



## **QUESTIONS & ANSWERS: *Waluga Reservoir 1 Roof Replacement***

### **What repairs need to be made to Waluga Reservoir 1?**

A recent structural inspection and seismic analysis determined that the floor and walls of the reservoir are in excellent condition with reinforcing adequate to meet current seismic and building codes. However, a detailed inspection and analysis of the roof system determined it to be vulnerable and thus should be replaced as soon as is reasonably possible.

### **How and when did the Partnership discover that the reservoir roof needs to be repaired?**

The current state of the Waluga Reservoir 1 (WR1) roof was discovered during a thorough inspection and condition assessment of the tank after Waluga Reservoir 2 (WR2) was built, which allowed crews to drain WR1 to make some planned improvements in late summer/fall 2015. Once inside the reservoir, a full structural evaluation was performed and defects were found with the roof system. City of Lake Oswego and Partnership staff reviewed the evaluation, briefed the Partnership's Oversight Committee and joint councils, and have developed a plan to replace the roof.

### **Is the neighborhood in any immediate danger?**

There is no immediate threat to the neighborhood, however, structural engineers recommend replacing the roof as soon as reasonably possible.

### **Didn't the Partnership recently make improvements to Waluga Reservoir 1? Is this new project undoing those improvements?**

The Partnership recently made improvements to the inside of WR1—adding a new mixing manifold, which improves water quality. This project focuses solely on replacing the roof and would not affect these improvements.

### **After the roof is replaced, how long is the Waluga Reservoir 1 expected to last?**

Structural engineers conclude that once the roof system is replaced, WR1 is expected to remain functional for more than 50 years.

### **How can you be sure the new Waluga Reservoir 2 won't have the same problem?**

The new WR2 roof and tank were designed and constructed to exceed current building codes. Full-time inspection by highly qualified engineers along with third party inspections provide assurances that the Partnership's 75-year design life requirement for WR2 will be met.

### **How often are the City's reservoirs inspected? Could other reservoirs have this same problem?**

In 1995, the City commissioned an inspection and condition assessment of all reservoirs and major pipelines in the City. Minor cosmetic defects were identified in a few reservoirs at that time. Since then, inspections of tank interiors has occurred using divers and/or remote controlled submersible vehicles. Additional inspections of the City's reservoir system will be conducted over the coming months and detailed assessments will be performed as warranted.

**Will any trees need to be removed as part of the roof replacement?**

The planning and design effort is in very early stages, so it is too soon to determine with any confidence to what extent additional tree removal would be required to facilitate the roof replacement. Once design has progressed further, we will know more, however, the Partnership will work to limit tree removal.

**How long will construction last?**

It is currently estimated to take approximately 6 months for active construction of the new roof on WR1.

**When is construction expected to begin?**

Design and land-use permitting is underway. Once this is complete, the bidding process will take place to secure a capable contractor. Construction is expected to begin fall 2016.

**What are the construction impacts to the neighborhood?**

This construction project will not be on the same scale as construction for WR2 - crews will be performing a specific task to remove and replace the roof on the existing WR1 structure. No rock excavation is required. Cranes and equipment will be present. Crews will need to cut parts of the roof to remove it and pour concrete for the new roof. An increase in truck traffic is expected around both entrances to the site—on Carman Drive and the end of Parkhill Street—during the day, along with equipment use, delivery and moving of materials, and periods of noise from the demolition activities to remove the existing roof.

**Where will equipment and materials be stored?**

Most of the equipment and materials needed for the roof replacement will be stored on the reservoir site. In some instances, they may be temporarily staged in the right-of-way on Parkhill Street near the site. Safe traffic flow and local access will be maintained.

**What will the work hours be?**

Permitted construction hours would likely be the same as they were during construction of the WR2—7 a.m. to 6 p.m., Monday to Friday—with the possibility of Saturday work, which would occur between 8 a.m. and 6 p.m.

**How much will the roof repair cost?**

Preliminary estimates indicate it will cost approximately \$2.5 million.

**Where will the money come from to fix the roof?**

Revenues from the sale of water to retail and wholesale customers will provide the funding to complete the repair.

**What is the history of Waluga Reservoir 1?**

WR1 was built between 1980 and 1982. The reservoir is approximately 190-feet in diameter and 21-feet tall. It stores about 4 million gallons of drinking water when full. The reservoir is a circular, wire-wrapped, pre-stressed concrete tank. This is a very common tank style— thousands of these style tanks are in service through the U.S. and abroad.

**Why is Waluga Reservoir 1 important?**

WR1 is a crucial component to the Partnership's system to provide drinking water to Tigard and Lake Oswego residents. Both Waluga Reservoirs (1 and 2) work together in tandem to store and provide clean, drinking water for both communities.

**MORE INFORMATION?**

For the most up to date information, sign up for our Waluga Reservoir email list at [lotigardwater.org](http://lotigardwater.org), email [lotwater@ci.oswego.or.us](mailto:lotwater@ci.oswego.or.us), call 503-697-6502 or follow @LOTwater on Twitter