

## Case Study

USWAPW-2544.001  
USWAPW-2544.002

**IXOM**  
WATERCARE

# GS-9 Mixing In A 500K and 750K Gallon Standpipe

Mixing breaks temperature stratification leading to uniform & consistent water age.

**Topics:** tank mixing, temperature stratification, water age, GS Series



### Location & Contact Information:

Further information may be available upon request. Please contact Ixom Watercare by phone at +1 866-437-8076 or by e-mail, [watercare@ixom.com](mailto:watercare@ixom.com)

**Overview:** This Customer was performing seismic retrofits on two potable water reservoirs and wanted to add active mixing as part of the overall project. Tank volumes are 750,000 to 500,000 gallons with each tank having a common inlet/outlet. Both are part of a non-treated system (no added chemicals).

#### ●Southwest Reservoir

Volume (gallons): 750,000  
Height (ft): 50  
Diameter (ft): 50  
Operating Range (ft): 38-48

#### ●Southeast Reservoir

Volume (gallons): 500,000  
Height (ft): 50  
Diameter (ft): 39  
Operating Range (ft): 38-48

**Pre-Deployment Conditions:** Temperature stratification and water age issues especially during the summer months.

**Project Objectives:** Create uniform temperature profile top to bottom and consistent water age.

**Solution:** One (1) GS-9 submersible tank mixer per tank. (August 2015)

**Results:** Baseline temperature stratification before mixer start-up exceeded 11° F top to bottom.

24 Hrs After Start-Up: Temperatures converged to less than 1.0° F.

72 Hrs After Start-Up: An even mix was further confirmed with temperature convergence between 0.1° to 0.3° F.

\*See also data charts on page 2.

**Update (April 2016):** Per the Customer, "...these are amazing little machines and I just love them..."

**Update (November 2020):** The Customer continues to be happy with the equipment and the results. They have ordered two (2) additional GS Series Tank Mixers in 2019 for a total of four(4).

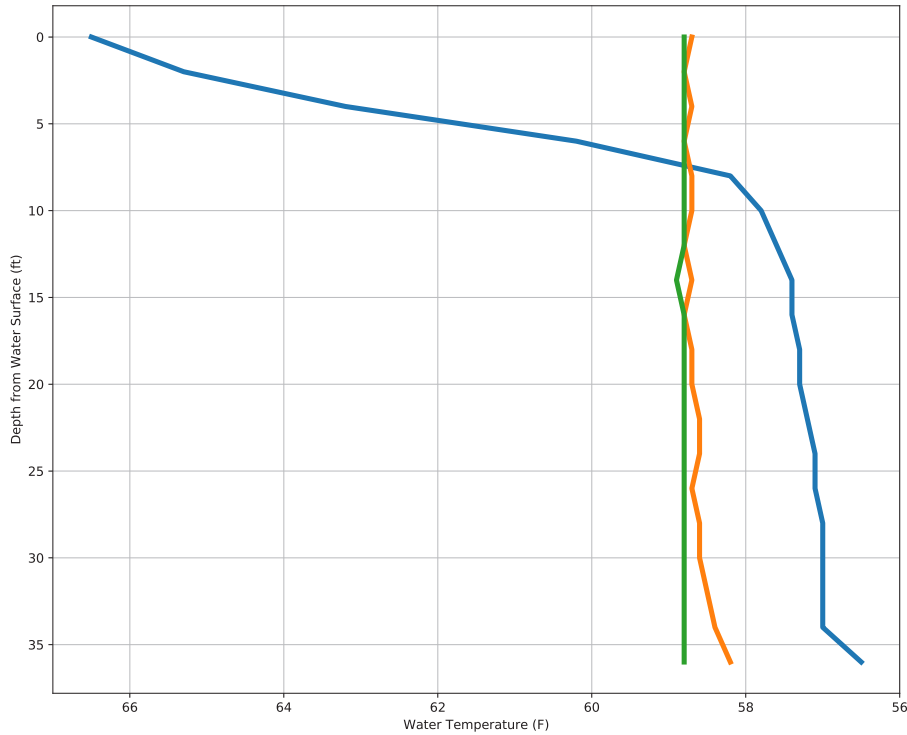
# Case Study

USWAPW-2544.001  
USWAPW-2544.002



## GS-9 Mixing - Temperature Stratification Testing

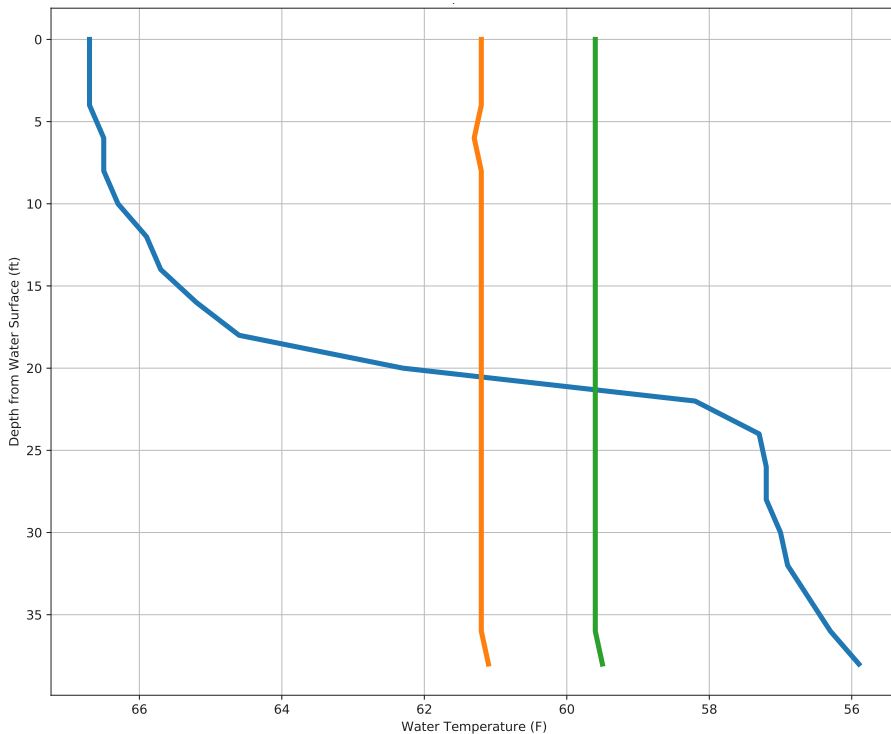
Southwest 750,000 Gallon Reservoir



- Baseline (F)
- 24 Hours (F)
- 72 Hours (F)

Temperature Difference  
Mixer Off - Baseline: 11.8° F.  
Mixer On - 24 Hours: 0.8° F.

Southeast 500,000 Gallon Reservoir



- Baseline (F)
- 24 Hours (F)
- 72 Hours (F)

Temperature Difference  
Mixer Off - Baseline: 11.2° F.  
Mixer On - 24 Hours: 0.3° F.  
Mixer On - 72 Hours: 0.1° F.