

Elon University Waste Reduction Master Plan 2022

Introduction

Reducing waste and increasing the yearly waste diversion rate is one of the operational objectives of Elon University's Sustainability Master Plan (2015). The landfill diversion rate has ranged from 18 to 21 percent in recent years. To support this objective, Elon hired a consultant in FY 19-20 to conduct a waste audit of selected campus buildings, assess campus waste operations and provide recommendations for campus wide improvement. The consultant's final report and recommendations were utilized to develop this Waste Reduction Master Plan.

Environmental Services and the Office of Sustainability led the development of this plan, along with the Waste Reduction Advisory Group (WRAG). The WRAG, which consists of staff, faculty and students, was formed in late spring 2021 to review and prioritize the recommendations and specific strategies from the consultant's final report to develop this plan.

The overall goal for the plan is to achieve a waste reduction goal of 50% landfill diversion by 2030. This plan is organized in three phases with the timeframes as follows: Phase 1 – 1-2 years; Phase 2 – 3-5 years and Phase 3 – 5+ years. The recommendations for each phase are outlined in the following pages with specific strategies, impact, cost (as available) and additional information included for each recommendation. The recommendations and specific strategies identified may change as needed during implementation.

Expanding sustainability efforts and achieving carbon neutrality by 2037 are important objectives of the Boldly Elon strategic plan under the Thrive theme. Achieving a waste reduction goal of 50% landfill diversion by 2030 will advance implementation of the Sustainability Master Plan, improve performance in the Waste sub-category of the Sustainability Tracking, Assessment & Rating System (STARS) report and lower greenhouse gas emissions from solid waste in the annual emissions inventory.

PHASE 1

1. Establish a full-time Waste Reduction Manager

Strategy	Finalize position description, then post and advertise position. The position has been approved and funded.
Impact	Increase institutional capacity to implement the recommendations of the waste reduction master plan and achieve waste related goals in the sustainability master plan. A dedicated person to focus on these efforts and be a centralized point of contact.
Cost	\$50,000 annual salary, plus benefits + initial equipment needs (e.g., computer, etc.)
Additional Information	Establishing a full-time Waste Reduction Manager is vital to completing recommendations: 2, 5, 6, 8, 9, 11, 12, and 13.

2. Increase diversion at special events

Strategies	Conduct detailed analysis of collection options for waste diversion. Research bin options from vender to improve post collection separation system.
Impact	Improve efficiency and develop a more accurate way to reduce contamination. Utilize up to date bin options to reduce separation errors.
Cost	TBD
Additional Information	Waste Reduction Manager will conduct the analysis with assistance from Assistant Director of Environmental Services. Assistant Director of Environmental Services and Waste Reduction Manager will work with Republic regarding bin options available for use.

3. Develop a Dining Vendor Procurement Policy

Strategy	Meet with Auxiliary Services to discuss idea and determine the purpose and goals of the policy. Draft a policy and obtain feedback from stakeholders.
Impact	Eliminate user confusion about proper disposal - all dining locations (including franchises) will have similar products (e.g., all compostable). Help reduce contamination across campus.
Cost	TBD
Additional Information	This may need to wait until contract renewal to implement. Could have a cost impact (e.g., required products cost more).

4. Increase Waste Reduction Awareness

Strategies	Collaborate with Elon Dining and Elon Communication to create branded messaging around proper waste sorting on campus for Instagram (only social media platform that is majority students). These channels could also be used to publicize waste reduction data. Develop and implement Community Based Social Marketing Program to increase solid waste awareness through face-to-face interactions with students, faculty and staff who frequent the dining halls (where much of campus waste is generated). Work with New Student Programs to infuse waste reduction education and awareness into new student orientation.
Impact	Engages students, faculty and staff on a personal commitment level. Increases awareness and publicity opportunities across campus related to solid waste reduction goals. (Elon University followers: 38k; Elon Dining Followers: 5,700+) 4,128 students have a meal plan on campus (as of 11.30.2021).
Cost	\$356
Additional Information	Cost based off of ordering 2,500 3" round stickers from Elon Print Services. This will require time from existing personnel: Assistant Director of Sustainability, Office of Sustainability Eco-Reps, Office of Sustainability Interns.

PHASE 1 CONTINUED

5. Improve on-campus collection efficiency

Strategies	Provide driver training on waste reduction, recycling and composting pick-up methods to include proper drop-off points. Reduction contamination and develop plans to solve areas of concern through training.
Impact	Reduce contamination in areas of concern to maximize proper recycling and composting efforts.
Cost	\$0
Additional Information	This will require ongoing training with sanitation staff, including regular inspection dates regarding proper sorting of materials and contamination reduction. Assistant Director of Environmental Services and Waste Reduction Manager will provide the training and perform the inspections along with the Supervisor of Sanitation.

6. Perform periodic composition and bin location audit

Strategy	Perform periodic waste composition and bin location audits.
Impact	Provides necessary ongoing measurement for waste composition to track contamination issues and areas needing to be addressed. Ensures that bin placement locations remain consistent.
Cost	TBD
Additional Information	This will require time from existing personnel: AD of Environmental Services, Waste Reduction Manager, Environmental Services Staff.

7. Map permanent collection points

Strategy	Build upon existing data to map permanent collection points.
Impact	Provide accurate data collection points
Cost	\$0
Additional Information	The Assistant Director of Environmental Services will develop an excel spreadsheet along with the Supervisor of Sanitation. Once collected, applying the data to a campus map format may be considered.

PHASE 2

8. Develop a Solid Waste Management Policy

Strategy	Core waste reduction team meet to discuss the purpose and goals of a policy. Draft a policy and obtain feedback from stakeholders.
Impact	Creates a uniform and consistent platform for implementing changes into the existing waste system. Requires top down approval to ensure greater success of implementation. Increases awareness of the waste system for administration, faculty, and staff and ensures all components will be integrated into daily operational procedures.
Cost	\$0
Additional Information	The Waste Reduction Manager will take the lead on this effort. The Office of Sustainability will assist.

PHASE 2 CONTINUED

9. Increase capture and reduce contamination by establishing design and layout standards for all bins on campus

Strategies	Develop a design and layout standard for all customer facing bins and ensure the standard is integrated into new building design standards. Develop a guideline document for where interior bins are placed. Develop a bin guideline for where exterior bins are placed. Expand the Deskside Recycling Program.
Impact	Eliminates user confusion. Creates a standard for all students, faculty and staff to follow. Allows opportunity to involve multiple departments and increase awareness of diversion goals.
Cost	TBD
Additional Information	The Waste Reduction Manager will take the lead on this. It will also require time from Environmental Services Staff. The bins to support this program (in several locations but not all of campus) have already been ordered and received.

10. Increase capture and reduce contamination by developing a campus-wide branding campaign for the solid waste collection system

Strategies	Develop a campus-wide branding campaign for the solid waste collection system. Use focus groups to test branding campaign and modify as necessary. Deploy branding campaign across campus, utilizing special events to foster awareness and education on branding campaign. Utilize existing groups, such as Building Managers, to help communicate the campaign.
Impact	Improve understanding across campus of how to properly sort waste. Help ensure the campaign is easy to understand and follow. Increase understanding across campus of how to properly sort waste, expand support.
Cost	\$375
Additional Information	This will require time from existing personnel: Assistant Director of Sustainability, Eco-Reps, Office of Sustainability Communications Intern, and University Communications personnel. Environmental Services personnel to provide feedback and input as needed. Cost based on a rough estimate of the number of bins on campus (1,750 6"x3" stickers). Information from waste bin audit conducted Summer 2020.

11. Improve reporting and tracking of on-campus collection activities & contamination monitoring system

Strategy	Improve the post-collection separation of the current system. Coordinate with compost hauler to utilize bagless option for compost stream. Conduct a more detailed analysis of collection options for waste diversion.
Impact	May ease collection burden on staff and address safety concerns. Potential to reduce collection costs. Will allow further analysis of collection options for waste diversion.
Cost	\$0
Additional Information	This will require time from existing personnel: Waste Reduction Manager, Assistant Director of Environmental Services, and Environmental Services Staff.

PHASE 3

12. Expand waste reduction opportunities

Strategies	Offer organics (post-consumer composting) collection at more locations across campus. Expand organics (post-consumer composting) collection to include paper tissue and towels. Offer organics (post-consumer composting) collection at football and athletic events.
Impact	Allows for greater potential capture of food waste and compostable material. Eliminates confusion over where to put organic (compostable) materials in areas where there are no composting bins. Reduces contamination or loss of diversion by making all waste teams easily accessible in more locations.
Cost	TBD
Additional Information	This will require time from existing personnel: Waste Reduction Manager, Environmental Services Staff, Assistant Director of Sustainability, Eco-Reps, Communications Intern Would need a large group of volunteers to help with athletic games (particularly football).

13. Implement a campus-wide Waste Composition Study

Strategy	Hire a consultant to conduct a campus-wide composition study.
Impact	Creates a thorough and accurate picture of all materials collected within the waste streams across campus. Will provide insight for future diversion strategies.
Cost	At least \$50k
Additional Information	Utilizing a third-party consultant with prior expertise is essential to ensure accuracy and usefulness of results. The Waste Reduction Manager will take the lead on this. This cost estimate is based on prior consultant fees for a waste audit of 4 campus buildings in 2018 and is likely low. If smaller (e.g., 1 or 2 buildings) waste composition studies are necessary in the interim, it may be feasible to conduct them with students and/or other campus volunteers.