



2017 REPORT

Pierce
County
Office of
Sustainability

Sustainability 2017



The Pierce County Council endorsed the Sustainability 2020 Plan on April 26, 2016 and here we are two years later reporting back on our sustainability efforts. The Office of Sustainability is now located in Planning & Public Works and remains focused on saving money, limiting waste, protecting the environment, and protecting human health.

Sustainability 2020 is an ambitious sustainability plan for Pierce County government that can only be met with the efforts and leadership of all Pierce County employees. Given

“ The biggest threat to sustainability in Pierce County is the increased pace of growth and cost of living. Pierce County continues to struggle to create enough living wage jobs locally so that residents can live and work here. Too many Pierce County residents continue to leave the county to go to work, a lifestyle that is often unhealthy. ”

limited resources, the Office of Sustainability is dependent on partnerships to meet our internal and external goals. When Pierce County employees make sustainable choices it saves us money and allows us to spend more tax dollars on public safety and other critical County services. The County owns

and operates 72 buildings, 1,069 vehicles and employs over 3,500 people. Making good decisions about these assets is critical for the wellbeing of Pierce County residents and can help ensure a cleaner and healthier future.

Ryan Dicks
Sustainability Manager

County-Wide Sustainability Trends

Air Quality	Air quality was worse in 2017 due to West Coast forest fires.
Climate Change Resilience	Pierce County created its first Climate Change Resilience Plan that will be released later in 2018.
Electric Vehicles	Pierce County has 1,939 electric vehicle at the end of 2017. 1 EV per 438 residents ranks 9th out of 10 counties in Western Washington.
Human Health	Human Health slightly improved in 2017 according to statewide results. Pierce County still lags well behind all of our neighbors.
Land Protected	Growth is increasing development pressure on farms and forestland.
Sustainability Education	Environmental educators taught in over 45 schools and 150 classrooms and educated over 9,770 Pierce County students and residents in 2017.
Tons of Garbage	Pierce County residents sent slightly more garbage to the landfill in 2017.
Trails	Pierce County parks added over 2 miles of new trails completing a major part of the Foothills Rails-to-Trails.
Water Quality	Pierce County water quality slightly improved in 2017.

County Government Sustainability Trends

Energy Use	Energy use was down at county owned buildings.
Water Use	Water use was down at county owned buildings, but up since 2009.
Commute Trip Reduction	Drive alone rates were up by Pierce County employees. ORCA card use increased by 3,000 trips in 2017.
Fleet Fuel Use	The Pierce County fleet continues to use less gasoline in 2017.
Purchases	Less money was spent on purchases while recycled content percentage increased to 51%.

air quality

active partners

Puget Sound Clean Air Agency, City of Tacoma, Tacoma Public Utilities, Tacoma Pierce County Health Department, Port of Tacoma, Puyallup Tribe

trend

Summer forest fires during the 55-day drought made air quality worse in 2017. Our three-year value jumped from 28 to 31 micrograms per cubic meter.

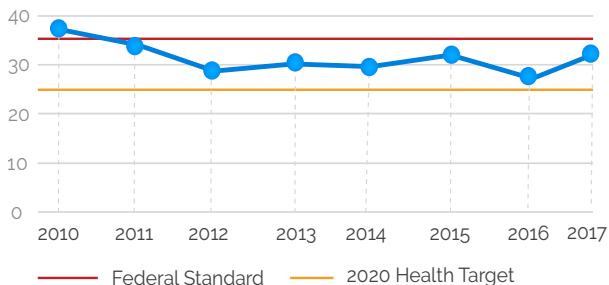
goal

Pierce County is committed to staying in attainment for PM_{2.5} and attaining the PSCAA daily health goal by 2020.

technical overview

Pierce County had a very clean winter wood smoke season in 2017, exceeding the federal PM_{2.5} standard only three times. Unfortunately, summer smoke from forest fires was extreme in 2017, exceeding the standard six times. 2017's preliminary value of 38 micrograms per cubic meter (ug/m³) moves our three-year value from 28 to 31 ug/m³, still below the federal standard of 35 ug/m³. Pierce County remains in attainment for PM_{2.5}.

Pierce County Air Pollution



coming in 2018

Pierce County and partners will compete for VW settlement funding to reduce diesel emissions and look for money to install electric vehicle infrastructure throughout Pierce County.

5 things you can do to help improve air quality

Comply with Burn Bans

Walk, ride your bike, carpool, or take transit

Buy or lease a new or used electric car

Switch to an electric lawn mower and leaf blower

Don't burn leaves or other yard waste

Did you know?

Since 2007, Pierce County and partners have incentivized the removal of over 5,000 old wood stoves and inserts in Pierce County.




climate change resilience



active partners

City of Tacoma, Muckleshoot Tribe, Port of Tacoma, Puyallup Tribe, Pierce Conservation District, Tacoma Pierce County Health Department



trend

Pierce County government has a much better understanding of what we must do to prepare for Climate Change.



goal

Have a completed Climate Change Resilience Strategy for Pierce County. This strategy will develop recommendations with priority action steps.

resilience overview

The Climate Change Resilience plan formally starts the process of preparing for the impacts of Climate Change in a manner that should reduce risks to people and minimize financial losses to the County. Preparing for the impacts of Climate Change is the responsible thing to do for the residents of Pierce County.

resilience metrics



Pierce County experienced very little flooding in 2017 despite a wet winter. 8 of the 10 strongest floods have happened since 2006.



Pierce County experienced 55 days without rain in the summer of 2017. 55 days was the longest rainless streak on record.



Pierce County experienced it's largest forest fire in recent history the Norse Peak fire covered 55,909 acres. West Coast fires caused poor summer air quality in Pierce County.

Did you know?

Pierce County will be releasing our Climate Change Resilience Plan in the summer of 2018.

top 5 local concerns

1) Sea Level Rise

Additional sea level rise is expected of 4 inches (range of 1-6 inches) by 2030, 7 inches (range of 1-14 inches) by 2050 and 23 inches by 2100 (range of 6 to 55 inches).

2) Extreme Precipitation

Total annual precipitation in the Pacific Northwest is not projected to change substantially, but heavy rainfall may be more frequent and intense, and summer precipitation may decrease.

3) Flooding

Flood risk is projected to increase during the fall and winter seasons as warmer temperatures cause more precipitation to fall as rain over a larger portion of the basin.

4) Sedimentation

For rivers originating on Mount Rainier, including the Puyallup, White, and Carbon Rivers, sediment loads are expected to increase, further contributing to flood risk, as declining snowpack and glacial recession expose more unconsolidated soils to rain, flood flows, and disturbance events.

5) Drought/Forest Fires

There is strong agreement among climate models that extreme heat events will become more frequent while extreme cold events will become less frequent. Wildfires are expected to become more common as temperatures rise.

human health + commute trip reduction

active partners

City of Tacoma, Downtown on the Go!, Tacoma Pierce Health Department, Pierce Transit, Sound Transit.

trend

Pierce County slightly improved our county health score from 24th to 19th in the State. ORCA Card use by Employees rose by over 3,000 trips in 2017.

goals

1. Incentivize Pierce County employees to create a personal health plan with wellness goals.
2. Improve the health of Pierce County residents.
3. 35% of employees use a commute trip reduction mode to commute to work.



overview

In 2017, Pierce County moved up five spots to 19th out of 34 counties in the annual County Health Rankings & Roadmaps report. Pierce County residents still lag far behind our neighbors King (1), Kitsap (8), Snohomish (3) and Thurston County (6).



Pierce County added 2.7 miles of new trail and now has over 27 miles of trail serving an estimated 548,700 residents.



575 employees engaged with HubBub 360 and earned a wellness incentive. 183 employees participated in the wellness challenge in 2017.



79% of adults drive alone to work, with 44% having an extremely long commute. Sitting in traffic is bad for your health.



92% of new construction permits had 1 or more applications submitted online via the website. Online services helps reduce trips to County buildings.

Coming in 2018

In 2018 the County is launching a tobacco cessation program for county employees. Pierce County plans to add a vanshare subsidy to our employee program in late 2018.

commute trip reduction overview

Campus	Drive Alone Rate	Commute Choice
Broadway	81.4%	Carpool
Annex	82.5%	Carpool
Downtown	82.8%	Carpool
Tacoma Mall	82.8%	Carpool
Human Services	88.0%	Carpool
ESB/WWTP	93.5%	Carpool
Remann Hall	95.8%	Carpool

Pierce County Employees used their ORCA Card **36,500 times in 2017.**

5 reason to use ORCA

- 1) It can save you thousands of dollars
- 2) People who use transit get more exercise
- 3) Reduce your personal carbon footprint
- 4) Meet new people on the bus or train
- 5) Don't have to pay for parking



sustainability education



active partners

Pierce County Employees, Tacoma
Pierce County Health Department, City
of Tacoma, Washington Green Schools.



trend

Pierce County employees continue to
be well educated about sustainability.
Pierce County residents need more
resources.



goal

Educate Pierce County employees and
residents about how to save money,
limit waste, protect the environment,
and protect human health.

Pierce County employees

- 94%** of employees know that we have dramatically cleaned up our Wood smoke problem.
- 92%** of Pierce County employees consider Sustainability at work.
- 92%** know LED Light bulbs are best choice.
- 88%** would like a water bottle filler at work.
- 83%** of employees are concerned about Climate Change and already have or will make lifestyle change.
- 81%** always recycle at work and at home.
- 69%** of employees made an effort to reduce fossil fuel use at home.
- 66%** print double-sided at work.
- 44%** will consider buying or leasing an electric vehicle.
- 34%** used their free ORCA Card.
- 11%** walk, ride, carpool or take transit regularly.

Pierce County residents

- 25** times the Office of Sustainability presented to public groups about sustainability in 2017.
- 150** classrooms served by County environmental educators at over 45 different schools.
- 12,000** residents reached by the Office of Sustainability and Sustainable Resources environmental educators.

survey results by County Department

- 1) Executive*
- 2) Economic Development*
- 3) Finance*
- 4) Assigned Counsel*
- 5) Medical Examiner*
- 6) Communications*
- 7) Superior Court Clerk*
- 8) Family Justice Center*
- 9) Emergency Management
- 10) Human Resources
- 11) Human Services
- 12) Superior Court
- 13) Planning & Public Works
- 14) Parks and Recreation*
- 15) Facilities
- 16) Assessor-Treasurer
- 17) Juvenile Court
- 18) Auditor*
- 19) County Council
- 20) Prosecuting Attorney
- 21) District Court
- 22) Sheriff

* Received Sustainability Training in 2017

energy + water use

active partners

Bonneville Power Administration, Smart Building Center, Lighting Design Lab, City of Tacoma, Tacoma Public Utilities, Puget Sound Energy

trend

Pierce County continues to use less energy in our buildings on a square foot basis. Water use decreased in 2017 but is up since 2009.

goals

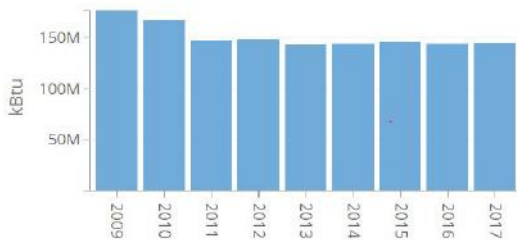
- 1) Reduce the energy use intensity in County-owned buildings by 30% over 2009 levels. Reduce natural gas used in all County operations by 50%.
- 2) Reduce water use by 30% in our owned facilities.

energy overview

The County has reduced its energy use by 18.78% below its 2009 baseline. Including a 0.4% decrease from 2016 to 2017 or a 1.75% reduction per square foot. This was 3.75% above our target for the year.

Pierce County is adding new facilities and providing more services, so while we continue to see energy reductions, they are sometimes offset by our growing County. Unless greater reductions occur over the next 3 years, Pierce County will miss its ambitious 30% reduction goal by the end of 2020.

Total Energy Use (kBtu)



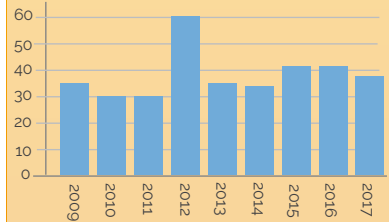
coming in 2018

Pierce County has been invited to participate in Tacoma Power's first Commercial Strategic Energy Management cohort. Large capital projects like HVAC replacement, lighting and energy improvement controls are planned for 2018.

water overview

The County has reduced its water use by 9.5% from 2016 to 2017. Unfortunately we are still 4.5% above our 2009 baseline. Pierce County is not on pace to meet our 30% reduction goal by the end of 2020.

Annual Water Use in Gallons per Sq ft



strategic resource management

Pierce County uses strategic resource management to consider the financial and environmental effects of County operations. By reducing the County's energy and water use over time, we demonstrate our commitment to the stewardship of our natural and fiscal resources.

fleet + ferry

active partners

Western Washington Clean Cities, City of Tacoma, Tacoma Public Utilities, Tacoma Pierce County Health Department, Department of Commerce

trend

Pierce County continues to use less fuel in our fleet reducing fuel use by over 157,000 gallons in 2017 compared to our 2010 baseline.

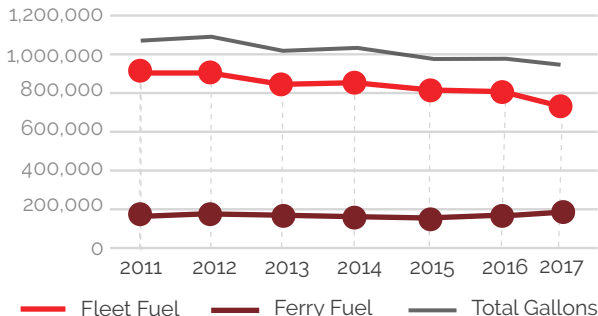
goal

Reduce Fossil fuel use by 20% by 2020 in Pierce County Fleet/Ferry.

technical overview

The Pierce County Fleet of 1,069 vehicles has reduced fuel use by 16.56% saving over 157,456 gallons of fuel annually compared with our baseline year of 2010. Pierce County used over 48,000 gallons of B20 Biodiesel up from 17,000 in 2016. The Sheriff's vehicle fleet has improved to 18.1 mpg a 41.4% improvement since 2011. Planning & Public Works' Maintenance and Operations Division has reduced fuel use by 77,597 gallons annually since 2010. To meet our 20% reduction goal we will need to invest in electric and hybrid vehicles.

Pierce County Fuel Use



5 ways to use less fuel

- 1) Stop idling your vehicle
- 2) Properly inflate your tires
- 3) Try to avoid traffic jams
- 4) Remove heavy gear from your vehicle
- 5) Try a hybrid or electric vehicle



2017 ferry update

The Pierce County Ferry used 181,951 gallons of diesel fuel in 2017. The 15,292 gallon increase was based on increased ferry service.

coming in 2018

Pierce County will look to install electric vehicle infrastructure at some of our facilities in Pierce County. We will also look at the feasibility of an Electric Ferry that could save over 150,000 gallons of diesel fuel a year and potentially save millions of dollars.

materials management



active partners

Pierce County residents, Waste Connections, University Place Refuse.



trend

Pierce County offices purchased less and had more products with recycled content. Pierce County residents threw away more trash per person in 2017.



goals

Reduce office supply purchases by 20%.

Reducing tonnage of landfill waste by 30% over 2010 baseline from County facilities. Tracking to the best of our ability waste and recycling at county owned facilities.

Reduce household waste to 3lbs disposed per person per day by 2020.



purchasing overview

	2017	2016	2015
Total Spend All Product	739,074	894,209	724,001
% of All Products Recycled	51%	39.4%	40.5%
Total Spend Office Supplies	673,864	630,863	480,340
Total Spend All Paper	119,012	119,864	86,461
% Recycled Paper	71%	94.7%	94.4%

waste overview

Tons of Garbage Disposed in 2017

391,000 Tons

Actuals Pounds Per Person Per Day

2017	2016	2015	2014
3.44	3.40	3.29	3.18

coming in 2018

Recycling happens only when our "stuff" is made into new products. Changes in the global marketplace impact what can be recycled and how much it costs. To make Pierce County more resilient to inevitable change, 2018 will be a year to rethink recycling and to focus more energy on REDUCING and REUSING materials.

4 things you can do to be a better recycler

1) Sort plastics by shapes listed on Pierce County's reminder sheet. Request a magnet version of the reminders at piercescountywa.org/recycle

2) Recycle the right things. Your recycling cart is not a second garbage bin. Keep it free of contamination by recycling only the items listed on our reminder sheet.

3) Avoid "wishcycling." It might be tempting to put things in your cart because you think they should be recycled, but your good intentions cause contamination.

4) Buy products with packaging you know can be recycled or reused. Use your purchasing power to show manufacturers and retailers that sustainable packaging is preferred.



resource lands

active partners

Forterra, PCC Farmland Trust, Pierce Conservation District, Puyallup Tribe, Muckleshoot Tribe, Nisqually Tribe, Floodplains for the Future

trend

Pierce County conserved 60 acres of farmland in 2017. Since 2016, the county has helped conserve 388 acres and four farms.

goals

- 1) Pierce County will work to grow the agricultural economy by 10% making sure the agriculture resource is economically viable for future generations.
- 2) Pierce County will hire or contract for a County stewardship forester to create a unified management plan and oversee the stewardship of Pierce County owned forestland.

overview



Pierce County and partners conserved 2 farms for a total of 60 acres in 2017.



Pierce County and partners conserved 33 acres of salmon habitat and passive recreation in 2017.



Pierce County conserved 102 acres of new park space for passive recreation and trails.



Pierce County purchases development rights from farmers and moves the development rights into cities. This provides a tool to keep farmland intact while fairly compensating farmers. Pierce County sold 14 agricultural development rights in 2017.

coming in 2018

The Pierce County Council Agricultural Advisory committee was created in early 2018, Pierce County will look to add property to the ARL designation. Improved forest regulations are coming in 2018 that make more sense to landowners. Pierce County is getting a better handle on what forestland we own and how we steward it.

farming update

2017 was a tough year for farmers as we saw a very wet winter into a 55-day summer drought. The Pierce County Conservation District partnered with the County to successfully receive a \$7.5 million dollar Regional Conservation Partnership Program grant to keep farms in active farming. Pierce County also received \$1 million in State funding through the Department of Ecology's Floodplains By Design grant. Pierce County farms continue to be impacted by development pressures and threatened to convert to other land uses.

forest update

Pierce County had a very wet winter and then a very dry summer that made us very vulnerable to forest fires. Climate Change stresses are expected to reduce timber production and increase tree mortality in Pierce County. Its time to work on making our working forestlands more resilient in ways that increase timber value and production, carbon storage, and improved soil moisture and summer stream flows.

water quality



active partners

Pierce Conservation District, Puyallup Tribe, Muckleshoot Tribe, Nisqually Tribe, Squaxin Tribe, Tacoma-Pierce County Health Department, Watershed councils



trend

Pierce County water quality is slightly improving but we are not likely to meet our 2020 goal.



goal

Increase stream quality to a reported grade of B in at least one watershed by 2020, with all others reaching a minimum of C+.

technical overview

Pierce County Planning and Public Works staff monitor water quality monthly at 54 Pierce County streams.

C

Pierce County overall water quality grade

C+

Puyallup River Watershed

Top Performing Creeks - Fennel, Diru, Fiske, Voights

Poor Performing Creeks - Canyon Falls, Clarks

C+

Key Peninsula, Gig Harbor, Island Watershed

Top Performing Creeks - Crescent, Rocky, Purdy

Poor Performing Creeks - Minter, Ray Nash, Mark Dickson

C

Nisqually River Watershed

Top Performing Creeks - Copper, Goat

Poor Performing Creeks - Ohop Lake Outlet, Lynch, Ohop, Midway

C

Chambers - Clover Watershed C

Top Performing Lakes - Gravelly Lake, Lake Louise, American Lake

Poor Performing Lakes/Creeks - Spanaway Creek, Clover Creek, Waughop Lake

5 things you can do to improve water quality

- 1) Use compost and mulch instead of chemical fertilizers
- 2) Use a commercial car wash or wash your car on the lawn
- 3) Turn in unused medications so they don't end up in our water
- 4) Check your vehicle for oil leaks every few months
- 5) Always scoop your dog's poop and put it in the trash

coming in 2018

Continue long-term, countywide water quality monitoring program. Inspect close to 2,000 storm ponds for maintenance and pollution control. Investigate hundreds of illicit discharges to the municipal stormwater system.

sustainability opportunities

Update the Sustainability 2020 Plan

Two years into the Sustainability 2020 Plan it is due for an update. Some of the Sustainability 2020 Goals are unrealistic given current realities. Improving our goals will make the Sustainability 2020 Plan more powerful and more meaningful to employees.

The Office of Sustainability is joining forces with Sustainable Resources

This merger is critical to providing better alignment around sustainability messaging for Pierce County. It is important that we continue to promote Sustainability internally and externally as we all look for good ways to save money, limit waste, protect the environment and human health.

Pierce County is growing quickly but jobs and wages are not keeping pace

For the growth that Pierce County is experiencing to be sustainable we will need to see improved wages and job opportunities locally. Too often our residents are leaving the County to go to work. Good jobs created here are "green jobs" because they don't require a long unhealthy commute.



Pierce County



Learn more about Pierce County's sustainability efforts at piercecountywa.gov/sustainability