Tufts Campus Sustainability Council Update

For Council meeting #3: September 14, 2012

PROGRESS TO DATE

- Working group meetings:
  - Energy: 8 (16 hrs) + subgroup mtgs (1-2 ea)
  - Waste: 8 (12 hours)
  - Water: 7 (9.25 hrs)
- Goals and sub-goals developed for report out to Council
- Strategies being developed with the aid of an evaluation and planning template

WATER (review)

VISION: Tufts envisions an integrated water management approach that reduces consumption, promotes reuse, and minimizes impacts on the environment. Tufts goal is to be a leader in water management.

GOALS AND SUBGOALS

1. Identify and prioritize opportunities to reduce consumption (losses/leaks/behavior)
   1.1. Identify and quantify all points of consumption (irrigation, building use, infrastructure)
   1.2. Prioritize reduction opportunities and define efficiency targets for each situation.
   1.3. Identify systems, products, technologies, and strategies that will reduce water consumption and their costs.
   1.4. Install water meters to detail consumption, where appropriate

2. Identify and where appropriate implement water re-use opportunities
   2.1. Identify typical scenarios where water re-use would be appropriate
   2.2. Identify currently existing opportunities to implement re-use
   2.3. Quantify potential savings from reuse as well as the costs of implementation

3. Meet and exceed federal, state, and local regulations regarding:
   - Runoff to storm sewers
   - Discharges to the sanitary sewer systems

   3.1. Improve quantification of irrigation use by ensuring all systems are properly metered and consumption is recorded. Develop an SOP for storm water management.
   3.2. Reduce water quality impacts (total suspended solids, nutrients and pathogens)
   3.3. Incorporate and document site improvements after summer slammers complete
   3.4. Reduce site runoff including peak flows and volumes

4. Ensure that students, faculty and staff have the knowledge of:
   - How their actions impact water usage and quality,
   - Why it's important and how they can act to reduce use and mitigate negative impacts on their watershed.

   4.1. Establish method for measuring student, faculty and staff knowledge of water issues on and off campus
   4.2. Develop an educational campaign to address gaps in knowledge among students, faculty and staff members about the personal impacts of water use and pollution on watershed
   4.3. Develop a system to work with faculty and students to identify and implement potential class projects and research that advance the sustainability goals of the university.

4.4. Motivate behavior change on campus
4.5. Institute a requirement that one of the undergraduate distribution classes be related to the environment and that graduate students take a course which addresses resource ethics

5. Where possible, implement LEED standards for water use and quality

WASTE

VISION: The entire Tufts community plays an intentional role in fostering a cradle-to-cradle economy.

GOAL: Tufts will reduce its waste by 3% per year through source reduction, waste management strategies and culture and behavior change.

SUBGOALS

1. Reduce the source of waste through purchasing policies and guidelines that decrease the volume of incoming purchases and increase the percentage of products purchased by the university that are environmentally responsible.
   1.1 Establish and communicate University source reduction policies and green procurement guidelines for department buyers.
   1.2 Identify and target disposables, supplies and equipment by descending volume contribution to the University waste stream.
   1.3 Negotiate incentives with vendors to provide the most environmentally responsible choices to University buyers.
   1.4 Redesign centralized software to include prompts and decision criteria for environmentally responsible purchasing
   1.5 Develop measurement strategies

2. Waste Management will be improved through:
   2.1. Proactive planning during purchasing to manage the appropriate disposal of items being replaced
   2.2. Improving systems for tracking and communication
   2.3. Creating and enforcing consistent policies across all campuses so participation is consistent
   2.4. Increased reuse of durable items, including furniture, equipment and office supplies

3. Culture Change
   3.1. Within 5 years, 100% of the Tufts community will know how to divert and reduce waste. Specifically, they will know:
      - What, how, where to divert waste
      - What to reduce and how

   and they will actively participate in these efforts.
   3.2. Increase active participation in waste diversion by 50%

ENERGY AND EMISSIONS

VISION: Tufts demonstrates leadership in responsible climate action through energy efficiency, emissions reduction and adaptation.

GOALS AND SUBGOALS

1. Under the New England Governors/Eastern Canadian Premiers Climate Change Action plan, we are committed to:
   1.1. Reduce emissions to 10% below 1990 levels by 2020
   1.2. Reduce emissions to 75-85% below the 2001 levels by 2050
   1.3. In 1990, emissions were: 14,197 metric tons carbon equivalents

1.3.1. In 1999, Tufts pledged to meet or beat the emission reductions in the Kyoto Protocol (7% below 1990 levels by 2012) which was accomplished.
1.3.2. 10% below the 1990 level is 12,777 MTCE. The commitment is to reach this level by 2020
1.3.3. 75% below the 2001 level is 3,977 MTCE. The commitment is to reach this level by 2050

2. Reduce energy consumption 5-7% per year for three years starting 2013.
   2.1. Short term: reduce electricity and gas consumption 5-7% per year for three years starting 2013.
   2.2. Negotiating a Memorandum of Understanding* with our gas and electric utilities committing to consumption reductions.
      2.2.1. Similar M.O.U. (or M.O.U.s Pending): Partners, MIT, Harvard, Holy Cross.
      2.2.2. Complex utility incentive structure is simplified
      2.2.3. Under the program, there is no penalty for failing to meet goals and incentives and savings can be pooled in a fund to support new energy efficiency projects.

3. Within 5 years, 100% of the Tufts community will know what they can do to reduce energy consumption.
   3.1. Specifically, all members of the Tufts community will know where opportunities exist and what to reduce and how to actively participate in these efforts.

4. Optimize planning and design process to reduce wasted time & money.

5. Operations, maintenance procedures drive continuous improvement
   5.1. Run pilot program on 1 or 2 buildings to provide feedback on energy use and occupant behavior that drives consumption
   5.2. Establish Building Curators and support network
   5.3. Increase metering and data tracking over time
   5.4. Expand use of existing tools for data analysis and tracking to improve maintenance
   5.5. Develop and implement preventative maintenance plans that focus on energy and emissions
   5.6. Increase metering and data tracking over time
      5.6.1. Modernize and network electric metering to provide continuous feedback
      5.6.2. Meter steam or condensate as practical and useful
      5.6.3. Add metering to new construction and major renovations

CROSS-CUTTING THEMES

1. Need for Central Reporting: data, occupant behavior, progress towards goals, etc
2. Need for Building Curators
3. Campus as a learning laboratory
4. Need for responsibility, accountability and consequences (e.g.
   4.1. Schools have emission reduction targets
   4.2. Consistency across campuses and among people
   4.3. Support from administration for new policies)

NEXT STEPS

1. Outreach to Tufts Community
   - Article in Daily
   - Postserve or email from President
   - Solicit feedback through website comment form
2. Refine strategies & evaluation criteria
3. Assign responsible parties and timelines
4. Publication of plan