

COMMENTARY ON ISSUES THAT MATTER IN THE NORTHWEST



1984



2006

GARY BRAASCH

"End of summer" photos taken in August 1984 and September 2006 document shrinking glaciers on Mount Hood. Portland State University glaciologists say summers are now longer and the onset of snow is later, creating a later summer snowmelt. Glacial loss means less snowmelt available to provide flow for streams throughout the region. Lengthened dry seasons stress streamside vegetation and make water-quality problems ever more acute.

Evolve or die: It's crunch time for the Willamette River

Smart software and a stakeholder process can help rescue our freshwater future — if we pull together soon

By JOE WHITWORTH

It's time to write a new chapter on the Willamette's woes — the solution chapter. And not a moment too soon, because our reliance on this resource runs deep and grows increasingly strained.

The Cascades have lost half of their April 1 snowpack since 1955 and will lose half again within a generation. Most of our freshwater systems are compromised, lacking the resilience to meet the basic targets of the Clean Water Act, much less deal with climate change. Add to this the absorption of a million new Oregon residents by 2025, and we will see unprecedented pressures on water health.

As if these concerns are not sobering enough, consider the water content of the products we enjoy: It takes 31 gallons of fresh water to grow and process the grapes for one glass of wine, 1,857 gallons to produce one pound of beef, 2,800 gallons for a single pair of blue jeans. Every product on Earth has water in its supply chain. And water reaches every part of our lives, so it is central to our long-term prosperity.

Yet each time we touch water, we alter it. And in the state's most populous basin, we have dramatically altered how the Willamette River functions. We removed streamside vegetation to fit in more crops. We built dams and dikes to drain fields and change flood patterns. We cut roads and cut slope-stabilizing trees to build houses. And our economy prospered — in the short run, anyway — because of those choices.

Now, as we enter the long run, the consequences of how we've used our watersheds and waterways have come into focus: Runoff of pollutants, erosion and overheated streams mean degraded water quality and impaired aquatic habitat. Because tributaries and rivers operate like veins and arteries, good spots here and there cannot correct accumulated negative impacts. We need contiguous, functioning stream zones that sweep across whole basins

Rivers in distress

Tests on about a quarter of Oregon's 115,000 stream miles found that 59 percent of those sampled failed to meet one or more federal Clean Water Act standards. Based on this sample, red lines on the map indicate "impaired waters." The Willamette basin, home to 70 percent of Oregon's population, registered a 58 percent failure rate.



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if we hope to correct current downward trajectories for fish, water quality and even economic prosperity. But right now, we are off-track.

In Oregon, we spend tens of millions of dollars on stream restoration annually and have done so for years. We have the country's most robust framework of watershed councils and conservation districts as well as committed resource professionals. We have a growing number of landowners interested and engaged in restoration projects.

The core problem — loss of streamside vegetation and basic in-stream habitat — and its remedies hold no mystery. We know what it takes to re-

store stream function. All this, and yet we have never recovered a fish listed under the Endangered Species Act. Nor are we on track to achieve freshwater health — on any timeline for any dollar figure.

Why? We have a systems problem: No matter how hard we work, we gain no efficiencies in our highly repetitive system of assembling restoration projects. Kind of like having to build a new chair every time you want to sit down.

For decades, and for good reason, agency regulations and funding procedures kept bad things from happening in-stream. Over time, however, these protocols have grown in a way that often keeps good things, like restoration projects, from happening ef-

ficiently. This stifles progress toward stream health and creation of local restoration jobs.

Certainly, we must assure quality work, but landowners looking to restore streams should not go through the same regulatory chute as those stripping gravel from streams. Even simple restoration actions often require multiple funding applications to numerous public agencies and private foundations, each taking several months, with mixed results.

Patchwork timing for funding and permit answers makes for tough restoration contracting. Add in the short in-stream work periods allowed under law, and projects get unnecessarily delayed, if done at all. This morass discourages participation from streamside landowners — particularly if it means taking land out of production [read: money out of pocket] to do the right thing for the resource.

Recognizing the need to break out of this process-heavy cycle, a small group of Oregonians set about developing a solution to this problem, an open-source software platform called "StreamBank" to translate across all agencies and funders, and dramatically accelerate the pace and scale of restoration. By embedding basin-specific, regulator-approved criteria into its code, the platform operates as a restoration "TurboTax" that brings one-stop-shop efficiencies to an otherwise highly repetitive and manual system without cutting corners on quality. Three pilot projects in the fall of 2007 cut some 70 percent off project-completion time compared with the traditional system for funding and advancing restoration projects. That turned heads.

One of those heads was Gov. Ted Kulongoski's, and in January 2008 he designated the StreamBank platform as an Oregon Solutions (orsolutions.org) project, noting that "a streamlined,

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Willamette: Delays, hurdles prevent progress at a faster pace

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web-based process that results in quality restoration projects will be a dynamic new tool for achieving a sustainable Oregon." He appointed Ken Bailey, a member of Oregon's largest cherry-growing family who also serves on the state Board of Agriculture, as the convener to work toward a consensus framework. Bailey said he saw the initiative as a way to "get us out of the 'blame-game' and start working to solve the actual problem. We're all trying to get to the same place, but a bunch of red tape stands in the way."

Private Oregon funds from Columbia Sportswear President/CEO Tim Boyle, the Jubitz Family Foundation, Bandon Dunes Golf Resort and Meyer Memorial Trust put another round of 17 locally managed projects on the ground in 2008, yielding similar results and drawing enthusiastic reviews from users around the state. In the Marys River near Corvallis, one project took only six months from start to finish. If done through a traditional grant/permit process, the same project would likely have taken 28 months from start to finish. That acceleration, when extrapolated over hundreds of projects, represents the magnitude of efficiencies required to get hold of our freshwater future.

In February 2009, the governor-sanctioned stakeholder process evolved into the Oregon Stream Restoration Partnership, a group of public and private entities committed to delivering enhanced and accelerated restoration projects for local restoration coordinators and private landowners. In the recent legislative session, the Department of State

Lands, with support from both the agricultural and conservation communities, successfully forwarded legislation that exempted certain types of restoration projects from permitting.

As in many other industries in the technology era, smart software allows us to take a highly repetitive task and pivot our efforts from *process to outcomes*, without taking shortcuts. By building agency requirements and funding priorities into the software, we now have the ability to turbocharge both the human and financial investments we make in restoration — to great effect.

A solution for the Willamette is now within reach. But we have to all pull together.

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Joe Whitworth is president of The Freshwater Trust, co-chairs the Water Subcommittee of the Oregon Global Warming Commission Natural Resource Committee and sits on the Oregon Agricultural Water Quality Advisory Committee.

An Oregon roadmap for healthier rivers

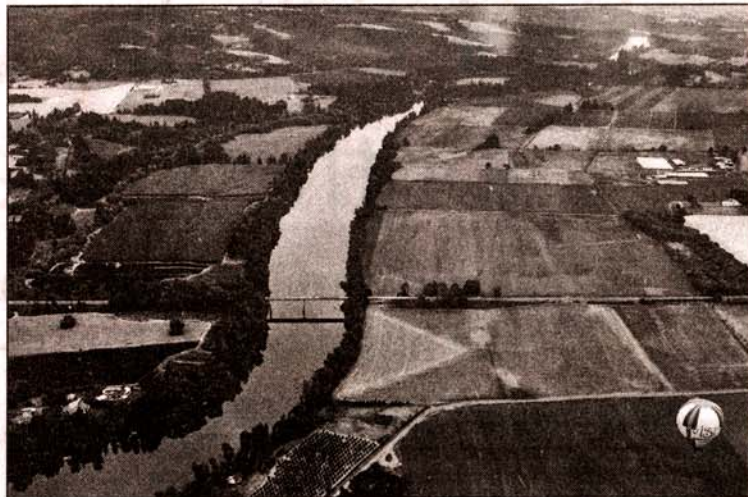
Generalized efforts at stream restoration can bring positive results, but the challenge before us is one of scale and prioritization. We must restore enough streams to ensure our freshwater has the resilience needed to meet the coming climate and population stresses. We need to prioritize and actually finish what we start in a given basin if we want someday to have the contiguous corridors of functioning streams necessary for real ecosystem resilience.

Today, mosaics of functioning and nonfunctioning sections typify most basins. We now have the opportunity to deploy an Oregon-built, Oregon-tested framework to accelerate a Willamette River fix while building a new model for conservation. The path forward will leverage proven Web-based technology (StreamBank) and rely heavily on strategic thinking from the Meyer Memorial Trust, Bonneville Environmental Foundation and Oregon Watershed Enhancement Board, and leadership embodied by the Department of State Lands and Department of Environmental Quality — all while energizing the local coordinators of this work.

Here is the roadmap.

Phase 1: Show the way

- The governor must reset freshwater expectations and demand the funding and permitting efficiencies to get there. A recent Presidential Executive Order on the Chesapeake Bay provides a good model from which to start.
- The federal government must get on board with this Oregon-led innovation and refocus agency effort on outcomes. The point — often lost in procedural fidelity — is to get freshwater health and recover fish.



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- Agricultural associations must agree to actively champion this restoration initiative.
- Conservation groups must foster a "we're all in this together" mind-set to incentivize rather than polarize agricultural and industrial sectors.
- Collectively, we must raise \$10 million in public and private funds for targeted use within the Willamette basin to model this new approach.
- Select two to four high-priority Willamette sub-basins, starting with the organizations participating in model watershed programs.
- Over 36 months, implement all known priority stream restoration actions on tributaries within the target basins; focusing on riparian function, fish-passage barrier removal, and common in-stream water quality and habitat restoration actions.

- As projects are implemented, quantify environmental benefit from the projects to better report actual gains in a consistent way.
- Engage economic impact researchers to track job creation and local economic impacts of restoration efforts.

Phase 2: Scale it up

- Pick the next round of basins and repeat until done. Finish by 2020.

Nowhere in this country have all known restoration actions within a large basin been fully completed. The state of the Willamette now requires us to respond to its clear signals and change course. And right here, right now in Oregon, by bringing all the right ingredients together, we can fix the Willamette River and show how to fix all the rest.

— Joe Whitworth