DOWN THE TOILET

Western Washington University

Water Assessment

By Bob Sabie and Travis Mabee

Project Goals

- Assess water consumption habits across campus
  - 2008/2009 total water charge: $ 672,860.00
  - 2008/2009 total water use: ~ 88 million gallons
- Audit two buildings:
  - Environmental Studies
  - Communications Facility
- Focus on bathroom fixtures
  - Toilets & Urinals
- Create a cost benefit analysis

Significance to WWU & Bellingham

- WWU students represent approx. 1/6 of the total pop. of Bellingham.
- Increasing population & decreasing natural resources.
- Savings
  - Environmental
  - Monetary

Case Study
Ferris State University

- 146 pre 1971 Sloan Flushometers using a min. of 3.5 GPF.

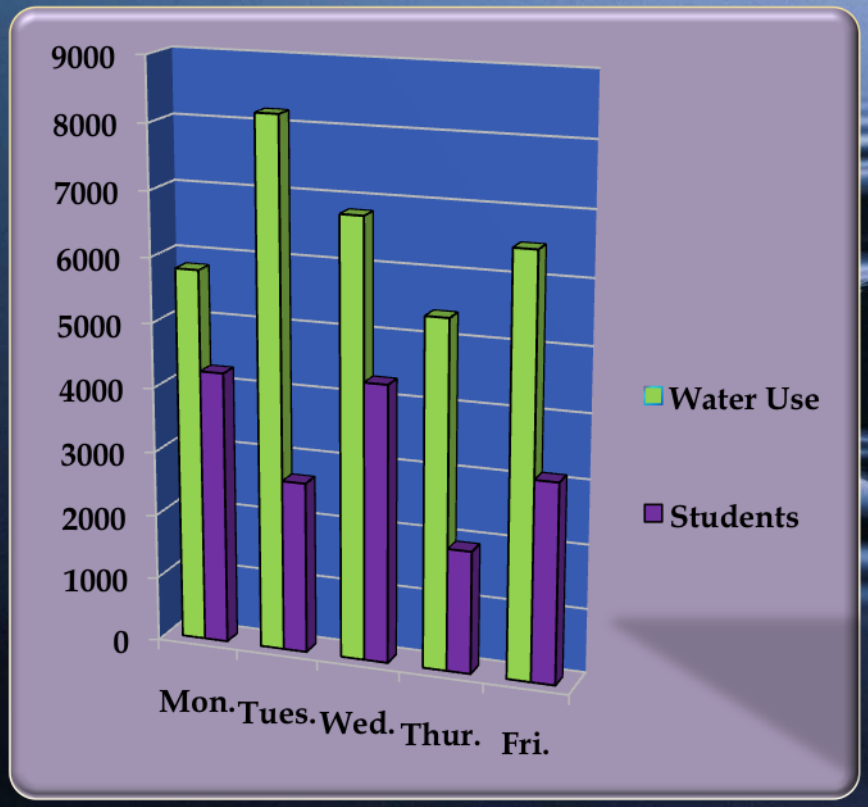
- Retrofitted all toilets with new Sloan A-38-A repair kits ($ 12) and pressure caps called Conservacaps ($ 13).

- Results:
  - Saved an average of 38,000 gal of water per month.
  - Saved ~ $305.90 a month and ~ $3670.80 a year.
  - Cost of retrofit was $3,650. Return on investment ~ 1 yr.

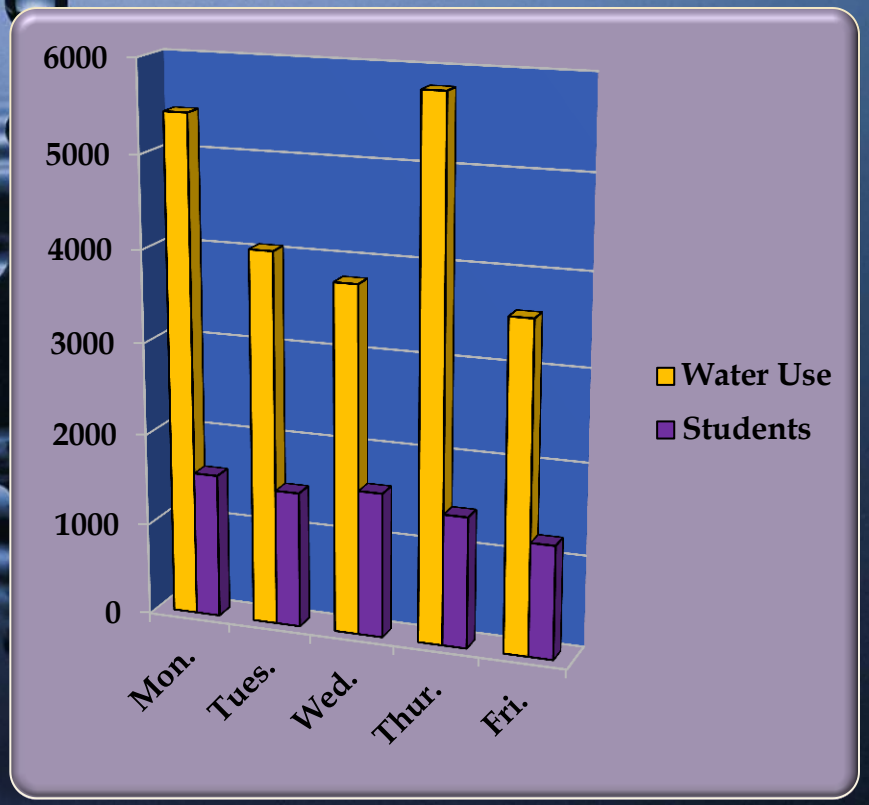
Sloan A-38-A repair kit & Conservacap

Findings

CF DAILY WATER USE (GAL) & STUDENT ENROLLMENT



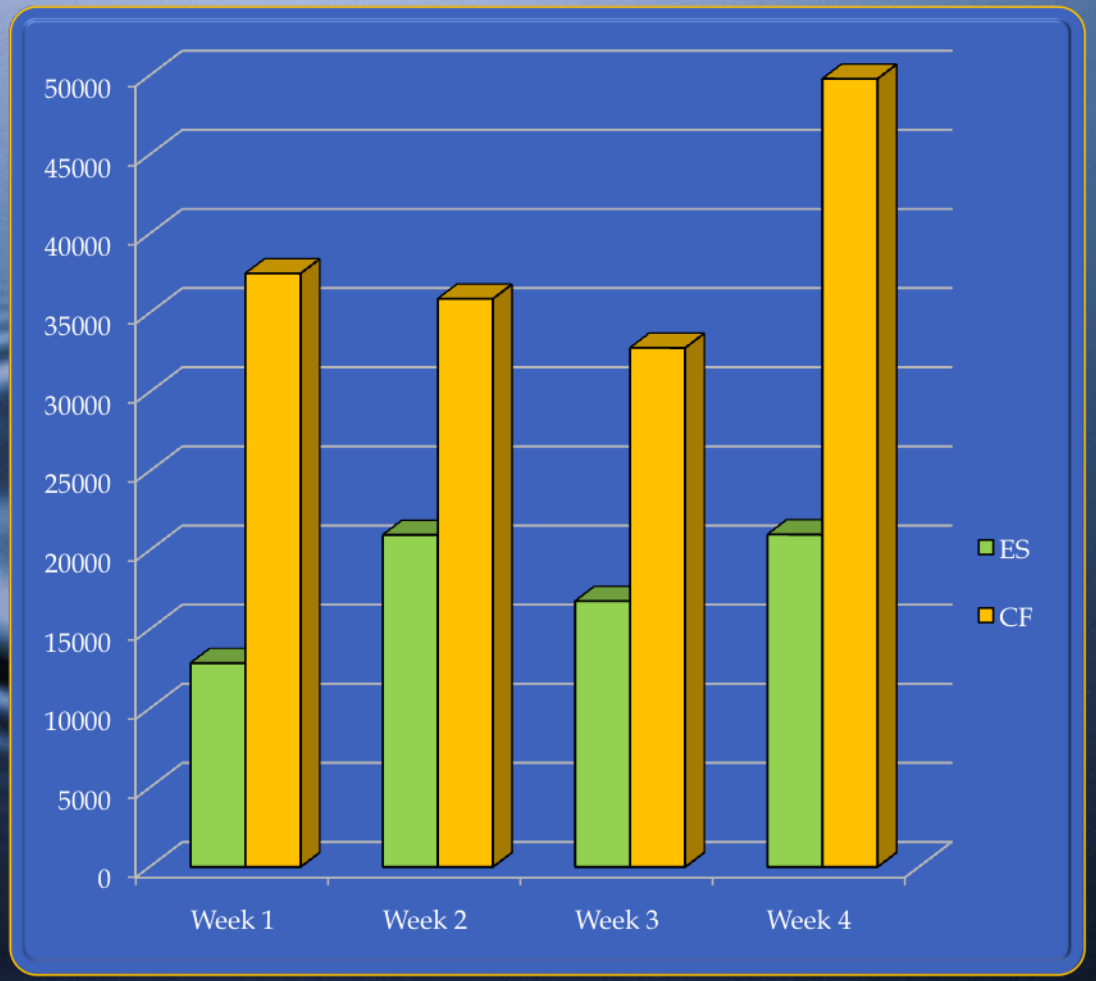
ES DAILY WATER USE (GAL) & STUDENT ENROLLMENT



Findings con't

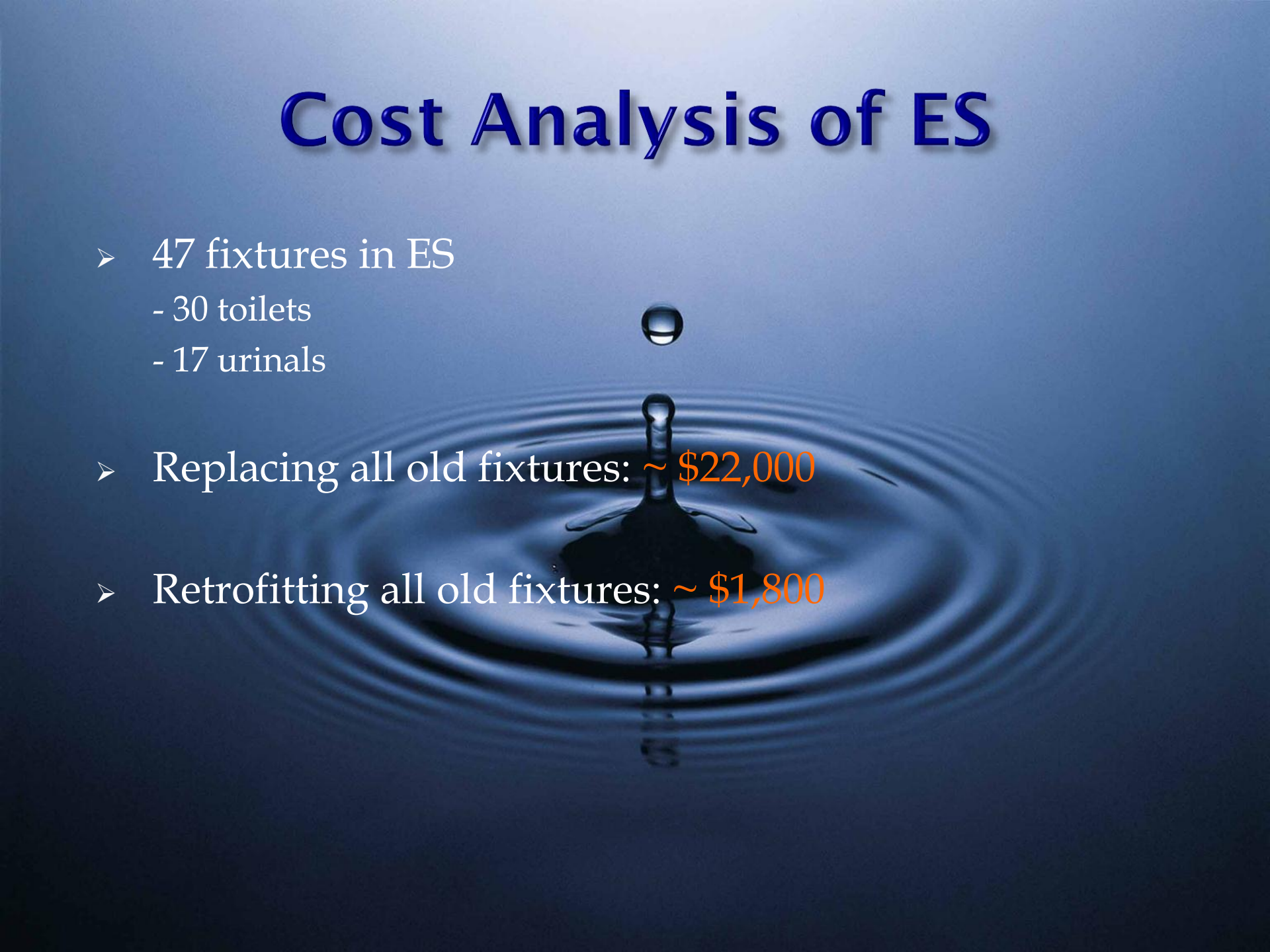
- Average weekly water use for ES was ~ 17,000 gal.
- Average weekly water use for CF was ~ 34,000 gal.
- Weekly averages had high variations.

FEB. WATER CONSUMPTION (GAL) OF ES & CF



Cost Analysis of ES

- 47 fixtures in ES
  - 30 toilets
  - 17 urinals
- Replacing all old fixtures: ~ $22,000
- Retrofitting all old fixtures: ~ $1,800



Recommendations cont.

- Trial run of Sloan A-38-A retrofit kit and Conservacap
- Weekly monitoring system
- Sub-meter installation on new buildings and all renovations
- Continued assessment of water savings potential