Tacoma Environmental Action Plan: 2019 Progress Report

As residents of Tacoma, we take pride in our environment. From a pink Mount Rainier at sunset, to orcas spotted in Commencement Bay; and from our growing tree canopy, to urban agriculture as a means of community resiliency. Our natural spaces are treasured pieces of our city's collective identity. We understand that investing in their protection ensures the continued stability, longevity, and resiliency of our economy and community as a whole.

In the past year, the City of Tacoma has taken great steps to protect our environment and community. In collaboration with Tacoma's youth, the Tacoma City Council unanimously approved the Climate Emergency Resolution, a major milestone in addressing the urgent need for action on climate change. Under this resolution, the Office of Environmental Policy and Sustainability will update Tacoma's Environmental Action Plan to include new sustainability initiatives that improve health, foster stewardship, address equity, and strive for a more vibrant Tacoma.

I am proud to present the Year 4 progress report. As you learn more about the steps the City, its residents, and businesses have taken, I encourage you to reflect on each number and figure presented herein as not just a statistic, but a symbol of a community's power when individuals unite to achieve a common goal.

To learn more and join the effort, visit www.cityoftacoma.org/sustainability.

Yours in Service,

Victoria R. Woodards
Mayor

What is the Environmental Action Plan and Its Intent?

The Environmental Action Plan (EAP) is a list of meaningful, high-priority actions that the City of Tacoma, Tacoma Public Utilities (TPU), and our community will take between 2016 and 2020 to meet the environmental goals outlined in the Tacoma 2025 Strategic Plan.

The EAP was developed in 2015 over nine months in a collaborative process with staff from multiple City of Tacoma departments, representatives of partner organizations, and residents of Tacoma.

It replaces the 2008 Climate Action Plan and builds on the 2016 Climate Change Risk Assessment to present near-term sustainability targets and actions in six different categories.

Each year the City releases a progress report detailing progress made on each target and action.

Six Categories of Sustainability

Natural Systems

Acquiring and managing natural areas contributes to climate change resilience. Green spaces also offer Tacomans access to nature and can positively influence mental and physical health.

Air and Local Food

Clean air and safe, nutritious food are important to sustaining our local community.

Buildings and Energy

Building energy represents about 40% of emissions for Tacoma's homes and businesses mostly due to natural gas used for heating.

Transportation

Transportation accounts for 73% of GHG emissions in Tacoma. Single-occupancy passenger vehicles contribute significantly to overall transportation emissions.

Materials Management

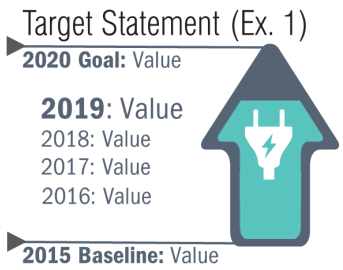
In the waste hierarchy we must prioritize reducing, then reusing, then recycling. Sharing, leasing, borrowing, refurbishing and buying used and durable goods should be the first choices.

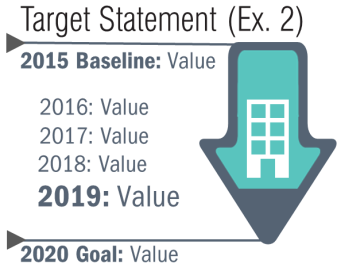
Climate Resiliency

Climate change is having and will continue to have financial and social impacts to our built infrastructure and natural and social systems.

Reading the 2019 Progress Report

This report contains near-term **targets** for each of the six categories of sustainability. In most cases, the baseline was set using 2015 data, and 2020 is the target year. For each target, a graphic shows the baseline, goal, and progress so far:





When the 2019 value **exceeds the goal**, data and icon is shown in **green**.

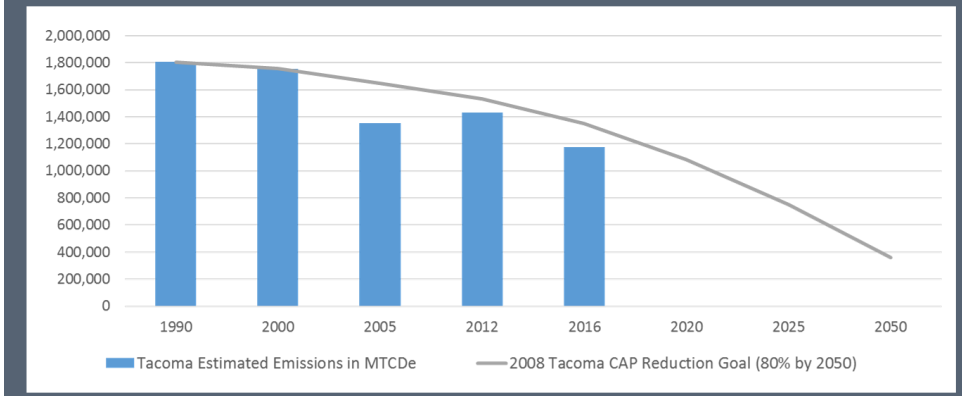
When the 2019 value is **behind the baseline**, data and icon is shown in **red**.

This report also contains **actions** that the City and community will take to reach the targets. Each action is given a **progress rating** and a **status update**:

1 None | 2 Little Progress | 3 Some Progress | 4 Good Progress | 5 Completed

Look for **stories of success** throughout the report to see some of the impactful accomplishments made this year in each EAP category.

Community Emissions Goals



The EAP recognizes that **climate change poses serious threats for life in Tacoma** and demands a strong and thorough response.

The targets and actions in the EAP are intended to improve the health and resilience of Tacoma by helping to reduce our greenhouse gas (GHG) emissions. The City of Tacoma set the goal of **reducing GHG emissions 40% below 1990 levels by the year 2020.** Tacoma's historic GHG emissions are shown in the graph to the left.

Natural Systems

TARGETS

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

2020 Goal: 4,105 volunteers

2019: 3,735 volunteers
2018: 2,076 volunteers
2017: 3,888 volunteers
2016: 3,781 volunteers

2015 Baseline: 3,421 volunteers

Increase blocks of new permeable residential streets.

2020 Goal: 53 blocks

2019: 62.5 blocks
2018: 60.5 blocks
2017: 37.5 blocks
2016: 30 blocks

2015 Baseline: 28 blocks

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

2020 Goal: 87.5 acres

2019: 72.2 acres
2018: 67.8 acres
2017: 62.5 acres
2016: 60.4 acres

2014 Baseline: 57.5 acres

Increase acres managed by Green Stormwater Infrastructure.

2020 Goal: 870 acres

2019: 960 acres
2018: 925 acres
2017: 866 acres
2016: 860 acres

2014 Baseline: 290 acres

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

2020 Goal: 212,500 trees

2019: 215,633 trees
2018: 213,013 trees
2017: 212,371 trees
2016: 212,115 trees

2009 Baseline: 212,000 trees

Natural Systems

ACTIONS

	Action	Progress Rating (1-5)	2019 Status
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.	3	The City received $5M in grant funding to improve water quality for 43 acres in the Flett Creek Watershed, and completed Phase 1 of the area's Watershed Management Plan.
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.	4	In 2019, steep slope standards and biodiversity corridors were applied to Shoreline Zoning Districts to ensure a consistent approach to the regulation of geologically hazardous areas and fish and wildlife habitat areas.
N3	Develop Urban Forestry Implementation Strategy for strategic and equitable planting locations, incentives, public engagement, retention strategies and maintenance. Create stable funding for implementation.	5	The City's Urban Forest Management Plan was developed in 2019, and officially adopted by City Council (Resolution 40492). This UFMP strengthens themes such as Resource Management, Equity and Accessibility, Canopy Health & Growth, Long-Term Funding, Climate Resiliency, Enhanced Ecosystem Services & Benefits, and Community Engagement & Stewardship.
N4	Plan, create incentives for, and support green stormwater retrofit projects such as rain gardens and other low-impact designs.	4	The City continues to complete green stormwater retrofit projects and new Green Stormwater Infrastructure (GSI) projects on an ongoing basis. 2019 projects include the South Puget Sound Avenue Greenscape project, and the Solid Waste Drainage and Traffic Safety Improvement project. The City also provides technical assistance for private citizens and developers on GSI.
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.	4	The City has an established Open Space Program that stewards approximately 500 acres in various capacities. All properties are managed for tree canopy and stormwater benefit. The City continues to educate, recruit and engage the public in open space property stewardship.

Natural Systems

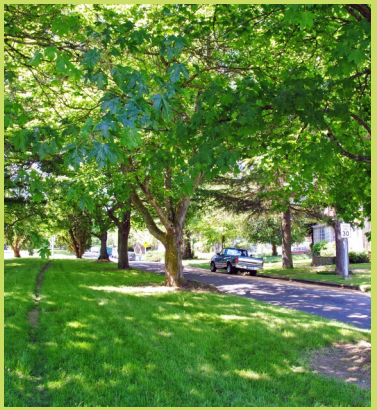
ACTIONS

	Action	Progress Rating (1-5)	2019 Status
N6	Improve regulations to encourage tree preservation and protection on private property and in the City right-of-way.	3	Adopted by the City Council in 2019, the Urban Forest Management Plan provides recommended Code Updates, including clarifying language for protection of trees within the public right-of-way. These recommendations also include establishing a voluntary heritage tree protection program.
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.	3	The City's Open Space program uses social media and public stewardship events to educate the public about the importance of native species and hazards of invasive species. Green Tacoma Day is an annual, City-hosted celebration of our community green spaces, engaging hundreds of community members on the importance of our native forests.
N8	Adopt and implement Landscaping Manual and Integrated Pest Management Policy and Plan for all City facilities and train staff.	1	No progress made.
N9	Retrofit one public facility with Green Stormwater Infrastructure.	5	In 2019, the City completed the Solid Waste Management building Green Stormwater Infrastructure project. This project added 10,694 sq. ft. (0.24 acres) of water quality control, treating 71,895 sq. ft. (1.65 acres) of runoff.

Urban Forestry Management Plan (UFMP)

Regional pressures of rapid development and an ever-increasing demand for housing are threatening Tacoma's already sparse urban tree canopy. In 2019, the City's Urban Forestry team set out to develop a new plan that would help find a balance between built and green infrastructure. Since identified as a critical action in the Natural Systems theme of the Environmental Action plan, this idea would grow into the Urban Forestry Management Plan (UFMP) which was unanimously passed by the Tacoma City Council on December 3, 2019.

The UFMP outlines a series of 58 actions across City departments and recognizes the importance of working hand-in-hand with the community to help Tacoma bloom into a thriving and sustainable city. Now in the implementation phase of the UFMP, Urban Forestry is working to steward green infrastructure. A few highlights include creating workflows that help to protect both trees and built infrastructure, such as sidewalks, in the case of a conflict; establishing a heritage tree program to recognize the importance of and protect Tacoma's most valuable trees; and designing an urban wood reuse program to retain a tree's value long after its life ends. Visit tacomatreeplan.org to learn more about the Urban Forestry Management Plan.



Air and Local Food

TARGETS

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

2020 Goal: 16 gardens

2019: 20 gardens
2018: 12 gardens
2017: 12 gardens
2016: 14 gardens

2015 Baseline: 14 gardens

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

2020 Goal: 365 days

2019: 353 days
2018: 344 days
2017: 341 days
2016: 358 days

2015 Baseline: 356 days

Community Resiliency Through Urban Gardening

Thanks to partnerships that include the City, Tacoma Farmers Market and Proctor Farmers Market, purchases of fresh, affordable local produce have become more available to seniors and low-income shoppers. With the help of Harvest Pierce County and Tacoma's Environmental Services Department, the greater Tacoma region is fortunate to have more than 80 community gardens, including 20 located in city neighborhoods prioritized by income and diversity. Local food banks maintain a stock of healthy options in part from Harvest's Gleaning Program, which rescued over 46,000 pounds of unharvested produce in 2019. With guidance from community-created research facilitated by the Puyallup Watershed Initiative, Tacoma will expand tools for self-reliance and food sovereignty, including opportunities for growing and selling produce - in line with the community's call for a more just and healthy food system.

Photo: Tacoma Farmers Market

Air and Local Food

ACTIONS

	Action	Progress Rating (1-5)	2019 Status
A1	Continue to collaboratively seek federal and state funding for reducing wood smoke pollution.	4	The City continues to promote the woodstove change out program administered by the Puget Sound Clean Air Agency. 43 stoves were scrapped or removed in 2019.
A2	Sustain and grow community garden program through enhanced garden support and education.	4	City support continues for gardens for residents in low-income and low-English language proficiency neighborhoods. From 2016-2019, the number of gardens with low-English proficiency community members increased from 5 to 14.
A3	Create and fund a reporting system and feedback forum for the city to hear from those suffering from food insecurity.	4	City staff continues to engage with community members and organizations about food insecurity, particularly the Just and Healthy Food System - Community of Interest. Recognizing racial and economic injustice issues, the City has sought to develop trust for support of community-led processes to address food insecurity.
A4	Support gleaning (harvesting produce left over in fields and home and community gardens for donation) in Tacoma through funding and outreach.	4	The Harvest Pierce County gleaning program adjusted it's model in 2018 and made significant work in 2019. The amount of food harvested and distributed increased from 17,495 pounds in 2018 to 46,290 pounds in 2019. To accomplish this, 210 gleaning events were held that engaged 574 volunteers.
A5	Support urban agriculture and clear legal hurdles so citizens can sell produce grown in the city.	3	City staff reviewed Tacoma Municipal Code, engaged other Cities about urban agriculture programs, and worked with Harvest Pierce County to discuss implementing a small-scale urban agriculture pilot program. The City began a cross-departmental process to continue development of urban agriculture programs.
A6	Support innovative projects to encourage more disadvantaged citizens to shop at farmer's markets.	4	Staff engaged local farmers' markets about allocating new City funds for the Senior Farm Share subsidy programs. Using available funding, Tacoma Farmers' Market saw EBT sales and matching incentives increase by 22% in 2019.
A7	Pilot 1 - 2 small-scale urban agriculture programs on public land.	2	With support from the City, Harvest Pierce County is in the third year of a successful Farmer Training program and is working to train farmers that will be able to move onto these sites once regulatory and policy barriers have been reduced.
A8	Implement community supported agriculture (CSA) pick-up at 4 city facilities for employees.	3	A program scope for a CSA program at four City worksites has been developed in 2019, for anticipated rollout in spring 2020.

Buildings and Energy

TARGETS

Reduce energy use in City & TPU buildings by 10%.

2013-15 Baseline: 213 mil kBTU
2016: 199 mil kBTU
2017: 216 mil kBTU
2018: 210 mil kBTU
2019: 212 mil kBTU
2020 Goal: 192 mil kBTU

Reduce electricity use in City & TPU operations by 10%.

2013-15 Baseline: 274 mil kBTU
2016: 258 mil kBTU
2017: 265 mil kBTU
2018: 230.4 mil kBTU
2019: 212.5 mil kBTU
2020 Goal: 247 mil kBTU

Decrease peak water use by 1,419 gallons per account.*

2017 Baseline: 64,576 gal/acct.
2018: 66,334 gal/acct.
2019: 62,521 gal/acct.
2020 Goal: 63,157 gal/acct.

*This target was updated and added in 2017

Reduce water use at City & TPU facilities by 10%.

2013-15 Baseline: 105,759 CCF
2016: 98,573 CCF
2017: 104,393 CCF
2018: 100,662 CCF
2019: 98,322 CCF
2020 Goal: 95,183 CCF

Increase solar power by 26%.

2020 Goal: 1,012 kW
2019: 3,084 kW
2018: 2,881 kW
2017: 1,767 kW
2016: 1,600 kW
2015 Baseline: 784 kW

Certify 100% more buildings as Energy Star.

2020 Goal: 28 buildings certified
2019: 23 buildings
2018: 18 buildings
2017: 18 buildings
2016: 14 buildings
2015 Baseline: 14 buildings certified

Certify 20% more buildings as LEED.

2020 Goal: 49 buildings certified
2019: 44 buildings
2018: 44 buildings
2017: 44 buildings
2016: 44 buildings
2015 Baseline: 41 buildings certified

Buildings and Energy

ACTIONS

	Action	Progress Rating (1-5)	2019 Status
B1	Meet I-937, the Washington State Energy Independence Act, energy conservation targets which require utilities to achieve all cost-effective energy conservation measures.	5	Tacoma Power exceeded I-937 targets for 2019, acquiring approximately 17 million kWh of energy conservation savings within Tacoma - saving enough power to heat and light 1,389 homes.
B2	Develop a pilot commercial program focused on reducing utility costs through improving building ops. & maintenance.	5	A pilot program is underway with seven large Tacoma Power customers. Through workshops and building audits, Tacoma Power aimed to help these customers save at least 5% in their electricity use during the first two years of the program. In year 1 alone, 6% average savings was achieved across enrolled facilities.
B3	Continue to develop water conservation incentives, rebates and education for residential, commercial and industrial customers.	4	Program development continued in 2019. Notable progress included distributing showerheads and sink aerators to five multifamily properties for the pilot fixture replacement program, and the launch of the residential smart irrigation controller rebate program.
B4	Hire a green building advocate for the City's Permit Office to identify incentives, remove barriers, and encourage green building practices.	5	The City's Green Building Specialist started their position on August 5, 2019.
B5	Retain funding for low income energy efficiency programs.	5	The 2018/2019 Conservation Plan included a targeted focus on low income and hard to reach residents. Due to the effectiveness of past TPU programs, better building codes and the availability of more efficient products, fewer conservation opportunities exist today. Funding has been adjusted to align with current community needs.
B6	Support efforts at the state and local level to incentivize conservation in rental properties.	4	TPU provided input on the 2019 Clean Buildings Bill which aims to lower energy costs and pollution from existing commercial buildings larger than 50,000 sf. Multifamily buildings with high energy consumption may qualify for State funds to reduce energy use. Tacoma Power is assisting the State to ensure successful implementation of the law.

Buildings and Energy

ACTIONS

	Action	Progress Rating (1-5)	2019 Status
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.	5	The City voted in the 3-year International Code Council's proposed building and energy codes to ensure that new national codes strengthen efficiencies. At the state level, Tacoma Power is actively providing recommendations to the State Building Code Council.
B8	Develop community-owned solar projects and support distributed generation.	5	Four, 75 kW Community Solar projects were completed in 2016. TPU continues to explore options for new projects. Since 2017, new projects remain economically unviable absent new legislative changes.
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 customers to better track and monitor building energy use.	5	TPU customers can now track multiple meters attached to one building using new software available online. Advanced meter upgrades are in progress, which will allow for customer access to more specific data related to building energy use. A how-to guide has been created and is live on the TPU website.
B10	Upgrade all streetlights to LED where cost effective and use best practices when possible to reduce light pollution.	5	TPU's LED street light project replaced approximately 18,000 streetlights, reducing costs, increasing safety, and saving energy. The project finished three months ahead of schedule and $2 million under budget. These LED street lights will save the City $620,000 per year in electricity costs, and even more in maintenance costs.
B11	Track and report city buildings' utility performance and Energy Star scores. Develop a Resource Conservation Management (RCM) Plan.	3	City facility management teams are working with the General Government Resource Conservation Manager and TPU Facility Conservation and Planning Administrator to monitor city facility energy use. Energy modeling and performance reporting continues for three City facilities as part of Tacoma Power's Commercial Strategic Energy Management program.

Buildings and Energy

ACTIONS

	Action	Progress Rating (1-5)	2019 Status
B12	Meet federal Better Building Challenge goal (5 year, 10% reduction) by implementing energy efficiency in city buildings where cost effective.	4	TPU and General Government energy teams continued focus on reducing energy use in three campuses; The Greater Tacoma Convention Center, Police/ Fleet Warehouse, and TPU Campus, which is on-target to surpass two-year energy reduction goals.
B13	Ensure all existing occupied LEED New Construction buildings comply with LEED Existing Building Operations and Maintenance guidelines.	3	The Center for Urban Waters achieved gold certification in 2018. In 2019, the Police Headquarters began using the commercial strategic energy management process to implement low-cost energy reductions that will assist in achieving LEED EBOM prerequisites.
B14*	Launch four new energy conservation initiatives to assist low-income and hard to reach customers	5	This goal was met in 2018 with a manufactured home pilot, higher rental rebate incentives, targeted energy audits, and a custom projects program. In 2019 Tacoma Power continued to launch new initiatives including a window promotion for rental properties, energy audits for low income customers and a low-income agency partnership program.

**This action was added in 2018, as a more measurable replacement for the previous target: " Achieve all cost-effective electricity community conservation savings"*

TPU's Innovative Solutions to Reach Low-Income Customers

TPU developed the deferred loan program, which covers insulation, windows, and ductless heat pumps. This program provides families zero interest financing to make their homes more energy efficient. Payments on the loans are deferred until the customer sells their home. In addition, TPU forged agreements with Rebuilding Together South Sound and the COT Rehabilitation Loan program that leverage existing low-income programs, with plans to expand partnerships with new community partners in the future. TPU implemented a successful limited time promotion for rental properties that served 51 low-income families by installing new efficient windows. Finally, TPU continues to reach customers on utility bill discount rate that show higher than average energy use by offering energy audits to help customers identify energy saving opportunities.

Transportation

TARGETS

Decrease community single occupancy vehicle trips by 7% of 2014 levels.

2014 Baseline: 77%

2016: 84%
2017: No new data
2018: 80%
2019: No new data

2020 Goal: 70%

Decrease City & TPU employee single occupancy vehicle trips by 5% of 2014 levels.

2014 Baseline: 75%

2016: 75%
2017: No new data
2018: 77.5%
2019: No new data

2020 Goal: 70%

Register 2,000 electric vehicles by 2020.

2020 Goal: 2,000 registered

2019: 1164 registered
2018: 878 registered
2017: 583 registered
2016: No data

2015 Baseline: 383 registered

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

2020 Goal: 4,188 pedestrians

2019: No new data
2018: No new data
2017: 2,650 pedestrians
2016: 2,858 pedestrians

2015: 3,642 pedestrians

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

2020 Goal: 83 miles

2019: 73.7 miles
2018: 70.6 miles
2017: 64.4 miles

2015 Baseline: 61 miles

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

2015 Baseline: 111 collisions

2016: 128 collisions
2017: 99 collisions
2018: 126 collisions
2019: 113 collisions

2020 Goal: 56 collisions

*This target and baseline data was updated for accuracy in 2019.

Decrease City & TPU carbon pollution from fuels by 15% of 2014 levels.*

2014 Baseline: 193,270 MTCDe

2016: 190,652 MTCDe
2017: 194,350 MTCDe
2018: 190,113 MTCDe
2019: 189,363 MTCDe

2020 Goal: 164,280 MTCDe

*This target was updated for accuracy in 2018, and was updated in 2019 for greenhouse gas pollution, as measured by metric ton carbon dioxide equivalents (MTCDe).

Hybrid Police Fleet Vehicles

The City of Tacoma continues to invest in hybrid and plug-in electric vehicles that reduce idling. In 2019, the Tacoma Police Department (TPD) purchased 32 new Ford Hybrid Interceptor police patrol vehicles, with plans to continue buying hybrids with additional funding. Though the initial costs are a bit higher than internal combustion vehicles, the hybrids pay for themselves within 16 months, as they require less maintenance and less fuel per miles traveled. Transitioning to hybrid patrol vehicles reduces TPD's fuel consumption by an estimated 40%, saving approximately 875,000 lbs (397 MTCDe) of CO_2 annually. Moving forward, TPD plans to have all internal combustion engine Crown Victoria models off the road, except a few retained as pool cars, by 2023. Eventually, the entire patrol fleet will be hybrid vehicles, which will save taxpayer money and leave a smaller carbon footprint.

Transportation

ACTIONS

	Action	Progress Rating (1-5)	2019 Status
T1	Develop education programs and materials for the public on benefits and practicalities of electric vehicles (EVs).	5	TPU developed an EV webpage (mytpu.org/EVs) and hosted EV workshops and Ride and Drive events which are offered on an ongoing basis.
T2	Establish dedicated and stable funding for active transportation education, encouragement, safety programs, and infrastructure improvements.	3	Through the Tacoma Streets Initiative, $2.5 million/year is dedicated to active transportation. City Council funded a Vision Zero study directing long-term sustainable funding strategies for safety programs & infrastructure improvements; part of which will be focused on active transportation.
T3	Synchronize and recalibrate the timing of traffic signals on all Tacoma arterials. Repair, improve, or upgrade infrastructure as needed to maximize signal efficiency.	2	Two signals were upgraded and retimed in 2019. After obtaining recent City and grant funding, the City completed design on 13 signals in 2019, which will be implemented in 2020. In addition, the City obtained consultants for retiming 22 additional traffic signals.
T4	Become a Bicycle Friendly Silver Community by implementing the next 5 prioritized Mobility Master Plan roadway projects and next 3 trail projects.	3	Construction began on Phase III of the Pipeline Trail, which will include protected bike lanes. More projects began including bike boulevard enhancements on Fawcett Ave and bike facilities connecting to the South Tacoma Sounder Station.
T5	Support 4 multi-year Safe Routes to School (SRTS) Programs and infrastructure improvements.	4	A HAWK beacon was installed for First Creek which improved pedestrian infrastructure for three elementary schools, and a pedestrian safety curriculum was created that is now being taught in elementary PE classes. Approximately 200 students were taught how to bike via three bike rodeos, and a grant was received to create a safe walking video.
T6	Create a grant program that supports walking, biking, and transit projects in business districts and designated centers.	1	No grant program has been developed.
T7	Develop sidewalk, curb ramp and crosswalk inventories to prioritize future investments, as part of a Pedestrian Mobility Strategy.	3	Partnering with UW Tacoma, walking audits were completed for five elementary schools. These walking audits included an inventory of sidewalk, curb ramp, and crosswalk data along with other data points that make a street walkable. Additionally, the City continues to inventory curb ramps.
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.	4	TPU advocated for HB 1512 (which passed the Washington State Legislature in 2020) clarifying utilities' authority to promote and incentivize transportation electrification. Tacoma City Council voted unanimously to support the draft Clean Fuel Standard rules developed by the Puget Sound Clean Air Agency.

Transportation

ACTIONS

	Action	Progress Rating (1-5)	2019 Status
T9	Advocate for strong Sound Transit and Pierce Transit policies and funding, incl. South corridor ST3 projects & Pierce Transit bus rapid transit on Rt. 1.	4	The City is a key partner in work groups developing the Tacoma Dome Link Extension, an ST3 funded project in the South Corridor, and the Pierce Transit BRT along Pacific Avenue.
T10	Equip operationally appropriate city vehicles with petroleum fuel saving and/or anti-idling technology.	3	The City continues to invest in hybrid and plug-in electric vehicles that reduce idling. Fleet purchased 32 new hybrid police patrol vehicles, which will all be in service by summer 2020. These vehicles will reduce fuel consumption by an estimated 40%, saving approximately 875K lbs CO2 (397 MTCDe) annually. Additionally, 7 Nissan Leaf electric vehicles and 2 hybrid loaders were purchased in 2019.
T11	Convert solid waste trucks from diesel to renewable natural gas made from methane captured at the wastewater treatment plant.	3	33 of the overall fleet of 84 solid waste trucks are now fueled by CNG. Renewable CNG from the wastewater treatment plan is anticipated to be available in the next couple of years.
T12	Develop, implement, and monitor a Fuel Reduction Policy and associated education and awareness campaigns for both employee commuting and city trips.	3	A Sustainable Fleet and Fuel Team was created, and met monthly in 2019. The group drafted a policy to be reviewed by stakeholders and eventually approved by management in 2020.
T13	Update City's Telecommuting Policy and flexible work schedule to foster increased use when it meets City business needs.	3	The City's Finance Department piloted a successful telecommute program for staff, which will be used to inform broader City department participation.
T14	Join West Coast Electric Fleets at the Highway Lane Level in 2016.	5	The City joined West Coast Electric Fleets in 2018. City fleet management continues to work with departments to purchase electric passenger vehicles.
T15	Develop and incorporate contractor fuel emissions reduction standards into bids and contracts.	3	Emission reductions and sustainable construction practices were incorporated into City-wide Sustainable Procurement resources. These include updates for evaluating the sustainability of proposal and bid requests.

Materials Management

TARGETS

Decrease waste generation by 11% per capita per day.

2014 Baseline: 4.4 lbs.

2016: 4.8 lbs.
2017: 4.9 lbs.
2018: 5.1 lbs.
2019: 4.9 lbs.

2020 Goal: 3.9 lbs.

Double commercial composting accounts.

2020 Goal: 220 accounts

2019: 372 accounts
2018: 344 accounts
2017: 277 accounts
2016: 270 accounts

2015 Baseline: 110 accounts

Increase multi-family recycling accounts.

2020 Goal: 1,160 accounts

2019: 1,370 accounts
2018: 1,111 accounts
2017: 1,143 accounts
2016: 1,026 accounts

2015 Baseline: 1,105 accounts

Tacoma's Multifamily Residents Work to "Recycle Right"

The City of Tacoma has around 1,731 multifamily buildings; representing nearly 28,000 homes. This number is only expected to grow as our city densifies and expands housing. In 2019, the Office of Environmental Policy and Sustainability (OEPS) partnered with Solid Waste Management (SWM) to hire a full-time project specialist to develop and manage the multifamily recycling and waste reduction program. This program helps multifamily property managers and residents "Recycle Right" by providing online and on-site technical and educational support. With the expansion of this program, accounts grew from 1,111 to 1,370 in 2019. Outreach materials included new colorful tote bags to help residents remember to keep their recyclables loose (not bagged) when they empty into the container.Properties that have received these tote bags through the program report less "tagging" resulting from contaminated recycling bins, marking a success for materials management!

Materials Management

ACTIONS

	Action	Progress Rating (1-5)	2019 Status
M1	Develop Construction and Demolition Diversion (C&D) program that includes education, reporting, regulation and enforcement.	3	The City's Green Building Specialist created a C&D information tab that was added to the City webpage, and a C&D rack card was created for public distribution. Additional C&D diversion resources are being created.
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.	4	The City helps fund the Northwest Product Stewardship Council and has staff on the Steering Committee. Several State legislative bills passed in 2019, including HB 1652 regarding paint stewardship and disposal. A study bill on the management of plastic packaging was passed, and Ecology and consultant work is underway.
M3	Provide financial incentives to increase diversion of materials at the Tacoma Recovery and Transfer Center.	3	Solid Waste Management purchased a grinder and is actively developing a wood diversion program with an estimated start date of late 2020.
M4	Conduct and support education and outreach on waste prevention (including food) and toxic reduction, with focused outreach to communities of color.	3	While waste prevention remains the most effective strategy to divert materials from the landfill, 2019 focused on waste diversion strategies due to international recycling changes. The City received input from over 6,100 community members which resulted in a $2.82 surcharge for residential customers. A portion of this surcharge will be used for education and outreach on how to "recycle right".
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 and can be turned into renewable natural gas.	2	A site visit to the University of Puget Sound Dining services helped to identified barriers and incentives for commercial use of disposers. A work plan was submitted for the use of sink food grinders in multifamily housing to WA Department of Ecology as part of the Food Waste Reduction Act.
M6	Provide recycling and composting education and outreach targeted at multifamily property managers and tenants.	4	The City hired a multifamily recycling and waste reduction specialist who finalized education and outreach materials, developed communications and performance measurement plan, and built relationships with local multifamily housing properties and non-profit organizations.

Materials Management

ACTIONS

	Action	Progress Rating (1-5)	2019 Status
M7	Require new buildings to provide adequate space and receptacles for recycling and organics storage and collection.	4	Solid Waste reviews and provides site specific requirements for individual residential and multifamily/commercial permit applications regarding solid waste and recycling (including organics) collection space to comply with adopted state building code.
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.	3	SWM is actively developing a clean wood waste sort and drop-off capability at the Tacoma Recovery and Transfer Center.
M9	Reduce disposable bag use by shoppers.	5	The Bring Your Own Bag ordinance went into effect in July 2017. Retailer surveys were conducted in 2019, the results of which indicated community support for the ordinance.
M10	Ensure compliance with existing Sustainable Purchasing Policy, including increasing staff training.	3	An inter-departmental group of City staff began development and promotion of online Sustainable Procurement resources for use by City purchasing and finance staff.
M11	Conduct waste characterization audits at 4 City facilities in order to develop better strategies for waste minimization and diversion.	3	As a result of four facility waste audits and the new "Recycle Reset" changes in Tacoma, new strategies have been identified for waste diversion in City facilities, which will be implemented in 2020.
M12	Increase materials surplus recovery and sale of City-owned goods and building demolitions.	1	No progress made.
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.	4	The use of recycled materials has become an industry standard and common in City projects, particularly when it comes to Hot Mix Asphalt (HMA) as most producers have some recycled materials in their mix. Recycled concrete aggregate is used where feasible on street projects. The City's asphalt plant is producing HMA with 15% recycled content and will be looking to increase this amount to 20% in 2020.

Climate Resiliency

TARGETS

Complete sea level and flooding studies.

2020 = 2 studies

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

2020 = Planning and implementation

Have adequate and accessible cooling stations to address heat waves.

2020 = cooling stations

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

2020 = Improved safety and resiliency

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

2020 = Public education on climate

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

2020 = Assess infrastructure needs

Tacoma's Climate Emergency Resolution

In December 2019, Tacoma became the first Washington city to pass a Climate Emergency Resolution. With a unanimous vote, City Council adopted Resolution No. 40509, declaring climate change an emergency in Tacoma, and affirming Council's support of initiatives to mitigate impacts.

This resolution recognizes the severity of the climate crisis and outlines a pathway to reaching the City's carbon reduction goals by 2050, including updating the City's Environmental Action Plan (EAP) by April 2021. Updates to the EAP include a more significant focus on climate and environmental justice initiatives, and calls for City staff to receive education and engagement on climate issues. Upon its adoption, Mayor Woodards addressed Tacoma's youth activists, who were instrumental in raising local awareness of the global climate threat.

Climate Resiliency

ACTIONS

	Action	Progress Rating (1-5)	2018 Status
C1	Incorporate climate resilience actions into equity initiatives and programs, and consider future climate risk in emergency planning and hazard mitigation plan updates.	1	This action will be an important part of the City's Climate Adaptation Strategy. The Equity Index, developed in the Office of Equity and Human Rights (OEHR), will be a useful tool for this work. Emergency Management will be a critical partner in this work.
C2	Preserve and expand urban forest canopies with climate resilient species based on heat island data analysis.	4	Open space continues to use native species to diversify our tree canopy over time. Heat island data is not used, as open space properties are focused in habitat corridors throughout the City.
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.	3	In 2019, the City developed an Equity Index Map, which provides data-driven, neighborhood-based needs assessment and project prioritization. Additionally, the City is piloting a Participatory Budgeting project in an East Tacoma neighborhood, where neighbors decide how to spend $100,000 to improve their neighborhood.
C4	Begin a conversation with the business community around climate impacts and resilience.	2	During the EAP update process beginning in 2020, community outreach, including business representatives, will be conducted by consultant teams.
C5	Engage with and support community organizations that enhance community resilience.	3	Staff represent the City on the Steering Committee of the Puget Sound Regional Climate Collaborative and the Puyallup Watershed Initiative. The Tree Coupon program has been expanded to encourage a healthy tree canopy.
C6	Ensure that near-term capital improvement projects consider climate change risks.	3	Metro Parks has incorporated anticipated climate change effects into the planning and design of its Owen Beach project. Each municipal project needs to be evaluated as to the acceptable level of risk given the value of the asset and its expected life expectancy. Most near-term capital projects are probably not being reviewed with a climate change lens at this time.

Climate Resiliency

ACTIONS

	Action	Progress Rating (1-5)	2018 Status
C7	Conduct additional studies (including data gathering, research, and mapping) to identify infrastructure that will be impacted by sea level rise (SLR) and flooding.	3	The Washington Coastal Resilience Project (WCRP) science team developed local sea level rise projections based on the latest global greenhouse gas projections and regional land up rise and subsidence. The City will work with a consultant on a Tacoma Climate Adaptation Strategy in 2020, which will include impacts from sea level rise and flooding.
C8	Inspect, maintain, and upgrade critical infrastructure.	3	The City continues to inspect all facilities after any rainfall event that is greater than a 10 year event (3 inches in 24 hours); however, regular inspections or upgrades of roadway infrastructure is less frequent.
C9	Preserve remaining natural areas, and provide more guidance and specifications on incorporating climate science in habitat restoration plans.	4	Open Space looks for opportunities to acquire property in a cost effective manner. The City permitting department does allow climate adapted species on a case by case basis. PDS has updated code to increase the protection of biodiversity corridors.
C10	Evaluate the development code related to landslide and flooding hazards.	3	The Tacoma Municipal Code was amended to incorporate requirements to evaluate sea level data and SLR risk and implications, promote resilience, and practice social equity.
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.	3	The City should be able to use the probabilistic SLR data from the WA Coastal Resilience Project (WCRP) to inform the effect of the Puyallup River on sea level rise and flooding in the tide flats. The new SLR data, maps and charts have been published and the WCRP continues.