

DAS Sustainability Plan 2018 Update

Phase 1 Report: Baseline Summary,
Benchmarking Results and Staff Input



DAS DEPARTMENT OF
ADMINISTRATIVE
SERVICES
SUSTAINABILITY PROGRAM

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A. Introduction

The Oregon Sustainability Act (ORS 184.421) defines "sustainability" as using, developing and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic and community objectives.



The DAS Sustainability Program is focused on the effects of DAS internal operations and our agency's delivery of external services and statewide policy across the enterprise. Primarily, these efforts focus on the sustainable management of the state's real and personal property assets, technology and the procurement of goods used daily by agencies as they deliver services to Oregonians.

On December 31, 2016, DAS completed an update to its sustainability plan for the period 2017-2023. This document was identified as a framework, with specific strategies and tactics DAS will employ over the next five years to increase the sustainability of state government assets and actions. It was intended to be built upon to create a more comprehensive sustainability plan for the agency in 2017-2018.

This document is Phase 1 of the DAS Sustainability Plan update, providing data, public input and comparative analyses to inform development of revised goals and actions. The DAS sustainability Plan is being updated in four phases:

- Phase 1: Baseline, Benchmarking, Opportunities and Challenges
- Phase 2: Vision/Mission, Goals (Steering Committee Workshop 1)
- Phase 3: Strategies and Implementation (Steering Committee Workshop 2)
- Phase 4: Documentation, Sustaining the Sustainability (Ongoing)

This Plan update is being developed in the context of several DAS sustainability initiatives already underway. Concurrent/ongoing activities will be integrated into the sustainability planning process to avoid duplication and integrate lessons learned. Such activities include but are not limited to:

- DAS participation in Strategic Energy Management (Energy Trust of Oregon)
- Participation in implementation of new Executive Orders (EOs) on energy and climate (EO 17-20 and 17-21)
- Compliance with and revision of sustainability-related policies, such as the DAS Energy Management Policy and statewide Resource Conservation Policy
- Strategic engagement of buildings/green teams, including continuing to encourage Earthwise certification through Marion County
- Other opportunities as they arise or may be proposed, such as those by the Oregon Sustainability Board/Interagency Sustainability Coordinators Network

Each of the following sections lays the groundwork for the Plan update by:

- Identifying where DAS is now (our current use, impact or footprint) with respect to environment/resource conservation, staff and community support and, to a lesser extent, how costs and benefits are integrated into sustainability decision-making.
- Comparing DAS' sustainability performance to peers/other organizations where data are available.
- Identifying current goals in policy, statute or the previous DAS Sustainability Plan that serve as a starting point for new goal setting.
- Identifying potential actions to support goals; these have been drawn from extensive staff input, best practice and the previous version of the Sustainability Plan.

Gathering ideas

The ideas in the actions listed for each resource were drawn from extensive input from DAS staff, including the following:

- 12 focus groups the DAS Sustainability Program held over the past several months with various divisions and functional areas to understand sustainability opportunities and challenges.
- Three Earth Month pop-ups – at Printing & Distribution, DAS East and Executive – which drew over 120 staff members to learn about DAS sustainability efforts, get tips on recycling and share ideas.
- Ideas submitted through the DAS Sustainability Team, and on the DASH web site.

Sustainability survey results

Several DAS staff participated in an enterprise-wide sustainability survey project developed by the Oregon Sustainability Board to gauge priorities, opportunities and challenges with respect to sustainability. In October 2017, Phase 1 of the survey went to DAS leadership. In February 2018, Phase 2 of the survey was administered to a random sampling of 20 percent of DAS staff. Appendix A contains brief summaries of DAS-specific responses for both survey phases.

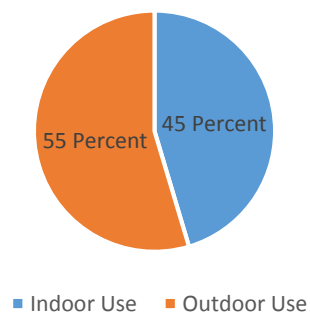
Overall, it is estimated that over 250 DAS staff members contributed ideas through both the survey and other outreach efforts.

B. Water resources

DAS uses water in a variety of ways to carry out its operations and support its programs. Water is not only vital to building operations, it is also used to maintain landscaping around buildings and on the Capital Mall grounds, to wash vehicles and to operate heating and cooling equipment.

Managing water efficiently is a high priority for Governor Brown, as is reflected in Executive Order 15-09, which directs DAS, among other agencies, to reduce non-essential water use 15 percent by 2020 over a 2014 Water Year (Oct 1-Sep 30)

Figure 1. DAS water use breakdown



baseline. Observed and anticipated further changes in Oregon’s climate also increase the likelihood of less winter snowpack and hotter and drier summers. This, along with continued population growth, is likely to put further strain on our state’s water resources.

Where we are and how we compare

DAS tracks water use through monthly invoices for municipal water, as well as meters for its three wells used to irrigate grounds in Salem. About 55 percent of the agency’s total water use is for outdoor use, while 45 percent is used indoors. Overall, DAS water use in Water Year 2017 fell 9.2 percent from the 2014 baseline.

Water trends differed significantly between indoor and outdoor use. In 2017, DAS recorded a 22 percent reduction in outdoor water use compared to a 2014 baseline. During this same reporting period, however, indoor water use increased 0.8 percent. This may be due to increased density of staff in buildings.

Water use trends per building varied widely, with the Pendleton State Office Building (SOB) recording the largest increase, followed by the Department of Environmental Quality (DEQ) Health Lab. The Human Services Building, DEQ Health Lab and Pendleton SOB were the largest users of water.

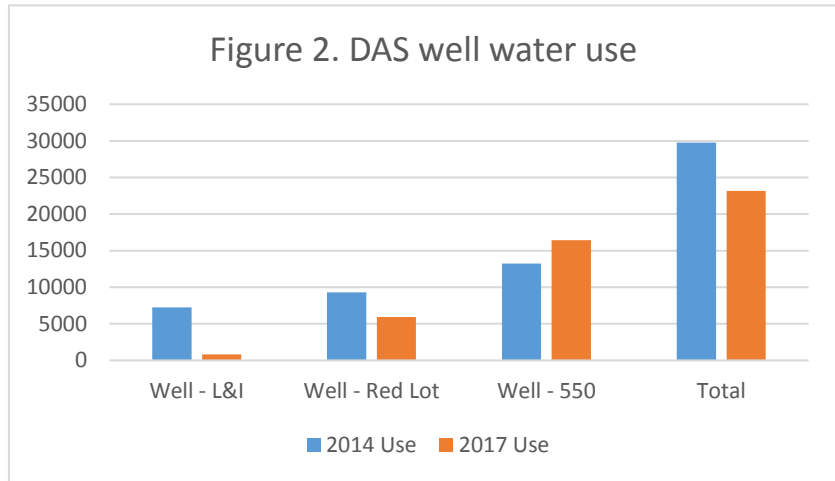


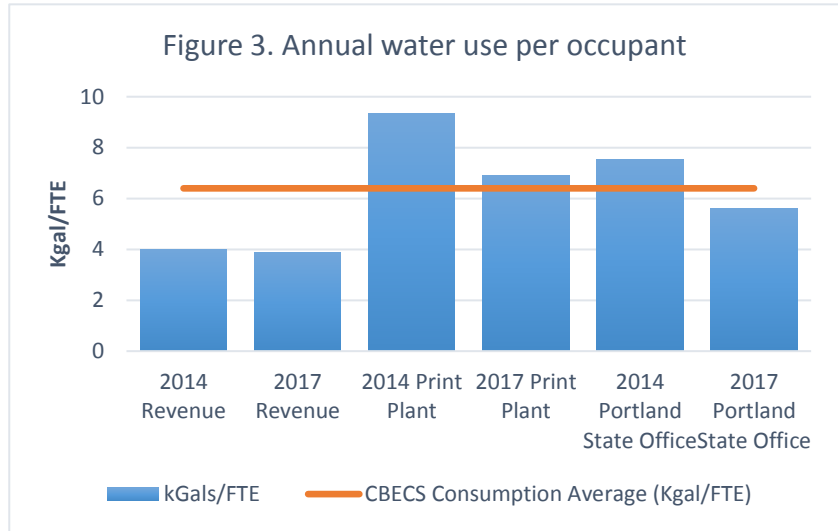
Table 1. DAS Buildings with water use increases from 2014 to 2017.

Building	2014 Water Year	2017 Water Year	Change (kgal)	Percent Change
550 Capitol	42.8	535.1	492.3	1150%*
Pendleton SOB	2379.3	4655.5	1725.6	96%
Real Estate	73.6	118.7	45.1	61%
DEQ Health Lab	3010.9	4649.8	1638.9	54%
State Data Center	1320.4	1714	393.6	30%
Public Services	1939.6	2492.4	554.8	29%
State Library	181.2	231.9	50.7	28%
Portland Crime Laboratory	1159.4	1421.5	262.1	23%
Justice	299.3	357.1	57.8	19%
Maintenance Shop	141.9	168.7	26.8	19%
Human Services	4404.1	4548.7	144.6	3%

*Building was vacant in 2014.

DAS well water use for outdoor irrigation declined 22 percent in 2017 compared to the 2014 baseline. Water use dropped the most for the Labor and Industries Well, and slightly for the Red Lot Well. Water use from the 550 Well increased.

Indoor water use efficiency, particularly in offices, can also be examined by evaluating water used per person. The U.S. Energy Information Agency periodically conducts the nationwide Commercial Buildings Energy Consumption Survey (CBECS), which also includes water use¹. The last survey, completed in 2012, showed a nationwide average of 6,000 gallons per person per year. In sampling a few DAS buildings for comparison (Revenue, Print Plant and Portland State Office Building), water use efficiency was both below and above the CBECS average.



Where we’re going: ideas for goals and actions

Goals

The following are existing water-related goals to consider for DAS water use:

Goal	Source
Reduce non-essential water use by 15 percent by 2020 over the 2014 baseline.	Executive Order 15-09
Meet and exceed 20 percent reduction goals from 2015 levels for DAS facilities.	DAS Sustainability Plan 2017-2023

Potential Actions

Indoor water use

- Compile an inventory of water fixtures and male/female occupants in DAS buildings to document potential water savings and costs/benefits of retrofits.
- Look for cost-effective water retrofits even in buildings that aren’t being remodeled (flushometer replacements, aerators).
- Conduct more routine maintenance on faucets – they often stick open and waste water.
- Install instant on-off faucets in bathrooms.
- Explore harvesting rainwater on buildings to cut down on potable water use where it’s not needed (irrigation, toilets).
- Explore water efficiency opportunities in boiler and chiller system selection and maintenance.

¹ <https://www.eia.gov/consumption/commercial/>

Outdoor water use

- Monitor irrigation sprinklers more frequently and adjust as needed.
- Evaluate use of surfactants as a water conservation measure in landscaping.
- Investigate options for assessing and updating the DAS irrigation system.
- Review watering requirements in service level agreements and incorporate ability to “let the grass go brown”
- Create/evaluate plant selection guidelines and identify native and low water use plants and grasses as well as pollinators.



A rain garden in Portland.

Other

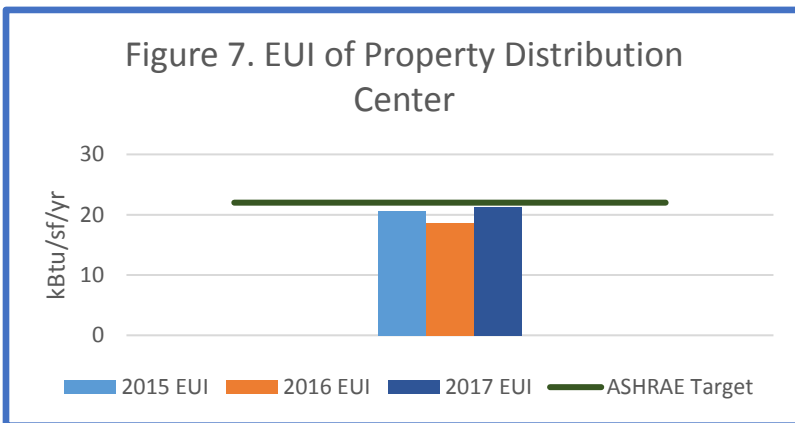
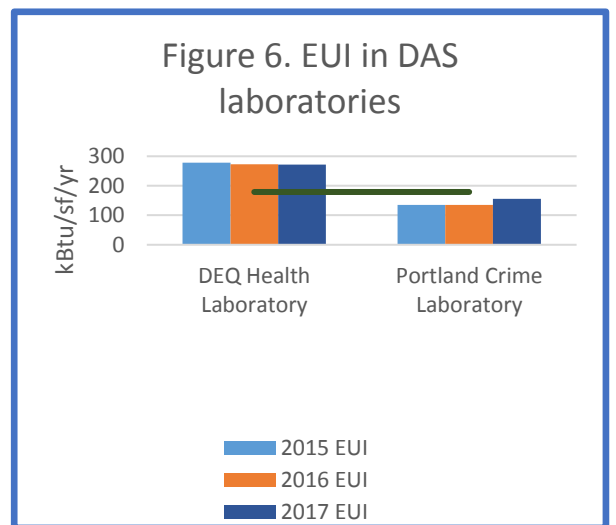
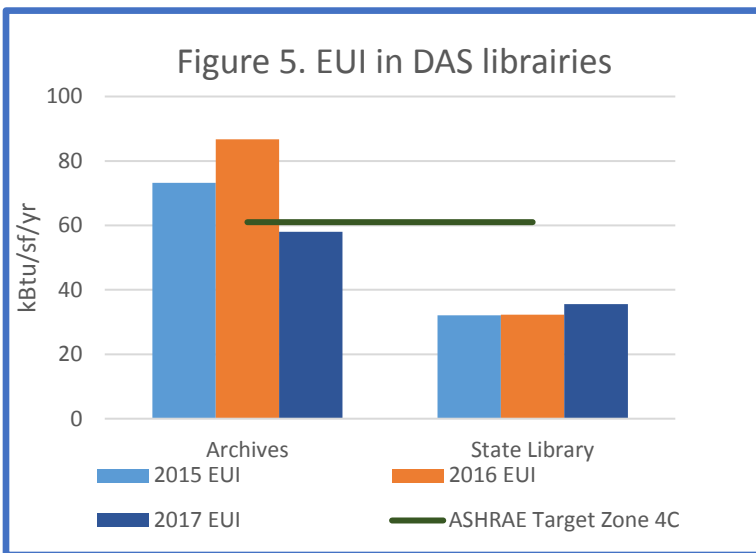
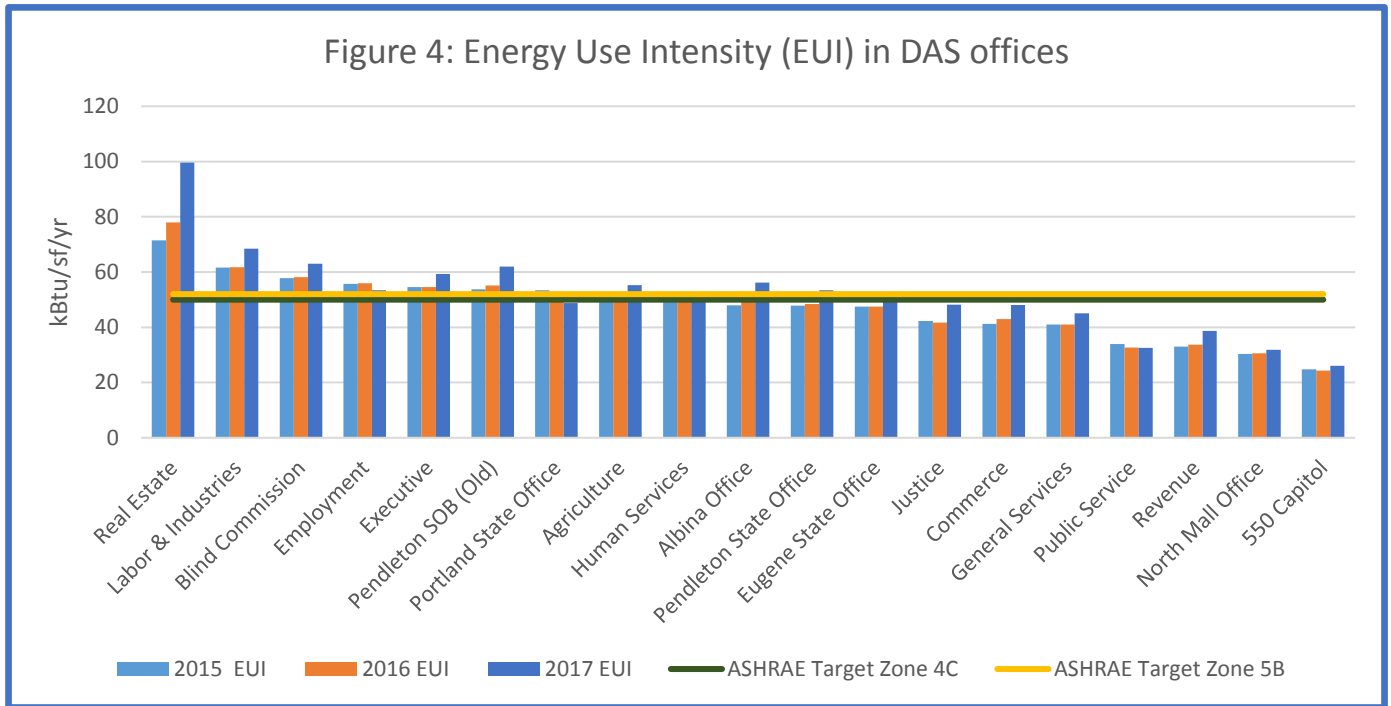
- Evaluate opportunities for “rain gardens” around DAS facilities to infiltrate and treat stormwater runoff.

C. Energy resources

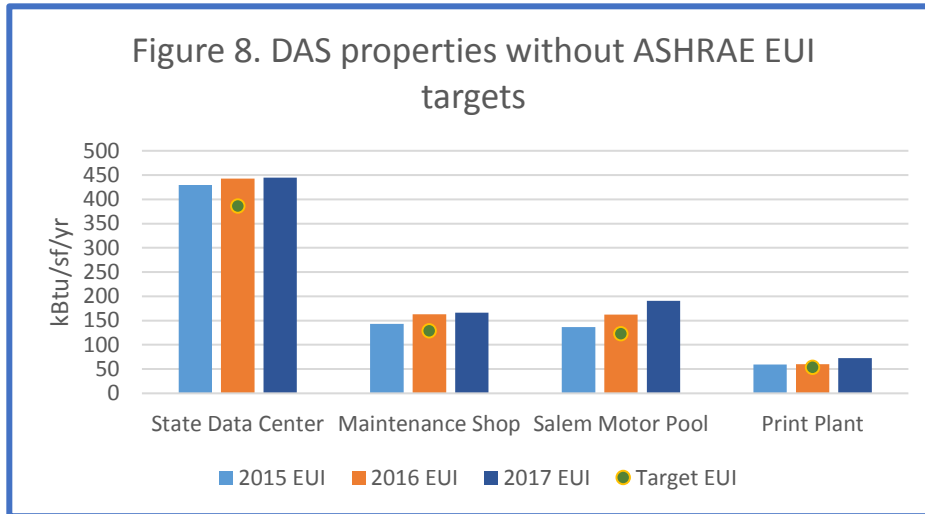
In 2016 DAS spent over \$3.3 million to light, cool and heat its buildings and support other operations. Energy is vital to the agency’s operations, and finding ways to conserve and use energy efficiently can also lead to cost savings. In the U.S., building energy use also accounts for over 40 percent of greenhouse emissions, so saving energy helps save money as well as lower DAS’ climate impacts.

Where we are and how we compare

The Oregon Department of Energy (ODOE) issues annual reports to agencies on energy use in buildings over 5,000 square feet. These reports, which are based on data submitted by DAS and other agencies, also track the energy use intensity (EUI) of buildings, or how much energy is used on a per square foot basis. Data on EUI by building is then compared to benchmarks in ASHRAE 100, an industry-developed standard for building performance broken into several categories by building type. Climate types are also included in the benchmarks, with Western Oregon being in Zone 4C, and Eastern Oregon in 5B. Buildings that fall below the benchmark are considered high performance, efficient buildings.



In addition to DAS buildings with EUI targets, four buildings do not have specific targets because of their unique nature in operations. Of these, the State Data Center is the most intense in its energy use, with the Print Plant the least intense on an EUI basis.

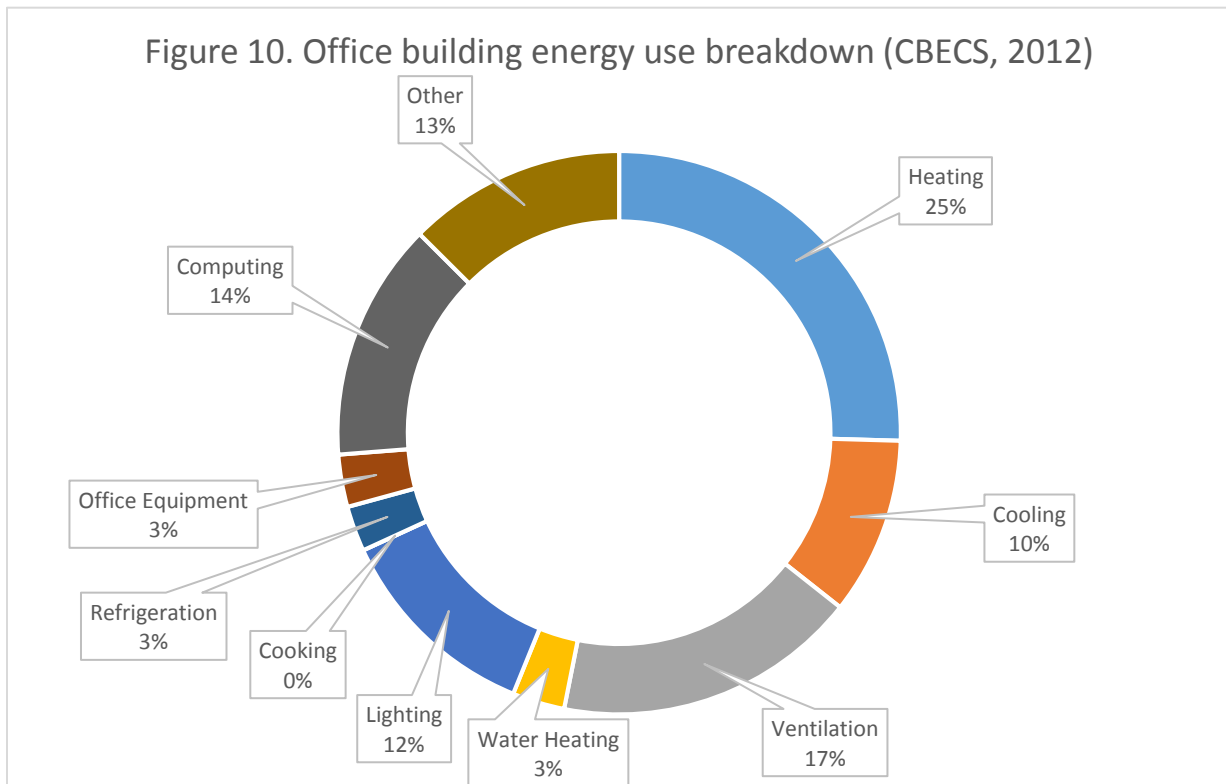
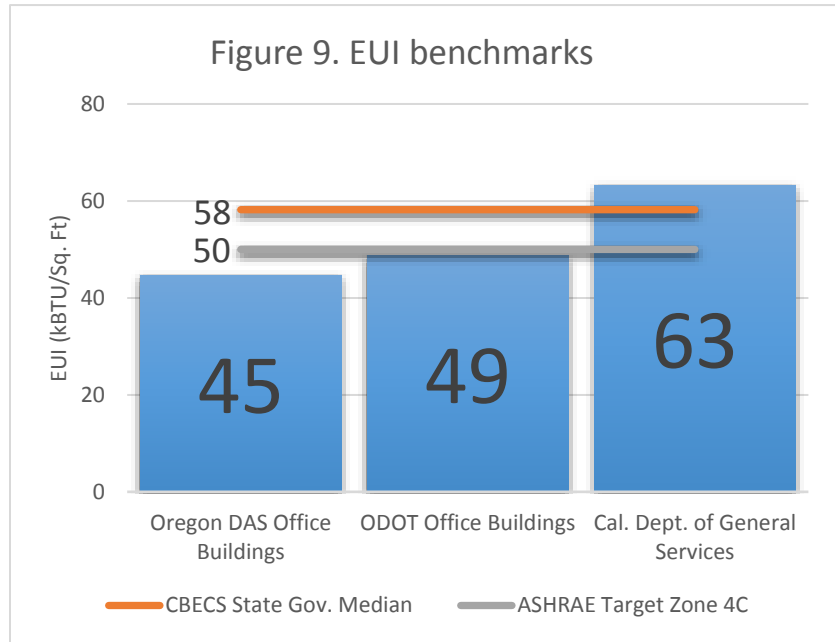


A number of improvements are already planned in DAS buildings that will work to lower EUI and make building operations more energy efficient. Table 2 shows projected annual energy cost savings if the EUI in these buildings were brought down to their EUI targets.

Table 2. EUI and energy savings for select DAS buildings.

Building	2016 EUI	EUI Target	Percent Gap from Target	Annual Energy Savings from Meeting Target Compared to 2016	2016 Cost of Energy
Real Estate	78	50	36%	\$8,746.00	\$24,294.22
DEQ Health Laboratory	272.6	179	34%	\$112,010.00	\$329,440.14
Archives	86.7	61	30%	\$33,371.00	\$111,235.71
Labor & Industries	61.7	50	19%	\$41,677.00	\$219,351.73
Blind Commission	58.1	50	14%	\$6,223.00	\$44,447.34
Employment	56	50	11%	\$23,347.00	\$212,246.69
Executive	54.5	50	8%	\$7,086.00	\$88,581.10
Pendleton SOB (Old)	55.1	52	6%	\$1,322.00	\$22,033.04
Portland State Office	51.8	50	3%	\$9,210.00	\$307,000.56
Agriculture	51.4	50	3%	\$3,377.00	\$112,566.45
Human Services	50.7	50	1%	\$2,847.00	\$284,693.46
TOTAL				\$249,216.00	\$1,755,890.44

When comparing DAS buildings to some of its “peer” organizations as well as to the CBECS database, DAS office buildings perform fairly well. According to the CBECS, on average heating is the largest energy use in buildings, followed by ventilation. Cooling, lighting and computer use are also notable uses of energy.



Where we're going: ideas for goals and actions

Goals

Goal	Source
Achieve ASHRAE 100 Standard targets for energy efficiency in all DAS buildings by 2022.	Executive Order 17-20, DAS Energy Management Policy
Reduce energy use 10 percent in buildings without an ASHRAE 100 standard.	Executive Order 17-20, DAS Energy Management Policy
Reduce energy use in BTUs by 20 percent over a 2012 baseline by 2025	DAS Sustainability Plan 2017-2023

Actions

(Note: DAS O&M has developed an [Energy Action Plan](#) through the Energy Trust of Oregon's Strategic Energy Management Program. The Action Plan contains several actions for 2017 and beyond. The actions below are in addition to what's already in the Action Plan.)

HVAC and Lighting

- Maintain a regular and recurring building retro-commissioning or "tune-up" program to ensure building systems are operating efficiently and to specifications.

Plug Loads

- Conduct periodic audits of work stations for those who leave on desk lamps and other equipment.
- Publish guidelines for staff on how to save energy at work stations.
- Research and deploy smart plug strips where appropriate to power off equipment in work spaces.

Information Technology (some may apply to DAS, others to OSCIO)

- Centralize control of printers/copiers to manage power, or create consistent power efficiency standards for them.
- Mandate all computer resources be specified with solid state hard drives.
- Phase out individual server racks in buildings and optimize underutilized servers.
- Pick personal computers by function and use case to optimize energy efficiency.
- Create a 10 year strategic plan for the state data center (equipment, capacity, etc.).
- Include sustainability and power management goals for the DAS IT Windows 10 Enterprise update to centrally manage PC power.

Other

- Set back hot water temperatures.
- Encourage/design in more natural daylight to reduce lighting needs in buildings.

- Conduct a feasibility study for renewable energy opportunities on DAS land and parking structures, as well as buildings where structurally possible.
- Develop a sub-metering plan for electric loads to more granularly evaluate energy use. Identify priority areas/loads and tenant spaces for sub-metering.
- Train project managers on the integration of energy considerations into projects and decisions per the DAS Energy Management Policy. Provide EAM and PCM checklists for integrating energy considerations where relevant.
- Engage employees and tenants through messaging, “power down” campaigns, energy report cards, signage/messaging, meetings, energy challenges and other engagement tools.
- Ensure agencies are incorporating sustainable, energy efficient systems in project requests they manage but DAS approves. DAS’ Construction Inspector position will review plans and construction of these projects to ensure compliance.

D. Material flows

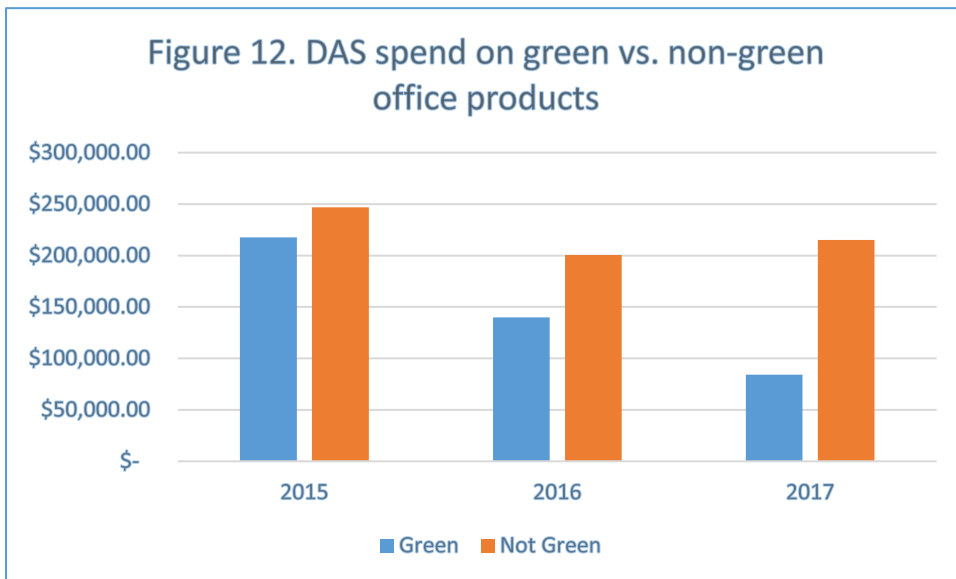
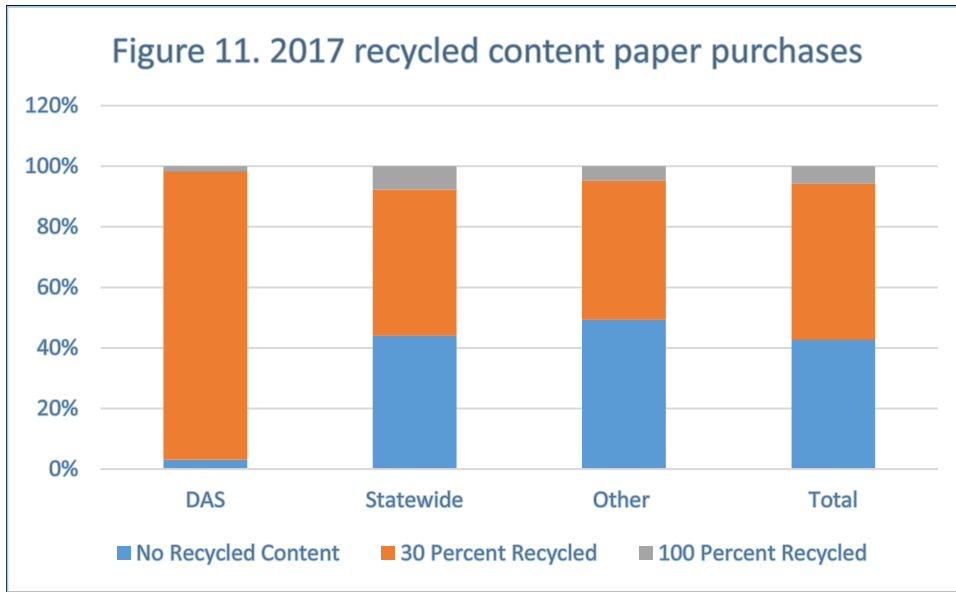
Like all organizations, DAS relies on a wide range of materials for its operations. These include everything from office supplies and paper to furniture, vehicles, electronics, uniforms and more. With analogies to things like vehicles (fuel in, exhaust out) or organisms (food in, waste out), DAS can holistically look at its “material flows” – or the goods and services it consumes to operate, and the waste produced in the process of doing so.

Where we are: Procurement

With hundreds of price agreements and large quantities of goods being procured by DAS – as well as by other organizations through DAS price agreements – procurement represents a significant sustainability opportunity. DAS currently has two “green” price agreements, one for office supplies and one for janitorial supplies. All agencies must use the green janitorial supply price agreement, while the green office supply price agreement is optional. A third price agreement for sustainability in furnishings is in development. EO 17-20 also calls on DAS, in collaboration with ODOE, to develop procurement standards for energy and water efficient building equipment.

Table 3. 2017 Spend on paper by recycled content.

Recycled Content Paper	DAS	Statewide	Other	Grand Total
0%	\$ 3,868.28	\$ 257,848.23	\$ 298,640.85	\$ 560,357.36
30%	\$ 113,524.26	\$ 280,328.35	\$ 276,253.88	\$ 670,106.50
100%	\$ 1,886.59	\$ 45,096.63	\$ 28,371.75	\$ 75,354.97
Total	\$ 119,279.14	\$ 583,273.21	\$ 603,266.49	\$ 1,305,818.83



Where we are and how we compare:
Waste/Recycling

DAS produces a wide range of materials at the “back end” of the material flow cycle. DAS recycles a number of materials including paper, cardboard, some plastics, electronics, batteries and Styrofoam. Deposit bottles and cans are also separated and collected. Other materials are diverted from the waste stream through State Surplus, donations and other means. DAS spent over \$143,000 to have waste hauled offsite in 2017.

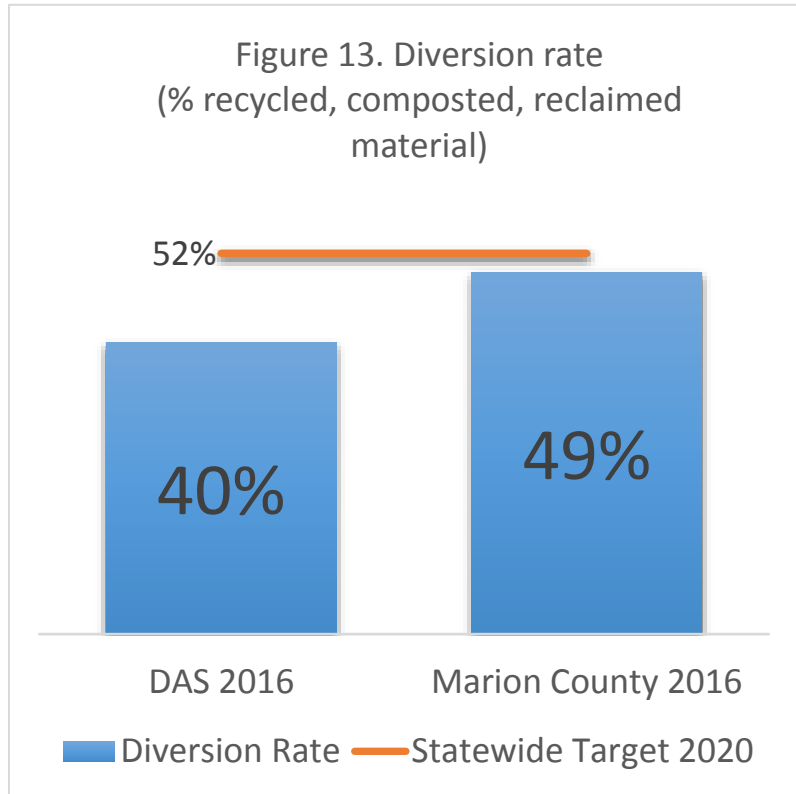
DAS diverted an estimated 40 percent of its waste from landfill in 2017 (DAS’ Diversion Rate was

approximately 32 percent in General Services and Executive). This is the first attempt to estimate DAS’ diversion rate and includes tenant-occupied buildings. This estimation included review of monthly invoices from waste haulers and estimating of waste weight based on bin size, pickup frequency and weight calculators provided by the U.S. Environmental Protection Agency². It was assumed that all waste bins are 100 percent full at pickup, based on input from DAS custodial staff. Weights for all recyclables were provided by Garten Services.

The DAS estimated diversion rate was compared to Marion County, Oregon’s rate. Generally, diversion rates in the Portland Metro area are higher. Analysis shows that DAS is diverting less waste than Marion County as a whole. It is also below a 2020 goal of 52 percent diversion for the state as established in Senate Bill 263.

Further analysis would allow this diversion rate to be more fine-tuned. For example, this does not include cardboard picked up by Republic in Salem, nor does it include miscellaneous waste such as construction and demolition debris. Invoices for some buildings (e.g., Eugene SOB) do not include recycling. Finally, the contract with Garten only includes weighing recycling from 12 buildings.

Diversion rate estimates vary widely by building. This could be due to the generation of more paper, which is then ultimately recycled. It could also be a factor of staff behavior, location and number of recycling facilities, or other factors not identified at this time.



² https://www.epa.gov/sites/production/files/2016-04/documents/volume_to_weight_conversion_factors_memorandum_04192016_508fnl.pdf

Table 4. Estimated Diversion Rate for DAS Buildings*

DAS Building	Recycle	Solid Waste	Diversion Rate
Employment	87,152	31,200	74%
Revenue	233,658	117,974	66%
Labor & Industries	104,391	67,472	61%
PERS	75,456	93,600	45%
Justice Building	109,554	156,000	41%
North Mall Office Building	38,669	55,821	41%
Albina	62,880	93,600	40%
Portland State Office Building	130,397	205,533	40%
Central Point	9,432	15,600	38%
Executive Building (DAS occupied)	37,981	78,000	33%
General Services (DAS occupied)	28,559	62,400	31%
Commerce	12,483	28,761	30%
Blind Commission	25,152	62,400	29%
State Data Center	20,683	62,400	25%
Agriculture	38,166	120,372	24%
Portland Crime Laboratory	49,321	187,200	21%
Archives	5,812	32,356	15%
Public Utility	8,987	143,389	6%
Real Estate	1,896	31,200	6%

*Only includes buildings where recycling is weighed by Garten or others. DAS is responsible for waste/recycling services in tenant-occupied buildings.

Surplus is broken out separately from this list due to its unique functions and high diversion rate.

	Recycle	Solid Waste	Diversion Rate
Property Distribution Center (DAS)	267,569	31,200	90%

Where we're going: ideas for goals and actions

Goals

Goal	Source
By 2023, increase statewide purchase of recycled-content copier paper and statewide purchase of current green office products to 50% of total volume.	DAS Sustainability Plan 2017-2023
Achieve a statewide 52 percent diversion rate by 2020, and 55 percent by 2025.	Senate Bill 263
Achieve a 64 percent diversion rate in Marion County and Portland Metro areas by 2020.	Senate Bill 263

Actions

Procurement

- Place and receive more procurement orders online.
- Integrate language on demonstrating commitment to sustainability into RFPs and sustainability into contract administration training.
- Explore embodied carbon in purchased materials in key procurement areas with the highest carbon footprint.
- Incorporate sustainable purchasing principles into statewide trainings. A module on sustainable purchasing has been incorporated into the DAS introductory course, "Principles of Oregon Public Procurement" course, which is open to state and local government trainees.
- Provide enhanced communication for those using the procurement portals regarding the benefits of more sustainable products.
- Monitor agency buys on agreements that offer choice of green or non-green products and work with agencies to focus on areas for improvement.
- Examine vendor ordering interfaces to offer green and sustainable items first.
- Continue monitoring green janitorial supply and office supply agreements and see if even more products can be included. Integrate new sustainable furniture price agreement into trainings.
- Build partnership with new DEQ Materials staff. Support other programs' sustainable projects, such as green fleet.
- Explore expansion of QRFs to meet more services and supply needs. This would potentially assist in increasing employment of people with disabilities, which have a historically high unemployment rate.

Waste Reduction

- Move to electronic RFP process to reduce paper.
- Create a materials exchange for employees.

- Reinforce the process of checking surplus first for any needed items before making a new purchase. Incorporate into procurement practices and guidance.
- Create a paper use “budget” for staff that limits how much they can print in a day/month/year. Track paper use by functional area/group printer and have contests on paper reduction.
- Use more electronic signatures.
- Eliminate paper agendas and use technology instead.
- Eliminate plastic stir straws.
- Push more print requests to P&D to cut printing costs and print more efficiently.
- Eliminate use of paper/plastic dishes in break rooms and for staff events.
- Create a community office supply storage for each building to share/avoid unnecessary purchases.
- Collaborate with P&D to create more online forms.

Recycling

- Provide more attractive recycling collection bins that can be designed into work areas.
- Track construction and demolition waste diversion on construction projects. Create diversion goals for projects over a certain size and plans for waste (salvage, recycle, etc.)
- Use deposit cans and bottles for charitable fund drives
- Collaborate with other agencies to encourage plastics recycling companies to locate in Oregon.
- Set up recycling at building entrances and exits.
- Put glass, electronics and battery recycling collection bins on each floor.
- Set up Styrofoam recycling stations
- Upcycle plastic bags and egg cartons
- Use recycled coffee grounds as fertilizer

Other

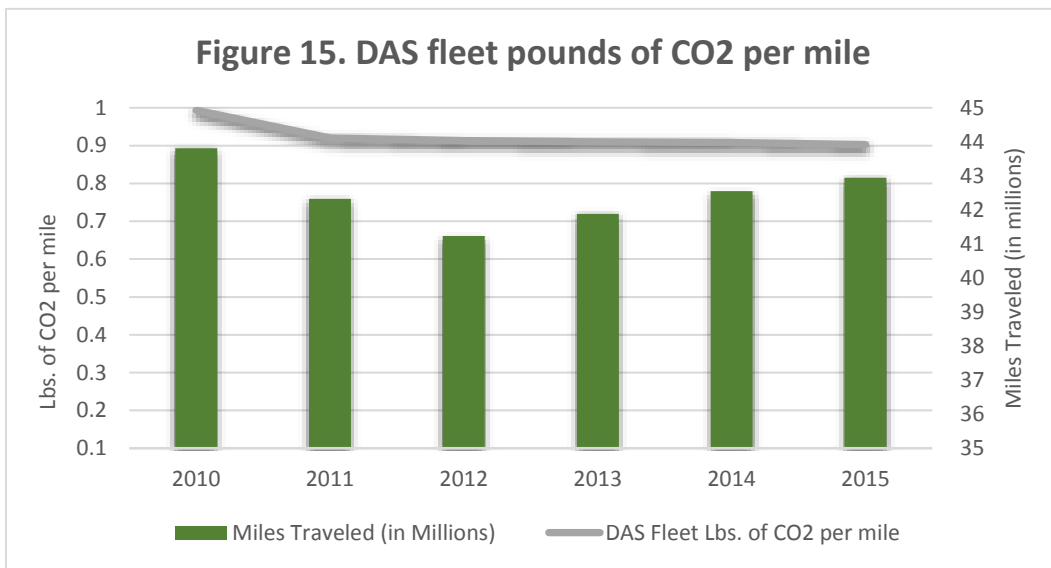
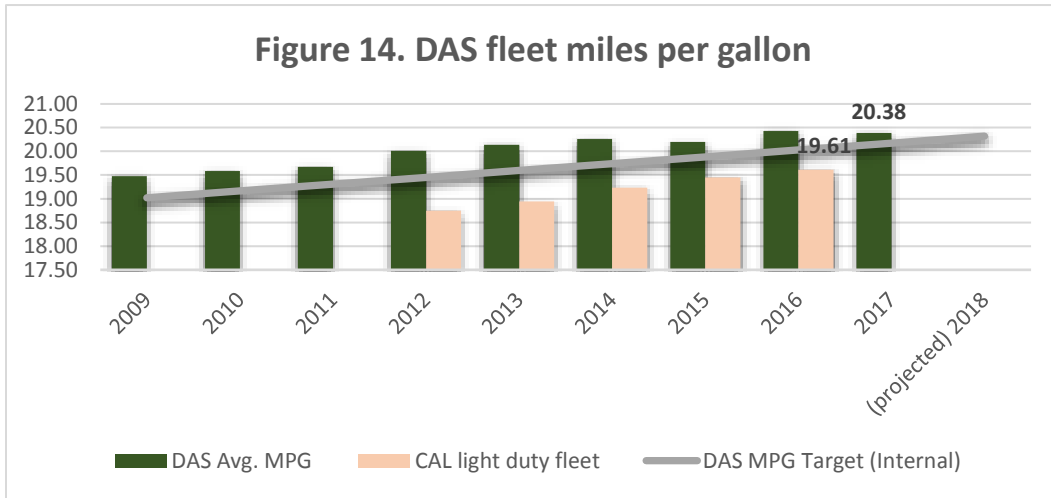
- Conduct a waste audit of DAS waste streams to determine composition and opportunities to increase diversion.
- Explore opportunities to weigh DAS waste as well as recycling to further refine diversion rate data.
- Set construction and demolition diversion rate goals for DAS construction/renovation projects and track outcomes. Drywall, metal, wood and other C&D materials can be recycled or salvaged.
- Make composting available in DAS break rooms. Explore a pilot project using lessons learned from PSOB composting efforts.
- Compost lawn and tree clippings from landscaping operations.

E. Fleet/transportation

The Fleet & Parking Services program manages 4,100 DAS-owned vehicles, provides policy oversight to over 3,000 vehicles owned by other agencies and manages 4,500 parking spaces in the Salem capitol mall, Portland and Eugene. Fleet & Parking Services rents vehicles on a daily basis and long-term to over 100 state and local agencies and promotes alternative modes of transportation for state employees. In 2017, state staff logged over 40 million fleet miles traveled.

Where we are and how we compare

The state fleet has been getting progressively more efficient over time in terms of miles per gallon. Compared to the State of California’s light duty fleet, the state fleet is more efficient.



The transportation sector in Oregon is the largest contributor to greenhouse gas emissions. The DAS fleet has been progressively improving over time with respect to carbon dioxide equivalent pounds per mile. In 2017, the fleet included approximately 350 hybrid vehicles, along with plug-in electric, compressed natural gas and flex-fuel vehicles.

Where we're going: ideas for goals and actions

Goals

Goal	Source
Increase fuel efficiency by 15 percent over a 2007 baseline by 2020.	DAS Sustainability Plan 2017-2023
Triple the number of EVs in Oregon by 2020.	Executive Order 17-21

Actions

- Require vehicles to use auto shutoff/start to save fuel and emissions and reduce idling.
- Have more virtual meetings to cut down on unnecessary travel.
- Create/provide a carpooling web site or support apps that encourage carpooling.
- Consolidate agency and Printing and Distribution delivery routes and remove duplication.
- Continue supporting incentivized rates for rental of high efficiency cars.
- Expand covered/secure storage for bikes at DAS buildings and explore participating in the City of Salem's bike share program.
- Continue to examine ROI on high efficiency small cylinder engines versus alt fuel options when replacing vehicles. Smaller conventional gasoline engines may yield more GHG reductions than larger flex fuel engines.
- Implement policy change to gain more efficient use of hybrids. Agencies that do not meet minimum use requirements for hybrids will not be able to add more vehicles; only replace existing ones.
- Revisit feasibility of multiple car sharing sites around the Capital Mall for state agencies to use, which would reduce the number of low use vehicles. This would also free up parking spaces for employee use.

F. Greenhouse gas emissions

Climate change presents a significant threat to Oregon citizens’ livelihoods, as well as to economic security, environment, health and wellbeing. Governor Brown has made climate change a priority issue – both reducing pollution that contributes to climate change, as well as adapting to changes already taking place and projected to occur.

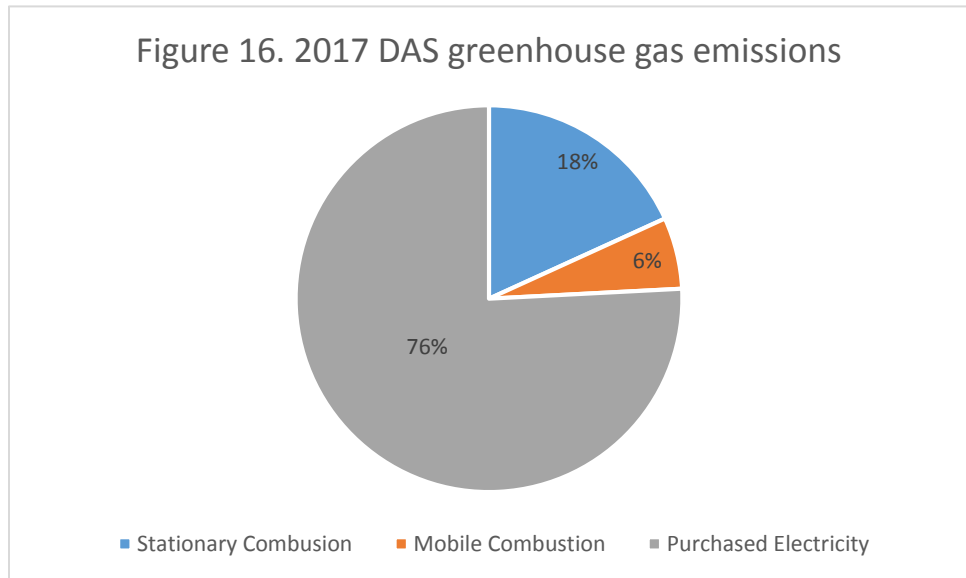
Greenhouse gas (GHG) reduction is a cross-cutting issue involving building energy efficiency and conservation, fleets and transportation, stationary fuel sources (such as diesel for equipment and generators), refrigerants, solid waste and others. The State of Oregon’s goal is to reduce GHGs 10 percent below 1990 levels by 2020 and at least 75 percent below 1990 levels by 2050 (ORS 468A.20). Governor Brown has also committed Oregon to achieving the targets of the Paris Climate Agreement, which are reducing GHG emissions 26 to 28 percent below 2005 levels by 2025.

Where we are and how we compare

Greenhouse gas (GHG) emissions were calculated using The Climate Registry’s Climate Registry Information System (CRIS). Data were uploaded on electricity and natural gas use in buildings, state fleet use, refrigerants and other stationary fuel sources. In 2017 DAS operations resulted in the emission of approximately 15,881 tons of GHG emissions. Emissions from purchased electricity were by far the largest share of emissions, followed by stationary combustion (natural gas, diesel, landscaping fuel, etc.) and fleet (DAS use of state fleet vehicles).

This equates to approximately 18.6 tons of GHGs per DAS employee in 2017. As a comparison, in 2015 Oregon State University emitted approximately 12.5 tons per student³.

Emissions from previous years will be calculated to help track trends. Data prior to 2012 is not complete or considered reliable.



³ http://fa.oregonstate.edu/sites/fa.oregonstate.edu/files/sustainability/docs/fy15_ghg_report.pdf

Where we’re going: ideas for goals and actions

Goals

Goal	Source
Meet international Paris Agreement targets to reduce GHG emissions by 26 to 28 percent below 2005 levels by 2025.	Governor’s Commitment, Embodied in EO 17-20
By 2025, reduce GHG emissions by 20 percent from 2012 baseline.	DAS Sustainability Plan 2017-2023

Actions

Actions related to energy and transportation will also contribute to GHG reductions. Other potential actions include:

- Partner with Department of Corrections (DOC) for a “Poop to Power” project that captures methane from DOC wastewater and converts it to natural gas for state buildings.
- Evaluate opportunities for carbon sequestration through tree plantings.
- Develop guidelines and standards for carbon neutral ready buildings by 2022, using the Resilience Building as a model, per EO 17-20.
- Partner with DEQ to include an analysis of the carbon content of building materials per EO 17-20.
- Conduct a consumption-based GHG inventory for DAS and use to inform lower-carbon options for procurement of materials.
- Purchase carbon offsets only after other efficiency and conservation projects are considered.
- Create an adaptation/resilience plan for DAS to proactively respond to a changing climate by evaluating potential risks to DAS assets and potential responses.

G. Green building and grounds

Like GHGs, green buildings and grounds is a cross cutting topic encompassing many of the resource conservation activities previously discussed. Green buildings and grounds can also support staff health and wellness by creating healthy and productive places to work. Green buildings have also shown to have premiums in the real estate market as desirable places to work⁴.

Goals

The DAS Statewide Facilities Standards and Guidelines (2004) specified that new state buildings and major renovations were to be designed to meet the point equivalent of the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) Silver certification level (new buildings), or

⁴ <https://www.appraisalinstitute.org/assets/1/7/Green-Building-and-Property-Value.pdf>

Certified level (major renovations). This policy was nullified with the rescinding of EOs 00-07 and 03-03. While the Oregon Department of Energy’s State Energy Efficient Design (SEED) program⁵ sets energy efficiency standards for new construction and major remodels, it does not address other aspects of green building.

Actions

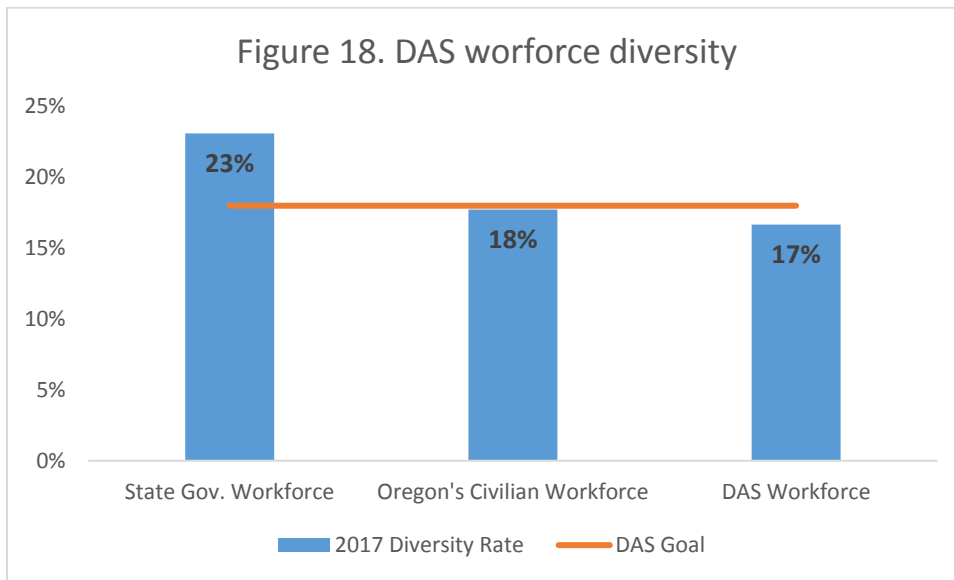
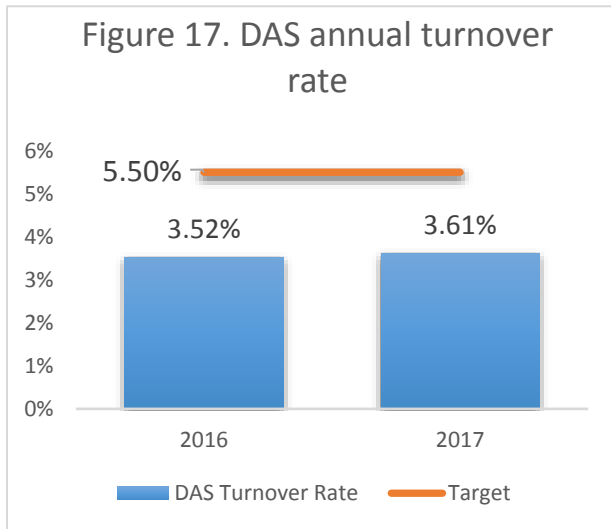
- Create minimum sustainable design standards for new construction and major renovation projects.
- For smaller projects, create a sustainability checklist to identify opportunities and project sustainability goals and consistency with green certification standards. Document outcomes.
- Use the Oregon Resilience Building as a test bed for development of a high-performing, carbon neutral and state-of-the-art building – from owner’s project requirements and conceptual design through construction and operation.
- Incorporate sustainability into boilerplate DAS construction standards to incorporate the latest green building standards (LEED Version 4). Require contractors to adhere to these standards, or better.
- Ensure construction standards and operations and maintenance standards are working toward common goals.
- Revise sustainable design/finish guidelines to attach to both DAS and private leases. Create versions for larger and smaller projects, as well as for DAS and private leases.
- Create sustainability checklists for RES to use in considering attributes for leased space.
- Request that private landlords share energy and water consumption and recycling data for leased properties.
- Use less/least toxic chemicals in landscape maintenance and create an integrated pest management strategy/plan.
- Pilot a garden project on DAS land for community food production.

H. Support staff and community

Supporting DAS staff and the greater community address the “community” component of the Oregon Sustainability Act. This encompasses a broad range of topics, but it offers an opportunity to evaluate and support those actions that can support staff and ultimately, the “sustainability” of DAS as a thriving, efficient and productive organization for the citizens of Oregon.

⁵ <http://www.oregon.gov/energy/energy-oregon/Pages/SEED-Program-Guidelines.aspx>

Where we are and how we compare



Actions: Employee Support

- Evaluate the benefits and costs of moving employees several times in a building.
- Create succession planning and pathways for agency leadership positions.
- Create guidelines for sustainability in events.
- Create guidance for staff to be able to participate in sustainability activities (paid and unpaid).

Actions: Equity, Diversity and Inclusion

Support and align with the Governor's Office and existing DAS efforts with respect to the following:

- Incorporate recruitment and retention efforts that work toward supporting effective practices.
- Provide training for DAS Managers to incorporate the values of equity and diversity as defined by the Governor and agency leadership.

- Deploy functionality in Workday to evaluate and report workforce metrics and measure progress.
- Incorporate expectations for advancing equity, inclusion and diversity in position descriptions.
- Reward employees for successful efforts in advancing equity, inclusion and diversity.
- Assuring equitable distribution of staff access to mentoring resources and networks.
- Participate in leadership training opportunities that builds expertise around equity, inclusion and diversity.
- Provide meetings, brochures and other materials in a variety of languages and formats.
- Strive for a workforce that reflects the rapidly changing diversity of Oregon.

Actions: Education, Communication and Engagement

- Train staff on sustainability “how tos”.
- Provide a sustainable procurement module on iLearn and require those making purchases to complete it.
- Hold weekly or monthly challenges between building floors or units with tracking boards or tools. Topics could include alternate commuting, home lunch vs. takeout, energy conservation or give up your waste basket for a month.
- Create separate, self-sustaining green teams in each DAS building.
- Create “sustainability days” for staff (e.g. bike to work day with breakfast stations – could be an enterprise wide event’ no waste days).
- Ask employees to commit to initiatives that parallel State of Oregon commitments to environmental protection.

I. Economic/fiscal and other ideas

- Actively explore grants, cooperative agreements, partnerships and other sources to leverage DAS resources.
- Apply life-cycle costing to major projects-decisions to account for full project costs and benefits.
- Set up an energy efficiency fund from ETO incentives for DAS to re-invest in other energy projects.
- Explore a fund to allow revenue from clean fuels credits to be used fund more ZEV purchases.
- Create a dedicated sustainability program budget (consultant help, Sustainability Board support, awards and materials for program, etc.)
- Maintain/obtain Earthwise or equivalent certification for all DAS buildings.
- Explore effective reuse of buildings.
- Explore opportunities to partner with other agencies on large sustainability projects. For example, DOC adults in custody projects that support the DAS Sustainability Plan.
- Develop a triple bottom line decision support tool to consider people, planet and profit in major decisions.
- Develop regular progress with metrics and an annual DAS sustainability report/web portal on progress toward sustainability goals.

J. Appendix A: Brief summary of survey results

Findings for Phase 1: Survey of DAS Leadership

- Survey was distributed to 66 DAS leadership members and senior managers (Level 35 and above); 25 responses were received.
- 42 percent said sustainability was a high strategic priority; 54 percent indicated it was a moderate priority.
- The top three benefits of implementing sustainability were to prepare and adapt to the future, increase efficiency and save money. Fulfilling a sense of obligation was fourth, supporting agency mission fifth.
- The top three most important sustainability issues were energy, waste reduction and procurement. Transportation was fourth, water fifth.
- Leadership rated DAS sustainability performance overall as average to above average. Conserving energy was rated the highest, increasing resiliency to climate change the lowest.
- Staff education and training, dedicated budget and guidance for creating/implementing programs were expressed as the most desired forms of support for sustainability efforts.
- Leadership was moderately or strongly supportive of allowing small amounts of paid staff time for sustainability activities.

Findings for Phase 2: Survey of Staff

- The majority (90 percent) of employees agree DAS should prioritize sustainability both within the agency and in programs directly impacting Oregonians.
- 74 percent of staff believe sustainability should be a high priority for DAS.
- Only 44 percent of DAS employees believe that it currently is a high priority.
- 62 percent of employees expressed they believe it is very important that leadership be involved in sustainability efforts.
- Only 24 percent of staff indicated they are very aware of DAS sustainability efforts and plans. 46 percent of staff are marginally aware or not at all aware of agency sustainability efforts.
- Top rated priorities include conserving energy and water, increasing recycling efforts and reducing waste.
- Biggest perceived benefit of sustainability efforts to DAS is increased efficiency in the use of resources.
- 65 percent of staff indicated interest in helping with sustainability activities; 55 percent indicated a willingness to participate on a volunteer basis, and 80 percent if on paid time.
- The biggest motivators for DAS staff to participate more in agency's sustainability efforts include more knowledge and training, direction from agency leadership and ability to use paid staff time to participate.
- The biggest barriers to practicing sustainability are budget, lack of sustainability staff and lack of knowledge and training.
- Staff indicated that the most effective ways to learn about agency's sustainability efforts would include a state government sustainability-specific newsletter and more sustainability-related trainings.