SWATeam Recommendation

Name of SWATeam: Water and Stormwater

SWATeam Chair: Art Schmidt Date Submitted to iSEE:

Specific Actions/Policy Recommended (a few sentences):
We recommend that the *Siebel Design Center* should be designed to include plumbing to supply non-potable water to be used for toilet flushing. The system could be connected to the potable water supply until such time as a viable non-potable source (e.g., the campus raw-water lines) is available. At that time the non-potable lines could be connected to the non-potable source at a small expense. We also recommend that a meter be installed to monitor the amount of water delivered to the non-potable system and that these data be made available on the *Dashboard* operated by *Facilities and Services.*

Rationale for Recommendation (a few sentences):
Use of non-potable water for purposes such as toilet flushing, landscape irrigation, cooling, etc. is one of the goals of *the Illinois Climate Action Plan* (ICAP) and is encouraged as a sustainable practice (e.g., Asano et al, 2007; EPA, 2012). Specific ICAP goals addressed by this include: a) *Reduce non-potable water* use, b) *Connect raw water* system, and c) *Use of non-potable* water. Retrofitting existing buildings to utilize non-potable water in place of potable water for these purposes is prohibitively expensive. On the other hand, including the plumbing that would allow non-potable sources to supply these purposes is relatively inexpensive and allows the building to utilize non-potable water sources in the future. Current Illinois plumbing code does not allow recaptured/recycled water to be used for such purposes, but several states have codes that allow such use and revisions to the Illinois code along these lines have already been proposed. Furthermore, the campus already has a *raw* water distribution system in place that could supply untreated groundwater to be used for non-potable purposes. Designing the building to utilize this system is consistent with ICAP goals.

Metering the *raw water* system, even when it is using potable water, would provide data about the temporal total and non-potable water demand at a typical campus class/office building. These data would be valuable to consider whether such systems should be considered in future campus construction and renovation.

At a minimum, we recommend that the non-potable distribution system should be designed and the incremental costs estimated. This would allow the campus to make an informed decision about whether to fund the incremental cost of providing the opportunity to switch to non-potable water in the future.

Connection to iCAP Goals (a few sentences):
Specific ICAP goals addressed by this include: a) *Reduce non-potable water* use, b) *Connect raw water* system, and c) *Use of non-potable* water.

Perceived Challenges (a few sentences):
The current proposed design for the *Design Center* is reported to be $4 million over budget and the design committee is reported to favor the educational function of the facilities (e.g., classroom space and environment) over sustainability features that do not directly benefit the educational mission.
This recommendation would require some means of funding the incremental cost of including the non-potable distribution system.

Suggested unit/department to address implementation:
Facilities and Services

Anticipated level of budget and/or policy impact (low, medium, high): __Medium?_____

Individual comments are required from each SWATeam member (can be brief, if member fully agrees):

Team Member Name	Team Member's Comments
Keith Erickson	I concur. This would be a good step forward for the use of raw water.

John Berens	I completely agree with this recommendation. This study will be the only way to begin to understand the potential of raw water
N Rajagopalan	Agree fully with recommendation.
Rabin Bhattarai	As this will be a cheaper alternative compared to doing this in future, I fully agree with this recommendation.
Art Schmidt	Providing this system now, at the design stage makes economic sense. These lines could not be added later. The small costs of adding these to design will leave the opportunity to implement use of reclaimed water in the future.

Comments from Consultation Group (if any; these can be anonymous):

Explanation and Background (can be supplied in an attachment):