

# Seal Rock Water District

February 14, 2017  
One-Stop Meeting



## General Statistics:

- Service territory: 12.5 sq. miles
- District Water production: 5.5MG
- 7.5 MG from surface water
- 65 miles of pipe
- 2-1/2 million gallons of treated water
- Service population: 2,217
- Customer losses: 10% vs. 10% for
- Annual Water Sales Volume: \$5.1M



## Threats to Existing Water Supply:

- Limited water
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## What we've learned:

- Present supply is not sufficient to supply 10 years
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# General Statistics:

- Service territory: 12.5 sq./miles
- District Static population: 5,500
- 9-full time employees
- 65-miles of pipe
- 2-million gallons stored water
- Service connections: 2,517
- Customer base: 95% residential
- Annual Water Sales Volume: 95 - M/Gal





# Service to the community:

- ◆ Provide safe reliable drinking water to a growing community.
- ◆ District population increases to 8000 during summer months.
- ◆ Emergency interconnection with neighboring communities.
- ◆ Support for the regions local fire districts.



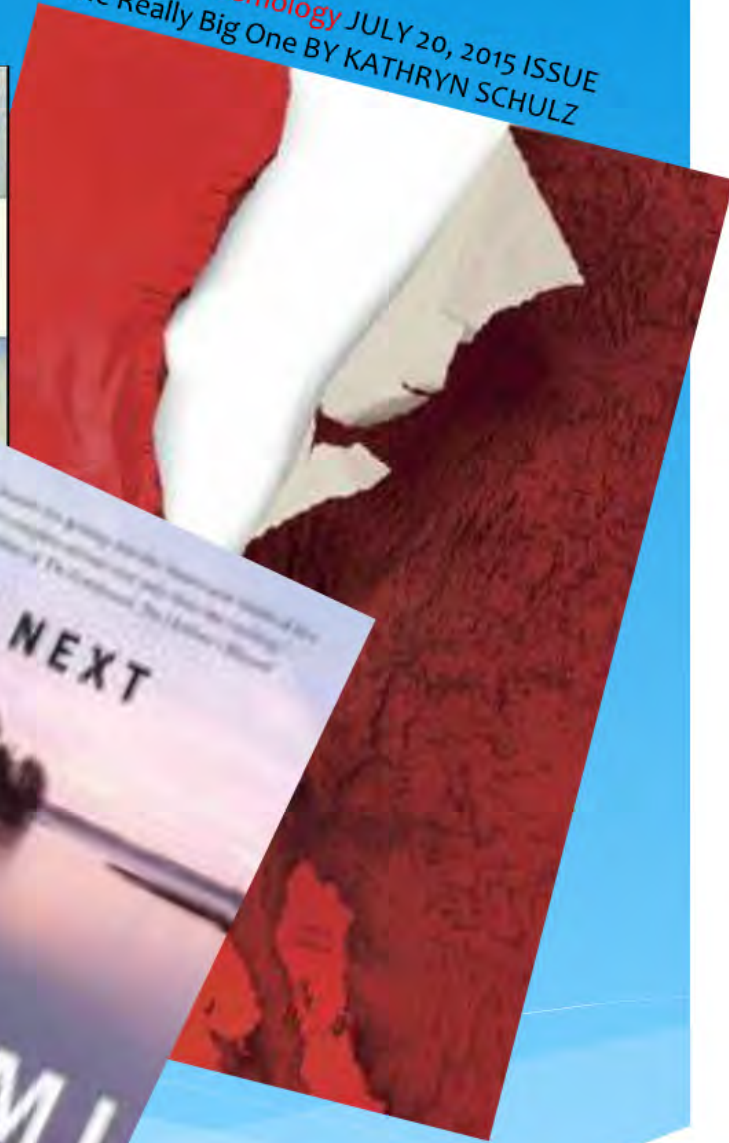


# Planning for a catastrophic event:

How to Stay Safe When the Big One Comes:  
By: Kathryn Schulz



Annals of Seismology JULY 20, 2015 ISSUE  
The Really Big One BY KATHRYN SCHULZ



**Lincoln County**  
Multi-Jurisdictional Natural Hazards Mitigation Plan  
Prepared for: Lincoln County, Depoe Bay, Lincoln City, Newport, Siletz,  
Toledo, Waldport and Yachats

A map of the state of Oregon with Lincoln County highlighted in a light green color. The map shows the geographical context of the county within the state.

**The Oregon Resilience Plan**  
Reducing Risk and Improving Recovery for the Next Cascadia  
Earthquake and Tsunami



Report to the 77<sup>th</sup> Legislative Assen  
from  
Oregon Seismic Safety Policy Advisory Commission  
Salem, Oregon  
February 2013

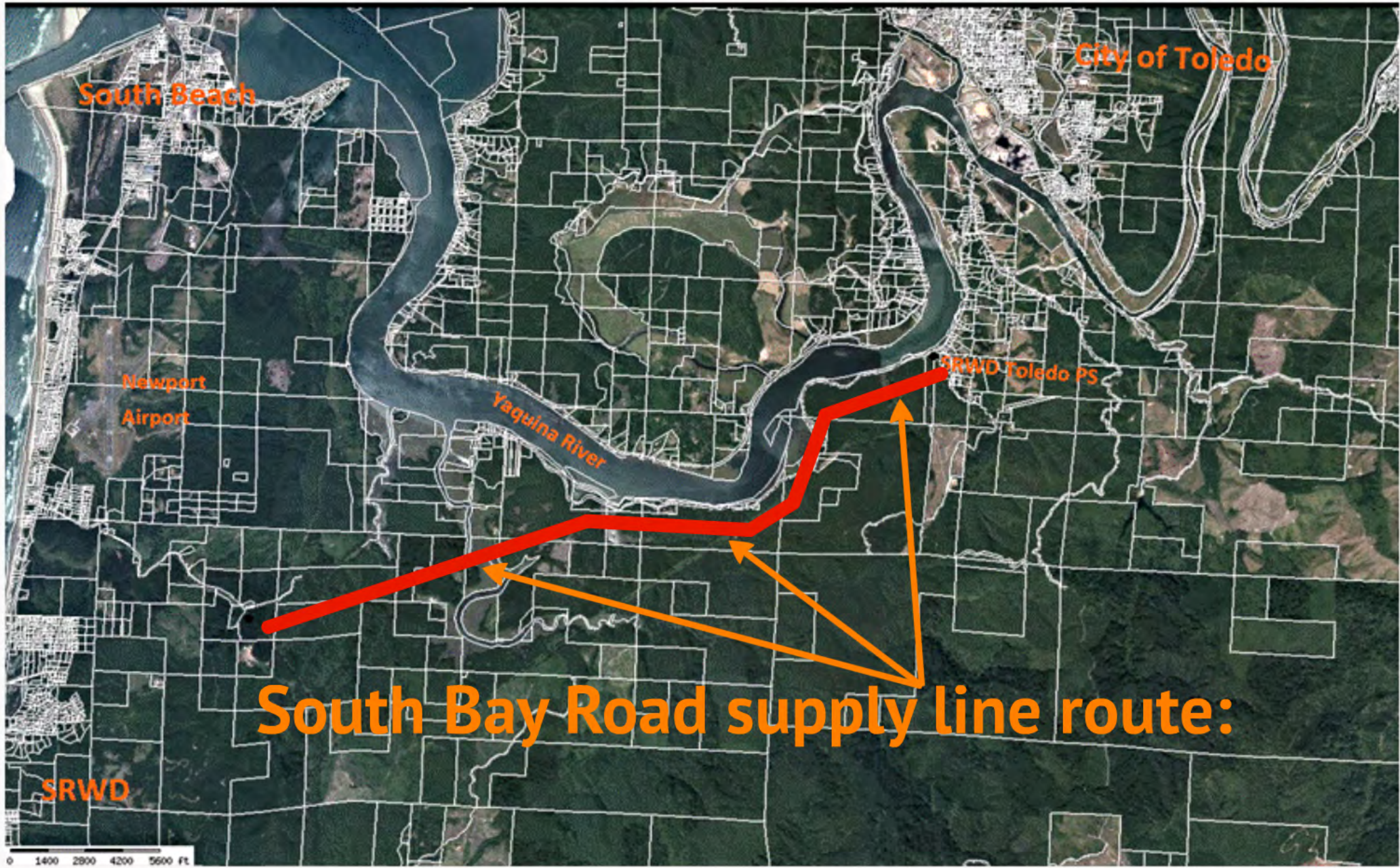
**THE NEXT**  
**TSUNAMI**  
Living on a Restless Coast  
DORRIS HENDERSON

The cover of the book 'The Next Tsunami: Living on a Restless Coast' by Dorris Henderson. The cover art depicts a sunset or sunrise over a body of water, with silhouettes of trees in the foreground.

Oregon Office of Emergency Management (OEM)  
January 25, 2017:

***"scientists predict there is a 40% chance that a megathrust earthquake of 9.0 magnitude or greater will occur in the next 50-years".***







# Threats to Existing Water Supply:

- Age and condition of supply line.
- Vulnerable to earth movement.
- Limited access.
- Liquefied soils, Pool Slough area.
- Location, adjacent to the Yaquina River.
- Multiple line failures/increasing frequency.
- Over a million dollars in repair costs.
- A Cascadia event would completely collapse the supply line.









# Existing Supply Line Conditions:



January 2016 Emergency Repair




# Recent Studies:

Final Report

## Reconnaissance-Level Source Water Study

Prepared for  
Seal Rock Water District



March 2015

Prepared by




**Civil West**  
Engineering & Construction

FINAL


## Phase IV Conceptual Design Report for the Seal Rock Water District Beaver Creek Water Supply

Prepared for  
Seal Rock Water District, Oregon

September 2016



1100 NE Circle Blvd Suite 300  
Corvallis, OR 97330-3538





***"Stakeholders agreed that use of Beaver Creek would have an immediate benefit to in stream flows on the Siletz River, currently considered critical by ODF&W due to the amount of withdrawals on the Siletz".***



# What we've learned:

- ◆ Recent analysis found the most favorable primary water supply is Beaver Creek.
- ◆ Developing source water supply on Beaver Creek was the least expensive option.
- ◆ Greatest positive environmental benefits.
- ◆ Project elements include:
  - ◆ Membrane Water Treatment Facility \$8,225,000.00
  - ◆ 1.5-mile Raw Water Supply Line = \$2,275,000
  - ◆ Stream Side Intake = \$2,000,000
- ◆ Total Overall Project cost is \$12.5 Million



## Project Goals Include:

- ◆ Cost – effective
- ◆ Reliable water quality
- ◆ Minimize O&M requirements
- ◆ Seismic resiliency and consideration for expedited recovery





# Considerations:

- ◆ Geology
- ◆ Tsunami
- ◆ Landslides
- ◆ 100 year flood conditions
- ◆ Cascadia Subduction Zone Earthquake
- ◆ Maximize seismic resiliency
- ◆ Consideration for recovery



# Proposed Beaver Creek Streamside Intake (cont):





# Proposed Beaver Creek Streamside Intake (cont):





# Proposed Beaver Creek Streamside Intake (cont)





# Project Funding Plan:

- ◆ Overall project estimate..... \$12.5M
- ◆ Available G. O. Bond Authority.....\$6.5M

- ◆ Membrane Treatment Facility \$8,225,000
- ◆ Raw Water Supply Line = \$2,275,000
- ◆ Stream Side Intake = \$2,000,000



# Thank You



*“Perhaps I’ve said too much.”*



# Questions?

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*541.768.3413*











14 4:02 PM









Repair Cost for South Bay Road Supply line:

\$1.6 million in repair cost since 1976

Support cost for the Toledo System:

\$2.6 million since 2002