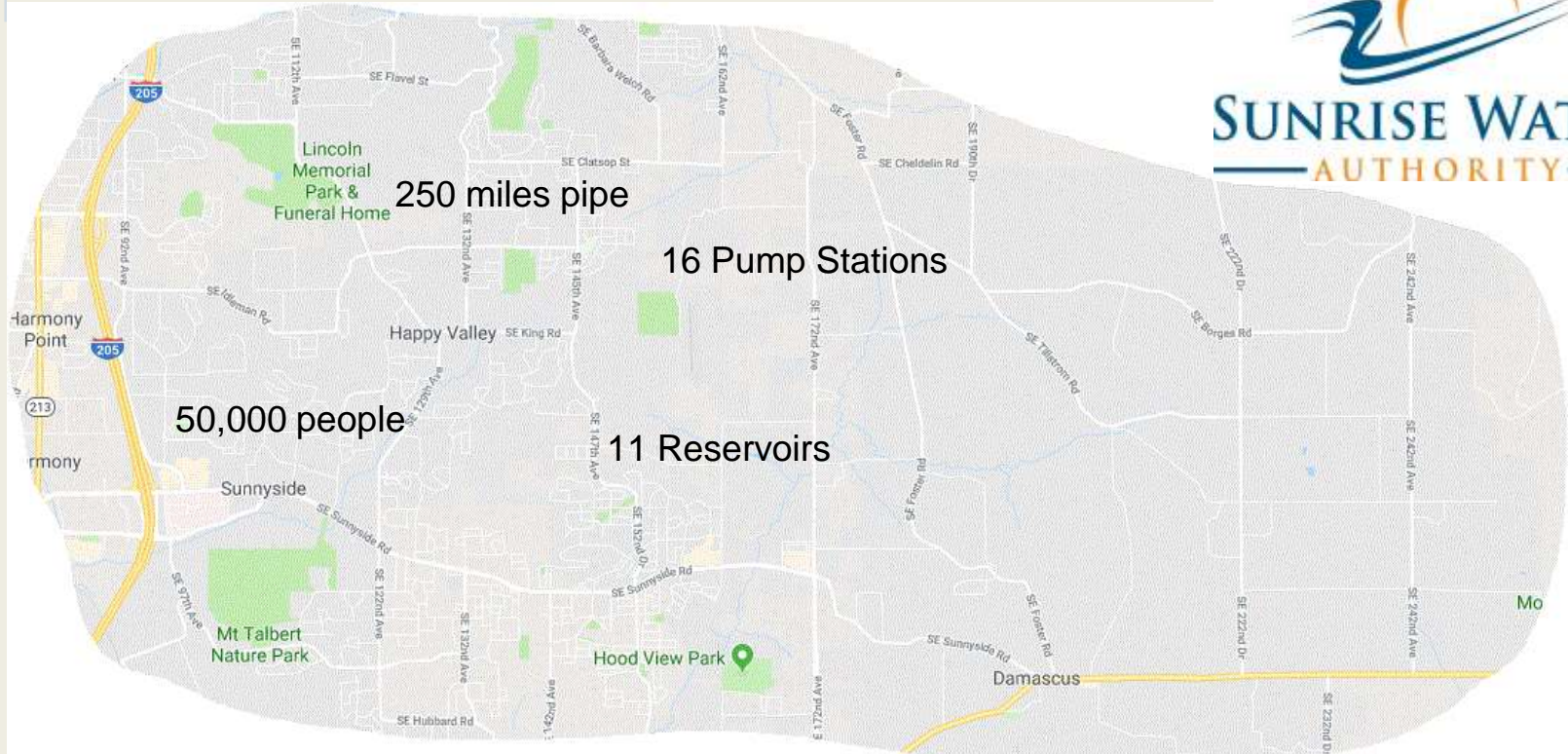


# Avoiding 'Run to Failure'

Wade Hathhorn  
General Manager

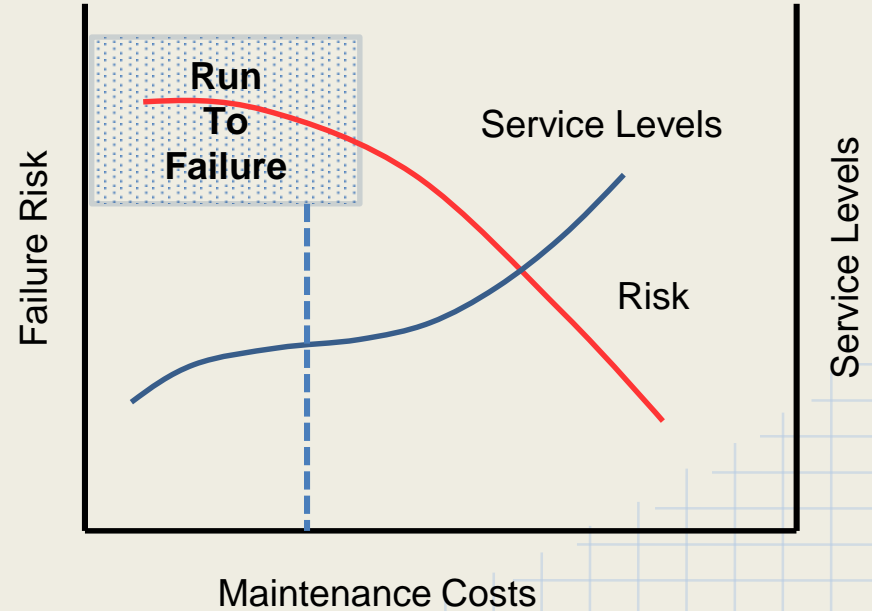
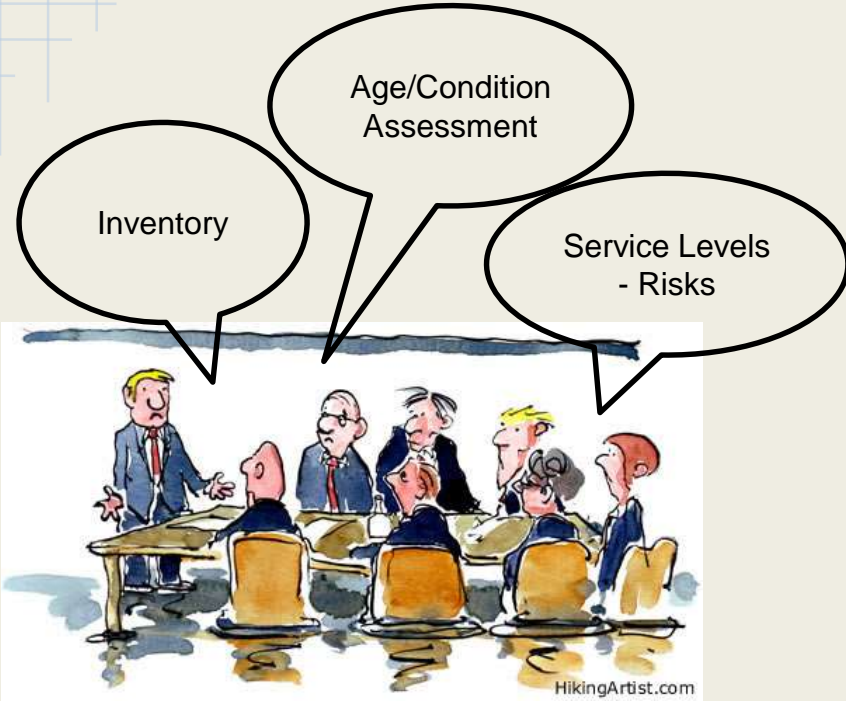
# Sunrise...



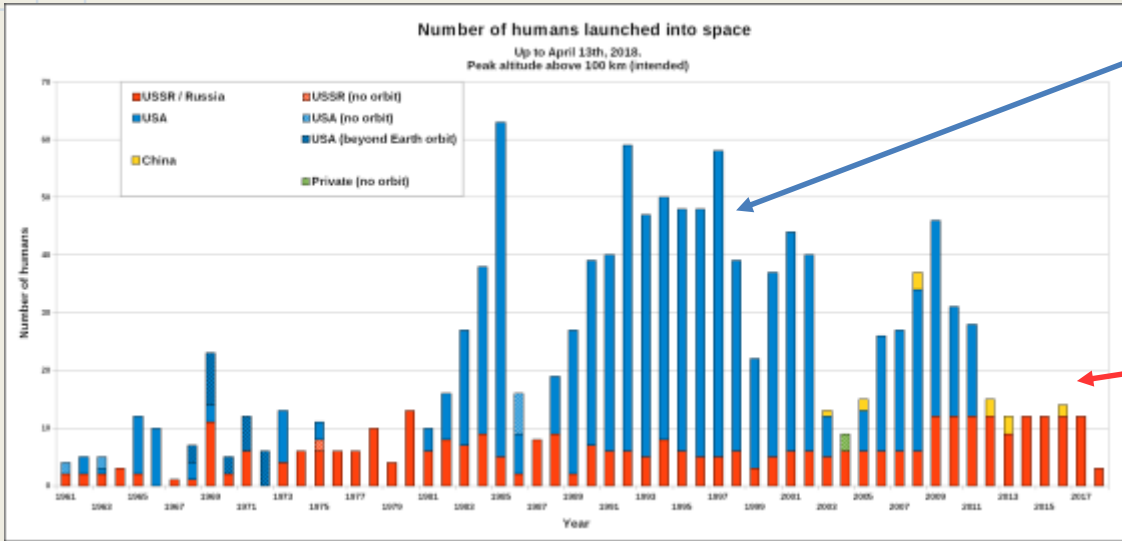
# Run to Failure ...



# Asset Management ...



# Capital Planning ...



20-Year  
\$80 Million  
New Facilities  
(SDCs)

20-Year  
\$15-20 Million  
Replacements  
(Rates)

# Priorities ... (Liabilities?)



?  
> \$50-100 Million  
in Replacements

# Technical Challenges...

Cast Iron Mains Buried  
on Native Rock and Soil



Often Immediate Failure  
No Advanced Warning



Ductile (Class 50) Laid on  
Native Soil Backfilled with  
Sand or Dissimilar Material

# Dealing with the problem(s) ...



Carefully Monitoring  
Break Histories (GIS)

Targeted Replacements  
of Key Assets

Trial Alternative Condition  
Assessment Technologies





# Costs \$\$\$\$ ...

$$18,000 \text{ ERUs} \times \text{Average Bill } \$50/\text{mo./ERU} = \text{Annual Revenue } \$10,500,000$$

Rates  
Service Charge \$18/mo./ERU  
Water \$2.50/CCF  
Volume 2,500,000 units/yr

Replacements  
\$1,500,000/yr

\$3,000,000/yr

