ANCHORAGE CLIMATE ACTION PLAN ANNUAL REPORT

2019/2020

ANCHORAGE
Climate Action Plan

WE'RE IN THIS TOGETHER

OUR GOAL: Reduce emissions by 80% from 2008 levels by 2050, with an interim goal of 40% by 2030

The Municipality of Anchorage Assembly passed the Anchorage Climate Action Plan and Strategy in May of 2019 and has been actively engaged in addressing climate change and reducing greenhouse gas (GHG) emissions to meet the emissions reductions goals of 80% from 2008 levels by 2050, with an interim goal of 40% by 2030. Climate change poses threats to our infrastructure, public health, and wellbeing. Responsible initiatives can reduce costs and reduce risks.

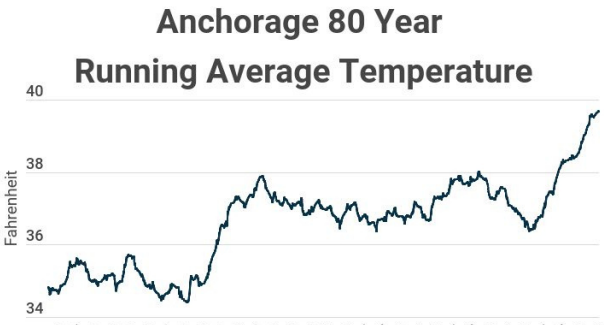
Alaska's temperatures are increasing twice as fast as those in the Lower 48. Anchorage has the opportunity to be a good steward of our home and resources by reducing emissions, preparing for a changing climate, and creating a more vibrant community. The CAP set specific visions, objectives, and actions to enable the Municipality to achieve its overall 2030 and 2040 targets. The actions include municipal and community activities with a focus on actions the local government can take to reduce climate change and prepare for the impacts we're already seeing.

Anchorage kicked off the Climate Action Plan with a bang, making great strides in all seven sectors. We expanded our renewable energy generation, won grants for innovative clean energy projects, expanded opportunities for residents to engage in climate action, and worked to institutionalize programs and policies for long term progress.

WHY WE NEED CLIMATE ACTION NOW

Anchorage experienced major climate events in 2019. On July 4, all-time high temperature records were set in Anchorage, reaching an astounding 90°F, breaking the previous all-time record by 5°F. Since the 1950s, Alaska has been warming twice as fast as the global average, according to the Fourth National Climate Assessment. Vast wildfires accompanied hot and dry conditions, leading to the first ever dense smoke advisory for Anchorage and some of the worst air quality in the world in Anchorage and Fairbanks.

It doesn't stop there. Anchorage average winter temperatures have warmed 4.2°F since 1970, bringing more rain-on-snow events and higher costs to maintain infrastructure and trails.



Average of daily max and min temperature, in degrees Fahrenheit. Data current through November 16, 2020. Source: Applied Climate Information System, https://xmacis.rcc-acis.org

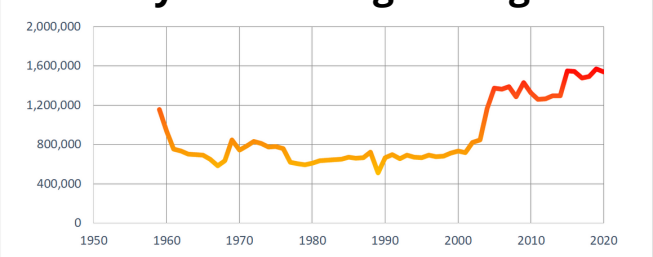
The Cost of Wildfires in AK

$340 - $700M per year: The likely annual net loss due to a warmer climate - from failing infrastructure to community relocation, increased wildfire frequency and shorter ice road seasons.

$25 - $40M per year: The estimated increased annual cost of fire protection and property damage claims.

UA *Institute of Social and Economic Research (ISER)*, 2019

Acreage of Alaskan Wildfires, 20-year running average



Sources: http://afesresearch.uaf.edu/index.php/download_file/428
https://uaf-accap.org/wp-content/uploads/2019/10/Alaska_Climate_Dispatch_sept-2013.pdf
https://omb.alaska.gov/html/performance/details.html?p=102

Nineteen of the 20 hottest years on record have occurred in this century. Arctic sea ice fell to its second-smallest area ever at the end of the Northern Summer. The Fourth U.S. National Climate Assessment, released in November 2019, stated repeatedly and directly that climate change could soon imperil the American way of life, transforming every region of the country, imposing frustrating costs on the economy, and harming the health of virtually every citizen.

View from City Hall, August 20, 2019

In December 2020, Anchorage signed the "We Are Still In" statement re-affirming our commitment to the Paris Agreement on climate change. On January 20, 2021, President Biden re-committed to the Paris Agreement.

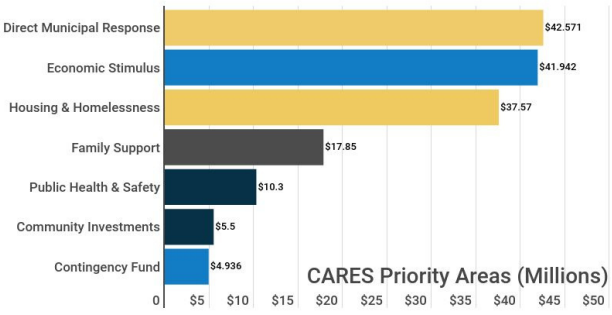
According to the National Oceanic and Atmospheric Administration (NOAA), one of the warmest years on record in the U.S. contributed to a record 22 weather and climate-related disasters that each inflicted damages of more than $1 billion. NOAA reported that those disasters accounted for $95 billion in damages, killed 262 people, and injured many more.

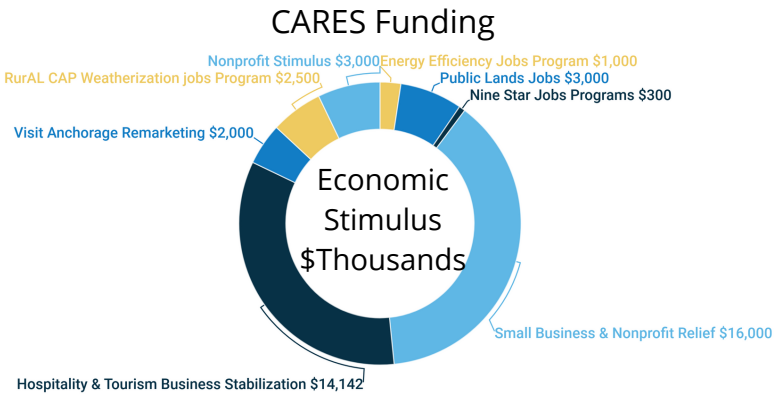
COVID-19 AND THE CLIMATE

This year humans handled two global emergencies that threaten the health and safety, economic security, and daily standard of living: the novel Coronavirus and Climate Change. The pandemic elicited a rapid and global response. Regions that acted early and extensively, and accepted the threat for what it was, were able to reduce the harm. The U.S. played down the threat of COVID and is paying with the loss of lives, the loss of jobs, and the loss of economic development. The same goes for climate change. Playing down the threat does harm to humans, our economy, and our environment.

Climate change harms the most vulnerable in our society as well as future generations. Every day of inaction constricts their opportunities to thrive and reduces stability and predictability.

The good news is that when we act on climate change, unlike our necessary responses to COVID-19, we stand to gain a lot. We gain more public transit options and multi-use paths when we support robust transportation. We gain good, well-paying jobs, such as electricians who work on solar and energy efficient lighting. We gain better air quality by burning less fossil fuels. We cultivate a community with diverse public involvement and opportunities for all residents.





CARES is the Coronavirus Aid, Relief, and Economic Security Act. The Municipality has received $148 million in federal funds from the U.S. Government in an effort to provide support to individuals and families in need as we navigate through the COVID-19 pandemic. The Anchorage Assembly has allocated these funds to relief, response, and support efforts in the community. By designating $3.5 million for energy efficiency improvements and weatherization, the Municipality is saving taxpayers and residents energy and money and facilitating economic development.

IMPLEMENTATION AND ACCOUNTABILITY

Anchorage Climate Equity Council

INTERNAL ACCOUNTABILITY: MAYOR'S RESILIENCE SUBCABINET

The goal of the subcabinet is to implement the city's resilience strategy and the recently adopted Climate Action Plan and Strategy. Per the Anchorage Climate Action Plan, the subcabinet meets quarterly to review implementation responsibilities, report on progress, and discuss challenges as well as develop an annual Climate Action Plan progress report and a work plan for the following year.

Members include representatives from multiple departments, and the work of the subcabinet is guided by the Office of Energy and Sustainability. This report highlights some of the great work by our dedicated departments.

The subcabinet has been instrumental in coordinating departments to maximize efficiencies, including budgetary efforts.

Parks & Recreation hosted a Community Harvest party at the Bragaw Community Food Forest to promote food security. Hundreds of families and children learned how potatoes are grown.

EXTERNAL ACCOUNTABILITY: CLIMATE EQUITY COUNCIL

The Municipality and the University of Alaska Anchorage are working to create a Council that will provide community input to the Municipality of Anchorage regarding the planning and implementation of climate and sustainability initiatives, with a specific focus on equity concerns. The Council will be an independent leadership body composed of diverse Anchorage residents who share a desire to tackle social justice issues related to climate action. The Council will engage diverse communities and develop climate justice leaders, while simultaneously strengthening trust between Anchorage residents and decision-makers.

The Council will strive towards the equitable distribution of benefits and costs of Municipal climate initiatives and their implementation, and ensure that equity and inclusion are at the forefront of environmental policies.

The newly approved Municipal Office of Equity and Justice will be engaged to help guide this effort.

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.

Saving Energy

The Municipality continues to upgrade lights to LEDs citywide. Reducing energy use by an average of 40% with LEDs is standard practice in the Municipality. The Municipality has upgraded over 12,000 streetlights, saving an estimated $780,000 annually. In 2020, the Maintenance and Operations Department completed lighting retrofits in numerous buildings across the city.

Russian Jack Greenhouse LED retrofit

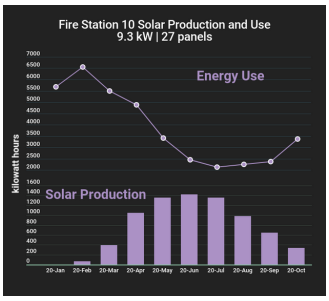
The Municipality is the first local government to work towards establishing a Commercial Property Assessed Clean Energy (C-PACE) Program in Alaska. Owners of commercial buildings may take out a long-term loan through a private lender for a clean energy project and pay it back through a voluntary special assessment on their property tax bill. Learn more at: www.muni.org/cpace

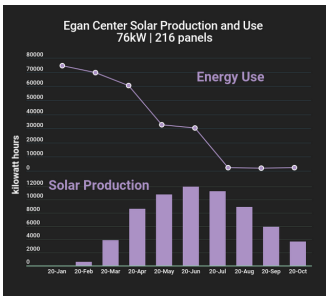
In the fall of 2020, the Municipality updated Title 23, the city's building code, including the adoption of the International Energy Conservation Code 2018 Edition. AO 2020-85 was the culmination of a multi-year effort by the building community, involving thousands of participants nationwide.

Improving our building stock improves our community resiliency. After the 2018 earthquake, FEMA reported that for every $1 invested in complying with 2018 code, $11 was saved.

Generating Energy

The Municipality has 243 solar panels generating electricity. Fire Station 10 saw a 16% reduction in electricity costs compared to the previous year, producing more energy than was used on-site 18 days in the summer of 2020. The Egan Center's 76 kW project produced nearly 80 megawatt hours of electricity, avoiding 123,179 lbs of carbon emissions, or the equivalent of 6,287 gallons of gasoline.





These charts illustrate the solar production (bar graph) aligned with energy use (line graph), demonstrating a reduction in use over summer months.

According to an analysis performed by the Alaska Center for Energy and Power and the Center for Economic Development:

- Solar installations in 2019 supported 58 jobs and 24 additional jobs through multiplier effects in Alaska.
- The solar industry directly supported an estimated $3,100,000 in income and payroll in Alaska in 2019. The industry supported an additional $1,278,000 in payroll in other industries in Alaska through multipliers.

http://uaf.edu/acep/solar

WHAT'S NEXT?

- Complete at least two C-PACE assessments
- Create a clean energy tax credit program
- Establish a municipal level energy efficiency and renewable energy target
- Install at least 70 kW of solar on Municipal property
- Analyze Municipal building energy use
- Invest in cost-effective energy efficiency measures for new and existing facilities
- Create an Anchorage or State Green Bank to help leverage private investment for clean energy
- Work with the Electric Reliability Organization to simplify bringing more renewable energy on to the grid.

LAND USE + TRANSPORTATION

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

Alternative Fuel Vehicles

The Municipality is gearing up for the 25,000 electric vehicles projected to drive on Alaskan roads by 2030.

Solid Waste Services (SWS) was awarded a grant for nearly $700,000 to fund Anchorage's first electric garbage trucks, coming end of 2021. The grant will also help install and test an innovative battery charger. SWS also operates an all-electric and hybrid electric vehicle in order to gather data on their operation and and costs.

Blue goes green

The Anchorage Police Department (APD) purchased 20 new hybrid electric vehicles. These vehicles are expected to use 45% less fuel per year. Fewer fill ups saves money and keeps vehicles and officers on the road.

The SUVs are expected to use 45% less fuel per year, saving $23,000 per vehicle over 6 years.

The Municipality installed a Level 2 electric vehicle charger at the lot east of the Rustic Goat.

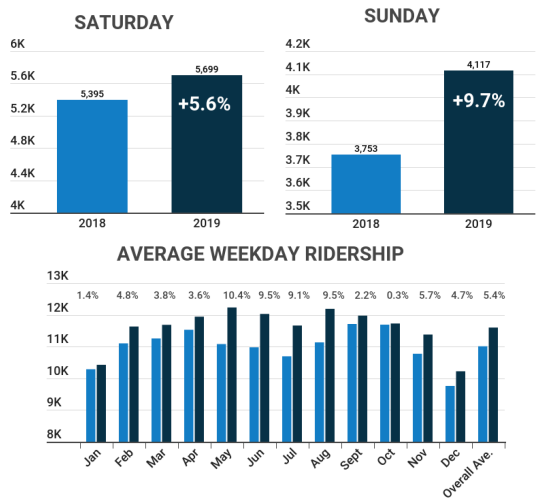
Anchorage Water and Wastewater Utility implemented smart timers on their vehicle plug-ins, which only turn on at set temperatures. This saves money, reduces emissions, and reduces wear and tear on the engine.

Land Use and Planning

The MOA made progress in encouraging sustainable development of land use and community resources for livable neighborhoods, a safe and healthy community, and a sustainable economy.

- Determined target for infill and redevelopment, focusing on Reinvestment Focus Areas, as identified in the 2040 Plan.
- Amended zoning code to allow mini city centers in neighborhoods to create more walkable/bikeable communities.
- Amended the alternate equivalent design tool to encourage retention of existing vegetation and low-impact design.
- Adopted the Spenard Corridor Plan, which focuses on transit-oriented development.
- A parking reduction initiative is underway, exploring where parking minimums can be reduced to encourage the use of alternative transportation and to reduce paved surfaces.

Public Transit Grows Ridership



In 2019, People Mover saw ridership increases, improved productivity, and a service change that added trips, increased frequency, and extended certain routes. During COVID-19, ridership was limited and people were urged to travel by other means if possible. In 2020, Transit on the Move was developed to expand frequency, connectivity, and coverage of the public transportation system.

WHAT'S NEXT?

- Complete MOA fleet inventory
- Set goal for alternative fuel and hybrid vehicles for the MOA
- Incorporate two electric refuse trucks and an electric box truck into the Solid Waste Services fleet
- Collect and share data from electric refuse trucks
- Work with new Central Transfer Station design team to include electric vehicle charging
- Continue to work with stakeholders to advise the state on distributing $950,000 in Volkswagen grant funds for electric vehicle charging

CONSUMPTION + SOLID WASTE

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

Extend the Life of the Landfill

Solid Waste Services (SWS) is designing a new Central Transfer Station which will provide additional recycling and waste diversion options that save residents money in the long-term by extending the life of the Anchorage Regional Landfill.

68,414 Homes

The equivalent number of homes powered by landfill gas generated at the Anchorage Regional Landfill last year.

SWS added a glass recycling drop-off at East High School and is working to expand to other locations

Compost collected by Solid Waste Services (tons)

30-40% of food is wasted in the U.S.

SWS was awarded a $90,000 grant from the U.S. Department of Agriculture for a compost study and organics collection expansion project. An additional 500 roll carts will be purchased for Curbside Organics with funding from the grant.

After passing a plastic bag ban in the fall of 2019, the Municipality was forced to suspend the ban for the duration of an emergency declaration (EO-04).

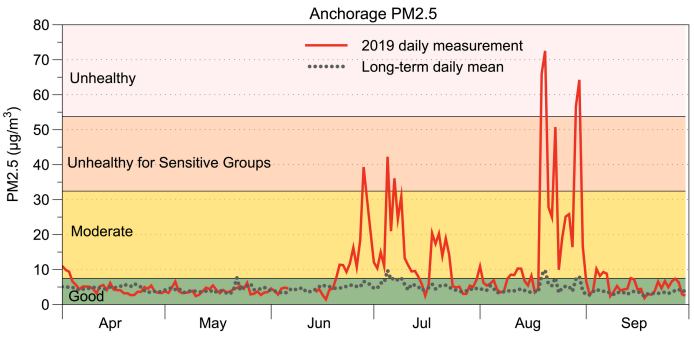
WHAT'S NEXT?

- Increase participation of the curbside organics program by approximately 900 customers
- Increase curbside organics from 320 to 450 tons
- Increase community compost from 20.3 to 22 tons
- Develop commercial level organics collection
- Complete Municipal scale composting feasibility study
- Increase recycle right outreach through ad campaign and analytics
- Expand glass recycling locations and capacity
- Identify more recycled glass outlets
- Work with the School District and Waste Management to expand recycling
- Develop leachate evaporator project at Landfill

HEALTH + EMERGENCY PREPAREDNESS

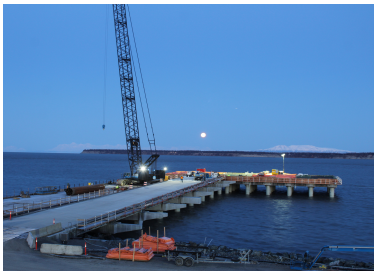
GOAL: Ensure preparedness and adaptability at household, neighborhood, and municipal levels to equitably improve health and safety.

Globally, it has been a year of disaster. The Federal Emergency Management Agency had to staff 125 official declarations of emergencies — up from 15 events in 2019. In Alaska, local and state Emergency Management personnel have stepped up to respond to wildfire emergencies and the COVID-19 pandemic. Experts advise that worsening emergencies due to climate change will continue to require local and state emergency services.



Bhatt US, Lader RT, Bieniek PA, Walsh JE, Thoman R, Merman M, Borries-Strigle C, Bulock K, Chriest J, Hahn M, Hendrick A, Jain P, Jandt R, Little J, Moore C, Rupp TS, Schmidt J, Stevens E Strader H, York A, and R Ziel (2021). Emerging Anthropogenic Influences on the Southcentral Alaska Temperature and Precipitation Extremes and Related Fires in 2019. Land. 10(1), 82.

Wildfire in Anchorage July 2019



The Port of Alaska Modernization Project is underway. The goal is to cut the ribbon on this new facility in the fall of 2021; it will be built to withstand a greater-than 1964 earthquake with minimal recovery time, and 4' of extra height will be added to account for sea level rise. In 2019, the Mayor's Office received a grant through the National League of Cities to improve emergency communications and preparedness with limited English proficient (LEP) individuals and other residents experiencing systemic exclusion. The grant promoted a partnership between the Municipality and the Peer Leader Navigators (PLNs), a project housed within the Alaska Literacy Program. PLNs are trusted residents representing numerous linguistic communities throughout the Municipality. The Office of Emergency Management purchased and distributed 'go bags' and pre-translated common emergency messaging into different languages so that they are prepared for emergencies. Most critically, the partnership with the PLNs was instrumental in ensuring that LEP residents had access to resources during the COVID-19 pandemic.

The Office of Emergency Management hosted a training for the PLNs on essential disaster preparedness

WHAT'S NEXT?

- Improve language access to all residents on climate change, natural hazards, and emergency preparedness
- Work with community partners and businesses to provide household emergency preparedness kits
- Expand visibility of the Anchorage Air Quality Index
- 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

URBAN FOREST + WATERSHEDS

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

CARES Act Funding and Urban Forests

The Parks and Recreation Department put unemployed and furloughed people back to work with CARES Act funding. $1.5 million was used to target beetle kill mitigation with small tree contracting organizations. Another $900k went towards further beetle kill mitigation and invasive species management through 25 expanded Parks and Recreation positions.

Beetle kill presents an aesthetic blight and a fire hazard. This effort provides immediate employment to furloughed and under-employed residents.

The Municipality's Local Food Mini Grant Program provided funding for a community garden in Spenard

Firewise Planning

In the fall of 2020, a local amendment on sprinklers in areas outside the city water supply improved the fire safety code to save lives and reduce property damage. A warming climate may exacerbate the risk of fire spreading in areas not served by the water utility and surrounded by a dense fuel source, such as Anchorage Hillside.

To mitigate wildfire danger, the Municipality advanced its first-ever "life/safety access roads" bond to create secondary access for portions of town where there is only one way in and one way out. Voters approved the initial package, and the Municipality is now developing necessary secondary access routes in areas such as Bear Valley and Eagle River.

Stormwater Infrastructure

The Municipality continues to assess the costs and benefits of a stormwater utility that would provide cohesive drainage management with a dedicated revenue source and an equitable distribution of costs. Anchorage Water and Wastewater Utility is on Phase 2 of evaluating the structure and operation as well as decision-making points.

Parks and Recreation Department work with residents at Chanshtnu Park in Muldoon, one of Anchorage's newest and most celebrated parks. The project includes a food forest, community garden, nature play area, and more

WHAT'S NEXT?

- Develop an urban forest management plan to establish best management practices for MOA's urban forest
- Enhance inter-agency communication for wildfire mitigation and emergency response
- Create a stormwater utility
- Mitigate wildfire hazards of spruce beetle kill
- Expand public education about the value of watersheds, rain gardens, and low-impact development to address stormwater runoff
- Support efforts to protect and restore parks, wetlands, wildlife corridors, and riparian corridors to maintain wildlife and fish habitat

FOOD SYSTEMS

GOAL: Support local, sustainable food systems.

ALASKANS TODAY, PARTICULARLY THOSE LIVING IN URBAN ALASKA, CONSUME A LOT OF IMPORTED FOOD. 95% OF THE $2 BILLION OF FOOD ALASKANS PURCHASE IS IMPORTED.

ANCHOR GARDENS

A dedicated team of garden coaches across each of Anchorage's 37 community council areas are volunteering their time to mentor anyone who wants to garden through Anchor Gardens; the program's mission is to make gardening resources and expertise accessible to everyone in the Municipality of Anchorage, regardless of income or home ownership status.

The University of Alaska is constructing an interactive Anchorage Food Security Map. The map will display a food index score for each census tract, and there will be layers depicting relevant aspects of the municipal food system including public transportation routes, community gardens, farmer's markets, food pantries, data on wild harvests, and more. The map is expected to completed by summer 2021.

The Municipality is working with multiple partners to develop an urban sustainability farm and native heritage garden at 3rd & Ingra. As the location of the Alaska Native Services Hospital from 1953 to 1997, this municipally-owned site is in dire need of healing through collaborative and equitable participation, framed by future-thinking principles. A master plan and two site-specific technical reports will serve as a guide as the Farm & Garden progress.

Credit: Mayor's Office

Credit: Micah Hahn

Credit: Michelle Fehribach

WHAT'S NEXT?

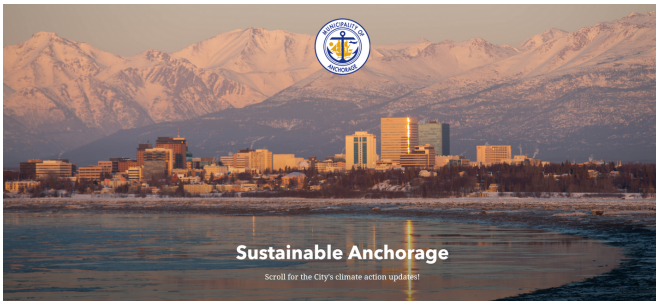
- Expand Local Food Mini-Grant Program to support community projects that increase access to local food
- Encourage and incentivize farmers markets to accept payment through food assistance programs, including SNAP, WIC, WIC GMNP, and Seniors FMNP
- Create a procurement preference for purchasing local food
- Conduct an organics waste collection pilot project with Anchorage businesses to test the capacity for a commercial organics collection program
- Expand curbside, community, and commercial composting programs

OUTREACH + EDUCATION

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

Inform and Engage

The Anchorage Climate Action Plan is implemented through partnerships between Anchorage residents, businesses, institutions, and organizations. The Municipality is committed to transparent communication and conversation regarding the plan's implementation.



Follow Anchorage's progress at:
www.muni.org/sustainability

Empower

It is the Municipality's goal to create opportunities for residents to learn about Anchorage's climate and resilience initiatives, engage with municipal staff, and take action. In response to resident requests for information about the implementation of the Anchorage Climate Action Plan, the Municipality created a webpage to better communicate and engage the public through the Resident Climate Action Page.

Learn how you can fight climate change in Anchorage:
www.muni.org/ResidentAction

Stay engaged with the Anchorage Climate Action Plan

1. Email ClimateActionPlan@anchorageak.gov
2. Reach out to your local, state, and federal elected officials to share your input on climate change
3. Sign up for the Anchorage Climate Action Plan newsletter here: https://bit.ly/39HGoKR
4. Take the Anchorage Climate Action Survey: https://bit.ly/2NjfZeX
5. Talk to your friends and neighbors about climate action in Anchorage
6. Read the Climate Action Plan and Strategy at www.muni.org/ClimateActionPlan

WHAT'S NEXT?

- Utilize effective and inclusive outreach methods and reduce barriers to participation in planning processes, new projects, and programs
- Compile and create materials for web and in-person distribution, including how-to guides and information about trainings, workshops, job opportunities, etc.
- Explore incentives to encourage business innovation on climate action
- 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 the electrification of transportation and infrastructure)

HOW DO WE MEASURE SUCCESS?

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

The Anchorage Climate Action Plan was written by the Anchorage community, for the Anchorage community. The Plan was adopted May 21, 2019 by the Anchorage Municipal Assembly.

For more information, or to view the 2019 Climate Action Plan, visit www.muni.org/climateactionplan