YANCY
LIND

OTHER VIEWS

Snake River dams must be removed

Despite the claim that dams are a form of clean, renewable energy, they are being removed in many places across the country due to their lack of cost-effectiveness and dramatic negative impacts on ecosystems.

Four power-generating dams on the Klamath River are slated to be removed next year, the largest dam removal project in U.S. history.

The Columbia River and its tributaries once held one of the world's greatest runs of anadromous fish, including multiple species of salmon, steelhead and pacific lamprey. The Snake River, which joins the Columbia, and its tributaries were the spawning grounds for many of these fish. Today, these runs are threatened with local extinction.

There are many reasons for the dire outlook for Snake River anadromous fish. Poor ocean conditions due to global warming, pollution, excessive harvest and genetic degradation from breeding with hatchery fish all play a role. The independent scientific consensus, however, is that the lower four dams on the Snake River are the primary issue and they must come out to avoid losing these fish.

It is true that interests vested in the operation of the dams have produced reports purporting to show the dams are not the issue. For decades, the U.S. Bureau of Reclamation, Army Corps of Engineers and the utility industry have released studies and plans for addressing the collapse of Snake River Basin salmon and steelhead. The courts have repeatedly stated these are flawed and ordered corrections, orders that have largely been ignored, leading to a cycle of constant litigation.

In 2020, the state of Washington released a report stating, "Today, Washingtonians stand at a fork in the road with a clear choice: Continue with current practices and gradually lose salmon, orcas and a way of life that has sustained the Pacific Northwest for eons. Or, change course and put Washington on a path to recovery that recognizes salmon and other natural resources as vital to the state's economy, growth and prosperity."

In May of this year, a study co-authored by scientists from the Oregon Department of Fish and Wildlife, the Idaho Department of Fish and Game, the National Marine Fisheries Service, Oregon State University and U.S. Fish and Wildlife, among others, stated the dams must be breached to save these fish.

Last month, the White House announced the release of two new interagency draft reports stating at least some of the dams must be removed along with other actions to "restore the health and abundance of Pacific Northwest salmon." These reports also detail steps that must be taken to offset the loss of power generation from the dams while meeting state and federal clean energy goals. These reports are drafts and the utility industry is lobbying to have their conclusions changed. Doing so would make them political, not scientific documents.

Breaching dams will require changes for many. It will require investments in a variety of areas and collaboration by a wide range of stakeholders. As the White House report states, however, "the region can continue to reshape its future through strategic investments, ongoing science and related actions that help ensure a sustainable and resilient basin that better serves all communities in the basin."

We need to ask ourselves some fundamental questions. Do we value a healthy Columbia River ecosystem? Do we value anadromous fish and the many benefits they provide to humans and the animals that rely on them as a source of food? What legacy do we want to leave to future generations?

Do we want to witness the final collapse of what once was a marvel of the natural world? We know we can make a positive change and include everyone in its benefits. Will we?

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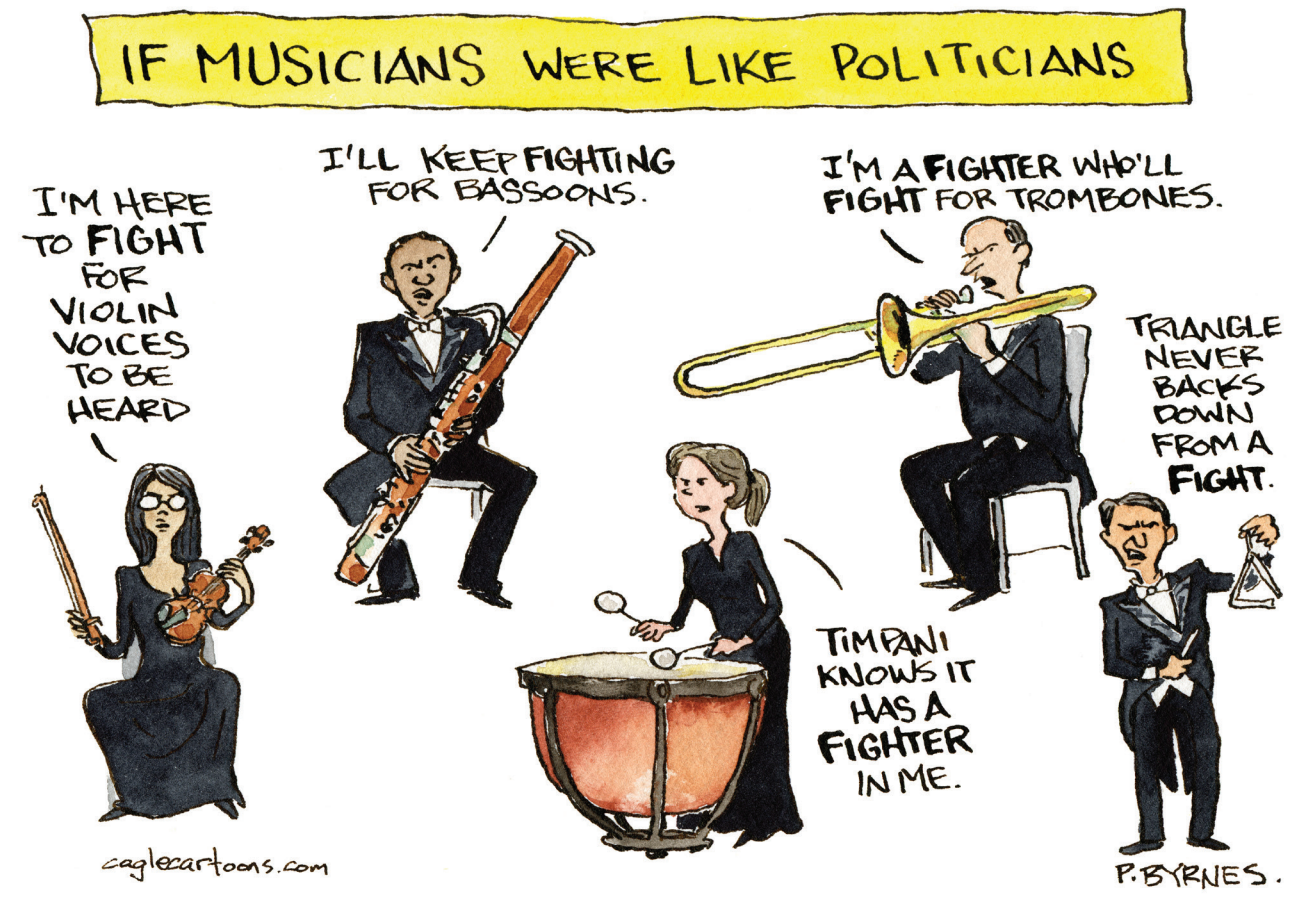
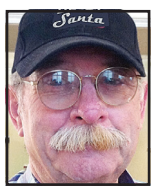
Yancy Lind lives in Tumalo and blogs about water and fish at www.coinformedangler.org.



Tick, tick, tick



J.D.
SMITH

FROM THE HEADWATERS OF DRY CREEK

OK, you just spent the afternoon adding to your guess-what-bird-I-saw-today list by walking a mile though the brush along the river.

It was a hot day, so you are changing out of your sweaty duds and admiring your image in a mirror when you notice a new mole just below your belly button. You move a little closer to the mirror, stand on your tippy toes, and realize that the mole has a silver-brown sheen and, aw Jeez, legs. The temple of your body has been invaded by a parasite and it is dining on your vital fluids.

Tick alert. Quick, get the critter off your skin, but how?

First, a bit of soft science. There are roughly 800 types of ticks on this planet. A hundred of these can carry disease to warm-blooded critters, including humans. Not every tick carries a disease. Of the hundred types, five species will be found in the Pacific Northwest. These are the Rocky Mountain tick, the American dog tick, the brown dog tick, the western black-legged tick and the relapsing fever tick.

Ticks are not insects, they are arachnids, eight-legged, like spiders. They go through four stages of life — egg, larva, nymph and adult. It takes about two years for a tick to hatch from the egg, go through the other three stages, reproduce, then die.

Eggs hatch into six-legged larvae called seed ticks, about the size of the period at the end of this sentence. A larva finds blood, dines, drops to the ground, molts and becomes an eight-legged being without sex organs called a nymph. The nymph also finds a host and sucks blood, sometimes morphs into yet another kind of nymph, and eventually changes into the adult that ended up on your belly. Adult females are larger and more colorful than males. Females find a blood feast then mate, lay eggs and die. Males live to mate several times.

The tick found your temple of flesh because, like mosquitoes, they gravitate toward carbon dioxide, which is given off as a waste product in mammalian sweat and respiration. Wacky arachnologists collect ticks by setting out chunks of dry ice that are pretty much solid carbon dioxide. If you have ever carried dry ice into the woods to freeze your trophy trout, you have probably come home with ticks.

Ticks do not jump or fly, but they can crawl ten yards to a blood source. Their usual business model is to hang on brush in a state of slumber, sometimes for weeks, until the carbon dioxide sensors in their front pair of legs trigger them to hitch a ride on a warm-blooded passerby.

The business end of a tick consists of two pincer-type mouthparts, one on each side of a little harpoon thingy with recurved teeth on it, like on a fishhook. The harpoon is called a hypostome. The tick grabs onto your belly with its feet and pincers long enough to force the harpoon through a couple of layers of tissue until it hits blood.

An anticoagulant lubricant is secreted, the little pump mechanisms in the tick's body are switched on and the blood is drawn through a straw-like mechanism in the hypostome. A fully gorged female tick can hold 50 times its dry weight in blood.

Ticks do not manufacture the toxins that cause disease in humans. They are unwitting hosts to other life forms that they contracted while nymphs. It is those little life forms that hitch a ride in the anticoagulant juice and into your bod.

My license as junior tick scientist does not allow me to explore the complexities of how these critters can cause fevers, rashes, chills, paralysis and even death. That is for others, like medical professionals, up the pay scale. Suffice it to say that North American ticks could be carriers of Lyme disease, Rocky Mountain spotted fever, tularemia, relapsing fever and tick paralysis.

Now, back to the tick on your belly. Don't fry it with a match or smother it with petroleum jelly. If you have blunt tweezers, find them. If you intend to use your fingers, it is probably best to cover the tick with a chunk of toilet paper or plastic wrap because some tick fluids can permeate human skin. If you didn't catch the fevers from tick spit while it was dining on you, you could possibly absorb disease-causing bacteria through your finger skin.

Grasp the tick as close to the skin as possible, then pull the critter steadily away from the skin.

Remember, you are trying to pull a tiny harpoon/horseshoe rasp out of your skin. A steady, careful pull has been shown to be the best way to retrieve the hypostome without breaking it off in your skin. Once the tick is removed, apply an antiseptic like rubbing alcohol or whiskey to the bitten area, both of which can also be used to pickle the tick, if that is the way you want to send it to the grave. My preferred method of tick disposal involves an ashtray and a cigarette lighter turned up high enough to weld.

Only you can prevent tick bites. Here are a few ways. Stay out of the woods, grasslands or near any shrubbery. Avoid nudist weddings. Check your dog for ticks so it doesn't bring them home in its fur. Wear light-colored clothes so you can spot a tick before it finds your skin. Walk in the center of the trail. Use DEET, which has its own health hazards.

Or, if you are of the tree-hugging shade-grown persuasion, try citronella, eucalyptus, peppermint, lavender, cedar oil, canola, rosemary or pennyroyal, all of which mask the carbon dioxide your skin emits, but leave room in your pack for a 50-gallon drum of the essential oils, because they must be applied every 30 minutes to be minimally effective.

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J.D. Smith is an accomplished writer and jack-of-all-trades. He lives in Athena.

Community should care how Port of Morrow fulfills role as environmental steward

BRIAN
MAAG

OTHER VIEWS

"Those who are in charge at the Port of Morrow need to stand up and publicly respond to what was an apparent decade-long plan to ignore state rules."

— East Oregonian editorial July 12, 2022

Since 1986, when the Port of Morrow began using industrial wastewater for farm irrigation, there has been constant and consistent improvement. The port hasn't ignored state rules, which incidentally promote wastewater reuse. Instead, the port has sought to follow science in support of responsible farming practices.

To comply with environmental and health regulations, the port installed networks of monitoring wells at the three farms irrigated with wastewater, including municipal wastewater from the city of Boardman. In coordination with ag experts and partner farmers, port-supplied irrigation water has been used in innovative ways to cultivate higher-value crops and avoid use of commercial fertilizers.

Since 2007, the port has invested over $45 million in capital improvements to maintain compliance with state rules.

- In 1994, the port constructed a 196-million-gallon pond to store water during the winter.
- In 2007, East beach wastewater line extensions.
- In 2010-2013, the port upgraded piping so all industrial wastewater would be processed through the storage pond, allowing for greater consistency in water applied as irrigation.
- In 2011, the pond was reconfigured into large and small sections. The smaller section is used as a surge basin to aerate wastewater. The larger section enables water storage for critical times in the growing season.
- In 2012, the storage pond was further expanded.
- In 2015, ConAgra Wastewater Pretreatment.
- In 2014 and 2015, more than 1,000 acres of additional farmland was piped to receive processed wastewater from the port, with an eye toward reaching cropland that could absorb processed wastewater without contaminating groundwater.
- In 2017, expansion at the Madison Ranch added a new 350-million-gallon winter storage pond and 2,822 acres for land application.
- In 2018 to current, digester in construction.
- In 2021, land application was added at the Mader-Rust farms with an additional 1,600 acres.
- In 2021, wastewater piping extension and replacement.

The Department of Environmental Quality's decision in 2017 to modify the port's permit to apply industrial wastewater for irrigation changed a fundamental dynamic of the program — distributing wastewater year-round to support crop rotation. Suddenly, the port needed to find a way to store 1.3 billion gallons of winter wastewater in a pond with a 256 million-gallon capacity.

With port support, Oregon State University has undertaken an independent five-year study to determine the sustainable use of irrigation in the Lower Umatilla Basin, which includes Morrow, Umatilla and Gilliam counties. This is in the context of a water quality problem caused by the drawdown of groundwater for public drinking supplies and farmland irrigation dating back decades. The study is looking at farmland irrigation generally and specifically examining how to make the port's wastewater reuse program for irrigation more sustainable.

This is not the port's study. But port officials are paying close attention to its informed findings to shape their further actions. Meanwhile, the port's strategic plan calls for expansion of its anaerobic digester, larger storage capacity, capture and reuse of methane from processing wastewater and other innovative strategies. The port is self-financing these investments while seeking federal and state funding to cover their full cost.

It's worth remembering what else the port does in our community. The port continues to expand its role as a regional trade hub that supports and benefits local farming, industry, and workers. Port and port-related businesses have brought in over 8,000 jobs to our area. It is the second-largest port in Oregon behind the Port of Portland with an annual economic output of more than $2.5 billion.

Finally, the port continues to join with community partners to address housing needs, commercial development, local services and other improvements that enhance the region's quality of life.

The community should care how the port fulfills its role as environmental steward. Asking questions and getting answers is constructive. Solving the region's serious, decades-old water contamination problem is imperative.

Cooperation and collective action is the path to the solution. Science should be its guide. The port will be its willing partner.

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Brian Maag is the president and co-founder of Boardman Foods, a tenant and member of the Port of Morrow business community since 1992. Boardman Foods processes ingredients for some of the largest food companies and relies heavily on the production of the agricultural community in the Columbia Basin.