

# Building resiliency so the small ones can survive

**GUEST COLUMN**  
DOUG DOUGHERTY



In 1992, I became the principal of Cannon Beach Elementary School. During that first year, I discovered something that would come to change my career. I found a picture of the school in a closet.

The surrounding houses and even the bridge next to the school were destroyed and swept upstream over a quarter of a mile. What had happened? And why hadn't I heard about it? I learned that an Alaskan earthquake in 1964 had generated a distant tsunami that caused extensive damage along the Oregon coastline.

Soon after finding the picture, I read scientists had recently found evidence of an even more destructive seismic area just 70 miles off our coast called the Cascadia subduction zone.

With this information in mind, I created an evacuation route for our students to cross the bridge next to the school and hike up a steep hill. And with that, Cannon Beach Elementary School was among the first schools in the U.S. to conduct tsunami evacuation drills.

## Reconnaissance

Even so, the need to move the school was evident. As superintendent in 1998, I began discussions with the state's Department of Geology and Mineral Industries to commission principal researchers George Priest, Rob Witter, Chris Goldfinger and Joseph Zhang to conduct the first science-based Cascadia tsunami inundation study. They anticipated the study would take about two months, cost \$30,000, and go back 10,000 years.

After two weeks on the ground, I was informed that the initial findings were revealing inundation levels well over twice the assumed height. Our two-month study received additional funding from the National Oceanic and Atmospheric Administration and morphed into seven years, undergoing international peer review and publishing.

Our study confirmed that I needed to move all of our schools to much higher ground. Our study also became the reason for the earthquake and tsunami evacuation signs and maps along the West Coast.

No one can accurately predict when an earthquake is going to occur, but from Goldfinger's recurrence interval research, if we have not experienced a Cascadia earthquake by 2060 (just 39 years from now), we will have exceeded 85% of the known Cascadia intervals over the past 10,000 years. We are definitely overdue.

Because of our findings, it was recommended that we build a new campus on stable soils above 80 feet in elevation.

The only property that could meet these specifications was privately owned by international timber company Weyerhaeuser. After many discussions, Weyerhaeuser allowed me to conduct extensive geotechnical tests on over 1,000 acres of timberland.

Once the reconnaissance was complete, it was clear that only one 80 acre parcel could meet the Department of Geology and Min-



The Astorian

**Students, community members and voters in support of the Seaside schools bond measure march around downtown reminding voters to turn in their ballots in 2016.**

eral Industries recommendations. I met with Weyerhaeuser corporate executives who set the price for the 80 acres at \$4 million — and they made it clear they would not lower the price. We had no option but to include the amount requested by Weyerhaeuser in the bond.

## The most vulnerable school district

Meanwhile, seismic engineers evaluated each of Seaside School District's four schools within the tsunami inundation zone, all less than 15 feet in elevation, and discovered each school would experience catastrophic collapse in a Cascadia earthquake. These schools averaged over 65 years of age and had outlived their useful lives.

The Cascadia subduction zone only produces 8 and 9 magnitude earthquakes that last a devastating 3 to 5 minutes — and then only 10 minutes later the tsunami hits the shoreline. Typical wave heights from Cascadia tsunamis are 20 feet to 65 feet but can be as high as 100 feet.

Even if students could escape the building, they would be trapped since none of the bridges to safety were designed to withstand Cascadia earthquakes.

Because of this, the Department of Geology and Mineral Industries listed Seaside School District as the most vulnerable school district in Oregon.

## 2013 bond

With our tsunami study, reconnaissance maps, architectural drawings, transportation studies, enthusiastic key communicators and a Portland-based survey showing strong support for a \$128 million bond in hand, the board approved seeking a bond to relocate all of our schools to high ground. Despite extensive community outreach and having passed five consecutive local option levies, not owning the land and the \$128 million price tag caused the bond to fail, 40% to 60%.

The Cascadia time clock was ticking and I felt increasing pressure to try a second attempt at a bond. I leveraged state and national media to bring attention to our situation and put pressure on Weyerhaeuser to

reduce its price.

Oregon Public Broadcasting included my research efforts as a major part in their documentary "Unprepared." I was also interviewed by multiple national television programs, including PBS NewsHour and CBS Sunday Morning.

My work was a major theme in Kathryn Schulz's article in The New Yorker, "The Really Big One" that won her a Pulitzer Prize and her follow up article "The Really Small Ones" that focused on our 2016 bond effort.

It made a difference. In fact, after extensive negotiations and several non-disclosure agreements, Weyerhaeuser ended up donating the entire 80 acres of property for the new campus site.

## New bond price tag

It was clear from post-election surveys that the new bond price should be under \$100 million.

They also recommended remodeling rather than replacing the 1975 elementary school that is at 70 feet elevation, using the current turf fields for competitions, and cutting the performing arts building.

The board used the survey feedback to reduce the cost of the new bond from \$128 million to \$99 million. With these reductions, the cost was cut from \$2.16 per \$1,000 to \$1.35 per \$1,000 or by 37%.

As part of our campaign strategy, I created a bond campaign committee of about 40 community members that met weekly for several months at the Seaside Coffee House, working on website information, three focused mailers and learning to give presentations at neighborhood gatherings.

I personally held over 50 community meetings, ranging from civic groups to city councils to neighborhood homes.

In addition to our adult bond campaign committee members, I also trained high school students. They had grown up learning about Cascadia and experiencing tsunami drills. We used their experiences to create a presentation they could scale. They spoke at the state Associated Student Body conference, assemblies at other high schools

and I took them to present before the emergency preparedness subcommittee of the state Legislature.

## Partnerships

Despite the clear scientific evidence of need, I would not have been able to pass this bond without the connections and partnerships I made through statewide committees. Through leading the Coalition of Oregon School Administrators, I learned Oregon lacked state funding for seismic projects. This led to the creation of the seismic rehabilitation grant program.

As the advisor to the state Board of Education, I gained insight into state and federal politics. As governor appointed state commissioner on the Oregon Earthquake Commission, I represented all school districts, community colleges and universities. This allowed me to continue developing strong partnerships with the Department of Geology and Mineral Industries, Department of Land Conservation and Development, the Oregon Department of Transportation and the Office of Emergency Management. I don't believe I could have passed the bond without them.

## Getting personal

Once a school board votes to put forward a bond measure, Oregon election law prohibits school employees from advocating for the bond, but this one was different. I had to throw everything I had into relocating the schools.

No one else better understood the research, the rationale, the conditions, or the opportunities of the new location — so I decided to retire and lead the campaign myself.

The board of directors understood the importance of the relocation bond and approved my retirement, naming me superintendent emeritus so I could continue to lead the bond effort and assist with the final design and construction phases.

The strategists told us to raise \$20,000 for the campaign, so after we set up the political action committee, I personally donated \$10,000 to match all other donations. This raised the necessary campaign funding.

Because of the work of hundreds of community members, the 2016 bond passed overwhelmingly 65% to 34%.

Following the passage of the bond, I wrote and received a \$4 million seismic rehabilitation grant to retrofit the elementary school. The new secondary building was constructed to resilience Level 4 immediate occupancy standards and will serve as the long-term emergency evacuation shelter for our area. There is no other structure on the Oregon Coast that is Level 4.

I loved serving the communities of Cannon Beach, Gearhart and Seaside as their superintendent for 18 years, however I felt that my greatest legacy would be this effort to move our schools to a much safer location. I could not be more proud of our community for making a truly historic decision that will impact the lives of children and families for generations to come.

*Douglas C. Dougherty, Ph.D., is superintendent emeritus of the Seaside School District. This was part of a larger presentation at the state Coalition of Oregon School Administrators conference, held June 23 to June 26, in Seaside.*

## LETTERS TO THE EDITOR

### A gift for future generations?

I'm sitting here on the bay by the old Seaside High School, wondering what the proposed plan is for the property. As it sits, empty, run-down and sad-looking, I have memories of running my heart out on the track, endless soccer practices and science trips along the estuary.

Now, just north a piece of land sits quietly, gifted back to the Clatsop-Nehalem Confederated tribes. I wonder, as my kids play in the water in the melty, setting sun — if the property would ever be considered by the "owner" for donation to the tribes.

I notice several cars line the small parking area facing west, as the day ends and the birds make noise along the shore.

The people in those cars appear to all be native — hanging out talking, just relaxing in the sun's rays. It seems like an obvious thing to gift the area nearby back to those who struggle to maintain their culture, their sense of place in a vastly different world from the one not so long ago, where their ancestors dotted these shores.

In a world filled with deep uncertainty about the future,



Megan Lucas

**View from the area west of the former Seaside High School.**

wouldn't it be incredible to see some hope in the form of land being given back?

I think so. If the owner of the property reads this, maybe consider the impact it would have for generations — of all people. The message, the positive action to make right what has been wrong for so many generations is to make a reparation.

**Megan Lucas  
Nehalem**

### A systems approach to homelessness

I've heard it said that homelessness is such a difficult complex problem to solve. That sentiment can be used to justify throwing up our collective hands in frustration... or it can be a rallying cry to empower us to action. I vote for empowerment. My wife, Nelle Moffett, and I have spent the last few years collecting, sorting, weeding, and archiving infor-

mation from across the United States (and beyond) on the topic of solutions to homelessness... strategies that work, strategies that don't work, and strategies still being tested.

To me it just makes sense to learn from cities and counties that have actually driven homelessness to functional zero. And many jurisdictions have accomplished that goal. How? In a nutshell, success is built on a framework called a systems approach. This

approach has recently been showcased by the National League of Cities.

What is a systems approach? The National Alliance to End Homelessness says "communities should take a coordinated approach, moving from a collection of individual programs to a community-wide response that is strategic and data driven. Communities that have adopted this approach use data about the needs of those experiencing homelessness to inform how they allocate resources, services, and programs."

To be clear, this is not about agencies meeting monthly and sharing ideas. Instead, this approach involves tools such as a coordinated entry system, a shared data system, jointly solving issues, and more. A full description and examples of the systems approach can be found via <https://FriendsOfTheUnsheltered.org/systems>.

Please use your power of convening and your resources to coordinate all governmental and social services agencies to work together based on an integrated systems approach. Working together we can solve homelessness as many cities across the country are proving. Let's stop talking and get in real, effective action.

**Rick Bowers  
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