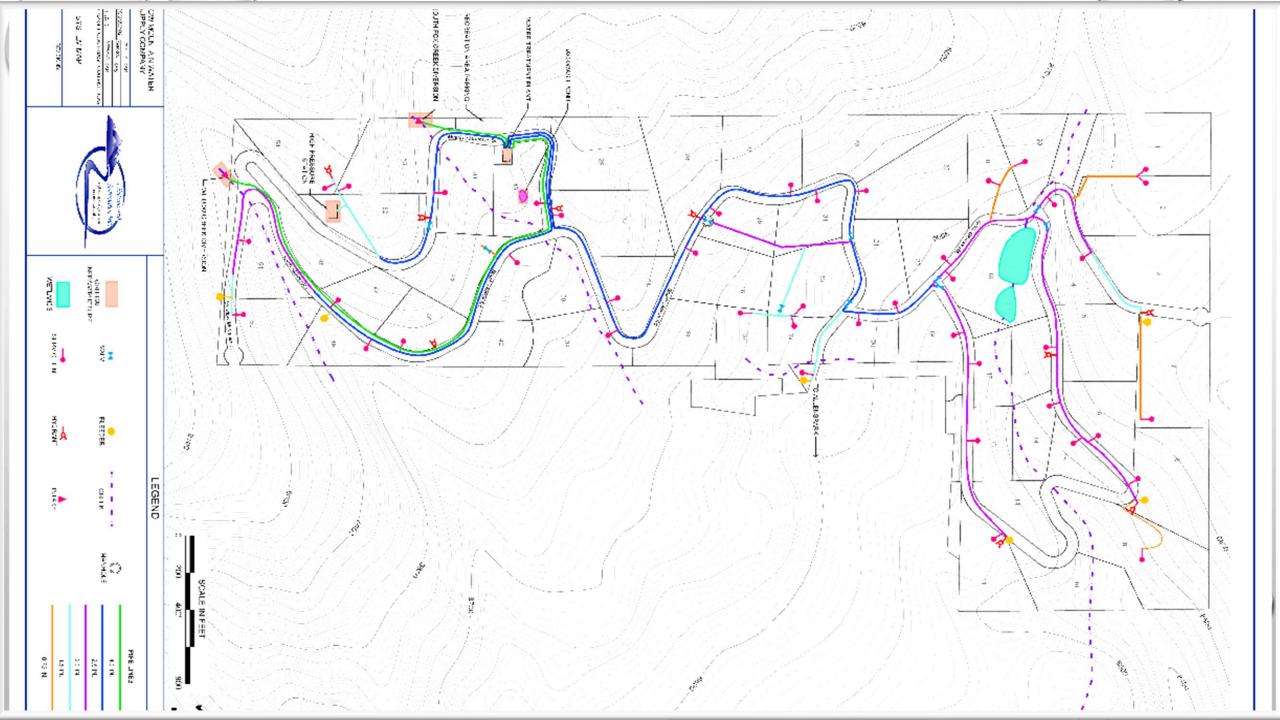
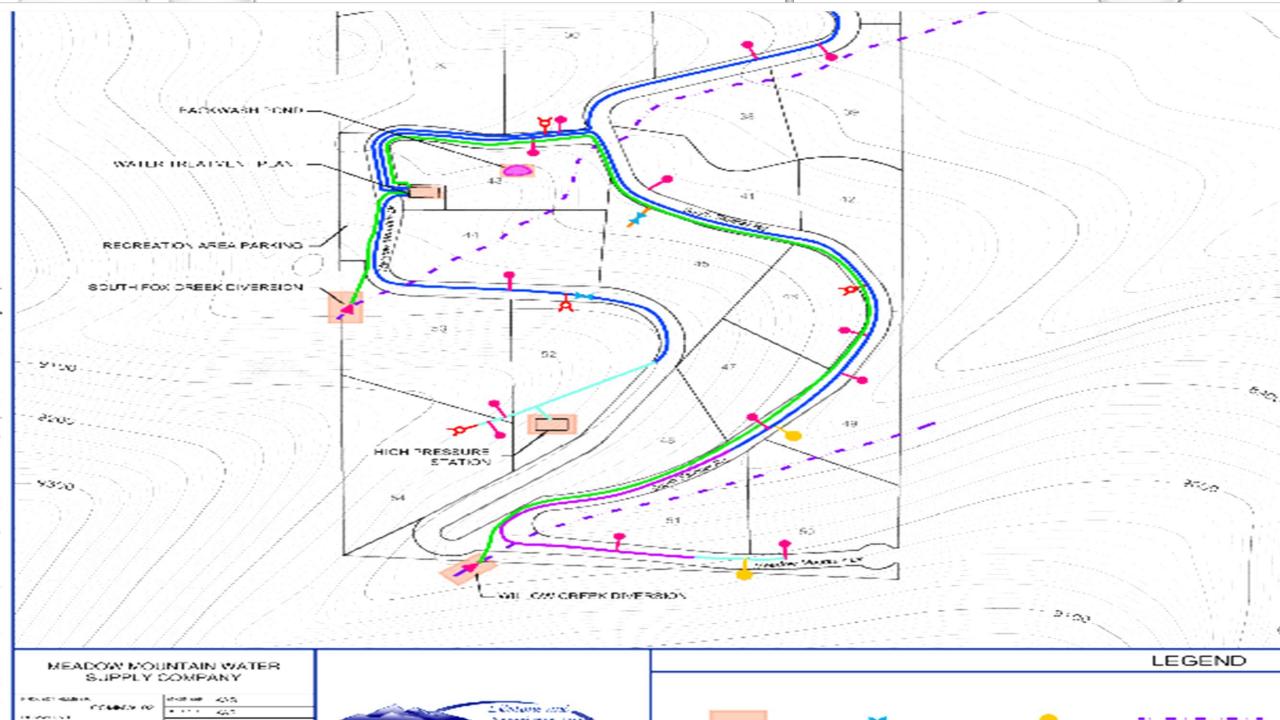


UPPER LOOP UPGRADE ULU PROJECT

DISCUSSION OVERVIEW

- UPPER LOOP BRIEF DESCRIPTION
- NECESSITY FOR PROJECT
- PROJECT SCOPE OVERVIEW
- COST ESTIMATE
- FINANCING





NECESSITY FOR PROJECT

2018 INLET LINE FROM FOX BREACHED

SIX PEOPLE VISUALLY INSPECTED THE LINE. ALL REPORT SEVERE
DEGRADATION DUE TO EROSION FROM PARTICULATES

• PER WENCK ENGINEERS, THE LIFE OF THE SCHEDULE 40 PVC USED IN THIS SERVICE IS NEAR THE MAXIMUM EXPECTED. MAXIMUM LIFE TO BE EXCEEDED 2028.



UPPER LOOP UPGRADE PROJECT SCOPE

- REPLACE INTAKE LINES TO FOX AND WILLOW CREEK
- REPLACE DISTRIBUTION LINES WHERE THOSE LINES CAN BE PLACED IN THE SAME TRENCH AS THE INTAKE LINES
- ADD AN ADDITIONAL LINE IN THE SAME TRENCH AS THE WILLOW CREEK INLET LINE FOR FUTURE CONNECTION TO THE ALLENSPARK WATER DISTRICT
- ADD A FIRE HYDRANT ON THE INTAKE LINE FROM WILLOW CREEK
- REPLACE THE UPPER HIGH LINE DISTRIBUTION LINE TO THE HIGH PRESSURE SHED

COST ESTIMATE

\$1MM

Excavation	\$200,000
Blasting	\$ 75,000
Road Base	\$ 80,000
Pipe bedding	\$ 36,000
Haul off	\$ 50,000
Pipe	\$250,000
Service lines, taps, valves	\$ 29,000
Air vac	\$ 15,000
Fire hydrant	\$ 8,000
Contingency	\$225,000
Management & Eng Support	\$ 35,000



CAN WE WAIT ON THIS PROJECT?

- FAILURE MAY BE MILD AND SOMEWHAT INCONSEQUENTIAL
 FOR A WHILE. PER WENCK, CATASTROPHIC FAILURE UNLIKELY.
 WE MAY HAVE UNDETECTED LEAKS NOW WITH NO
 NOTICEABLE EFFECT.
- IF FAILURE OCCURS, WE HAVE REPAIR KITS. THIS NECESSITATES DIGGING AND FINDING THE LEAK, SHUTTING OFF CREEK FLOW, AND REPLACING THE LEAKING SECTION.

REASONS TO PROCEED NOW

- PVC PIPE LIFE EXPIRING (50 YRS. OLD?). REPLACEMENT MUST OCCUR IN NEAR FUTURE ANYWAY.
- VISUAL INSPECTION IDENTIFIED SEVERE DEGRADATION
- FAILURE COULD OCCUR ANYTIME. POTENTIAL CONSEQUENCES IF FAILURE OCCURS IN WINTER
 - LOWER LOOP LINE FREEZES
 - EXTREMELY DIFFICULT COSTLY REPAIR (WITH NO LONG-TERM BENEFIT TO EXPENDITURE) AND POSSIBLE SUPPLY CHAIN ISSUES
- FUNDING FOR THIS PROJECT WILL TAKE SUBSTANTIAL TIME TO ACCESS. IN OTHER WORDS, WE CAN'T
 WAIT TO APPLY FOR FUNDING WHEN THE PROJECT NECESSITY IS IMMINENT.
- UNIQUIELY GIFTED AND WILLING BOARD MEMBERS
 - EXPERIENCED IN GRANT APPLICATIONS, LOAN NEGOTIATION, DEALING WITH STATE AGENCIES

TWO OPTIONS

Repair before failure (if not now, when?)

Wait until failure

COST ESTIMATE TOTAL \$997,564

- UNIT COSTS OBTAINED FROM ACKERMAN BASED ON BIG ELK MEADOWS PROJECT AND ESCALATED TO 2022 COSTS
- FOR THIS ESTIMATE WE TOOK ACKERMAN'S PER UNIT COSTS AND APPLIED THEM TO THIS PROJECT.
- ASSUMED 50% OF EXCAVATION REQUIRES BLASTING (PROBABLY ACTUAL IS 30%)
- 25% CONTINGENCY
- \$40K CONTINGENCY FOR CREEK TIE IN POSSIBLE ISSUES
- \$35K FOR PROJECT MANAGEMENT, PROJECT REPORTING, AND ENGINEERING SUPPORT



- INLET LINE REPLACEMENT FOX \$67,000
- INLET LINE REPLACEMENT WILLOW \$440,000
- LINE FOR FUTURE ALLENSPARK CONNECTION \$51,000
- DISTRIBUTION LINE REPLACEMENT (NO EXCAVATION)
 - POTABLE TO BASE PENNY LANE \$115,000
 - POTABLE TO LOWER LOOP \$25,000
 - POTABLE TO FOX \$9,000
 - UPPER HIGH LINE POTABLE WATER (FROM FOX TO HIGH PRESSURE SHED) \$221,000 (EXCAVATION INCLUDED)
- OTHER (CREEK TIE IN CONTINGENCY, MANAGEMENT, REPORTING AND ENGINEERING SUPPORT) \$75,000