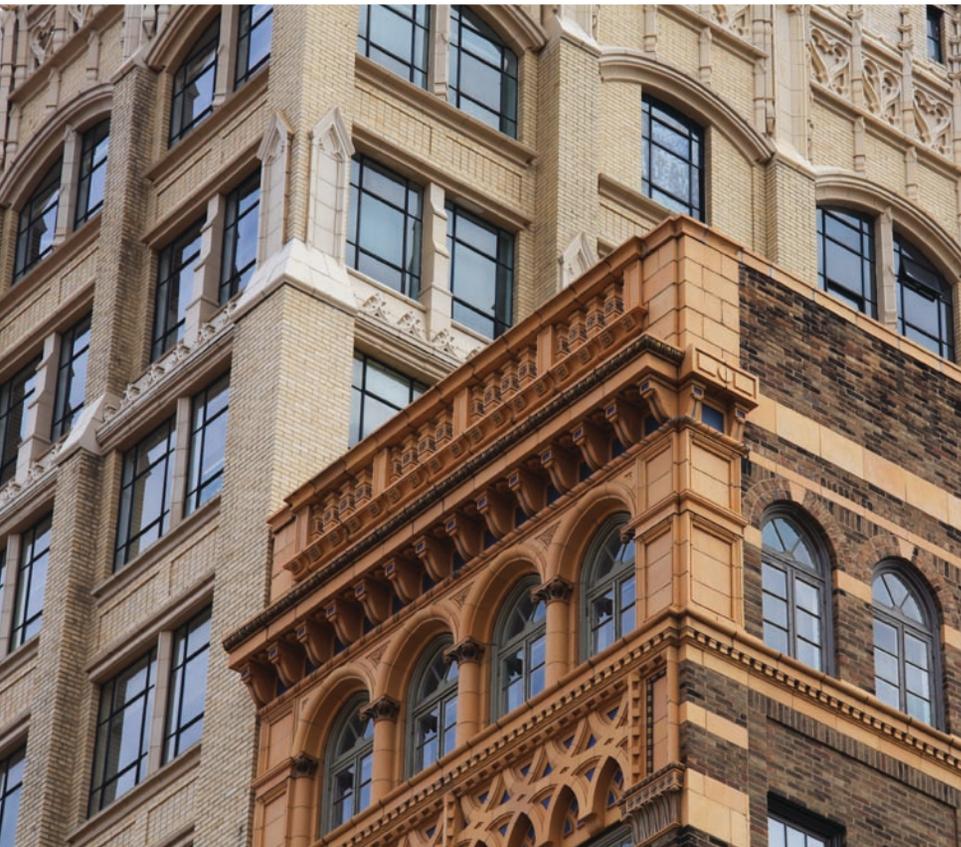


Opportunities for a More Sustainable Future

A total of 107 recommended actions are identified in all of the focus areas, representing a range of next steps for the City to take in the areas of buildings, transportation, water systems, solid waste, land use, and education to address the associated goals. The 107 action items consist of emission reduction strategies, best practices, and institutional/policy recommendations, appropriate for implementation at all levels of City government. The following graphic shows the distribution of these opportunities, organized by goal and organizational leadership category.



IMPLEMENTING THE PLAN



For implementation to be successful, mechanisms for prioritizing the recommended actions are needed, and a structure for organizing the responsible entities should be identified. Opportunities, however, will “ripen” at different rates and for different reasons. Accordingly, the Plan provides a flexible approach for implementation and recognizes that opportunity is based on a variety of logistical, financial, technical, and other variables that change over time.

Ranking Criteria for Opportunities

To help organize the opportunities, the Plan contains a dynamic ranking system that prioritizes all the recommendations according to various factors. A rating protocol was applied that generated a score for each action item based on the following criteria:

- Existence of current program or activity
- Environmental benefit
- Economic benefit
- Social benefit
- Financial incentive
- Personnel availability and capacity
- Technical feasibility
- Stakeholder concerns
- Regulatory requirement
- Contribution to established goals
- Timeframe to realize benefits

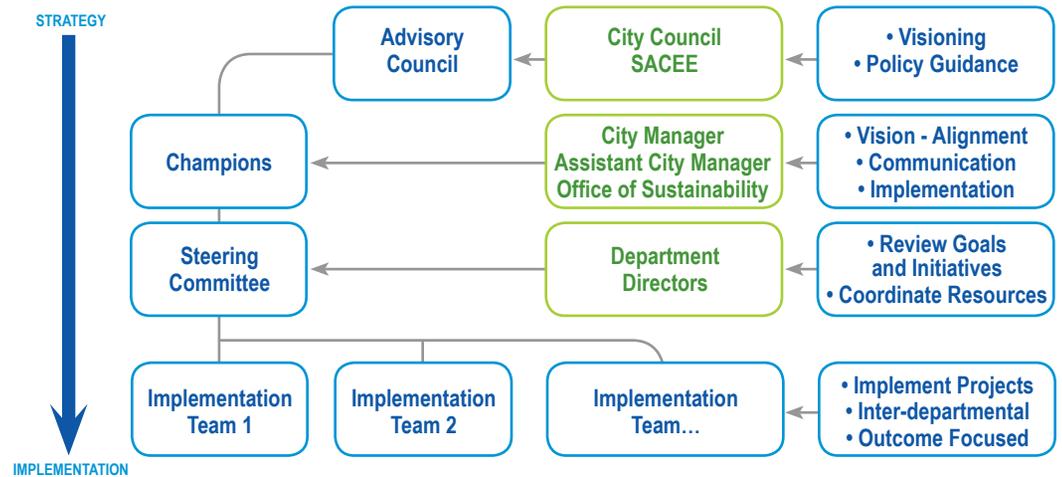
To select future actions and initiatives, users of the Plan can sort the opportunities by any of the above criteria, or by a series of ranking or organizing parameters, including:

- A composite ranking score representing the combined criteria listed above.
- A “triple bottom line score,” which highlights how well each opportunity balances the environmental, economic, and social benefits.
- A qualitative ranking, listing opportunities as high, medium, and low priority, which is informed by the previous two quantitative scores.
- The opportunities were matched with the goal set, to allow sorting by individual goals.
- Opportunities were grouped by implementation categories representing the City’s organizational leadership, to help individuals in the organization identify how they contribute to implementing solutions.



Organizational Structure for Implementation

Implementing the diverse opportunities identified in the plan requires leadership and engagement from multiple levels of management and staff from all components of City government. Implementation requires an organizational structure, with specific roles, responsibilities and accountabilities defined for each level in the organization. The Plan identifies a protocol that can be utilized to develop implementation teams with defined roles to implement each action or group of actions, and further provides templates for developing action plans, identifying metrics and developing targets, and monitoring and measuring progress.



Organizational structure for implementing the City of Asheville's sustainability program

CONTINUED IMPROVEMENT TOWARD A SUSTAINABLE ASHEVILLE

Approaching sustainability in a coordinated and organized manner is important to Asheville's success. As such, the City of Asheville employs a "sustainability performance management system" to guide the City's efforts. The management system approach presented in the Plan encourages a continual reassessment of goals and emphasizes consistent monitoring of performance and communication of results to create a feedback loop for continual improvement of sustainability performance. As a product and representation of the management system for the City's sustainability program, the Plan is intended to be a continuously evolving document. This Plan can and should be a catalyst for continuous evolution toward a more sustainable, resilient Asheville.

8 Monitor Performance

9 Communicate Progress

1 Establish Vision and Strategic Goals

2 Conduct Assessment

3 Identify & Rank Opportunities

4 Refine Goals

5 Select Actions & Set Targets

6 Develop Action & Monitoring Plans

7 Implement Initiatives

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