

# Optimizing Operations & Saving Energy at SUEZ (United Water Idaho)

**PNWS AWWA in Boise, Idaho**  
**Friday May 6, 2016**

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**Energy Manager**  
**SUEZ North America**



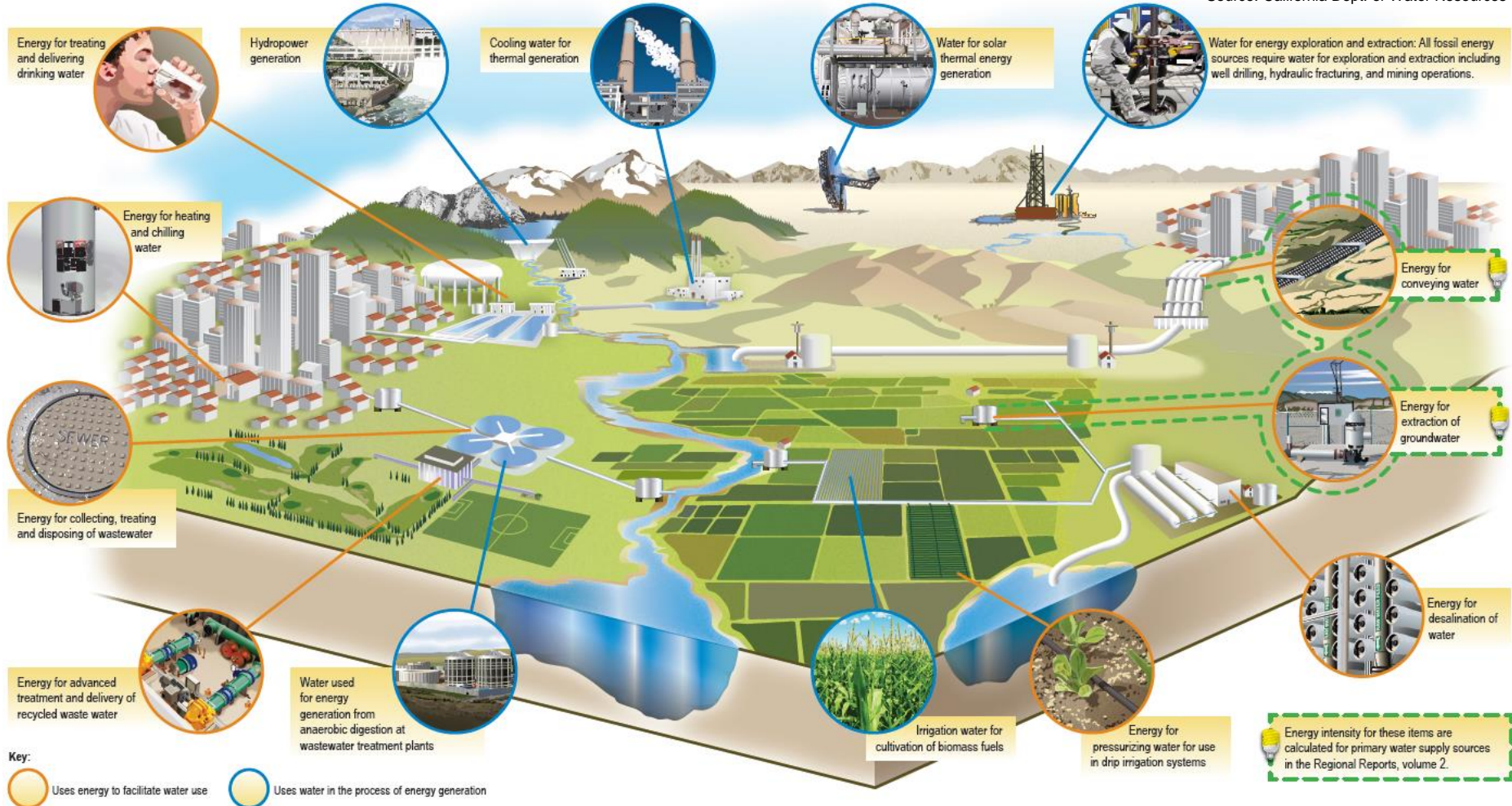
# MWH/MG ↓ 5%

## SUEZ North America

Goal to reduce electric use per unit of water produced by 5% over 3 years

# Water Energy Nexus

Source: California Dept. of Water Resources



# BOISE

## Annual Drinking Water

**200,000 = 36 Million  
People kWh**

**\$2.5 Million**



SUEZ Water  
Idaho

97%

Production  
Efficiency



National Average:

20%

WATER LOSS

# Smart Energy Management

Best practices

Power monitoring

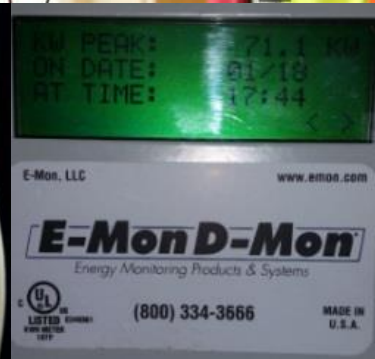
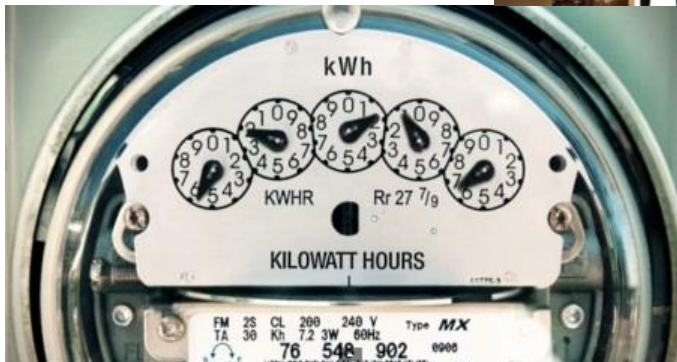
Energy assessments

Efficiency upgrades

# Best practices

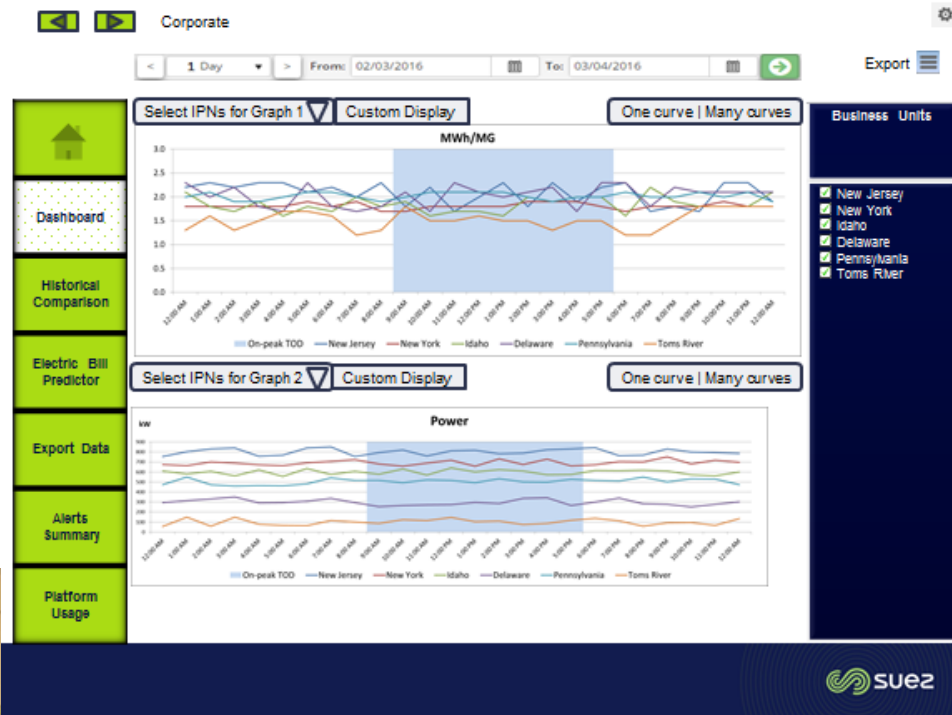


# Power monitoring

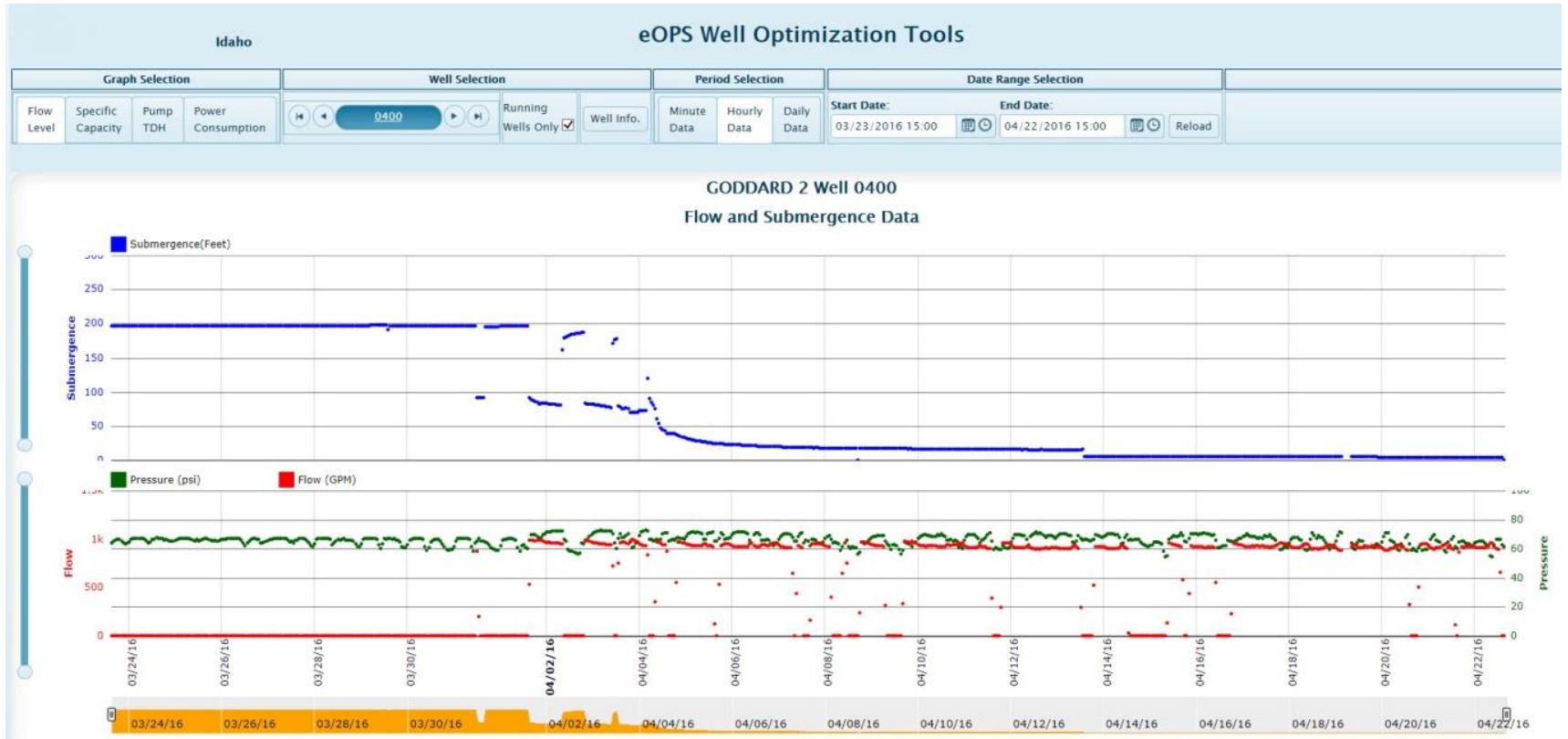




# Energy assessments



# Example: Well Optimization



# Energy Efficiency Upgrades



**Pump and Process Improvements**

**Premium Efficiency Motors**

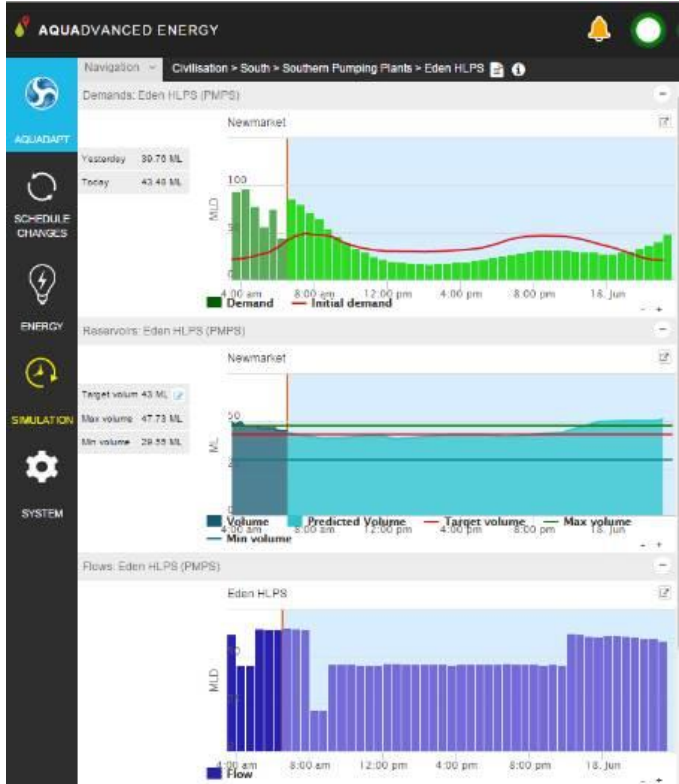
**Variable Frequency Drives**

**High Efficiency Lighting**

**High Efficiency A/C Units**

**HVAC Control System Upgrades**

# Derceto Aquadvanced Energy™

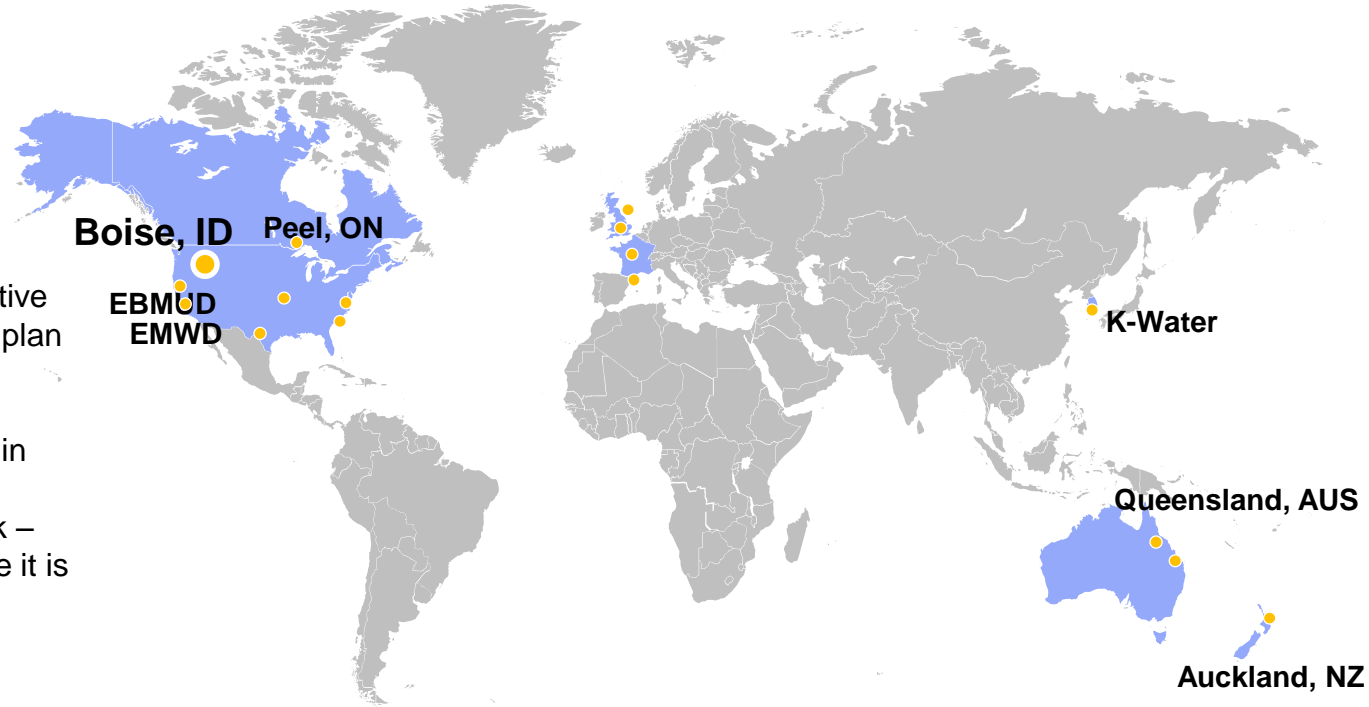


# Aquadvanced Energy



Integrating with existing SCADA systems to create the most effective pump valve and water treatment plan schedules

Adapting in real time to changes in demand, energy pricing and unforeseen events in the network – ensuring water is delivered where it is needed at minimum cost and maximum quality

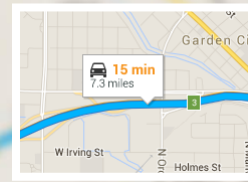


# What is Real-Time Optimization?

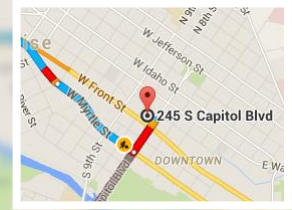
*Drive to the Grove Hotel...*

- *In the Least Amount of Time*
- *Obeying All Traffic Laws*
- *Minimizing Fuel Use*
- *Avoid Construction*

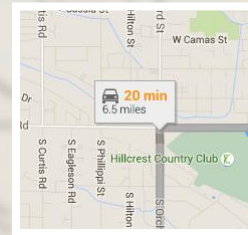
**Fastest Route**



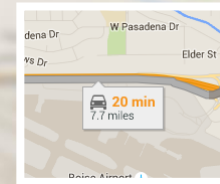
**Current Events  
Effecting  
Outcome**

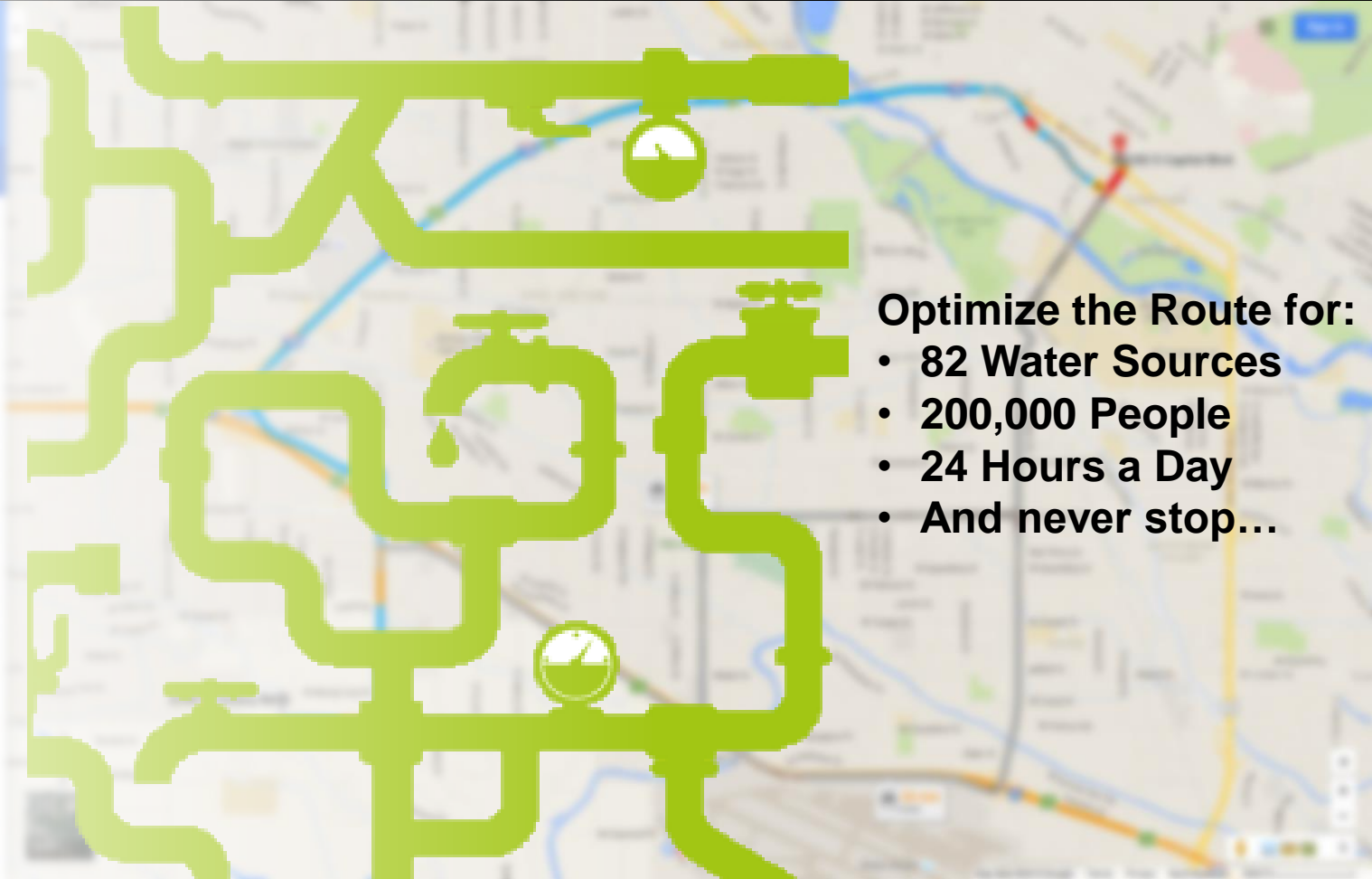


**Shortest Route  
Avoiding Highways**



**Longest Route**



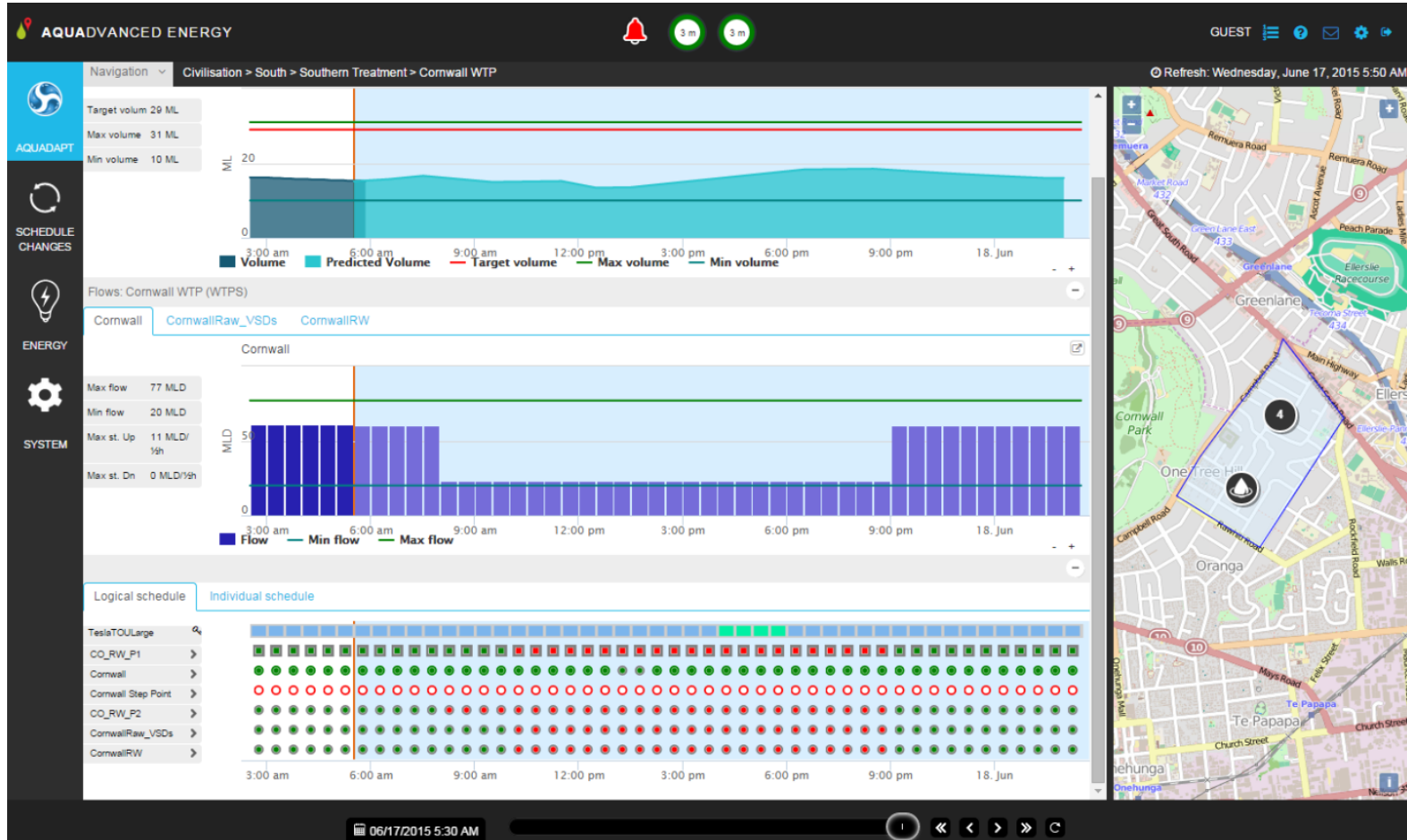


**Optimize the Route for:**

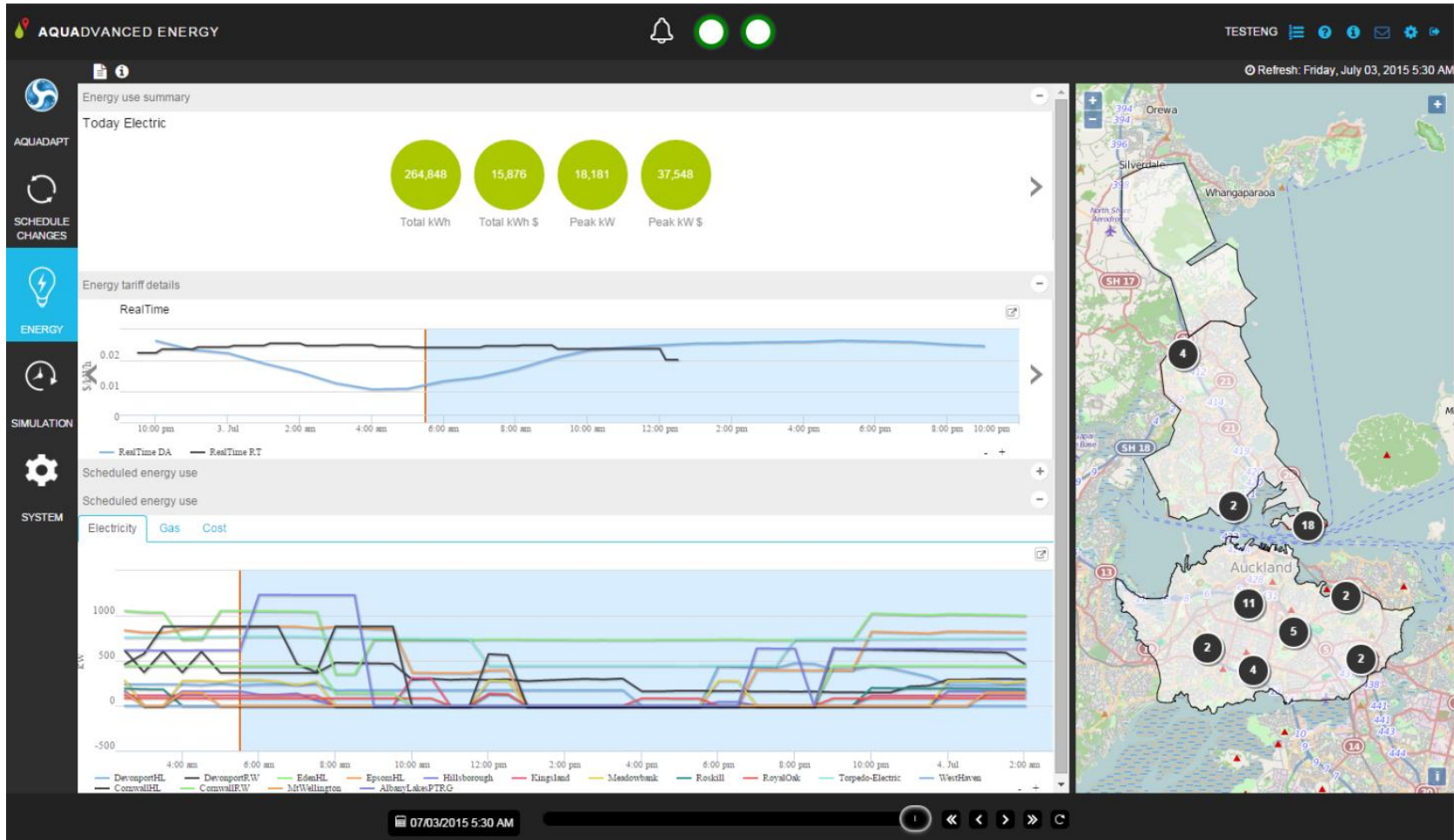
- **82 Water Sources**
- **200,000 People**
- **24 Hours a Day**
- **And never stop...**



# Real-Time Optimization



# Operations Benefits



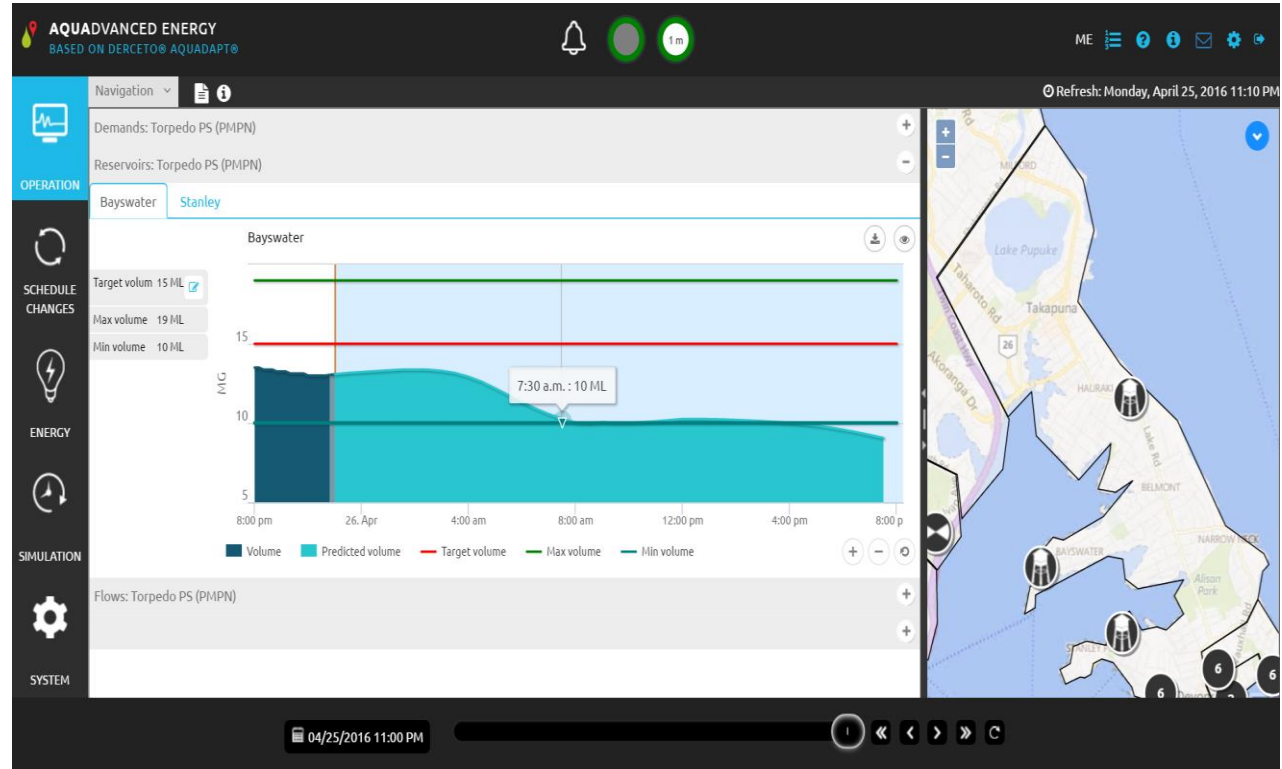
# What this Means for Boise Customers



## Aquadvanced Energy

### Provide Water to the Boise System...

- For the lowest Energy Cost
- Following Regulatory Guidance
- Maximize Water Quality



# Thank You!

**For more information, please contact:**

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