

NEMSN Profile: Keene, NH

Community Profile¹

Area (sq. Miles):	37.2
Population:	23,403
Population Density:	628.30
Households:	9,319
Median Age:	33.5
Median Household Income:	\$52,636
Poverty Rate:	17%

City Department:

Title: City of Keene Planning Department

Staff: W. Rhett Lamb: Planning Director, Michele Chalice: Planner, Tara Kessler: Planner, Will Schoefmann: GIS Technician, Lee Langella: Administrative Assistant.

Responsibilities: Provides research, advisor and administrative support for an array of comprehensive and land use planning functions within the City of Keene.

Programs/Policies: City Master Plan, Climate Change Action Plan

Interview:

What have been your biggest successes in the past 2-3 years?

- Finished GHG inventory, just hired someone to do a wrap up report that is being finished. (1995-2015). Now looking at what were our goals and how we have done.
- Received a Grant from PSNH for LED streetlight transition taking place in the next couple of months.
- Issued RFP for solar on city property. Got 6-7 proposals for PPAs and/or group net metering and one from NH Solar Garden.
- Update on greenhouse/landfill gas project that EPA gave funding for. Using that money for a biofuel electric generator used to operate the recycling and transfer station. Did a study to about various options and decided to go with the 100% biofuel (AFPM post consumer waste biofuel). Essentially a diesel generator running on biodiesel.
- Working with American Army Corp. to develop flood management strategies.

Given the range of your priorities, which do you consider to be your top priorities?

- Renewable energy system installations pertaining to solar.

- Flood management strategies.

Please explain why you have chosen these strategies?

They are priorities because they are part of the long-term capital improvement for Keene. Solar is a priority because New Hampshire Policies on Caps and net metering are changing.

How important are the metrics to identifying progress for projects and programs?

GHG emissions are recorded and are apart of the 20-year evaluation report. Each project has it's own metric system which is then compared with an economic analysis of the project.

What resources are needed to complete your strategies and priorities? Are they currently available to you? If not, do you know where/how to obtain them?

It is important to continue to work with Keene Facilities Division and Public Works to help improve building operations to be more efficient. Is there a way the network could assist in helping find the right consults for project development.

How has the local community promoted its sustainability efforts to members in the community?

Have done surveys and outreach for programs such as the LED streetlight program. We are good at outreach during the planning stages of projects but once in implementation it is hard to find the time to keep the community up to date.

What are your top 3 barriers that you consider to be beyond the control of the municipality, which have limited your ability to implement sustainability initiatives?

The biggest barrier in Keene is that we have the fourth highest tax rate in the state. Therefore, everything we do has to have an economic case. Many of the sustainability projects are competing with other town projects such as improvements to the fire station.

Sustainable Profile(1)

Overview

- Solid Waste Reduction & Recycling
- Food & Agriculture
- Transportation
- Storm Water
- Energy
- Development
- Greenhouse Gas Reduction

- Climate Preparedness
- Equity & Economics
- Community Engagement

Solid Waste Reduction & Recycling

Top Priorities

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Strategies

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Food & Agriculture

Top Priorities

- Support local agricultural economy.

Strategies

- Inventory and map existing farms (acreage and commodity) update every year.
- Increase local food production by 20% within five years of establishing baseline of community food production.
- Double the size and number of community gardens by 2027.
- Identify plants that will be compatible with future projected climate and soil conditions by 2010.

Transportation

Top Priorities

- Create alternative route options for movement of goods and people.
- Design and reconstruct roadways to handle changes in temperature and precipitation as a result of a change in climate.
- Provide sustainable transportation mode choices (locally and regionally).

Strategies

- Identify alternate routes and modes for goods transport and evacuation efforts during emergency situations.
- Change design requirements for new or refurbished roadways to include different pitches combined with storm water design and/or use of more permeable surface to effectively remove water from the roadway.
- Identify and implement Transportation Demand Management techniques.

Water

Top Priorities

- Safety and efficiently remove storm water from the built environment.
- Decrease storm water runoff and flash flooding.

Strategies

- Work with the Regional Planning Commission to create a regional

- management plan for future storm water runoff levels.
- Research, create and begin the implementation of a green streets and a sustainable infrastructure program in Keene.
- Include the reassessment of storm water infrastructure into the City's Comprehensive Master Plan and Capital Improvement Program to replace failing infrastructure.
- Create innovative storm water design requirements and include these in site plan requirements.
- Adopt a Net Zero Runoff site plan requirement.

Energy

Top Priorities

- Decrease the ways in which energy supplies could be interrupted.
- Increase the resiliency of emergency energy systems.
- Increase municipal and community energy security, use of renewable resources and overall energy efficiency.
- Engage energy providers to enhance local renewable generation opportunities.

Strategies

- Identify low-risk areas that would allow for the safe burial of existing power lines to avoid interruptions due to increased precipitation events.
- Establish the requirement that new construction builders bury utilities during the construction phase.
- Connect emergency centers with onsite renewable energy sources to reduce susceptibility to lapses in the conventional energy supply.
- Provide 50% of municipal and community energy needs locally through local renewable energy resources development by 2027.
- Take steps to decrease municipal and community energy consumptions by 25% and decrease greenhouse gas emissions caused by the production of energy by 75% through energy conservation measures and the development of renewable energy resources by 2027.
- Encourage the state to increase amount of renewable energy produced in the state and to keep that energy in the state.

Development

Top Priorities

- Create, adopt, and implement a City Building and energy code that incorporates sustainability, green building materials, and energy conservation principles.
- Make all new developments in Keene "green".
- Lower the ecological footprint of existing buildings.
- Protect habitats and migration routes.
- Devise land use regulations to preserve forests.

Strategies

- Research and review existing information and how similar codes have been developed and implemented in other communities.
- Improve existing energy conservation standards by a minimum of 25% through implementation of the code in both commercial and residential development.
- Build a green building in Keene that can serve as an example for the community that incorporates sustainable design and materials and is 50 to 70% more energy efficient than a conventionally designed building, within five to seven years.
- Update the City's Infrastructure Standards to ensure public safety in the event of major flooding or severe storm events.
- Reduce sprawl and promote infill development/redevelopment.
- Align City Policies to support goals of New Hampshire wildlife action plan.

Greenhouse Gas Reduction

Top Priorities

- Reduce carbon footprint by 10% (2015).

Strategies

- Prioritize areas for action and set goals.
- Develop an adaption action plan.
- Monitor, Evaluate and Update the Plan.

Climate Preparedness

Top Priorities

- Reduce the likelihood of structural damage resulting from predicted increases in severe weather events.
- Increase the protection of existing and future wetlands to maintain the ability of these systems to naturally recharge aquifers and decrease storm water run-off.
- Educate the public about wetland protection as a climate adaptation strategy.
- Increase Keene's water storage capabilities in the face of drought conditions.
- Improve the reliability of emergency communications during severe weather events.
- Increase community communication for emergency events.
- Increase the ability of the public to respond/recover from extreme weather events.

Strategies

- Encourage more pitched roofs and incorporate design standards that consider snow stacking (zones and increase in roof loads) and ice falling zones.
- Identify a 200-years floodplain and prevent future development in these areas.
- Investigate design standards for buildings that currently handle weather conditions similar to the climate forecast New England can expect in the

- future.
- Continue to research and allow City staff to participate in educational opportunities to learn about advances in green building design and practice.
 - Develop a wetlands management strategy by 2010 that includes the identification of and recommendation to preserve key wetland areas in the City that will reduce the impact of a flooding event.
 - Incorporate wetland and sub-surface waters protection into the comprehensive water plan.
 - Develop a guide for homeowners, developers, architects, etc., by 2009.
 - Devise a public outreach campaign/presentation.
 - Create a watershed management plan.
 - Devise grey water storage and reuse systems to recycle and utilize water resources more efficiently.
 - Create an education program to increase public awareness of extreme weather event resources in coordination with Keene.

Equity & Economics

Top Priorities

- Create support services for people who lose their jobs (e.g., snowplowing, sugaring) as a result of climate change.

Strategies

- Establish retraining programs.
- Establish scholarship programs.
- Establish loan programs for citizens who need to revamp their businesses.

Community Engagement

Top Priorities

- Increase public awareness about the public health implications of climate change, including risks and the need for emergency preparedness.
- Train and educate emergency/human services/public health officials and workers.
- Support environmentally sustainable businesses and economy.
- Increase the vitality and competitiveness of local business.

Strategies

- Provide public education on mosquito and tick protection and disease prevention.
- Provide public education on how to handle flood emergency situations.
- Establish training programs for public health workers to deal with the emotional aspects associated with loss of life and property caused by extreme weather events.
- Identify economic development policies and goals that incorporate sustainability.

- Review and rewrite zoning code and land development regulations in five years to include sustainable building materials, design and energy conservation measures.

Sources:

1 “Adapting to Climate Change: Planning a Climate Resilient Community” *City of Keene, New Hampshire*. November 2007.

https://www.ci.keene.nh.us/sites/default/files/Keene%20Report_ICLEI_FINAL_v2_0.pdf

2 “Census Profile: Keene, NH.” *Census Reporter*. N.p., n.d. Web 27 March. 2017

<https://censusreporter.org/profiles/16000US3339300-keene-nh/>