

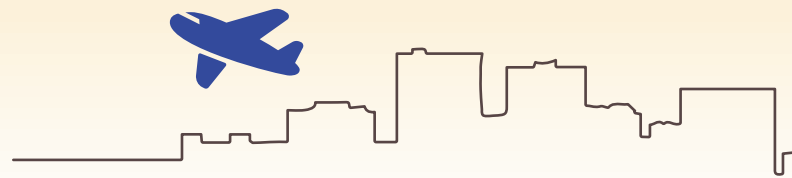
# Municipality of Anchorage Climate Action Strategy

A Strategy for Good Stewardship, Good Management, and Effective Preparation for an Efficient and Self-Sufficient City

The Climate Action Plan launches us toward our key goals:

## Accelerate Our Economy

Reduce costs and increase jobs



## Steward Our Resources

Take care of the place we live



## Prepare Our City

Build a ready and resilient city



## Engage Our Residents

Involve all Anchorage residents in taking action



# Taking Action

The Municipality of Anchorage (MOA) Climate Action Strategy shows how the MOA will implement the Anchorage Climate Action Plan, a foundational document developed through a partnership between the MOA and the University of Alaska Anchorage. Actions in the MOA Climate Action Strategy are derived from the Anchorage Climate Action Plan.

We are taking action across seven sectors:

**BUILDINGS + ENERGY** 

**LAND USE + TRANSPORTATION** 

**CONSUMPTION + SOLID WASTE** 

**HEALTH + EMERGENCY PREPAREDNESS** 

**FOOD SYSTEMS** 

**URBAN FOREST + WATERSHEDS** 

**OUTREACH + EDUCATION** 

## Top Priorities

The Municipality has prioritized the following strategies to meet our goals:

1. Continue upgrading street and trail lights to high-efficiency LEDs.
2. Improve energy and water efficiency in municipal facilities.
3. Expand local renewable energy generation and use.
4. Increase opportunities for residents and businesses to implement clean energy technology.
5. Reduce the number of vehicle trips by offering alternatives for getting around by walking, biking, carpooling, and taking public transit.
6. Support infrastructure for electric vehicles.
7. Increase waste diversion.
8. Capture more potential energy in collected refuse.
9. Protect forest, wetlands, waterways and urban green spaces.
10. Prepare for and respond to increased risk of wildfires and other health and safety impacts of climate change.
11. Conduct a financial analysis to assess and plan for the cost of climate actions.
12. Evaluate life-cycle costs in planning and procurement.

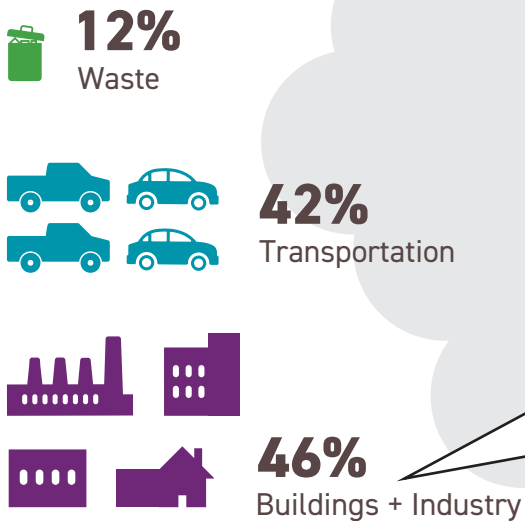


# Why Do We Need Climate Action?

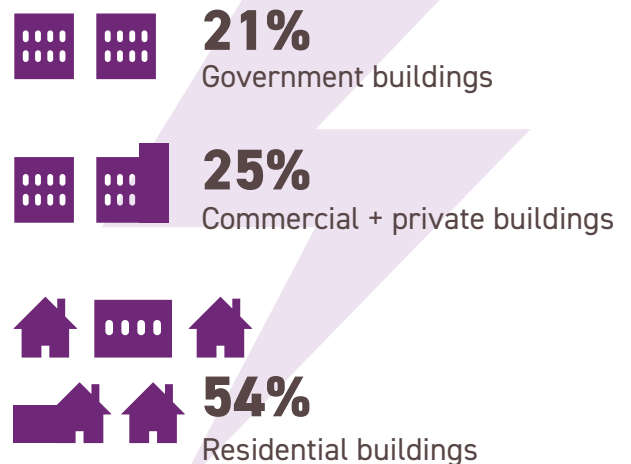
Climate change poses threats to our infrastructure, public health, and wellbeing. Responsible initiatives can reduce costs and reduce risks. Alaska's temperatures are increasing twice as fast as those in the Lower 48. Anchorage has the opportunity to be a good steward of our home and resources by reducing emissions, preparing for a changing climate, and creating a more vibrant community.

Human activities have been the main driver of climate change. In particular, greenhouse gas emissions from burning of fossil fuels have formed a heat-trapping "blanket" around the Earth, driving disruptive warming.

## Where Do Our Emissions Come From?

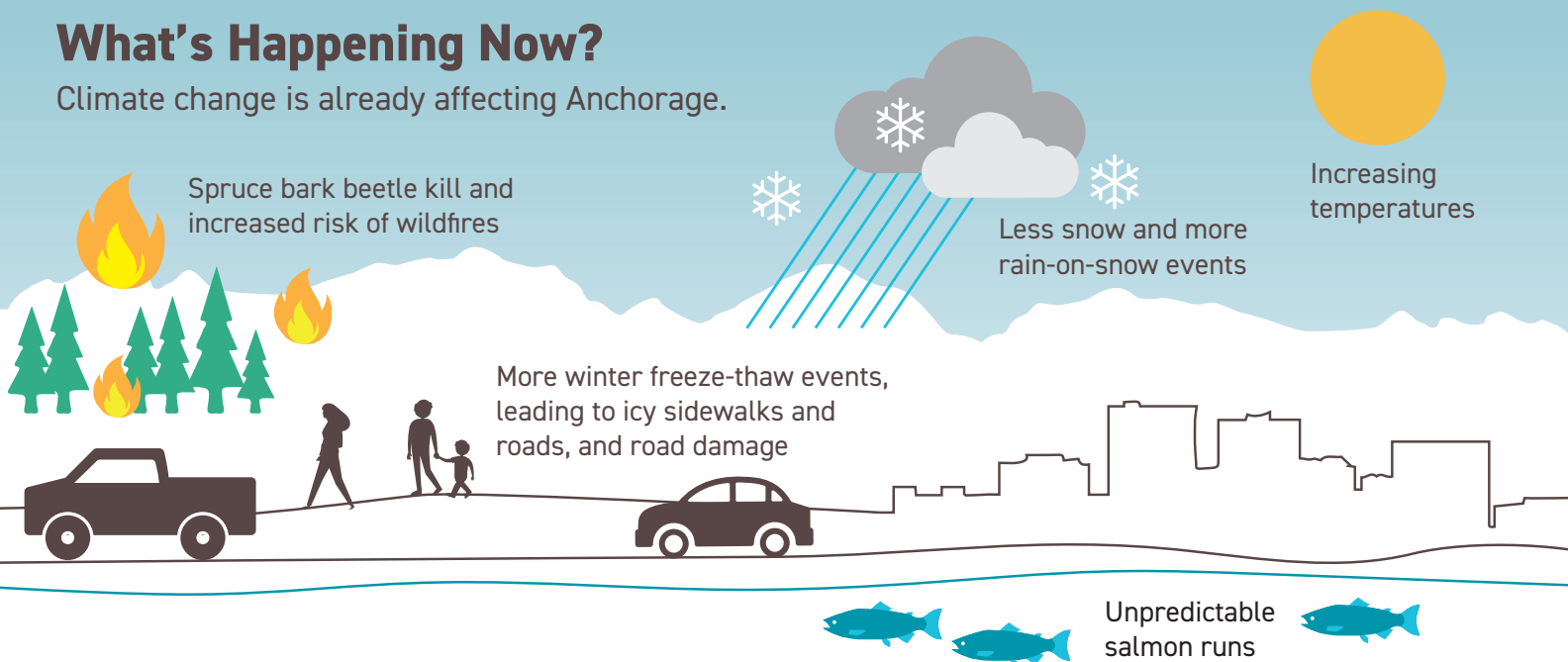


## Who Uses Electricity and Heat in Anchorage?



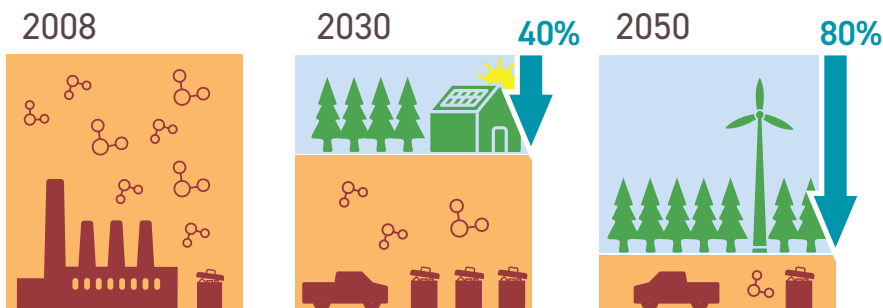
## What's Happening Now?

Climate change is already affecting Anchorage.



# How Do We Measure Success?

**GOAL:** Anchorage will eliminate 80% of greenhouse gas emissions by 2050.



## Municipal Indicators

We will measure the impact we are having on our goal as we take climate action. Most actions to reduce our emissions fall under three categories: Energy, Transportation and Waste. The Municipality's climate action dashboard will allow everyone to see the progress we are making. The indicators below help track the Municipality's progress. In the future, the dashboard will include additional indicators that track community progress.

### ENERGY

1. Dollars saved
2. Renewable energy generated
3. Facilities retrofitted to increase efficiency
4. Outdoor lighting converted to LEDs

### TRANSPORTATION

1. Miles of bike and pedestrian infrastructure added
2. Public transit ridership increased
3. Electric vehicles in the Municipal fleet

### WASTE

1. Waste converted to energy
2. Waste diverted to compost
3. Waste diverted to recycling

## Reducing Emissions Is Good Business

Reducing greenhouse gas emissions makes our businesses more efficient and competitive and saves residents money.

Energy efficiency and renewable energy technology is readily available today to help reduce our energy use and save money.

- Businesses in Anchorage can save approximately \$40 million per year on energy bills, which makes businesses more competitive and keeps money in the local economy.
- LED lights use 85% less electricity than incandescent bulbs and last much longer. Anchorage homes can reduce electric use by switching to LED bulbs for a 2.5 year payback.
- Home and business energy upgrades not only save money on bills, but also create jobs.
- The cost of installing solar has dropped 258% since 2010.

**“Investing in energy efficiency is not about the environment or being green; this is about reducing overhead costs and making Alaska businesses more competitive.”**

- Eric McCallum, local business owner

# BUILDINGS + ENERGY

**GOAL: Optimize energy use in MOA facilities to save energy and money and work with private residential and commercial building owners to support safe, healthy, and affordable buildings.**

## Early Achievements

Retrofitting 12,000 Anchorage streetlights with LEDs saves an estimated \$780,000 annually.

Anchorage homes have reduced energy use more than 20% from 2010 to 2018 with more efficient homes and appliances.

Since 2010, the installed capacity of small scale solar and wind energy systems have increased by an average of 45% each year.

### **1 Improve energy efficiency in Municipally owned and operated facilities.**

- a. Continue to change out street and trail lights to LEDs.
- b. Invest in cost-effective energy efficiency measures for new and existing buildings, such as the new solid waste disposal facility. Develop an energy and water use guide for Municipal employees.

### **2 Establish a municipal level renewable energy and energy efficiency target.**

- a. Develop a municipal policy and procedure to consider life-cycle costs in planning and procurement.
- b. Implement municipal clean energy opportunities such as those outlined in the 2017 Anchorage Energy Landscape and Opportunities Analysis.
- c. Install renewable energy systems on MOA property, such as the 75 kW solar project on Egan Center, the 9.3 kW solar project on Fire Station 10, and the 50 kW solar project at the Anchorage Regional Landfill.
- d. Develop third party financing models for clean energy projects.

### **3 Increase opportunities for residents and businesses to implement clean energy technology.**

- a. Establish a Commercial Property Assessed Clean Energy (C-PACE) program to finance energy efficiency and renewable energy measures in commercial properties.
- b. Establish energy codes that increase the efficiency of all new buildings.
- c. Analyze feasibility of creating an Anchorage or State Green Bank to help leverage private investment for clean energy.
- d. Identify and reduce barriers to installing solar on homes and businesses.





# LAND USE + TRANSPORTATION

**GOAL: Improve walkability and connect neighborhoods that employ mixed-use development and diverse transportation options.**

## Early Achievements

Anchorage Metropolitan Area Transportation Solutions (AMATS), adopted a “Complete Streets” policy in 2018 to expand the focus of streets from cars alone to all users, including pedestrians, cyclists, and transit riders. The Spenard Corridor is the first major Complete Streets project.

The Anchorage 2040 Comprehensive Plan and land use map provides a roadmap for efficient and sustainable community development. Implementation of the plan is through the adoption of ordinances that allow and promote infill, redevelopment, and mixed-use development.

- 1 Promote land use planning that minimizes the distance people have to travel by car and increases community resiliency.**
  - a. Consistent with the 2040 Land Use Plan, continue to promote infill development, redevelopment, and mixed-use development.
  - b. Adopt a Complete Streets policy for all MOA transportation improvement projects to parallel the AMATS Complete Streets Policy.
  - c. Increase capacity of the Maintenance & Operations Department to address changing winter weather conditions, including rain on snow events.
- 2 Increase use of public transit and non-motorized transportation.**
  - a. Develop a Short-Range Transit Plan to expand frequency, connectivity, and coverage of the public transportation system.
  - b. Increase public transit commuter options between the Mat-Su Valley and Anchorage.
  - c. Fund and implement policies and projects recommended by the Anchorage Non-Motorized Plan, such as secure bike storage options.
  - d. Promote the use of transportation modes other than single-occupancy vehicles (e.g., creating a Bus to Work Day, expanding Bike to Work Day).
- 3 Promote the use of energy-efficient vehicles.**
  - a. Inventory the municipal fleet and incorporate electric vehicles through right-timing purchases with a planned vehicle-replacement schedule.
  - b. Work with utilities, city and borough planners, and other stakeholders to develop and implement a Regional Electric Vehicle Charging Plan.
- 4 Establish proactive planning approaches that incorporate climate change.**
  - a. Incorporate climate projections (e.g., precipitation, temperature, flooding) in transportation, hazard mitigation, and development planning.
  - b. Map wildland-urban interface area and adopt appropriate guidelines to ensure safety of residents and property.
  - c. Increase GIS capacity in order to analyze environmental data in relation to planning matters that may be impacted by climate change.



# CONSUMPTION + SOLID WASTE

**GOAL: Develop an efficient and innovative solid waste management system that promotes sustainable consumption, recycling, and waste reduction.**

## Early Achievements

Collection of compostable material has more than doubled between 2017-2018 with curbside organics collection and additional drop off sites.

In 2017, the Municipality produced enough energy to power the equivalent of 6,400 homes through its landfill gas to energy project.

### **1 Increase diversion of waste from the Landfill.**

- a. Develop more recycling programs and expand education and outreach efforts, including options for multi-family residences.
- b. Increase composting through expanding the curbside organics program, community composting, and education programs.
- c. Enact waste reduction and diversion policies within the MOA, aligned with zero-waste practices.

### **2 Capture more potential energy in collected refuse.**

- a. Implement additional means of energy collection from solid waste such as organics digestion, mass burn, and landfill gas to energy expansion.
- b. Develop leachate evaporator with excess landfill methane to reduce leachate hauling.

### **3 Deploy electric and alternative fueled vehicles used in solid waste collection and disposal.**

### **4 Expand diversion opportunities for Anchorage by building a new waste disposal facility.**

- a. Increase diversion opportunities by creating new off-loading areas for different material types (e.g., food scraps, yard trimmings, recycling).

# HEALTH + EMERGENCY PREPAREDNESS

**GOAL: Ensure preparedness and adaptability at household, neighborhood, and municipal levels to equitably improve health and safety.**

## **Early Achievements**

The Office of Emergency Management translates key emergency preparedness documents into Anchorage's most spoken languages.

The Anchorage Health Department is expanding outreach into limited English proficient communities to increase access to health care.

- 1 Reduce risks to health and safety created by ongoing climate impacts.**
  - a. Improve household wildfire mitigation efforts by supporting a full-time Forester position in the Fire Department and expanding the Firewise Program to help homeowners implement recommendations in the Firewise Manual.
  - b. Identify and develop key secondary access routes for emergency response and evacuation in the Hillside, Girdwood, and Eagle River areas.
  - c. Ensure safe drinking water supply by continuing assessments of drinking water requirements that incorporate regional population growth trends, climate data, and historical water usage patterns.
  
- 2 Expand outreach about the health and safety impacts of climate change.**
  - a. Improve language access to all residents on climate change, natural hazards, and emergency preparedness.
  - b. Work with community partners and businesses to provide household emergency preparedness kits.
  - c. Expand visibility of the Anchorage Air Quality Index.





# FOOD SYSTEMS

**GOAL: Support local, sustainable food systems.**

## Early Achievements

Anchorage Parks and Recreation Department operates four community gardens and plans to add 54 new garden plots in Muldoon.

The Anchorage Health Department updated the Food Code to encourage food entrepreneurship and remove barriers to the cottage food industry.

The Anchorage Assembly passed an ordinance to allow construction of rooftop greenhouses.

- 1 Support the Alaska Grown market and enable regional food system solutions to decrease energy use and increase food independence.**
  - a. Create a procurement preference for purchasing local food.
  
- 2 Increase access to and consumption of local foods.**
  - a. Expand Local Food Mini-Grant Program to support community projects that increase access to local food.
  - b. Encourage and incentivize farmers markets to accept payment through food assistance programs, including SNAP, WIC, WIC FMNP, and Seniors FMNP.
  - c. Continue to develop edible landscaping in the MOA Horticulture program.
  - d. Support existing school and community gardens and provide opportunities to expand community growing spaces with a focus on youth and low-income residents.
  
- 3 Reduce and repurpose food-related waste.**
  - a. Conduct an organics waste collection pilot project with Anchorage businesses to test the capacity for a commercial organics collection program.
  - b. Revise the Anchorage Food Code to allow people to use personal containers for prepared food take-out.
  - c. Expand curbside, community and commercial composting programs.



# URBAN FOREST + WATERSHEDS

**GOAL:** Support healthy ecosystems that increase recreational opportunities, clean air and water, and habitat for wildlife.

## Early Achievements

The Municipality's Firewise Home Assessment Program provides home visits to offer specific recommendations for vegetation management, home maintenance, and fire prevention.

Updated the Anchorage Stormwater Manual in 2017 with new requirements for stormwater management infrastructure that can accommodate projected increases in precipitation.

- 1 Improve the resilience of urban forest and watersheds to protect against extreme weather events and promote ecosystem health.**
  - a. Develop an urban forest management plan to establish best management practices for MOA's urban forest, including appropriate canopy cover and biodiversity goals for Anchorage.
  - b. Support efforts to protect and restore parks, wetlands, wildlife corridors, and riparian corridors to maintain wildlife and fish habitat.
  - c. Enhance inter-agency communication for wildfire mitigation and emergency response.
  
- 2 Improve stormwater management to reduce flooding and enhance water quality.**
  - a. Create a stormwater utility.
  - b. Incentivize and prioritize the development of "green infrastructure" such as natural drainage-ways and low-impact development.
  - c. Expand public education about the value of watersheds, rain gardens, and low-impact development to address stormwater runoff.

# OUTREACH + EDUCATION

**GOAL: Inform, engage, and empower Anchorage residents and leadership to find community-led climate solutions that support a sustainable future.**

## Early Achievements

Rider participation in Anchorage's annual Bike to Work Day has increased by 260% since 2007; in 2017, over 4,000 people participated in the local event.

Anchorage teachers can use AK EnergySmart, a free K-12 STEM curriculum with hands-on lessons that are Alaska-specific and develop important energy literacy for students and teachers.

- 1 Engage community members in the implementation of the Climate Action Plan.**
  - a. Utilize effective and inclusive outreach methods and reduce barriers to participation in planning processes as well as new projects and programs.
  - b. Develop an online Anchorage climate action webpage to provide ongoing updates about implementation and related resources.
  - c. Compile and create materials for web and in-person distribution, including how-to guides and information about trainings, workshops, job opportunities, etc.
  
- 2 Engage business owners about energy savings opportunities and ways to prepare for a changing climate.**
  - a. Explore incentives to encourage business innovation on climate action.
  
- 3 Encourage education about climate change, energy, and outdoor/natural science.**
  - a. Encourage the development of career and technical education programs focused on supporting clean energy and infrastructure jobs (e.g., renewable energy, net zero building, and electrification of transportation infrastructure).

# Municipality of Anchorage Climate Action Strategy

The Anchorage Climate Action Plan was **written by the Anchorage community, for the Anchorage community**. Many thanks to the Steering Committee, Advisory Committee, working groups, student contributors, and the Anchorage community and volunteers for their time and thoughtful contributions to the plan. The plan was adopted May 21, 2019 by the Anchorage Municipal Assembly, Resolution No. AR 2019-158.

**35**

**Events** hosted by the Steering Committee to present about the plan.

**100+**

Anchorage residents **helped draft the plan**, including University of Alaska faculty and Municipality of Anchorage staff.

**1400+**

Anchorage **residents engaged** throughout the development of the plan.

Special thanks to the University of Alaska and Solid Waste Services for providing funding for the development of the Anchorage Climate Action Plan and Municipality of Anchorage strategy.

The Anchorage Climate Action Plan is a companion to the Welcoming Anchorage Roadmap and the Resilient Anchorage Roadmap. Together, these efforts are the Municipality's strategy to build an AWARE city: Anchorage Welcoming and Resilient. AWARE is building Anchorage's capacity to thrive and survive through acute shocks and chronic stresses. We can achieve this vision by focusing on collaboration, equity, and innovation.

For more information or to view the 2019 Climate Action Plan, visit [www.muni.org/climateactionplan](http://www.muni.org/climateactionplan)



Municipality of Anchorage



Solid Waste Services



University of Alaska



University of Alaska Anchorage



Anchorage Climate Action Plan



Anchorage AWARE: Welcoming + Resilient

