

Holden Town Water Master Plan:
Summary of Findings
December 2020

CULINARY WATER CONNECTIONS

- Growth Projection – 1% Avg Annual Growth
- Current ERC's – 325 (232 Residential, 4 Commercial, 33 Industrial, 56 Institutional)
- 20 Year projected ERC's ~ 400

WATER RIGHT

- Total Current Water Right = 481.5ac-ft
- Current Water Right Required ~ 359.78 ac-ft; Current Surplus 121.76 ac-ft
- Projected Water Right Required (20 Years) ~ 435.85 ac-ft; Projected Surplus ~ 45.69 ac-ft
- Projected Water Right Required (40 Years) ~ 527.99 ac-ft; Projected Deficit ~ -46.45 ac-ft
- 40-Year Plan will help Town protect its water rights
- A new well would allow Town to utilize its full water right
- The Town could implement a water right policy for new development outside of existing culinary service area.

SOURCE

- Current Water Source Capacity = 264 gpm
- Current Source Capacity Required 634.07 gpm; Current Deficit ~ -370.07 gpm
- Projected Source Capacity Required (20yrs) ~ 767.23 gpm; Projected Deficit ~ 503.23 gpm.
- Pursue an additional 500 gpm of source capacity
- A well siting study could help to find a location that would most likely produce the required source capacity.

STORAGE

- Current Water Storage = 740,000 gal
- Current Water Storage Required ~ 636,162 gal; Current Surplus ~ 103,838 gal
- Projected Water Storage Required (20yrs) ~ 731,965 gal; Projected Surplus ~8,035 gal
- The 90k and 150k tanks are intended to be replaced in the future.
- Replace these tanks with a 500,000-gallon tank.

TREATMENT

- Add a new building near existing headworks to house chlorination system.

DISTRIBUTION SYSTEM

- Minimum Available Fire Flow – target 1,500 gpm
- Dead-end, six-inch lines on North and South sides of system do not meet target fire flow
- Furthest East Hydrant on 100 N, North of 300 North on 300 East, and Woodhill Drive are below 40 psi
- The hydrant on Woodhill drive has a pressure of 14 psi and may need to be removed to avoid potential contamination.

STORAGE RESERVOIR

- Projected costs would be between \$1.5 M and \$2 M
- A secondary irrigation system would need to be installed to fully use the water
- Two locations were analyzed; The North Site could store up to 80 ACFT, and the South Site would store up to 76 ACFT of water.
- 100 gpm of overflow through the winter is about 67 ACFT of water for storage.

CAPITAL IMPROVEMENTS PLAN/RECOMMENDATIONS

- Immediate Improvements
 - Source Capacity
 - Add a culinary well to supplement springs in the summer
 - Spring Site Metering
 - Distribution System
 - Redundant tank distribution line
 - Radio Read Metering System

Holden Town Capital Improvements Opinion of Probable Cost	
Immediate Improvements	
Mobilization	\$ 117,000
Well Drilling Subtotal	\$ 503,680
Well Building, Equipping, Well Line Subtotal	\$ 802,250
Redundant Tank Distribution Line Subtotal	\$ 122,050
Radio Read System Subtotal	\$ 349,350
Spring Site Metering Subtotal	\$ 55,000
Contingency	\$ 390,000
Incidentals & Professional Services Total	\$ 601,500
Total	\$ 2,940,830

- Funding (Immediate Improvements)
 - USDA Rural Development (USDA-RD)
 - 1% of MHI- \$43.33
 - Estimated Average Monthly Bill- \$50.99-(Assuming 30% grant; 1.75% interest; 40 years)
 - Division of Drinking Water-Drinking Water Board (DDW)
 - 1.75% of MAGI – \$65.92
 - Estimated Average Monthly Bill-\$65.24 (Assuming 20% grant; 2.5% interest; 30 years)
 - Permanent Capital Improvements Board Fund (CIB)
 - 1.75% of MAGI – \$65.92
 - Estimated Average Monthly Bill-\$57.75 (Assuming 20% grant; 1% interest; 30 years)
- Future Improvements
 - Storage
 - Remove 90k and 150k tanks
 - Add 500,000-gallon tank
 - Chlorination Room & System Upgrades
 - Distribution System
 - See Exhibit E7; Dead end line looping and upsizing

Holden Town Capital Improvements Opinion of Probable Cost	
Future Improvements	
Mobilization	\$ 90,000
500,000 Gallon Tank Subtotal	\$ 750,000
Chlorination Room Subtotal	\$ 105,000
Distribution System Subtotal	\$ 546,190
Contingency	\$ 298,000
Incidentals & Professional Services Total	\$ 471,000
Total	\$ 2,260,190

QUESTIONS AND COMMENTS