

WSU Sustainability & the Environment Committee Minutes

DATE, TIME, & LOCATION: Friday, December 3rd, 2010 2:10-3:10pm, Lighty 405

ATTENDANTS: Andy Ford, Chad Kruger, Nick Lovrich, Terry Baxter-Potter, Dwight Hagihara, Rich Heath, John Reed, Terry Ryan, Skuylar Herzog, Leif Moon-Nielsen, Robi Nilson, Gene Patterson, Stuart Campbell, Liv Haselbach, Bridgette Brady, Rick Finch, Jamie Bentley, Jason Sampson, Ade Snider

1. Call to Order - Dwight Hagihara *Committee Interim Administrator*
2. Approval of November 5, 2010 Minutes - Dwight Hagihara
3. Master planning and Sustainability - Bobbie Ryder
Held a telephone conference with Hanbury Evans Wright Vlattas and Company to answer questions about WSU Sustainability plans as relates to Master Planning. See the attached notes from Buddy Hall.

NEXT MEETING: February 4th, 2010 - Light 405 - 2:10pm-3:10pm

To: Bobbie Ryder
Washington State University
Pullman WA 99164

From: Buddy Hall

Date: December 3, 2010

Re: Washington State University Comprehensive Master Plan Project #: 10023.00

Friday, December 3 (via Conference Call)

2:00pm - 3:30pm – Sustainability Committee

Attendees: Bobbie Ryder, Chad Kruger, Nicholas Lorvrich, Terry Baxter-Potter, Rich Heath, Terry Ryan, Skuylar Herzog, Leif Moon-Nielson, Robi Nilson, Stuart Campbell, Gene Patterson, Rick Finch, Jamie Bentley, Jason Sampson, Dwight Hagihara, John Reed, Liv Haselbach, Brian Bodah, Bridgette Brady, Keith Storms, Buddy Hall, Caitlin Evans James Negri, Martin Chase, Thaddeus Egging, George Alexiou, Nat Grier, Geoff McMahon

The following items were discussed:

1. What does WSU see as the biggest barrier to sustainable transportation?
 - There are no barriers to the use of more sustainable transportation per se – rather there is little impetus. There is plentiful parking, cost of a permit is relatively low and the community has proven to be at least relatively price inelastic. Alternatives are available and promoted. Likely the best means for increased use is a good set of incentives coupled with decreased parking supply.
2. Air travel is a very small portion of the emissions, relative to many universities. If research production increases, what measures are in place to ensure that air travel emissions don't grow? (Or that they are offset?)
 - Air travel is a small portion of GHG emissions today so there is little focus on this part of the CAP. It may not be cost effective to pursue this. There were some suggestions for distance learning and telecommunications in the CAP and related work, but little formal has been done to pursue these plans to-date.
3. If parking on campus were more difficult (more expensive; less of it; and/or further from the core), would employees likely switch to other modes such as the bus, walking or carpooling? Or would they continue to drive regardless?
 - There are some, and perhaps many, who would continue to drive regardless – at least without substantial change. But there are also many who would at least consider alternatives. To better answer this question, a commuter survey is being planned. Martin/Alexiou/Bryson requested a copy of the draft questions so they can offer comments based on experience with surveys at other campuses.
4. What is the timeline (official or aspirational) for achieving net-zero on commuter emissions? Are there any interim (aspirational) milestones?
 - There are no formal goals for neutrality nor have there been internal discussions of aspirational goals – for neutrality or other interim points. The CAP sets for a 15 percent reduction over 2005 levels by 2020 and a 36 percent reduction by 2035 as these have been mandated by the legislature.
5. Has WSU looked at the possibility of solar or wind power or using these technologies on the micro scale to power charging stations? Coupled with PHEV/EV fleet, this could

reduce/eliminate fleet-related emissions (and provide the temporary load/source that's often needed to trim the peaks and valleys of larger-scale implementations).

- We periodically review the evolution of technology and the cost of solar power – to date it has not proven financially viable nor of sufficient power generation density to provide a significant amount of the campus power in the space available. Wind power has also been reviewed but is not appropriate at a densely populated area such as the campus. Potential involvement in a future Avista wind farm has been discussed.

6. Please describe the process by which sustainability leadership and responsibilities are distributed in the campus.

- Committee was appointed by the President
 1. Four faculty, four staff, four students
 2. Dwight Hagihara is the interim sustainability coordinator and committee chair
 3. A permanent director is needed
- Committee meets monthly
- Committees charter/goals
 1. Climate Action Plan (completed)
 2. Coordinate sustainability initiatives among the University community
 3. Maintain the sustainability website
- No staffing for coordination or enforcement. A staff person was going to be hired, but then budget issues precluded it.
- An optional green “fee” is being proposed to students to fund campus initiatives
- WSU would like to be seen by its peers as the “Diamond of the West”

7. How much of the existing facilities are metered individually?

- Approximately 95% of buildings have electric meters;
- 85% of buildings have condensate meters;
- Very few have chilled water or domestic water meters; all major buildings have electric/condensate meters.
- There have been discussions about changing the structure to allow each building to be responsible for their energy use to allow savings to accrue to the occupants however with so many buildings being shared by multiple departments this was deemed unfeasible
- WSU is required to meter individual buildings by 2016

Which buildings are energy hogs?

- Plant growth facilities, followed by Veterinary facilities, research facilities w/once-thru systems run 24/7.

8. What studies have occurred to address new sources of heating on the campus beyond natural gas? Biomass? Biofuels? Solar Thermal, etc.

- McKinstry is completing a study of alternative fuels (coal, wheat straw, wood waste).
 - The results of this study should be available with 2 months and will be provided to the planning team
- No co-gen or tri-gen in that study for political reasons
- co-gen was looked at when the new energy plant was installed

9. Have there been any discussions regarding a new approach to facilities management (and funding) that will better support new and more complex technology at the building level rather than centrally at the campus level?

- Distributed vs. Central district utility systems have been analyzed in the past and proven to be advantageous from both energy cost and maintenance aspects. This item should be discussed directly with Ev Davis/Rob Corcoran.

10. Has there been any discussion about development of more stringent energy standards (going well beyond code) for new/remodeled buildings in the campus?
 - There have been situations where new technology has proven advantageous (VFD's, T8 lighting, etc.) and has been specified in the WSU Design/Const. Standards prior to being required by Code, but in general the Washington State Energy Code has been used as a model at the national level and is considered fairly stringent.
11. Data analysis and storage accounts for a significant use of energy on the campus. Have any efforts been made to address approaches such as cloud computing, green data centers, equipment standards, etc.?
 - Although there is a central IT department that handles the IT infrastructure across campus as well as centralized functions such as email, etc. each department generally has an internal IS/IT group that handles their server and PC level functions. A number of departments have integrated virtual servers, thin clients, PC power management, etc. and share information. There is still opportunity for additional improvements in this arena.
12. Would WSU consider purchasing land adjacent to the S. Fork of the Palouse River in the vicinity between South and Benewah Streets for the construction of a regional water quality facility that improved flood control and habitat? The "facility" would be a natural drainage best management practice versus a structure and/or mechanical system. Perhaps a joint venture with the City of Pullman?
 - Planning team to follow up with Ev Davis/Rob Corcoran.
13. Would WSU consider converting all or part of the existing parking lot adjacent to Spring Street between Lentil Lane and College Avenue for the construction of natural regional water quality facility noted above? Perhaps a joint venture with the City to include the adjacent park?
 - Planning team to follow up with Ev Davis/Rob Corcoran.
14. The WSU Puyallup campus provides research for current natural drainage practices for hydrologic, temperature and soil conditions of Western Washington. Has WSU considered implementing a research station for Eastern Washington climate and soil conditions?
 - Liv Haselbach stated the lack of "acceptance criteria" as one of the greatest barriers to sustainable practices. She implied that installation of projects for the purpose of research could be a helpful tool in defining these criteria.
15. How well known are the efforts of the WSU Puyallup campus' research to the WSU staff, faculty and students? Their research is significant to the A/E, construction and regulatory communities in Western Washington.
 - Very well. WSU is closely coordinating with them to extend these research elements to the Pullman campus as well.
 - There is not much information out there on how natural drainage practices work in a climate such as Pullman. The next steps are to fund pilot projects to determine what works and then develop a guide or manual for green site development on campus
16. Would WSU consider implementing a green roof pilot project both for existing roofs and new roofs for the purpose of determining the feasibility of green roof technology to the Pullman campus?
 - WSU has a green roof on the Holland Library. Leaking is a concern.
 - WSU implemented a green roof pilot project using planted bins to retrofit a building at the WSU greenhouses. This was implemented Summer 2010 and is being monitored for effectiveness

17. Green site infrastructure (natural drainage practices, water reuse, etc.) does not have the normal cost paybacks that motivates energy innovation. The Sustainable Sites Initiative proposes there is economic value to healthy ecosystems. Some Cities and Counties have now included code requirements for new developments to implement green infrastructure. Would WSU consider developing a code to guide new developments on campus that require green infrastructure?
 - Sustainability Committee is working with CPD to implement pilot green site projects on campus (through grant funding/writing, etc) to determine what elements work in the Palouse climate.
 - Once it is determined which elements work the goal is to develop a code or, at a minimum, recommendations for green site development on campus.
18. Does Facilities Operations have any cost models or training programs anticipating new maintenance paradigms for sustainable practices for the next 10 years and beyond? Is WSU committed to supporting Facilities Operations to insure proper maintenance of new sustainable infrastructure?
 - Planning team to follow up with Ev Davis/Rob Corcoran.
19. Are there any water rights issues that would preclude WSU from implementing rain water capture for non-potable uses?
 - Planning team to follow up with Ev Davis/Rob Corcoran.
20. How is the beet juice experiment with de-icing roads coming along?
 - Planning team to follow up with Dennis Rovetto at FacOps Plant Services.
 - Terry Baxter-Potter noted that the campus is using beet-juice de-icing successfully on campus.
 - It is used on both sidewalks and roadways.
21. Truly sustainable land use strategies result in maximized ecological functions (with the least amount of input) which in turn provide maximized ecological services to the people using them. Currently what (if any) landscape and habitat types on the Campus support this objective?
 -
22. What are the criteria (such as landscape size, plant community types, max/min slopes etc) for such results to be successful on the Campus? Are there any current WSU research efforts or individuals who may be helpful in discussing these issues?
 - Planning team to follow up with Ev Davis/Dennis Rovetto.
23. What are the University's current goals for storm water management? What are the 10 year goals?
 - Reduce impervious surface on campus
 - Reduce storm water discharge to zero
 - Determine what low impact development (LID) measures work on campus and then develop a code (standards) to enforce them
 1. An example given was to use 5% set aside for LID water treatment area for each building site
24. Is storm water management included in the Clean Tech research agenda?
 - Liv Haselbach (LH) with WSU is working to implement LID measures on campus. She is working with CPD to add to projects.
 1. One of her goals is to provide teaching opportunities
 - LH has been working on Grant writing to get funding for real LID projects. She indicated that a scoping plan would be available via Bobbie Ryder

25. Describe WSU's status on water conservation
- WSU is a leader in the Palouse Basin
 - WSU has met and exceeded its goals to reduce its water consumption
 - In 2009 WSU's extraction of water from its wells equaled that of 50 years ago
 - Water is not metered at buildings – only at the wells
 - WSU is working to retrofit all building and irrigation POCs. WSU is mandated to have all connections to the water system metered by 2016.
 - There is no charge for water on campus except to housing and dining
 - Once WSU can implement and test LID on campus they will determine what works and incorporate into a sort of "development guide" for campus.
26. What information is available regarding current levels of effluent being delivered to the Little Palouse River via storm water runoff from the Campus, specifically from Stadium Way and adjacent agricultural research facilities?
- Three outfalls identified by the WSU Department of Ecology are being monitored
 1. Max daily loads of fecal chloroform are being studied
 2. Data will be made available to Bobbie Ryder for the Planning Team
27. Given the nature of the regional basalt layer, has the University considered an approach to storm water which relies largely on evapotranspiration? Are there any current WSU research efforts or individuals who may be able to provide information such as: optimum soils types and plant communities as well as optimum configuration of such a system?
- Liv Haselbach is interested in this area of research and implied that there may be information within her recent grant writing efforts and specifically in a scoping plan which she indicated would be available via Bobbie Ryder.
28. What is the current status of the University's compost facilities in terms of volume and type of materials being composted? How is the resulting material being used? What are the issues associated with production and use? What are the current goals for production and use? What are the 10 year goals? Is compost (for bio fuel or soils building) included in the Clean Tech research agenda?
- Planning team to follow up with Ev Davis/Dennis Rovetto/Rick Finch.

The aforementioned is our understanding of items discussed and decisions made during the meeting. Please contact this office with any additions or corrections to these notes.

bh

cc: Steve Gift, Keith Storms