MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Mital, Simpson, Helgeson, Manning and Brown

FROM: Brad Taylor, Water Operations Manager

DATE: September 16, 2015

SUBJECT: Water Utility Emergency Preparedness Planning Activities

OBJECTIVE: Provide Board with Information

Issue
Provide Board a high level overview of Water Operations Emergency Preparedness Planning activities.

Background
In 2012 EWEB staff served on the Oregon Seismic Safety Policy Advisory Commission (OSSPAC) Water and Wastewater Task Group. Awareness of emerging readiness issues prompted the EWEB Water Division to publish an Emergency Water Supply Plan in July 2012.

OSSPAC recommendations from the Oregon Resilience Plan, published in February 2013, set resiliency standards and service recovery goals following catastrophic emergency that will require significant investment in the next 50 years. The 2015 Water Master Plan approved by EWEB's Board of Commissioners in June provides guidance and authority to take the necessary steps to identify and upgrade a resilient spine for the water distribution system and diversify EWEB's water supply as recommended by OSSPAC.

In October 2013 the Water Division established the Water System Security and Emergency Preparedness Committee to prepare EWEB water facilities and staff for emergency management and recovery. The Committee charter includes development of FEMA/NIMS compliant Incident Command System protocols and training as well as evaluation of security and emergency response equipment to lay the groundwork for proposed preparedness budgets.

In addition, OSSPAC advised utilities to begin aggressive public information efforts to re-set public expectations for a realistic response time (to catastrophic failure due to earthquake) and that there is clear value in members of the public having robust emergency supplies. EWEB's Water Division has leveraged partnerships to cultivate a culture of preparedness within households and businesses to help our customers understand and support community investment in water reliability and associated water rate increases.

Discussion
<u>2012 Emergency Water Supply Plan</u>
The 2012 Emergency Water Supply Plan outlined a schedule for purchase of water emergency response equipment and materials. The first two phases are shown below along with the status of the implementation:

2012 Emergency Water Supply Plan Phase I

Develop two sources of emergency supply		
Phase I Recommendation	Status December 2015	Planned Implementation
Select and retrofit a reservoir in the South Hills	Design complete for Replacement of Willamette 800 Reservoir #1.	Construction anticipated in 2016-2017
Retrofit Santa Clara Reservoir	2015 Water Master Plan phases out this facility by 2022	New smaller Santa Clara Reservoir in service 2023. Also Willamette River Plant operational by 2022
Develop emergency water supply deployment capacity		
Phase I Recommendation	Status December 2015	Planned Implementation
Assemble two mobile emergency water systems (trailers/reservoir/piping/etc.)	• One public education trailer able to serve up to 60 taps • Two water incident response trailers able to serve up to 100 taps	NA
Purchase three additional blivets for dump trucks	• 1 – 500 gallon plastic tank • 1 – 1,000 gallon blivet • 2 – 2,000 gallon blivet	NA
Develop storage area/plan for water incident response equipment	Storage area identified at Roosevelt Operations Center	NA

2012 Emergency Water Supply Plan Phase II

Develop additional sources of emergency supply		
Phase II Recommendation	Planned Implementation in 2016	Future Implementation
Groundwater well at ROC	• Development of Willamette River permit is the focus of additional source of supply until 2024. • Partnership development of EWEB's north wells may be initiated once the Willamette River Plant is operational.	
Outfit and operate existing EWEB wells (two existing wells in north end of water system)		

Develop emergency water supply deployment capacity		
Phase II Recommendation	Planned Implementation in 2016	Future Implementation
Assemble two mobile emergency water systems (trailers/reservoir/piping/etc.)	• One water treatment trailer operational by December	• The plan specifies 6 mobile emergency water systems by 2018. The procurement of future mobile water distribution systems will depend on the development and testing of water delivery methods. Need to ensure we can get water to the sites.
Purchase blivets for dump trucks	• None budgeted for purchase in 2016	Operationally there should be a minimum of one blivet per mobile emergency water system, preferably two. Need to test existing systems further prior to implementation.
Develop storage area/plan for water incident response equipment	An additional storage area on the north side of the river for water incident response equipment would be optimal.	

Other Emergency Preparedness Improvements

EWEB has been working on various improvements related to emergency preparedness in the water system for several years. These improvements include:

- Seismic upgrades to our Hayden Bridge Intakes and Filtration Plant
- Reservoir and Pump station structural and seismic upgrades.
- Generator installations at our constant run pump stations.
- We are modifying design standards for resilient spine distribution and transmission piping (coming out of 2015 Water System Master plan).
- Identifying, procuring and storing critical repair materials for water system (pipe repair bands, curved steel plates, and boiler plugs).

Cultivate a Culture of Preparedness

EWEB's Water Division has over 30 years of partnership with Springfield Utility Board and Rainbow Water District to optimize resources for customer outreach (backflow, curtailment, water conservation and emergency messaging) as well as mutual aid in case of emergency. The three utilities conduct annual mutual aid drills that more recently have included FEMA/NIMS compliant Incident Command System protocols and training. This utility partnership plans an emergency response drill in 2016.

Direction from the Oregon Resilience Plan prompted EWEB to begin to build partnerships with non-governmental organization, emergency managers and the business sector. The Water Incident Communication Plan proposed an emergency water supply container as a vehicle for public outreach. The concept proved so popular that EWEB was able to establish preparedness education relationships with the American Red Cross, Rainbow Water District, Springfield Utility Board and the City of Eugene Office of Emergency Management. By December 2015 EWEB customers will have purchased more than 6,000 emergency water supply containers at a discount price. Estimated budget for 2016 could make as many as 3,000 more containers available for customers to purchase.

EWEB has fostered community response capacity through multi-agency emergency water distribution drills that also include actual customer participants. The 2015 Disaster Relief Trials will provide an additional opportunity for the public to participate in an emergency water supply drill and equipment test.

EWEB has entered into site use agreements with property owners of the drinking water distribution sites identified in the 2012 Emergency Water Supply Plan. Current partners include Bethel School District 52 (high school), School District 4J (high schools), and City of Eugene Amazon Center. Several other site use agreements are pending. Each site use agreement includes plans for a future interagency water emergency response drill.

For some years EWEB staff has served on the board for the Oregon Water/Wastewater Agency Response Network (ORWARN), an organization that facilitates rapid, short-term deployment of emergency services for utilities by utilities. EWEB staff has been instrumental in promoting this resource to local emergency managers.

In May 2015 EWEB participated in an emergency equipment drill sponsored by the Regional Water Providers Consortium (Portland Metro Area). The purpose of this event was for participating water utilities to show and tell about their emergency response equipment. EWEB took the emergency water supply trailer and shared customer outreach materials. EWEB staff learned much from other participating utilities. Many of the participants are also ORWARN members and could deploy the equipment that was on display if requested.

In addition, EWEB is now an active member of the Lane Preparedness Coalition (LPC), an organization focused on engaging the business sector through emergency preparedness education and training. The LPC Natural Hazard Mitigation Plan (NHMP) Subcommittee is charged with implementation of the plan recommendations. The LPC-NHMP Water Supply Project Team will be convened by EWEB staff for the purpose of compiling a check list of considerations for local businesses and institutions that wish to hire a contractor to build emergency on-site water storage.

Water Reliability Communication Plan

In 2015 the public outreach section of the Water Incident Communication Plan was merged with the plan supporting the Water Reliability Initiative (WRI). WRI was based on solid opinion research conducted in 2011 and was initially focused on communicating the need for EWEB to develop alternate water sources (AWS). Over time EWEB's WRI implementation team recognized that customers have a more holistic view of EWEB's need for investment in resilient water infrastructure; that AWS is one component of a much larger capital plan. Water reliability communications began moving toward a more inclusive message upon publication of the 2015 Water Master Plan.

Customer Engagement

EWEB will conduct follow-up water reliability opinion research in October 2015 to test effectiveness of the first three years of WRI implementation and to develop strategies for successful

outreach as we move into development of the Willamette River source. The ongoing goal of EWEB water reliability communication efforts is to help manage reputation risk (perceptions of water quality as we diversify our sources) and credibility risk (EWEB is so reliable that there is no perceived need to invest in resilient infrastructure). The New Yorker article "The Really Big One" may have given EWEB a temporary boost in public awareness of the need for investment, but the long term nature of infrastructure investment means that EWEB must develop a long term communication strategy to sustain awareness of the need.

Employee Engagement

Water Division staff have been involved in launching the Emergency Preparedness Employee Interest Group initiated and led by Jennifer Connors. The members of the interest group recognize that as community first responders EWEB employees have a responsibility to prepare their households to be secure so that the employee can quickly report to work in the event of an emergency. The interest group has garnered sponsorship budget from several departments. The group members will organize preparedness awareness events and workshops throughout 2016 to encourage employee preparedness.

Staff Support for Commissioners

In March 2015 staff provided the Prepare. Replace. Maintain. Booklet to support commissioner conversations with constituents. The booklets have been a cornerstone of 2015 Water Reliability Initiative staff outreach efforts. Staff welcomes feedback from commissioners about usefulness of the talking points and booklets. 2016 outreach materials will be developed based on opinion research conducted in the fourth quarter of 2015.

Future Outreach

Would updated 2016 water reliability talking points and handouts be helpful for commissioner outreach?

October 4 – 9, 2015:	Emergency Water Supply Container Distribution
October 8 – 10, 2015:	Water Reliability Initiative Telephone Opinion Research conducted by Barney & Worth and DHM Research
October 17, 2015:	Disaster Relief Trials Water Check Point
October 17, 2015:	WRI Discussion Groups conducted by Barney & Worth and DHM Research
November 18, 2015:	WRI/AWS EWEB Customer Research Panel
February/March 2016:	Pre-orders for emergency water supply containers opens to the public
May 2 – 7 2016:	Drinking Water Week Container Distribution
May 2016:	Value of Water Display at The Science Factory; a EWEB, SUB, RWD partnership

Recommendation

This material was presented for information purposes and comments and questions will be answered during the Agenda time.

If there are any questions or if more information is needed, please contact Brad Taylor, Water Operations Manager 541-685-7385 or brad.taylor@eweb.org.

Water Utility - Emergency Water Response Equipment

Current Inventory and Planned Purchases

Equipment	Quantity	Description	Currently Own and Operational	Operational by End of 2015	Operational by End of 2016
Water Distribution/Public Education Trailer	1	Water trailer has both concession style doors and/or the capability of using a manifold to dispense water. This trailer has the capacity of 0 - 60 water dispensing spigots and serves dual purpose as a public education trailer.	X		
Water Distribution Trailers	2	The trailers and generators have been purchased. Pumps, piping, and distribution manifolds will be complete by the end of 2015. Each trailer will have the capacity to provide 0 - 100 water dispensing spigots using external pipe manifolds,		X	
22' Box Trailer	1	The Water Utiliity took over a 22' box trailer from Facilities. This trailer will either be used as the treatment trailer in 2016 or a damage assessment trailer in 2016			X
Water Treatment Trailer	1	Using either the trailer above or a new trailer, portable water treatment equipment will be purchased. Goal is operational by end of 2016			X
500 Gallon Plastic tank	1	small incidents this small 500 gallon plastic tank can be installed in the back of a dump truck to provide drinking water.	X		
1000 Gallon Bladders	2	Potable water bladder for transportation	X		
2000 Gallon Bladder	1	Potable water bladder for transportation	X		
3 Gallon Emergency Storage Containers	2889	Containers sold to the public for emergency prepardness.	2889	~6000	~9000+