CITY OF MINNETONKA
14600 Minnetonka Blvd. | Minnetonka, MN 55345 | 952-939-8200 | eminnetonka.com

To: Sustainability Commission

From: Drew Ingvalson, Associate Planner/Sustainability Coordinator

Date: Nov. 20, 2023

Subject: Change Memo for the Nov. 21st Sustainability Commission Agenda

---

ITEM 5B – Climate Action and Adaptation Plan (CAAP) Update

The attached are two DRAFT documents (Community Feedback and Strategies + Actions) that were received from the city's consultant, LHB, after the packet was completed.

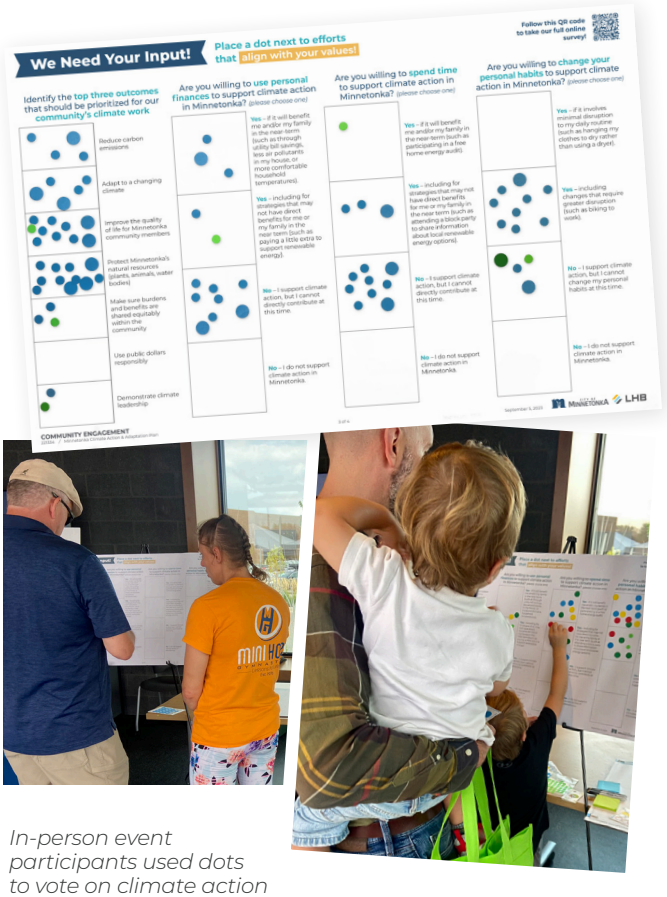
Community Feedback

The City of Minnetonka held several in-person and online engagement events across the Summer and Fall of 2023 to get community input on how climate action should be integrated throughout the city over the coming years.

In total, we received feedback from **around 850 participants**. Self-reported demographic input indicated that participants represented a similar age and race percentage as that of the entire City of Minnetonka. Summaries of each event can be found on the following pages.

In-Person Event Summary

Participants in these events were asked to provide input on what climate actions the City of Minnetonka should prioritize, as well as what their personal willingness was to take action regarding climate. Overall, in-person participants responded positively, indicating they would support climate action through their own finances, time, and habits. Their top priority for the city was to protect Minnetonka's natural resources, followed by reducing carbon emissions and improving the quality of life for residents.



In-person event participants used dots to vote on climate action willingness & priorities

Public Open House

A public open house was held in September of 2023. About 28 people participated in the open house exercises. The majority supported climate action and virtually all support adaptation to deal with storm events, heat, waste management, and impacts to Minnetonka's natural resources.

Those who supported climate action especially supported solar and increased use of electric vehicles, but those who opposed it particularly felt that these shifts were detrimental for economic or geopolitical reasons. There was strong support from nearly all participants for changes such as adaptive planting of native and drought resistant species, resilient infrastructure, assisting homeowners with making their houses more efficient, reducing waste hauling, composting, and public outreach.

Pop-Up Events

Three pop-up events were held over the summer of 2023 to meet people where they are and capture a different crowd than those who were able to attend the public open house. Two of the pop-up events were held at local apartment buildings (*Crown Ridge Apartments and The Preserve at Shady Oak*) to capture more input from Minnetonka's renter populations. A third pop-up event was held in conjunction with the City's "Everything Electric" event. Overall sentiment matched what was expressed during the public open house.

Focus Groups

Three Focus Group Meetings were held with select groups who represented unique viewpoints on the project process:

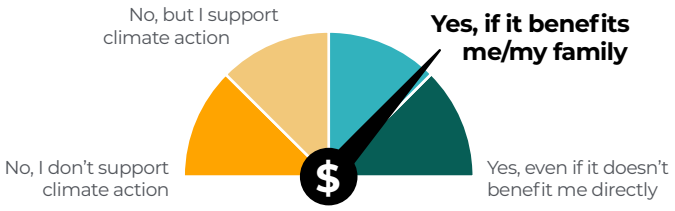
- Social service organizations, such as local food shelf, school district, and religious organization representatives met to provide insight into how this plan could impact folks they serve. They noted that low energy costs and accessible education are especially important.
- Local volunteers, primarily from the Friends of Minnetonka Parks, particularly noted the impact on plant and animal communities and the need to get more residents doing things like converting lawn to native plant communities.
- Various business owners and property managers talked about their current best practices and where they see opportunity to do more. They noted that budget and financing are particularly important to make change happen more quickly.

> **“ Love all the action already being taken—it’s time to be BOLD**

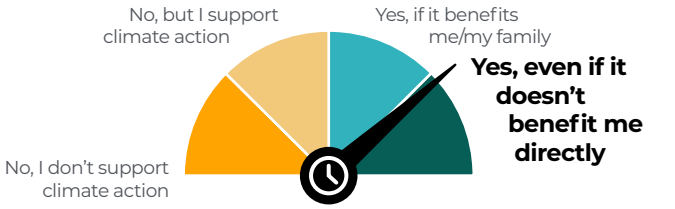
> **“ Although I care very much about the environment and protection of our resources, I don’t believe there is an immediate concern.**

> **“ Education is a first step. Keep the topic at the forefront and keep reminding folks that many people making one small change = big change.**

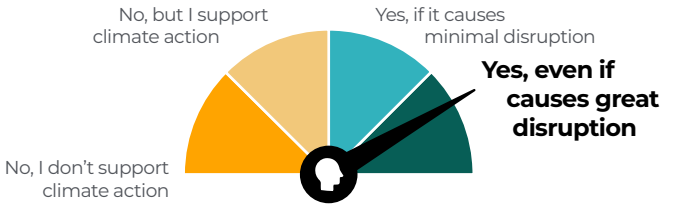
Willingness to **spend personal finances***



Willingness to **spend personal time***

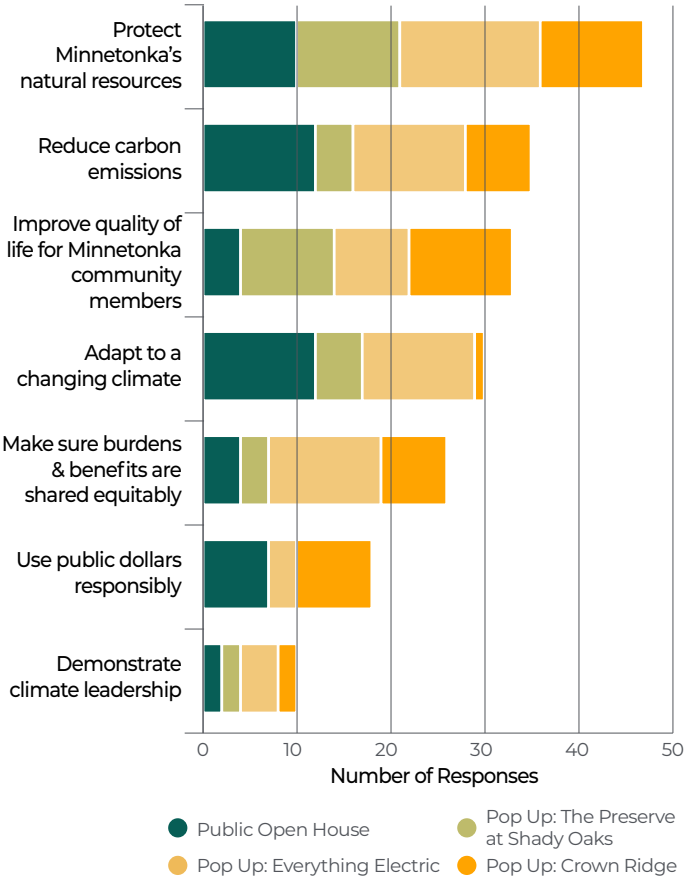


Willingness to **change personal habits***



*central dial marker denotes weighted average of responses

Community priorities for Minnetonka climate work



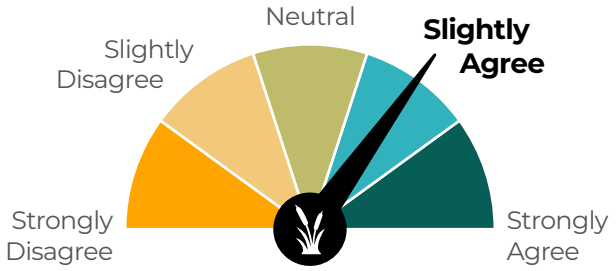
Online Survey Summary

An online survey was held between August and September of 2023. The online survey was promoted at apartment buildings (*The Preserve at Shady Oak, Crown Ridge, and Minnetonka Heights Apartments*), Williston Fitness Center, Shady Oak Beach, Ridgedale Library, and the Minnetonka Farmer's Market. The survey was received enthusiastically, gathering the opinions of **775 respondents**.

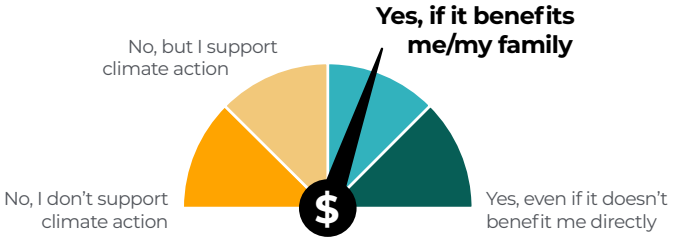
Overall, respondents generally expressed positivity and curiosity toward taking individual action and supporting city-led initiatives related to reducing greenhouse gas emissions and adapting to a changing climate.

Of respondents who left comments, around 15% were opposed to the city taking climate action of any kind and expressed that tax payer dollars should not be used for this effort.

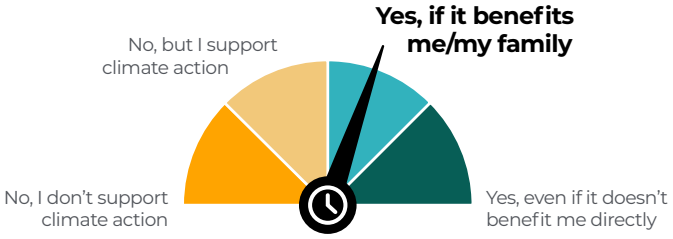
Minnetonka should set **ambitious goals** for greenhouse gas emissions reduction*



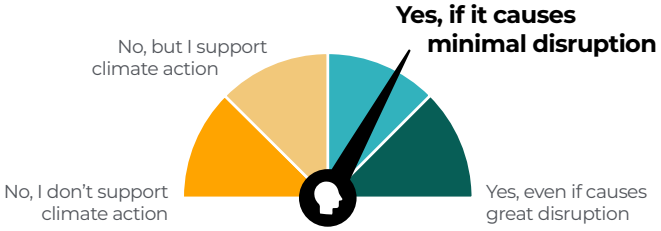
Willingness to **spend personal finances***



Willingness to **spend personal time***

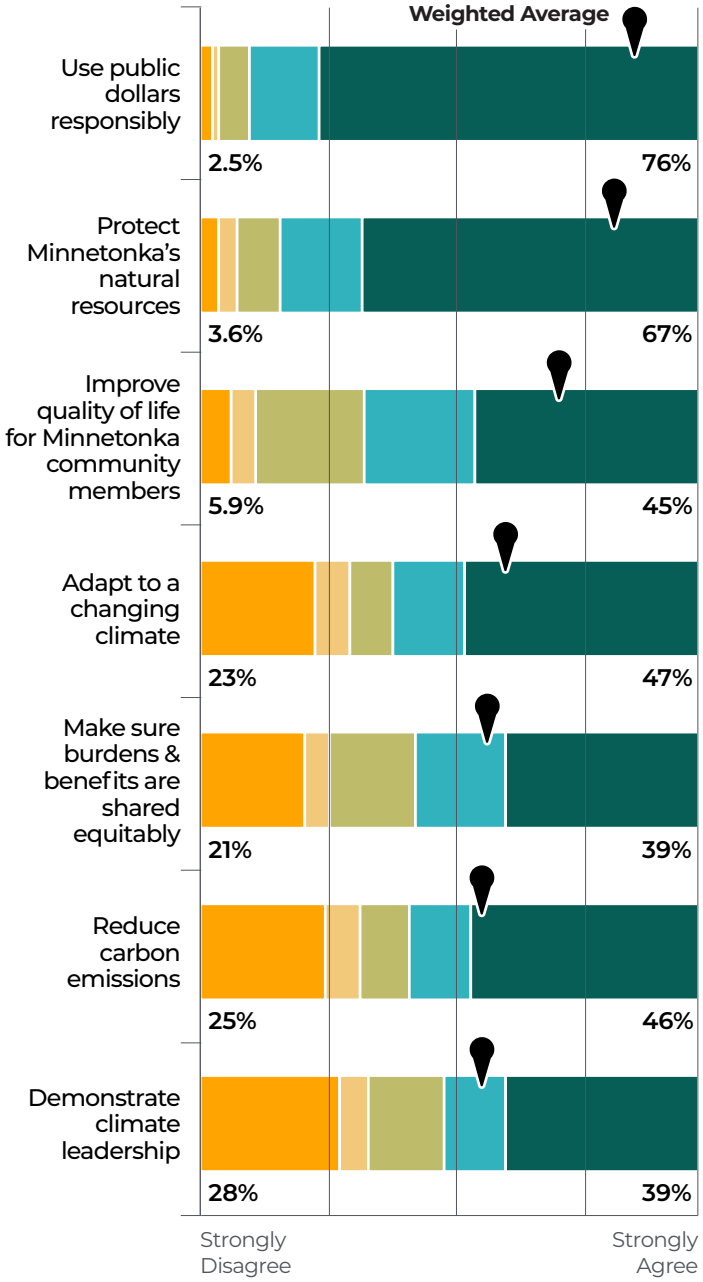


Willingness to **change personal habits***



*central dial marker denotes weighted average of responses

Community priorities for Minnetonka climate work



DRAFT

Climate change impacts respondents are most concerned about

- **Drought conditions affecting waterbodies**
- **Poor air quality impacting health**
- **Higher or prolonged heat impacting health**

Climate & weather conditions respondents are most concerned about

- **Prolonged drought**
- **Extreme heat events**
- **Severe weather events**

Respondents would like to see the **City prioritize the following strategies:**

Built Infrastructure Priorities

1. Increase **use of trees & vegetation** to help manage rainwater & reduce urban heat
2. Use **pavement options that are permeable** & reduce urban heat
3. Ensure roads, pipes, bridges, & culverts **can handle future weather**

Social Wellbeing Priorities

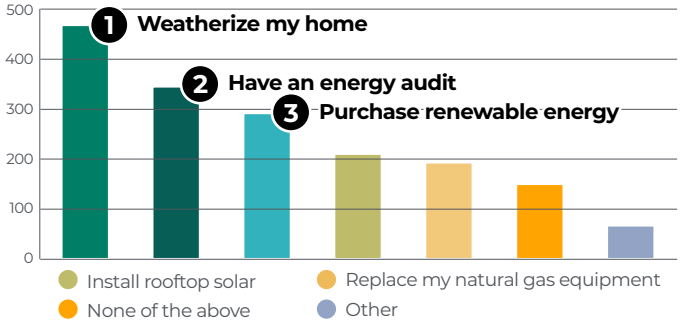
1. Meet **people's basic needs** (local food sources, housing, cooling options, etc.)
2. City **emergency response preparedness**
3. **Equitable benefits & outcomes** (economic, health, access)

Natural System Priorities

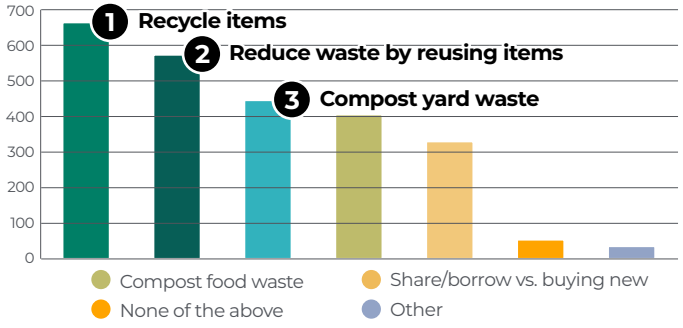
1. **Protect & manage water resources**
2. **Protect & restore plant & animal habitats**
3. Maintain & improve **health of natural areas** as conditions change **/ Replace traditonal turf grass** with diverse & pollinator friendly plantings

Respondents **have done, would do, or would like to learn more about** the following actions:

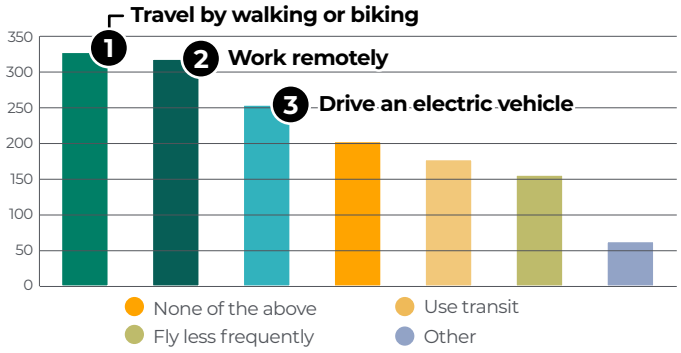
Actions related to **home energy**



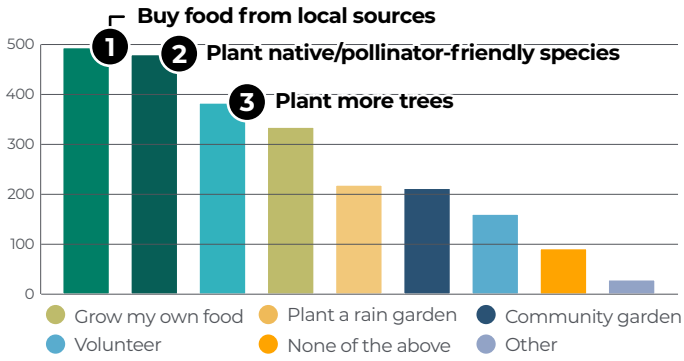
Actions related to **waste**



Actions related to **transit**



Actions related to **plants & food**



Strategies & Actions

Climate Friendly Homes

Home Emissions

Energy used in homes accounts for 26% of community wide GHG emissions in Minnetonka. The emissions come from the gas used for space and water heating as well as cooking, and the electricity used to run appliances and lighting. Fortunately, the electric grid is getting cleaner and will be completely free of GHG emissions by 2040, due to state law. Participating in renewable energy programs can help achieve a cleaner grid faster. Emissions from gas, however, are not getting cleaner and pose a threat to health due to indoor combustion. Reducing emissions from home energy use will help positively impact climate impacts, lower energy bills, and improve indoor air quality.

The primary strategies to reduce emissions in homes are to 1) use less energy through efficiency and conservation, 2) move from gas-fueled appliances to electric, and 3) participate in clean energy. Each strategy is described below, and specific actions can be found on the checklist at the end of this section.

Energy Efficiency/Conservation

The most cost-effective strategy to reduce emissions is to simply use less energy. This can be done by updating old appliances to higher efficiency technologies, turning off appliances that are not in use, using smart appliances and thermostats to conserve energy, and replacing light bulbs with high-efficiency LEDs.

- **Get a Home Energy Audit:** Energy professionals provide in-home visits to assess and recommend energy improvements that may include air sealing and insulation, more efficient appliances and lighting, as well as other energy improvements. They can provide a detailed plan, offer a list of qualified contractors, share financing options, and help navigate rebates and tax incentives.
- **Weatherize your home:** Home weatherization includes taking steps to improve the air sealing and insulation of your home. A properly weatherized home improves performance, comfort, and health of homes.
- **Upgrade appliances to higher efficiency models:** When updating appliances, look for the ENERGY STAR label to ensure efficient performance and save money on annual energy use.
- **Replace incandescent light bulbs with LEDs:** LED technology has changed home lighting. Residents can find lights with broad color temperatures, wide ranges of brightness, and smart features while using less than 10% of the energy it takes to operate a 100W bulb.
- **Install smart thermostats:** Smart thermostats automatically adjust heating and cooling based on occupation and humidity. They can also be controlled remotely to ensure your home is comfortable when you arrive.
- **Install low-flow showerheads and faucets:** Using less water helps to conserve water, but also reduce emissions by requiring less hot water heating.
- **Hang-dry laundry:** Drying laundry on a line or rack will help reduce energy use and contribute to longer-lasting clothes.

Electrification

Many homes in Minnetonka use gas furnaces and boilers, water heaters, clothes dryers, and cooking ranges. These appliances generate GHG emissions through the combustion of gas as well as the escaped methane from gas pipes and connections. In addition to GHG emissions, gas appliances also contribute to unhealthy indoor air quality and pose safety from leaks. Electrifying these appliances will reduce emissions and improve home safety. Homeowners can take advantage of multiple federal government rebates and tax credits for electrifying their home.

- **Electric panel upgrade:** Switching to all-electric appliances may put electric panels beyond their capacity. Upgrading panels to smart

Climate-Ready/Friendly Homes Action Checklist

click here or follow this QR code for more info!

Home Emissions

Energy Efficiency/Conservation

- ◯ Get a Home Energy Audit
- ◯ Weatherize your home
- ◯ Upgrade appliances to higher efficiency models
- ◯ Replace incandescent light bulbs with LEDs
- ◯ Install smart thermostats
- ◯ Install low-flow showerheads & faucets
- ◯ Hang-dry laundry

Electrification

- ◯ Electric panel upgrade
- ◯ Replace gas furnaces with a cold climate heat pump
- ◯ Install an electric clothes dryer
- ◯ Replace gas range with induction
- ◯ Replace gas water heater with a heat pump water heater
- ◯ Electrify yard tools (snow blower, lawn mower, etc.)

Clean Energy

- ◯ Install rooftop solar
- ◯ Subscribe to community solar gardens
- ◯ Participate in green power purchase programs

Travel Emissions

- ◯ Choose biking & walking
- ◯ Use tranist
- ◯ Reduce trips
- ◯ Purchase efficient vehicles
- ◯ Purchase electric vehicles

Waste Emissions

- ◯ Reduce
- ◯ Buy used
- ◯ Buy local
- ◯ Buy less
- ◯ Reuse what you have

Climate-Friendly Yards

Create & Protect Habitat

- ◯ Choose alternatives to traditional turf grass
- ◯ Plant pollinators
- ◯ Establish a rain garden
- ◯ Participate in Low Mow Spring
- ◯ Do not feed deer
- ◯ Plant new trees
- ◯ Take care of existing trees

Increase Drought Tolerance

- ◯ Follow local watering guielines/restrictions
- ◯ Install WaterSense sprinkler heads & irrigation controllers
- ◯ Install a rain barrel or cistern
- ◯ Choose native/drought-tolerant species

Climate-Ready Home

- ◯ Install a metal roof
- ◯ Install a lightning rod
- ◯ Prepare your yard for rain
- ◯ Plant your yard in strategic locations
- ◯ Be prepared for fire
- ◯ Add back-up power
- ◯ Purchase flood insurance
- ◯ Prepare when you leave the house
- ◯ Get connected
- ◯ Know your neighbors

Resources

+ Rewiring America Rebate and Tax Incentive Calculator
+ Energy Star Appliances
+ Home Energy Squad
+ Xcel Rebates
+ Resilient Minnetonka

> **"Would like to see more charging stations and more electric cars/lawnmowers/ leaf blowers. This will cut down on noise as well.**

> **"How can the City help me with the IRA credits & rebates**

panels can help increase capacity and reduce energy use through better load management.

- **Replace gas furnaces with a cold climate heat pump:** Air-source heat-pumps that are designed for cold climates can provide both heating and cooling needs for homes that have existing ducting. For homes with boilers, mini-split units can be installed for a ductless option.
- **Install an electric clothes dryer:** Electric clothes dryers can help reduce emissions by switching to a cleaner energy source. Look for **ENERGY STAR** models.
- **Replace gas range with induction:** Induction ranges provide greater control over temperatures, faster boiling, and are more efficient than gas stoves. Compared to electric coils, induction ranges are easy to clean and are safer with less surface area reaching a high temperature.
- **Replace gas water heater with a heat pump water heater:** Electric heat pump water heaters provide greater efficiency and can serve as thermal energy storage. Using smart meter technology, heat pump water heaters can use electricity to heat stored water during times of low energy demand and high renewable energy and keeping the water hot until it is ready to be used.
- **Electrify yard tools (***snow blower, lawn mower, etc.***):** Electric yard tools reduce noise, air, and soil pollution, while using a cleaner source of energy.

Clean Energy

Minnesota has a goal to achieve 100% carbon free electricity in the state by 2040. This goal can be achieved on a faster scale as more consumers participate in the clean energy transition. There are several ways to access clean energy and save money on utility bills.

- **Install rooftop solar:** For homes with a good solar resource, rooftop solar can be a great way to meet your electricity needs with clean energy while saving money. Tax incentives are available for up to 30% of system costs through 2033.
- **Subscribe to community solar gardens:** For homes that do not have a good solar resource, Minnesota has modified its community solar garden rules that will make it easier for residents to subscribe to a garden.
- **Participate in green power purchase programs:** Xcel Energy offers **Renewable*Connect Flex** for residents to participate in renewable energy without the need to install equipment.

Travel Emissions

Emissions from vehicle travel make up 44% of total community-wide emissions. These emissions are generated from tailpipes of cars, trucks, and other vehicles that use liquid fossil fuels (*e.g., gas, diesel*). Strategies to reduce emissions from travel include driving less or driving cleaner vehicles.

Drive less

The most effective strategy to reduce travel emissions is to drive less. Using low- or no-carbon methods to travel or avoid travel will help to reduce emissions and pollutants that contribute to poor air and water quality.

- **Choose biking and walking:** For shorter trips, consider biking or walking to destinations. For longer trips try electric bikes. Adding active transportation into your day can have many positive health benefits.
- **Use transit:** Explore transportation options for commuting, trips to sporting events or other entertainment trips. The light rail extension will

> **“ Better mass transit - I hate always having to use my car**

make trips into downtown Minneapolis more accessible for more people.

- **Reduce trips:** Fewer trips can be made by carpooling, combining errands, or telecommuting.

Drive cleaner

Traditional combustion vehicles not only emit greenhouse gases, but also generate particulates and other air pollutants. Using more efficient and cleaner vehicles can help reduce all pollutants, contributing to cleaner air and water.

- **Purchase efficient vehicles:** Personal vehicles have become larger and less efficient. In addition to generating more emissions per mile, large vehicles are unsafe for other road users like pedestrians and cyclists. Smaller, more efficient vehicles can help reduce emissions and take up less road space, creating a safer environment for all users.
- **Purchase electric vehicles:** Electric vehicles offer a cleaner alternative to traditional combustion vehicles. Ranges have and charging infrastructure have expanded greatly in the past several years and these vehicles are now a viable option to reduce GHG emissions and other pollutants.

Waste Emissions

Emissions from waste account for 2% of total emissions. However, this only accounts for emissions that are generated from waste disposal and not the emissions that result from the production of household goods. Strategies to reduce emissions from household waste are to 1) consume less, 2) source local goods, 3) reuse goods, and 4) recycle and compost.

Reduce

Reducing consumption of unnecessary goods and buying products that are sourced locally can help reduce emissions on the front end of a product’s life.

- **Buy used:** Many items are disposed of before the end of the of their useful lives. Used items can be purchased through online marketplaces, garage sales, and thrift stores. Many communities have “buy-nothing” groups on social media pages where participants can post items they are looking for or what they are trying to give away.
- **Buy local:** Replacing purchases of goods that are produced far away with locally-made or -grown goods reduces emissions from unnecessary travel and supports the local economy.
- **Buy Less:** Consider the need and on-going use of items before purchasing. Avoid single-use items.
- **Reuse what you have:** Many items are purchased and seldom used. Reuse or donate items that are in good condition before disposing of them.

> **“ If there were a community tool “library” that would enable us to check-out or use tools without buying.**

> **“ I recycle/donate what I can, but I’d like to know how to dispose of items responsibly... Is there a better option than throwing them in the garbage?**

Climate-Friendly Yards

Lawns are the single largest irrigated crop in the US, covering 40 million acres across the country. Re-thinking how all of this space is used, planted, and maintained has the potential to have a large impact. Traditional suburban yards are not only labor and resource-intensive, they also contribute to polluted rainwater runoff while failing to provide any ecological value for humans and animals alike. Exploring the implementation of more climate-friendly practices in your yard can lessen long-term costs, enhance natural habitat, reduce chemical-inputs and pollutants, and beautify your landscape. There are budget and maintenance considerations to implementing non-traditional strategies, but several financial and **educational resources** are available to help bridge any barriers. Ways to make your yard more climate-friendly are as follows:

> **"Please create more protections for trees on private properties! We've seen way too many people cut down perfectly healthy trees for absolutely no reason and it needs to stop.**

> **"More about the "how to" of planting a pollinator garden or a rain garden.**

Create & Protect Habitat

There are over 450 species of bees native to Minnesota alone, who, in combination with other pollinators like butterflies, moths, and certain birds, need native flowers to survive. There are many actions you can take in your yard to provide habitat and food to these essential species, while actually reducing the cost and labor needed to keep it looking healthy.

- **Choose Alternatives to Traditional Turf Grass:** Instead of having to frequently mow, irrigate, and fertilize at traditional turf grass yard, **explore alternatives** like bee lawn, low or no mow turf, perennial ground covers, or native prairie plantings. After these alternatives are established, the reduced maintenance needs allow for less energy consumption from power tools (*like lawn mowers*), less water consumption, and less rainwater run off while providing important habitat for pollinators and an aesthetically pleasing yard.
- **Plant pollinators:** Creating **beds of native pollinators** is a great way to establish habitat and is an action that can happen at multiple scales. According to Blue Thumb, a 10'x10' pocket plantings can be enough to provide pollinator habitat, while a pollinator meadow is the most beneficial choice for diversity.
- **Establish a rain garden:** Rain gardens not only create pollinator habitat, but also helps prevent rainwater than lands in your yard from running off, capturing pollutants as it crosses paved streets and sidewalks before entering your local lakes and streams. Instead, **implementing a rain garden** helps you capture that rainwater closer to where it lands and allows it to slowly infiltrate straight into the ground.
- **Participate in Low Mow Spring:** The beginning of the growing season is the most critical time for newly emerged native bees, and allowing your lawn to grow longer and letting plants flower provides important food and habitat resources for these young pollinators. Even **reducing your mowing** to once every two to three weeks during the spring season can help young pollinator species thrive.
- **Do not feed deer:** While they may be cute, they are very bad for native plant and animal communities. Feeding also makes deer dependent on humans for survival. Feeding them does not prevent them from eating your plants. Make sure bird feeders are out of reach of deer and do not feed them deliberately.
- **Plant new trees:** When planting new trees, it is important to do so properly to ensure they start off strong and have a long, healthy life. Keeping them watered during the growing season, particularly in the first 2-3 years of their lives, is very important for their survival. Take advantage of

City resources on **how to care for young trees** and the **annual tree and shrub sale**.

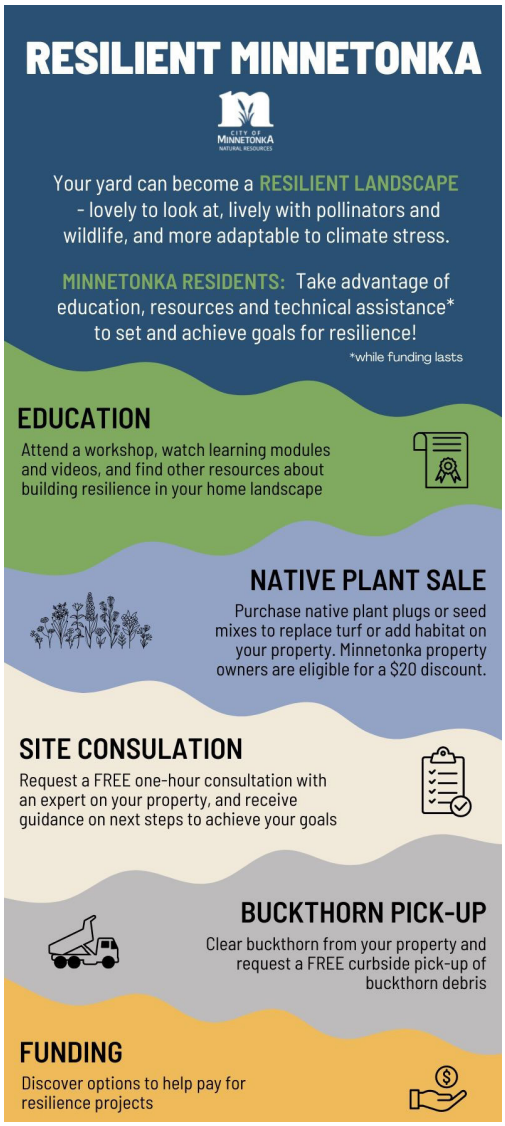
- **Take care of existing trees:** Providing mulch around the tree to maintain moisture and prevent weeds and pruning periodically to remove deadwood and improve airflow through the branches are both great ways to **keep your trees healthy**. If you have a healthy ash or elm tree on your property it is important to treat them for **emerald ash borer** or **Dutch elm disease** respectively.

Increase Drought Tolerance

According to the EPA, the largest water expenditure in a typical home is outdoor water use, and 50% of the water used for lawn/garden irrigation is wasted, in part, due to overwatering. Changing how we water lawns and using strategies that reduce water use in the first place to increase your home's drought tolerance can save homeowners both water and money.

- **Follow local watering guidelines/restrictions:** As the EPA states, timing is everything! It is important to know exactly how much water your lawn and landscaping needs and when before setting up irrigation practices. Most species only need one inch of water or less per week. The City of Minnetonka helps with this by outlining **lawn watering restrictions** that should be followed every year between May 1 and September 30. These strategies include avoiding watering midday and limiting days that watering can take place.
- **Install WaterSense sprinkler heads and irrigation controllers:** **WaterSense products** are EPA-certified, high-performaing products that use at least 20 percent less water than older products. The City of Minnetonka offers **residents rebates** of up to $200 per item for installing more water-efficient products.
- **Install a rain barrel or cistern:** Building or installing a pre-made **rain barrel or cistern** is an easy way to capture and collect rainwater on your property, creating a free source of non-potable water. Collected rainwater is a great alternative to potable water and can be used for irrigation or other outdoor water uses.

> **"More communication to residents about using water wisely & replacing turf grass with drought-resistant native grasses, plants, & trees.**



- **Choose native/drought-tolerant species:** One of the easiest ways to reduce water waste is to **select plant species** that are already adapted to our local climate. Species native to Minnesota have deep roots that can break up compacted soil and allow for more water infiltration into the ground, also making them more tolerant to drought conditions.

Climate-Ready Home

As global temperatures rise, we can expect more extremes in weather patterns. This can include drought as we've experienced in the recent summers, as well as heavy precipitation events that lead to flooding. Prolonged heat events and extreme storms can threaten our power systems and pose a risk to health and property. Preparing your home for such weather events can help increase community resilience.

- **Install a metal roof:** When replacing your roof consider a metal roof or other durable material that can stand up to hail and damaging winds. Metal roofs can also provide energy savings in the summer as compared to asphalt roofs due to their ability to reflect heat rather than absorb it.
- **Install a lightning rod:** lightning strikes are an increasing cause of house fires in Minnetonka. Consider a lightning rod to help reduce the risk.
- **Prepare your yard for rain:** Ensure that your yard slopes away from your house for at least 8-10 feet to help water move away from your foundation and protect your basement from flooding. If water remains an issue, consider installing draintile and/or a sump pump.
- **Plant your yard in strategic locations:** Plant evergreen trees/shrubs along the northwest exposure of your home to protect it from winter winds and plant deciduous trees and shrubs along the southern exposure of your home to protect it from summer sun while allowing heat gain during winter months. Both strategies effectively reduce home energy costs.
- **Be prepared for fire:** Keep your hydrant clear of snow and landscaping for easy access—it can help to put a post next to the hydrant so it easier to find after a big snow event. Keep landscape plants trimmed away from walls to prevent spread of fire.

> **"Updating home electric to move away from natural gas, low mow/pollinator yard, solar powered home generators for power outages**

- **Add back-up power:** During times of power outages, back-up power systems can help keep critical appliances operating. There is a growing number of options for battery back-up power from small power banks to whole-home systems. These power banks can be paired with solar energy systems to ensure clean power and an energy source that is available to recharge the battery.
- **Purchase flood insurance:** Heavy rains can cause localized flooding in areas throughout the community. Flood damage is not covered under standard homeowners' insurance. All Minnetonka residents are eligible to purchase flood insurance through FEMA's Nation Flood Insurance Program (*NFIP*). You might also consider a sewer backup rider on your insurance.
- **Prepare when you leave the house:** Have a car kit with safety items in every car. Dress appropriately when traveling so that you can get yourself to safety if you need to leave your vehicle or shelter within your vehicle. Check out ready.gov for more info.
- **Get connected:** Opt-in to receive emergency alerts from the city via email and Reverse 911.
- **Know your neighbors:** During times of disaster, neighbors can be a critical resource while emergency responders are tied up. Knowing who may need additional assistance or who has supplies to help those in need can help save lives and ensure safe recovery for all residents.

$ Climate-Friendly Businesses

Commercial/Industrial Building Emissions

Energy used in commercial and industrial buildings accounts for 28% of community wide GHG emissions in Minnetonka. While there is a wide variety of building types in the commercial and industrial sectors, generally emissions come from gas used for space and water heating, cooking, and processing. Additional emissions are dependent on the energy sources used to generate electricity. Since 2007, buildings energy emissions have dropped by 41%, driven largely by a 58% drop in emissions from electricity due to a combination of improved efficiency and cleaner sources for electricity generation.

The primary strategies to reduce emissions in businesses are to 1) use less energy through efficiency and conservation, 2) move from gas-fueled appliances to electric, and 3) participate in clean energy. Implementing these strategies can improve building performance and occupant comfort, while reducing operating costs. Each strategy is described below with supporting actions.

Efficiency/Conservation

The most cost-effective strategy to reduce building emissions is to use less energy. This can be done by installing more efficient technology and equipment, as well as adding controls that can moderate energy use based on occupancy.

- **Complete an energy assessment:** Energy assessments provide an analysis of energy use in commercial buildings and provide recommendations to improve building performance.
- **Benchmark building energy and water use:** Use free tools like Portfolio Manager to track energy and water use, as well as associated emissions. This will be required for all buildings greater than 50,000 square feet beginning June 2024.
- **Incorporate efficiency into building design:** Use utility resources to design new buildings to maximize energy efficiency.
- **Leverage financial incentives for improvements:** Many incentives are available through energy utilities, the federal government, and the Property Assessed Clean Energy Program. These incentives can help reduce costs through rebates, tax credits, and low-interest financing.

Electrification

Where feasible, replacing equipment that uses natural gas with electric options will help reduce emissions from energy used and often contribute to improved air quality.

- **Airsource heat pumps:** Smaller properties can consider cold-climate air-source heat-pumps for primary heating and cooling needs in existing buildings.
- **Ground source heat pumps:** Ground source heat pumps are a high-efficiency technology that utilizes the heat from the ground to provide space heating and cooling. These are best for new developments or large-scale renovations.
- **Heat pump water heaters:** Electric heat pump water heaters use ambient heat to water using a refrigerant-based system. These units use less than half the energy of electric resistance models.

Clean energy

Participating in clean energy can help accelerate the transition to a carbon-free electric grid.

- **On-site solar:** Assess rooftop solar resource potential for on-site solar options. Tax credits are available through 2033. Consider adding storage for back-up power or peak shaving.
- **Community solar gardens:** Community solar gardens work like virtual rooftop installations and can be a great alternative for buildings that don't have a good solar resource.
- **Virtual power purchase agreements:** Property owners with large electric loads may be interested in exploring alternative clean energy purchasing structures like VPPAs.
- **Renewable Energy Credits:** Purchase renewable energy credits that are additive to offset carbon emissions from energy use.

$ Climate-Friendly Businesses Action Checklist

click here or follow this QR code for more info!

Home Emissions

Energy Efficiency/Conservation

- ◯ Get a Home Energy Audit
- ◯ Weatherize your home
- ◯ Upgrade appliances to higher efficiency models
- ◯ Replace incandescent light bulbs with LEDs
- ◯ Install smart thermostats
- ◯ Install low-flow showerheads & faucets
- ◯ Hang-dry laundry

Electrification

- ◯ Electric panel upgrade
- ◯ Replace gas furnaces with a cold climate heat pump
- ◯ Install an electric clothes dryer
- ◯ Replace gas range with induction
- ◯ Replace gas water heater with a heat pump water heater
- ◯ Electrify yard tools (snow blower, lawn mower, etc.)

Clean Energy

- ◯ Install rooftop solar
- ◯ Subscribe to community solar gardens
- ◯ Participate in green power purchase programs

Travel Emissions

- ◯ Choose biking & walking
- ◯ Use transit
- ◯ Reduce trips
- ◯ Purchase efficient vehicles
- ◯ Purchase electric vehicles

Waste Emissions

- ◯ Reduce
- ◯ Buy used
- ◯ Buy local
- ◯ Buy less
- ◯ Reuse what you have

Climate-Friendly Yards

Create & Protect Habitat

- ◯ Choose alternatives to traditional turf grass
- ◯ Plant pollinators
- ◯ Establish a rain garden
- ◯ Participate in Low Mow Spring
- ◯ Do not feed deer
- ◯ Plant new trees
- ◯ Take care of existing trees

Increase Drought Tolerance

- ◯ Follow local watering guielines/restrictions
- ◯ Install WaterSense sprinkler heads & irrigation controllers
- ◯ Install a rain barrel or cistern
- ◯ Choose native/drought-tolerant species

Climate-Ready Home

- ◯ Install a metal roof
- ◯ Install a lightning rod
- ◯ Prepare your yard for rain
- ◯ Plant your yard in strategic locations
- ◯ Be prepared for fire
- ◯ Add back-up power
- ◯ Purchase flood insurance
- ◯ Prepare when you leave the house
- ◯ Get connected
- ◯ Know your neighbors

Resources

- + Rewiring America Rebate and Tax Incentive Calculator
- + Energy Star Appliances
- + Home Energy Squad
- + Xcel Rebates
- + Resilient Minnetonka

Travel Emissions

Travel emissions make up 44% of community-wide emissions. This includes all travel within the city boundaries. Commercial entities contribute to travel emissions via employee commutes and visitor trips. Emissions can be reduced from travel by 1) reducing trips from single-occupancy vehicles, 2) more efficient vehicles, and 3) electric vehicles. The following strategies can be used by Minnetonka businesses to help reduce overall travel emissions.

Employee commute

Many people travel to work in single-occupancy vehicles contributing to climate change and air pollution. Reducing this type of commute can result in many benefits that range from less impact on climate change and air pollution, to reduced need for paved surfaces and more active lifestyles.

- **Bike facilities:** Add secure bike storage and showering facilities to encourage employees to bike to work.
- **Telework:** Where appropriate, encourage or enable employees to work remotely at least one day a week.
- **Transit passes:** If near transit lines, offer free or subsidized transit passes as an employee perk.
- **Carpool:** Encourage or incentivize employees to carpool.
- **EV Charging:** Provide electric vehicle charging stations that are available to employees.

Visitor Travel

Visitors often arrive in single-occupancy vehicles. Providing additional options can help encourage visitors to use alternative transportation modes.

- **Bike parking:** Add quality bike parking outside businesses to enable cyclists to have secure and convenient parking options.
- **EV charging:** Provide public electric vehicle charging stations in locations where visitors' stay is longer than two hours.

Waste Emissions

Waste only accounts for 2% of total community-wide emissions. However, this only counts emissions that occur once goods are disposed of and does not consider the inputs that produce and transport those goods. Reducing emissions from waste involves 1) reducing waste 2) reusing products, and 3) recycling/composting as much as possible.

Reduce

Reducing waste will have the biggest impact on emissions that occur in the production and transport of goods. This means buying fewer single-use products in favor of multi-use alternatives.

- **Single-use plastics:** Where possible convert single use plastics to reusable, compostable, or recyclable items.
- **Sustainable purchasing:** Develop and implement a sustainability policy that prioritizes waste reduction and considers the life-cycle of large purchases.
- **Food waste:** Donate edible food through local food shelfs or similar programs.
- **Bulk purchases:** purchase commonly used items in bulk where possible to reduce packaging waste.

Reuse

Many items are disposed of prematurely when they could be reused or repurposed, keeping them out of the waste stream.

- **Donate:** Avoid disposing of goods that still have a useful life. Consider donating through local charities or online spaces.
- **Repair:** Before throwing away broken goods, try to repair or have them repaired. These items might also make good candidates for donations where they can be repaired by someone else.

Recycle/Compost

For remaining items, the best disposal options is to recycle goods and compost organic material.

- **Construction reclamation:** For large renovation projects, seek options to salvage building materials and donate or sell to hard-to-recycle facilities.
- **Back-of-house sorting:** Ensure that waste is properly disposed of by sorting materials before collection.

- **Commercial composting:** Use the city's recycling drop off facility for organic materials. Support efforts for commercial organics pick-up services.

Climate-Friendly Property

Private property makes up most of the land in Minnetonka. Leveraging improvements in these areas is crucial to reducing negative impacts like the urban heat island effect, loss of habitat, and so on. Changes can also increase the resilience of businesses in times of shock or increased risk. Some key actions include:

- **Reduce pavement:** Evaluate parking and driveway needs and eliminate unnecessary pavement. Consider replacing remaining pavement with permeable and/or lighter colored pavement options.
- **Beneficial planting:** Replace turf grass with native and hardy adapted plant species that provide more habitat value, help infiltrate stormwater, and take fewer inputs of water and gas. Get a free site consultation and other resources from the City of Minnetonka via Resilient Minnetonka and other resources.
- **Place your plantings strategically:** Plant evergreen trees/shrubs along the northwest exposure of your building to protect it from winter winds and plant deciduous trees and shrubs along the southern exposure of your building to protect it from summer sun while allowing heat gain during winter months. Both strategies effectively reduce building energy costs.
- **Plant new trees:** When planting new trees, it is important to do so properly to ensure they start off strong and have a long, healthy life. Keeping them watered during the growing season, particularly in the first 2-3 years of their lives, is very important for their survival. Take advantage of City resources on how to care for young trees and the annual tree and shrub sale.
- **Take care of existing trees:** Providing mulch around the tree to maintain moisture and prevent weeds and pruning periodically to remove deadwood and improve airflow through the branches are both great ways to keep your trees healthy. If you have a healthy ash or elm tree on your property it is important to treat them for emerald ash borer or Dutch elm disease respectively.
- **Green infrastructure:** Capture water running off roofs and paved surfaces in raingardens, bioswales, and similar systems that reduce runoff and flooding and create beautiful and functional site features.
- **Install a rain barrel or cistern:** Building or installing a pre-made rain barrel or cistern is an easy way to capture and collect rainwater on your property, creating a free source of non-potable water. Collected rainwater is a great alternative to potable water and can be used for irrigation or other outdoor water uses.
- **Follow local watering guidelines/restrictions:** As the EPA states, timing is everything! It is important to know exactly how much water your lawn and landscaping needs and when before setting up irrigation practices. Most species only need one inch of water or less per week. The City of Minnetonka helps with this by outlining lawn watering restrictions that should be followed every year between May 1 and September 30. These strategies include avoiding watering midday and limiting days that watering can take place.
- **Install WaterSense sprinkler heads and irrigation controllers:** WaterSense products are EPA-certified, high-performaing products that use at least 20 percent less water than older products. The City of Minnetonka offers residents rebates of up to $200 per item for installing more water-efficient products.
- **Climate-friendly roofs:** Traditional asphalt roofs generate excess ambient heat and are designed to shed water. Adding a white membrane can significantly reduce surrounding ambient air temperatures while keeping the building cooler. Green roofs can help manage stormwater, provide habitat, and create a pleasant space for gathering. Blue roofs are designed to capture and utilize stormwater.

Climate-Ready Businesses

Poor air quality days, power outages, and extreme weather can all disrupt daily activities. As these events

become more likely, it's important to take steps to ensure businesses are prepared.

- **Back-up power:** Power outages can be costly for many businesses, especially for goods that need refrigeration.
- **Prepare for shelter-in-place:** Have a plan for employees and visitors to shelter in place in case of imminent weather.
- **Offer shelter:** Consider providing shelter to those who may be stranded or displaced due to severe weather and/or long-term power outages.
- **Opt-in for emergency notifications:** The city offers a Reverse911 service in case of a community emergency or imminent weather.
- **Communicate closures:** Use social media or other tools to alert potential customers of closures due to weather to prevent unnecessary or unsafe trips

Climate-Ready/Friendly Minnetonka

In addition to actions being taken by individuals and businesses, the city can drive further reductions in greenhouse gas emissions and accelerate adaptation through city operations and functions. The primary tools available to city governments include:

- **Leading through City Operations:** reducing emissions across city operations and incorporating resilience into public infrastructure, natural resource projects, and city events.
- **Education and Engagement:** equipping residents and businesses with the information and tools needed to make climate-conscious decisions.
- **Incentives:** offering financial or regulatory incentives to encourage climate-friendly practices.
- **Policies:** Developing policy and regulation that enables climate action.
- **Budget:** The city can apply a climate lens to standard budget decisions as well as identify revenue sources to support expanded climate action.

This section focuses on these tools and various strategies that can be deployed to achieve the city's climate goals.

Leadership through City Operations

Establish GHG emissions reduction goals for city operations and track progress

Set GHG reduction goals for city-owned facilities and vehicles that support the community-wide goals. Update the city operations GHG inventory every three years to evaluate progress and modify the planned strategies as needed.

Establish a resilience goal

Identify what it means for the city to be resilient, what metrics are needed, and how to track progress toward achieving that goal.

Buildings

- **Require new city facilities to meet Minnesota's SB 2030 Energy Standard.** Ensure that new facilities are designed to generate minimal GHGs from operational energy use by requiring compliance with Minnesota's SB 2030 program.
- **Ensure energy-efficient operations at city facilities.** Continue tracking monthly energy use to identify potential energy waste and implementing no- and low-cost measures to improve energy efficiency within the city's facilities and water system.
- **Invest in facility improvements that reduce energy consumption.** Continue to conduct energy assessments of the city's facilities and water systems and invest in improvements that reduce energy consumption.
- **Create a plan to electrify city-owned facilities by 2040.** Identify all fossil fuel equipment currently in use and establish a timeline for equipment replacement. Evaluate the potential for a centralized, all-electric heating and cooling system. Establish strategies to improve resilience, such as energy generation and storage at key facilities.
- **Continue to support renewable energy.** Support the statewide transition to carbon-free electricity by 2040 by continuing to participate in community solar programs and installing solar energy systems on city properties.

Fleet

- **Create a decarbonization plan for city-owned vehicles and mobile equipment.** Based on the city's current fleet, vehicle requirements, route lengths, and service priorities, evaluate low-carbon alternatives for all fleet vehicles and mobile equipment (*e.g., mowers, snow removal equipment*). Establish criteria and a targeted timeline for switching over to these alternatives and plan for any additional infrastructure, training, and operational changes that may be needed.

Natural resources

- **Reinforce and fund strategies developed in the NRMP, especially:**
  - Budget for increased invasive and pest species monitoring and management, including deer management.

- Model best practices on city-owned land. This has started with park property, but other city properties and street rights-of-way also present opportunity for improvement.
- Invest in construction and maintenance of green infrastructure on both public and private property.
- Enhanced communication and cooperation between city departments.
- Inventory wetlands and other natural resources. Wetland inventories are particularly outdated.
- Increase budget for inspection and maintenance of existing and proposed green infrastructure.

Public Infrastructure

We haven't seen Public Works' assessment of infrastructure assessment, which is crucial to developing this item.

+ **Capital Improvement Plan.** Incorporate and prioritize mitigation and resilience efforts into the capital improvement plan based on infrastructure assessment.

Preparedness

+ **Modify several public buildings to serve as resilience hubs.** Community centers and/or park buildings (*maybe Williston*) could do more to function as safe spaces during weather events, but they need back-up power and other modifications.
+ **Develop a response plan for large windfall events.** This likely involves partnerships and advanced planning.
+ **Plan for increasing waste stream from trees dying from disease or storms.** Research and partnerships are needed to ensure that wood waste is diverted for reuse, biochar, biologs, and other secondary uses.
+ **Continue to address flood planning.** Plan for eventual update to Atlas 15 flood modeling.
+ **Invest in more first responder gear and training for extreme climate events, especially focused on cross-departmental coordination during multiple emergencies.**

Education & Engagement

+ **Add tools and resources to the Minnetonka website for residents.** Ensure residents can get up-to-date information about what to do in their homes and yards to support climate action. Topics may include:
  - Federal and state tax incentives and rebates for home efficiency, electrification, clean energy technologies, electric vehicles, and electric bikes.
  - Resources for home energy audits
  - Community solar garden subscriptions
  - Connect to Resilient Minnetonka for climate-friendly yard tips
  - Disaster preparedness
  - Alternative and active transportation options
+ **Add tools and resources to the Minnetonka website for businesses.** Create a one-stop-shop for businesses to look for resources to implement climate-friendly actions. Include resources for:
  - Property Assessed Clean Energy Financing

> **"Curbside composting & especially supports to aid residents in condos or rental units for on site recycling & composting**

> **"A one stop website to learn about Minnetonka's plan climate action, current initiatives underway by the city, and resources/links/tools for citizens all in one place.**

> **"I would like to see the city become more proactive in encouraging local businesses to put solar on their many roof areas.**

- Tax credits and utility rebates for clean energy
- Community solar garden subscriptions
- Climate-friendly landscaping practices that reduce urban heat and offer stormwater benefits
- Sustainable waste management options
- Deconstruction practices rather than demolition

+ **Host informational workshops.** Many residents report a desire for more educational opportunities to learn what they can do to reduce emissions and adapt to climate change. Host workshops on the following topics:
  - Solar bulk buys can help reduce costs, streamline installation, and garner better warranties.
  - Ride and drive events can help people experience electric vehicles and bikes
  - Partner with local businesses to host workshops on native plantings and turf conversions
  - Apartment composting methods and options
+ **Include regular climate action news in the Minnetonka Memo.** Utilize the city's communication channel to feature residents who have taken climate action and provide information on available incentives and best practices. Share stories from the city's implementation of sustainability and resilience strategies to inform and inspire community action.
+ **Add more residents to sign up for city alerts.** Conduct an outreach campaign to sign more residents up for city emails, newsletters, social media, and Reverse 911 to receive timely updates.
+ **Create a business recognition program.** Launch an annual program that highlights businesses that are leading on climate mitigation and adaptation efforts.

Incentives

+ **Create commercial property depaving program.** Provide incentives for green infrastructure, tree planting, depaving and similar projects have multiple environmental benefits.

> **"Give incentives to large companies to replace their large lawns with native grasses and pollinator plantings. No need for all the fertilizer and mowing!**

> **"Provide incentives for solar and wind use such as credit toward a community class or tree and plant sales for everyone**

+ **Offer incentives to residents for climate-friendly yards.** Financial incentives can help residents choose landscaping that provides habitat and stormwater benefits. Incentives might include:
  - Pollinator and native plants as options through the city's tree sales
  - Free or reduced cost rain barrels, WaterSense sprinkler heads
  - Stormwater credit for rain gardens or other stormwater management practices
+ **Implement a green cost-share program.** Several cities in the west metro have cost-share programs for residents and businesses that are intended to reduce the upfront costs of efficient or electric appliances, clean energy, storage, and electric bikes.

Policies & Programs

+ **Complete green streets.** Apply a complete green streets policy to all major street renovations that prioritizes the non-vehicular user experience, as allowable by public right-of-way and narrow streets.
+ **Biking and walking.** Accelerate implementation of bicycle and walking strategies included in the city's Comprehensive Plan.
+ **Sustainable Buildings.** Develop and adopt a sustainable building policy for new developments that receive city incentives.

- **Energy code.** Continue to enforce energy code requirements for new buildings. Get additional training and/or outside support for this as the codes require higher levels of efficiency.
- **EV charging placement.** Develop standards for EV parking in indoor garages that consider fire department access.
- **Zero Waste.** Support initiatives included in Hennepin County's Zero Waste plan.
- **Land use and zoning.** Ensure land use and zoning requirements reduce the need for vehicle trips.
- **Sustainable purchasing.** Evaluate the outcomes of the city's sustainable purchasing policy and – if needed – make modifications to maximize impact.
- **Capital investment criteria.** Develop purchasing criteria for the city's capital investments that prioritize energy efficiency and electrification.
- **Planting guidelines.** Develop a policy and recommendations related to native, near-native, climate adapted, and migration assisted plants.
- **Align protective ordinances.** Update ordinances concurrently to coordinate approaches to buffers, shoreland, steep slope protection, pollinator habitat requirements in plantings plans, tree protection, and conservation of open space.
- **Create standards.** Develop city standard details and specifications for city-funded and planned unit development construction projects to ensure best practices are used consistently.