

SWATeam Recommendation

Name of SWATeam: Purchasing, Waste and Recycling

SWATeam Chair: Bart Bartels

Date Submitted to iSEE: 9/10/2015

Specific Actions/Policy Recommended (a few sentences):

We recommend that the Waste Transfer Station accept all plastics number 1 through 7 to simplify what can be recycled and to better align with what is accepted by the Cities of Champaign and Urbana, The University of Illinois at Chicago, Parkland College, students' high schools, and students' homes.

Rationale for Recommendation (a few sentences):

Currently the University's Waste Transfer Station, the facility that coordinates recycling for the UIUC campus, only accepts plastic bottles numbered 1 and 2. It does not accept plastics numbered 3 through 7 or any plastics numbered 1 & 2 that aren't bottles. ISTC has conducted surveys that indicate confusion amongst those in the campus community because acceptable products for recycling at home are different than those on campus.

UIUC currently uses the AASHE STARS reporting tool to measure progress toward sustainability. Using this tool the institution has earned a prestigious "Gold Rating". However on the topic of waste diversion, UIUC has gone backward. In the baseline year of FY2008 the campus' waste diversion rate was 36% but in FY2014 the rate fell to 31%. By implementing this recommendation to expand plastic recycling the campus could increase the diversion rate to 45% and once again show sustainable progress in the waste diversion category.

Connection to iCAP Goals (a few sentences):

This recommendation addresses strategy number 5 under the Purchasing/Waste/Recycling section of the iCAP, stating: "Identify opportunities for an increase in reuse and recycling of materials". Also, in the 2015 Waste Reduction Plan, expanding plastic recycling to include #3 -#7 is included in the list of strategies being considered.

Perceived Challenges (a few sentences):

Making changes to the campus recycling process will take new signage, re-education of building occupants, building staff support, and retraining of staff at the Waste Transfer Station. In addition such a change may require additional equipment (bailer) or storage trailers at the Waste Transfer Station.

Suggested unit/department to address implementation:

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

Facilities & Services is the suggested unit for implementation although the Illinois Sustainable Technology Center could assist. The budget level is considered low because the revenue increase and avoided costs are expected to cover the changes.

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

| Team Member Name | Team Member's Comments |
|---------------------|--|
| Warren Lavey | Recommendation looks good. |
| Elizabeth Shancer | I stand behind this recommendation completely. Campus recycling must be consistent with recycling in surrounding areas. |
| Bart Bartels | I enthusiastically support this recommendation. |
| Dilip Chhajed | I fully support this recommendation – it has the potential of making substantial difference to our recycling efforts and will enhance the education mission of the campus. |
| Marcy Wright | I agree with recycling 1-7. I strongly believe that this will create less confusion on campus and actually encourage more recycling. In addition, I feel that this may create some additional labor savings at the waste transfer station as they will not have to sort through the different types of plastics. |
| Karin Hodgkin Jones | This is an excellent proposal to support long-term sustainability goals but this proposal also provides a sound economic incentive for expanding the scope of plastics recycling for the campus. There are many areas where multiplier effects related to efficiency of waste disposal and improved handling facilities that would result from the new sorting protocols could contribute to further gains and improvements. |

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

The Illinois Sustainable Technology Center (ISTC) was consulted for this recommendation. Last year they conducted waste audits at 4 campus buildings and cumulatively found that plastics that are currently being recycled represent 3% of the waste stream, while plastics not being recycled represent 14% of the waste stream. From this sample, the current UIUC plastic recycling program only collects about 18% of the plastics waste stream, and many other programs recycle all or almost all plastics.

One option would be to recycle all plastics on campus and package them for sale as mixed plastics. The price per pound would drop from 13.25, as is paid for #1 & #2, to 3.5 cents per pound for mixed plastics. But the advantage would be capturing 100% of plastics instead of only 18%. Expanding the recycling to include plastics #3-#7 would also generate revenues and save landfill tipping/hauling costs. Using the recycling market price of mixed plastics of 3.5 cents per pound, we can take the waste characterization sample to develop a rough financial estimate.

If all plastics were recycled, each ton of solid waste would yield \$11.90 in revenue from plastic sales (2000 x 17% x \$0.035), and the reduced landfill volume would save \$9.58 in tipping and hauling fees (56.33 x 17%). The gross financial benefit for UIUC of recycling all plastics would be about \$21.48 per ton of solid waste material. Considering that during FY2014 the UIUC campus sent 5425.97 tons to landfill, the total financial benefit of recycling all plastics and selling as a mixed commodity would amount to \$116,549.84 per year. From this figure it would be reasonable to deduct the revenue that would no longer be collected from the separated plastic #1 & #2 sales. In FY2014, 46.72 tons of plastic bottles were sold. At today's market price of 13.25 cents per pound, that would amount to \$12,380.80. Therefore the net financial gain of selling mixed plastics would amount to \$104,169.04 or (\$116,549.84 - \$12,380.80).

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

Please see the attached Waste Characterization Study, used to calculate revenue adjustments from changes to the recycling process. Waste stream materials from the Swanlund Administration Building, Henry Administration Building, Alice Campbell Alumni Center, and the Illini Union Bookstore are identified in chart form on page 3.

Also from Facilities and Services in FY2014:

Solid Waste = 5425.97 Tons

Allied Tipping Fees = \$159,928.78

Waste Hauling Charges = \$145,692.64

Total Landfill Costs = \$305,621.42

Solid Waste cost per ton = \$56.33

PET sold = 46.73 tons

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Professor of Chemistry
Associate Director of Campus Sustainability
Institute for Sustainability, Energy, and Environment
1101 W. Peabody, Suite 350, MC-635
Urbana, IL 61801



BENJAMIN J. MCCALL
Telephone: (217) 244-0230
FAX: (217) 244-2006
campus-sustainability@illinois.edu

October 6, 2015

Allan Stratman
Executive Director
Facilities & Services

Dear Al,

I am writing on behalf of the Illinois Climate Action Plan Working Group to formally transmit a recommendation on expanding plastic recycling from the SWATeam on Purchasing, Waste, and Recycling. Attached you will find a form summarizing the iCAP Working Group's assessment of the recommendation, and the SWATeam recommendation itself.

I ask that you or your designee provide a written response to me by October 20, indicating whether or not your unit concurs with the recommendation, and (if so) detailing your plans and timeline for implementing the recommendation.

If F&S disagrees with any aspects of the recommendation, or if F&S cannot implement the recommendation for budgetary reasons, I ask that this be explained in your response.

Thanks very much in advance for your consideration of this recommendation!

Sincerely,

A handwritten signature in black ink that reads 'B. J. McCall'.

Benjamin J. McCall
Chair, Illinois Climate Action Plan Working Group