

CWU Water Conservation Plan Recommendations

Selena Wellenstein

Introduction

Most universities in the United States have published climate action plans in the last five to ten years which outline their commitment to reducing the effects of climate change. These plans usually include a section which addresses water concerns, including how the university plans to reduce their water use and how they will use water responsibly. As of 2024, Central Washington University does not have a Water Conservation Plan as part of its Climate Action Plan. In 2022 the university's total water withdrawal was over 300 million gallons, of which approximately 281 million gallons was potable water. This project collected information from other universities with developed water plans, especially those in dry and arid climates, in order to inform CWU on the best practices for building its own Water Conservation Plan. The project summarizes the water plans of several universities and makes recommendations for which practices CWU should adopt in its own water plan.

Process

- Identified universities with water conservation plans via the Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking and Reporting System (STARS).
- Researched water conservation plans at each university including identifying common areas of water conservation and methods
- Contacted sustainability officers at universities for university water usage and conservation practices
- Interviewed Washington Department of Fish & Wildlife habitat restorationists for plant species to use as lawn replacement
- Compiled and summarized my findings

Recommendation #1: Data Collection & Audit

- Improve water metering to make it more consistent and easily accessible
- Take inventory of all water infrastructure on campus (faucets, toilets, water fountains, cooling towers, irrigation systems, etc.)
- Survey lawn areas and what they are being used for

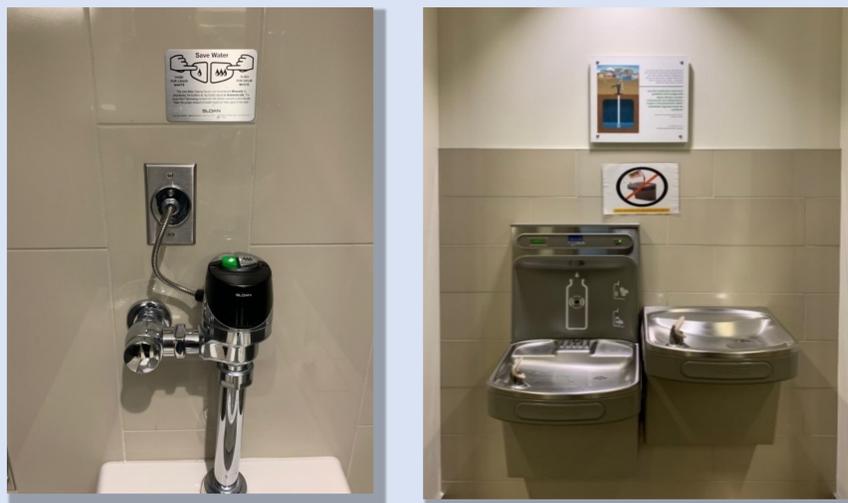


Figure 1 Water infrastructure on campus includes water fountains, toilets, and faucets

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Recommendation #2: Improved Landscaping

- Update to a smart irrigation system that uses meteorological and GPS data to monitor and control water needs. One possible system is the Rainbird Maxicom, which is currently used by Fort Lewis College.
- Replace lawn areas not being used for leisure/recreation with a native, drought-tolerant, seed mix
 - Bunch grasses
 - Native flowering plants
- Reduce potable water usage in landscaping



Figure 2 Bluebunch wheatgrass could be used as a replacement for the current lawn-grass on campus



Figure 3 Example of drought-tolerant landscaping in Kittitas County

Recommendation #3: Improved & Updated Infrastructure

- Create a master list of water-smart replacement parts for broken/damaged infrastructure
- Create a GIS Map of all water infrastructure on campus
- Reduce potable water usage where possible



Figure 4 Water infrastructure map from Fort Lewis College showing different irrigation zones

Conclusions

As CWU begins to implement its Climate Action Plan, developing a Water Conservation Plan should be a priority. Climate change is causing hotter and drier summers, and more rain than snow in the winter is affecting water reservoir storage. It is imperative that such a large water-user as CWU lead by example in implementing water conservation practices, especially in irrigation and landscaping. By following these recommendations, CWU can be a responsible steward of water resources, and help to educate students and the campus community on sustainable water practices.



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