Livable Nashua

Working Together for a Resilient Future

April 2024

Prepared by Kim Lundgren Associates, Inc.

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ACKNOWLEDGEMENTS

Brought to you under the leadership of Mayor Jim Donchess and the Board of Alderman.
Prepared for the City of Nashua by Kim Lundgren Associates, Inc.

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Customized Solutions for the Community You Want

Livable Nashua would not have been possible without the time, effort, and dedication from a wide range of individuals and groups. Thank you to all City leadership, staff, and community partners who participated throughout the planning process.

CLIMATE ACTION ADVISORY GROUP

Administrative Services Division
Building Safety Department
Community Development Division
Environmental Health Department
Economic Development Division
Fire Rescue
Mayor's Office
Nashua School District
Nashua Transit System
Planning Department
Police Department
Public Health & Community Services Division
Public Works Division

CONSERVATION COMMISSION

ENVIRONMENT AND ENERGY COMMITTEE

SUSTAINABILITY DEPARTMENT

OFFICE OF EMERGENCY MANAGEMENT

WORKING TOGETHER FOR A RESILIENT FUTURE

Ensuring the health of our local environment and the safety of our community is not new in Nashua. For years, we have been steadily working to maintain our city's beautiful natural features while enhancing the quality of the air we breathe and the water we drink. That is what *Livable Nashua* is: the City's commitment to ensuring that our community's future is **LIVABLE**, **RESILIENT**, and **SUSTAINABLE** for everyone.

As laid out in the *Imagine Nashua Master Plan*, ensuring a high quality of life for our residents is a top priority for our community. We are already facing more frequent and intense weather events, flooding, heat waves, and winter storms due to climate change. With *Livable Nashua*, the City's first sustainability master plan, we will meet these challenges head-on by working with residents to build up their resilience while reducing the City's impact on our environment.

Livable Nashua provides an actionable roadmap for municipal staff that will help us realize the vision we imagined in our Master Plan. The goals, strategies, and actions in this plan are organized into five focus areas.

CLEAN ENERGY & EFFICIENT BUILDINGS

RESILIENT & HEALTHY COMMUNITY

SMART WASTE & WATER MANAGEMENT

SUSTAINABLE TRANSPORTATION & LAND USE

THRIVING NATURAL RESOURCES

HOW WE ARE TAKING ACTION

Based on previous initiatives, data collection and analysis, input from City staff, and feedback from community members, we know what needs to happen to ensure a sustainable future for Nashua. Our solar and hydroelectric power light up our homes and businesses regularly, and our community power program is connecting even more residents to affordable, renewable options every day. Now we are ready to build on these successes with an experienced approach and a steady hand.

The actions specified in this plan illustrate what the City is aiming to accomplish within the next five years. While we recognize that we may not be able to accomplish all of our goals within this short time frame, the *Livable Nashua Plan* was created to align with long-range planning efforts like the *Imagine Nashua Master Plan* and lay the groundwork for long-term, consistent action on climate change.

When it is time to implement the actions laid out in this plan, our approach and methods will be guided by the core values of our community. Four Guiding Principles were selected to shape the planning process and establish priorities for implementing *Livable Nashua*. These principles will help ensure that we create a resilient community where everyone can thrive, where the City is a responsible steward of resources, and where existing inequities are addressed while we strive for a more equitable community.

Now, it's time to get to work.

GUIDING PRINCIPLES

GREENHOUSE GAS (GHG) EMISSIONS REDUCTIONS

SOCIAL EQUITY

COMMUNITY ENVIRONMENTAL, SOCIAL, & ECONOMIC RESILIENCE

STEWARDSHIP OF NATURAL, SOCIAL, & FINANCIAL RESOURCES

"I am proud that the City of Nashua is leading the way to a more resilient and sustainable future. With *Livable Nashua*, our first sustainability master plan, we will work to ensure that the City's operations and services are efficient and support a safe and healthy environment for everyone. This plan reflects input and ideas from both City staff and community members, and its guiding principles and goals reaffirm the City's commitment to creating a more equitable and resilient community for everyone, especially in the face of challenges like climate change. I hope that you will join me in supporting the *Livable Nashua Plan*."

- MAYOR JIM DONCHESS

HOW CLIMATE CHANGE IMPACTS NASHUA

In recent years, the impacts of climate change have become more apparent than ever in our community. As global temperatures rise, Nashua will continue to experience various climate hazards including **intense storms, heat waves,** and **localized flooding.**

These hazards have far-reaching consequences such as public health impacts, costly infrastructure damage, and habitat loss. In fact, heat-related illness has been identified as the primary climate-related health impact in our region, particularly for low-income populations, older adults, youth, and historically marginalized groups.[1] Considering these challenges, it is imperative that we work collaboratively to safeguard our community for current and future generations.

INTENSE STORMS

43.65"

Average amount of precipitation per year from 1961-1990.[3]

48.29"

Expected amount of precipitation per year by 2050 – a 10.6% increase.[4]

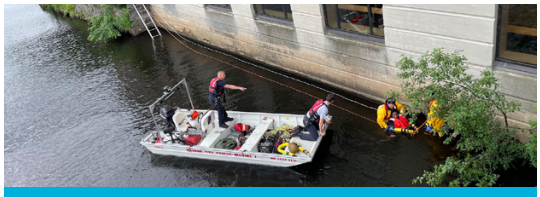
HEAT WAVES

3.4 DAYS

Average days per year with a maximum temperature above 90 degrees from 1961-1990.[5]

29.3 DAYS

Expected average days per year with a maximum temperature above 90 degrees by 2050.[6]



LOCALIZED FLOODING

4,603
housing units

located within a FEMA designated flood hazard area in 2011.[7]

14,028
properties

have more than a 26% chance of being severely affected by flooding over the next 30 years. This represents 14% of all properties in Hillsborough County.[8]

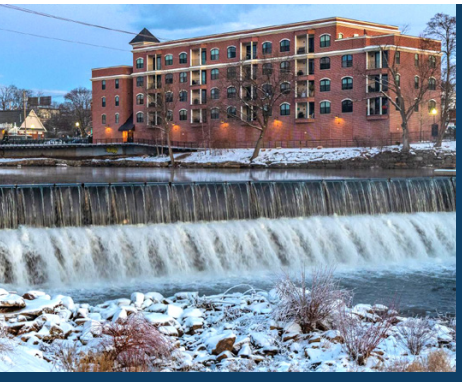
IMPACTS TO OUR COMMUNITY

- Downed trees
- Power outages
- Property damage

- Higher energy demand
- Increased risk of heat-related illness and vector-borne disease

- Damage to critical facilities, infrastructure, homes, and businesses
- Diminished water quality

*Days when precipitation is less than 0.01 inches.



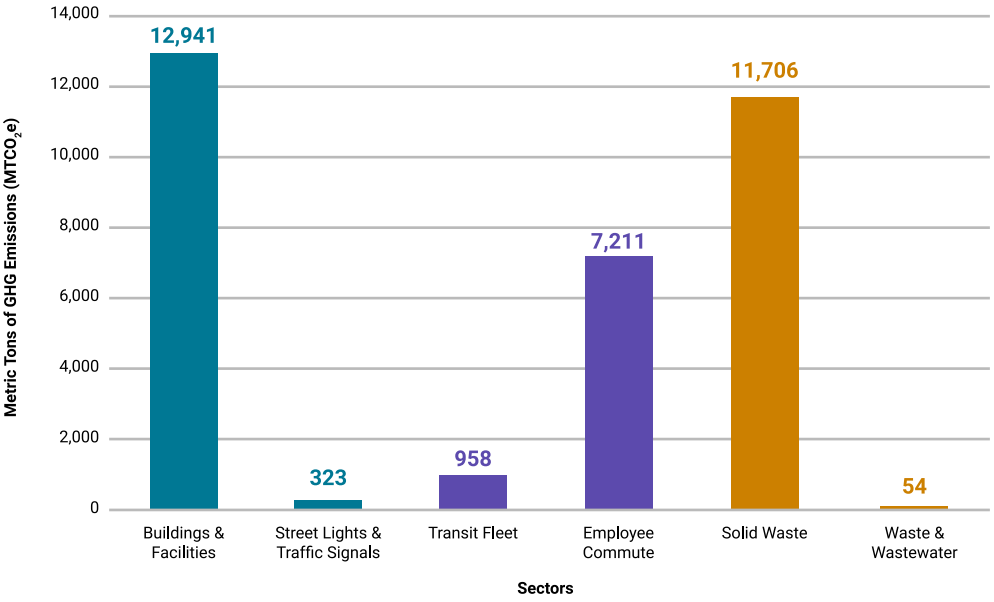
LESS SNOW, LESS HYDROPOWER SUPPLY?

Snow cover is significantly declining in the Northeast due to climate change. It is projected that by 2100, 59% of northeastern North America will not accumulate any snow.[2] A lack of snow and snowmelt can pose significant challenges for ecosystems and water supplies. It could also have an impact on Nashua's clean energy supply. Less snowfall in the Nashua River watershed would mean less snowmelt flowing into streams and the river. This could disrupt the generation of hydropower along the Nashua River at Jackson Mills and Mine Falls.

HOW NASHUA CONTRIBUTES TO CLIMATE CHANGE

Like other communities, Nashua is not only being impacted by climate change, but is also directly contributing to its causes. Greenhouse gas (GHG) emissions are produced when fossil fuels like oil and natural gas are burned to heat our buildings and power our vehicles, and when we send waste to the landfill. To reduce these emissions, the City government aims to lead by example, showing the community how reductions are possible by first targeting the sources that the City has direct influence over.

MUNICIPAL GHG EMISSIONS BY SECTOR (2022)[10]



DID YOU KNOW?

In addition to the transit fleet, the City's other fleet vehicles generate a significant amount of GHG emissions. In 2016, fleet vehicles generated 3,746 metric tons of GHG emissions. While 2022 calculations are not yet available, the City is working to release a complete inventory later this year.[11]

To identify sources of municipal emissions, the City conducted an inventory of the GHG emissions generated from City-owned buildings, vehicles, equipment, and other activities. Buildings and facilities (which include public schools) are Nashua's largest source of municipal emissions. Close behind is solid waste due to the Four Hills Landfill, which is owned and operated by the City but also takes waste generated from communities throughout the region. Transportation, including emissions generated by employees commuting to and from work and the transit fleet, is the third largest source.

These areas of opportunity formed the basis for many of the high-impact strategies in this plan, such as investing in renewable energy, electrifying buildings and vehicles, encouraging alternative modes of transportation, and diverting waste from the landfill. While Nashua's municipal emissions are only a small portion of the community's total emissions, the same opportunities exist across our entire community for electrifying homes, businesses, personal vehicles, and reducing the amount of waste that we produce. The faster and more aggressively the City and all community members can take action, the better we can help slow climate change to a manageable pace.

In 2022, the City generated 33,193 metric tons of GHG emissions (excluding municipal fleet vehicles). While that is roughly equivalent to the annual emissions generated by 7,000 passenger vehicles, emissions from Nashua's municipal operations represent only a small fraction (likely 2-4%) of the entire community's emissions.[9]

ENGAGING STAFF AND THE COMMUNITY

Livable Nashua is a joint effort across City departments, stakeholder organizations, and residents. Involving City staff and the broader community was crucial to developing the *Livable Nashua Plan* to understand and incorporate their diverse priorities, concerns, and ideas for how the City can lead on climate action.

24 CITY STAFF MEMBERS

representing a variety of departments formed a *Livable Nashua* Advisory Group. The members discussed climate leadership in Nashua, identified potential opportunities and barriers to action, and shaped the plan's goals, strategies, and actions.

27 HIGH SCHOOL STUDENTS

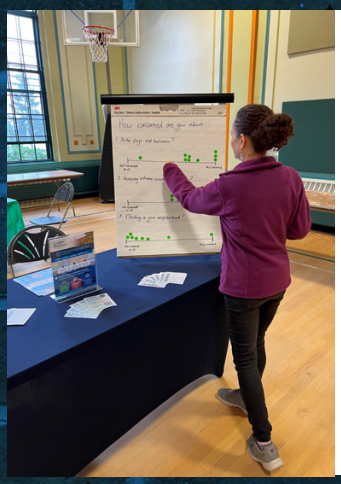
from Nashua High School North and South participated in focus groups where they expressed their climate hopes and fears for the future, envisioned a climate-ready Nashua, and shared how they would tackle climate change as mayor.

47 MEMBERS OF THE LATINO COMMUNITY

representing a wide variety of national origins participated in a focus group through Centro Latino. Attendees expressed a strong interest in sustainability and identified a greater need for Spanish-language education and resources to help their community effectively take action, including financial and renter-specific resources.

19 MEMBERS

of the Conservation Commission and Environment & Energy Committee contributed their ideas and expertise to the development of the *Livable Nashua Plan*, providing feedback on the goals, strategies, and actions and articulating their desire for the City to take bolder action on sustainability—particularly in the areas of energy and transportation.



280 COMMUNITY MEMBERS

participated in *Livable Nashua* activities at community events. Community Resource Fair attendees, mostly recent immigrants, expressed concerns about extreme heat and a lack of air conditioning. Young families at Holiday Stroll would like to see more public education about sustainability. And residents at the Senior Center and YMCA expressed their support for sustainability initiatives while learning about free transit options through the Nashua Transit System.

368 CITY STAFF AND COMMUNITY MEMBERS

responded to the *Livable Nashua* community survey. Respondents indicated their willingness to change their behavior to reduce their environmental impact, prepare for extreme weather events, and the types of resources that the City could provide to help them electrify their homes, transition to EVs, and more.

"We need more EV charging stations."

"I would love to see more City support for native landscaping."

"We should have more programs to put solar panels on City-owned properties to help boost solar power for the city."

CLEAN ENERGY & EFFICIENT BUILDINGS

Our vision: Nashua utilizes energy efficiently, invests in resilient and high-performing buildings, and ultimately runs on 100% renewable energy.

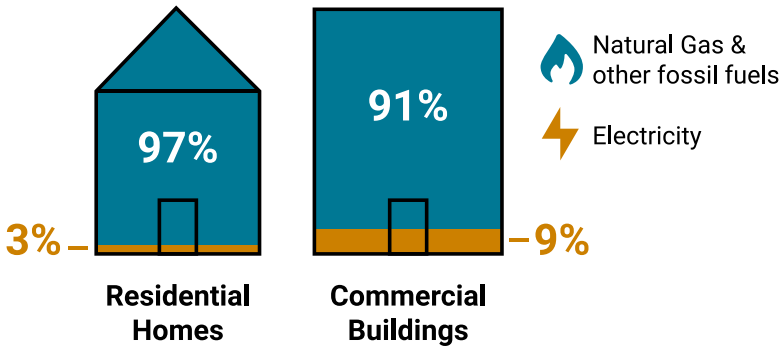
WHAT'S INCLUDED

- Electrification
- Energy efficiency and resilience
- Municipal energy use
- Renewable energy transition
- Rooftop solar

TRACKING PROGRESS

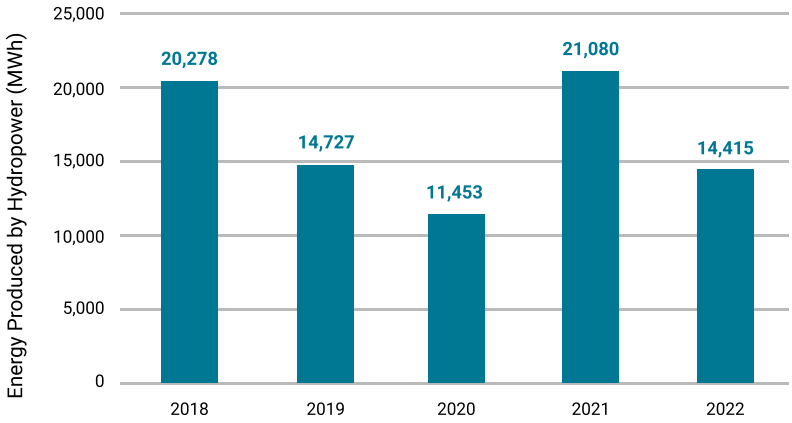
Nashua will track progress on the *Livable Nashua Plan* by monitoring the following metrics and trends.

HEATING FUELS USED IN NASHUA BUILDINGS[12]



A typical single-family household in Nashua heated with gas will create about 182 metric tons of GHG emissions by 2050. If that same household was fully weatherized and running on a heat pump, however, those emissions drop to 30 metric tons.[13] Every year that a homeowner delays action is a lost opportunity to significantly reduce emissions by electrifying their heating systems and installing high-efficiency heat pumps. Electric HVAC systems are also more energy efficient, can reduce costs, and improve indoor air quality.

HYDROPOWER PRODUCTION IN NASHUA[14]



The energy used to power homes and businesses comes from different sources. While some of those sources, like oil and natural gas, pollute our environment and are in limited supply, Nashua's two hydropower dams – Jackson Mills and Mine Falls – generate clean, renewable energy that is readily available to our community. In 2022, these dams generated 14,415 MWh of electricity, enough to power more than 1,300 homes.[15]

BE PART OF THE SOLUTION

Lower your energy costs and improve your energy efficiency by taking advantage of rebates and incentives offered by NH Saves to homeowners, renters, businesses, and contractors.

LEARN MORE

GOALS, STRATEGIES, AND ACTIONS

The *Livable Nashua* planning process identified the following goals, strategies, and actions for Clean Energy & Efficient Buildings.

	Implementation Timeframe
GOAL 1 Buildings in Nashua are designed, constructed, and maintained to be energy efficient and minimize GHG emissions.	
STRATEGY 1.1 Support electrification and energy efficiency retrofits for new and existing residential and commercial buildings.	
EB 1.1.A Pursue a variety of finance mechanisms to develop a "one-stop shop" model for whole-home retrofits for affordability, resilience, and health.	**Medium**
EB 1.1.B Launch a residential and commercial energy coaching program.	**Short**
EB 1.1.C* Create incentives to encourage the development of renewable energy systems and high-performing buildings by updating the Land Use Code to permit density bonuses or similar incentives.	**Short**
STRATEGY 1.2 Decarbonize municipal buildings and pursue whole-building energy efficiency.	
EB 1.2.A Develop a municipal facilities improvement roadmap that prioritizes electric, high-efficiency buildings.	**Short**
EB 1.2.B Strengthen City procurement policies to require purchase of energy efficient appliances and technologies at time of replacement.	**Short**
EB 1.2.C Designate Nashua's existing Energy Fund as a resource for financing municipal decarbonization retrofits, supported by electric vehicle charging revenue, energy efficiency rebates, grants, etc.	**Short**
GOAL 2 Nashua generates energy that is local and renewable and supports resilient energy infrastructure.	
STRATEGY 2.1 Generate more local and renewable energy.	
EB 2.1.A Advocate to the State to improve the enabling statutes for local renewable energy development.	**Short**
EB 2.1.B Prioritize solar installations and battery storage on City-owned parking lots and garages, particularly during renovations and reconstruction projects, where feasible.	**Short**
EB 2.1.C* Update Land Use Code to permit rooftop solar energy systems by-right in certain zoning districts and explore requirements for rooftop solar readiness as part of the site plan review process.	**Short**
EB 2.1.D Increase the Community Power Program's reserve funds to invest in local renewable energy projects.	**Medium**
EB 2.1.E Launch Nashua Solarize 2.0, a campaign to encourage community members to install solar, and a battery bulk-purchasing campaign to increase affordability of battery systems.	**Short**
STRATEGY 2.2 Enhance energy resilience and expand capacity for renewable energy.	
EB 2.2.A Install a series of microgrids at critical municipal facilities throughout the city.	**Long**
EB 2.2.B Coordinate with utilities and peer cities to advocate for grid updates to support increased electrification.	**Medium**

*Relates to the City's forthcoming Land Use Code Update.

Implementation Timeframes:
Short (1-3 years), **Medium** (3-5 years), **Long** (5+ years)

RESILIENT & HEALTHY COMMUNITY

Our vision: Our community is prepared for climate impacts through emergency preparedness, strengthened social systems, and accessible resources.

WHAT'S INCLUDED

- Attainable and resilient housing
- Community outreach and education
- Emergency preparedness and communications
- Health and safety

TRACKING PROGRESS

Nashua will track progress on the *Livable Nashua Plan* by monitoring the following metrics and trends.

HUMAN HEALTH AND PROPERTY RISKS

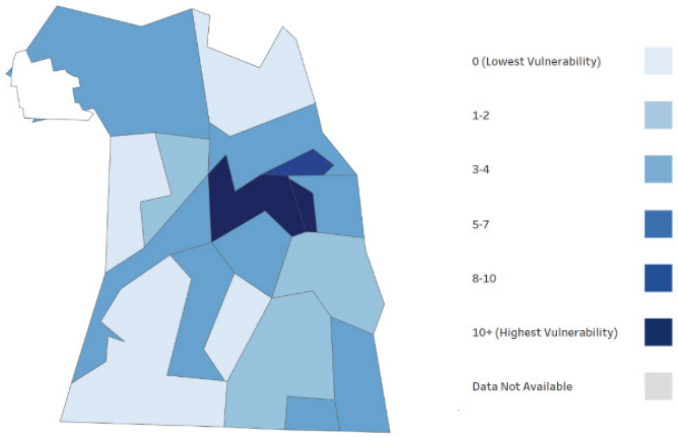
12%
of residential properties face flood risk.[16]

26%
of critical infrastructure faces flood risk.[18]

334
heat-related emergency room visits annually at a heat index of 90 degrees F.[19]

While these statistics reflect the current reality, Nashua is committed to implementing comprehensive measures aimed at reducing these numbers over time. The City is actively working towards implementing heat and flood resilience strategies to ensure a safer and healthier environment for our community.

SOCIAL VULNERABILITY IN NASHUA[17]



The Social Vulnerability Index (SVI) summarizes a variety of social, economic, and demographic factors that contribute to a community's resilience such as poverty, language, transportation access, and type of housing. Higher SVI scores indicate higher vulnerability, signaling a need for increased attention and support for disaster preparedness, response, and recovery efforts. This map illustrates that there is a range of social vulnerability in Nashua, with an area of high SVI concentrated downtown. This area has an SVI of 11, the highest level of vulnerability, indicating these neighborhoods should be prioritized for resilience upgrades.

BE PART OF THE SOLUTION

Follow our step-by-step, self-guided suite of resources in the Resilient Nashua Toolkit to create a resilience plan for you and your family.

BE PREPARED

GOALS, STRATEGIES, AND ACTIONS

The *Livable Nashua* planning process identified the following goals, strategies, and actions for Resilient & Healthy Community.

	Implementation Timeframe
GOAL 1 The Nashua community is prepared to recover quickly from short-term shocks and long-term stressors.	
STRATEGY 1.1 Provide residents with resources and information to be better prepared for climate change and its accompanying health impacts.	
RH 1.1.A Host educational climate preparedness workshops and trainings for a variety of community members, including renters and business owners.	**Short**
RH 1.1.B Create and promote a centralized multi-language online resource hub with resources on emergency preparedness, climate-ready homes, public health, etc.	**Short**
RH 1.1.C Establish resilience hubs through the Greater Nashua VOAD to support residents and coordinate resource distribution and services before, during, or after natural hazard events.	**Medium**
RH 1.1.D Partner with local and regional health facilities to create a process for collecting and analyzing all climate-related emergency data (illness/death from flooding, heat, poor air quality, etc.).	**Short**
RH 1.1.E Launch a local air quality monitoring network to provide residents with local air quality information that supplements state-level data.	**Short**
RH 1.1.F Conduct an outreach campaign targeting residents and businesses to improve understanding of flood risk, including flood insurance information, flood prevention measures, information for prospective buyers on flood risk, etc.	**Short**
STRATEGY 1.2 Enhance infrastructure, natural systems, and communications processes to be resilient to climate impacts.	
RH 1.2.A Leverage existing partnerships with local and regional institutions, nonprofits, and local businesses to formalize emergency communications processes and facilitate funding opportunities.	**Medium**
RH 1.2.B Launch a "cool block" pilot program to install features such as white roofs, lighter pavement, and shade trees in neighborhoods and new developments across the city to reduce the urban heat island effect.	**Medium**
RH 1.2.C Install back-up power (e.g., solar+storage, battery storage) at critical City-owned facilities and develop a generator asset management plan.	**Long**
RH 1.2.D Develop a comprehensive Flood Mitigation Strategy that considers both current flood hazards and future flood risks.	**Short**
GOAL 2 Housing in Nashua is attainable, efficient, and resilient to climate impacts.	
STRATEGY 2.1 Facilitate the creation and maintenance of affordable and climate-ready housing.	
RH 2.1.A Create and maintain an inventory of publicly-owned land and assess its suitability for new affordable housing.	**Medium**
RH 2.1.B Expand staff capacity to oversee the Housing Trust Fund and evaluate housing policy with a focus on long-term housing goals.	**Short**
RH 2.1.C Conduct outreach to low-income residents to encourage them to participate in Nashua's Housing Improvement Program and receive funding for climate-ready home improvements, such as electrification, renewable energy, and energy and water efficiency upgrades.	**Short**

Implementation Timeframes: **Short** (1-3 years), **Medium** (3-5 years), **Long** (5+ years)

SMART WASTE & WATER MANAGEMENT

Our vision: Nashua provides safe, reliable waste and water services while reducing consumption and resource waste.

WHAT'S INCLUDED

- Efficient wastewater systems
- Recycling and reuse
- Municipal water use
- Sustainable procurement
- Waste reduction

TRACKING PROGRESS

Nashua will track progress on the *Livable Nashua Plan* by monitoring the following metrics and trends.

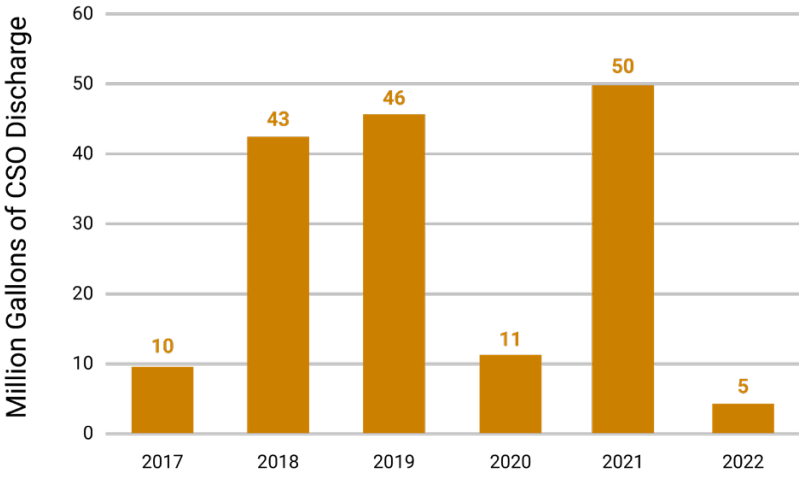
ANNUAL WASTE DISPOSAL AT FOUR HILLS LANDFILL[20]

64,000 METRIC TONS

Average amount of waste disposed at the Four Hills Landfill every year between 2012 - 2021.

While the Four Hills Landfill serves neighboring communities beyond just Nashua, the City and Nashua residents can still influence the amount of waste that is generated and sent to the landfill every year. In 2022, there was a noticeable decline in waste disposal at Four Hills; 56,000 metrics tons were disposed after a steady 10-year average of 64,000 metric tons. Nashua aims to continue that decline through waste reduction and diversion (e.g., recycling, composting, and reuse) programs.

COMBINED SEWER SYSTEM OVERFLOWS[21]



Combined sewer systems are designed to collect rainwater runoff, household sewage, and industrial wastewater all in the same pipe. During periods of heavy rainfall, the amount of wastewater in a combined sewer system can go beyond the amount the system can take, causing overflows of dirty, untreated wastewater into nearby water bodies.

The chart shows how much discharge from combined sewer system overflows (CSO) enters water bodies in Nashua. Reducing overflows is a key strategy in maintaining the quality of Nashua's water.

BE PART OF THE SOLUTION

Visit the City's website to learn more about what materials are recyclable and the City's curbside collection and recycling drop-off options.

KNOW BEFORE YOU THROW

GOALS, STRATEGIES, AND ACTIONS

The *Livable Nashua* planning process identified the following goals, strategies, and actions for Smart Waste & Water Management.

	Implementation Timeframe
GOAL 1 Businesses, households, municipal operations, and individuals minimize waste and consumption of disposable goods.	
STRATEGY 1.1 Reduce waste generated from municipal operations.	
WW 1.1.A Amend the City's procurement policy to include centralized guidelines for purchasing reusable, recycled, and refurbished products and materials.	**Short**
WW 1.1.B Implement a phased paper reduction program that encourages online or digital application processes and document storage where feasible.	**Short**
WW 1.1.C Reduce the use and sale of single-use plastics and polystyrene in municipal facilities, schools, and stadiums, and offer alternatives, such as water bottle refilling stations and reusable products.	**Medium**
WW 1.1.D Create and launch an educational campaign to educate City staff and stakeholders about new initiatives and policies that aim to reduce municipal waste.	**Short**
STRATEGY 1.2 Reduce waste generated by businesses, households, and individuals.	
WW 1.2.A Partner with local organizations to host repair and reuse workshops.	**Medium**
WW 1.2.B Partner with local organizations to launch a campaign to reduce food waste.	**Medium**
GOAL 2 Materials are diverted from the landfill whenever possible.	
STRATEGY 2.1 Explore opportunities to improve and expand infrastructure for managing and diverting waste.	
WW 2.1.A* Update Land Use Code to require new developments to provide space and infrastructure for recycling.	**Short**
GOAL 3 The City consumes water and manages wastewater efficiently and sustainably.	
STRATEGY 3.1 Decrease municipal water consumption and track consumption patterns over time.	
WW 3.1.A When updating City facilities, retrofit existing municipal facilities and adopt standards for water-efficient appliances and faucets for all municipal buildings and schools.	**Short**
WW 3.1.B Track water consumption at the municipal building level and share data publicly to educate staff and encourage conservation.	**Medium**
WW 3.1.C Create standards for maintaining municipal landscaping that reduce outdoor water use through installing rain barrels, drip irrigation, native and drought-tolerant plantings, etc.	**Short**
STRATEGY 3.2 Minimize pollution from wastewater.	
WW 3.2.A Continue to identify areas within the City's combined sewer overflow (CSO) system where separation can be achieved, particularly in those areas where overflows occur.	**Long**
WW 3.2.B Create and disseminate outreach materials to educate community members about Nashua's CSO system and how to minimize fats, oils, and grease (FOG) in sewer lines.	**Short**

*Relates to the City's forthcoming Land Use Code Update.

Implementation Timeframes: **Short** (1-3 years), **Medium** (3-5 years), **Long** (5+ years)

SUSTAINABLE TRANSPORTATION & LAND USE

Our vision: Nashua empowers low-carbon mobility and reduces car dependence with expanded transportation options and smart community planning.

WHAT'S INCLUDED

- Public transit
- Transit-oriented development
- Walking, biking, other active modes of transportation
- Zero-emission vehicles

TRACKING PROGRESS

Nashua will track progress on the *Livable Nashua Plan* by monitoring the following metrics and trends.

ELECTRIC VEHICLE ADOPTION[22]

267%

increase in electric vehicle (EV) registrations in Nashua between 2018 and 2022.

PUBLIC EV CHARGING STATIONS[23]

11

public EV charging stations in Nashua, up from only two stations in 2019.

COMMUTE MODE SHARE[24]

76%

of commuters in Nashua drive alone.

Nashua is primarily a car-dominated city. Enhancing infrastructure for public transportation, EVs, and pedestrians and bicyclists will be key to ensuring that City staff and community members have sustainable and safe travel options.

HOUSEHOLD TRANSPORTATION FOOTPRINTS[25]

59 VEHICLE MILES PER DAY

Average distance traveled by suburban resident

13 VEHICLE MILES PER DAY

Average distance traveled by urban resident

The U.S. Department of Transportation estimates that daily household vehicle trips range from a high of 59 miles per day in the least dense (suburban) parts of the community to only 13 miles per day in the downtown. The City aims to decrease these numbers in Nashua by shortening distances that residents must travel to get to daily destinations while encouraging the transition to EVs and other modes of transportation.

BE PART OF THE SOLUTION

Find an EV charging station near you and plan your next trip on PlugShare.com.

FIND A STATION

GOALS, STRATEGIES, AND ACTIONS

The *Livable Nashua* planning process identified the following goals, strategies, and actions for Transportation & Land Use.

	Implementation Timeframe
GOAL 1 Nashua is a model for clean transportation options.	
STRATEGY 1.1 Transition the municipal fleet to zero-emission vehicles and expand charging infrastructure where feasible and available.	
TT 1.1.A Create and formalize a municipal Zero-Emission Vehicle (ZEV) Purchasing Policy that considers operational requirements of vehicles and availability of suitable models at time of replacement.	**Long**
TT 1.1.B Incorporate electric vehicle (EV) charging infrastructure into capital projects and significant maintenance work at municipal parking facilities.	**Short**
TT 1.1.C Study and assess the feasibility of electrifying the City's school bus, transit, and other heavy-duty vehicles.	**Medium**
STRATEGY 1.2 Increase community adoption of electric vehicles (EVs).	
TT 1.2.A* Update Land Use Code to require new developments of a scale to be EV-ready.	**Short**
TT 1.2.B Host workshops and events to educate the community about EVs and connect them with resources.	**Short**
TT 1.2.C Continue to work with local- and state-level officials to encourage EV adoption and remove barriers to ownership.	**Short**
GOAL 2 People in Nashua have more options for sustainable and safe travel.	
STRATEGY 2.1 Enhance and encourage the use of public transportation and pedestrian and bicycle infrastructure.	
TT 2.1.A Create and launch a City-wide marketing campaign to promote transit services and encourage ridership, particularly around City Hall, along major transportation corridors, and downtown.	**Medium**
TT 2.1.B* Update Transit-Oriented Development (TOD) Overlay District to set a minimum density standard.	**Short**
TT 2.1.C Expand e-scooter program to include bikeshare options to encourage active modes of transportation.	**Short**
TT 2.1.D Adopt a Complete Streets Policy and Guidance for how it can be implemented across the city.	**Short**
TT 2.1.E Research and consider the adoption of a city-wide mode-shift goal.	**Short**

*Relates to the City's forthcoming Land Use Code Update.

Implementation Timeframes:
Short (1-3 years), **Medium** (3-5 years), **Long** (5+ years)

THRIVING NATURAL RESOURCES

Our vision: Nashua protects natural resources and public lands and ensures that they are accessible to all.

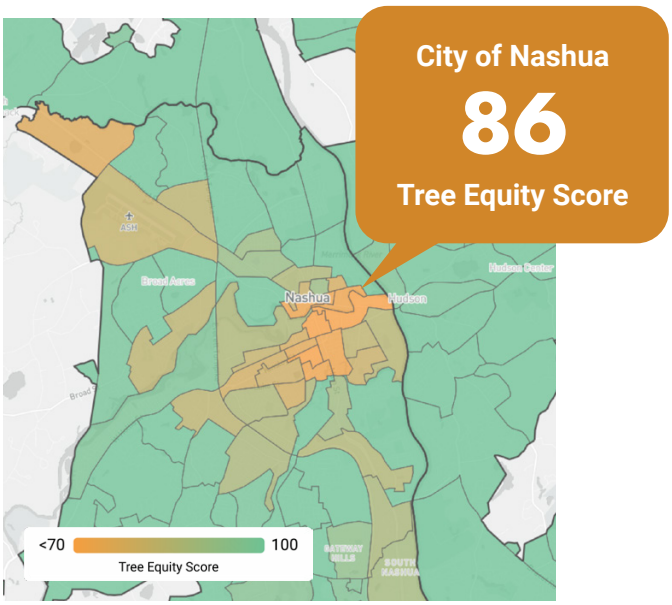
WHAT'S INCLUDED

- Conservation
- Green infrastructure
- Open space
- Parks and recreational spaces
- Stormwater management
- Sustainable landscaping
- Urban forestry

TRACKING PROGRESS

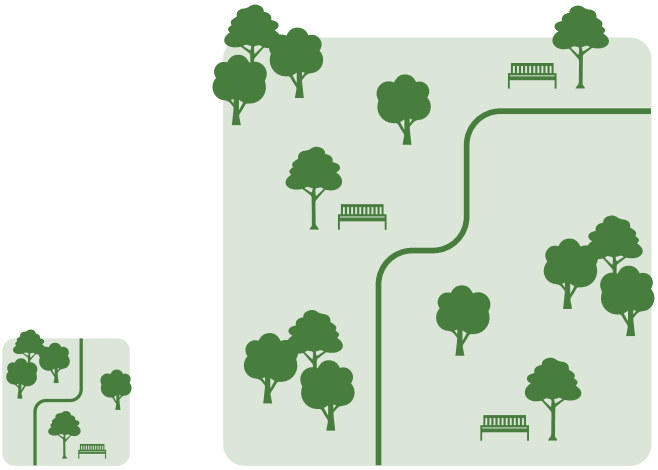
Nashua will track progress on the *Livable Nashua Plan* by monitoring the following metrics and trends.

TREE EQUITY IN NASHUA[26]



Nashua has worked hard to ensure that all community members enjoy the advantages of a healthy urban forest, which is reflected in a high Tree Equity Score of 86. To ultimately reach a score of 100, Nashua will need to prioritize areas of the city with lower tree cover and high heat vulnerability, including the downtown.

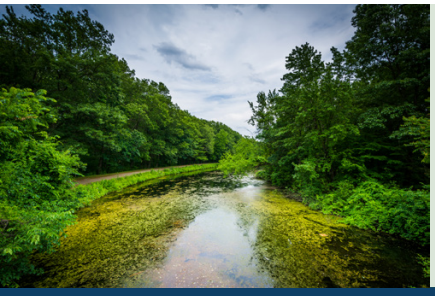
CONSERVATION LAND[27]



94 ACRES
of conservation land in 1979

1,344 ACRES
of conservation land in 2019

Nashua has demonstrated a steadfast commitment to preserving its open spaces. Notably, the city witnessed a substantial surge in the acreage dedicated to conservation land during the 2000s, culminating in nearly 1,350 acres (about twice the area of Central Park in New York City) by 2019 or 15 acres/1000 residents. Recognizing the environmental, recreational, and aesthetic benefits of these preserved areas, Nashua remains dedicated to sustaining and expanding this progress.



BE PART OF THE SOLUTION

Take action at home to help protect and restore our community's water sources with resources from Soak Up the Rain New Hampshire.

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GOALS, STRATEGIES, AND ACTIONS

The *Livable Nashua* planning process identified the following goals, strategies, and actions for Thriving Natural Resources.

	Implementation Timeframe
GOAL 1 Open spaces are protected and managed to enhance ecosystem services and community resilience.	
STRATEGY1.1 Prioritize the conservation of open space.	
NR 1.1.A Using Nashua's Natural Resources Inventory, identify parcels of land with high natural resource, flood storage, or recreational value and pursue funding to acquire and preserve them as open space.	**Medium**
NR 1.1.B Seek out public-private partnerships to fund the installation of permanent conservation protections for priority source waters and surrounding areas.	**Long**
NR 1.1.C Identify a sustainable funding stream for the City's Conservation Commission and explore adopting an Open Space Impact Fee to support future enhancements.	**Long**
NR 1.1.D* Review and update the Conservation Subdivision Ordinance as part of the City's update to the Land Use Code.	**Short**
GOAL 2 Nashua residents have equitable access to enhanced parks.	
STRATEGY 2.1 Enhance parks and recreation spaces to benefit all community members.	
NR 2.1.A Develop a comprehensive Parks and Recreation Master Plan that identifies the community's recreational needs, long-term maintenance requirements of parkland and amenities, and funding opportunities.	**Medium**
NR 2.1.B Provide recreational opportunities for residents of all ages and abilities through investing in universal design retrofits to playgrounds and upgrading appropriate trails for ADA accessibility.	**Medium**
GOAL 3 Nashua's trees and landscapes are managed with sustainable practices, green infrastructure, and municipal programs.	
STRATEGY 3.1 Minimize stormwater generation and pollutant runoff.	
NR 3.1.A Inventory and evaluate existing municipal green stormwater infrastructure (GSI) and incorporate additional Best Management Practices (BMPs) into future capital projects and significant maintenance work on City properties.	**Long**
NR 3.1.B Regularly audit and update stormwater management regulations based on state and federal best practices.	**Medium**
NR 3.1.C Conduct outreach to owners of private stormwater systems annually and develop a GIS-based system for tracking compliance with ongoing maintenance and operations requirements.	**Medium**
NR 3.1.D Create and administer an incentive program and best management practices (BMP) Guide for residential property owners to encourage the use of green infrastructure throughout the city.	**Medium**
STRATEGY 3.2 Enhance the tree canopy and encourage sustainable landscaping practices.	
NR 3.2.A Launch education campaign to promote sustainable landscaping practices, proper tree maintenance, invasive species identification and management, and the protection of wetland buffers among residents, businesses, and municipal staff.	**Short**
NR 3.2.B Conduct a street tree inventory and management plan that prioritizes enhancing tree canopy in the Main Street Corridor and neighborhoods with high heat vulnerability.	**Medium**

*Relates to the City's forthcoming Land Use Code Update.

Implementation Timeframes: **Short** (1-3 years), **Medium** (3-5 years), **Long** (5+ years)

ENDNOTES

1 Hot Topic: A Climate and Health Adaptation Plan for the Greater Nashua Region, Nashua Regional Planning Commission (2017).

2 Longer Mud Season, No Snow Could Alter Northeast Rivers by 2100, University of New Hampshire (2020).

3 The Climate Explorer, National Environmental Modeling and Analysis Center (2024).

4 The Climate Explorer, National Environmental Modeling and Analysis Center (2024).

5 The Climate Explorer, National Environmental Modeling and Analysis Center (2024).

6 The Climate Explorer, National Environmental Modeling and Analysis Center (2024).

7 National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention (2024).

8 Risk Factor, First Street Foundation (2024).

9 Greenhouse Gas Equivalencies Calculator, U.S. EPA (2024).

10 Municipal Greenhouse Gas (GHG) Inventory, City of Nashua (2022).

11 Municipal Greenhouse Gas (GHG) Inventory, City of Nashua (2016).

12 Assessor's Database, City of Nashua (2023).

13 ResStock End Use Savings Shapes, National Renewable Energy Lab (2022 Release).

14 Renewable Energy Dashboard, Livable Nashua (2023).

15 Frequently Asked Questions (FAQs), U.S. Energy Information Administration (2024).

16 Risk Factor, First Street Foundation (2024).

17 Social Vulnerability Index (SVI), New Hampshire Department of Health & Human Services Data Portal (2015-2019).

18 Hazard Mitigation Plan, City of Nashua (2019).

19 Hot Topic: A Climate and Health Adaptation Plan for the Greater Nashua Region, Nashua Regional Planning Commission (2017).

20 Four Hills Landfill EPA Flight Tool Report, U.S. EPA Office of Atmospheric Protection Greenhouse Gas Reporting Program (2022).

21 Gallons of CSO Discharge, Livable Nashua Dashboard (2022).

22 Total EV Registrations, Livable Nashua Dashboard (2023).

23 Alternative Fueling Station Locator, U.S. DOE Alternative Fuels Data Center (2023).

24 Commuting Characteristics by Sex, U.S. Census Bureau American Community Survey (2021).

25 Highway Statistics Series, U.S. Department of Transportation Federal Highway Administration (2022).

26 City of Nashua Tree Equity Score, American Forests (2024).

27 Conservation Land Over Time, Livable Nashua Dashboard (2019).

Livable Nashua

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