
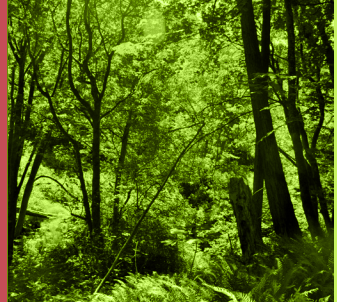

Tacoma Environmental Action Plan 2016











Tacoma

Introduction

Letter from Mayor and City Manager

April 19, 2016

As residents of Tacoma, we all care about the place where we live. One thing that makes Tacoma special is its physical environment, from its tree-filled parks and public beaches to its views of Mt. Rainier, the Olympic Peninsula and Puget Sound. As Mayor and City Manager, one of our most important responsibilities is to protect these resources and ensure that Tacoma can be an even more beautiful and livable city long into the future.

This Environmental Action Plan is an important step in that direction. It outlines the actions that our City government and local community will take over the next five years to become more environmentally sustainable. This means creating greater efficiency in our City operations, reducing air and water pollution in the community, and responding to the challenges of climate change. Together, these environmental actions will also generate substantial "co-benefits": improvements in human health, budgetary efficiency, the local environment, the local economy, emissions reductions, and social equity.

This plan provides a road map for a more sustainable Tacoma, both through the City "leading by example" and through actions affecting the broader community. We invite you, as fellow residents of Tacoma, to consider what actions you can take as well. Working together, we can achieve our goals and make this city an even better place for everyone, both now and in the future.

Sincerely,

Marilyn Strickland
Mayor

T.C. Broadnax
City Manager

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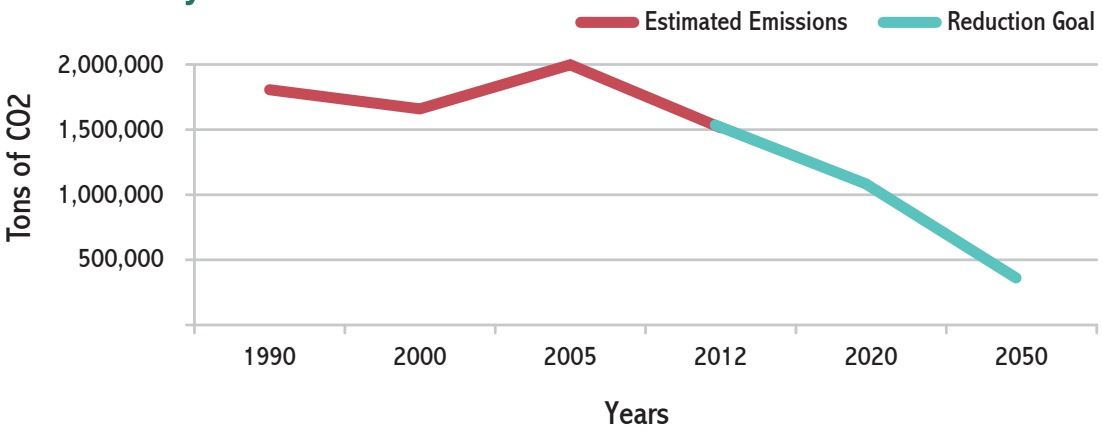
What is the EAP and Its Intent?

This Environmental Action Plan (EAP) is a list of meaningful, high-priority actions that the City of Tacoma and our community will take between 2016 and 2020 to meet the environmental goals outlined in the Tacoma 2025 Strategic Plan. The EAP consolidates the priorities of multiple city departments, providing a centralized plan and reporting system for tracking progress toward environmental goals. In this way, it functions both as a management tool for city staff and as a public document providing transparency on the actions the city is taking on behalf of the broader community.

The EAP replaces the city's 2008 Climate Action Plan (CAP). Tacoma's Green Ribbon Task Force developed the CAP in 2005 in response to then-Mayor Bill Baarsma's signing of the U.S. Mayors Climate Protection Agreement. The CAP laid the groundwork for reducing greenhouse gas (GHG) emissions in Tacoma, setting a goal of reducing GHG emissions 40% over 1990 levels by the year 2020. It also led to the creation of the Office of Environmental Policy and Sustainability and the Sustainable Tacoma Commission, among other achievements. The 2012 Climate Action Plan Final Report details progress the City made toward its goals in that time period.

Community Emissions Goals



Like the CAP, the EAP recognizes that climate change poses serious threats for life in Tacoma and demands a strong and thorough response. The EAP not only addresses the critical issue of mitigating greenhouse gas emissions, but also extends to other areas of life in Tacoma, such as water pollution, healthy food access and open space management. A special section on climate resilience is included based on the 2016 Climate Change Risk Assessment commissioned by the city and conducted by the University of Washington's Climate Impacts Group. That study highlighted areas of vulnerability to current and expected impacts of climate change, such as warming temperatures, increased extreme weather events, higher temperatures, sea level rise, and ocean acidification. Preparing and

adapting for these conditions is a key responsibility of city government to the current and future residents of Tacoma.

Process

The EAP was developed by request of the City Manager, in a collaborative process with staff from multiple city departments, representatives of partner organizations, and citizens of Tacoma. In the second half of 2015 a core stakeholder group met monthly to develop and prioritize possible actions, including two citizen volunteers from the Sustainable Tacoma Commission. A public comment period took place in December 2015 with 176 residents offering their feedback at a public open house and through an online survey.

Framework

The actions in this plan are divided into six main categories: Buildings and Energy; Transportation; Materials Management; Natural Systems; Air and Local Food; and Climate Resilience. They are further divided according to the scope of action. The *City Leading By Example* sections outline actions the city will take to improve its own operations, while the *Serving Our Community* sections refer to farther-reaching actions that affect general life in Tacoma. Each section highlights actions that individuals can take to contribute to progress in these areas.

Major goals are listed relating to each category. Near-term targets, which track progress toward those major goals, are also listed, along with the city departments and partner agencies that will lead the implementation and reporting efforts. The five-year targets are estimated targets, as the City Council and Tacoma Public Utilities Board only set two year budgets. There will be opportunity to revise both actions and targets annually.

Each action is accompanied by a qualitative graphic representation of co-benefits, the bonuses each action is expected to create. Listing co-benefits reflects the reality that targeted investments in our environment often have significant economic and social benefits beyond the anticipated environmental ones. Neighborhoods with good tree canopy, for example, often enjoy higher property values and improved walkability, along with better air quality and lower summer temperatures. Recycling new materials might create new economic efficiencies while diverting waste from the landfill. And building bicycle and pedestrian connections in neighborhoods could lead to healthier lifestyles and better air and water quality.

Higher scores show greater co-benefits.

Local Environment - benefits air quality, water quality and habitat.

Health - provides physical benefits to local residents.

Equity - aims to provide everyone with the opportunities necessary to satisfy their essential needs, advance their well-being and achieve their full potential.

Greenhouse Gas Reduction - reduces the amount of emissions polluting the air and contributing to climate change.

Affordability - offers solutions that are cost-effective in the short term.

Local Economy - shows potential for long-term economic benefits.

Public Support - indicates community support for including actions in the EAP.

Buildings and Energy

Why it matters

- Building energy represents about 40% of emissions for Tacoma's homes and businesses mostly due to natural gas used for heating.
- Green building, weatherization retrofits and technologies such ductless heat pumps and LED lights reduce the amount of energy and cost over a building's lifetime. LED street lights reduce life-cycle emissions through better manufacturing, improved efficiency, and fewer service vehicle trips for repairs.
- Tacoma Public Utility (TPU), a city-owned utility, provides carbon-free electricity largely from hydro power. TPU exports carbon-free electricity to other regions displacing carbon-emitting fuels used by other utilities.
- TPU's carbon-free electricity may be increasingly used as a fuel to electrify transportation.
- Increased energy produced locally or regionally, such as distributed solar, provides opportunities for local economic development.

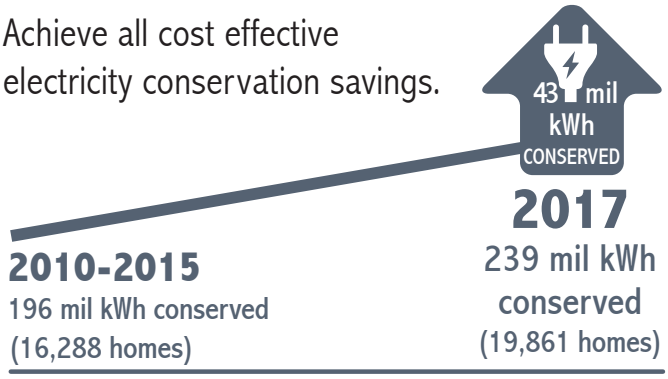
Long-term goals

- Acquire all cost-effective electricity conservation as a preferred resource.

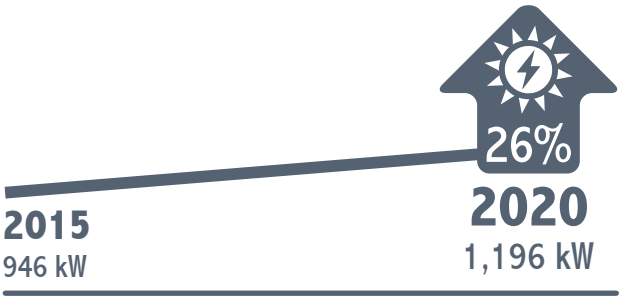
TARGETS

Tacoma will

Achieve all cost effective electricity conservation savings.

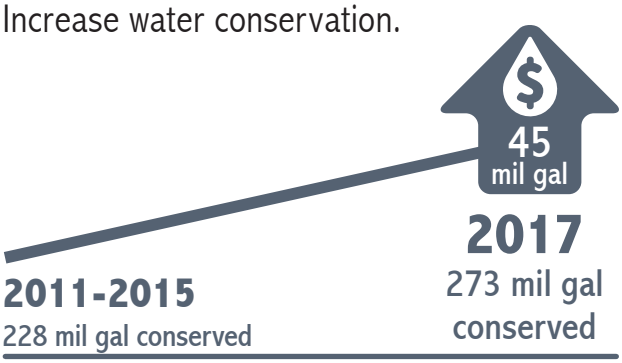


Increase solar power by 26%.

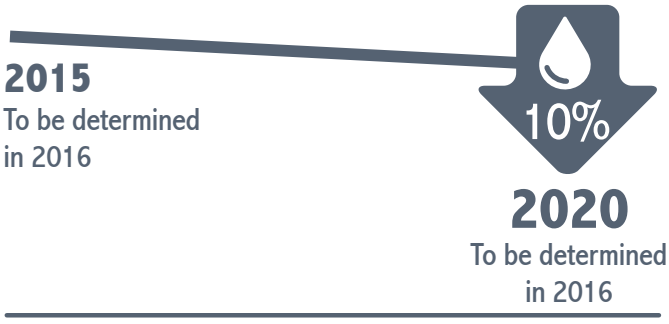


Reduce electricity use in City facilities by 10%.

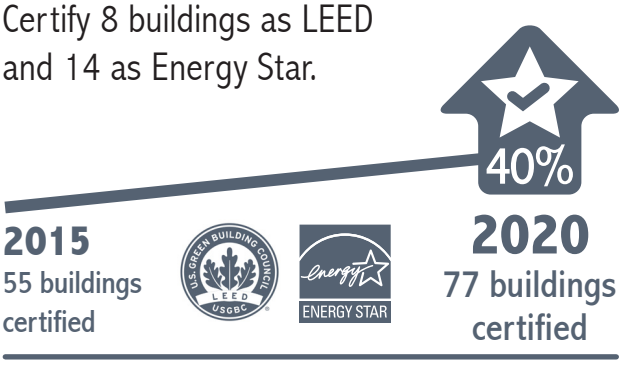
Increase water conservation.



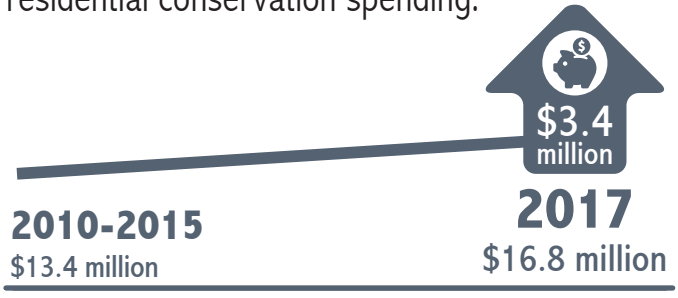
Reduce water use in City facilities by 10%.



Certify 8 buildings as LEED and 14 as Energy Star.



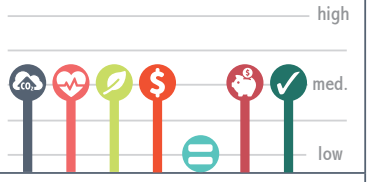
Fund all cost-effective low income residential conservation spending.



Did you know ...

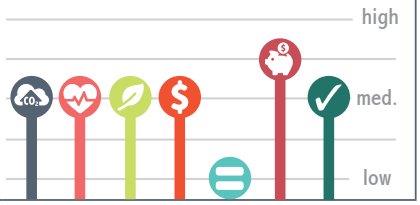
An average home uses just over 12,000 kWh of electricity and 56,500 gallons of water per year.

SERVING OUR COMMUNITY - Actions

Action		Lead	Co-benefits
B1	Achieve I-937, the Washington State Energy Independence Act, energy conservation targets which require utilities to achieve all cost-effective energy conservation measures.	Tacoma Public Utilities	
B2	Develop a pilot commercial program focused on reducing utility costs through improving building operations and maintenance.	Tacoma Public Utilities	
B3	Continue to develop water conservation incentives, rebates, and education for residential, commercial and industrial customers.	Tacoma Public Utilities	
B4	Hire a green building advocate for the city's Permit Office to identify incentives, remove barriers, and encourage green building practices.	Planning and Development Services, Solid Waste	
B5	Retain funding for low-income energy efficiency programs.	Tacoma Public Utilities	
B6	Support efforts at the state and local level to incentivize conservation in rental properties.	Tacoma Public Utilities, Government Relations	
B7	Work with regional partners to increase cost effective energy efficiency standards in the State Energy Code. Participate actively to revise the State Building Code to incorporate performance that targets net-zero energy by 2030.	Planning and Development Services, Tacoma Public Utilities	
B8	Develop community-owned solar projects and support distributed generation.	Tacoma Public Utilities	
B9	Promote transparency, investment and competition of energy and water performance by requiring commercial benchmarking and disclosure through EPA's Energy Star utility tracking system. Increase awareness of the system and provide technical assistance to building owners and managers to better track and monitor building energy use.	Sustainability Office, Tacoma Public Utilities	

Greenhouse Gas Reduction · Health · Local Environment · Local Economy · Equity · Affordability · Public Support

CITY LEADING BY EXAMPLE - Actions

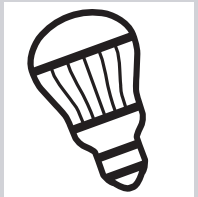
Action		Lead	Co-benefits
B10	Upgrade all streetlights to LED where cost effective and use best practices when possible to reduce light pollution.	Public Works	
B11	Track and report city buildings' utility performance and Energy Star scores. Develop a Resource Conservation Management Plan and general government policy to guide energy efficiency investments, operations, and behaviors in city facilities.	Sustainability Office	
B12	Meet federal Better Building Challenge goal (10% reduction in 5 years) by implementing energy efficiency in city buildings where cost effective.	Tacoma Public Utilities, Public Works, Environmental Services, Public Assembly Facilities	
B13	Ensure all existing occupied LEED New Construction buildings comply with LEED Existing Building Operations and Maintenance guidelines.	Sustainability Office, Public Works, Environmental Services	

Greenhouse Gas Reduction · Health · Local Environment · Local Economy · Equity · Affordability · Public Support

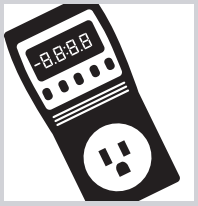
Individual choices matter

RESIDENTS

Visit the Envirohouse, the south sound's first model green home, to see sustainable building materials first hand. Great free workshops offered too!



LED lightbulbs are efficient and cost as little as $2.99 with Tacoma Power's amazing instant rebates at area stores.



Check out a Kill-a-Watt meter at a Tacoma Public Library to see how much energy your appliances and electronics use.

BUSINESSES AND RESIDENTS

Get a zero-interest loan up to $100,000 for energy efficiency improvements through Tacoma Power.

Weatherize buildings and complete energy retrofits. Your home may qualify for rebates or a zero-interest loan from PSE or TPU.

Transportation

Why it matters

- Transportation accounts for 58% of GHG emissions in Tacoma. Single-occupancy passenger vehicles contribute significantly to overall transportation emissions.
- Mutlimodal options such as walking, biking, transit and cleaner vehicles play an important role in individual and collective action to reduce greenhouse gas emissions and make our air healthier.
- Safe Routes to School programs can increase the number of students walking and biking to school by 40%.

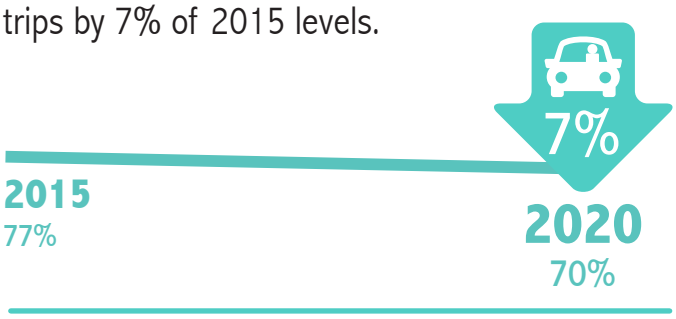
Long-term goals

- Reduce greenhouse gas emissions from transportation and petroleum fuel use.
- Protect public health and the environment from dangerous air pollution.
- Prioritize the movement of people and goods that have the least environmental impact and greatest contribution to livability. Build a transportation network that provides options, accessibility, and economic vitality for all across all neighborhoods.
- Design an environmentally, socially and fiscally sustainable transportation system that serves its users through strategic planning efforts, funding and projects.

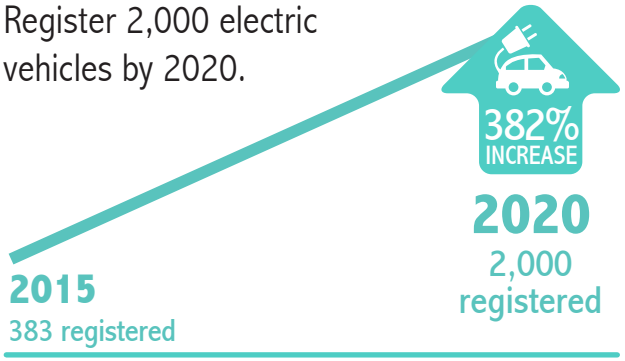
TARGETS

By 2020, Tacoma will

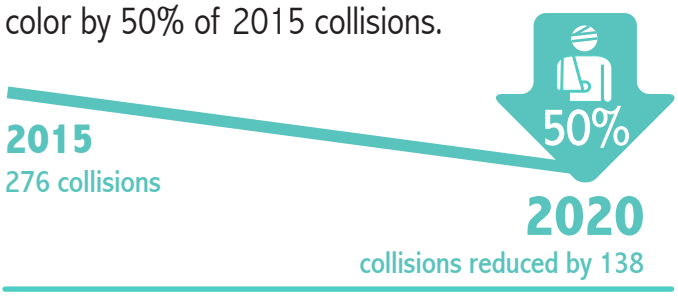
Decrease single occupancy vehicle trips by 7% of 2015 levels.



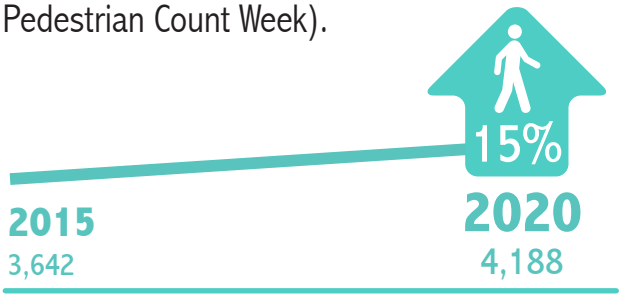
Register 2,000 electric vehicles by 2020.



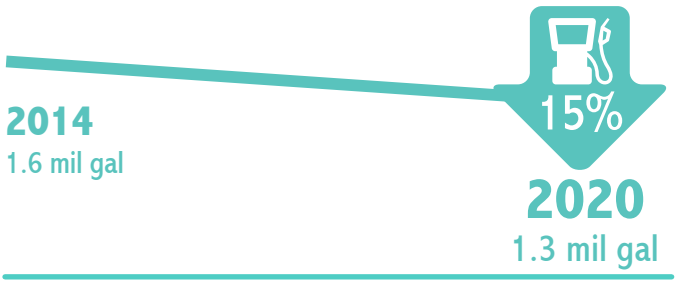
Reduce bicycle and pedestrian collisions in low income neighborhoods and communities of color by 50% of 2015 collisions.



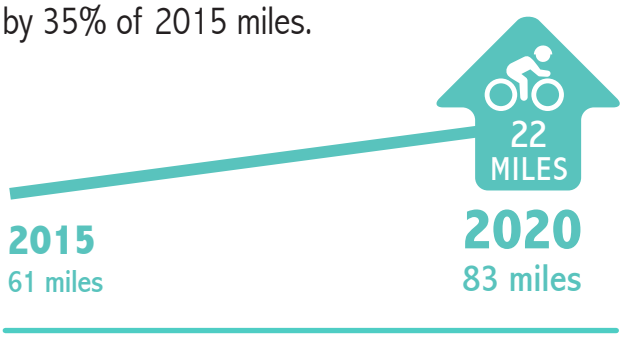
Increase pedestrian counts by 15% of 2015 counts (as measured during annual Bicycle/ Pedestrian Count Week).



Decrease fossil fuel use by 15% of 2014 levels.



Increase miles of bicycle infrastructure by 35% of 2015 miles.

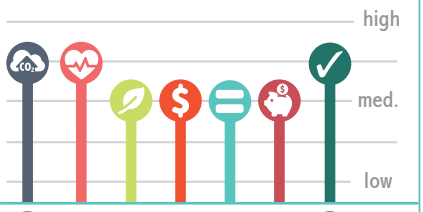


Decrease city employee single occupancy vehicle trips by 5% of 2015 levels.

Did you know ...

4% of Tacomans walk to work, marking a 164% increase between 2005 and 2014. That's the 13th-fastest growth rate in the nation for cities of any size, and the fastest in the Northwest!

SERVING OUR COMMUNITY - Actions

Action		Lead	Co-benefits
T1	Develop education programs and materials for the public on benefits and practicalities of electric vehicles.	Sustainability Office, Tacoma Public Utilities	
T2	Establish dedicated and stable funding for active transportation education, encouragement, safety programs, and infrastructure improvements.	Public Works, Sustainability Office	
T3	Synchronize and recalibrate the timing of traffic signals on all Tacoma arterials. Repair, improve, or upgrade infrastructure as needed to maximize signal efficiency.	Public Works	
T4	Become certified as a Bicycle Friendly Silver Community by implementing the next 5 prioritized Mobility Master Plan roadway projects and next 3 trail projects.	Sustainability Office, Public Works	
T5	Support 4 multi-year Safe Routes to School Programs and infrastructure improvements.	Sustainability Office, Police, Public Works	
T6	Create a grant program that supports walking, biking, and transit projects in business districts and designated centers.	Sustainability Office, Public Works, Community and Economic Development	
T7	Develop sidewalk, curb ramp, and crosswalk inventories to prioritize future investments, as part of a Pedestrian Mobility Strategy.	Public Works, Planning and Development Services	
T8	Advocate at the state and national levels for policies and programs that provide incentives for Tacoma residents to use more fuel-efficient and alternative-fuel vehicles.	Sustainability Office, Government Relations	

Greenhouse Gas Reduction · Health · Local Environment · Local Economy · Equity · Affordability · Public Support

CITY LEADING BY EXAMPLE - Actions

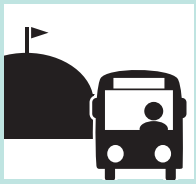
Action		Lead	Co-benefits
T9	Advocate for strong Sound Transit and Pierce Transit policies and funding, including South Corridor ST3 projects and Pierce Transit bus rapid transit on Route 1.	Government Relations	
T10	Equip operationally appropriate city vehicles with petroleum fuel saving and/or anti-idling technology.	Public Works Fleet, Tacoma Public Utilities Fleet	
T11	Convert solid waste trucks from diesel to renewable natural gas made from methane captured at the wastewater treatment plant.	Solid Waste Utility	
T12	Develop, implement, and monitor a Fuel Reduction Policy and associated education and awareness campaigns for both employee commuting and city trips.	Sustainability Office	
T13	Update the City's telecommuting and flexible work schedule to foster increased use when it meets City business needs.	Sustainability Office	
T14	Join the West Coast Electric Fleets (a joint state initiative to expand the use of zero-emission and low-carbon vehicles) at the Highway Lane Level in 2016.	Public Works Fleet, Tacoma Public Utilities Fleet	
T15	Develop and incorporate contractor fuel emissions reduction standards into bids and contracts to ensure construction contractors doing work on the city's behalf are using fuel efficient and low polluting vehicles and equipment when feasible and practicable.	Finance, Sustainability Office	

Greenhouse Gas Reduction | Health | Local Environment | Local Economy | Equity | Affordability | Public Support

Individual choices matter

RESIDENTS

Find out if an electric car could fit your budget and lifestyle. Chances are it will!



Hate driving to Seattle? Park at the Tacoma Dome Station for free and take an Express Bus that leave frequently, day and night.

Turn off your car after 30 seconds of idling to help your wallet, engine, and air quality.

BUSINESSESS

Contact Downtown On the Go for help setting up an employee commuting program.

Contact the city about getting a free bike rack for customers.

Materials Management

Why it matters

- Consumption and material waste disposal are intertwined. Most products, everything from jeans, laptops and building materials, generally end at the landfill and disposal stage. The embodied energy of consumer goods includes multiple lifecycle stages of raw material extraction, manufacturing, packaging, distribution and use.
- In the waste hierarchy we must prioritize reducing, then reusing, then recycling. Choosing to reduce consumption or identify a substitute or alternative products leads to less waste and fewer embodied emissions. Sharing, leasing, borrowing, refurbishing and buying used and durable goods should be the first choices.
- The Tacoma City landfill is full! Each year, we send enough garbage to the Pierce County landfill to fill two Tacoma Domes.

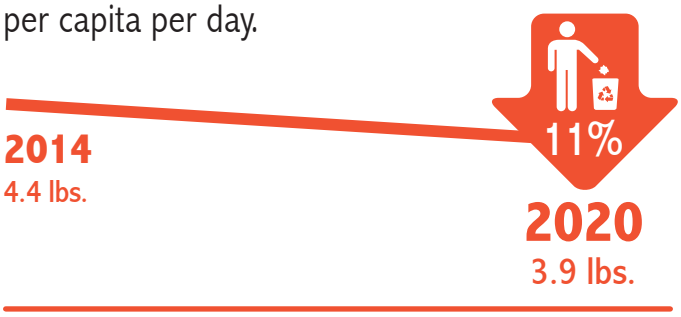
Long-term goals

- Increase waste diversion to 70% by 2028.
- Continue the adoption of life-cycle thinking.
- Continue work on waste to energy opportunities.
- Focus on reducing food waste.
- Encourage sustainable consumption, including supporting the sharing economy and products with lower lifecycle impacts.

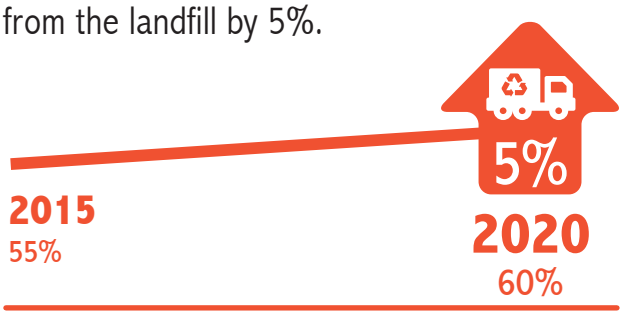
TARGETS

By 2020, Tacoma will

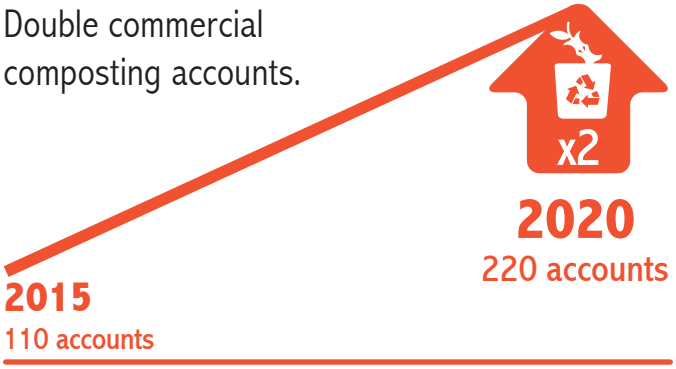
Decrease waste generation by 11% per capita per day.



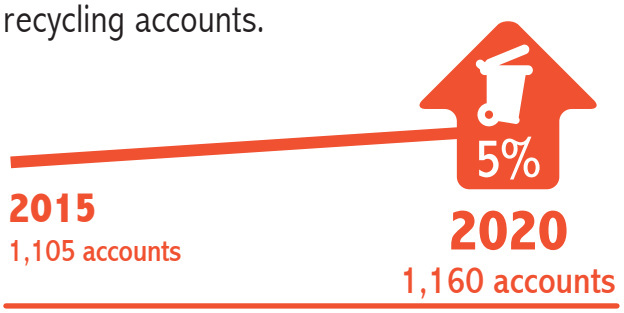
Increase amount of waste diverted from the landfill by 5%.



Double commercial composting accounts.



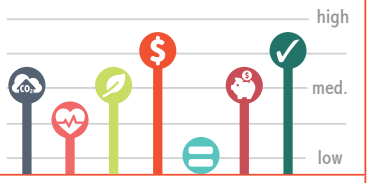
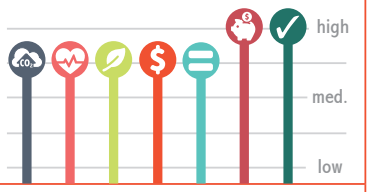
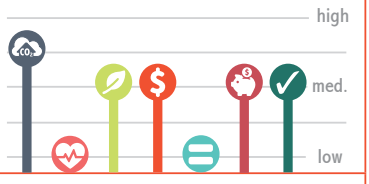
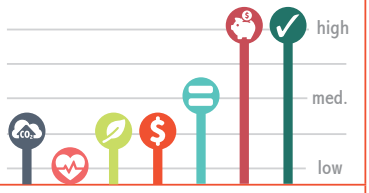
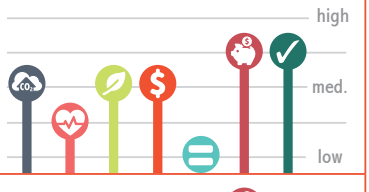
Increase multi-family recycling accounts.



Did you know ...

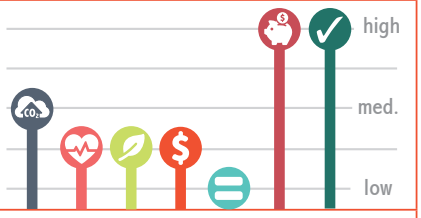
Tacoma is home to about 40 consignment shops! Not just for gently used clothes, but household furniture, supplies and equipment.

SERVING OUR COMMUNITY - Actions

Action		Lead	Co-benefits
M1	Develop a Construction and Demolition Diversion program that includes education, reporting, regulation and enforcement.	Solid Waste, Planning and Development Services	
M2	Support and advocate for strong product stewardship policies at the state and national levels, minimizing environmental impacts of product and packaging throughout all lifecycle stages, especially manufacturing.	Solid Waste, Sustainability Office, Government Relations	
M3	Provide financial incentives to increase diversion of materials at the Tacoma Recovery and Transfer Center.	Solid Waste	
M4	Conduct and support education and outreach on waste prevention (including food) and toxic reduction, with focused outreach to communities of color.	Solid Waste	
M5	Incentivize the use of sink food grinders as a strategy for beneficial use of food scraps. Food sent to the wastewater treatment plant is used as Tagro (environmentally friendly lawn and plant products produced by the City of Tacoma) and can be turned into renewable natural gas.	Wastewater, Solid Waste	
M6	Provide recycling and composting education and outreach targeted at multifamily property managers and tenants.	Solid Waste	
M7	Require new buildings to provide adequate space and receptacles for recycling and organics storage and collection.	Planning and Development Services, Solid Waste	
M8	Enhance opportunities to sort and drop-off reusable and recyclable materials at the Tacoma Recovery and Transfer Center through better signage, enhanced floor sorts, and drop-off area.	Solid Waste	
M9	Reduce disposable bag use by shoppers.	Sustainability Office	

Greenhouse Gas Reduction | Health | Local Environment | Local Economy | Equity | Affordability | Public Support

CITY LEADING BY EXAMPLE - Actions

Action		Lead	Co-benefits
M10	Ensure compliance with existing Sustainable Purchasing Policy, including increasing staff training.	Sustainability Office, Finance	
M11	Conduct waste characterization audits at 4 city facilities in order to develop better strategies for waste minimization and diversion.	Public Works, Public Assembly Facilities, Solid Waste, Tacoma Public Utilities	
M12	Increase materials surplus recovery and sale of city-owned goods and building demolitions.	Finance, Solid Waste	
M13	Use low-carbon concrete or asphalt made with a percentage of recycled asphalt and/or recycled asphalt shingles in city projects, including streets, where feasible and applicable.	Public Works, Solid Waste	

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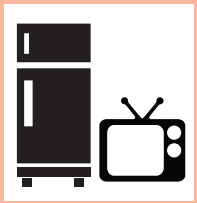
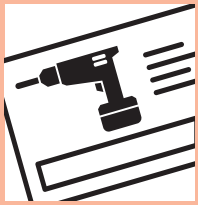
Individual choices matter

RESIDENTS



Unusable textiles, broken appliances and electronics, block Styrofoam, plastic garden pots - you'd be amazed at all the stuff you can recycle at the Tacoma Recovery and Transfer Center.

Americans waste about 25% of all food and drinks we buy, adding up to more than $1,600 per family each year. There is a science to food storage; learn how to keep produce from turning bad.



Borrow tools instead of buying them! Become a member of the Tacoma Tool Library.

BUSINESSES

Have a question?

Call (253) 502-5100 for information on how to increase recycling and add composting to your waste pickup, both of which can reduce your garbage can size and bill.

Natural Systems

Why it matters

- Natural systems include the plants and animals and integration of air, water and land systems that provide life and ecosystem services for Tacomans and the biotic community.
- Open spaces and urban forests improve water quality by filtering and managing stormwater and cooling urban areas. Green spaces also offer Tacomans access to nature and can positively influence mental and physical health.
- Acquiring and managing natural areas contributes to climate change resilience.
- Polluted stormwater runoff is the number one source of toxic pollution in Puget Sound.
- Trees benefit Tacoma by absorbing water, digesting carbon dioxide, providing habitat, raising property values and creating healthy neighborhoods.

Long-term goals

- Sustain and improve Tacoma's natural environment.
- Ensure that all Tacomans have access to clean air and water, can experience nature in their daily lives and benefit from low-impact development.
- Foster appreciation and stewardship of wildlife and natural resources.
- Restore damaged shorelines and marine ecosystems and protect salmon habitat along the many rivers and streams that flow into Commencement Bay.

TARGETS

By 2020, Tacoma will

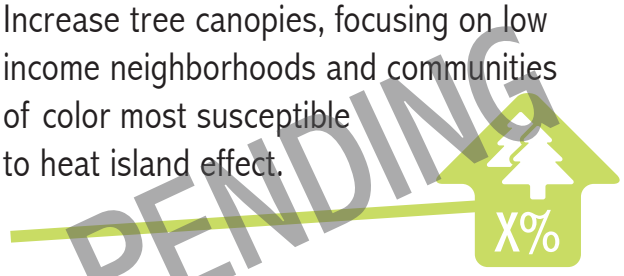
Maintain the amount of solids removed from streets, pipes, and filtration systems through stormwater best management practices.

2014
3,575 tons

2020
3,575 tons

Increase tree canopies, focusing on low income neighborhoods and communities of color most susceptible to heat island effect.

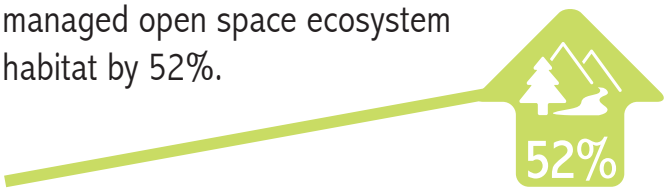
PENDING



2015
XX%

2020
XX%

Increase acres of actively managed open space ecosystem habitat by 52%.



2014
57.5 acres

2020
87.5 acres

Increase volunteers engaged in stewardship activities and programs by 20%.

2014
3,420 volunteers

2020
4,104 volunteers

Increase blocks of new permeable residential streets.

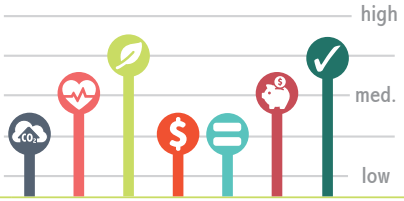
2015
28 blocks

2020
53 blocks

Did you know ...

A "hands-off" lawn isn't always best. When lawns become compacted, water fails to infiltrate into the soil. Rather, the water can run off into the streets where it can pick up pollutants before emptying into the Puget Sound through storm drains. Keep your grass brown in summer and avoid chemical fertilizers, but make sure the soil is healthy.

SERVING OUR COMMUNITY - Actions

Action		Lead	Co-benefits
N1	Reduce stormwater quantity and/or increase quality in each of the city's watersheds by developing Management Plans that use best practices appropriate to each watershed's natural and built conditions.	Surface Water	
N2	Implement code that discourages development on lands where such development would endanger life, property or infrastructure, or where important ecological functions or environmental quality would be adversely affected.	Planning and Development Services	
N3	Develop Urban Forestry Implementation Strategy that identifies and prioritizes strategic and equitable planting locations, incentives, public engagement and education, retention strategies and maintenance. Create adequate and stable funding for Strategy implementation.	Sustainability Office, Public Works, Planning, Development Services and Surface Water	
N4	Plan, create incentives for, and support green stormwater retrofit projects such as rain gardens and other low-impact designs.	Surface Water	
N5	Develop and manage an open space program based on watershed planning that seeks to own most valuable properties and effectively manages and restores habitat, using volunteers as appropriate.	Surface Water	
N6	Improve regulations to encourage tree preservation and protection on private property and in the City right-of-way.	Sustainability Office, Planning and Development Services	
N7	Create a public education campaign, targeted outreach effort or incentives to inform residents and/or plant sellers about the benefits of native and pollinator-friendly species and the hazards of invasive species.	Sustainability Office	

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CITY LEADING BY EXAMPLE - Actions

Action		Lead	Co-benefits
N8	Adopt and implement Landscaping Manual and Integrated Pest Management Policy and Plan for all city facilities and train staff.	Sustainability Office, Surface Water	
N9	Retrofit one city facility with Green Stormwater Infrastructure.	Public Works, Surface Water	

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Individual choices matter

RESIDENTS

Call Tacoma's Water Pollution Hotline (253-383-2429) if you see a spill, dirty construction site runoff, suds in the street, leaking dumpsters, or anything besides rainwater going down the drain. Powered by Citizens for a Healthy Bay.

From October to March, pick up a tree coupon for greening up your planting strip or yard.

BUSINESSES

Mark the storm drains on your business property, helping educate customers that storm drains divert untreated water. These waters — and the pollutants they carry — head into the Puget Sound where they can adversely affect aquatic organisms.

Air and Local Food

Why it matters

- Clean air and safe, nutritious food are important to sustaining our local community.
- Tacoma-Pierce County was one of only 32 areas in the country that didn't meet federal health standards for air quality.
- Wood smoke accounts for the matority (53%) of wintertime fine particle pollution in the Pierce County Smoke Reduction Zone.
- Direct and indirect costs associated with fine particle pollution in Pierce County are estimated at over $20 million each year for residents, businesses and others.

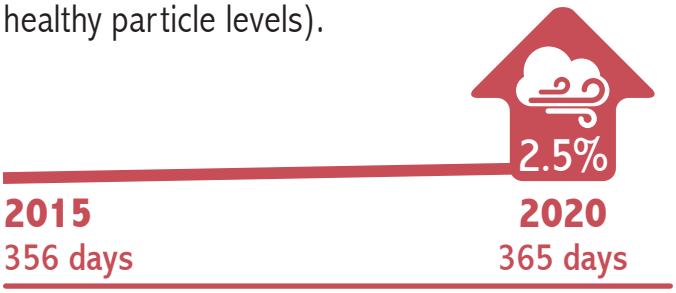
Long-term goals

- Reduce food insecurity for Tacoma residents.
- Protect public health and the environment from air pollution.
- Create a thriving community engaged in a just and healthy food system.
- Increase participation in urban agriculture and community garden programs that promote consuming locally grown fruits and vegetables.

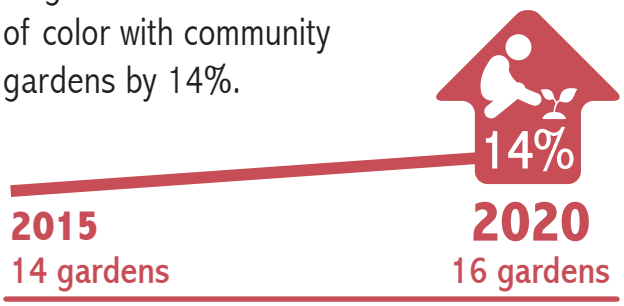
TARGETS

By 2020, Tacoma will

Meet healthy fine particle pollution levels 365 days a year (in 2015, 9 days were above healthy particle levels).



Increase number of low income neighborhoods and communities of color with community gardens by 14%.



Did you know ...

Since 2009, Harvest Pierce County has harvested over 300,000 pounds of food that would have otherwise been wasted.

SERVING OUR COMMUNITY - Actions

Action		Lead	Co-benefits
A1	Continue to collaboratively seek federal and state funding for reducing woodsmoke pollution.	Sustainability Office	
A2	Sustain and grow community garden program through enhanced garden support and education.	Environmental Services	
A3	Create and fund a reporting system and feedback forum for the city to hear from those suffering from food insecurity.	Neighborhood and Community Services	
A4	Support gleaning (harvesting produce left over in fields and home and community gardens for donation) in Tacoma through funding and outreach.	Sustainability Office, Neighborhood and Community Services	
A5	Support urban agriculture and clear legal hurdles so citizens can sell produce grown in the city.	Sustainability Office, Legal, Community and Economic Development	
A6	Support innovative projects to encourage more disadvantaged citizens to shop at farmer's markets.	Sustainability Office, Community and Economic Development	

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CITY LEADING BY EXAMPLE - Actions

Action		Lead	Co-benefits
A7	Pilot 1 - 2 small-scale urban agriculture programs on public land.	Sustainability Office	
A8	Implement community supported agriculture (CSA) pick-up at 4 city facilities for employees.	Sustainability Office	

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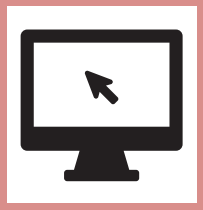
Individual choices matter

RESIDENTS

Text "PIERCEBURN" to 313131 to receive alerts on burning bans, ensuring you are doing what you can to protect the most vulnerable from air pollution.

Volunteer with Harvest Pierce County's Gleaning Project. Donate your crop or help collect leftover produce from area farms and residential fruit trees. Harvest some for yourself and some for local food banks.

BUSINESSES



Pugetsoundfresh.org has a list of Puget Sound Community Supported Agriculture (CSAs). Setting up a CSA delivery at work will support local agriculture and save you a trip to the store.

Climate Resilience

Why it matters

- The concentration of greenhouse gases in the atmosphere is projected to increase dramatically over the rest of the 21st century absent changes in policies and practices to substantially reduce those emissions.
- Climate change is having and will continue to have financial and social impacts to our built infrastructure and natural and social systems.
- The high-end estimated changes later in the century are projected to occur under a "business as usual" greenhouse gas emissions scenario.
  - Sea level rose 7.8 inches last century, with projections of an additional 6 to 50 inches of sea level rise by 2100. This results in increased risk of storm surge, flooding, erosion and habitat loss. These impacts will affect shoreline areas long before permanent inundation.
  - Temperatures increased by 1.3 degrees F in the last century, with projections of an increase of 4.0 to 5.3 degrees F by 2050. The increases will result in warmer summers with more intense heat waves and a longer frost-free season. Temperature increases result in increased risks of heat-related illness, and the cumulative effects of fire, insects, and disease on forest ecosystems.
  - Changes are predicted to local amounts and patterns of precipitation, including wetter autumn, winter, and spring months, with drier summers. More frequent heavy rainfall events are expected, along with a decrease in snowpack. These changes are expected to result in consequences for water quantity, fish habitat, hydropower and agriculture irrigation, as well as impacts to the Puyallup watershed, including greater frequency of neighborhood flooding and landslide events.

Long-term goals

- Educate residents.
- Understand patterns and vulnerability.
- Adapt to change.

TARGETS

By 2020, Tacoma will

Complete sea level and flooding studies.

2020 = 2 studies

Use information from completed studies to modify development codes, ensuring safety and resiliency.

2020 = Improved safety and resiliency

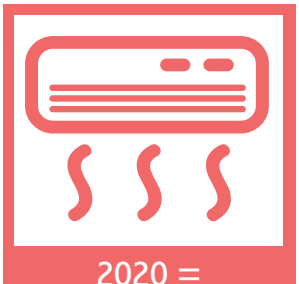
Incorporate climate risks into formal asset management, Capital Improvement Plans and implementation, and emergency management plans.

2020 = Planning and implementation

Educate the public on risks of climate change and opportunities for climate resilience and adaptation.

2020 = Public education on climate

Have adequate and accessible cooling stations to address heat waves.



2020 = cooling stations

Identify which public infrastructures and facilities are at unacceptable risk from climate change; prioritize adaptations for these elements.

2020 = Assess infrastructure needs

Did you know ...

Cumulatively, the area of Mt. Rainier's glaciers decreased by 27% between 1913 and 1994.

SERVING OUR COMMUNITY - Actions

Action		Lead	Co-benefits
C1	Incorporate climate resilience actions into equity initiatives and programs, and consider future climate risk in emergency planning and hazard mitigation planning updates.	City Manager's Office, Neighborhood and Community Services, Emergency Medical Services, Planning and Development Services	
C2	Preserve and expand urban forest canopies with climate resilient species based on heat island data analysis.	Environmental Services	
C3	Prioritize the most vulnerable neighborhoods for capital improvement, development, and planning activities to ensure that these communities receive the services they need to build resilience to climate change and other stressors.	Community and Economic Development, Planning and Development Services	
C4	Begin a conversation with the business community around climate impacts and resilience.	Neighborhood and Community Services	
C5	Engage with and support community organizations that enhance community resilience.	Neighborhood and Community Services, Environmental Services	

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Individual choices matter

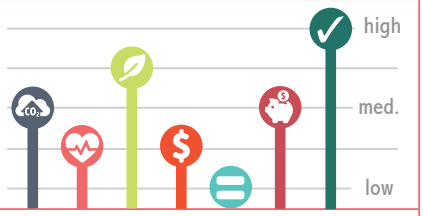
RESIDENTS

Plant native, drought-resistant trees and shrubs

Keep storm drains clear of leaves.

Insulate and air seal your home to keep cooler in the summer. PSE and TPU have great rebates and even a zero interest loan program.

CITY LEADING BY EXAMPLE - Actions

Action		Lead	Co-benefits
C6	Ensure that near-term capital improvement projects consider climate change risks.	Environmental Services, Public Works	
C7	Conduct additional studies (including data gathering, research, and mapping) to identify infrastructure that will be impacted by sea level rise and flooding.	Environmental Services, Public Works	
C8	Inspect, maintain, and upgrade critical infrastructure.	Environmental Services, Public Works	
C9	Preserve remaining natural areas, and provide more guidance and specifications on incorporating climate science in habitat restoration plans.	Environmental Services	
C10	Evaluate the development code related to landslide and flooding hazards.	Planning and Development Services	
C11	Integrate climate change considerations (e.g., increased sediment, increased flow, increased sea level) into current and near-term work for Puyallup River flood planning.	Environmental Services	

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