

# How Much Water?

Ms. Analogy translates Coburg power plant numbers.

I have a master's degree – in science. One might assume, therefore, that the voice of an authority reciting gigantic numbers would barely reach my eardrums before I'd nod with complete understanding. Instead, my cortex locks up, my eyes fade to the left, and the heat of anxiety begins to creep up my neck.

Enormous numbers are lovely things to have and to use. For example, I'd like to see them in my bank account. But if we're talking tons, light years, millions or billions of anything, my first attempt to understand such a size leaves me mumbling the huge understatement, "That's a lot."

The colossal amount of water the proposed Coburg power plant could use is an example of numbers beyond my mental reach. I need the help of my friend who is known to many as Ms. Analogy. Without her, I'd be awash in a sea of numbing numerals. I have her on my speed dial, and luckily she was available.

I asked her to demonstrate the average amount the power plant could draw from the McKenzie River, which is 6.46 million gallons per day. Since childhood, my friend Ann has always been there for me. She usually avoids football field comparisons, because, after all, they've been done to death. However, since they're such an easy way to jump between the parallel worlds of Numbers and Real Life, she warms up by popping out a quick one.

"OK, here we go. Close your eyes so you can focus completely. Imagine a visit to Alton Baker Park for a day in the sun. You arrive at the parking lot, and begin to walk toward the river. Standing in your way is an aquarium the size of a football field. To look over the top you'll need to climb 18 feet. It took one day to fill."

Words failed me, so I squeaked out a "Wow!"

I had to admit I was stunned with the thought of how much water would be gulped in one day. But I'd like an analogy that's less jock-like. Besides, I need to understand how fast that amount of water would flow.

I asked her nicely, "How about the 75 gallons of water it could pull out of the McKenzie in one second?"

"Firefighters need a big tanker truck called a tender to bring water to a fire that has no water source," she replies. "They usually have a 2,000-gallon capacity and carry a 500-gallon per minute pump. Once the intake hose is in the river or lake and ready to pump, it takes them four minutes to fill the tank. If we used the flow rate the power plant commands, how long do you think it would take?"

"Uh. Well. Maybe it ..."

"That would be 27 seconds."

I could hear the whoosh.

A while back, I called Mark Lepine, utility analyst at the Springfield Utility Board to confirm the average amount of water a Springfield residence draws per month. It's about 9,000 gallons, which is similar to the EWEB residential consumption amount. I asked Ms.

Analogy to demonstrate the power plant's monthly consumption compared to residential usage.



realize how many elephants that would be, since they don't congregate in such numbers, so picture them lined up grasping trunk to tail. The line of elephants would begin 90 miles south of Carmel, Calif., then head north 727 miles to the first elephant sipping from the McKenzie at Armitage Park. Of course, they'd all have to hustle to the park in one day's time."

The elephant analogy creates quite an amazing mental picture, and I smile while I think about it. But I have to admit, I prefer the 18-foot aquarium analogy with the dimensions of a football field.

*Barbara Allen is a freelance writer and a retired special educator. Her thanks go to Lou Woodford, a retired math teacher and former Springfield Teacher of the Year, for checking the math used in this article, as well as to Todd Trigsted for his skill at turning words into pictures.*

"While a home in the Eugene-Springfield area uses an average of 9,000 gallons a month, the power plant could use 196 million gallons. A quick calculation shows the water plant's monthly consumption could equal the current water use of 21,841 residences, or about the same amount of water as all the residents in Springfield collectively."

"Whoa!"

Once I started thinking about home water usage, I remembered how both SUB and EWEB promote water conservation. Jill Hoyenga, water management specialist for EWEB, told me their yearly conservation goal for residential, commercial and industrial customers is 100 million gallons a year. In 2003, EWEB customers conserved 109.8 million gallons by fixing leaks, installing water-miser toilets and showerheads, not running water while brushing their teeth, upgrading washing machines, etc.

I prodded Ms. Analogy, "What about those 109.8 millions gallons of water the customers worked so hard to save?"

"I won't bother with a fancy analogy. Instead, I'll just divide that number by 6.3 million gallons, which is the amount of water the power plant could consume in a day. The power plant could guzzle 2003's hard-won savings in just 16 days."

The cumulative effect of Ann's analogies makes my head smoke. Now I can visualize millions of gallons of the McKenzie being sucked away from recreational users. Fish would have less water to live in. Threatened spring Chinook salmon and bull trout might face greater risk during low flow periods.

Instead, this power plant would voraciously devour part of our McKenzie River. It's not a hydroelectric plant that uses and returns the water to the river. This gas-fired power plant would evaporate most of the water, which would then mix with 1,151 tons of criteria air pollutants. The air we breathe and the rain that falls will be dirtier. We're so proud of our wild, blue McKenzie. How could this happen?

Local utilities have no current plans to purchase the power plant's electricity, and our projected needs over the next 20 years are far less than the amount the plant could produce. Plus, an out-of-state corporation would receive the profits from the sale of this power.

Former County Commissioner Tom Lininger couldn't have said it better: "They get the solution, and we get the pollution."

"I'm beginning to wish I'd never called you, Ann."

"Well, look at it this way," the queen of analogies replied, "Analogies don't have to feel gloomy. Pick an animal and we'll end this conversation on a happy note."

I've always loved elephants, so it took me half a second to say, "Elephant. A big bull elephant."

"OK. An average African bull elephant drinks 50 gallons of water a day. That would be about 130,000 elephants drinking the power plant's daily consumption. You may not

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