



AUSTIN RESOURCE RECOVERY MASTER PLAN SUMMARY

DECEMBER 2011

AUSTIN'S
ROAD MAP
TOWARD
ZERO WASTE

To review the entire Austin Resource Recovery Master Plan, references and citations, **visit austinrecycles.com**.

Hard copies are available at Austin Public Library branches.



This document summarizes the Austin Resource Recovery Master Plan, a long-term plan for the Austin Resource Recovery Department that projects future activities and services for the next 30 years. The Master Plan looks at the Department in its entirety and empowers the Austin community to achieve a drastic reduction in the amount of trash sent to area landfills.

The foundations of the Master Plan are the 2005 United Nations Urban Environmental Accords and the 2009 Zero Waste Strategic Plan adopted by the Austin City Council. Driven by an extensive, 18-month-long stakeholder input process, the Master Plan reflects both the vision of the City of Austin and the Austin community.

Austin Resource Recovery already has begun the journey toward Zero Waste. City of Austin curbside customers contributed to a 38 percent diversion rate in 2010 by participating in curbside recycling, yard trimmings and large brush collection.

Early actions include:

- Implementing curbside Single Stream Recycling for single-family residential homes
- Offering an option in trash cart sizes and lower rates for smaller carts
- Adopting the Universal Recycling Ordinance, which requires Austin businesses and multifamily communities to provide recycling to customers, employees and tenants
- Increased public outreach and education efforts

To increase the diversion rate, the Master Plan includes policies, programs and implementation steps to achieve Zero Waste by 2040.



**DEFINING
ZERO
WASTE**





Zero Waste is a shift from traditional waste management, where recyclables are kept out of the trash, to materials management, where trash is what remains once we reduce, reuse, recycle and compost. Striving for no waste burned or buried, Zero Waste focuses on reducing trash at the source and reusing, recycling and composting resources to avoid landfills and incinerators.

ZERO WASTE BY 2040

The Austin City Council established three benchmark goals for achieving Zero Waste:

1 Reducing by 20 percent the per capita solid waste disposed to landfills by 2012

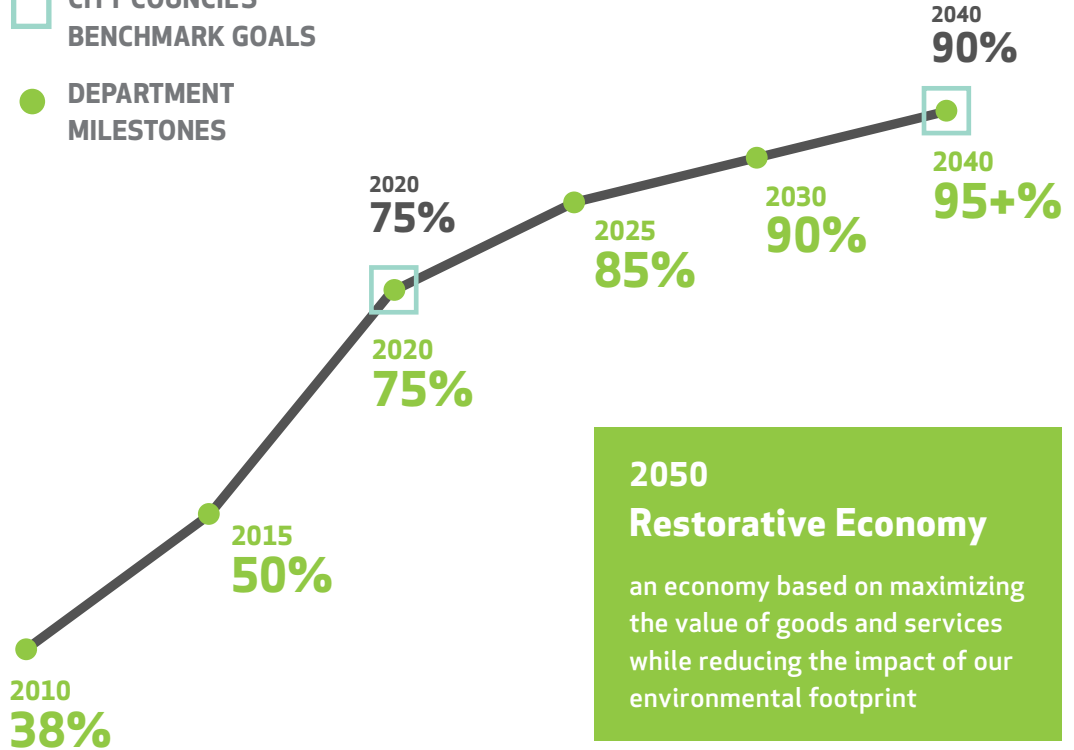
2 Diverting 75 percent of solid waste from landfills and incinerators by 2020

3 Diverting 90 percent of solid waste from landfills and incinerators by 2040

DIVERSION GOALS

The Master Plan establishes more aggressive milestones to ensure the City Council's benchmark goals are achieved.

- CITY COUNCIL'S BENCHMARK GOALS
- DEPARTMENT MILESTONES



2050 Restorative Economy

an economy based on maximizing the value of goods and services while reducing the impact of our environmental footprint

LEADING BY EXAMPLE



The City of Austin strives to serve as a model for the community by implementing waste reduction practices within its own facilities and promoting Zero Waste among City employees.

Austin Resource Recovery plans to:

- Conduct waste audits of all City Department offices and facilities
- Identify areas within City facilities where discarded materials could be reduced, such as break rooms and restrooms
- Implement ways to make recycling easier at City facilities
- Educate City employees to identify strategies for waste reduction
- Repurpose equipment and facilities
- Implement environmentally preferable purchasing strategies
- Restructure the Department's vehicle routes and implement operational efficiencies in miles driven to reduce carbon footprint
- Improve fuel efficiency of the Department's fleet by purchasing vehicles that use Compressed Natural Gas, hybrid technology and other alternative fuels





BENEFITS OF ZERO WASTE

Achieving Zero Waste provides far-reaching benefits for the Austin community.

REDUCING GREENHOUSE GASES

Landfills are one of the largest sources of methane, a powerful greenhouse gas that is 21 to 75 times more potent than carbon dioxide. Reducing the amount of trash sent to landfills reduces the amount of methane and other greenhouse gases released into the atmosphere.

In addition to reducing dependence on landfills, the Master Plan will help reduce greenhouse gases by:

- Consuming less energy as a result of extracting, processing and transporting fewer virgin raw materials
- Utilizing recycled content products, which release less greenhouse gases than mining or harvesting virgin materials
- Establishing local end markets for the consumption of recovered recyclables and compostable materials, which reduces transportation impacts



DEVELOPING A GREEN ECONOMY

The Master Plan also provides economic development opportunities for the region. Zero Waste programs and strategies help develop green jobs, attract more businesses to the city, and create less expensive, more sustainable opportunities to manage our resources.

Austin Resource Recovery will partner with the City's Economic Growth and Redevelopment Services Office to create the Resource Recovery Economic Development Program, which will be responsible for:

- Locating small businesses capable of using discarded materials in their manufacturing processes
- Supporting byproduct synergies, where the discarded byproducts from one company can be the feedstock for another company
- Encouraging the development of Eco-Industrial Parks, where major remanufacturing facilities are co-located with processors of recycled materials
- Developing existing or new business opportunities that produce new products utilizing locally-generated recyclables as feedstock
- Assisting the Brownfields Redevelopment Program in redeveloping environmentally remediated land
- Supporting the development of a Green Business Leaders Program



IMPLEMENTING THE MASTER PLAN HAS THE POTENTIAL TO:

- Reduce Austin's dependence on landfills
- Reduce Austin's annual greenhouse gas emissions by 800,000 metric tons of carbon dioxide equivalent
- Generate 1,000 to 5,000 new local green jobs in recycling and organics collection and processing, materials reuse and repair, and remanufacturing
- Help Austin attain international recognition for achieving the goals it committed to in 2005 as a signatory to the United Nations Urban Environmental Accords





PROGRAMS AND SERVICES

Enhanced programs and services available to Austin residents and businesses are additional benefits of attaining Zero Waste. Austin Resource Recovery's planned programs and services are designed to ensure health and safety while reaching the City's Zero Waste goal. These programs and services were developed in direct response to community feedback.

Through the planning process, community members identified numerous materials that were especially hard to recycle or manage, such as mattresses and carpet. Austin Resource Recovery will implement pilot collection and processing programs to address specific material types. These pilot programs will test operational methods prior to citywide implementation.

WASTE REDUCTION

Austin Resource Recovery will actively support product stewardship, including supporting research to reduce and redesign packaging, and implementing citywide purchasing preferences for products containing high levels of post-consumer recycled material. The Department also will partner with and support the Texas Product Stewardship Council to advocate for legislation requiring product manufacturers, retail establishments, wholesale distributors and other appropriate entities to take back hard-to-recycle products or packaging.

Austin Resource Recovery provides commercial technical assistance through its Waste Reduction Assistance Program, a free service that assists local businesses in recycling and waste reduction efforts. This program will be expanded to every business in Austin over a five-year period.

**90 percent of
discarded materials
are either reusable,
recyclable or
compostable.**

REUSE

Austin residents are estimated to dispose of \$11 million in reusable items annually. To support reuse, Austin Resource Recovery will encourage and facilitate the growth and development of repair and reuse businesses and nonprofits.

Through a new program called Reuse Austin, the Department will salvage reusable items from bulk collection and partner with reuse and resale organizations that are structured to collect and sell gently-used furniture, building materials and other reusable items.

In addition, four Reuse Centers will be established throughout the city to collect a variety of recyclable, reusable and repairable materials, including batteries, motor oil, paint and anti-freeze. A teacher creative reuse center will be developed in collaboration with area schools to collect donated materials for teacher use that can be transformed into instructional aids, student projects and works of art.

As the Department increases its capacity to manage reusable items and develops partnerships, materials recovered at community cleanups will be diverted from landfills as much as possible.



RECYCLING

Recyclable materials, or materials that can be reprocessed into new products or packaging, compose a large fraction of the discard stream. Austin Resource Recovery currently provides biweekly collection of Single Stream Recycling in 96-gallon, wheeled carts for single-family households and some small scale multifamily and commercial customers.

As part of the Master Plan, Austin Resource Recovery will enhance existing programs and initiate new programs to divert residential recyclable materials, including:

- Continuing to contract for Single Stream Recycling processing at local, private sector Materials Recovery Facilities
- Adding additional material types to the Single Stream Recycling program
- Providing a choice in the size of curbside recycling carts
- Transitioning to weekly recycling collection for residential customers
- Relocating the existing Resource Recovery Center to the Department's Todd Lane facilities, and rebuilding the center to collect additional hard-to-recycle materials, such as appliances, tires, furniture, carpet and paint

ORGANICS

Organics are discarded materials that will decompose, such as yard trimmings, food scraps, compostable food-soiled paper and untreated wood. Organic materials are the largest percentage of the discard stream, representing more than 47 percent of materials disposed in landfills.

Currently, Austin Resource Recovery collects yard trimmings and large brush curbside for single-family residential customers and delivers these materials to the Hornsby Bend Biosolids Management Plant operated by Austin Water. Yard trimmings and large brush are combined with treated sewage sludge to create a type of compost called Dillo Dirt™. The Department also offers a home composting rebate program to encourage Austinites to implement composting at home.

Austin Resource Recovery will enhance existing programs and initiate new programs to divert organic materials, including:

- Expanding the home composting incentive program to increase participation
- Initiating composting trainings at community gardens
- Implementing a junior composter and master composter training program
- Conducting a pilot program to collect yard trimmings, food scraps and compostable paper; rolling out a new citywide organics collection program based on pilot program results





HOUSEHOLD HAZARDOUS WASTE COLLECTION

Household Hazardous Waste (HHW) includes leftover household products that contain corrosive, toxic, ignitable or reactive ingredients, such as paint, cleaners, oils, batteries and insecticides. HHW contains potentially hazardous materials and requires special care when discarded. Although HHW represents only about one percent of materials disposed in landfills, it presents a significant risk to the environment and public health. If poured down a drain or into a storm sewer, chemicals can contaminate local streams and rivers. If put in the trash and disposed in a landfill, HHW can eventually seep into groundwater and contaminate drinking water supplies.

Austin Resource Recovery currently operates an HHW Facility in south Austin and provides door-to-door collection for seniors and

disabled residents. The Department also supports developing take-back programs for batteries and fluorescent light bulbs that are offered by local businesses.

Austin Resource Recovery will enhance HHW collection to include:

- Expanding operating hours for the HHW Facility in south Austin
- Providing rechargeable battery collection sites
- Increasing retail take-back partnerships
- Piloting residential door-to-door HHW collection
- Developing and operating a new HHW Facility in north Austin

CLEAN AUSTIN

Austin Resource Recovery will implement a new program called Clean Austin to enhance brush and bulk collection for high-need areas and increase diversion of reusable and recyclable materials. High-need areas are characterized by frequent resident turnover and/or high demand for bulk and large brush collection services. The Department identified 27 areas that meet these criteria. These areas will receive more frequent brush and bulk collection to accommodate their needs, minimize illegal dumping and improve residents' quality of life.

OTHER CORE SERVICES

Additional services provided by Austin Resource Recovery include:

- Litter control
- Alley and street flushing
- Street and bike lane sweeping
- Dead animal collection
- Storm debris management





SPECIAL EVENTS

Austin Resource Recovery provides numerous services to ensure that special events in Austin reduce waste disposal, properly manage large volumes of trash and keep Austin's streets and waterways clean and litter-free.

To improve diversion rates at City of Austin-sponsored events, the Department will work with event organizers to:

- Increase Zero Waste awareness among event-goers and vendors
- Develop and implement vendor waste management guidelines
- Plan for event waste management in advance
- Provide composting diversion services
- Engage and reward event patrons for recycling and composting through incentive programs
- Ensure access to event recycling and composting containers

Based on standard practices adopted for City-sponsored events, Austin Resource Recovery will provide technical assistance to help other events incorporate waste reduction and diversion measures.



DISPOSAL MANAGEMENT

Although landfill disposal will decrease aggressively as new programs are deployed, the City still needs to plan for disposal of non-reused, non-recycled and non-composted materials. Austin Resource Recovery committed to a 30-year disposal contract through May 2030. According to projections, the City's disposal needs are expected to decline significantly, from approximately 139,000 in 2010 to only 37,000 tons in 2030.

The City-owned, closed landfill located at 10108 FM 812 presents site reuse opportunities, including:

- Capturing methane gas, a natural byproduct of landfill decomposition, and combusting it to generate electricity
- Constructing a solar farm on the capped landfill surface to generate renewable solar energy and convert it to electricity
- Redeveloping land on-site for an Eco-Industrial Park, where major remanufacturing facilities are co-located with processors of recycled materials



POLICIES AND ORDINANCES

Zero Waste policies and ordinances allow the City of Austin to increase diversion and decrease waste.



UNIVERSAL RECYCLING AND COMPOSTING

The goal of this initiative is to phase in universal recycling and composting requirements to all waste generators, both residential and commercial, within the City of Austin by fiscal year 2016.

The Austin City Council adopted Phase 1 of the Universal Recycling Ordinance in 2010, which requires recycling at all multifamily communities, office buildings and institutional properties in the city.

Phase 2 will apply to food and beverage service establishments, retail, hospitality, manufacturing and industrial generators, and the City will add a policy for diverting compostable organics in this phase.

Phase 3 of the ordinance will include single-family residents in the recycling and composting requirements.

HAULER REGISTRATION

To monitor the effectiveness of the Universal Recycling Ordinance, the City will establish an annual registration process of nonprofit and private sector services providers that collect and haul trash, recyclables and compostable materials within the city limits. Registered haulers will report diversion and disposal tonnages and service levels. The City will ensure that the proprietary business needs of the service providers are balanced with the Department's need to track diversion activity and progress toward the Zero Waste benchmark goals.



SINGLE-USE PRODUCTS AND PACKAGING

To reduce discards that currently have limited recycling markets or uses, the City will consider product and packaging bans. Single-use products and packaging can negatively impact the City's collection system and harm the environment when littered. The City will consider developing ordinances to reduce or eliminate consumption and generation of single-use bags, non-recyclable and non-compostable take-out containers, and single-use beverage containers.



TAKE-BACK ORDINANCE

Take-back requirements shift disposal costs from taxpayers to product manufacturers. They also create a powerful incentive to redesign products and substantially reduce the use of toxic materials. The City will consider take-back ordinances for materials that cannot be reused, recycled or composted; single-use items; and other materials, such as pharmaceuticals, needles and sharps, batteries and fluorescent light bulbs.



EVENT RECYCLING

Based on information gathered from an Event Recycling Rebate program currently underway, Austin Resource Recovery will present an Event Recycling Ordinance to the Austin City Council. The ordinance will expand the Universal Recycling Ordinance to apply to large special events.



CONSTRUCTION, DECONSTRUCTION AND DEMOLITION DEBRIS

Construction and demolition (C&D) debris accounts for approximately 20 percent of citywide disposal. The City of Austin will develop and adopt an ordinance to increase reuse, recycling and composting of products used in remodeling and new construction. The ordinance also will require permit holders for large building projects to provide diversion plans. C&D debris facilities and haulers also will be required to register with the City. Austin Resource Recovery will provide technical assistance to generators of C&D debris in support of the ordinance.

ADVOCACY

In addition to Extended Producer Responsibility initiatives, Austin Resource Recovery will support statewide refundable bottle legislation (Texas Bottle Bill) to decrease the volume of aluminum, glass and plastic beverage containers that end up in waterways and on roadways and public lands.

FUNDING THE MASTER PLAN



Austin Resource Recovery is exploring options to modify its rate structure to support the costs of service and will conduct a public engagement process before taking a recommendation to the Austin City Council.

While the Master Plan includes cost estimates for each planned program, actual costs will be adjusted during implementation as new initiatives are integrated into existing programming and operations. Austin Resource Recovery is committed to finding efficiencies and reducing the financial impact on ratepayers. The Master Plan is a long-term plan, and as such, rate adjustments will

be phased in over the long-term. In addition, the Department is specifically exploring opportunities to assist low-income residents in reducing their costs of service.

Adoption of this Master Plan does not imply the approval of estimated rates and expenditures outlined. The Austin City Council and City Manager reserve the right to approve an annual budget each year reflecting current events and citizen needs. The estimated expenditures, revenue needs and proposed rates will be re-evaluated every year with the Department's annual budget proposal.

MONITORING OUR PROGRESS

While programs, infrastructure and policies are planned for implementation through 2020, the Master Plan is designed to be a living document with annual updates and program assessments every five years. Annual updates will allow for consideration of economic conditions and available resources. A detailed waste assessment study will be contracted every five years to measure against major milestones. Austin Resource Recovery will issue a report summarizing progress annually.



BUILDING AND MAINTAINING PARTNERSHIPS

Because the majority of the reuse, recycling, composting and landfill infrastructure in the region is owned and operated by private sector service providers and other government agencies, the City of Austin relies on partnerships to support its Zero Waste goal. In addition to partnering with private service providers, Austin Resource Recovery will build and maintain relationships with nonprofits, educational institutions, businesses and other government agencies to pursue Zero Waste at home, school, work and play. Additionally, Austin Resource Recovery will expand collaboration with other City departments.



ENGAGING THE PUBLIC

Austin Resource Recovery will develop a strategic communications plan that uses a community-based social marketing approach to foster behavioral changes among the Austin community. Planned activities include youth education, a speakers bureau and volunteer programs. Throughout implementation of the Master Plan, the Department is committed to involving the public in its planning and programming activities. Austin Resource Recovery will host ongoing public forums and engage in regular dialogue with stakeholders.

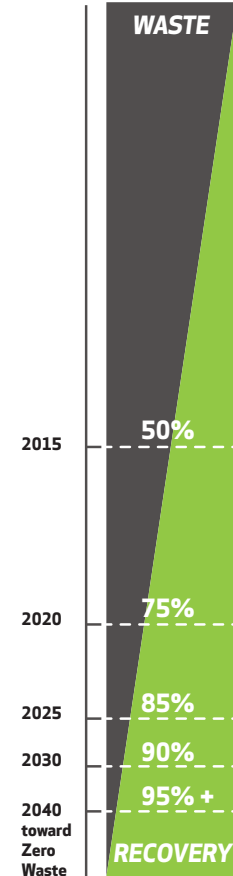
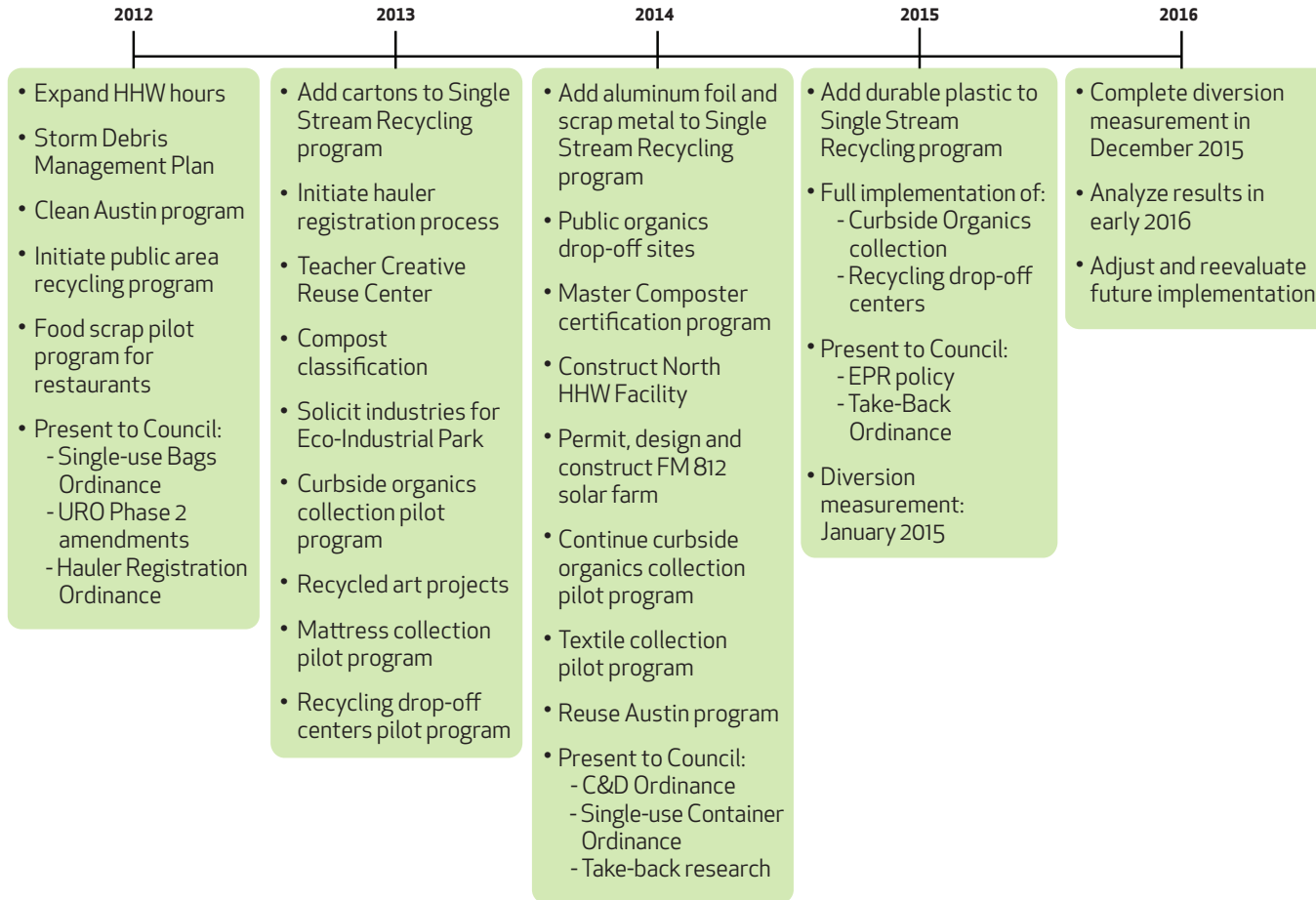
TO LEARN MORE ABOUT HOW YOU CAN TAKE ACTION,
VISIT [AUSTINRECYCLES.COM](https://austinrecycles.com)

Everyone has a role in achieving Zero Waste in Austin. Here's how you can help:

- Buy products that are made to last
- Buy in bulk or select the largest container possible
- Choose products with a longer lifespan, such as:
 - Reusable grocery bags
 - Reusable water bottles and coffee mugs
 - Cloth towels
 - Cloth napkins
 - Reusable food containers
 - Rechargeable batteries
- Donate unwanted items to local charity and thrift stores, or through online communities
- Take products back to manufacturers or retailers when possible
- Buy goods packaged in recycled and recyclable materials
- Compost your food scraps and yard trimmings
- Recycle as much as possible

MASTER PLAN 5-YEAR IMPLEMENTATION SCHEDULE

DIVERSION MILESTONES





austinrecycles.com