

# WATER SYSTEM COST ANALYSIS



# THOUGHT PROCESS

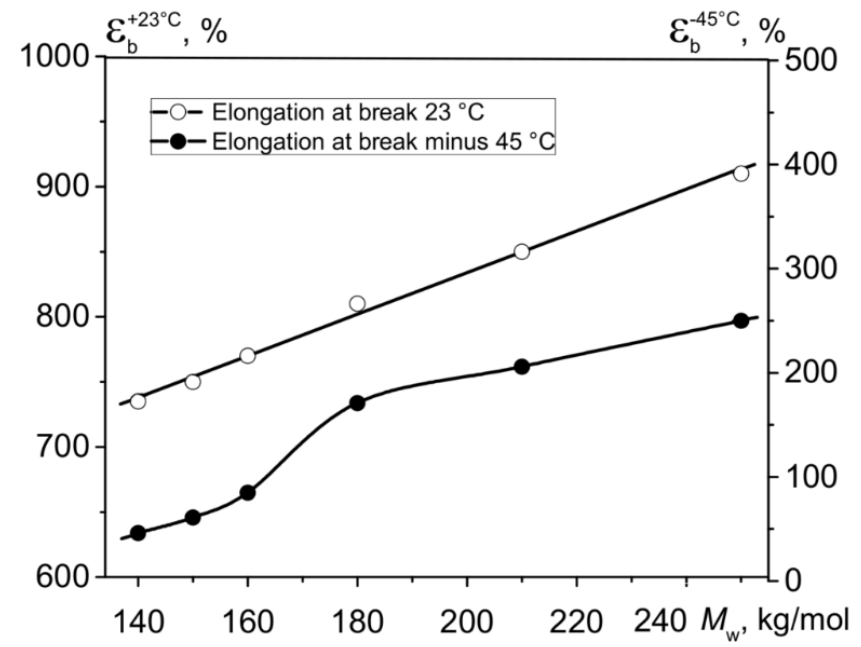
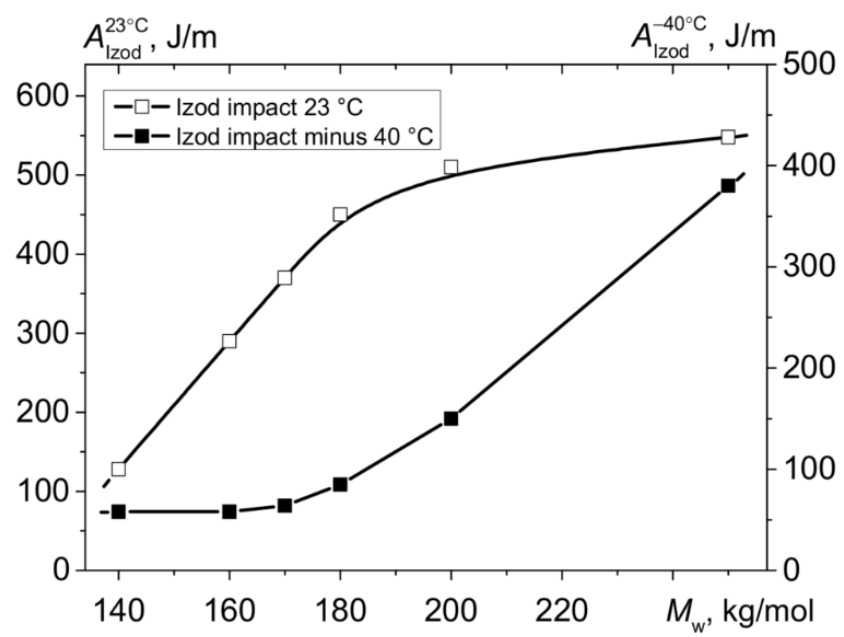
- Forecast water system costs based on current replacement rate, current water system life cycle, and asset management plan.
- Break down cost estimating criteria and final conclusions regarding total cost, annual cost and the cost to expand the water system.

Village of Taos Ski Valley

Water System Asset Management Plan



Village of Taos Ski Valley, New Mexico



## ENVIRONMENTAL FACTORS

# ENVIRONMENTAL FACTORS CONTINUED



Feature	HDPE Pipes	PVC Pipes	Steel Pipes
Flexibility	High	Moderate	Low
Corrosion Resistance	Excellent	Good	Poor
Lifespan	Over 50 years	25-40 years	20-30 years
Installation Complexity	Moderate	Low	High
Highest Operating Temperature	60°C (140°F)	60°C (140°F)	260°C (500°F)
Lowest Operating Temperature	-40°C (-40°F)	0°C (32°F)	-20°C (-4°F)



# MAIN EXPENDITURES



## Water Line Replacement and Expansion

- Covers Major Water Line Restorations and expansions

## Emergency Repairs

- Covers all emergency water line repairs and replacements

# COST FORECASTING

Tariffs

Increased Cost of Labor

Supply Chain Issues

Aging System

# LINE REPLACEMENT

- Estimated 9000 Linear Feet of Replacement.
- Replacements required based on useful life, undersized lines, and undesirable material.



## LINE REPLACEMENT COST

- Using Phoenix Switchback replacement as a benchmark of construction cost



\$6,700,000 Estimated total for the next  
5 years on water line replacement

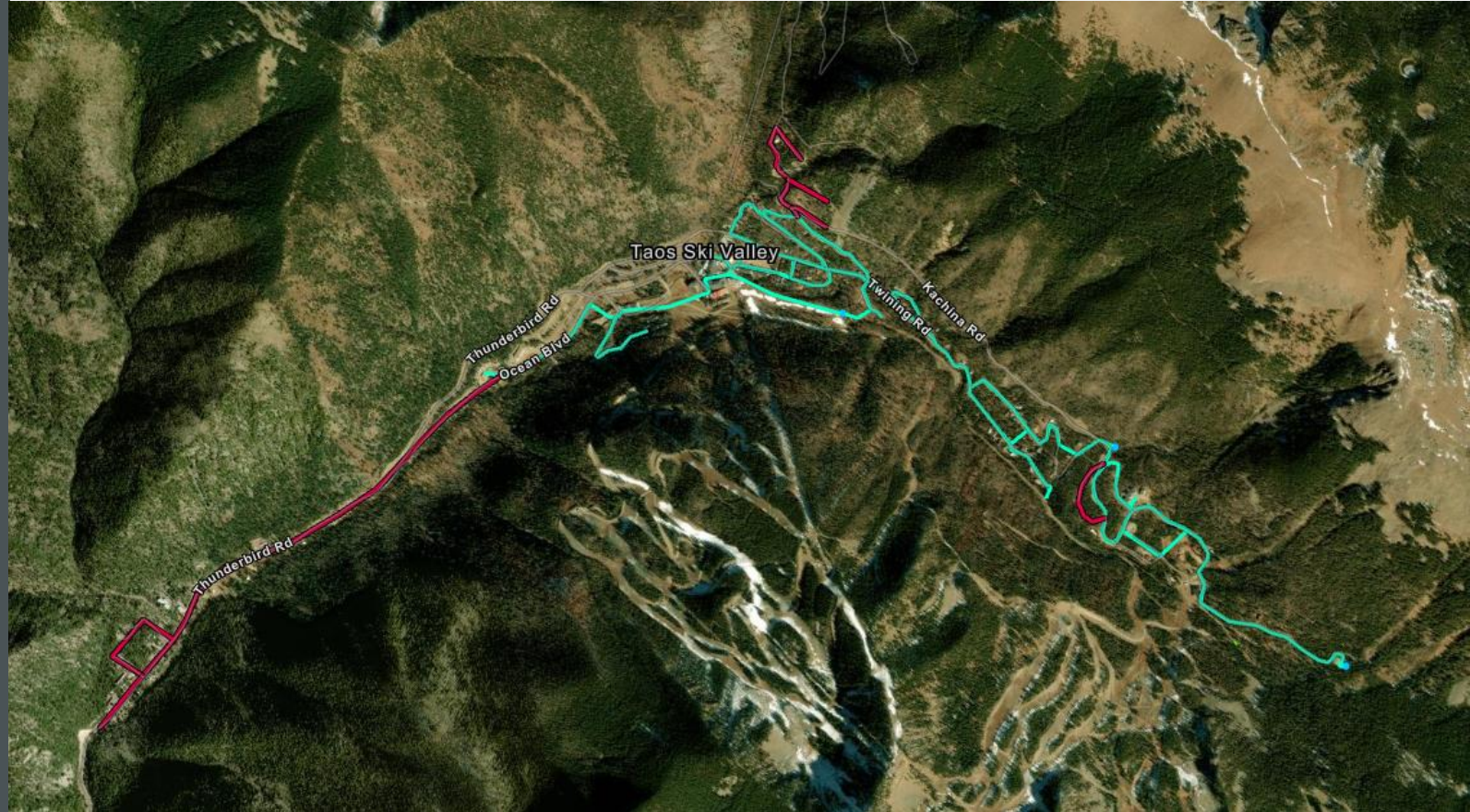


\$1,300,000 Estimated Annually



# WATER SYSTEM EXPANSION

- Total Estimated Cost of \$9,200,000
- \$1,800,000 Estimated Annual Cost



# EMERGENCY REPAIR COSTS

- Averaged historical emergency repair cost per annum
- Included maintenance costs for PRVS, Pumps, Tanks, and Meters



**\$1,288,000 IN ESTIMATED  
EMERGENCY REPAIRS**



**\$257,000 ESTIMATED  
ANNUALLY**

## FINAL FIGURES

Replacement

Expansion

Emergency  
Repairs

Total  
\$6,700,000

Total  
\$9,200,000

Total  
\$1,288,000

Annual  
\$1,300,000

Annual  
\$1,800,000

Annual  
\$257,000

## FINAL ANNUAL COST

Estimated  
\$3,440,000  
Per year

Estimated  
\$17,200,000  
Total





## OTHER COSTS AND CONSIDERATIONS

### Wastewater

- Plant is almost out of warranty.
- Line along twining will need to be replace during twining construction.
- Approximated 800,000 to 1.5 million depending on repairs needed.