Upgrading our water System (The Process)

- Define the components(increments) of the system

- Assess the viability of each increment as to:
  - Age
  - Projected lifespan from new
  - Current/future need for repair/upgrade/replace
  - Requirements for engineering
  - Requirements for approvals/planning reviews/permitting

- Develop increment package:
  - Remaining life
  - Estimate repair replace requirement
  - Initial scope of repair/replace
  - Develop budget
  - Requirement for approvals/permitting
  - Requests for proposals/Bids
  - Estimate schedule from concept to completion

- Develop priority for each increment

- Develop schedule for each increment based on priority

- Integrate each increment into master schedule

- Develop budgeting cycle and match to master schedule

Increments of the Water System

The acquisition phase

Wells

- There are 4 wells with an undefined lifespan
- Each is sleeved and piped to the treatment area
- There is one well with building that is not operable (reason unknown)

Pumps

- There are four submersible well pumps
- Each operates one well
- They are all original and expected to have a 10 to 15 year life span
- One pump has been replaced in last 4-5 years
- One now not operating to capacity (may be the piping)

Piping

- The piping in each well must be replaced periodically due to rusting
- Pipe replacement is currently in the operating budget yearly

Electrical

- The current system is four years old and is considered adequate
- Expected life span of 10 to 15 years

Increments of the Water System

The Distribution Phase

Holding Tank(s)

- Needs flush, repair, repaint
- Will need second tank to support ongoing maintenance
- Budget
  - Current tank ??
  - Additional tank ??
- Schedule TBD
- Start Date TBD

Pressure and distribution pumps

- Located in shed on mountain
- Needs upgrade and engineering
- Budget ??
- Schedule TBD
- Start Date TBD

Lines and piping

- There are no "as built" drawings of the system
- Current system not installed to engineering specifications
- Lines need constant repair
- Grand application for on-site survey is underway
- Budget
  - $1 to $3 Million phased over time
- Schedule
  - Engineering one year after "as builts" are available
  - Phased project over 3 to 4 years

Facility

- Shed houses pump room and distribution routing
- May need modification
- Budget ??
- Schedule TBD

Electrical (includes metering system)

- Current system is adequate
- Meter info and reading/tracking system is state of the art
- Ten year battery life is included

Security

- Fencing of the mountaintop facility is required by Homeland Security
- Budget - $25 to $30k
- Schedule
    - Planning/RFP - 30 days
    - Approval – 30 days
    - Work – 30 days
    - Start Date - TBD

Town of Lake Santeetlah Water System Program Package

Priority	Increment	Function/Issue	Age	Life Span	Scope	Schedule Approval	Engineering	RFP/Bid	Mobilization/ Prep	Work Sched.	Cost	Program Budget
1	Storage and Holding Tanks	Short term requirement for repair Follow-on requirement for tank #3?	Original	Not determined	Repair 2 of 3 tanks now	30 days from reciept of proposal	N/A	15-Nov-19	15-Dec-19	15-Feb-20	Pending reciept of proposal	$ 28,000
2	Treatment Facility	Houses treatment facility. Needs repair/upgrade	Original. One replaced due to tree fall	25 Years	In file	60 days	N/A	30 Days	7 days	30 days	In house estimate	$ 50,000
3	Distribution Holding Tank	Mountain top storage for distribution. Needs flush, repair, repaint	Original. Past required maint.	Not determined	Add temp tank, Flush,sandblast, repair repaint	State?, Local (30-60 days)	N/A	30 days from scope definition	7days	30 days (must have temp tank 5k gal.	In house estimate ($200,000) 2021-22	$ 200,000
4	Temporary holding Tank	Allow for maint repair of main tank	N/A	Not determined	Permanent 5k gal. tank less exp than periodic temp	State?, Local (30-60 days)	2 months	30 days from scope definition	7days	14 days	In house estimate 2021-22	$ 15,000
5	Pressure and distribution pumps	Provides pressure and flow to properties	Original	Not determined	Needs upgrading and engineering	State?, Local (30-60 days)	60 days	30 days from scope definition	7 days	30 days	In house estimate 2021-22	$ 20,000
6	Facility	Houses above	Original	Not determined	Possible alteration to accommodate above	local (30 days)	N/A	31 days from scope definition	7 days	30 days	In house estimate 2020	$ 10,000
7	Distribution Lines and Piping	Water to fire and residents	Original	30 years	System not installed correctly, no as-built, major breakages periodically. System nearing end of viability	State?, Local (6-12 months days)	6 months Should include phasing over 1-3 years	Incremental packages based on phasing	TBD	TBD	In house estimate ($1-3 Million) Start process 2021-2022	
8	Security	Protection of mountain tanks facilities	Currently facility locks only	N/A	Must install fencing per Homeland security	local (30 days)	N/A	30 days	7 days	14 days	In house estimate 2020	$ 25,000
	Wells	Four functional, one unknown	Original	Unk	Shaft and sleeved to underground wells	N/A	N/A	N/A	N/A	N/A	N/A	
	Well pumps	Four submersible	Three original one replaced	10-15 Years	Pump from well to treatment	N/A	N/A	N/A	N/A	N/A	In operating budget	
	Well piping	From U/G well to surface	Periodic replacement	Not determined	From well to surface	N/A	N/A	N/A	N/A	N/A	In operating budget	
	Well Electrical	System Controls and power	Four years	10-15 Years	System Control	N/A	N/A	N/A	N/A	N/A	Replace in 2030	$ 15,000
	Treatment Pumps	Movement within treatment facility	One to three years	Not determined	Replacement	N/A	N/A	N/A	N/A	N/A	In operating budget	
	Chemicals	Result is potable water	N/A	Daily use	Ongoing	N/A	N/A	N/A	N/A	N/A	In operating budget	
	Security	Fencing not required. Acess gates are locked. Facilities have high security double locks	Original	Not determined	N/A Replacement only	N/A	N/A	N/A	N/A	N/A	In operating budget	
	Electronics	Entire system control	Treplaced four years ago due to lighting strike	10-20 years	Replace entire system	local (30 days)	N/A	30 days	N/A	7 days	Replace in 2034	$ 50,000
	Electrical (inc. Metering)	State of the art tracking/ recording	2 years	10 years for batteries	Current	N/A	N/A	N/A	N/A	N/A	Batteries 2026	$ 2,000
											Total	$ 415,000

29,000