

# Engaging Your Local Utilities in Disaster Planning and Response

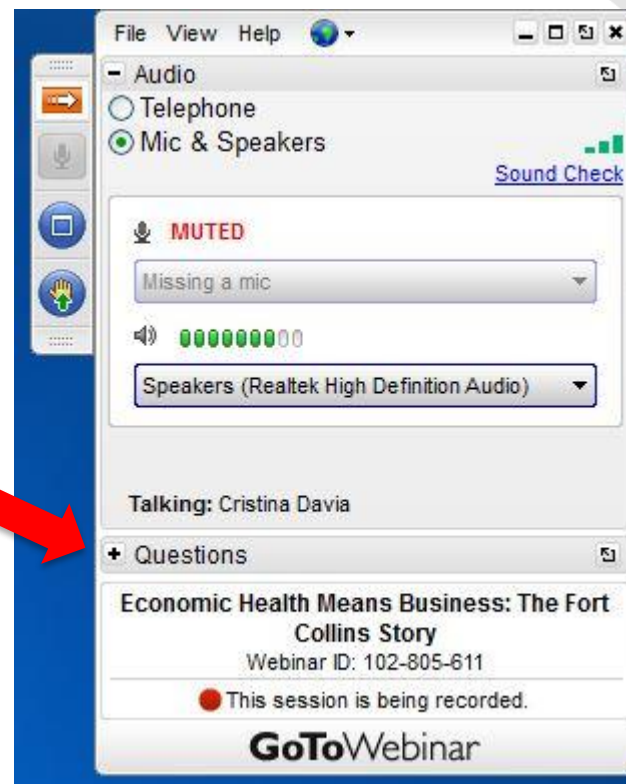
National Association of Counties  
February 6, 2018

**Stronger Counties. Stronger America.**



# Tips for viewing this webinar

- The questions box and buttons are on the right side of the webinar window.
- This box can collapse so that you can better view the presentation. To unhide the box, click the arrows on the top left corner of the panel.
- If you are having technical difficulties, please send us a message via the questions box on your right. Our organizer will reply to you privately and help resolve the issue.

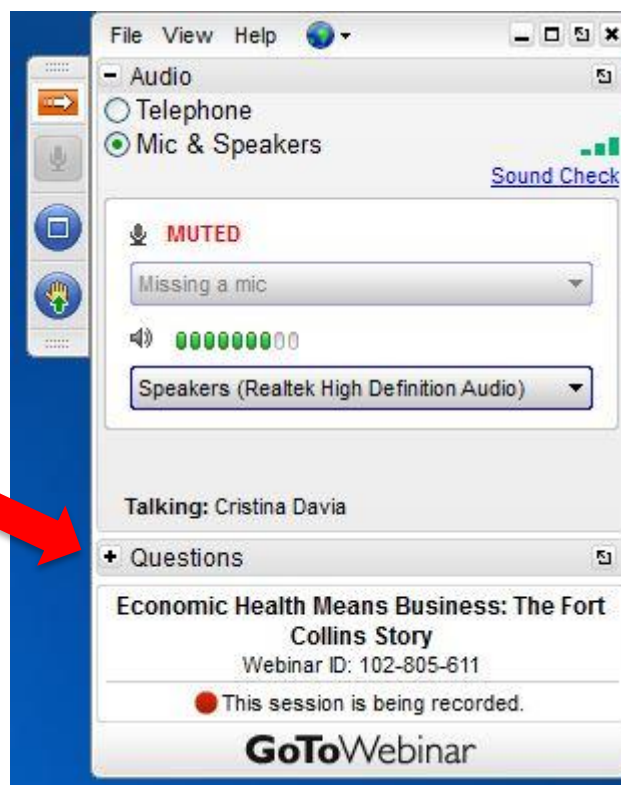


# Webinar recording and evaluation survey

- This webinar is being recorded and will be made available online to view later or review at [www.naco.org/webinars](http://www.naco.org/webinars).
- After the webinar, you will see a pop-up box containing a webinar evaluation survey. Thank you in advance for completing this survey – your feedback is very important to us!

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# Engaging Your Local Utilities in Disaster Planning and Response

National Association of Counties  
February 6, 2018

**Stronger Counties. Stronger America.**



# Kent Gylfe



*Principal Engineer*  
Sonoma County Water Agency



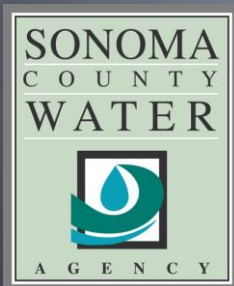
**RESILIENT COUNTIES:**

**ENGAGING YOU LOCAL UTILITIES IN DISASTER PLANNING AND RESPONSE**

Sustainability in a Time of Change

February 6, 2018

# Building Water Infrastructure Resilience



**Kent Gylfe**

Principal Engineer

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Sonoma County Water Agency

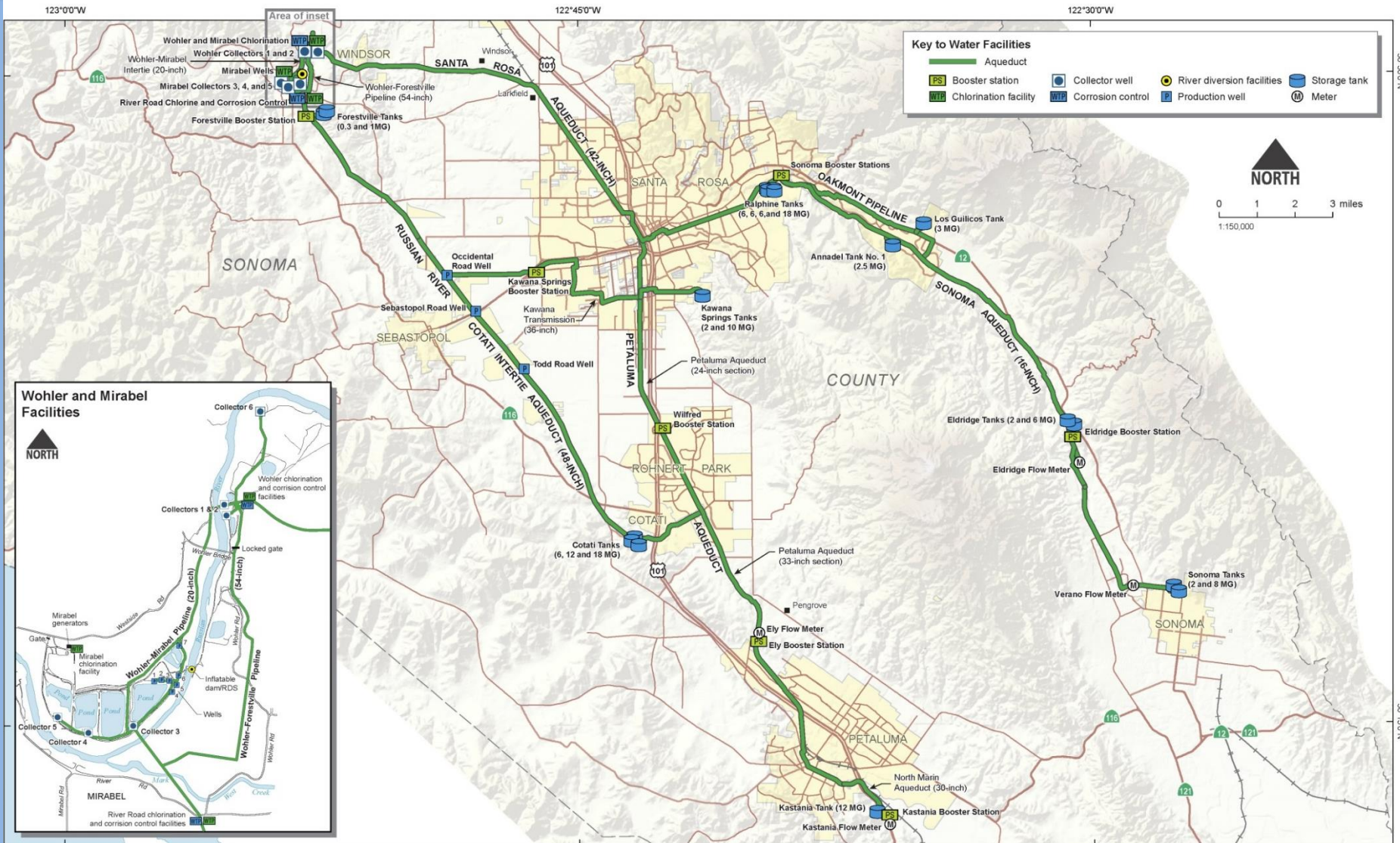
# About Us

- Wholesale Water Supply  
(Sonoma & Marin Counties)
- Sanitation  
(8 County San. Dist./Zones)
- Flood Control  
(Stream Maintenance)
- Energy  
(Renewable Energy Production)

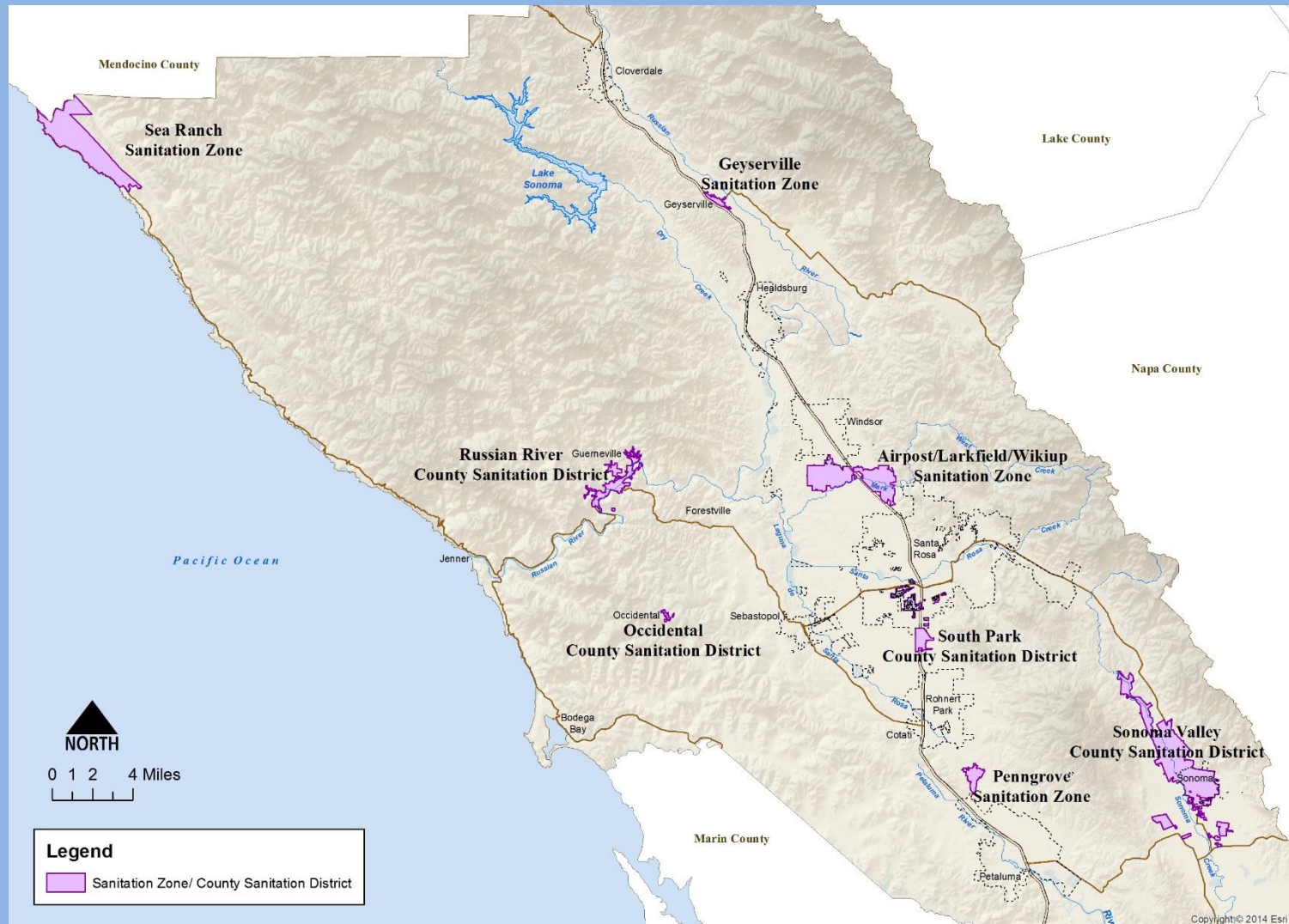




# Our Water System



# Our Sanitation System





# Our Flood Control System



# Earthquakes, Floods, Fires, & Drought



**Napa Earthquake, August 2014**



**Lake County Rocky Fire 2015**



**Flood Condition, January 2017**



**Lake Mendocino Drought 2014**

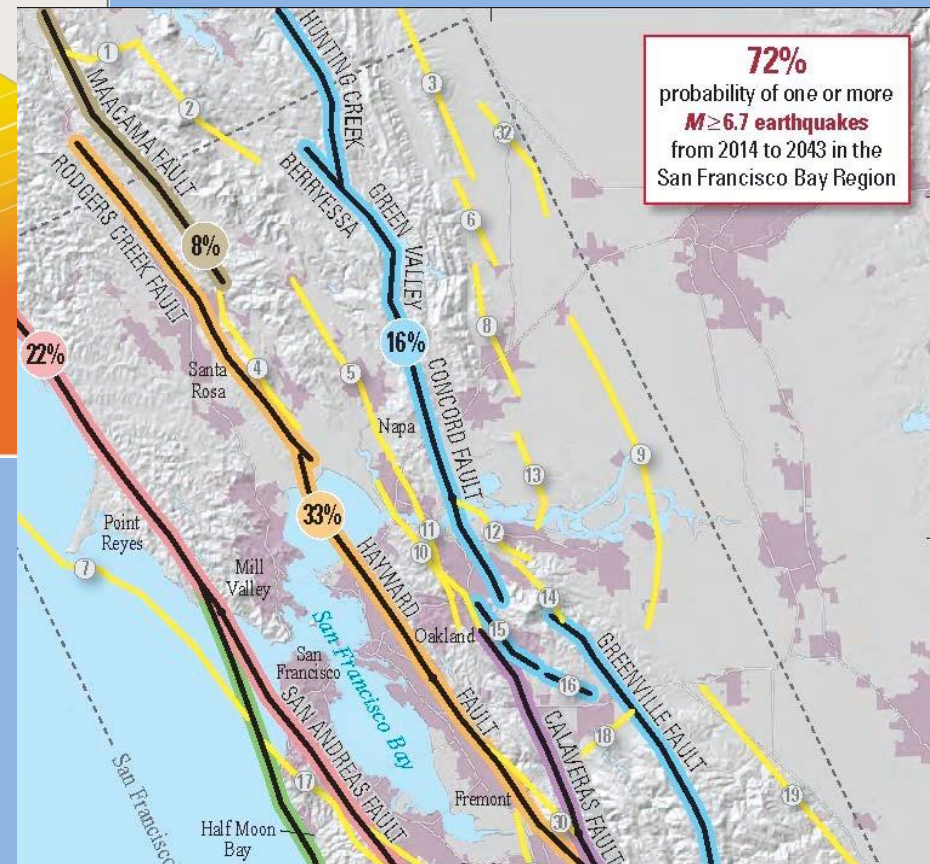
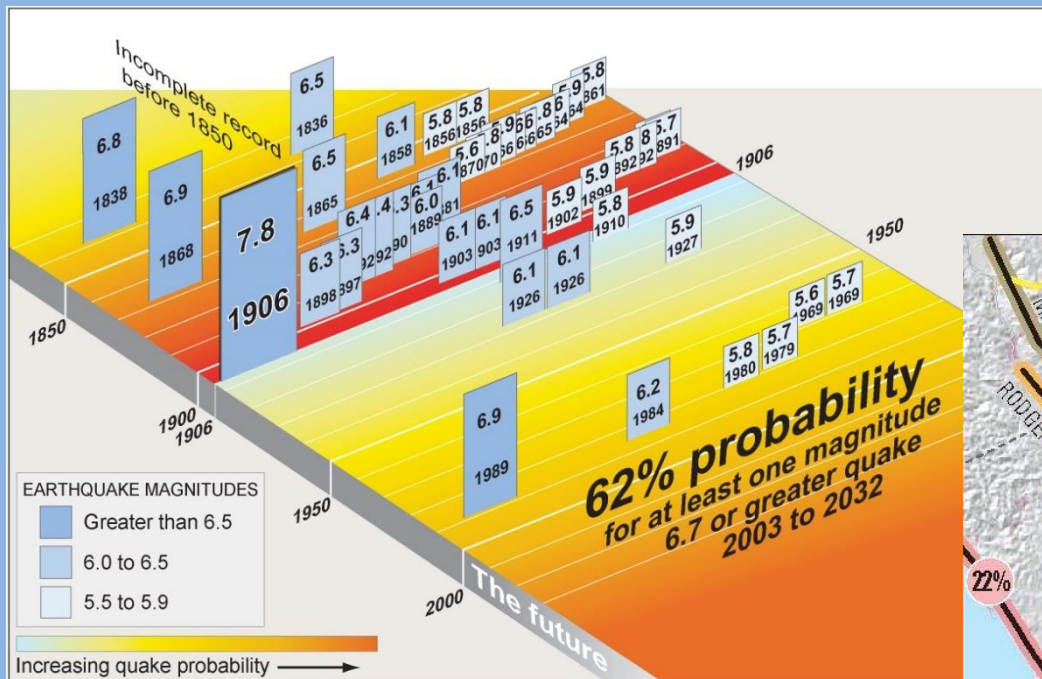


# Natural Hazard Reliability Assessment

- Multi-hazard assessment
- Developed prioritized mitigation projects



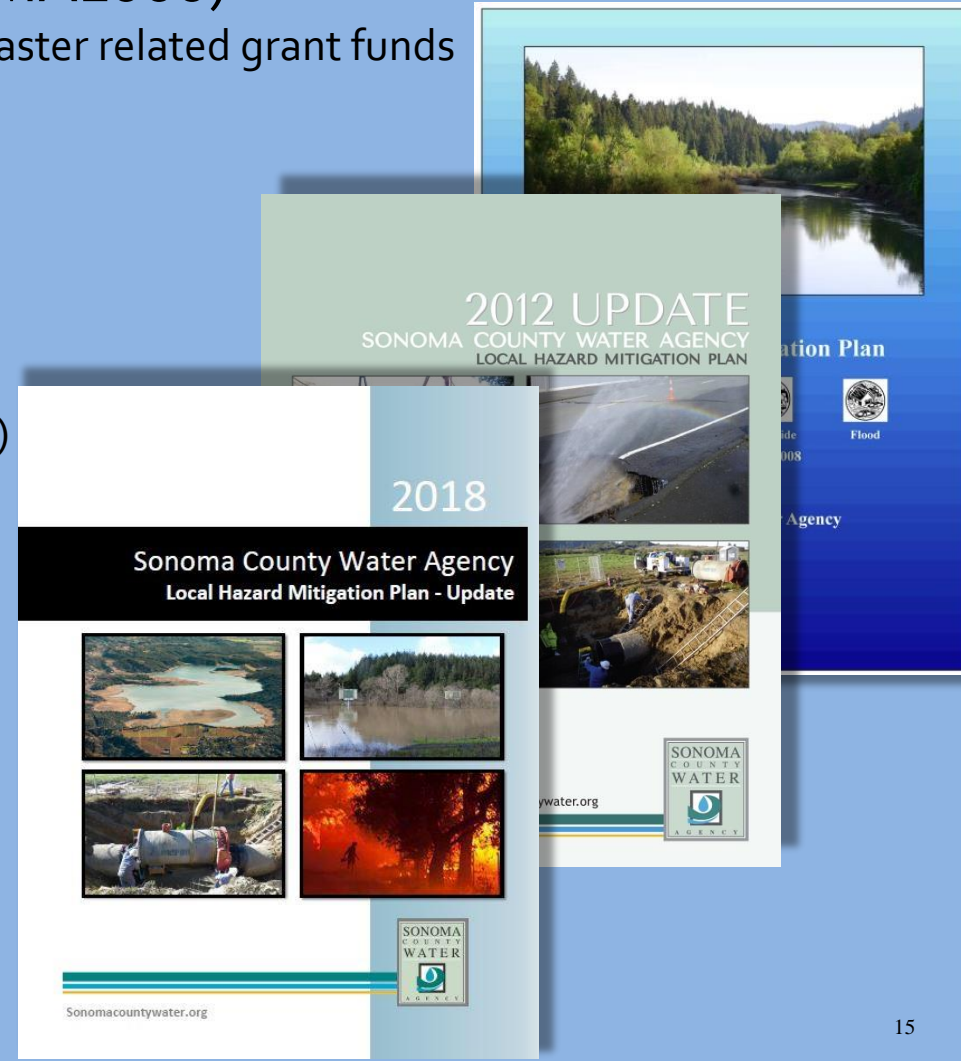
# Earthquake Hazard



- High probability of a major earthquake in the San Francisco Bay Area

# Local Hazard Mitigation Plan (LHMP)

- Disaster Mitigation Act 2000 (DMA2000)
  - Requires LHMP for eligibility for FEMA disaster related grant funds
  - Formally adopted by governing authority
  - Public Participation
  - Approval by FEMA and State OES
- FEMA Funding
  - Pre-Disaster Mitigation Program (PDM)
  - Hazard Mitigation Grants Program (HMGP)
- Goals → Actions
  - Safe and reliable water supply
  - Reliable wastewater services
  - Reliable flood control works





# Stakeholder Outreach

- Water Contractors (Retail water providers)
- Cities/Counties/Local Governments
- State and Federal Agencies
- Emergency Response Providers
- Elected Representatives
- Non-governmental Organizations
- Associations
- Public Advisory Committees
- Business/Chamber of Commerce
- Service Organizations

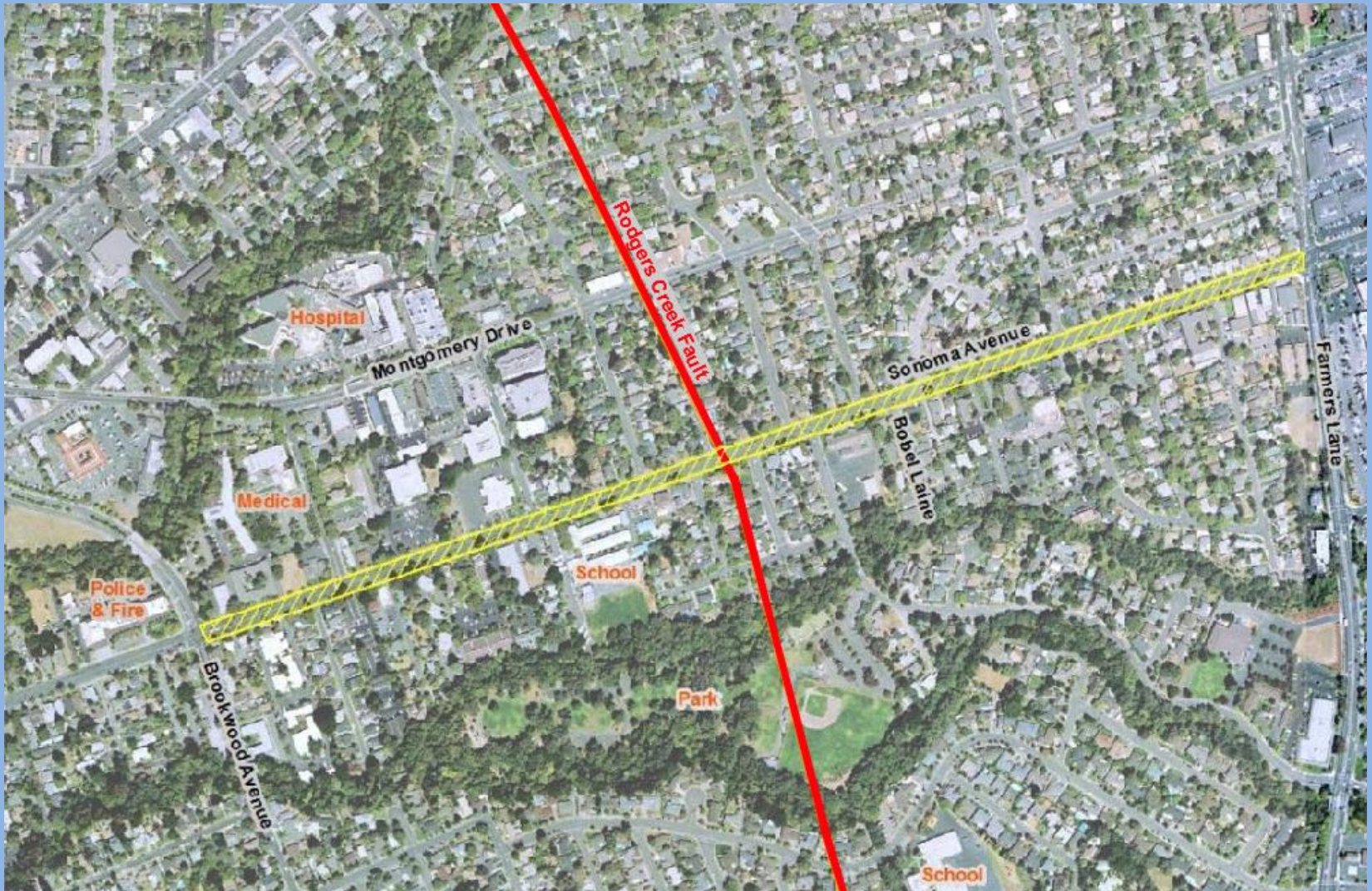


# Seismic Hazard





# Rodgers Creek Fault Crossing

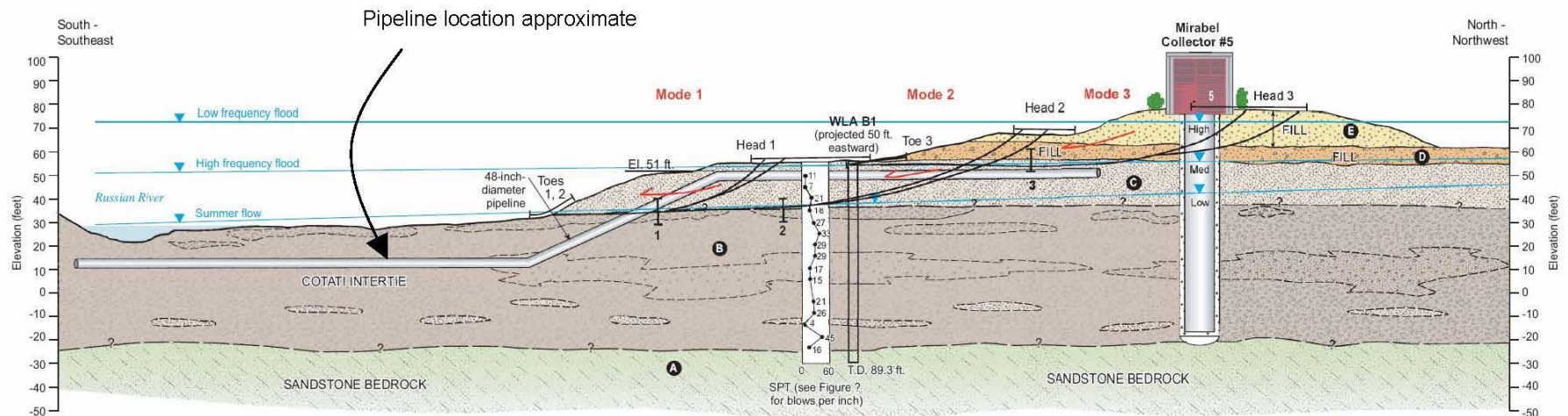
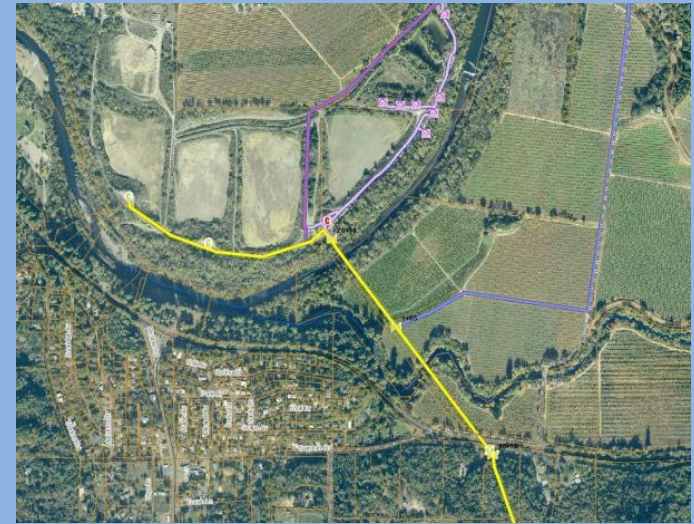




# Russian River & Mark West Creek Crossings

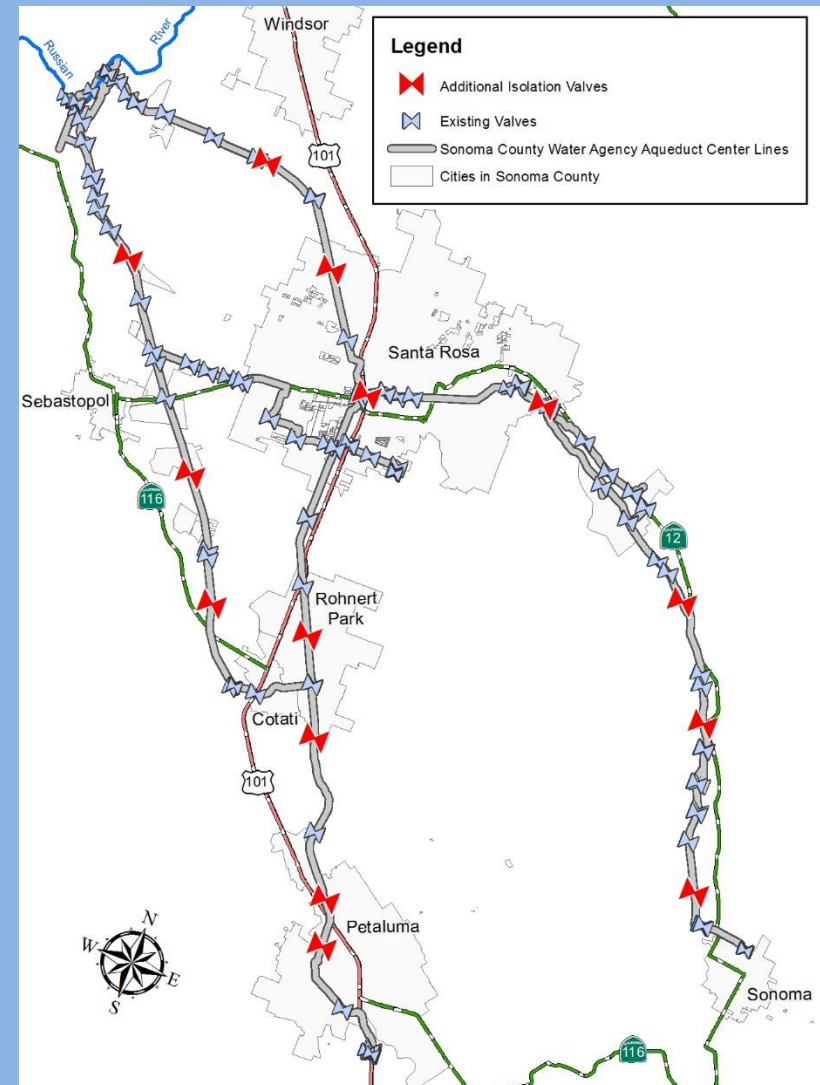
## ■ Description/Purpose:

- Approx. 2100 feet of 48 inch steel pipe
- Install within the “safe” soil layer



# Isolation Valves Project

- Description
  - 14 additional isolation valves
- Purpose
  - Enhance operational capability to restore service
  - Maximize geographic area that can remain in service
  - Reduce down time and adverse impacts of an uncontrolled release



# 2017 Sonoma County Wildfires

- New awareness
- Post-Fire Partnerships influencing recovery & planning



Justin Sullivan/Getty Images



Kent Porter/The Press Democrat via AP





## Hazard Understanding and Mapping

# Projected Climatic and Hydrologic Changes for the Region



### Temperature

- Increases up to 1.3 – 3.1°C by mid-century
- Increased frequency of temperature extremes (days > 30°C or 86°F)



### Sea Level Rise

- MSL increases by 0.1-0.6 m (0.3-2 ft) by mid-century
- Storm surge will cause additional increases



### Precipitation

- Extreme precipitation increases (ARs) by 15%
- Increased winter, decreased summer precipitation (more variability)



### Drought

- Increasing intensity of drought conditions
- Increasing frequency and duration of dry weather conditions



### Wildfire

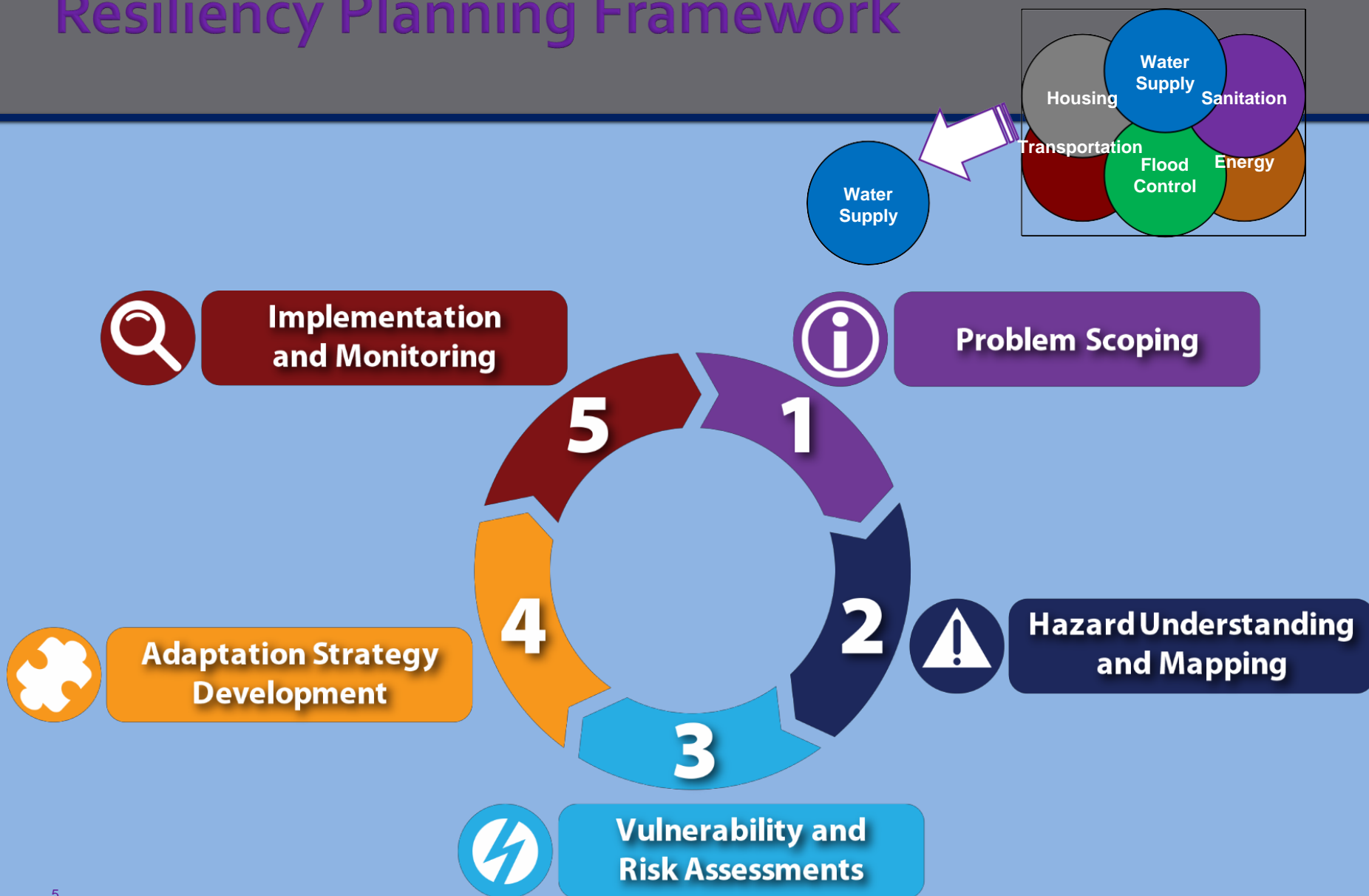
- More frequent and intense wildfires due to warmer temperatures and drier conditions
- Increase in probability of wildfires by 15-33%



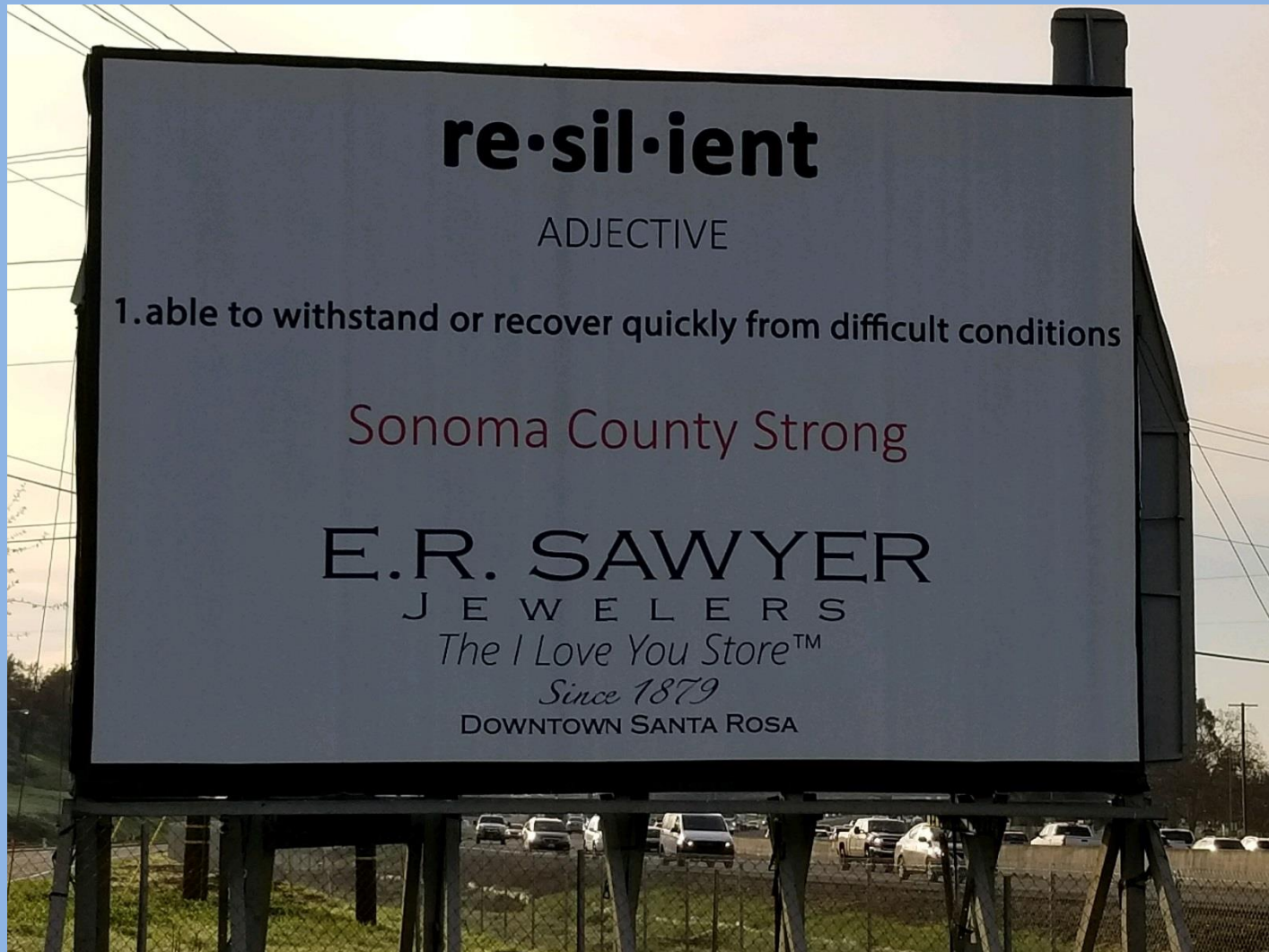
### River Flooding

- Potential increase in AR-driven floods on Russian River
- 100-year flood magnitudes could increase by 10-20%

# Resiliency Planning Framework



# Questions





# John Quinn



*Director of Governmental  
and External Affairs*  
Baltimore Gas & Electric

# Engaging Your Local Utilities in Disaster Planning and Response ... and More

John Quinn  
February 6, 2018



An Exelon Company



# BGE is the Largest Electric and Natural Gas Utility in Central Maryland

BGE, founded in 1816 as the nation's first gas utility, is Maryland's largest natural gas and electric utility. Headquartered in Baltimore, BGE delivers power to more than 1.25 million electric customers and more than 650,000 natural gas customers in central Maryland. The company's approximately 3,200 employees are committed to the safe and reliable delivery of natural gas and electricity, as well as enhanced energy management, conservation, environmental stewardship and community assistance.

The service area is economically diverse, 2,300 square miles area encompassing Baltimore City and all or part of 10 Central Maryland counties.

Service Area: electric, 2,300 square miles; gas, 800 square miles

Customers: 1.25 million+ electric; 650,000+ natural gas

Employees: approx. 3,200

Substations: 243

Distribution & Transmission Power Lines: More than 25,000 circuit miles distribution; almost 1,300 circuit miles transmission

Natural Gas Pipeline Network: More than 7,100 miles

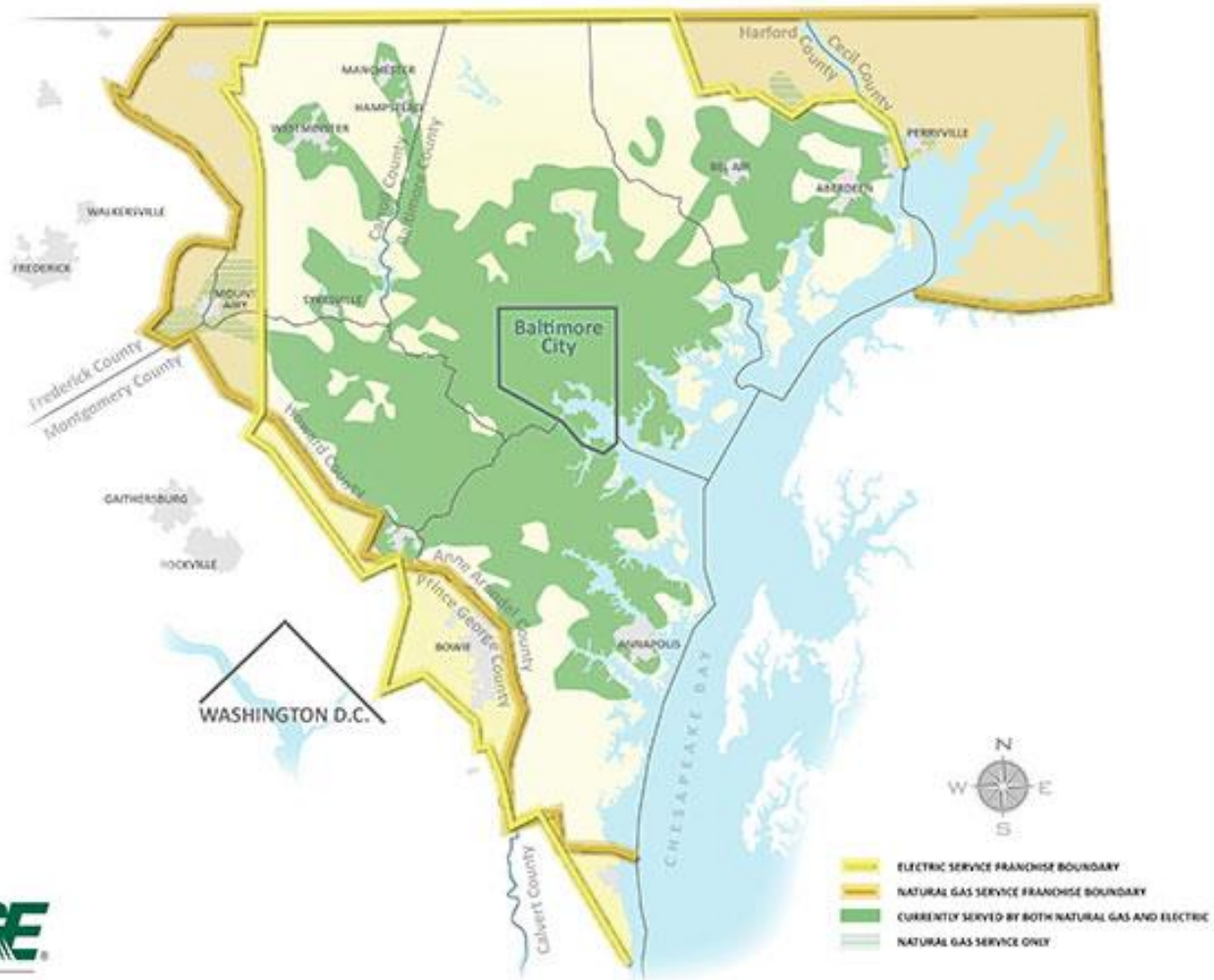
BGE is a subsidiary of Exelon Corporation (NYSE: EXC), the nation's leading competitive energy provider.



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## BGE SERVICE AREA



**BGE**

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[THAT'S  
SMART  
ENERGY]<sup>SM</sup>

# FOR THOSE WATCHING THE RECORDING

You can access the video as a link at:

<https://www.youtube.com/watch?v=IOjRzUrLOsg&feature=youtu.be>

*Please skip ahead approximately 2 minutes to pass the gap in this recording.*



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# Emergency Response/Safety Grants

BGE is committed to maintaining the highest standards of safety and reliability for our employees, our customers and the communities in which we live and work. This grant is an opportunity to further support organizations that are committed to safety during emergency preparedness and response efforts to urgent and immediate needs.

- Now in its sixth year, BGE awarded more than \$1.6 million
- Grant submission dates December 1 – January 15
- Eligible 501c3 organizations can be awarded \$1,000-\$10,000
- To learn more, go to [www.bge.com/giving](http://www.bge.com/giving)



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# Emergency Response/Safety Grants - Continued

The grants have assisted agencies in purchasing items such as thermal imaging cameras, smoke alarms, CPR devices and funding for emergency preparedness drills and equipment, thermal imaging cameras, GPS systems, smoke alarms, portable radios and funding emergency preparedness drills and equipment.



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# Green Grant

Because of our commitment to use natural resources responsibly, prevent pollution, improve energy efficiency and enhance our environmental stewardship efforts, in 2013, BGE created the Green Grant program.

- Now in its fifth year, BGE awarded more than \$1.6 million to nonprofits for their greening efforts
- Grant submission dates April 1-May 15
- Eligible 501c3 organizations can be awarded \$1,000-\$10,000
- To learn more, go to [www.bge.com/giving](http://www.bge.com/giving)



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# Peter Grandgeorge



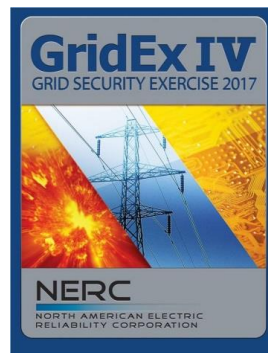
*State, National Security and  
Resiliency Programs Advisor*  
MidAmerican Energy

# Electric Sector Cybersecurity

- National program for electrical system cyber security called the Critical Infrastructure Protection program – also adopted in Canada
- Testing, auditing and annual exercising
- Regulatory auditing of firewalls and air gaps between critical systems began in 2008



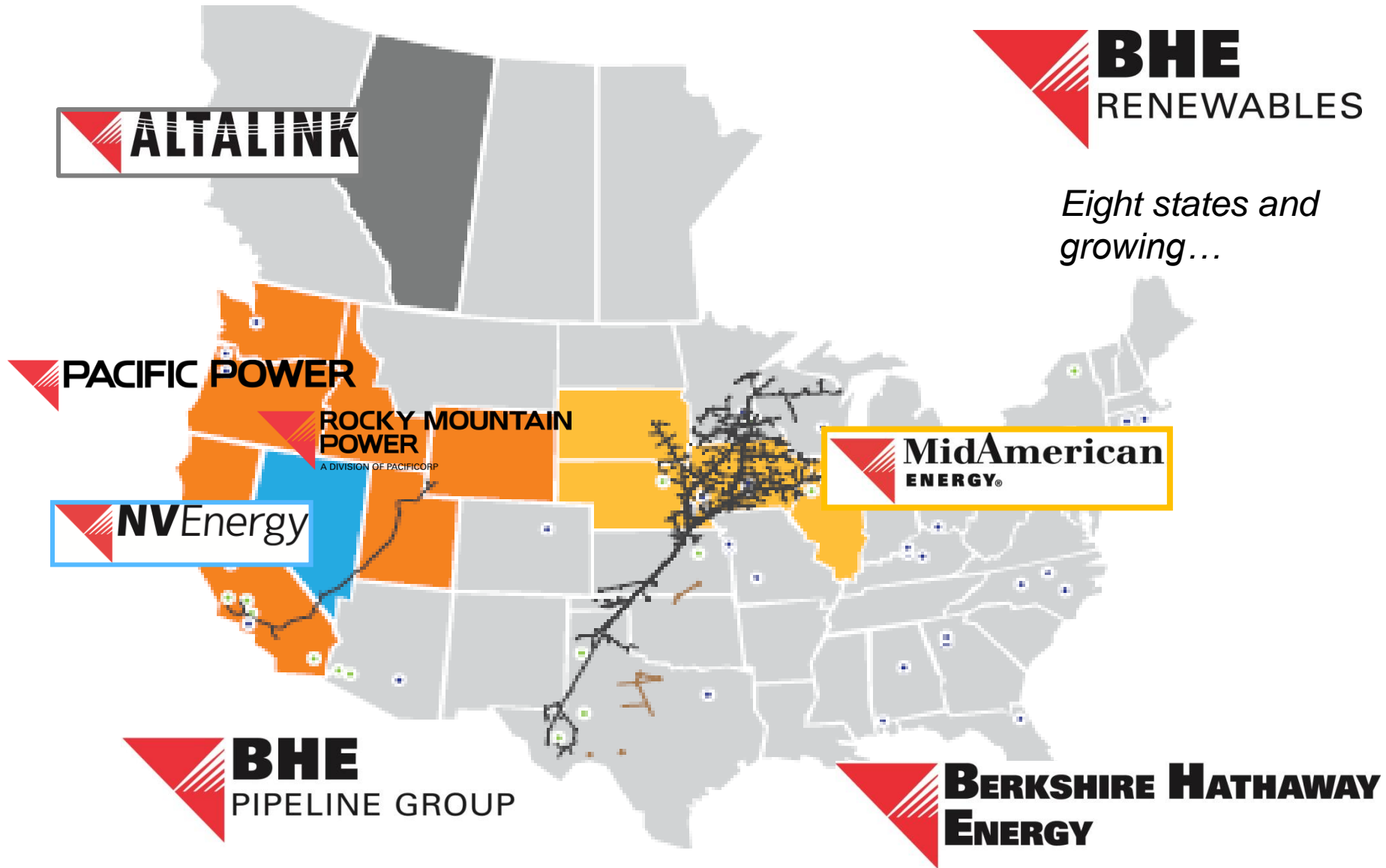
IOWA COORDINATED **ELECTRIC EXERCISE**  
**2016**



# Sensitive Information

- Increasing amounts of utility information is sensitive under various federal regulations
- Penalties are severe; one large multi-state utility was fined \$2 million for violating federal market rules
- These federal regulations can be a disincentive to communications, so we work to have trusted relationships

# 9,000 Employees in 15 States



# Differences for Rural & Urban

- Rural restoration challenges
  - Low number of customers per mile
  - Generator safety
  - Travel challenges
  - Housing for restoration crews
- Urban restoration challenges
  - Rear lot aerial lines and underground services
  - Other utilities, such as cable lines or underground
  - Fuel for restoration crews

# Restoration Priorities

- Public safety threats first
- Critical public infrastructure and transmission sources
- Large blocks of customers
- Key businesses and other large locations
- Individual addresses and damaged premises
- Customers messaging



# Critical Public Infrastructure

## Locations necessary for public safety during energy disturbance conditions

- emergency dispatch centers
- hospitals
- fire and police stations
- water and sewage treatment plants, pumps and lift stations
- radio and television stations
- radio transmitter sites
- telecommunications central and switching stations
- emergency sirens
- shelters
- prisons
- airports
- radio and television stations



# Storm Restoration Logistics

- Rapid and safe restoration is the priority
- Outside resources are sometimes requested regionally and nationally
- 2008 Wind Storm – 1,200 personnel across three states
- January 2010 Ice Storms, upper Midwest – 2,200 personnel
- Sufficient hotels, fuel and food to support restoration workers may be limited

# Logistics and Support

- Dedicated utilities team that focuses on getting sleeping quarters and food to the crews
- Partnering with county governments:
  - Accessing areas
    - Emergency gas leak reports with snow plows
    - Snowmobiles in winter and boats in flooding
  - Traffic control for congested areas
  - Movement of special equipment or materials
  - Security for vehicles and supplies

# Government Impact Lessons

- Coordination across state boundaries and FEMA regions – 18 county EOCs in four states
- Loss of power to public safety radio and over-the-air data communications sites
- Shelters and warming centers
- Extended electrical outages may drive the medically-fragile population to health facilities

# Life Support Program

## Elements

- For customers with electrically-supported medical equipment
- Annual application with certification from an attending physician
- Attempt to notify in extended outages
- Does NOT provide restoration priority

## If a household member relies on:

- *Infant apnea monitor*
- *Oxygen concentrator*
- *Ventilator/respirator*
- *BIPAP (Bi-level positive airway pressure)*
- *IV pumps*
- *Home dialysis*
- *C-Pap machine – minor child*

# Question & Answer session

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[www.naco.org/webinars](http://www.naco.org/webinars)

[www.naco.org/resilience](http://www.naco.org/resilience)

# Upcoming Resilience Webinars

- Telling Your Community Story: Strengthening Economies through Place Branding, *Feb. 7, 2018 , 2:00 – 3:15 pm*

# THANK YOU!

Additional questions or feedback?  
Contact Jenna Moran at [jmoran@naco.org](mailto:jmoran@naco.org)