Wind Storm and Power Outages

-Dave Kimbrel, Electrical Engineer

Beginning Tuesday night November 17th, 2015, a powerful wind storm swept through Washington State. Winds in excess of 100mph downed trees and caused major power outages. It has been reported that more than 200,000 Avista customers lost power during the event, marking it as the largest outage scenario for Avista in its 126 year history. Despite the severity, WSU, with close in-house multidepartment collaboration, as well as with Avista, managed to restore power to the majority of the Pullman campus to open midday on the 18th.

At around 6:45p.m. on November 17th, 2015, a windstorm-caused power outage at the College Avenue Steam Plant (CASP) caused the plant to shut down and also left the building in complete darkness. A short while later, the Grimes Way Steam Plant (GWSP) shut down due to additional wind-related outages. Steam pressure, nominally at 100psi, fell to 8psi, during which time Steam Plant personnel underwent recovery efforts. Due to the power outages, Terry Ryan (Director, Energy Systems Operations) was contacted by WSU Dispatch to provide support.

Terry contacted the Steam Plant personnel, Mike Nearing (manager), Brad Guenther, Virgil Kellogg, and Gary Fisher, to determine the status of the Steam Plants, the generators, the 5kV switchgear, and the system’s automated response to outages. The situation was not good. All three generators running with both Avista feeds to the East Campus Substation (ECSS) were out. Furthermore, one of the two feeders to the 5kV switchgear at the College Avenue Steam Plant (CASP) was also out. Those three feeders originate from Avista’s South Pullman Substation, which had lost power at the 115kV level due to downed transmission lines and poles. That transmission system is routed along the south side of Pullman. Avista has another transmission system that runs along the north side of Pullman and, thankfully, it was still in service and remained so for the duration of the storm. The north transmission system serves Avista’s Turner and Terre View substations, which feed portions of the campus, but more on that later.

The East Campus Substation (ECSS) normally feeds around 10 – 12 megawatts worth of campus load, but the generators are only capable of about 4 megawatts. Terry left instructions for Mike, Brad, Virgil, and Gary, to put a block on any further load additions until the utility service could be restored.
Further instructions included making a visit to the College Avenue Steam Plant (CASP), contacting Avista, and reconfiguring the 5kV switchgear to utilize the one good CASP Avista feeder to bring as much load back online as the one feeder would allow.

After receiving a call from Facilities Services Dispatch and touching base with Terry, I made my way to campus. Upon arriving at the Grimes Way Steam Plant, Doug Hays (Utilities Electrician) and I assisted the Steam Plant in carrying out Terry’s instructions; only the Steam Plant, Beasley, the IT Building, and a handful of other loads were permitted to receive power from the East Campus Substation’s 4 megawatt limit. Doug and I then headed down to CASP to carry out the rest of the plan. Tim Olson with Avista was contacted and he, Doug, and I, worked together to reconfigure CASP utilizing the one good feeder. Tom Moore (Life Safety Maintenance Electrician) also arrived during this time to provide his assistance.

Doug, Tom, and I, headed back to Facilities Services Dispatch at McCluskey to check in and update the dispatchers. Julie Aranza-mendi and Becky Reiber. Chris Fischer was also on site and requested a list of buildings without power. While I started working on that, Tom and Doug went to the Vet Teaching Hospital to check in with them, as they had called Dispatch regarding critical freezers that were without power. By the time I had finished up the list of buildings, Tom and Doug were back at McCluskey and pointed out that power at the Vet Teaching Hospital could be brought back up on the ECSS generators if other loads were shed. It was agreed upon to be a viable solution for VTH and so a plan was formulated between us and put into action; VTH freezers were brought back online.

At around midnight, Tom Moore had recalled that the PACCAR building recently had 2 Avista feeders brought to it, one from their south 115kV line, and one from their north 115kV line. If you recall, the north line remained in service for the duration of the storm. Tom surmised that the system could be reconfigured so that the north line could re-feed the de-energized south line and restore at least one of the feeders to the East Campus Substation, where the generators could be teamed up with the newly energized line to bring all ECSS loads back on line. Tim Olson with Avista was notified, and by 3:30a.m., that goal was accomplished. It is interesting to note that the first feeder brought back on line immediately tripped out due to a fault (the Greenhouses, more on that later). At the time of the fault, Generator #3 tripped off-line (presumably due to the fault), which overloaded Generators #1 and #2, causing about 5 feeders to trip off-line. “Block dump”, Tom muttered casually as it happened, referring to the feeders tripping off line automatically to relieve the overload condition on Geners #1 and #2. There was nothing casual about it, as I was dancing around like a high schooler on prom night!! The 5kV feeder breakers are about as loud as a .22 rifle when they trip and with 5 of them in rapid succession, unexpectedly, well, you get the idea! Mike, Brad, Virgil, and Gary, could see the loss of Gen #3 on their control screens, and so immediately cleared the issue and put Gen #3 back into service.

During this time, Avista performed another reconfiguration of the north and south 115kV lines to re-energize the lost line at CASP.

Bill Morris and Brett Stapleton (Life Safety Utilities Electricians) also arrived on scene. Bill, Brett, and I, made our way to CASP with Bo Morgan from Avista to set CASP back to normal and re-energize all the loads there, which was completed without incident, at least for the time being. Meanwhile, Mike Nearing briefed the morning shift at GWSP of the nights activities and performed field checks of all equipment, steam and electrical, to ensure continued operations.

After getting CASP back in order, Bill and Brett went to work on the ECSS faulted feeder (the one that took out Gen #3 and that ultimately led to my impromptu dance routine). I went back to the office to check in and to also provide an update to Terry. He was in turn providing updates to Dan Costello regarding the progress being made in the field as well as projecting what the loading would look like during the day to help determine when the campus could open.

A few hours after CASP was brought back to normal, Feeder #12 tripped off line due to a steam trap leaking steam into the switchgear. Terry, Bill, and Brett, responded to find the steam condensing on the inside of the 5kV switchgear at Feeder #12 (serves the Washington Building). Without the correct spare parts, it was decided to move the Feeder #12 wiring to the adjacent cubicle #11, which happened to be spare. Jerrad Graham (Construction Electrician) arrived and helped Brett with the rewiring while Bill made his way back to the ECSS faulted feeder repair. Terry, with assistance from Schweitzer Engineering Laboratories (SEL) reprogrammed the relay at Feeder #11 to provide the correct overcurrent protection for the new configuration. Brett and Jerrad also repaired a non-functioning indicator light to get cubicle #11 fully functional. Utilities personnel Larry Marshall, John Baldwin, and Robert Brooks, working with Steam Plant personnel Dave Wilbur and Mark Grant, took care of repairing the steam trap leak.

After the steam leak fiasco, Brett and Jerrad went to the ECSS faulted feeder where Bill and Doug had continued repair work. Heavy Equipment also pitched in by trailering a spool of 5kV cable to a location convenient for splicing in new wire. Mike Pope and Rick Hull, Jr. (Construction Electricians), also arrived to help out with the repair. Finally, by about 1:00pm on Thursday the 19th, the WSU electrical systems were providing power to all loads on campus. However, the three generators were still running to support the load, as ECSS was still running on one Avista line. It took until Friday the 20th for Avista repairs to be completed on the south 115kV lines. One final reconfiguration on Friday morning at ECSS was completed by Bill, Brett, and Doug, along with Avista, to restore service to normal.

It was a mess, and a long night and morning, but what a fantastic job everyone did to get the systems back on line! Effective collaboration amongst individuals and across trades and organizations is what it takes to develop and execute expedient solutions to complex problems, especially when faced with what was one of the worst natural disasters WSU has seen. Everyone did exactly that, and for that, everyone involved is commended!
Construction and Maintenance and Utilities Services

Trying a New Schedule

– Dan Costello, AVP, Facilities Services Operations

When you mention shift schedules, you are almost always guaranteed to generate a lively discussion, second only to “compensation”. And while people generally agree on compensation (more would be better), there are a wide-range of opinions as to what is the “best” schedule.

Last fall, Construction and Maintenance & Utilities worked together to determine whether or not there would be some operational advantages of allowing more employees to move to alternate work schedules (4x10s). After much thought and discussion, the consensus was that there could be some operational advantages if we standardized start/stop, break and lunch times, we were able to provide maintenance coverage during the full work week, that construction services primarily worked 4x10s on the same days, that employees were properly scheduled in advance, and that we are able to provide adequate supervision across the entire work day.

To that end, we received and have now processed temporary, employee-requested schedule changes with a review in June 2016, to determine if the adjustments to the schedules should be continued. Selecting a standard lunch period created the biggest challenge since we have two different start times at 6:00AM and 8:00AM. The WAC does not allow for a lunch period that is more than 5 hours after work starts which means that the latest standardized lunch period that could be scheduled is 1100AM. Unfortunately, that does mean that some employees who begin at 8:00AM are also breaking for lunch at 11:00AM which may be earlier than they would prefer.

With this one exception, the feedback on the new schedules from both the supervisors and employees has been overwhelming positive. I am hopeful that this trend will continue and while not perfect for everyone, there certainly seems to be some positive trends. It is certainly a good thing when individual preferences and institutional needs can both be met at the same time.

Customer Service

Everyone in Facilities Services is a Customer Service Agent. Customer service is a personal human interaction, and these interactions are occurring in work with our customers all the time. In some way, shape or form, every staff member contributes to a customer’s overall experience. Certainly, not every staff member works directly with customers, but even our support people all do something that affects those who serve customers or something that affects the customers themselves. Every single staff member affects our “face”, and each person should be willing and able to assist customers in an efficient, professional and friendly manner when interacting with them. (“Win the Customer”, by Flavio Martins)

From the number of “kudos” that are submitted for our employees, it is evident that our Facilities Services team is making a positive and appreciated difference for our customers.

Well Done!
During the calendar year 2015, Custodial Services completed 222 building audits. An audit is where a Custodian Supervisor or Lead goes through a work area and inspects the work of an employee. The audits scores range from 1 to 5. The APPA Cleanliness definitions for the cleaning levels are as follows:

- Level 1.0 - Orderly Spotlessness
- Level 2.0 - Ordinary Tidiness
- Level 3.0 - Casual Inattention
- Level 4.0 - Moderate dinginess
- Level 5.0 - Unkempt Neglect

Of the 222 audits we had 26 audits that scored better than a 2.00. Any score that is better than a 2.00 is an extremely good score considering our current staffing levels are right around Level 5. The department has set a goal for all employees to meet or exceed a score of a 2.75. Of the audits completed we only had 13 audits that failed to meet this goal. That would equate to over 94% of the audits meeting or exceeding this goal. We had a total of 19 employees with at least one audit score that was a 1.99 or better. They are Colleen Baldridge, Margot Buckley, Brittney Cox, Michael Crail, Duane Dammel, Norman Fung, Zach Howell, Hansel May, Aaron McArthur, Ray McCulloh, Helen Peru, Michelle Phillips, Kathie Power, Rachelle Ragains, Sharon Stout, Melissa Tholstrup, Abby Walser, Jolanda Whitacre and Sarah Wilson.

We had many other employees get very good audits scores that were in the low 2's as our departmental average score was a 2.26.

The average audit score by work groups were:

- Appliance Shop: 2.19
- Bohler Crew: 2.06
- Daggy Crew: 2.28
- Fine Arts Crew: 2.39
- Food Science Crew: 2.45
- Johnson Crew: 2.21
- McCluskey Crew: 2.32

The audits are an important part of the information that is provided to the Facilities Services Management. These consistently show that the Custodial Department as a whole provides a much higher level of service than what you would expect, given our current staffing levels. Good job to all those that consistently maintain their areas and meet or exceed our goals!

Pictured are employees who scored 1.99 or better.


Well Done!
As the new semester is approaching, I just wanted to take a moment to thank you Stacy Gravel and Rodger Small for the effort that you put into distributing information about the Bryan Hall fourth floor classroom project. As a resident of the building, we have not always been informed in a timely manner of events that impact the building. I appreciate your intention to minimize the obstruction of our daily activities.

S. Albers

We would like to tell you Christine Persons, who is responsible for cleaning the lower levels of Fulmer, is amazing. I don’t know if there is an award or anything, but she really does a fantastic job and is always very helpful and we felt someone needed to know.

I. DeWitt and P. Nosbusch

Just a quick note to tell you that Jolene Osterberg is doing a terrific job. The building looks great and she’s done a great job of taking over for Geoffrey.

J. Dahmen

I just wanted to tell you how much we all appreciate our new Custodian, Jolene Osterberg, and to say thank you! Jolene is doing an outstanding job keeping Commons spic and span, and goes above and beyond as she power washed the ladies restrooms and made everything sparkle! Although she will say thank you (with a smile) and that its part of her job, we all want to let her know that we appreciate the fine job that she is doing, and that it doesn’t go unnoticed. Keep up the good work!!

H. Munro

I have worked here for 30 years all over campus and Kathie Powers is the best. We are really happy and lucky to have her here.

J. Langerquist

Just wanted to acknowledge how great my area looks. Corrina Johnson waxed over the holiday break and I was very impressed. Thank you!

K. McClanahan

I just wanted to take a moment and say thank you. When we returned from break the first thing I noticed when I walked in the FMIC was the bright and shiny floors. Corrina Johnson really put in a lot of effort to make it so nice for us. Please pass on our sincere thanks.

V. Lynch-Holm

I just wanted to check-in regarding the Owen Concourse Sky bridge. Thanks to Sarah Wilson and the rest of the custodians for taking such good care of our space! It is really appreciated and does not go unnoticed!

R. Jensen

I am a faculty member located in the FSHN building. I wanted to take the time to tell you that Pat Strong and Jim Nielsen are doing a really fantastic job in maintaining our building. It is simply great to work with Pat and his bright outlook on life is quite infectious. Bathrooms, hallways, etc. are always kept to the highest of standards which implies that they really care. Thank you for providing us such great staff to work with. Best wishes.

C. Edwards

I want to complement Eric Slocum and the Heavy Equipment staff on the excellent job you do taking care of the University’s streets and parking lots. The City of Pullman could learn a great deal from you. I always know if I can at least make it to campus, I’ll have smooth traveling once I get here! Thanks for all you and your staff do!

J. Luft

I would like to acknowledge the following Carpenters who worked on the Food Quality Building/Creamery floor project during the Christmas break: Jason Brausen, Eric Sorenson, JB Self, Jeff Gulick, Shad Nilsson, Lance Mitchell and Miguel De La Mora. This was a time sensitive project and the men stepped up to the plate and made this project a success. The work involved was no easy task. If anyone has ever tried to remove old epoxy grout and ceramic floor tile, they can immediately identify with the agonizing labor and endless knee torture that is required from start to finish to make a project of this size (with a small window of opportunity) a triumph. Special thanks to Jason and Eric for running the show and seeing to it that the customer’s request was fulfilled. Thanks Guys!

R. Miller

I wanted to extend kudos to you and your crews on a great display of teamwork and effort in the food quality building last 2 weeks to make everything come together. John appears to be very satisfied with the results and our efficiency to get everything done. There were a lot people involved on this project so please pass this along to everyone involved. Thanks again!

A. Ferry
Back in the spring of 2013, a new department was formed within the Administration division of Facilities Services. The new department brought together the Geographic Information System (GIS), Space Management, Campus Mapping, and Archives. Then in 2015, Campus & Space Planning were brought in to be a part of our team. We call ourselves Facility Information Resource Management…….FIRM for short.

Recently, we split ourselves into two groups: Planning: Campus & Space; and Spatial Information & Technology, both of which are led by Don Hulst, the Director for FIRM.

Planning: Campus & Space
Our Campus & Space Planning group is made up of Bobbie Ryder and Charles Hemphill. The goal for this group is to provide information and support to university decision makers. By using standards, master plans, industry guidelines and state agencies, the planning group applies information and data from FIRM and outside agencies to provide recommendations in support of the campus built environment. By gathering all applicable infrastructure, and plan design studies then applying them to internal space studies, scenarios and campus site locations, our planning group will help to create a more cohesive and intelligently designed campus that we can all enjoy for years to come.

Spatial Information & Technology
Our Spatial Information & Technology group brings together GIS, Campus Mapping, Archives, and Space Management. These areas are responsible documenting infrastructure information such as, utility mapping data and analysis, field data collection, the university space inventory, construction document archives, as well as standards, drafting, mapping and design coordination. This new group is led by Bob Nichols, the Manager for Spatial Information & Technology. Chuck Coen is in charge of Campus Mapping & Archives while Craig Boersema will lead Space Management. Bob Nichols will still oversee and administrate the GIS.

Spatial information comes in many forms, but for us it means managing data and the inventory of the university’s built environment. As stewards of this information, our goal is to make sure that everyone can not only get easy access to it, but be confident that the information that they are receiving is as accurate and up-to-date as possible. We see ourselves as service providers, solution developers, data analysts and a resource to help support all of the Facilities Services divisions.

Facility Information Resource Management
- Don Hulst, Director
- Bob Nichols, Manager

Planning: Campus & Space
- Bobbie Ryder – Planner
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  - Phone: 509-335-2192
  - Email: bryder@wsu.edu
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- Blair Myron – Program Coordinator
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- Dave McCarroll – Cartographer
  - Campus Mapping
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  - Email: dmcarrow@wsu.edu
- Kent Grimm – Drafting Technician II
  - Engineering & Tech Support
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  - Email: kgrimm@wsu.edu
- Craig Boersema – Space Allocation Specialist
  - Space Management
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- Miranda Ferry – Drafting Technician II
  - Space Management
  - Phone: 509-335-9323
  - Email: miranda.ferry@wsu.edu
New Hires

Jolene Osterberg, Custodian 1; pictured with AVP Joe Kline and Director of Custodial Services, Tom Parrish.

Phil Johnson, Project Manager

Promotions

Shiloh Farmer promoted to Control Technician; pictured with AVP Joe Line, Supervisor Tom Burritt and Assoc. Director Chris Fischer

Jason Cox (left) promoted to Custodian 3, Lead.
Pictured with supervisor, Randy Ludiker.
Douglas Hays, pictured with AVP Joe Kline and Assoc Director Chris Fisher; Not pictured: Brett Rode and Gary Fisher.

Dean Neppel, pictured with Director, Craig Cole; AVP Joe Kline; and Supervisor, Randy Cavanaugh.

Maja Huff with Director, Fin/Admn, Kate Kamerrer.

Kelsey Southwick with Supervisor, Eric Slocum.

Neal Wallen and Rick Hull with AVP Joe Kline and Director, Craig Cole. Not pictured: Peggy Dudley, John Baldwin, Eric Craig Urban, and Den Bowker.

Kate Kamerrer with AVP Joe Kline.
25 Year Service Award — Quarter Century Club
Randy Smith

Randy Smith, pictured with Director, Craig Cole; AVP Joe Kline; and Supervisor, Randy Cavanaugh. Not pictured: Jim Parvin, Danny McBaine and Mark Grant.

30 Year Service Award
Jodi Magers

Jodi Magers pictured with Assoc. Director, Chris Fischer; AVP Joe Kline; Supervisor, Aaron Cunningham; and Director, Craig Cole.

Service Award Recipients—remember to visit the HRS website,: http://employee-recognition.wsu.edu/ER+Length+of+service+Award to order your recognition gift!
**Roy Dillahunt** receiving his 40-year Certificate of Service.

His Supervisor is Sandie McCollum.

**Well Done !!**

More Kudos !!

Huge thanks to **Ted Townsend**, electrician, for his work at the PACCAR Building. He completed several projects for us, and made “dreams come true” for the occupants!

D.Nuenherz

I wanted to thank **Tom Wilson, Rick Hull Jr., and Gerrad Graham** so much for getting us power to the electrical outlets in Wegner G50. We are in that classroom every day and so being able to plug in our devices without an extension cord is greatly appreciated! Thank you again!

C. Sakamoto, 3rd yr vet student

**THANK YOU! for the support of this project that was completed over Christmas break. We greatly appreciate this consideration and support!**

D. Carlson

I just wanted to send a thank you to the crew in **Heavy Equipment** for all the work they do for our campus community and for our maintenance shops. The tasks they perform in all kinds of weather is outstanding and appreciated. **Eric Slocum and Steve Holbrook** always seem to find the time to help us get our jobs done by scheduling in lift and equipment deliveries between clearing snow and moving departmental equipment into buildings, and always with a smile and a great attitude! My kudos to the entire HE team **including the front office**!

A. Barton

On behalf of the CAHNRS Business Center team, I want to thank **Steve Holbrook, Eric Slocum and the Heavy Equipment team**!! Your group is always fabulous to work with; polite, patient, have a good sense of humor and fast! I appreciate the help so much!

K. Strong

I would like to thank **Angie Wilbur and Kevin Taylor**, Custodial Floor Crew, for the fantastic job they did in cleaning our dirty old chairs in Dispatch. What a great job – no oil or grime left on the upholstery. And to top it off, you folks cleaned the walls, glass and wooden doors, dusted off above desks, and cleaned the floors. Thank you so much for your hard work Angie and Kevin. Your work ethic and friendly attitudes are top notch!

J. Aranzamendi

Thank you to **Julie Aranzamendi and Dustin McGillic** for helping me out on 1/28/16 when I locked my purse in the motorpool car, and put the car keys in the overnight drop box. Julie and Dustin responded so quickly and efficiently and “it is much appreciated”. Thank you for a job well done!

S. White (and K. Jahn)
Thanks for Working Safely!!

Marty Brigham is the Winner!
Marty Brigham was nominated for wearing the proper PPE as he changed truck tires.

Dennis Rovetto provided this nomination.
Marty selected a prize from the Safety Award Cabinet.

Congratulations!

APP Safety Question Winner!

Norman Fung is the Winner!
We had 13 entries. All were correctly answered. Norman’s entry for the Safety Question was randomly selected from the correct entries. Those correct entries not chosen will be placed in the bucket for the annual Safety Award Drawing at the 2016 Facilities Services Picnic.

Congratulations Norman!
Thank you to all that entered the contest! Be sure to enter this month’s contest!!

Answer to the December APP question:
Areas not designated for hot work will require a hot work permit. Before hot work operations begin in a non-designated area, a written hot work permit shall be prepared by the employee and approved by the supervisor.

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Thanks for Working Safely!!

Thanks for Working Safely!!
Facilities Services Safety Committee
Safety Question Contest for the Month of February 2016

Directions: The answer to the question below can be found in one of the chapters of the Accident Prevention Program (APP). Read the question carefully. When you think you have found the answer, you may email your answer to D Thomas at d.thomas@wsu.edu or print off this page and cut out the form on the dotted lines. You may give the form to your supervisor to send in intercampus mail to D or drop it off at her desk in the reception area of the McCluskey Office building. The names of all employees who submit the correct answer will go into a hat for a drawing. Whoever’s name is drawn will be able to pick out one of the monthly safety awards. This contest will be open only until 5 p.m. on February 29, 2016 so get started finding the answer now and win a nice prize! http://facops6/safety/APP%20Manual/Forms/AllItems.aspx

APP Chapter 11: Personal Protective Equipment
Employee Responsibilities: 1. __________________________, 2. __________________________, 3. __________________________, 4. __________________________, 5. __________________________

Name of employee submitting the above answer: __________________________
Facilities Services Division: __________________________

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WSU Holiday Schedule

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<th>Holiday</th>
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<tbody>
<tr>
<td>Labor Day</td>
<td>September 5, 2016</td>
<td>New Year’s Day</td>
<td>January 2, 2017</td>
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<tr>
<td>Veterans’ Day</td>
<td>November 11, 2016</td>
<td>Martin Luther King Jr.</td>
<td>January 16, 2017</td>
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Summit Safety Boots will be coming in April.
Watch the Facilities Focus Newsletter, April edition, for details.

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WSuSURPLUS
Open to the public every Friday 10am-3pm

http://surplus.wsu.edu