

**Not Enforcement, Reinforcement  
Caution! You're about to enter a  
No-Swim Zone! 😊**



## New Wastewater Operators Newsletter

Volume 2, Issue 5, July 2011

Dear Ladies and Gentlemen:

**Numbers:** We're back on track! The victims list is back up to 212 souls (plus or minus a couple of soulless ones, yet to be determined). In the June issue, I had 202 subscribers back on the list after Lucifer put the finger on my hard drive. I still have to retrieve a number of lost email addresses.

Actually, the number is probably closer to 250, because some fans are forwarding the newsletters to colleagues and friends, or printing and posting on facility bulletin boards. For the printers/posters, I've changed from blue to mostly black type, so they don't run out of ink in their blue cartridges. Besides, it's easier to read black on your aging (super faded) monitor, Roger (you know who you are).



More new interest in the newsletters has been generated in the past 30 days than ever before, thanks to you all. Lucifer has failed!

Good news! Thanks to MaryAnn St. Martin, Chad Short, Rogena Johnson, and Jeff Jennings, *et al*, I have all but the first newsletter back in my possession. Call off the bloodhounds; we're back in business.

**Why this newsletter?:** The main purpose of this voluntary exercise is to showcase cool ideas (and the people responsible) I see or hear about in the wastewater treatment industry, mostly in Eastern Washington, but not always.

**Share with us:** Everyone reading this is part of the wastewater community in some way. If you have an idea or interesting project you'd like to share, your finger's on the trigger right now. Do it! (that means email me about it, OK?).

### Equipment for sale or to give away:

Roger Sebesta, PW Director at Odessa, retrieved the Draimad® biosolids processing system advertised as surplus by the City of Palouse in the March 2011 newsletter, for free! He said they've already scavenged a major part from it. The network works! 😊

Don't forget that the Cheney plant has some good stuff to give away too. Available are a 2-ton hoist, gas-powered portable pump, portable air compressor and air dryer, a couple of 1" centrifugal pumps, valves, etc., seen in the April 2011 newsletter.

The City of Royal City probably still has that SRECO truck-mounted sewer jetter, also seen in the April 2011 newsletter. It needs a new water tank.

See those mentioned issues for contact info, or email me. All deals made between the entities are their business—I'm just the messenger.

### Job Openings:

The [City of Moses Lake, WA](#) has a Wastewater Treatment Lead Operator position open until filled. Go to [ci.moses-lake.wa.us](http://ci.moses-lake.wa.us) and click on their job opportunities button for details on this and another PW job, plus a Firefighter/EMT job, and a downloadable job application. The Lead Operator position pays a salary of \$3,689 (Entry) to \$4,611 (A Step).

The [City of Eugene, OR](#) has a Wastewater Residuals Technician 1/2 (to be filled at level 1 or 2, depending on knowledge, skills and abilities of the applicant).

Pay ranges: Residuals Technician 1: \$21.47—\$26.74 hourly

Residuals Technician 2: \$23.43—\$29.21 hourly

Go here: <http://www.eugene-or.gov/jobs> for the complete descriptions, links to other jobs in Eugene and an online application. Online applications only are being accepted.

Closing date: July 29, 2011

Thanks to MaryAnn St. Martin (Richland) and Maile Lono-Batura (Executive Director, Northwest Biosolids Management Association) for the heads-up on this position.

## **Cool Idea of the Month, July 2011:**

We now travel to the City of Pomeroy, WA, located in beautiful Garfield County.



We already know Glenn Davis from the April 2010 newsletter, re: his installation of effluent post-aeration equipment for D.O. limits compliance.



He's been at it again. Now mind you, Glenn is an avid ("avid" is not a strong-enough word) fisherman. He could open his own tackle shop with what he has right now. Point is, there's nobody in this world who appreciates clean water more than he does.

With the financial and moral support of the city council and his supervisor, he's planned and executed a biosolids compost facility at their treatment plant. Now Glenn doesn't always follow protocols when implementing his ideas, but the result in this case, is outstanding, in my personal opinion.

I'm not sure what they were doing with their biosolids prior to this, but he wasn't satisfied with it. He wanted to make nice compost for the town folks to use on their gardens.

So they laid out an area on the plant site and poured a concrete slab, properly graded and sealed, complete with a drain leading back to the headworks.

## Cool Idea of the Month, July 2011, cont.:

Here's an overview of the composting area. I just now noticed that there seems



to be a little overflow onto the ground on the right side.

You might want to consider a retaining wall, Glenn, for two reasons: to give your Bobcat something to push against when mixing the piles, and to placate the managers of the new RV park going in next door. They're probably not appreciating that naughty brown stuff in full view of their visitors. That will still give you access on the left (west) side.

Glenn and his crew poured the slabs with overlapping sealed joints to prevent moisture leakage into the ground. The hose is there to add moisture to the piles to get the microflora working on making compost.

Glenn's one regret: That they didn't make it twice as big. You'll have to ask him to get the current measurements, because I didn't. Update: 20' x 100'.

He would like to have it at 40' x 100'.

### **Cool Idea of the Month, July 2011 cont.:**

Here's a shot of the drain on the south end of the pad. As mentioned, this is plumbed back to the headworks.



The shot below is another overview, this time from the north end.



They get the “bulking agent”, in this case, wood chips, probably from the local power company (?) when they go around trimming tree limbs away from their power lines. Other sources could be lumber yards, tree surgeons, tree farms, nurseries, etc.

## Cool Idea of the Month, July 2011, cont.:

Here's the result of their first exercise in composting. On the date of this shot in June, 2011, the composting is complete. There's the RV park going in across the way. The pile does look a little menacing with its long-shafted dial thermometer eyes, doesn't it? 😊 Glenn says it gets hot in there! It kind of reminds me of a brown Pac-Man® character, which is appropriate, don't you think?



Composting is all about bacteria eating the goodies out of the biosolids very rapidly. Yep, Pac-Man®. Let's go on to the next level.

This particular first pile was formulated at about 50-50 sludge to chips. Glenn says this turned out to be too much chips, not enough sludge mass. The next pile (shown on page 5) is going to be about 2:1 (sludge to chips).

Now Glenn wishes somebody would donate a screener-shaker so they can recycle their chips. Good luck with that, Glenn!

## Cool Idea of the Month, July 2011, cont.:

A big dam **Saaaalute!** to the City of Pomeroy and the Kingfisher himself, Glenn Davis and his crew for taking the snorting bull by the horns and executing this project.

**Plan ahead:** Now, if any more of you are thinking about doing a project like this, you should read Ecology's Biosolids Management Rule in its entirety, located here:

<http://www.ecy.wa.gov/biblio/wac173308.html>

There's a lot of fine print in there, and they're dead serious about it. In fact, if you're an insomniac, well, you know the rest, sweet dreams! 😊

Contact your regional biosolids coordinator (after you read the Rule and FAQs) for details—he/she can interpret some of the legal lingo in there, and, from my experience, would much rather help you up front with that, than to jump on your back later.

Here's the Biosolids Home Page: <http://www.ecy.wa.gov/programs/swfa/biosolids/>

**Read the FAQ's before contacting a coordinator.** They're extremely busy doing what they do, much of it in the field.

Here's the Biosolids Contacts Page: <http://www.ecy.wa.gov/programs/swfa/biosolids/contacts.html>

While we're on the subject of Biosolids: If your organization isn't already a member of the **Northwest Biosolids Management Association**, you should consider joining. Maile Lono-Batura, Executive Director of NBMA, and her crew do a fabulous job of keeping us all informed about what's going on in their world. Their home page is here: <http://www.nwbiosolids.org/>

## Cool Happenings:

Last issue Carl Jones and I explored Washington State wastewater trivia. One of the items was about

**“Most unique feeding of activated sludge bacteria during low flow periods:”**

**Rogena Johnson, Water/Wastewater Treatment Supervisor in Goldendale, WA, sent a follow-up email on the subject, quoted with permission:**

*We have fed dry molasses to our bugs. We got it at our local grain supply, readily available, easy to handle. One BONUS with the molasses is that it came in buckets that we "recycled" for screenings!! ;)*

*We tried dog food ONCE a nightmare just floated around was more of a problem than we wanted to deal with.*

*Most UNIQUE, cherry syrup! And best price too, FREE! All we had to do is go pick up the bins of it from the cherry growers in The Dalles. We only did this a few times . . . quite a sticky situation!! ;)*

*But bugs are like your children and when they are hungry, good operators are willing to go do what they can to feed them and also stay in budget. You just have to be resourceful! What might be a problem at one plant could be a godsend for another, forming partnerships are a good idea.*

*Rogena*

**Very well said, Rogena! And a big dam Saaaalute! to you. And somebody told me recently that wastewater treatment wasn't interesting. Ha! Fie upon the unbelievers. 😊**

## Some Humor for the, um, “mature” cats:

I want to talk to you older guys who get in trouble when you try to help. I'm talkin' about when you see your wife or your kids strugglin' to do somethin', and you butt in and say "Here, give me that."

They think you're trying to show off, be a know-it-all, tryin' to inflate your ego. Nothing could be farther from the truth. Your ego is under so much pressure, the last thing you want to do is inflate it. And your wife of course has that ego pin that she keeps handy.

No, no, when you say "Here, give me that", you're trying to save them from that painful learning curve you've gone through. You know that when something's stuck, or doesn't fit, or isn't straight, you just haven't hit it hard enough yet.

At our age there's almost nothing that we haven't dropped, hammered, rolled, driven through, smashed, cut too short or burned. We have this vast knowledge to share, and, we want to save our loved ones from the pain and injury. You see, on them a cut or a bruise is an unsightly blemish. On us, it's just one more knothole on an already very blemished tree.

So just tell your family the next time you say "Here, give me that," you're not trying to be the star, you're just offerin' to take one for the team.

Remember, I'm pullin' for ya; we're all in this together.

Red Green View some hilarious videos from the Red Green Show here: [http://www.il laugh.com/the red green show](http://www.il laugh.com/the_red_green_show) (Copyright © iLaugh. March Entertainment. All Rights Reserved. )



## Articles of Interest:

A while back, an operator suggested I do an article on **Lagoon Systems**. It's a huge subject, but a quick Google® search yielded up an excellent article. This is major, **Believers of the Simpler Way**. Read this, remember 1/5 of it, and you'll know more about wastewater lagoons than anybody on the block, maybe in town! Located here: [http://www.nesc.wvu.edu/pdf/WW/publications/pipline/PL\\_SP97.pdf](http://www.nesc.wvu.edu/pdf/WW/publications/pipline/PL_SP97.pdf)

This article tells you how lagoons work, what can go wrong, the various kinds of lagoons, even what the colors mean in healthy or sick lagoons. Here's a link to the archives of **Pipeline**, a newsletter copyrighted by the NESC (National Environmental Services Center), funded by the EPA (that's your taxes and mine).

### **Pipeline** : About *Pipeline*

Popular with small community officials, citizens, maintenance and inspection personnel, and community educators, each quarterly issue of *Pipeline* focuses on a single wastewater topic and presents it in an easy-to-read format.

**A list of all archived issues of Pipeline is here:** <http://www.nesc.wvu.edu/pipeline.cfm>

**There are a lot of good articles available there, especially for small communities.**

**Quoting from:** <http://www.nesc.wvu.edu/media/background.cfm> : (talk about trivia)...copyright NESC 2011... See the page for all of it—I culled out the drinking water bullet points.

### **“Water and Wastewater Infrastructure Facts**

Clean, safe drinking water and adequate wastewater treatment are two of life's basic necessities. Properly functioning water and wastewater infrastructure are, therefore, critical to public and environmental health.

Progress is Ongoing

For most of us, it's easy to take water for granted. But not that long ago, most people didn't have indoor plumbing.

- As recently as 1950, a quarter of America's homes had no flush toilet, with some states topping 50 percent. i
- California has the highest number of housing units using outhouses or privies (67,865). ii
- Other states with large numbers of small community housing units using outhouses/privies are: Kentucky (55,764), Pennsylvania (47,902), Missouri (46,223), and North Carolina (45,461). iii
- In the 2009 update to ASCE's Report Card for America's Infrastructure, both water and wastewater were given a grade of "D-." v
- There are up to 75,000 sanitary sewer overflows per year in the United States, resulting in the dis-

## Articles of Interest, cont:

charge of 3-10 billion gallons of untreated wastewater. vi

- Approximately 671,000 (0.64%) households lack complete plumbing facilities, dropping from 721,693 (0.78%) in 1990. This is approximately 50,000 fewer households than in 2000. ix

**Much of this improvement can be attributed to federal infrastructure investment.**

- Clean Water State Revolving Fund (CWSRF) has funded over \$68 billion, providing over 22,700 low-interest loans to date. xi

### **Challenges for Small Water and Wastewater Systems**

- 77 million people live in small communities. 2.3 percent of housing units in small communities have incomplete plumbing facilities. This amounts to nearly three quarters of a million homes that have inadequate plumbing. xiv
- There are 11.7 million housing units in small communities served by public sewers, 19.8 million use septic tanks or cesspools, and 917,373 use outhouses or privies. xv

### **Aging Infrastructure**

While significant progress has been made, a number of challenges confront communities as they try to safeguard public health. In many communities, water distribution systems and wastewater collection systems are 40 or 50 years old; in some, they date back more than a century.

- U.S. drinking water and wastewater utilities are responsible for an estimated 800,000 miles of water delivery pipelines and between 600,000 and 800,000 miles of sewer pipelines, respectively. xviii
- Between 35% and 45% of U.S. surface waters still do not meet current water-quality standards. Many of the nation's urban sewage collection systems are aging; some sewers are 100 years old. Many systems have not received the essential maintenance and repairs necessary to keep them working properly. Pending federal regulations to manage sanitary sewer overflows would impose an additional total cost for all municipalities of \$93.5 million to \$126.5 million each year. xxiii

Sources: i US Census Bureau; ii US EPA Office of Wastewater Management; iii US EPA Office of Wastewater Management; iv New York Times; vi US EPA Aging Water Infrastructure Research Program; ix U.S. Census Bureau; x US EPA Federal Register Environmental Documents; xi US EPA Office of Wastewater Management; xiv US EPA Office of Wastewater Management; xv US EPA Office of Wastewater Management; xviii United States Government Accountability Office Report GAO-08-687T, the American Society of Civil Engineers; xxiii American Society of Civil Engineers<sup>9</sup>

## So you don't have to ask, revisited:

Last issue I told you where I got replacement hard drives and a power-backup unit. Mike Barnett, Manager of the East Wenatchee WWTP (operated by the Douglas County Sewer District) gave me a couple more online computer vendors of note: He says:

If you price shop, I have ordered quite a few parts from <http://www.newegg.com/> & <http://www.zipzoomfly.com/jsp/Home.jsp> . Thought I would pass that along as it could save you a few dollars.

Mike

Thanks Mike! Now I'll go in and find out how much money I could have saved. 😊

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Hey! Keep up the good work! See you next time.

New subscribers: Click on the White Raven on the title page and check out the Personal Pics button for more photos, including some of my other wastewater work. Not selling anything—honest! Used to, but not now.

All the best to you and yours,

Darrel Fleischman

P.S. If you want off this list for any reason, just let me know. I'm still missing some of the "old" members, so if you know of anyone who'd like to get back on this wagon, tell 'em to email me.

P.P.S. All previous newsletter issues are available by email, except the very first one, which was lame anyway.

P.P.P.S. Feedback is welcome, both positive 😊 and negative 😞, so let me have it! You and your opinions are appreciated.

P.P.P.P.S Three parting shots from my recent vacation on the next pages.

**My Brother-in-law, Fred, says in the area where they live (near Bliss, Idaho), the many fish farms there produce 70% of all the trout used in restaurants in the USA. The one pictured below is one example. Those funnel-looking things contain fish food. Notice the man-made wetlands in the background for treating their wastewater.**



**This farm is located in the 1000 Springs Hydro Project in the Hagerman Valley. 1000 springs (or more) pass through the fractured basalt. Much of the water is collected for irrigation, and to produce hydro power (duh!). Digital photo, 6-18-2011.**

**Here's some of the major runoff water they didn't collect at 1000 Springs this year. It runs directly into the Snake River... (digital, 6-18-2011)**



**...And here's a beautiful dawn photo of the Hagerman Valley from the same day. That's the mighty Snake River in the background...(digital). Enjoy!**

