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# Maintenance supervisor proves mettle during 150-year flood

Elementary school relies on past experiences to overcome disaster

By Phil Partington, POS staff

It's been a wet, sometimes miserable winter for Centralia School District's Maintenance Supervisor, Bruce Hargrave. The heavy floods and the breaking of the nearby dike caused substantial damage to Washington Elementary School, 'home of the mini Tigers', and Hargrave was often knee deep in the problems.

"We get flooding in our area all the time, but we never expected it to get as bad as it did," Hargrave said. "Things were so crazy. December was a blur."

The elementary school had 14 inches of water inside the building, four feet of water just out-

Washington Department of Transportation and many other Consortium members assisted in mitigating extensive flood damage in western Washington in December. Photo courtesy of WSDOT.

side the building and the basement (with the building's electrical equipment) was underwater for 20 hours. In addition, the nearby transportation cooperative, which operates and manages the district's busses, was dealing with its own flood-related challenges.

Flooding from the December 2007 Pacific Northwest storms resulted in massive damage to businesses, residences and farms among a huge corridor. Additionally, a twenty-mile stretch of Interstate 5 in Washington was closed between exits 68 and 88, which runs through Lewis County. It did not reopen for four days. The economic cost of the Interstate 5 closure was roughly \$4 million a day. To help drain the water from the roadway, a dike was breached to help drain the Chehalis River. At the height of the storm, 75,000 customers in Washington lost electric service. Many remained without power for more than one week.

(Please see "Centralia", continued on page 7)





Shop Talk Winter 2008

### POS *Notes:* Resource Conservation Managers

Saving money and enhancing facilities while conserving energy

Guest article by Ron Major



Ron Major

As the Resource Conservation Manager (RCM) for Washing-Capitol Campus,

responsible for reducing the utility costs associated with daily operations. These utilities include electricity, natural gas, water and solid waste. While my role as RCM makes me the single point of contact for the organization, it is quite obvious this is a team effort. My work routinely involves the facilities staff, asset managers, business office and utility service providers. It is critical to the success of an RCM program to involve and have the support of the entire organization, from executive management to custodial services. Everyone has an important role to play in the conservation of the organizations resources.

In this age of growing concern over climate change, rising energy costs and shrinking budgets, controlling utility costs is an essential business strategy. An RCM can be a cost effective tool for stretching budgets and leveraging finite resources. On average, an RCM saves two-to-three times the fully loaded costs of the FTE, providing a net gain in the operating budget.

Although facility managers are aware of the importance of controlling utility costs, they may not have the time

to address these issues. By focusing on resource efficiency, the RCM provides added value to the organization by collecting and analyzing utility data, developing energy profiles of buildings, tracking ton State's progress and recognizing suc-

### Tips for RCM Success

While each organization is unique, a typical RCM focuses their attention on the following tasks:

- Monitor energy and water
- Develop recycling programs to reduce solid waste costs.
- Set goals and develop plans to implement efficiency strategies.
- Analyze utility billing and recover overcharges from billing errors.
- Determine the best rate schedule for utilities.
- Provide assistance with selection and specification of energy efficient equipment, technology and best practices.
- Identify and secure alternative funding for energy efficiency projects.
- Conduct building audits to identify opportunities for saving energy.
- Promote energy efficiency and conservation through education and training
- Promote energy efficiency and conservation through education and training

The RCM can also play a significant role in an organization's efforts on sustainability and climate change. This is especially true for the collection and reporting of information.

By having a Resource Conservation Manager as a dedicated member of your staff and focused on resource efficiency, your organization can capture those savings that would otherwise go down the

drain.

At the upcoming EFC 2008 conference in Leavenworth (see page 8 for more details), I'll be teaming with Lori Moen, RCM of Puget Sound Energy, to further detail the benefits of Resource Conservation Managemen. Lori and I will outline how RCMs are used in myriad roles in public and private sectors. Join us, bring your questions and participate in a lively discussion of how to maximize your agency's RCM!

Ron Major is GA's Resource Conservation manager of the State Capitol Campus in Olympia. Contact Ron, 360-902-7197 or

rmajor@ga.wa.gov.

Also, check out the GA Energy Team on the web, www.ga.wa.gov/energy.

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Winter 2008 **Shop Talk** 

## 'Vacuum Trailer' transforms grounds cleaning

School districts enjoy effectiveness, efficiency of a renewed best practice

By Phil Partington, POS staff

Wenatchee School District's grounds crew seems to have come across a simple way of saving extensive time, effort and dollars with a "vacuum trailer" invention. The contraption is essentially an effective and efficient means to mow an overgrown field, or clean up/collect leaves, thatch or other debris.

The design is simple enough, basically consisting of a twoto-three yard capacity trailer being mounted to a mower with piping and a 10 HP blower connecting the two.

John Becker, City of Cashmere parks and cemetery supervisor, invented the apparatus 15 years ago. At first, he came up with the idea of using a backpack blower. Next, he converted a snow plough into a tractor and put a rubber blade on it.

These ideas worked OK, but when the smaller versions of "vacuum trailers" came on the market, he wondered why the same thing couldn't be done in larger volumes.

"We've always been so shorthanded," Becker said. "I'm currently the only full-time guy we have."

Becker proudly concludes that the result was significant decrease in the amount of human labor needed, and a more effective end result.

"It's not rocket science. It's just something I looked at and said "there's got to be something on a larger scale to pick up your grass clippings."

He added that the product has been fine-tuned and adjusted over time through trial and error.

"You could probably even

modify one that could be set up with hydraulics to push the load out back when it got full, so that you wouldn't even have to unload it," said Becker. "The machine is worth its weight in gold and

saves wear and tear on the human body. Plus, it's really cheap to build."

The idea was so intriguing that when Larry Rose, Cashmere School District's M&O Supervisor, got wind of it, he adopted it for his own grounds crew.

Municipalities

City of Hoguiam

City of Tacoma City of Tumwater

City of Walla Walla

City of Vancouver

Auth. Jefferson County

King County Housing

Auth.

Kitsap County Lakehaven Utility District

Clárk County

**Cowlitz County** 

City of Oak Harbor

City of Port Moody, BC

Cowlitz County PUD #1 Grays Harbor Public Dev.



Lane Keller proudly displays the miracle 'vac-trailer'.

"Every now and then we get really busy in the spring and had a hard time getting our grass mowed," said Rose. "Either that, or if the weather turned wet for an extended period and we couldn't mow the grass like it needed, so it got very long.

(Please see "Vacuum", continued on page 6)

### **Consortium Member Roster**

#### K-12 Schools Abbotsford, BC Bremerton **Brewster Bridgeport** Camas Centralia Chehalis Clover Park Comox Valley, BC Coquitlam, BC Delta, BC East Valley, Spokane Easton Eatonville **Edmonds** Enumclaw **ESD 101 ESD 171** Federal Way Goldendale Highline Hoguiam Ketchikan, AK LaCrosse

Liberty

Marysville McCleary Mission, BC Moses Lake Mount Vernon Mukilteo North Thurston Oak Harbor Ocosta Okanogan Skaha, BC Olympia Peninsula Port Angeles Port Townsend Puget Sound ESD Quilcene Quillayute Valley Rochester Saanich, BC Shoreline South Kitsap Snohomish Sumner Sunrise Beach Surrey, BC Wenatchee

White River Willapa Vallev Wishkah Valley Yelm

#### Universities/Colleges

Big Bend CC Cascade CC Clark College Columbia Basin CC CC of Spokane Everett CC Grays Harbor College Highline CC Olympic CC Renton TC South Puget Sound CC The Evergreen State College Univ. of Washington WSU Extension Energy

**Ports** 

Port of Everett Port of Kennewick Port of Sunnyside

Auth. Pierce County Library System Skamania County

Lewis County

Pierce County

Tacoma-Pierce Ćty Health Whatcom County

Pierce County Housing

#### States/Tribal

Oregon Youth Auth. Squaxin Island Tribe

#### Wash. St. Agencies

**Corrections** 

**Criminal Justice Training** Comm. Ecology General Administration Health Information Services Licensing Liquor Control Board Military Natural Resources Parks & Recreation School for the Blind School for the Deaf Social & Health Services Transportation Veteran's Affairs Washington State Patrol

Our warm welcome to the new members in green type and to those members who have re-subscribed.

We look forward to serving your facility and operations needs.

Shop Talk Winter 2008

### Rainier School lauded for inventory tracking methods

Top-flight team nominated for DSHS Outstanding Team Performance Award

## By Phil Partington, POS staff

For many, simply keeping track of what's on their work desks or what's in their homes are unattainable feats. Imagine having to track all the items at a state school for the developmentally disabled which houses more than 390 adults. Rainier School in Buckley, Washington happens to have a staff that makes the challenge look easy. In fact, they've been nominated by the school's director of professional support services, Bob Curtiss, and Rick Meyer, Department of Social and Health Services auditor and consultant, for the DSHS Outstanding Team Performance Award.

"In my opinion," said Meyer,
"Rainier School sets the bar."
I have been with DSHS' internal auditors for about 10
years and have audited every
institution within DSHS. While
other DSHS institutions have
done well in regard to their
warehouses and inventories,
their organization, thoroughness and accuracy of its inventories should be the goal
of all institutions."

What's even more impressive is the complexity of the school. For instance, the three-person Kitchen Inventory Control team - consisting of Mary Bellamy, Christy Collins and Chace White - must manage 36,000 meals every month (including as much as 130 pounds of ground beef per meal). And, keep in mind that those meals aren't typically standard, but rather tailored to each special client's dietary needs.

"We have about 80 clients who use feeding tubes," said Bellamy, "and, those on feeding tubes require the food to be prepared a certain way so they can process it. There are also many diabetics, many in their 80s or older. Each of the clients with special needs require different kinds of food textures and different kinds of preparation."

In addition, the kitchen provides a wide range of food choices for clients. Despite the complexities, Rainier is able to track each individual meal and food preferences for each house and client on the campus, including nuances of client preferences or what particular brands are preferred.

When auditor Meyer first approached the Commissary Inventory Control team, he found they had the unique ability to identify a state-wide dilemma that is typically overlooked by most facilities.

"We've been losing gasoline due to changes in temperature," said Ken Harper procurement and supply specialist 3. "We have our own gas pump and are able to control and track its use by having two separate keys. One key is for the gas pump control itself that must be signed out at the switchboard (pump has a separate key), while the other key is for the control of the gas being received. Fuel is delivered by the vendor at above 60 degrees during the summer months. Thus, during times when the temperature of the fuel being delivered



Award-Winning Team - Front row: (left to right) Ken Harper, Betty La-Crosse, Janet Hayes and Crystal Wolf. Back row: (left to right) Cory Harrison, Mike King, Kevin Moore, Cindy Johnson, Candie Elliott and Bob Curtiss.



Top-Flight Crew - (left to right) Chace White, Christy Collins, Mary Bellamy and Bob Curtiss.

is above 60 degrees, we lose fuel due to temperature variance of the fuel being delivered. The state contract does not allow us to adjust the delivery receipt to account for the lost fuel. This means it doesn't break even in the books, if you're being held accountable the way we are. We are paying for fuel we did not receive. The offage is clearly noted on the inven-

tory control form so that we have a record of the loss due to temperature. We believe it to be a major problem across the state."

(Please see "Inventory", page 7)

Winter 2008 **Shop Talk** 

### Consortium members find ways through darkness

City and college faced lengthy power outages as a result of winter storms

By Phil Partington, POS staff



Brian Shay



Beate Wahl

merous towns and counties in western Washington were overwrought with flood damage in December 2007, Grays Harbor College and the City of Hoquiam had to deal with mainly darkness.

While nu-

The City of Hoquiam, including City Hall, police stations and fire stations, was without power for four full working days. Brian Shay, city administrator, cites key lessonslearned from the recent disaster.

1. Have back up power: "The single biggest issue was back up power. Our police and fire stations both have back up generators, but they aren't big enough to do everything within the department. With the power out as long as it was, we only had a day or so worth of fuel. The water treatment plant also had its own generator, and accessing fuel to run all the generators was tricky. In addition, there was no way to get additional gas with the gas stations empty. Fortunately for us, Olympia wasn't very affected. Had this been a more widespread event, we would've been in big trouble.

This was a real eye-opener that we need back up generation and fuel storage."

2. Make arrangements with different groups to serve as shelters during crises: "We plan to make better partnerships with churches and other groups that might be able to serve as shelters. The Red Cross responds within a day or so, but they send only so many volunteers. Meanwhile, we're busy tracking looters and keeping streets clear and don't have the staffing to operate shelters. There were some places that opened up as shelters a couple days into the power outage, but having something established beforehand would make things easier to manage during natural disasters.

3. Have dedicated phone lines for power outage situa- money, because their place tions: "In this kind of power outage, phone systems didn't work. Communicating was challenging. We didn't even have a phone line that could enable us to communicate in and out of the city. We plan on changing that.

Similarly, Grays Harbor College in Aberdeen was without power for a solid week at the worst possible time. High winds made some areas around campus look more like graveyards for trees masking the otherwise gorgeous landscape.

With finals at hand, students were surprised to find the campus entrance completely blocked off by crisscrossed trees and debris.

"The duration of the outage made it an unprecedented

occurrence," said Beate Wahl, chief of campus operations & auxiliary services. "With the college switch boards down and the fact that most phones in our area don't work in a power outage, especially with the power out in 90% of the area, we felt very isolated."

Perhaps the most amazing story at Grays Harbor College was the selflessness of the staff, faculty and community, who made it their business to care about students in need during the tough times. Many students had lost vehicles, contents of refrigerators, and other vital necessities, and many of these students didn't have the money to make necessary fixes or replace what they'd lost. Moreover, they couldn't they get extra of employment were shut down.

"I asked one student how she was doing for food," said Wahl. "She said she had a box of cereal and beans. Yet, when I offered food,

she refused because her 'neighbors were much worse off'. Our main job as school faculty and staff members is to help students, but this situation brought a lot of groups closer and we were able to help students on an

individual basis at a level I've never seen before."

For more information about Grays Harbor College, contact Beate Wahl, 360-538-4106, or e-mail bwahl@ghc.edu.

For more information about the City of Hoguiam, contact Brian Shay, 360-532-5700, ext. 243, or e-mail bshay@ci.hoquiam.wa.us.



Utilities work to restore power to one of hundreds of downed powerlines in the Hogiuam/Grays Harbor



Grays Harbor College faced major challenges as trees were uprooted and forest debris blocked roads and walking paths.

Shop Talk Winter 2008

### Facility leader laments use of benchmarks 'without perspective'

There are few in the facilities administration field who have not been faced with the challenge of benchmarking or "pegging" staff and varied mission tasks. These experiences can be frustrating, especially when reacting to mandates from executive management or bean-counting types.

"It's so frustrating when I see these generic benchmarks sent and I see it often," said Pattie Williams, GA's acting deputy assistant director for buildings and grounds on the State Capitol Campus in Olympia. "I'm ready to help facilities managers understand that these numbers don't necessarily mean the same thing."

Williams says it's like comparing house painting prices.

"One guy says I paid \$1,000 to paint a 4,000 sq ft house, while another says he paid \$25,000. This information is useless without understanding what was involved. For instance, what was the type of paint used, prep work, scraping, etc?"



Pattie Williams

A recent POS Consortium question referred to the formula or average cost-per-square-foot for cleaning a dining facility. It is appropriate to ask, "What is the formula for determining the time to clean a dining facility?" But, to ask 'what is the average cost' means nothing, Williams said. "You have to compare apples-to-apples, which means considering what was done, such as trash removed, floors swept, mopped, waxed, buffed, chairs and tables put-away and set-out, etc."

Pattie Williams will address, "How to benchmark cleaning activities and costs," during the upcoming Energy/Facilities Connections 2008 conference (see page 8) in May. This will be one session you won't want to miss.



("vacuum" continued from page 3)

When we did mow it, we had wind rows of long grass that we couldn't leave on the field. John's model has made things much easier for us."

Soon, Lane Keller, grounds foreman for Wenatchee School District, learned of the invention and borrowed Cashmere School District's vacuum trailer. They used it to do a field reconditioning at Recreation Park, the district's varsity and American Legion baseball field, last summer.

Bryan Visscher

"It just made a lot of sense," said Keller. "When we power thatched our baseball outfield last year without this machine, it took two guys with two machines two-and-a-half days to clean up the mess massive amount of thatch left behind, plus manpower to run the dump trucks back and forth. With the vacuum trailer we borrowed from Cashmere School District, it took one person just one-and-a-half days. We're hoping to get that down to one day."

Keller modified the invention by tapering the box of the district's utility trailers from front to back. This way, the bail wouldn't get stuck. He also built the cage on the top and sides and installed a pickup truck bed unloading conveyer. When full, the trailer is disconnected from the mower and quickly towed by a pickup truck to their drop site.

Another useful aspect of the vacuum trailer is that the collected debris/thatch compresses into a huge, heavy bail. Keller claims that the bail is so solid it can't be penetrated with a shovel. As a result, Wenatchee School District grounds crew didn't have to commit to the labor-intensive task of sweeping and disposing of all the thatch, which would include sweeping, hauling and dumping the thatch at a dump site.

"The one small vacuum trailer probably held the equivalent of 10 dump trucks of thatch," said Bryan Visscher, Wenatchee School District's maintenance and operations director. "That's reducing our round trips between the field and the dump-site by 90%"

"We agree that there will be some bugs to work out when we start to use it, but it promises to be a tremendous time saver when reconditioning fields," said Visscher.

For more information on the vacuum trailer, e-mail Lane Keller, keller, l@mail.wsd.wednet.edu.

Winter 2008 **Shop Talk** 

### ("Centralia" Continued from page 1)



Bruce Hargrave

The flood was blamed for eight deaths and is considered one of the worst natural di-

sasters of the region in more than 150 years.

Yet, Hargrave is no stranger to dealing with disasters. He's been with the district for fifteen years and has been through a major fire at one of the schools just two years ago, a large flood in 1996, as well as other disasters in his lifetime.

Hargrave offers two key principles to follow when dealing with such a large disaster:

- 1. Be responsive as quickly as possible. Put your resources on notice as soon as you know the potential need exists, even if the event has not happened yet.
- 2. Get help from the outside community so that you do not compete with local patrons who are also trying to deal with the disaster.

Regarding the latter principle, Hargrave made the point that there was a significant difference between this recent flood and say, the building fire they dealt with a couple of years ago. The fire damage was constrained to Centralia School District. However, in the case of this recent flood, all of Centralia as well as numerous other areas were hit by the disaster. That means that if the district needed something, so did everyone else.

With this flood, the insurance company quickly approved the hiring of a private company, Interstate Restoration, to do the cleanup. Having the help made a big difference when comparing this event to the flood of 1996. In the flood of 1996, Hargrave explained that maintenance staff, teachers, and aids all pitched in, performing a valiant effort to push water out of the building and to do cumstances the cleanup of the building. This time, Interstate Restoration did most of the work and imperative." Hargrave was able to do more oversight to determine what items were really usable and what items needed replacing. Last time, they kept a lot of items that developed into problems afterwards.

Another big positive outcome of having the contractor's support was the reduced wear and tear on their employees. They were not all exhausted and stressed when they needed to get the build-

ing ready for school. Though, some of the staff did have to deal with their own tragedy at home.

"Much of it was a matter of clean-up," said Hargrave. "You do what you have to do to get things up and running again quickly. It might not always be the most efficient way to work, but in such cirmeeting deadlines is

The school was closed down for five days, and Hargrave

credits the collective cooperation and - many times - elbow grease of teachers, staff members, local and outside community and others for getting the district back on track. There's still much to do, but for now the worst seems to be over.



Interstate 5 was closed for four days in the Chehalis/ Centralia and surrounding areas due to the severe flooding.



An aerial view of Chehalis valley during the December 2007 flooding. Photo courtesy of WSDOT.

For more information about the flooding at Washington Elementary, or for additional pictures, contact POS staff,

plantops@energy.wsu.edu.

#### ("Inventory" Continued from page 4)

Harper credits Candie Elliott and Janet Hayes, both procurement and supply specialist 2s, for discovering this setback as well as developing the processes that enables the outstanding control of the fuel.

"Next to Western State Hospital, Rainier is the second largest DSHS institution and largest DDD institution," said Meyer. "They lost only one item the year before and in previous years they've lost zero items. That's just amazing."

Meyer attributes the school's success to a top-down mentality. "Upper management cares and holds staff accountable. It clearly affects the overall attitude and pride in everyone who works there. In addition, everyone knows their jobs, but at the same time they're not afraid to ask questions."

For more information about Rainier School, contact Bob Curtiss, (360) 829-3045, or e-mail CurtiBJ@dshs.wa.gov.

Shop Talk Winter 2008

### **BOC** makes training more accessible

'Webinar' easy to use for all level users



Building Operator Certification (BOC) has made training much easier for building operators by tapping into the world-wide web as a resource. The organization recently offered its first technical webinar training on Small Packaged HVAC Systems - Maintenance & Optimization and invited POS staff to participate in order to give an

objective perspective on the effectiveness of the training.

Those who might not consider themselves very "tech savvy" might be excited to know that BOC's webinar is extremely easy to set up and use. Participants receive an e-mail prior to the webinar date which reveals a phone number to call and a code to use. After logging into the webinar at the designated time and date, participants are able to follow along as a PowerPoint presentation flashes on their screen. At the same time, the presenter's voice is heard on the phone after the participant calls the number with the designated code. In addition, participants are able to ask questions via the conference call at designated times, or throughout the presentation by typing it in a chat box.

BOC is offering a Technical Webinar series in 2008 which will focus on technologies and practices building operators can use to improve energy efficiency.

#### March 19, 2008

Dataloggers: Use of trending to troubleshoot & improve building performance

#### April 16, 2008

Demand Control Ventilation: Using CO2 sensors for ventilation savings

To sign up for the technical webinars, send an email to BOCinfo@theBOC.info.



### Join us in Leavenworth for Energy/Facilities Connections 2008

'Building Energy and Facilities Success...for a Sustainable Future'

The Energy/Facilities Connections Conference 2008 is fast-approaching. The focus of this year's event will be a comprehensive training opportunity and applicable for energy, facilities, safety, operations and business-related professionals.

Conference Date, Time and Location: The conference takes place Wednesday - Friday, May 21-23, 2008, in Leavenworth, Washington. Conference hours are from 8:00 a.m. to 5:00 p.m. May 21st and 22nd and from 8:00 a.m. to 12:00 Noon, May 23rd.

Attendance Fee: Just \$250 per person for Consortium members and \$400 per person for non-members for two and one-half days of value-laden training, effective networking and comfortable social settings. If you'd like to attend only the Friday morning custodial track and energy demo/tour activities, the cost is \$50 for members and \$100 for non-members for that one-half day of intensive activities. Registration includes buffet-type, scrumptious luncheons on May 21st and May 22nd (the first two days of the Conference).

Register Today: Visit http://www.ga.wa.gov/Events/EFCHome.htm to register online. For additional event questions, please contact Bob MacKenzie at 360-956-2055, or e-mail plantops@energy.wsu.edu.