



WINES & VINES OAK CONFERENCE

Santa Rosa, CA April 26, 2017

# Earthquake Response

Mike Blom  
Napa Barrel Care



#wvoak

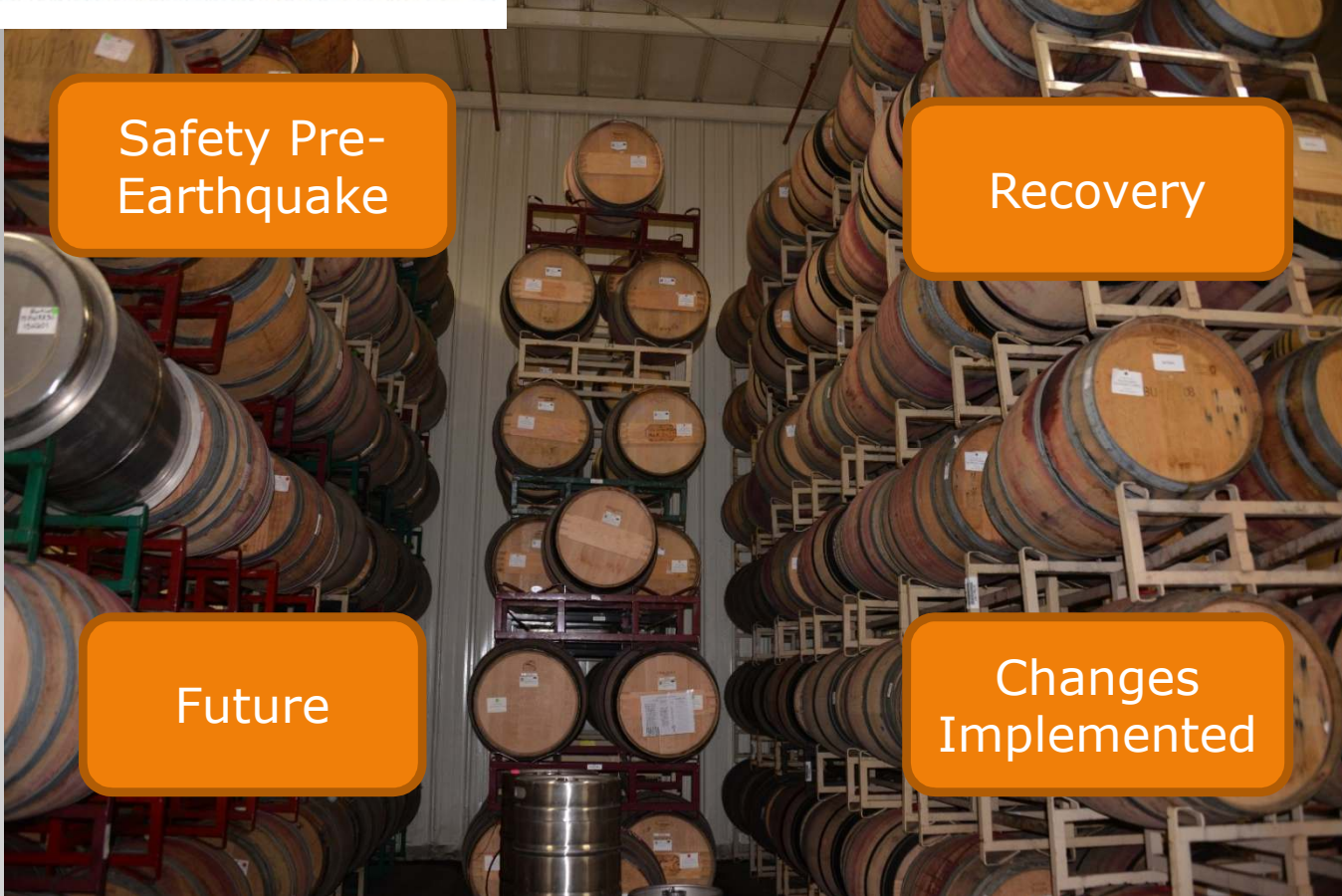


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Safety Pre-Earthquake

Recovery

Future

Changes Implemented

## Discussion Topics



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Source: Los Angeles Times

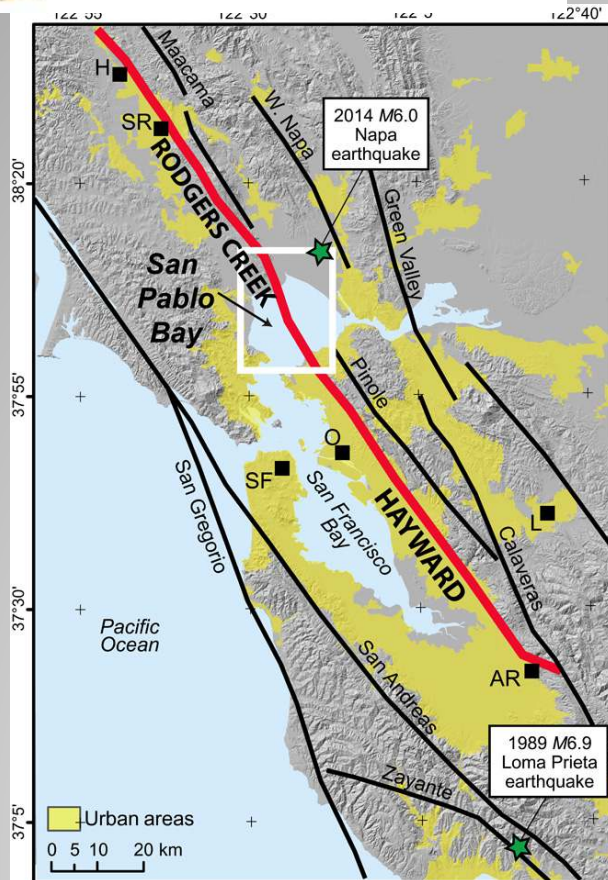
**Be prepared – make changes!**



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The next major earthquake to strike the ~7 million residents of the San Francisco Bay Area will most likely result from rupture of the Hayward or Rodgers Creek faults... A direct link enables simultaneous rupture of the Hayward and Rodgers Creek faults, a scenario that could result in a major earthquake ( $M = 7.4$ ) that would cause extensive damage and loss of life with global economic impact.  
*AAAS - Science Advancements*

**Will Not Happen To You?**



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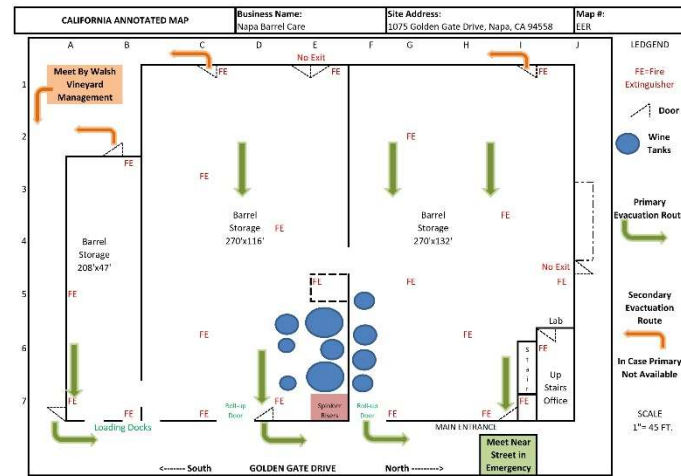


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Revised 3/13/2013

# Pre-earthquake safety



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# Pre-Earthquake Arrangement



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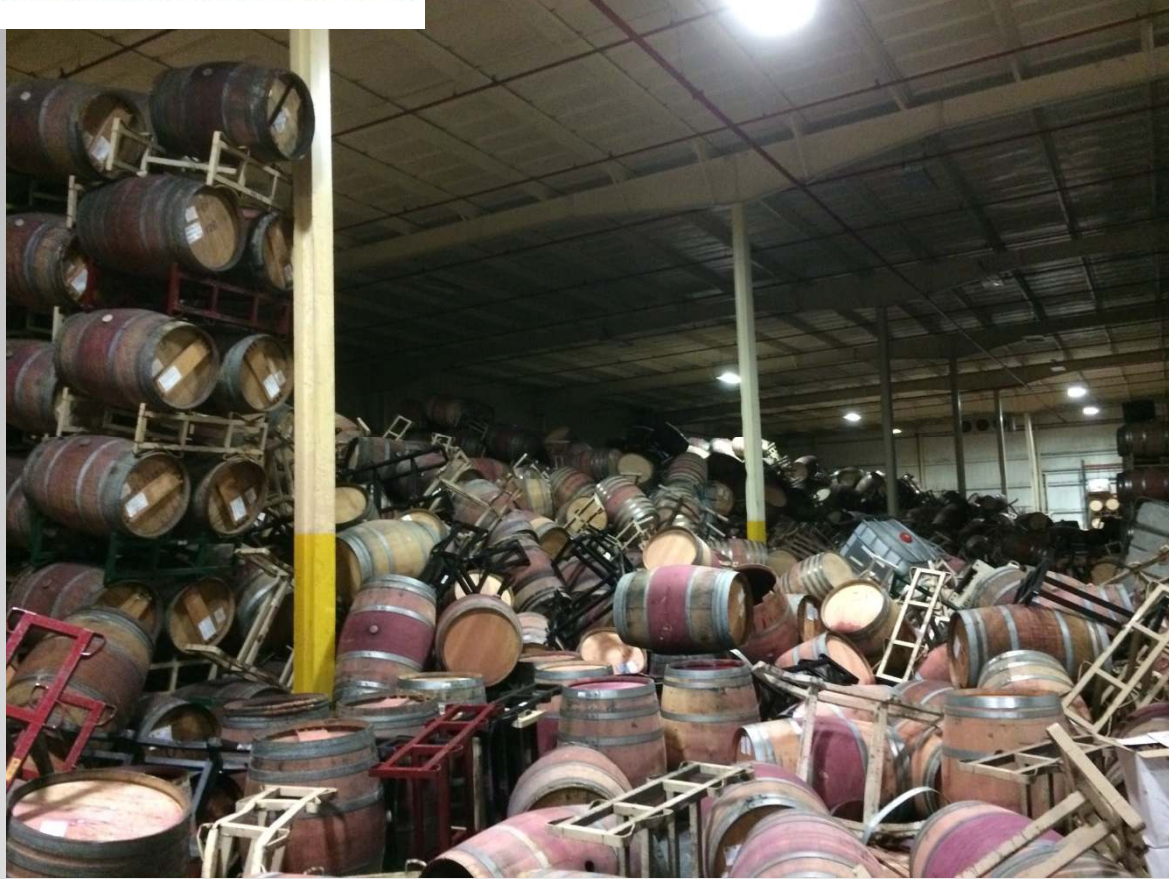


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# Just After Earthquake



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**Standing but precarious**



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### Emergency Response Plan

Company Name

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Address

---

Telephone

---

Contact Name

Title

Last Revision Date

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### Policy and Organizational Statements

Identify the goals and objectives for the emergency response plan.

Define what your emergency response team is expected to do during an emergency (e.g., evacuate employees and visitors, provide first aid, etc.)

Identify any regulations covered by your plan (e.g., OSHA, fire code, etc.)

# Emergency response plan



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Be ready – control access



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Cleanup begins – 1 barrel at a time



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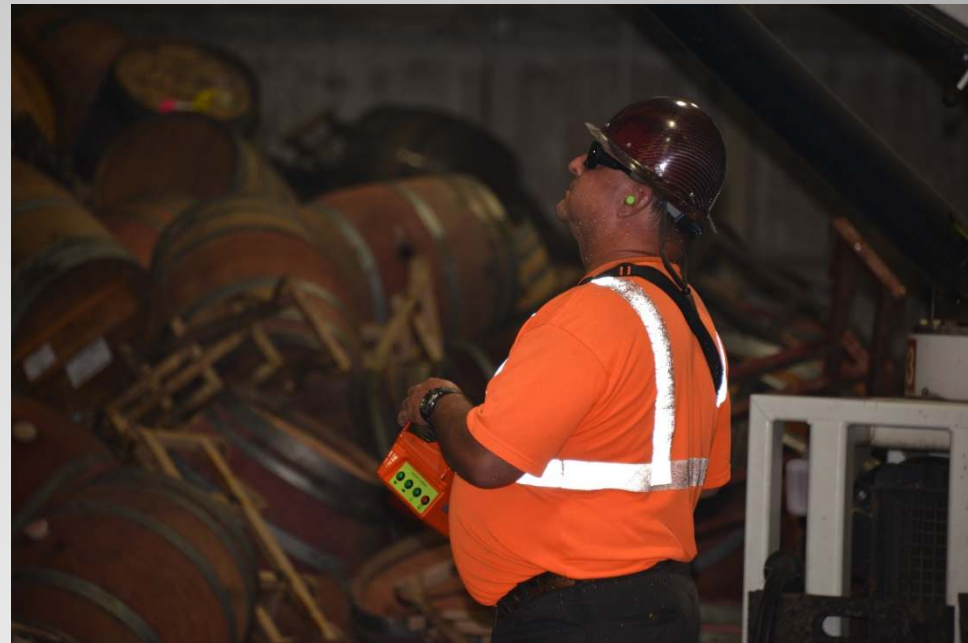


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**Safety first!**



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**You will need help – know who?**



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# Renting? Understand capacities



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**Think beyond production!**



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Back the same way?



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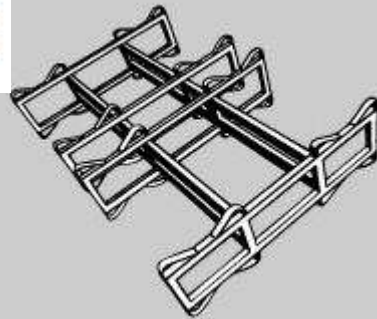




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- Plan!
  - Review
  - Update
  - Coordinate
- Implement
  - Train
  - Change
- Anticipate



## Actionable Items



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# My Top Ten (there are others)

## The ~~Colbert~~ Top 10 EQ Strategies *“Marrow”*

1. **Keep the public away from the barrels**
2. **Four Barrel Racks vs. Two Barrel Racks**
3. Limit stack heights, separate from structure
4. Orient stacks with bilges out, heads end-to-end
5. Restrain top level barrels to their rack
6. Anchor wine tanks and consult tank vendors for design basis
7. Independent support for catwalks (no tank support)
8. Study collapse patterns and develop EQ response program
9. Install “shark cages” throughout the barrel room
10. Install seismic instruments and PA system

Avoid “solve all” solutions that are impractical and costly





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**Next? Early warning systems,  
shark cages, etc.**



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