SHAKE ALERT PILOT APPLICATION

Presented by RH2 Engineering

September 15th 2016
MUNICIPAL WATER SYSTEM PROTECTION

Typical Municipal Water System:

• Responsible for potable water supply - drinking water and emergency fire protection
• Have been planning and preparing for earthquakes for decades
• Leaders in automating emergency responses

If you had 15 seconds of earthquake warning, what would you do?
TYPICAL MUNICIPAL WATER SYSTEM

Three fundamental parts... Supply / Storage / Piping
DURING AN EARTHQUAKE:

- This burns
- This empties
- This ruptures

Storage supply piping customer
RUPTURED WATER MAIN
FAILED RESERVOIR
IF YOU HAD WARNING:

CUT THE POWER

CLOSE VALVE

LIMIT FLOW

SUPPLY

STORAGE

Piping

CUSTOMER
IF YOU HAD WARNING-SUPPLY PROTECTION:

Open Automatic Transfer Switch
IF YOU HAD WARNING-PIPELINE PROTECTION:

Close Zone Valve
IF YOU HAD WARNING-RESERVOIR PROTECTION:

Close One Valve, Open The Other
ANATOMY OF THE WARNING:

CLOUD-BASED MESSAGING ENGINE

PNSN SENSOR NETWORK

USGS SORT AND VERIFY

5 SECONDS

NETWORK DMZ (CUSTOM WINDOWS APP)

UTILITY SCADA SYSTEM

5 SECONDS

5 SECONDS

BLOCK DIAGRAM
COMMUNICATION PROCESS
SHAKE ALERT CONCEPT APPLICATION

BELLINGHAM | BOTHELL | CENTRAL POINT | EAST WENATCHEE | ISSAQUAH | NORTH BEND | PORTLAND | RICHLAND | TACOMA