

## SURVEYS

Surveys were a critical community engagement tool under Concord's climate action & resilience planning process.

### **Special Survey: Sustainable Concord Resilient Business**

This survey was launched in February 2020 with the purpose of providing businesses an opportunity to voice feedback on what it would take to make their business and Concord's town centers resilient to the impacts of climate change. There were 5 questions and 16 responses.

#### **Sustainable Concord: Resilient Businesses**

From more intense storm events to high heat days, Concord is feeling the impacts of climate change. While our community has been taking action to reduce the emissions of greenhouse gases that cause climate change, there is still more to do to both reduce emissions and to prepare for the changes that are already here. To drive this effort, the Town of Concord has initiated the development of a climate action and resilience plan, *Sustainable Concord*. The completed plan will provide an actionable roadmap for reducing greenhouse gas emissions, preserving our natural resources, and preparing all residents for the impacts of climate change.

We are specifically reaching out to our business leaders in our town centers to understand what it will take to make your business and Concord's town centers resilient to the impacts of climate change. This survey should only take around 5 minutes to complete.

OK

### **Q1 In what ways have extreme weather events (heat waves, drought, floods, wind) affected your business or property in the past?**

Multiple respondents listed flooding and snowstorms as extreme weather events that have affected their business or property. This has led to interruptions in services as well as property damage. Participants also noted heat and climate changes damaging the local tree population.

**Q2 Are you concerned that flooding due to rainfall or from rivers and underground streams could impact your property, business, or the town centers?**



Yes: 12



No: 3

**Q3 Are you concerned that heat waves, snow and ice, or other extreme weather events could impact your property, business, or the town center?**



Yes: 13



No: 2

**Q4 Do increased frequency of these types of weather events could have an economic impact on your business or property in the future? What type of economic impacts (e.g. repair expenses, loss of business due to access issues, other)?**

Many respondents listed repair expenses and loss of use/sales as an economic impact. Participants also noted increased operational costs due to increased utilities and snow removal costs.

**Q5 What do you think would be a good first step for Concord to take to prepare its town centers for climate change impacts?**

“Encourage water conservation, build and maintain more energy efficient homes and businesses, accommodate more electric/hybrid autos, provide alternative transportation options.”

“Partnering with institutions to become emergency refuge centers.”

“Storm water management and overall resiliency plan for the town.”

## Survey #2: Action Prioritization

The second survey for the Climate Action and Resilience Plan launched from February to April 2020 and focused on asking stakeholders to rank action items that had been identified throughout the planning process. Below are the top-rated actions from each plan element. More detailed results from the prioritization can be found on the following pages.



### **Built Environment**

Incentivize high-efficiency electric heating and cooling systems in new buildings.



### **Energy**

Promote incentives for businesses/homeowners to invest in renewable energy.



### **Mobility**

Develop a long-term plan for electrifying school and municipal vehicle fleets.



### **Natural Resources**

Monitor and maintain the quantity and quality of groundwater and surface water.



### **Preparedness**

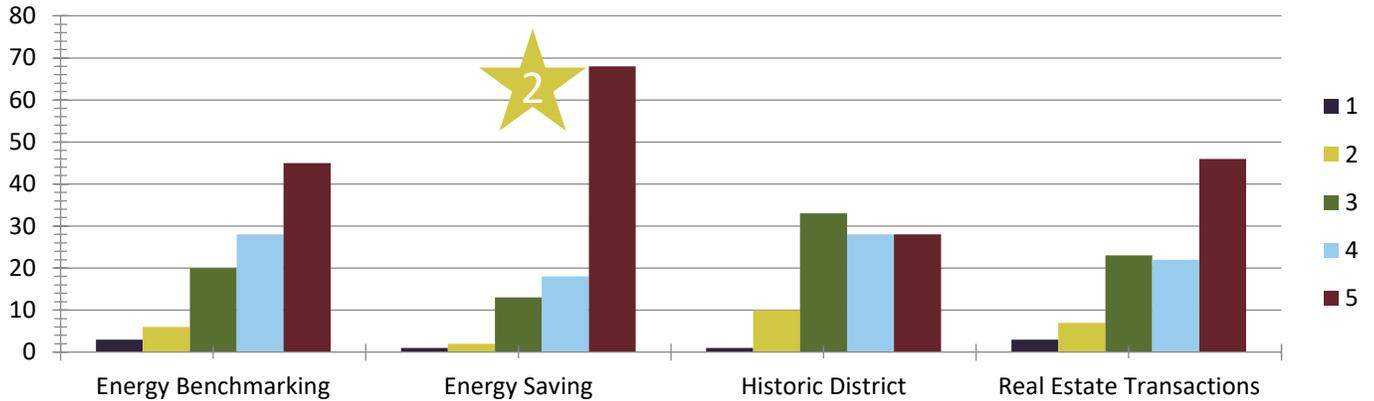
Continue to integrate sustainability goals into town planning, evaluations, and budgeting.

Total survey  
Responses:  
**112**

# SURVEY RESULTS: BUILT ENVIRONMENT

Survey participants were asked to rank the importance of each action on a scale from 1 to 5, 5 being the most important. The following charts show the rankings of each action. See the descriptions of each action below the charts for more details. Stars indicate the actions with the three highest average rankings.

## Existing Buildings



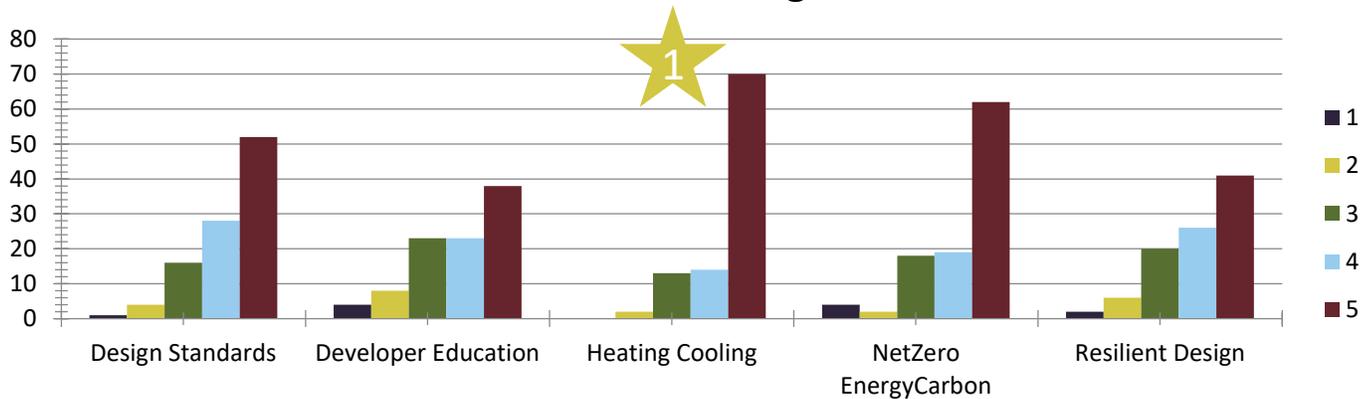
**Energy Benchmarking:** Require large commercial buildings to report on energy use annually.

**Energy Saving:** Incentives and education for deep energy retrofits, electrification, and energy saving.

**Historic District:** Establish HDC-approved guidelines for sustainable improvements to older and historic homes.

**Real Estate Transactions:** Require energy performance to be disclosed in residential real estate transactions.

## New Buildings



**Design Standards:** Prioritize healthy indoor air, sustainable materials, water efficiency, and waste management.

**Developer Education:** Energy efficiency/zero net energy education for developers, contractors, and builders.

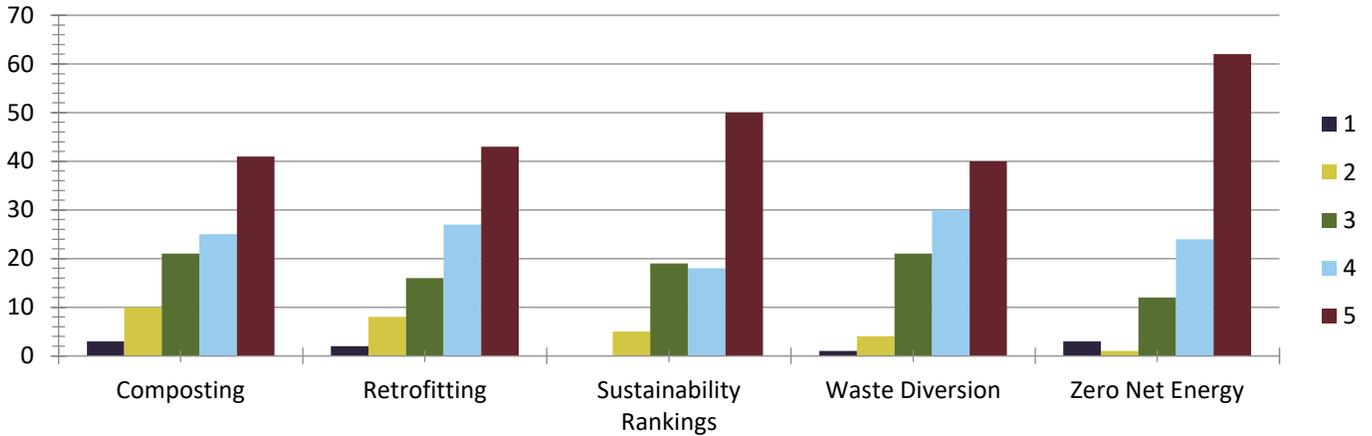
**Heating & Cooling:** Incentivize high-efficiency electric heating and cooling systems in new buildings.

**Net-Zero Energy/Carbon:** Require new development to be Zero Net Energy or Zero Net Carbon.

**Resilient Design:** Incentivize the use of resilient design practices by developers in new construction.

# SURVEY RESULTS: BUILT ENVIRONMENT

## Municipal Infrastructure



**Composting:** Expand and improve organic waste management (composting) for residents and businesses.

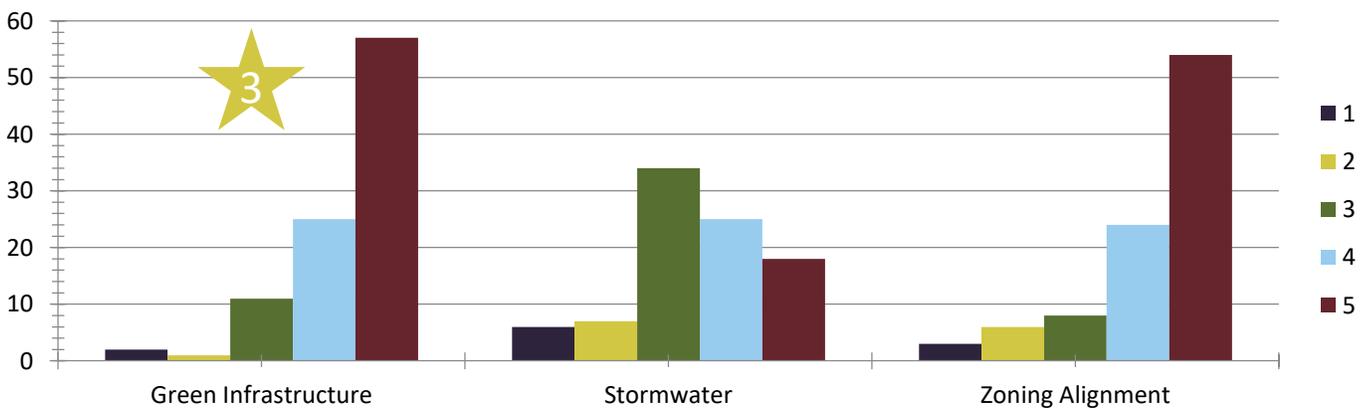
**Retrofitting:** Create a phased plan for retrofitting existing municipal and school buildings to achieve net zero energy.

**Sustainability Rankings:** Require new municipal projects to achieve a sustainability rating (LEED, SITES, Envision).

**Waste Diversion:** Improve overall waste diversion and recycling rates through policy and program changes.

**Zero Net Energy:** Adopt a Zero Net Energy policy for all new municipal and school buildings.

## Smart Development



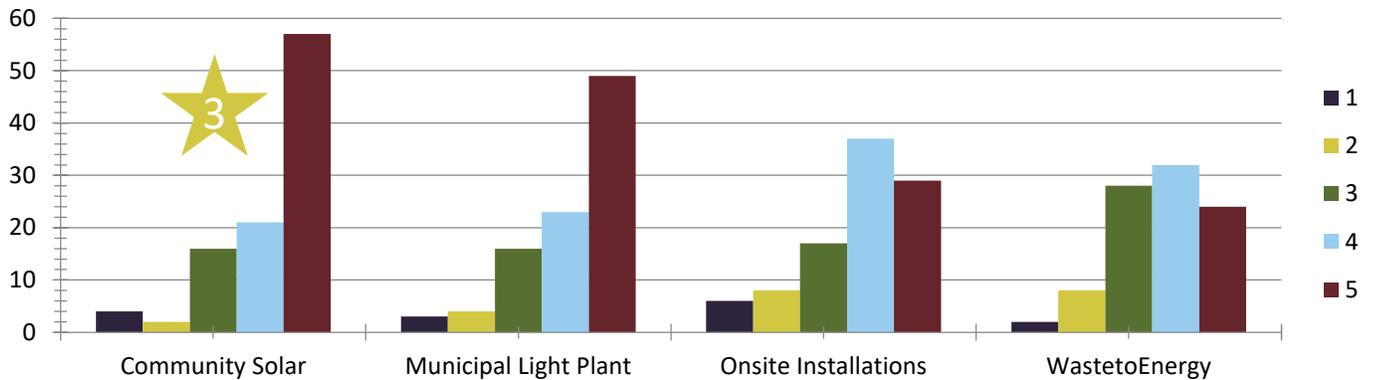
**Green Infrastructure:** Identify and implement policies to increase the use of green infrastructure and low impact development.

**Stormwater:** Update stormwater regulations and create a stormwater utility.

**Zoning Alignment:** Align zoning bylaws with Concord's sustainability goals.

# SURVEY RESULTS: ENERGY

## Renewable Energy Sources



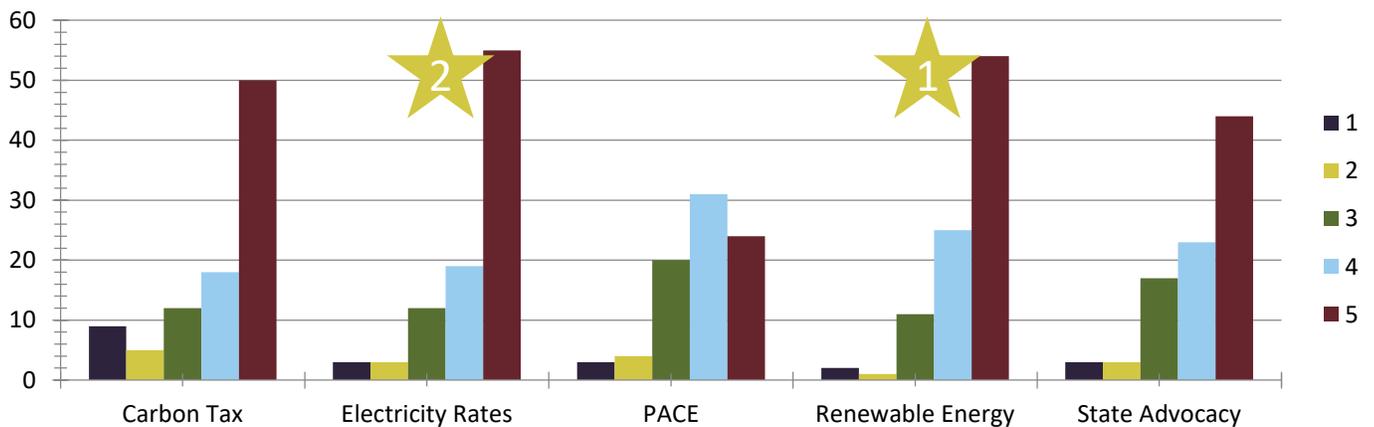
**Community Solar:** Design and implement a community solar program.

**Municipal Light Plant:** Shift CMLP's electricity supply to non-emitting sources (Renewable Energy Credits or certificates).

**On-site Installations:** Supply all municipal energy from on-site renewable energy installations.

**Waste-to-Energy:** Explore potential for waste-to-energy options in the wastewater treatment processes.

## Energy Financing



**Carbon Tax:** Adopt a local carbon tax on fossil fuels to fund energy efficiency and renewable energy programs.

**Electricity Rates:** Re-design rates to support conservation, peak load management, and renewable energy generation.

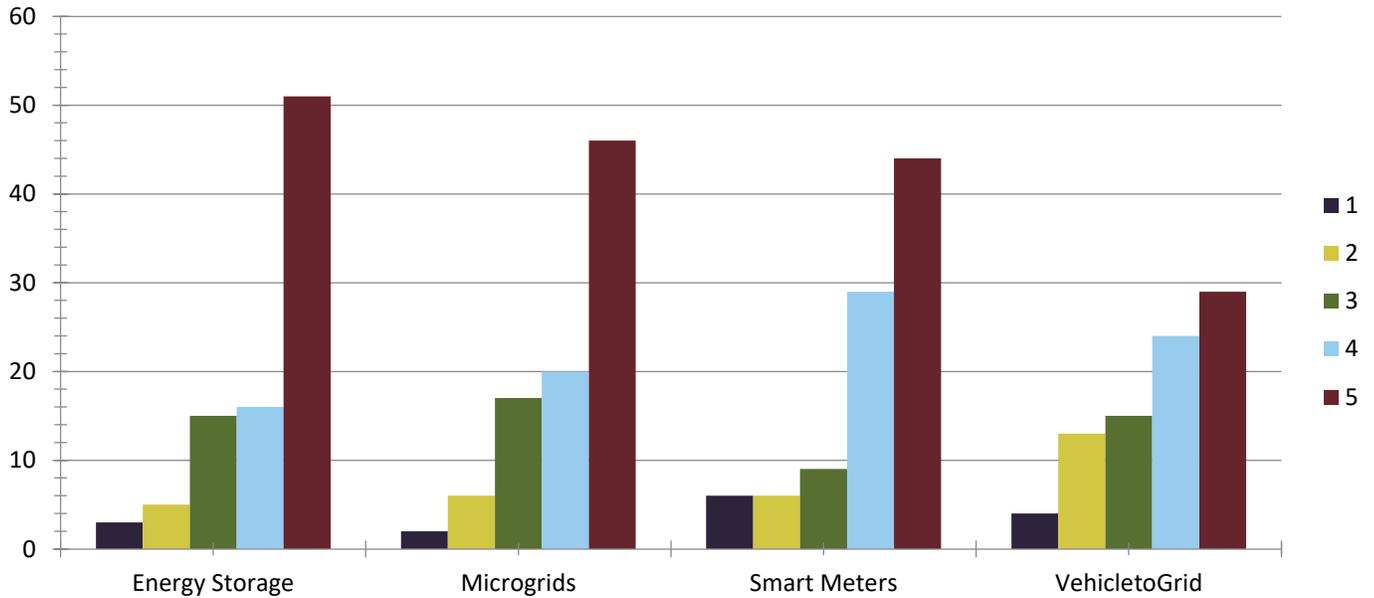
**PACE:** Fund energy improvements to commercial buildings through Property Assessed Clean Energy.

**Renewable Energy:** Promote incentives for businesses/homeowners to invest in renewable energy.

**State Advocacy:** Advocate for renewable energy and building energy efficiency standards and funding<sup>6</sup> at the state level.

# SURVEY RESULTS: ENERGY

## Energy Grid & Storage



**Energy Storage:** Invest in utility-scale energy storage and incentivize commercial/institutional energy storage.

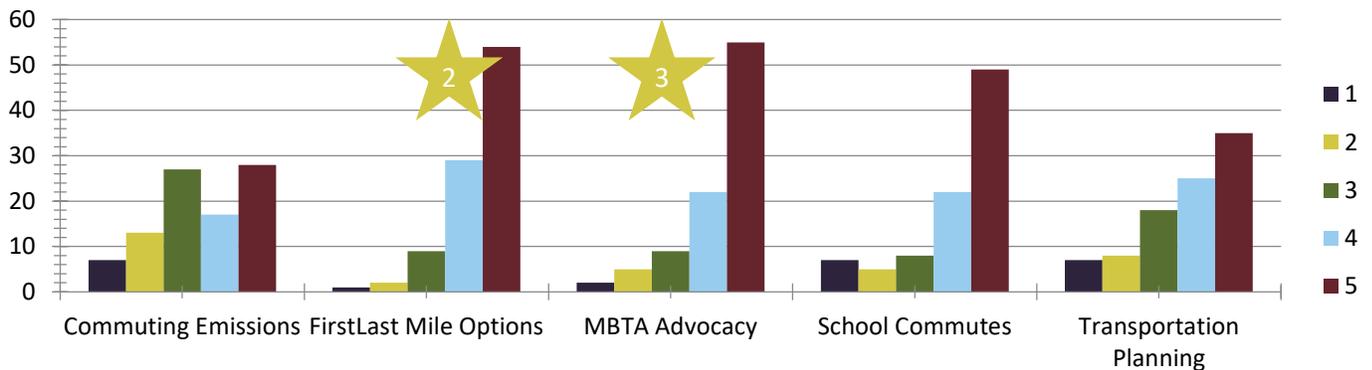
**Microgrids:** Explore opportunities for microgrids and/or energy storage for critical facilities in Concord.

**Smart Meters:** Continue to deploy smart meters townwide to facilitate time-of-use pricing and energy conservation.

**Vehicle-to-Grid:** Enable electric vehicle-to-grid electricity.

# SURVEY RESULTS: MOBILITY

## Low-Carbon Mobility



**Commuting Emissions:** Work with employers to encourage telecommuting, flexible hours, or working at co-working spaces.

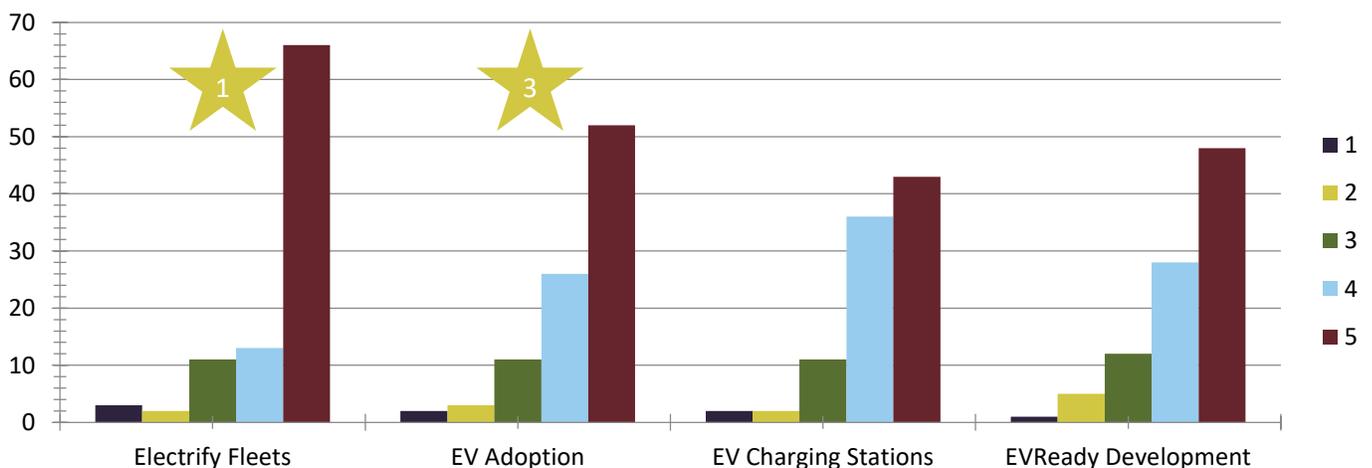
**First/Last Mile Options:** Promote and facilitate increased use of public transportation by improving access to transit.

**MBTA Advocacy:** Advocate to MBTA for enhanced service quality and coverage and GHG reductions through electrification.

**School Commutes:** Encourage low-carbon commuting options to school through student education and improved bike storage.

**Transportation Planning:** Establish a central transportation planning function within Town government.

## Electric Vehicles



**Electrify Fleets:** Develop a long-term plan for electrifying school and municipal vehicle fleets.

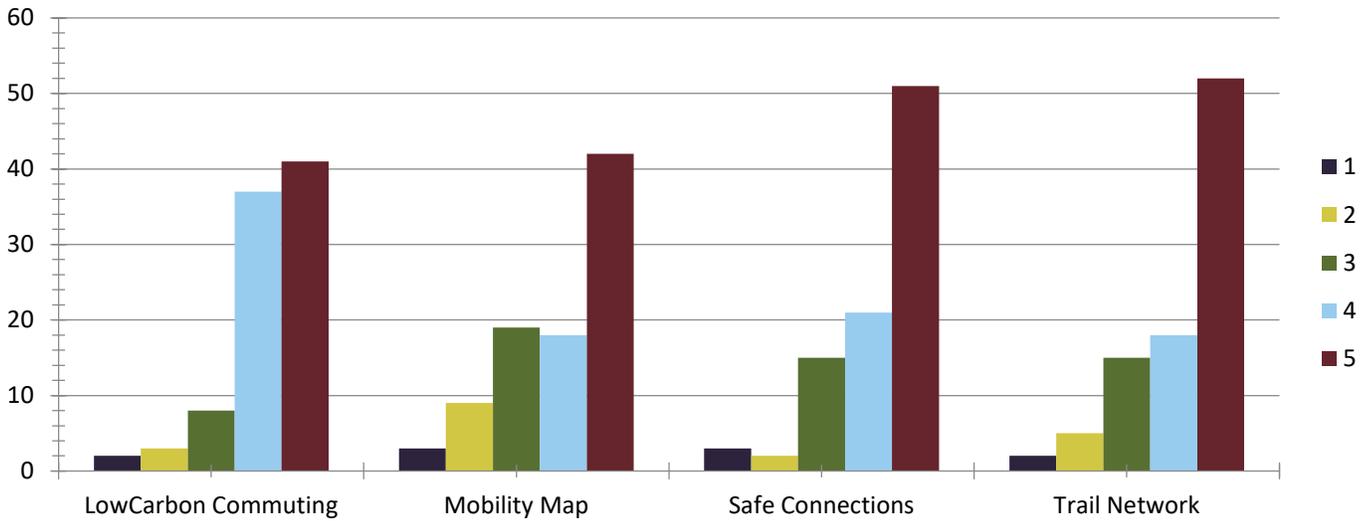
**EV Adoption:** Continue to promote and provide incentives for adoption of electric vehicles.

**EV Charging Stations:** Provide resources, support and incentives for electric vehicle charging.

**EV-Ready Development:** Require new development to be EV-ready (prepared for electric vehicle charging).

# SURVEY RESULTS: MOBILITY

## Walking & Biking



**Low-Carbon Commuting:** Encourage employers and property owners to add bicycle parking facilities and EV charging stations.

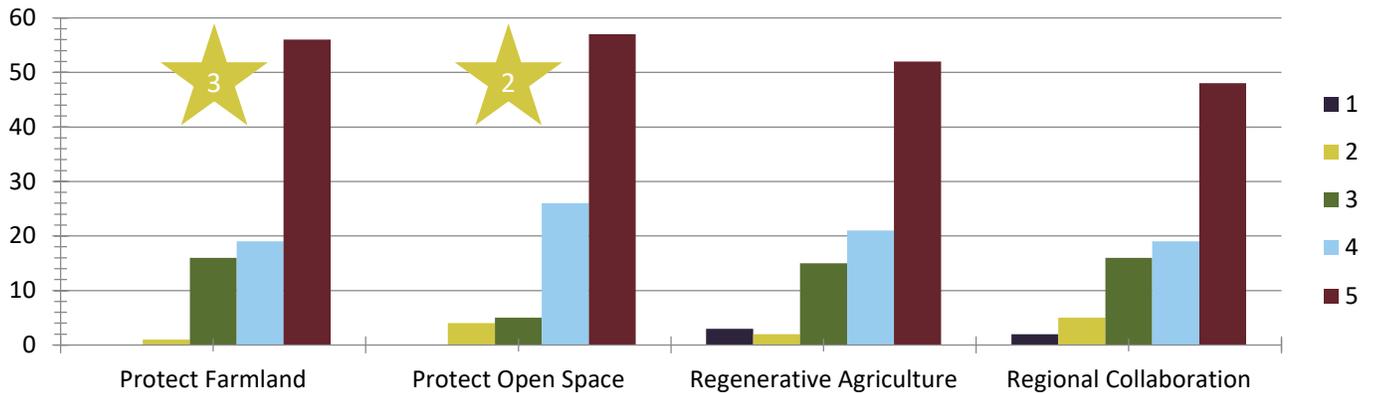
**Mobility Map:** Create and promote a town mobility map that includes all pedestrian and bike paths and bike racks

**Safe Connections:** Improve connections between key bicycling and walking paths and sidewalks.

**Trail Network:** Continue developing the local/regional trail network for transportation and nature-based recreation.

# SURVEY RESULTS: NATURAL RESOURCES

## Open Space & Agriculture



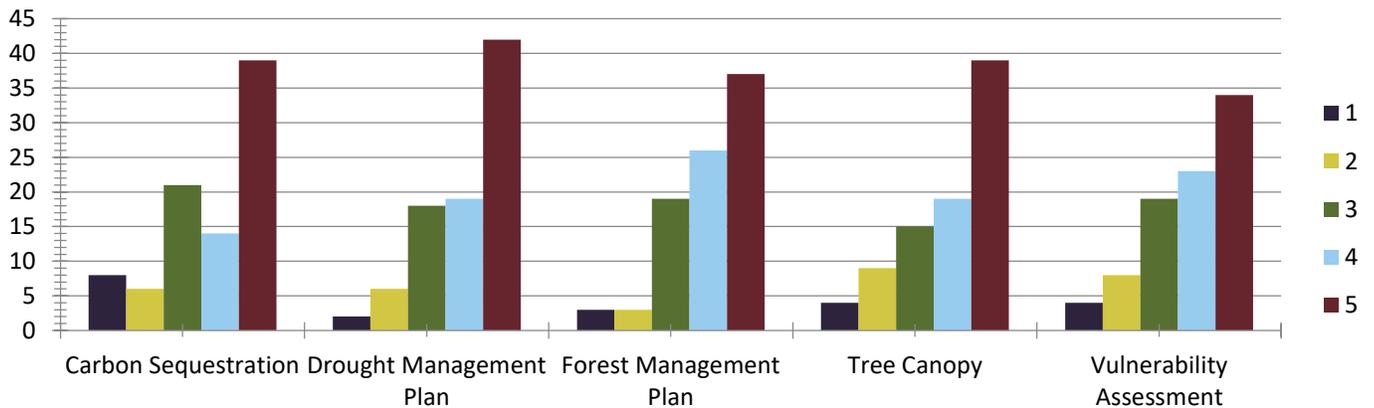
**Protect Farmland:** Partner with farmers and agricultural community to protect farmland.

**Protect Open Space:** Prioritize the allocation of resources to protect and enhance open space and conservation lands.

**Regenerative Agriculture:** Partner with agriculture sector to transition to sustainable and regenerative farming practices.

**Regional Collaboration:** Collaborate on the health and continuity of open space and ecosystems across town borders.

## Natural Resource Planning



**Carbon Sequestration:** Assess opportunities and take action to maximize carbon sequestration throughout town.

**Drought Management Plan:** Develop a drought management plan.

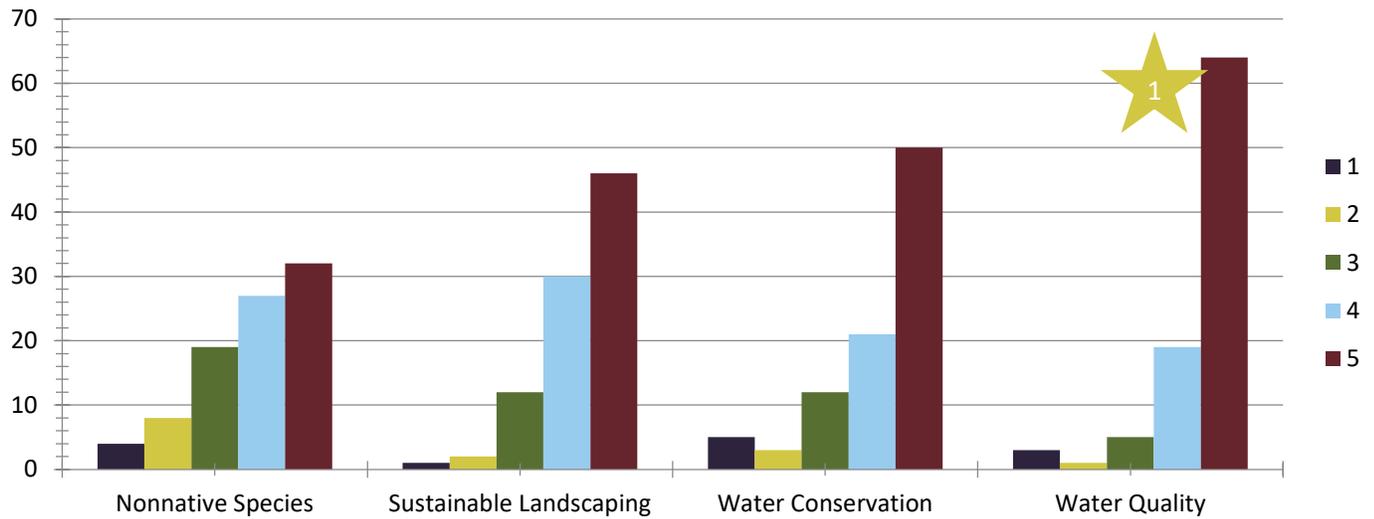
**Forest Management Plan:** Develop a Forest Management Plan to enhance the health of all town forests and water supply lands.

**Tree Canopy:** Evaluate options to improve Concord's tree canopy and develop a tree canopy management plan.

**Vulnerability Assessment:** Conduct a vulnerability assessment of natural resources most at risk to projected climate changes.

# SURVEY RESULTS: NATURAL RESOURCES

## Conservation



**Non-native Species:** Address the proliferation of non-native species.

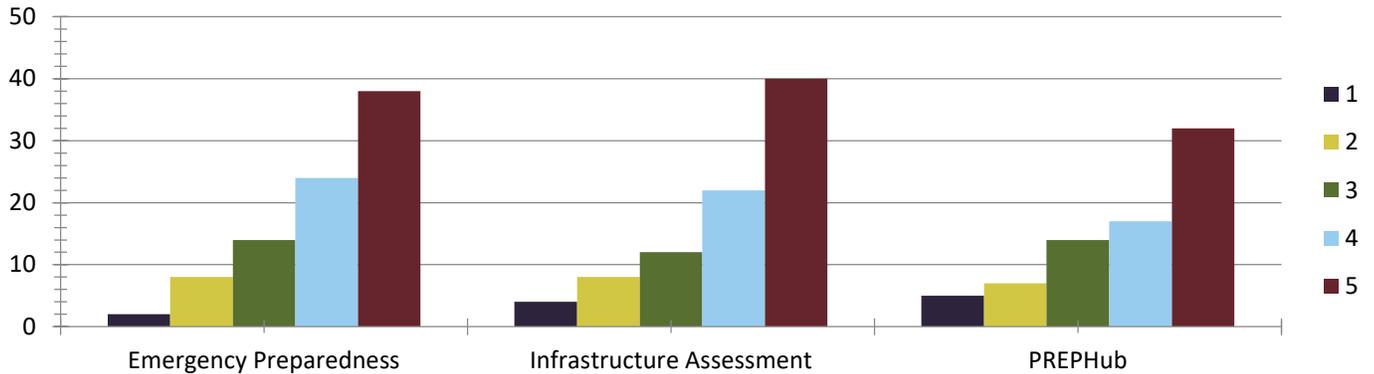
**Sustainable Landscaping:** Work with homeowners to promote sustainable landscaping practices.

**Water Conservation:** Increase water efficiency and minimize the use of fresh water for irrigation.

**Water Quality:** Monitor and maintain the quantity and quality of groundwater and surface water.

# SURVEY RESULTS: PREPAREDNESS

## Disaster Preparedness

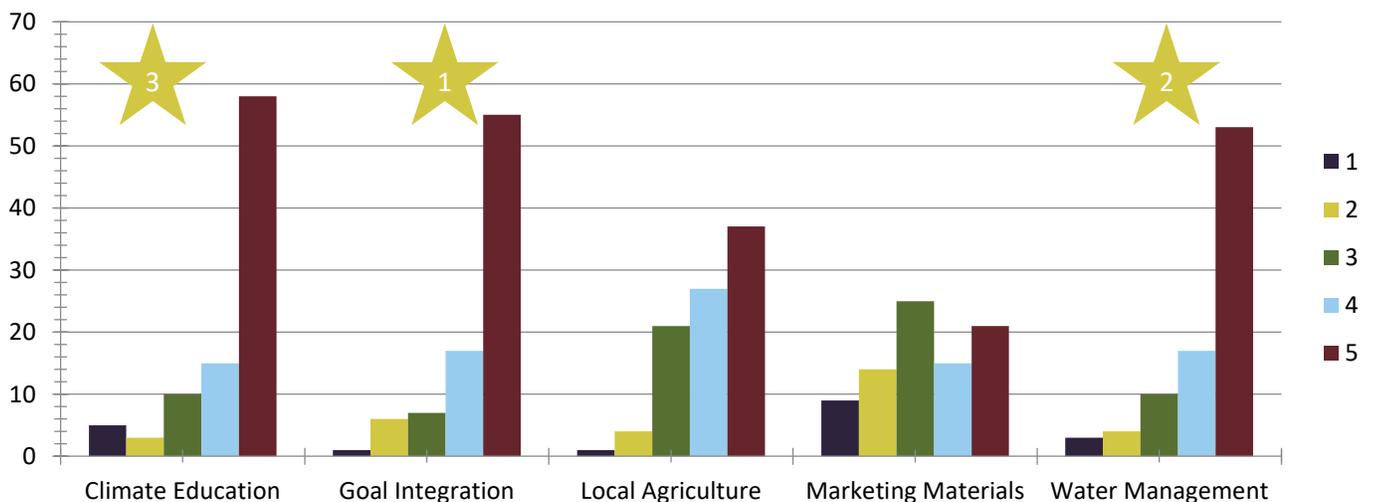


**Emergency Preparedness:** Prepare businesses and residents for the impacts of climate change through resiliency education.

**Infrastructure Assessment:** Conduct a threat assessment and security plan for Concord's infrastructure.

**PREPHub:** Secure funding for the implementation of an Emergency Preparedness Hub in Concord.

## Community Resilience



**Climate Education:** Implement climate education curriculum in schools.

**Goal Integration:** Continue to integrate sustainability goals into town planning, evaluations, and budgeting.

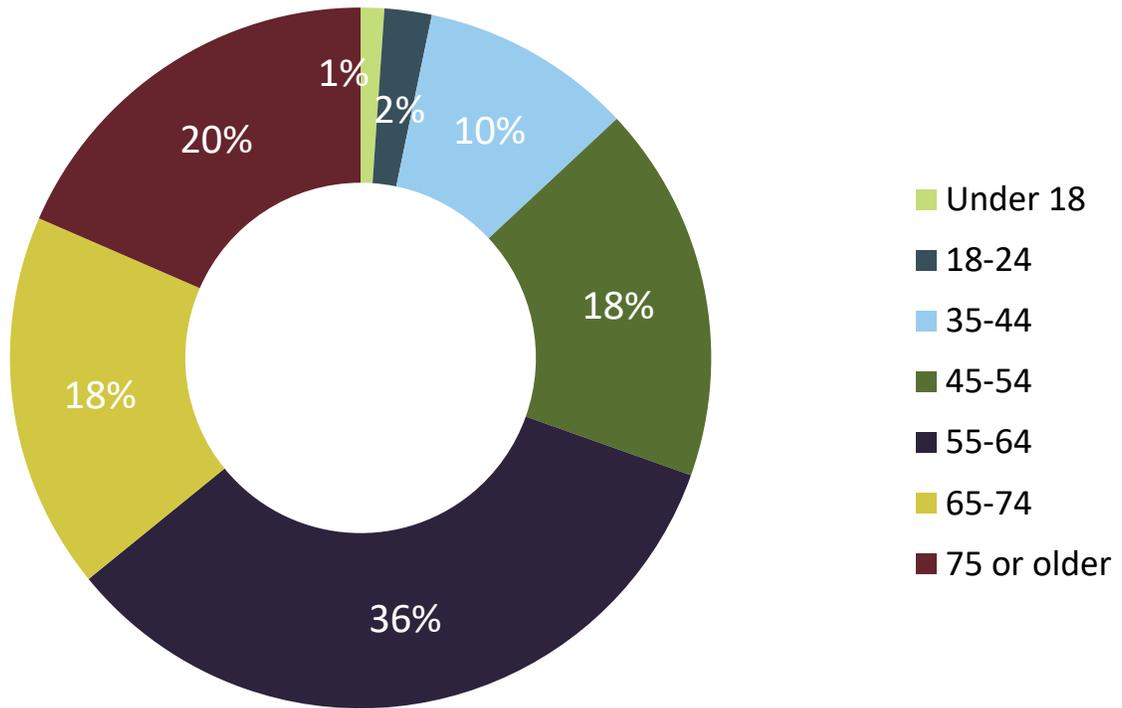
**Local Agriculture:** Promote agricultural products as a key component of Concord's economy.

**Marketing Materials:** Include information about Concord's commitment to sustainability in visitor and marketing materials.

**Water Management:** Develop a water resource management plan to ensure the health of the public and the environment.

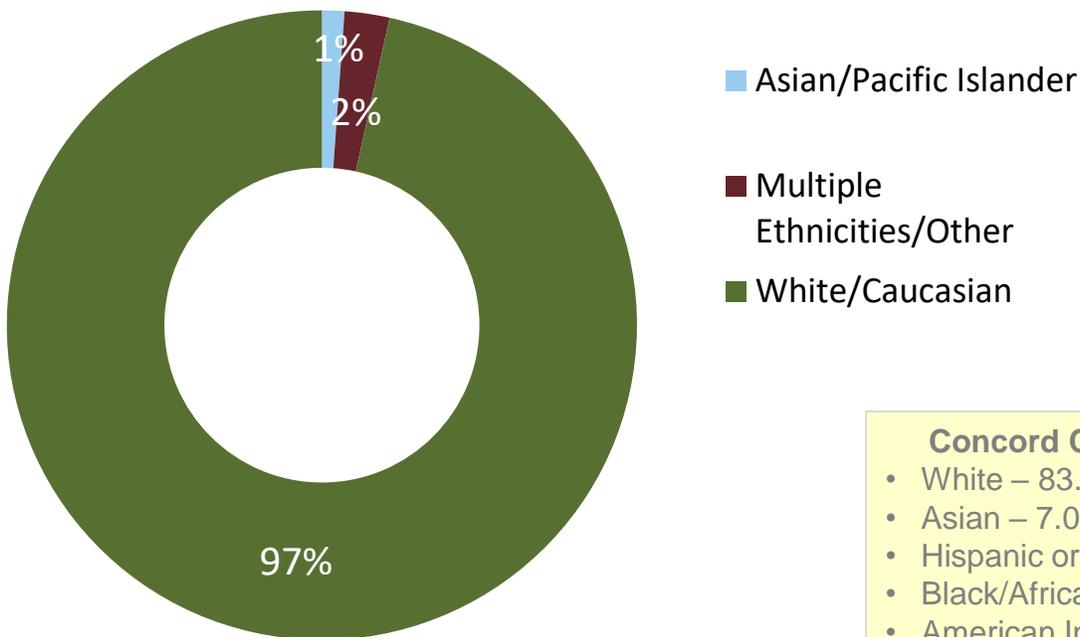
# SURVEY DEMOGRAPHICS

## Age of Participants\*



\* Based on the 92 people who reported their age on the survey.

## Race/Ethnicity of Participants\*



\* Based on the 87 people who reported their race on the survey.

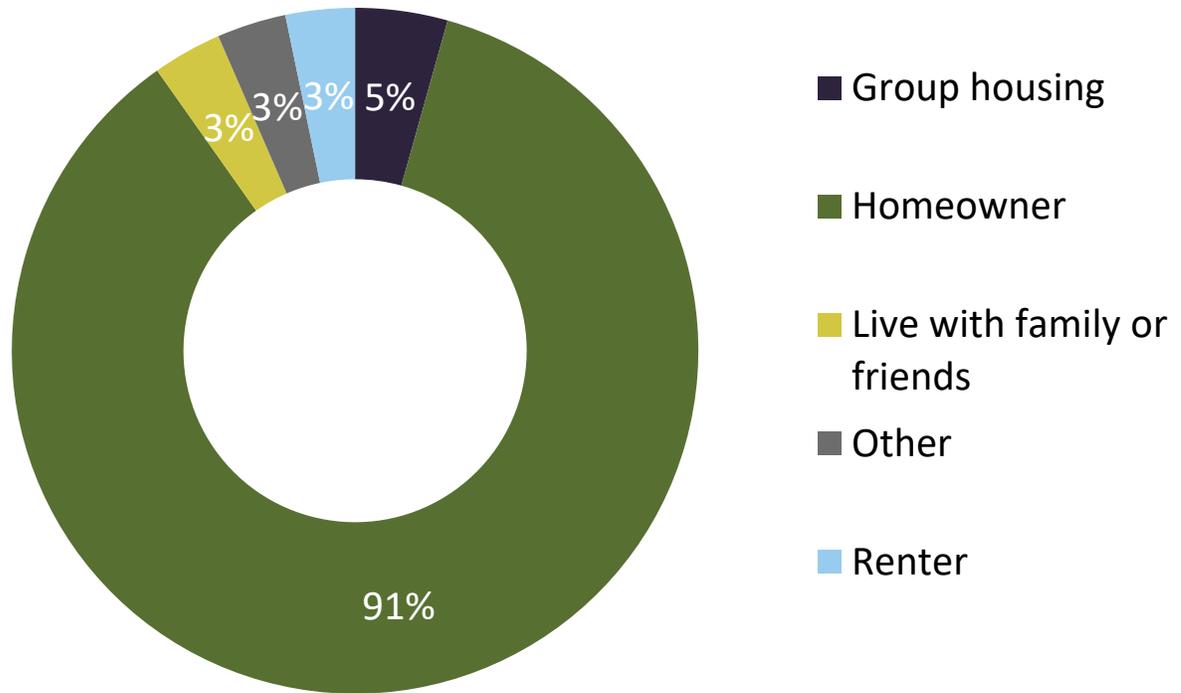
### Concord Community Profile

- White – 83.2%
- Asian – 7.0%
- Hispanic or Latino – 7.1%
- Black/African American- 4.0%
- American Indian – 0.0%
- Multiple Ethnicities- 2.7%

Source: 2017 American Community Survey

# SURVEY DEMOGRAPHICS

## Housing Status of Participants\*



\* Based on the 92 people who reported their housing status on the survey.

### 2014-2018 Concord Housing Tenure

- Owner-Occupied Housing- 75.1%
- Renter-Occupied Housing- 24.9%

Source: American Community Survey, 5-year estimates