

CONSUMPTION AND SOLID WASTE



Consumption and Solid Waste

Solid waste poses many environmental challenges in Anchorage. The Anchorage Regional Landfill, the only municipal solid waste landfill in Anchorage, is a finite resource with approximately 35 years of capacity remaining.⁵³ Additionally, solid waste collection and disposal generates greenhouse gas emissions as a result of the operation of heavy equipment and vehicles.

In Anchorage, approximately 1,200 tons of waste is disposed of each day. On average, residents throw away 5-6 pounds of garbage every day, which is higher than the national average of 4.4 pounds of waste generated per person.^{54,55}

Efforts to use alternative fuels like biodiesel and the electrification of the solid waste collection and disposal fleet will help to offset greenhouse gas emissions. Construction of a new Central Transfer Station will reduce miles driven by the refuse collection fleet, which will also reduce overall greenhouse gas emissions.

Less than 20% of all materials in Anchorage get recycled. Increasing recycling outreach and education would increase interest in recycling and allow for targeted messaging. Other options to increase recycling include efforts to keep materials out of the landfill with surcharges or other restrictions at the point of disposal, opportunities for multifamily housing, and incentives for businesses. The new Central Transfer Station also helps to make waste diversion opportunities (e.g. recycling, organics collection) more accessible to Anchorage residents.



Anchorage School District/Alaska Waste/Solid Waste Services School Recycling Coordinator
Through a grant from the Municipality of Anchorage Solid Waste Services Department, and Alaska Waste, ASD has established mixed paper recycling at its 95 schools and five administrative buildings. The primary goal of the Recycling program at ASD is to increase education and recycling rates while maintaining an environmentally responsible school district.⁵⁶

Organics collection is building momentum in the city, with private businesses in Southcentral Alaska showing renewed interest in accepting organic materials for composting. Solid Waste Services has piloted a household composting project to test community interest in composting. There is widespread community interest in more organic material collection.

⁵³ Anchorage landfill closure clock: <https://acak.statwindow.com/landfill>

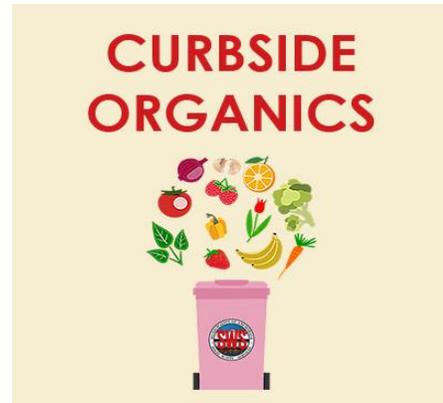
⁵⁴ <https://acak.statwindow.com/measures/d3bb5dc5-6de5-46ea-b145-81a9c0066d5b> (Anchorage average)

⁵⁵ <https://archive.epa.gov/epawaste/nonhaz/municipal/web/html/> (National average)

⁵⁶ <https://www.asdk12.org/recycling>

SWS Residential Curbside Organics Collection Pilot Project

Every week SWS will collect yard waste and food scrap materials from residents participating in the program. As part of the program, residents can use their buckets to collect free compost at the Central Transfer Station and Anchorage Regional Landfill.⁵⁷



Solid waste can also be considered an energy resource. The landfill gas-to-energy plant at the Anchorage Regional Landfill provides additional power to Joint Base Elmendorf-Richardson and reduces the Municipality's overall greenhouse gas emissions. Additionally, SWS will construct landfill leachate evaporators to run off the excess gas, reducing the leachate that must be hauled off for disposal and utilizing gas that is currently being flared. Development of anaerobic digestion or mass burn waste-to-energy facilities are other options that could reduce landfill dependence and provide additional benefits like compost, biogas, and electricity.

Anchorage recently passed a plastic bag ban that prohibits distribution of disposable plastic shopping bags. Similar laws and policies could help lower waste generation in the city. Options include modifying food codes to allow for reusable containers for take-away, extended producer responsibility laws, and policies that support zero waste principles and practices.



Case Study: Anchorage Landfill Gas-to-Energy Project

Through a partnership between the Municipality of Anchorage Solid Waste Services and Doyon Utilities, landfill gas at the Anchorage Regional Landfill, a byproduct of waste decomposition, produces 7 Megawatts of energy to Joint Base Elmendorf-Richardson (JBER). This energy meets the off-peak demand of the Fort Richardson side of the base.⁵⁸

⁵⁷ <https://www.muni.org/Departments/SWS/Recycling/Pages/CurbsideOrganics.aspx>

⁵⁸ <https://www.muni.org/Departments/SWS/Pages/AnchLandfillGastoEnergyPrj.aspx>

Climate Action Plan sectors

The Anchorage Climate Action Plan puts Anchorage on a path to reduce greenhouse gas emissions 80 percent from 2008 levels by 2050, with an interim goal of 40 percent by 2030. This document details objectives and actions to achieve these emissions goals and to support resilience and preparedness for climate impacts.

Key

The objectives and associated actions are grouped into the following sectors:

- Buildings and Energy
- Land Use and Transportation
- Consumption and Solid Waste
- Health and Emergency Preparedness
- Food Systems
- Urban Forest and Watersheds
- Outreach and Education

TERMINOLOGY

“Vision” = A broad statement that describes our desired position by 2050 within each sector.

“Objectives” = Steps towards achieving mitigation targets and adaptation goals by 2030.

“Actions” = Detailed policies, projects and activities to achieve our objectives.

CO-BENEFITS refer to the intended or unintended benefits for the local environment and community as a result of mitigation and adaptation actions that are directed at addressing climate change. The co-benefits column indicates the actions that have the potential for significant, direct co-benefits. For example, actions to reduce the number of cars on the road have environmental quality and health co-benefits because these actions will improve air quality in Anchorage. The co-benefits assessed in this plan include:

- High potential to support jobs and prosperity
- High potential to advance equity
- High potential to improve local environmental quality
- High potential to improve health

PRIMARY MUNICIPAL LIAISON & POTENTIAL PARTNERS

To assist with implementation and accountability, primary municipal liaisons and potential partners are identified. For Municipality lead actions, the Primary Municipal Liaison is the primary entity responsible for initiating the implementation of the action and reporting on progress. For partner (university and other) lead actions, the Primary Municipal Liaison will be the main point of contact for the Municipality. Successful implementation will often require collaboration and coordination with other departments as well as public and private sector partners.

The full list of municipal departments included in the plan is included in the Appendix.

IMPLEMENTATION TIMEFRAME

- **Near-term** = Plan adoption to June 2020
- **Mid-term** = 2020 to 2025
- **Long-term** = 2026 and beyond
- **Existing and/or ongoing** = currently underway
- **Uncertain** = depends on funding or other factors

Consumption and Solid Waste

2050 Vision: Anchorage has an efficient and innovative solid waste management system that promotes sustainable consumption, recycling and waste reduction.

Objective 8. Restructure waste diversion methods.

No.	Actions	Co-benefits	Primary Municipal Liaison	Potential Partners	Timeline
8A	Generate and enact policy (internal and external to MOA) to increase diversion, including policies that look 'upstream' like Extended Producer Responsibility (EPR).	environment	Solid Waste Services (SWS)	Office of the Mayor, Anchorage School District (ASD), private waste haulers, private sector	Mid-term
8B	Create ordinance so waste haulers can incorporate progressive Pay-As-You-Throw (PAYT) residential trash rates.	environment, jobs and prosperity	Office of the Mayor	SWS, Anchorage Assembly, Regulatory Commission of Alaska, private waste haulers	Mid-term
8C	Require mandatory residential curbside recycling.	environment	SWS	Anchorage Assembly, private waste haulers	Long-term
8D	Assess/ expand/ improve infrastructure for recycling and organics collection and processing.	environment, jobs and prosperity	SWS	Anchorage Recycling Center, Alaskans for Litter Prevention and Recycling (ALPAR), private waste haulers, recycling and commercial reuse companies, local grocery stores	Mid-term
8E	Increase recycling surcharge on landfill fees to develop more recycling programs and expand education and outreach efforts.	environment, jobs and prosperity	SWS	Anchorage Assembly, private waste haulers	Near-term
8F	Offer more recycling options for multi-family residences.	environment, equity	SWS	Planning Department, MOA Code Enforcement, housing providers	Mid-term

Objective 9. Capture potential energy in collected refuse.

No.	Actions	Co-benefits	Primary Municipal Liaison	Potential Partners	Timeline
9A	Develop Leachate Evaporator with excess landfill methane to reduce leachate hauling.	environment, jobs and prosperity	SWS	Doyon Utilities, Anchorage Water and Wastewater Utility (AWWU), JBER	Mid-term

9B	Identify and implement additional means of energy collection from solid waste (e.g. organics digestion, mass burn).	environment, jobs and prosperity	SWS	Alaska Waste, Alaska Energy Authority, AWWU, Central Environmental Inc., Anchorage electric utilities, local compost makers, entrepreneurs	Mid-term
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Objective 10. Educate and engage residents and businesses to encourage waste reduction and diversion.

No.	Actions	Co-benefits	Primary Municipal Liaison	Potential Partners	Timeline
10A	Expand consumer education (e.g. host community forums) on sustainable consumption and materials management, including recycling.	environment	SWS	ASD, AK Department of Environmental Conservation (AK DEC), ALPAR, Green Star, nonprofits, private waste haulers	Near-term
10B	Provide outreach and education to Anchorage businesses in reducing greenhouse gas emissions through their supply chains.	environment	Office of Economic and Community Development (OECD)	SWS, ALPAR, Green Star, nonprofits, shipping companies, local and national businesses	Near- to Mid-term
10C	Conduct a literature review of incentive/disincentive programs for the community and businesses that have been successfully implemented in other cities.		SWS	ASD, Anchorage Health Department, UAA	Near-term
10D	Support collaborative consumption community projects, such as neighborhood compost projects, tool libraries, and repair cafes through mini-grant programs (See Food Systems Action 20A).	environment, equity	SWS	The Alaska Center, ALPAR, Green Star, Church of Love, Alaska Master Gardeners, Off the Chain, private waste haulers, zero-waste advocates	Near- to Mid-term
10E	Provide reduce / recycle marketing and signage at store fronts, in parking lots, at point-of sale, on MOA websites, in local papers, on TV, etc.		OECD	SWS, Traffic Department, local businesses	Near-term

Objective 11. Create and implement waste reduction targets across Municipal operations and for the broader Anchorage community.

No.	Actions	Co-benefits	Primary Municipal Liaison	Potential Partners	Timeline
11A	Create sustainability liaisons in all municipal departments who will coordinate recycling and other sustainability measures.	environment	OECD	SWS	Uncertain
11B	Generate and enact waste reduction and diversion policies within the MOA aligned with zero-waste practices.	environment, equity	SWS	SWS, Maintenance and Operations (M&O), Anchorage Assembly	Near-term

11C	Establish community-wide waste reduction targets based on waste trends analysis.	environment	SWS	Port of Alaska, OECD, AK Department of Transportation & Public Facilities (AK DOT&PF), UAA	Mid-term
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Objective 12. Optimize refuse collection and disposal systems.

No.	Actions	Co-benefits	Primary Municipal Liaison	Potential Partners	Timeline
12A	Optimize the efficiency of solid waste collections and transfer routes.	environment	SWS	Commercial haulers	Near-term
12B	Deploy alternative fueled vehicles – biodiesel/electric vehicles used in solid waste collection and disposal.	environment, health, jobs and prosperity	SWS	Alaska Waste, local fuel vendors, private waste haulers	Near-term
12C	Expand diversion opportunities for Anchorage by building a new Transfer Station.	environment, jobs and prosperity, equity	SWS	Commercial haulers	Mid-term
12D	Implement improved leachate management at Anchorage Regional Landfill by deploying stormwater diversion measures.	environment	SWS, AWWU	JBER, UAA, AK DEC	Near-term