

Hello,

Our names are Ryder Frost and Joshua Schildcrout, and we are in the Green Umbrella Learning Lab (GULL) class this winter. We have been working all term on a water consumption project, more specifically, we focused on the water usage in the showers in dorms on campus.

We started our project by looking at and researching all users of water on campus, such as the dorms, academic buildings, athletic buildings, lawn care, and the dining halls. From talking with Mr. Kelly and Mr. Biggins, we narrowed and concentrated our focus specifically on dorms and the showers in the bathrooms in the dorms. For us, the most important aspect of our project was the tangibility and the size of the impact we could make. We wanted to ensure we could leave here knowing that Phillips Exeter Academy was in a better place than when we arrived.

Our process consisted of working with Mr. Kelly and Mr. Biggins to gather information on the water consumption on campus and then moving to testing and seeing what shower heads specifically need to be replaced on each floor and section of both of our dorms. There was definitely variability depending on the floor and dorm. Some shower heads worked great and needed no replacement, while some, we were able to tell immediately that it was going to need to be replaced.

We created a google sheet labeling each shower head in each bathroom in both Cilley and Main Street, and marked shower heads that didn't meet the standards and flagged them. We totaled six shower heads that needed replacement and on Friday February 21st we went through and personally swapped out the shower heads in all six of those showers. We then sent out Google surveys to each of our dorms and asked some questions to gather information about how many gallons of water we would potentially save.

And based on our calculations, In Cilley we will save 261 gallons per day, 1,827 gallons per week, and 60,291 gallons per school year. In Main Street we will save 212 gallons per day, 1482 gallons per week, and 49,062 gallons per school year. These data calculations are based on a 230-day year, including school days and weekends.

Our project has a total cost and budget of \$140. The only purchase we made as a group was Mr. Kelly buying a gallon jug for us to measure with, which was only \$15 with tax. Because the plumbing workers on campus had access to new shower heads for us to use in replacement, we in fact, did not need to purchase any additional shower heads, any

other special materials for installation, or pay any workers to install the heads for us. The six shower heads cost \$21 each. Considering the only purchase we made was a gallon jug, the calculations of how much we will save is tremendous for how much we spent and we are very excited and proud of the tangible difference we were able to make with such a small amount of money spent in the process.

Additionally, we do have some of our goals looking ahead to the future after our time in the course has concluded. For example, students will be aware of their shower time and water usage! We want our project to reach all students on campus and help inform and remind them not to waste water. We also hope that the current and future E-Proctors will use our method and process to install new shower heads and save water in the other dorms that we could not reach during the duration of our project, future Exonians will continue to do research and fill out the google form on their shower head flow rate, and that we will motivate future Exonians to start their own environment initiatives and save our planet one day at a time!

Thank you!

Ryder Frost and Joshua Schildcrout