

Summary

In the 2015 Update of the Sustainability Plan (covering years 2015 through 2017), Sound Transit committed to reducing its environmental footprint while fulfilling its mission to plan, build and operate a regional transit system that supports communities and the local economy. This document summarizes the Plan’s key successes and opportunities. It also assesses Sound Transit’s progress towards its initial, long-term sustainability goals.

Progress on Sustainability Priorities and Goals

Sound Transit is on track to meet most of its initial long-term sustainability goals. Sound Transit has implemented its 2015 Sustainability Plan by advancing sustainability initiatives to develop near-term resource conservation strategies and make targeted resource efficiency-related investments, focusing on time-sensitive design and construction efforts and prioritizing high-impact activities. Since 2015, the agency has:

- **Met nearly 88% (16 of 18) of its long-term goals (2030)**, as shown in Table 1. Sound Transit expects to meet the remaining goals with continued work.
- **Met more than 70% of its short-term goals (2017)** and more than 77% of the annual targets since 2015.

Table 1. Summary of Sound Transit’s Priorities and Progress on Long-Term Goals (2030)

Key	✓ On track toward meeting long-term goal
	✧ Continued focus needed to stay on track to reach long-term goal
	◆ Significant work required to achieve long-term goal
Priority	Long-Term Goal
Make informed decisions that consider environmental and social impacts	◆ Agency decision-making processes incorporates the triple bottom line considerations (people, planet, prosperity)
	✧ Sustainability goals are connected to organizational objectives, priorities and decision-making processes.
Advance sustainability in early planning and design	✓ Major capital project budgets incorporate sustainability considerations by the completion of 30% design.
	✧ Sustainability planning reflects increased internal and external collaboration.
	✓ Design Criteria Manual reflects industry best practices for sustainable design and green infrastructure.
Increase system resilience to climate change and extreme weather	✓ Climate change impacts are integrated into relevant planning, design, operations, and emergency preparedness processes.
	✓ Weather-related service interruptions and equipment failures are avoided
Reduce construction pollution	✧ 95% of construction equipment complies with highest EPA standards.
	✧ Continue 100% storm water compliance
	✧ 95% of Construction and Demolition (C&D) materials are source-separated on site and recycled.
Increase revenue fleet fuel efficiency and reduce vehicle pollution	✧ Reduce greenhouse gas emissions per vehicle revenue mile (VRM) by 80%.
	✧ Achieve carbon-neutral ST Express by 2050.
	✓ Reduce vehicle pollution by 75%
Optimize facility energy efficiency and clean energy generation	✧ Facilities and all electricity are carbon-neutral
	✓ Decrease energy use for existing facilities by 25%
Procure and use green products services and construction	✧ All agency procurements include green procurement methods or features.
Foster a staff culture of sustainability	✧ The agency promotes sustainability innovation
	◆ Sound Transit is a zero-waste agency

Document Layout

Pages 1 –3 provide a summary of Sound Transit’s Sustainability Plan, current progress on each long-term goal and key accomplishments and challenges. Pages 4 and 5 provide a list of achievements regarding Sound Transit’s 2015-2017 short-term goals, along with explanations for goals not yet met. Starting on page 6, the appendix provides a detailed overview of each long-term goal, the goal’s associated short-term activities, and the metrics collected to measure progress.

Key Accomplishments to Date

Since 2015, Sound Transit has made key accomplishments in the following areas:

- Providing Sustainability Leadership.
 - Ensured that green building and sustainable infrastructure are an integrated, funded component of the agency’s future capital projects.
 - Issued \$1 million worth of green bonds - the world’s largest municipal sale of green bonds at the time – allowing investors the ability to advance environmental sustainability.
 - Signed agreement with PSE that will make Link light rail run on 100% clean, green energy in 2019.
 - Recertified Sound Transit’s Environmental and Sustainability Management System (ESMS) to the new ISO 14001:2015 standard.
 - Achieved Platinum-level recognition for the American Public Transportation Association’s Sustainability Commitment that marks sustainability achievements.
- Making the region cleaner and greener.
 - Offset more than 425,000 tons of regional emissions by supporting transit-friendly development and offering mass-transit options, which carry 99% more riders for 16% more miles annual than in the baseline year of 2010.
 - Improved air quality through fleet management and energy efficiency, by restricting the most polluting construction equipment from Sound Transit sites, upgrading all Sounder engines, increasing the percentage of the revenue fleet composed of CNG buses and increasing the number of hybrids in the non-revenue fleet.
 - Updated the Design Criteria to reflect industry best practices including third-party certifications.
 - Protected natural habitats by creating or restoring three acres of wetlands for every acre altered and only receiving two stormwater permit violations across 25 permits.
 - Between 2014 and 2017, made progress on the following quantitative goals:
 - Reduced total greenhouse gas emissions by 12% (goal: 5%)
 - Reduced criteria air pollutants by 17-82% (depending on pollutant) (goal: 15%)
 - Reduced facility energy use by 20% for buildings built before 2015 (goal: 15%)
 - Increased diversion rate to 43% (goal: 40%)
- Developing plans and policies.
 - Banned the oldest and dirtiest construction equipment from Sound Transit sites, with appropriate exemptions in place to protect small and disadvantaged businesses.

Performance Challenges

Sound Transit has made considerable progress toward reducing its environmental footprint by reprioritization actions and developing near-term plans and policies to guide action. However, the agency has more work to do to accomplish a few of the key short-term goals that were not completed by 2017. These topics will be addressed in Sound Transit's Sustainability Plan update process.

- Long-term goal: Agency decision-making processes incorporates the triple bottom line considerations (people, planet, prosperity)
 - ☐ *Short-term goal: Evaluate expansion of Total Cost of Ownership (TCO) to include environmental and social costs and benefits.* This short-term goal was key to working towards the long-term goal of triple bottom line decision-making. The TCO policy was not amended to include triple bottom line considerations (people, planet, prosperity). Due to agency focus on the Sound Transit 3 planning process, there were not sufficient staff resources available to further develop the TCO policy and or procedure. Furthermore, staff had determined that work on around TCO in 2016 and 2017 should first focus on educating the agency on the base tenants of the policy and draft procedures before further amending the policy.
 - ☐ *Short-term goal: Board, Executive Leadership, and Senior Management articulate agency's top sustainability goals and values on a regular basis.* Although many senior staff championed sustainability efforts and sustainability topics were included in a number of project reports to the Board, messaging and reporting around sustainability by senior agency leadership was not formalized in a comprehensive way.
- Long-term goal: Sound Transit is a zero waste agency.
 - ☐ *Short-term goal: Recycle 90% of construction and demolition materials.* For a number of reasons, it is unclear how well the agency did in terms of increasing diversion to recycling and composting for construction. Shortly after setting this goal, the two jurisdictions whose recycling guidance we most closely follow - King County and the City of Seattle - altered the regulations for construction waste recycling. Both municipalities transitioned away from requiring diversion rates and instead focused on documenting that recycling was being diverted to certified facilities. Sound Transit altered its recycling specifications to reflect this change. However, while this information is a required submittal for contractors, it has been difficult to systematically collect this documentation from the field in order to assess contractor success.
 - ✓ *Short-term goal: Sound Transit diverts 40% of office waste to recycling or compost.* Although the agency met its recycling and composting goal, the agency must deepen its office recycling and composting practices in order to near the zero waste reduction goal.

Progress on Sustainability Short-term Goals (2017) - Organized by Priority

Make informed decisions that consider environmental and social impacts

- Evaluate expansion of Total Cost of Ownership (TCO) to include environmental and social costs and benefits.
- Board, Executive Leadership, and Senior Management articulate agency's top sustainability goals and values on a regular basis.
- ✓ Develop a decision-making path to approve and fund sustainable design and green infrastructure features.

Advance sustainability in early planning and design

- ✓ Include provisions in the System Plan budget for sustainable design and green infrastructure, system access, and Transit Oriented Development (TOD) readiness.
- ✓ Prioritize alternative modes of access in System Plan and preliminary engineering, as appropriate by location.
- ✓ Require evaluation of sustainable design and green infrastructure features prior to final design.
- ✓ Pursue collaborations with external partners on green infrastructure projects.
- Coordinate with utilities to enhance use of efficiency and incentives during design and construction.
- NA Evaluate state climate change legislation impacts and benefits.
- ✓ Enhance coordination between agency's Sustainability, TOD and Access programs.
- ✓ Prioritize the sustainable design and green infrastructure features that should be included in agency projects.

Increase system resilience to climate change and extreme weather

- ✓ Adopt and implement agency Climate Adaption Strategy.
- ✓ Assess how early planning and environmental analyses can better address potential climate change impacts.
- ✓ Consider climate change when updating standard operating and maintenance procedures, inclement weather plans and emergency response plans.
- ✓ Track service interruptions attributed to weather related events.
- ✓ Assess options to reduce the incidence of weather related service disruptions.

Reduce construction pollution

- ✓ Evaluate and require applicable sustainability BMPs for contractors to improve environmental performance.
- ✓ Ensure that General Contractor/Construct Manager (GC/CM) and Design Build contracts include Sustainable Practice Plans.
- Achieve 100% compliance (zero violations).
- ✓ Compile dashboard of key environmental compliance measures (e.g., air quality, stormwater, noise).
- Recycle 90% of construction and demolition materials.

Increase revenue fleet fuel efficiency and reduce vehicle pollution

- ✓ Reduce greenhouse gas emissions per vehicle revenue mile by 5%.
- ✓ Update ST Express Fuel Efficiency Strategy.
- ✓ Replace non-revenue fleet passenger vehicles with low-emission or other clean vehicles.
- ✓ Reduce vehicle pollution (criteria air pollutants by 15%).

Optimize facility energy efficiency and clean energy generation

- ✓ Evaluate how to optimize use of electricity from renewable sources.
- ✓ Assign an agency division to manage utility conservation efforts.
- ✓ Decrease total energy use by 5% for all facilities built before 2015.

Procure and use green products services and construction

- Assess 100% of all new agency procurement for the opportunity to include green methods or features.
- Include green methods of features in at least 50% of all new agency procurements.
- ✓ Establish department-specific goals for green procurement and utilization.

Foster a staff culture of sustainability

- ✓ Initiate a peer sustainability recognition program for individuals and departments.
- Develop an award program to enable select staff across the agency to research new sustainability solutions.
- Revise job descriptions to reflect how applicable positions support agency sustainability goals.
- ✓ Sound Transit diverts 40% of office waste to recycling or compost.



Progress Report on the 2015 Sustainability Plan - Appendix

Priority: **Make informed decisions that consider environmental and social impacts**

Long-term Goal	Short-term Goal	Progress/Challenges
Agency decision-making processes incorporates the triple bottom line considerations (people, planet, prosperity).	<input type="checkbox"/> Evaluate expansion of Total Cost of Ownership (TCO) to include environmental and social costs and benefits.	<p>Progress</p> <ul style="list-style-type: none"> Expanded annual Sustainability Report to include more social and economic data and anecdotes. Began gap analysis to identify opportunities for additional socioeconomic metrics to collect and report on. <p>Challenges</p> <ul style="list-style-type: none"> TCO Policy is poorly understood and utilized and needs to be revamped prior to being expanded to include social, environmental and economic benefits.
Sustainability goals are connected to organizational objectives, priorities and decision-making processes.	<input type="checkbox"/> Board, Executive Leadership, and Senior Management articulate agency's top sustainability goals and values on a regular basis.	<p>Progress</p> <ul style="list-style-type: none"> A few key project reports to Board, namely East Link, included mention of sustainable building and design progress. <p>Challenges</p> <ul style="list-style-type: none"> There is no requirement or guidance provided to project leadership to prompt inclusion of sustainability topics in public or board presentations.
	<input checked="" type="checkbox"/> Develop a decision-making path to approve and fund sustainable design and green infrastructure features.	<p>Progress</p> <ul style="list-style-type: none"> The ST3 Plan includes cost estimates to fund sustainable design and green infrastructure features. <p>Challenge</p> <ul style="list-style-type: none"> Staff have been challenged to finalize and approve guidance documents on how to apply ST3 funding in a timely manner.

Performance Measures

Metrics	2015	2016	2017
# of formal TCO analyses performed	4	12	5
# of major capital project and procurement reports that include sustainability topics	N/A*	4	2

*Data collection for this metric began in January 2016.

Priority: Advance sustainability in early planning and design

Long-term Goal	Short-term Goal	Progress/Challenges
Major capital project budgets incorporate sustainability considerations by the completion of 30% design.	<ul style="list-style-type: none"> ✓ Include provisions in the System Plan budget for sustainable design and green infrastructure, system access, and Transit Oriented Development (TOD) readiness. ✓ Prioritize alternative modes of access in System Plan and preliminary engineering, as appropriate by location. ✓ Require evaluation of sustainable design and green infrastructure features prior to final design. 	<p>Progress</p> <ul style="list-style-type: none"> ▪ Ensured that system plan project cost estimates addressed sustainable design and green infrastructure, system access and TOD readiness ▪ Customized sustainability design criteria for preliminary engineering ▪ Prioritized pedestrian, bicycle and transit access in ST3 language ▪ Completed a sustainability analysis for ST3
Sustainability planning reflects increased internal and external collaboration.	<ul style="list-style-type: none"> ✓ Pursue collaborations with external partners on green infrastructure projects. <input type="checkbox"/> Coordinate with utilities to enhance use of efficiency and incentives during design and construction. 	<p>Progress</p> <ul style="list-style-type: none"> ▪ Participated in the Puget Sound Regional Council’s Regional Climate Adaptation Collaborative <p>Challenges</p> <ul style="list-style-type: none"> ▪ Staff have been focused on the growing body of work related to ST3 implementation and as a result external collaboration has lagged until recently. Furthermore, until 2018, the agency did not have any staff dedicated to utility management.
Design Criteria Manual reflects industry best practices for sustainable design and green infrastructure	<ul style="list-style-type: none"> ✓ Prioritize the sustainable design and green infrastructure features that should be included in agency projects. 	<p>Challenges</p> <ul style="list-style-type: none"> ▪ Washington State did not pass any climate change legislation from 2014 to 2017 <p>Progress</p> <ul style="list-style-type: none"> ▪ The Design Criteria Manual’s Sustainability Chapter update required that staff re-prioritize sustainability features for inclusion in projects. The revised DCM (approved in 2018) requirements were refocused around energy, water and materials efficiency with an underlying emphasis on durability and long-term Operations and Maintenance savings.

Performance Measures

Metrics	2015	2016	2017
# of design processes with budgets for sustainable design, green infrastructure access and TOD readiness	9	7	13
# of external partnerships to enhance sustainable planning	25	29	4
% increase of required sustainable design and green infrastructure features in design criteria	NA*	NA*	NA*

*Design criteria updated significantly in 2017/2018.

Priority: Increase system resilience to climate change and extreme weather

Long-term Goal	Short-term Goal	Progress/Challenges
Weather-related service interruptions and equipment failures are avoided.	✓ Track service interruptions attributed to weather related events.	Progress <ul style="list-style-type: none"> ▪ Sound Transit Facilities Maintenance Inclement Weather Plan updated annually provides scheduling , response plans and preparedness actions adapted from prior weather events ▪ Facilities Emergency inclement weather response actions are tracked and labor costs captured in EAMS and E1 ▪ Stormwater System Inspections evaluate continued system adequacy ▪ Completed initial Agency Continuity of Operations Plan (COOP) to effectively manage operations recovery from high impact events Challenges <ul style="list-style-type: none"> ▪ Value in creating integrated reporting and tracking system to efficiently pool all weather related response data
	✓ Assess options to reduce the incidence of weather related service disruptions.	
Climate change impacts are integrated into relevant planning, design, operations, and emergency preparedness processes.	✓ Adopt and implement agency Climate Adaption Strategy.	Progress <ul style="list-style-type: none"> ▪ Finalized and adopted the agency's Climate Adaptation Strategy ▪ Began to implement Climate Adaptation Strategy's initiatives ▪ Integrated climate adaptation approaches into project development ▪ Evaluated design criteria to address projected climate change impacts
	✓ Assess how early planning and environmental analyses can better address potential climate change impacts.	
	✓ Consider climate change when updating standard operating and maintenance procedures, inclement weather plans and emergency response plans.	

Performance Measures

Metrics	2015	2016	2017
# of climate adaption strategy actions completed	N/A*	7	7

*Strategy began implementation in January 2016.

Priority: Reduce construction pollution

Long-term Goal	Short-term Goal	Progress/Challenges
95% of construction equipment complies with highest EPA standards.	<ul style="list-style-type: none"> Evaluate and require applicable sustainability BMPs for contractors to improve environmental performance. 	<p>Progress</p> <ul style="list-style-type: none"> Banned Tier 0 and Tier 1 equipment from construction sites – the oldest and dirtiest pieces of equipment. Negotiated and implemented Sustainable Practice Plans in five different GC/CM contracts, to include contractor agreed upon sustainability items in construction specifications Completed comprehensive research into current state of the industry in sustainable construction as well as local contractor equipment profiles to determine the burden of requiring cleaner equipment on Sound Transit sites.
	<ul style="list-style-type: none"> Ensure that General Contractor/Construct Manager (GC/CM) and Design Build contracts include Sustainable Practice Plans. 	
Continue 100% storm water compliance.	<input type="checkbox"/> Achieve 100% compliance (zero violations).	<p>Progress</p> <ul style="list-style-type: none"> Continued strong environmental compliance in the past three years. Formalized spill response activities in emergency response protocols <p>Challenges</p> <ul style="list-style-type: none"> 2015 saw zero fineable permit violations, and 2016 and 2017 each saw only one violation per 17 total permits
	<input checked="" type="checkbox"/> Compile dashboard of key environmental compliance measures (e.g., air quality, stormwater, noise).	
95% of Construction and Demolition (C&D) materials are source-separated on site and recycled.	<input type="checkbox"/> Recycle 90% of construction and demolition materials.	<p>Progress</p> <ul style="list-style-type: none"> Updated construction and demolition waste specification to reflect jurisdictional requirements. Jurisdictions shifted from requiring a diversion percentage to certifying that recycled materials were properly sent to approved facilities <p>Challenges</p> <ul style="list-style-type: none"> 2015 saw zero fineable permit violations, and 2016 and 2017 each saw only one violation per 17 total permits

Performance Measures

Metrics	2015	2016	2017
# of General Contractor/Construction Manager and Design Build contracts that include sustainable Practice Plans	3	5	5
# of fineable actions or other compliance violations related to stormwater treatment	0	1	1
% recycling rate for construction and demolition materials	80%	80%	80%

Priority: Increase revenue fleet fuel efficiency and reduce vehicle pollution

Long-term Goal	Short-term Goal	Progress/Challenges
Reduce greenhouse gas emissions per vehicle revenue mile (VRM) by 80%. Achieve carbon-neutral ST Express by 2050.	✓ Reduce greenhouse gas emissions per vehicle revenue mile by 5%.	Progress <ul style="list-style-type: none"> Updated ST Express Fuel Efficiency Strategy Increased the percentage of hybrid or electric vehicles in the non-revenue fleet from 17 to 25% Performed a total cost of ownership analysis on battery electric buses Challenges <ul style="list-style-type: none"> Balancing emerging technologies with agency risk remains a constant conversation.
	✓ Update ST Express Fuel Efficiency Strategy.	
✓ Replace non-revenue fleet passenger vehicles with low-emission or other clean vehicles.		
Reduce vehicle pollution by 75%.	✓ Reduce vehicle pollution (criteria air pollutants by 15%).	Progress <ul style="list-style-type: none"> Upgraded all Sounder engines to Tier 3+ Increased the percent of the ST Express fleet made up of compressed natural gas buses from 7.5% in 2014 to 11% in 2017

Performance Measures

Metrics	2015	2016	2017
% change in total fleet energy use	-3%	-14%	-14%
% change in greenhouse gas emissions	-1%	-9%	-12%
% change in criteria air pollutants (passenger mile traveled)	-3 to -21%	-11 to -64%	-17 to 82%
Tons of CO ₂ e of greenhouse gas savings from Sound Transit ridership	358,069	406,550	425,490



Priority: Optimize facility energy efficiency and clean energy generation

Long-term Goal	Short-term Goal	Progress/Challenges
Facilities and all electricity are carbon-neutral.	✓ Evaluate how to optimize use of electricity from renewable sources.	Progress <ul style="list-style-type: none"> ▪ Hired a resource conservation manager in Operations ▪ Signed an agreement with PSE to participate in the Green Direct Program to purchase 100% locally produced wind energy for six Link Light Rail accounts ▪ Installed solar panels on Angle Lake Station and garage
	✓ Assign an agency division to manage utility conservation efforts.	
Decrease energy use for existing facilities by 25%.	✓ Decrease total energy use by 5% for all facilities built before 2015.	Progress <ul style="list-style-type: none"> ▪ Implemented energy efficiency projects at six major facilities ▪ Revised lighting design guidelines

Performance Measures

Metrics	2015	2016	2017
% of electricity or energy generation from renewable sources	84%	81%	84%
% change in energy use for facilities	-5%	-15%	-20%

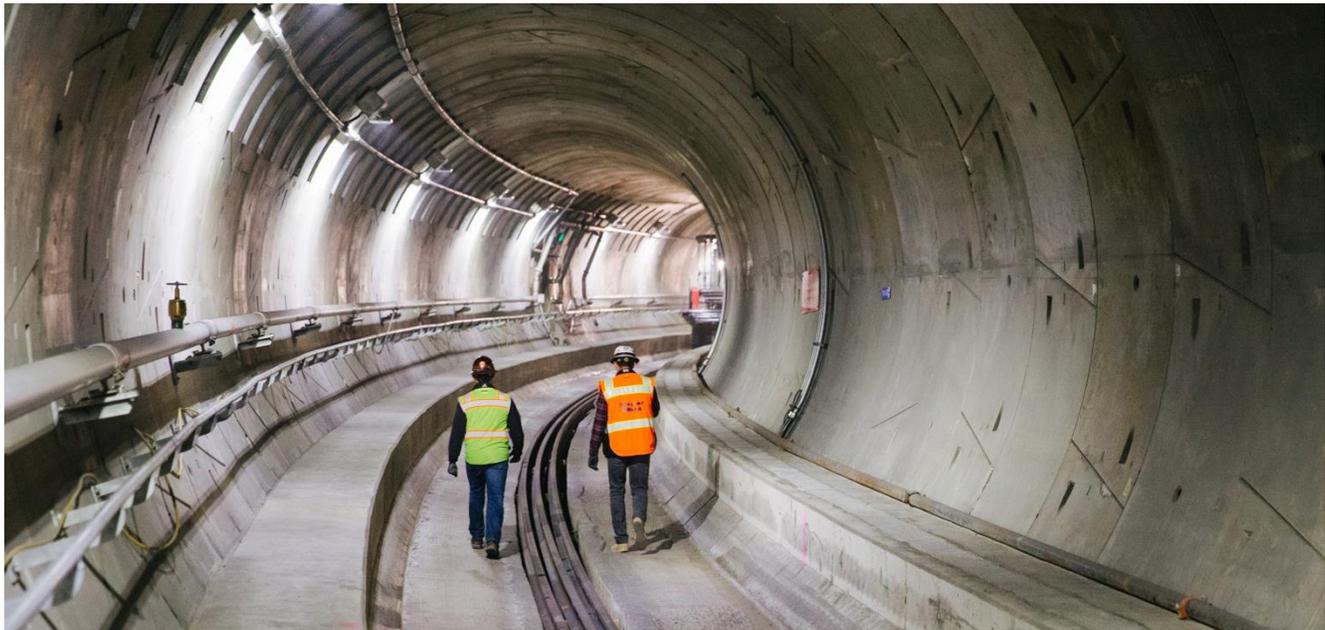
Priority: Procure and use green products services and construction

Long-term Goal	Short-term Goal	Progress/Challenges
All agency procurements include green procurement methods or features.	<input type="checkbox"/> Assess 100% of all new agency procurements for the opportunity to include green methods or features.	Progress <ul style="list-style-type: none"> ▪ Published procedures to help staff understand the Green Procurement Policy. ▪ Developed a life cycle cost assessment tool to be used in the procurement ▪ Set department specific Green Procurement goals.
	<input type="checkbox"/> Include green methods or features in at least 50% of all new agency procurements.	
	<input checked="" type="checkbox"/> Establish department-specific goals for green procurement and utilization.	

Performance Measures

Metrics	2015	2016	2017
% of agency procurements assessed for green methods and features	NA*	81%	93%
% of new procurements that include green methods and features	NA*	48%	33%

* Data collection for this metric began in January 2016



Priority: Foster a staff culture of sustainability

Long-term Goal	Short-term Goal	Progress/Challenges
The agency promotes sustainability innovation.	<input checked="" type="checkbox"/> Initiate a peer sustainability recognition program for individuals and departments.	Progress <ul style="list-style-type: none"> Launched Sustainability Peer Recognition program to allow employees to nominate their peers for sustainability accomplishments Included statement in all job descriptions about Sound Transit’s sustainability commitments Challenges <ul style="list-style-type: none"> Drastic increases in staff numbers along with turnover in HR leadership proved for an inopportune moment for some staff management related goals
	<input type="checkbox"/> Develop an award program to enable select staff across the agency to research new sustainability solutions.	
	<input type="checkbox"/> Revise job descriptions to reflect how applicable positions support agency sustainability goals.	
Sound Transit is a zero-waste agency.	<input checked="" type="checkbox"/> Sound Transit diverts 40% of office waste to recycling or compost.	Progress <ul style="list-style-type: none"> Completed renewed <i>Think Before You Throw</i> campaign to remind staff of proper waste sorting strategies. Conducted agency wide training on new City of Seattle mandatory composting law. Conducted a waste audit of Union Station.

Performance Measures

Metrics	2015	2016	2017
% of waste diverted from landfill to recycling or compost	39%	39%	43%

