

UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

**Irrigation Water Consumption Analysis**

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**University of British Columbia**

**PLAN 527A**

**February 26, 2018**

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## Executive Summary

The purpose of this project was to collect data on irrigation water consumption at UBC, and identify trends that may help guide future conservation efforts. There were four main research goals:

- Characterize the overall irrigation water use on campus (how much, where, and when)
- Establish typical irrigation water use intensities (WUI) for different types of landscaping.
- Test the effectiveness of rain sensor irrigation controls
- Make recommendations on how to improve data collection and analysis for future research.

Weekly meter readings were collected from selected meters across UBC campus and from that, water use was calculated for each irrigation area downstream from the meters. Extrapolating the results from the irrigation areas studied resulted in an estimate of overall irrigation water use in the range 290,000 to 340,000 m<sup>3</sup> per year. Average WUI values were found to range from 0.001 to 0.003 m<sup>3</sup>/m<sup>2</sup>/day, and did not indicate a correlation with landscape type. In evaluating the effectiveness of rain sensors, a lack of rain during the study period made this not possible. Finally, the data set is neither reliable nor comprehensive enough to draw conclusions with a high degree of confidence. The data does, however, provide ample basis for recommendations for future research into irrigation water use and creates a strong foundation for future irrigation studies.

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This SEEDS project report contains confidential information where a project participant(s)

requested that the full research report not be made publically available.

For further information on this project report, please email the SEEDS Program

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