

2021

Sustainability Progress Report



Preface

ODOT's *Sustainability Plan (Volume II)* was created pursuant to the 2001 Oregon Sustainability Act. In 2000 and 2003, Governor's Executive Orders were issued to support and drive specific sustainability actions within state government operations. These Orders direct state agencies to hire program coordinators, develop plans, and work to incorporate sustainability into government practices.

The Sustainability Plan lists strategies across several topic areas focused on economic, environmental, and social values. Goals within the Plan provide a clear set of long and short-run targets and expected outcomes. Strategies outline the various actions that will be taken by Lead Work Groups across the agency to achieve measurable results. ODOT publishes annual reports that share progress made toward the goals identified in the Sustainability Plan. Performance measures identified in the progress reports enable the agency to evaluate trends and highlight successes.

ODOT staff use both the Sustainability Plan and annual progress reports to aid decision-making in a way that makes ODOT a more sustainable agency.

Progress toward ODOT's sustainability goals would not be possible without the dedication of employees that implement conservation practices and suggest ways to do things better. Thank you to all employees who make ODOT sustainable!

Questions or comments regarding this report, or any other sustainability topic, can be directed to the Sustainability Program Manager.

Zechariah Heck, AICP, ENV SP
ODOT Sustainability Planner
(503) 986 4261
zechariah.heck@odot.state.or.us



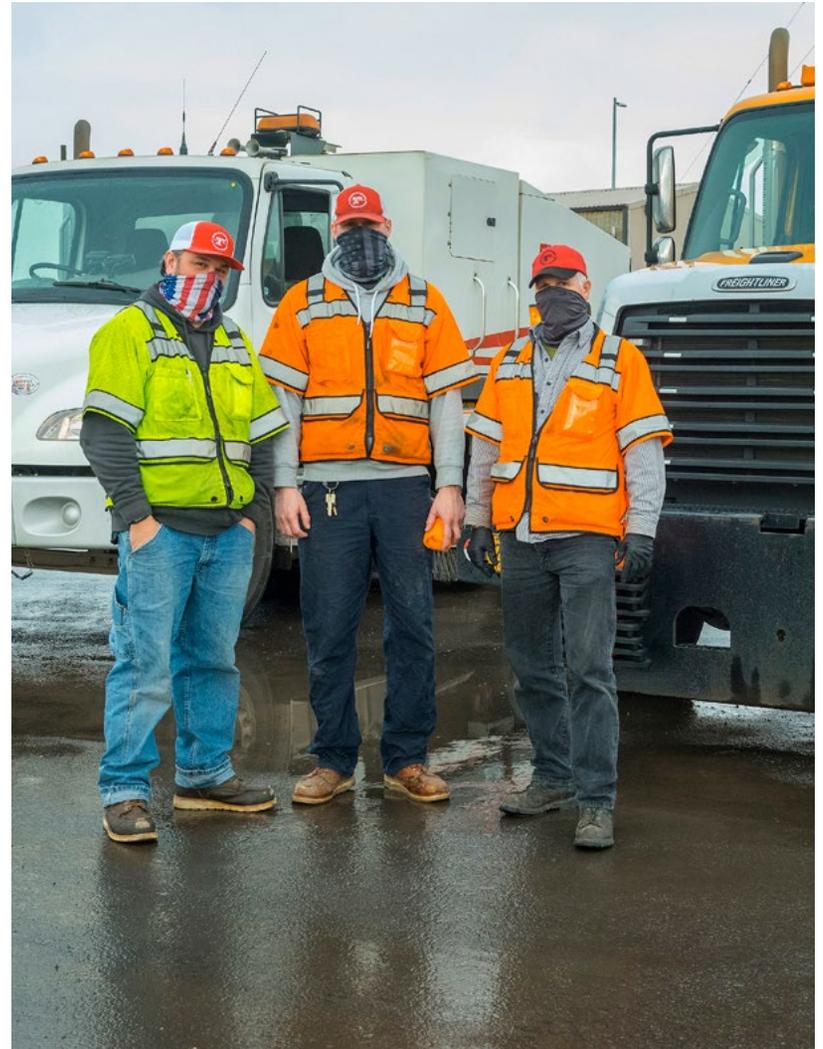
I Sustainability in 2021: Reflections on a “New Normal”

In calendar year 2021 we hoped to see a “return to normal” – alas, it was anything but normal. The COVID-19 pandemic was still in full force, with Oregon seeing new cases increase in the fall of 2021 and reach their peak in the 2021/2022 winter. Vaccines became more widely available and even mandated, including for State of Oregon employees. Leadership across the State enterprise worked to figure out how to reopen offices to employees and to serve the general public.

On a lighter, more celebratory note, ODOT’s Climate Office reached its one-year anniversary in 2021. The Climate Office’s mission is to identify and pursue actions that reduce transportation greenhouse gas (GHG) emissions and the agency’s carbon footprint. Several noteworthy accomplishments for the Climate Office in 2021 include:

- Completion of the agency’s first-ever GHG inventory of construction and maintenance operations
- Approved updates to the West Coast Electric Highway
- Released a study on hydrogen as a transportation fuel

The Sustainability Program, part of the Climate Office, led the GHG inventory and is responsible for implementing the agency’s Sustainability Plan. Each year, an annual progress report is issued. Several 2021 metrics reflect an uptick in activity from 2020 (e.g., increased fleet fuel use and building electricity use). However, it remains unclear what a “new normal” looks like for ODOT post-pandemic. Future progress reports will clarify where the agency is on-track – or not – in order to meet its sustainability goals.



Key Takeaways

The 2021 Progress Report highlights several takeaways:

Areas of new and continued success

- 60 percent of diesel product dispensed at ODOT bulk-fuel sites was bio or renewable diesel.
- 48 percent of on-road diesel fleet (457 trucks) are using anti-idling technology.
- Building energy use intensity held steady in comparison to 2020 despite changes in office utilization.

Areas for improvement

- ODOT only has two (2) all-electric fleet vehicles.
- Water use from leased-facilities increased from 2020 and is above the 2015 baseline.

The Sustainability Program continues to monitor successes and challenges while strategizing ways to improve.

Modifications to Progress Report

ODOT Sustainability Plan Volume II – the most recent version – was published in November 2015. Several performance measures do not have consistent or meaningful data available. Several measures are always reported, if data is available. Other measures are not reported due to lack of data (e.g., green procurement). And, lastly, others are no longer relevant to the Sustainability Program (e.g., safety measures), or are reported elsewhere in the agency (e.g., demographics). Emissions from ODOT’s transportation fuel sources and the Strategic Energy Management savings are not yet reported due to the data not being available from other agencies.



ODOT Sustainability Performance Measures – Trends and Summary 2021

Focus Areas and Sub-Areas	Performance Measures	Trend Performance Compared with Goal	Summary	Primary Data Source
Energy/ Fuel Use and Climate Change				
Greenhouse Gas (GHG) Emissions	Total GHG emissions from ODOT’s building energy use.	↓	Increased by 15.6% (906 Metric Tons) from 2020 but is still 10% below pre-pandemic average.	Financial Services; Facilities Section
	Total GHG emissions from ODOT’s transportation fuel sources.	---	<i>Not available at time of publishing.</i>	Fleet Services; DAS
Building Energy Use	Building level Energy Use Intensity (EUI) per square foot.	↑	Decreased across buildings by an average of 1.1% for the year and 12.4% from the baseline. Wide variations, both increased and decreased, for individual buildings.	Financial Services; Facilities Section
Fleet Fuel Use	Total biodiesel and other alternative fuel use as percent of total fuel use.	↑	60% of overall fuel use from ODOT tanks was bio or renewable diesel.	Maintenance and Operations - Fleet Program
	Total number of trucks using anti-idling technology as a percent of total truck fleet.	↑	457 trucks use anti-idling technology, or 48% of the on-road diesel fleet.	Maintenance and Operations - Fleet Program
	Hybrid, best-in-class high-mileage vehicles, and gasoline vehicles using alternative fuels as percent of all passenger sedans.	↓	26 sedans use alternative fuels (22% of total fleet).	Maintenance and Operations - Fleet Program
Material Resource Flows				
Waste and Recycling at Major Facilities	Recycling values in major facilities	↔	98,682 pounds of paper; 136,280 pounds of confidential shred; 28 pounds of plastics; 24,398 pounds of electronics.	Major Facilities, Garten Services

Focus Areas and Sub-Areas	Performance Measures	Trend Performance Compared with Goal	Summary	Primary Data Source
Environmental Stewardship				
Maintenance Environmental Management System (EMS)	Percentage measure of maintenance yards following the “must” BMPs in the seven priority procedures of the EMS program.		98.6% compliance with priority procedures.	Office of Maintenance
Hazardous Materials	Amount of hazardous waste generated at each maintenance yard with goal of maintaining conditionally exempt status under federal laws.		Maintenance yards are successfully reducing waste and maintaining status as Conditionally Exempt Hazardous Waste Generators.	Office of Maintenance
Water Use at Major Facilities	Total reduction in non-essential water use (gallons) at Major Facilities.		Water use decreased at owned facilities (-1.5%) but increased significantly at leased properties (11.3%).	Central Services

Legend:

	Data shows ODOT meeting/ exceeding the related goal or there is an upward trend of improvement.
	Data shows ODOT met the goal but the metric is on an even or downward trend.
	Data shows ODOT did not meet the goal and metrics on a downward trend.

I Energy and Fuel Use

ODOT is working to reduce greenhouse gas (GHG) emitted by its operations and the transportation sector. This work involves collaboration with others to develop innovative responses, minimizing energy use in facilities, increasing fuel efficiency in fleet vehicles, and encouraging employees to reduce vehicle commutes.

Greenhouse Gas Emissions

Goal: Arrest growth in GHG emissions from ODOT fleet and facilities.

Performance Measures: Total GHG emissions from ODOT's building, energy, and transportation (fuel) sources.

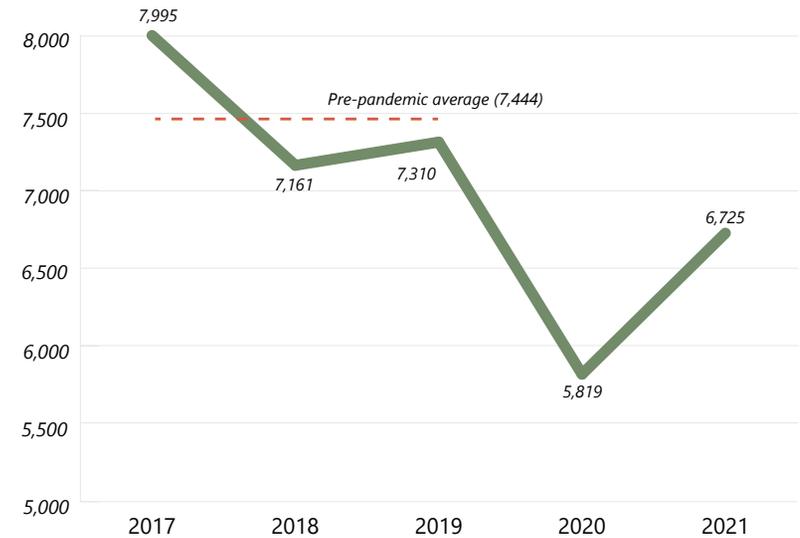


GHG from Building Energy Use

Electricity generation is the second largest source of GHG emissions in Oregon.¹ Thus, energy efficiency in ODOT buildings is an important part of the agency's sustainability goals.

Energy usage from over 70 ODOT buildings is continuously tracked through the Energy Star Portfolio Manager.² **Emissions increased, by 15.6 percent, in 2021 compared to 2020 emissions data but is still ten percent less than the pre-pandemic average.**

GHG Emissions Trend from Energy Use (Metric Tons CO₂e)



Source: EPA Portfolio Manager, ODOT.

1 [DEQ | Oregon Greenhouse Gas Sector-Based Inventory Data](#)

2 [Use Portfolio Manager | ENERGY STAR Buildings and Plants | ENERGY STAR](#)

Building Energy Use

Goal: Reduce energy consumed in day-to-day operations of ODOT’s facilities.

Performance Measures: Building level Energy Use Intensity (EUI) per square foot per year.

ODOT focuses on twelve Major Facilities for this performance measure (see table below). EUI at Major Facilities was slightly lower by an average of 1.1 percent for the calendar year. The 2021 average EUI was 12.4 percent below the 2015 baseline.

There are a few large swings year-over-year in EUI as noted in the table below. The Barlow School Office Building switched from a boiler to heat pumps in late 2020 contributing to a 49 percent decrease. The 32 percent increase at the Salem Supply Operations Building K is likely due to furnaces being replaced and upsized along with an earlier start-up time. ODOT staff will continue to note and explore reasons for unusual changes in EUI.

Note: CY 2015 is the baseline for state agencies concerning the goal of a 20 percent reduction in EUI by 2023. Data is being tracked in Portfolio Manager and applies to sites greater than 5,000 square feet. ODOT also continues to implement projects that include a mix of renewable energy sources consistent with the State Energy Efficient Design (SEED) program (ORS 276.900).

Energy Use Intensity (EUI) at ODOT Major Facilities

Source: ODOT Facilities Services, EPA Portfolio Manager, 2021.

Property Name	2021 Site EUI (kBtu/ft ²)	2020 Site EUI (kBtu/ft ²)	City	Property GFA - Self-Reported (ft ²)	% Change (one year)	2015 Site EUI (Baseline)	% Change Over Baseline
Region 1 HQ, Garrett	26.7	33	Portland	94,063	-3.3	42.5	-15.8
DMV HQ Office Bldg Salem	44.4	42.5	Salem	120,790	4.5	54	-9.6
Region 5 HQ Bldg	59.1	65.4	La Grande	27,900	14.8	62.9	-3.8
Region 3 HQ Bldg	87.9	106.9	Roseburg	38,186	-19.1	100.5	-12.6
Transportation Bldg. HQ	32.1	34.4	Salem	151,635	0.9	35.8	-3.7
Barlow School Offc Bldg	22.6	67.4	Portland	20,000	-49.3	74.8	-52.2
Supply Ops, Purchasing, Bldg K	56.3	48.5	Salem	30,000	32.2	40.6	15.7
Project Mgrs & R/W, Building A	67.6	69.9	Salem	16,700	18.4	59	8.6
Region 2 Headquarters, Bldg B	52.2	57.8	Salem	21,900	13.5	51.4	0.8
Mill Creek Office Building	25.9	31.9	Salem	51,120	-4.1	31.7	-5.8
Region 4 HQ, Bldg K	87.6	91.8	Bend	11,000	4.8	101.5	-13.9
Salem Materials Laboratory	121.1	164.8	Salem	54,000	-26.5	147.5	-17.9
Averages	57	61		53,107	-1.1	66.85	-12.4

Fuel Use

Goal: Increase the use of low-carbon fuels and technology by ODOT's fleet.

Performance Measures:

1. Total biodiesel and other alternative fuel use as a percent of total fuel use.
2. Total number of trucks using anti-idling technology as a percent of total truck fleet.
3. Hybrid, best-in-class high-mileage vehicles, and gasoline vehicles using alternative fuels as percent of all passenger sedans.

ODOT's Fleet Section continues to meet and exceed the agency's goals for alternative vehicles and fleet fuels. In addition to using alternative fuels with less embodied carbon, the agency also purchases hybrid and electric vehicles and equipment to reduce overall fuel use.

2021 Status: 60 percent bio/renewable diesel product dispensed.³

Total Biodiesel: 33,109 gallons (3 percent of total)

Total Renewable Diesel: 746,086 gallons (57 percent of total)

Total Ethanol: 42,890 gallons (10-percent of total gasoline)⁴

R99 is a renewable diesel and has the lowest carbon intensity of all fuels with the exception of electricity. ODOT has 31 bulk fuel locations dispensing R99 in 2021, up from the 28 locations reported in 2020. The ODOT Fleet Fuel Program is expanding R99 use now that it has become more available and price competitive.

The Sustainability Plan has a goal to achieve 30 percent of ODOT on- road light to heavy duty trucks using anti-idling technology.

- **2021 Status:** 48 percent of on-road diesel fleet (457 trucks) are using anti-idling technology.⁵

Another goal is to increase passenger fleet vehicles that are hybrid, best in class high mileage vehicles, or gasoline vehicles using alternative fuels.

- **2020 Status:** 22 percent (26 vehicles) of the passenger fleet meet this goal.

Total Sedans	116	
Total Alternative Fuel Sedans	26	22%
All Electric Sedans	1	0.8%
Electric Hybrid Vehicles	13	11%
E85 Ethanol	12	10%
E85 Ethanol	22	16%

Source: ODOT Fleet Services July 2021.

Overall, ODOT currently owns 357 E-85 vehicles and 22 hybrid or plug-in hybrid electric vehicles which includes three Chevy Volts, nine Toyota Prius, six Ford Escapes, one Ford Fusion and one Ram 1500 ½-Ton Pickup. ODOT also owns one Nissan Leaf (all electric) and one all electric Ford Transit Van.

Note: The Oregon legislature passed a bill (HB 2027) requiring state agencies to exclusively purchase light-duty EVs no later than 2025.

3 This number represents the total percentage of pure bio/renewable fuel used from ODOT bulk sites (e.g., one B20 gallon equals two-tenths or 0.2 gallons of alternative fuel).

4 Similar to above, this number represents the total percentage of pure ethanol dispensed at ODOT bulk sites.

5 This data was misrepresented in previous progress reports. The 30 percent goal has been met since at least 2018.

I Material Resource Flows

Waste Minimization and Recycling

Goal: Reduce total waste produced at ODOT facilities and increase recycling.

Performance Measure: Recycling volumes in Major Facilities.

ODOT works to reuse and recycle office materials from its operations, including paper, plastics, electronics and metals. It is difficult to track waste volume data at a large and decentralized organization like ODOT. The agency uses many waste haulers throughout the state which often differ in the client and account information gathered. Tracking the actual volume or weight of waste disposal is also a challenge.

Garten Services, Inc. – a Salem-based nonprofit that manages recycling efforts at several ODOT facilities in the Willamette Valley – reports the following recycling volumes for calendar year 2021, reflecting data from over 30 ODOT facilities.

The table to the right shows there are fairly significant year-over-year changes from 2020. It is unclear why there is such a decrease in recycling volumes, but likely reasons include:

- 2021 was a full year of remote/hybrid work for many employees, whereas 2020 saw just nine months of employees working from home.
- Bottles were the only plastic items able to be recycled (operational change not allowing tubs or containers).

2021 ODOT Recycling Totals

Material Types	Haul Volumes		
	2021	YOY % Change	2020
Office Paper (lbs.)	98,682	-29	139,228
Confidential Paper Shred (lbs.)	136,280	-14	158,590
Plastics (lbs.)	28	-93	409
Electronics (lbs.)	24,398	-38	39,336

Source: Garten Services, 2021.

Note: Garten Services no longer tracks waste diversion streams that were reported previously.



Photo Credit: Garten Services, Inc.

Environmental Stewardship

Environmental Management System

Goal: Fully implement environmental management system (EMS) standards at ODOT maintenance yards.

Performance Measure: Percentage of maintenance yards following the “must” Best Management Practices in the seven priority procedures of the EMS.

Average overall implementation in 2021 was 98.6%.

Developed in 2004 and initiated in 2005, the EMS Policy and Procedures Manual (Manual) provides straight-forward BMPs for managing materials used in the day-to-day maintenance and operation of the highway system.

ODOT Maintenance employees strive to make the EMS program part of standard operating procedures.

Three levels of audits are used to evaluate the EMS Program: Monthly Field Audits, Regional Audits, and Statewide Reviews. Seven procedures have been selected as indicators of EMS program implementation: drainage and water quality; aerosol cans; fuel; lighting; oil; pesticide; and winter maintenance chemicals. These priority procedures were selected because of the type of wastes generated, the degree of regulation, continued confusion implementing the BMPs, and potential to impact natural resources. Each of the seven priority procedures are evaluated at each Maintenance yard during the Regional Audit.

BMPs throughout the Manual that are required by law or ODOT policy are identified by the word “must.” Responses to Regional Audit questions in the priority procedures regarding “must” practices are compiled to evaluate progress implementation of the EMS Program. Guidance materials are updated as needed to improve success.

Summary of Regional Audits in 2021

- Planned for 2021: 34
- Scheduled by Districts: 34
- Forms Received: 34
- Procedures Audited: 22 of 22

Average Statewide Implementation of “must” BMPs in Priority Procedures



Hazardous Materials

Goal: Reduce the use of hazardous chemicals and materials in facilities.

Performance Measure: Amount of hazardous waste generated at each maintenance yard and truck shop each year, with the goal of maintaining Conditionally Exempt Status under federal laws.

In 2021 all Maintenance yards were classified as “Very Small Hazardous Waste Generators”.

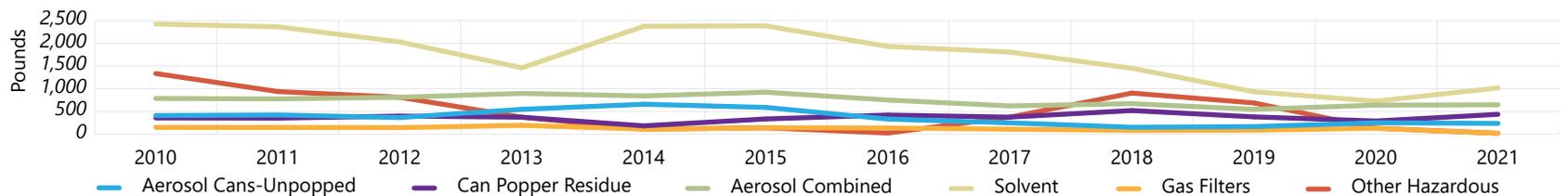
Hazardous waste generated by Maintenance crews and equipment shops (combined statewide).⁶

- 2021: 0.92 tons
- 2020: 0.79 tons
- 2019: 1.13 tons
- 2018: 1.56 tons
- 2017: 1.46 tons

Very Small Hazardous Waste Generators is the lowest category of hazardous waste generator, as defined by Department of Environmental Quality. Generator status is determined by hazardous waste created each month in a calendar year and the amount stored onsite. Hazardous waste generation by Maintenance and Fleet through routine activities is minimal.



Hazardous Waste Generation - Statewide by Year



⁶ Information on hazardous waste generation is tracked by the crews and compiled biannually by the Maintenance and Operation Branch. Hazardous waste generation is tracked at 89 maintenance facilities.

Water Use at Major Facilities

Goal: Reduce water use in buildings, landscape irrigation and rest areas.

Performance Measure: Total reduction in non-essential water use (gallons) at Major Facilities.

Metered water data is collected from ODOT-owned as well as leased sites across the state. ODOT’s measures water usage at Major Facilities and select buildings to learn how certain operational changes, retrofits and conservation activities can reduce water use.

2021 Status: The agency’s water usage has continued to decrease at owned-facilities. However, meters from ODOT’s leased facilities continue to rise. One reason there might be such an increased in water use at leased facilities is the Region 1 Headquarters has temporarily moved from the ODOT-owned Garret Building in downtown Portland to a leased facility in Tualatin.

Work is underway to better track facility-level water usage and drive reductions through targeted equipment retrofits and other conservation actions. It is important to note while ODOT’s accounting systems allow for water use tracking, challenges remain with facility metering and consistent and accurate data entry.



Statewide Metered Water Use

	2014			2020			2021			YOY Change	Baseline Change
	Meters	Gallons	Gallons per Meter	Meters	Gallons	Gallons per Meter	Meters	Gallons	Gallons per Meter		
ODOT-owned Facilities	129	32,996,100	255,784	137	32,486,683	237,129	142	33,181,445	233,672	-1.5%	-8.6%
ODOT-leased Properties	30	1,297,386	43,246	29	2,420,200	83,455	28	2,601,084	92,896	11.3%	115%

Economic Health

Small Business Program

The primary goal of the Small Contracting Program (SCP) is to provide outreach to targeted business entities. The SCP is a means to build effective working relationships with companies who can benefit from partnering with ODOT.

ODOT also strongly encourages, and is committed to, the participation of Emerging Small Businesses (ESB) in contracting opportunities. The mission of the ESB Program is to create new and innovative contracting opportunities for Oregon’s small business community. It also assists ESBs in overcoming barriers to participating in the state’s extensive public contracting procurement programs. ODOT’s policy is not to discriminate on the basis of race, color, sex and/or national origin when awarding and administering those contracts.

Goal: Meet or exceed a six percent target for small-business contracting each year.

Performance Measure: Percent of ODOT contract dollars awarded to disadvantaged, minority, women, and emerging small businesses.

ODOT’s Office of Civil Rights tracks dollars awarded to specific certified groups – as shown in the table to the right. The six percent goal for contracts with Certified groups was met in 2021.

Reporting Period: 1/1/21 - 12/31/21	Dollars Awarded	% of Dollars Awarded
Total	\$1,034,919,761	100%
Certified	\$61,212,850	6%
Disadvantaged Business Enterprise	\$59,859,086	6%
Emerging Small Business	\$15,629,681	2%
Minority Business Enterprise	\$30,808,982	3%
Women Business Enterprise	\$33,320,571	3%
Service Disabled Veteran	\$0.00	0%

Certified groups have overlapping award amounts (i.e. a firm can have multiple certifications at once), so an award amount to a firm with multiple certification types will be attributed to multiple certification totals.