

Existing and potential future water systems and service areas have been reviewed. Preliminary costs have been generated for proposed infrastructure upgrades. Prioritizing future upgrades is slightly subjective; however, there are two important factors to consider when determining project timelines:

- an infrastructure grant is currently approved through the BC Community Water Improvement Program to assist in funding the upgrade of the Central-Upper reservoir (wood stave tank). This infrastructure grant is valued at 2/3 the original estimated total project cost of \$1,100,000.
- an infrastructure grant is currently approved through the Municipal Rural Infrastructure Fund (MRIF) to assist in funding the North Lillooet interconnect upgrade, comprising the Main St watermain “bottleneck” and booster pump station from Central to North Lillooet
- IHA has issued statements to the District requiring compliance with its 43210 drinking water treatment objectives.

In addition to current water supply and treatment priorities, consideration must be given to increasing the efficiency of the existing water system in delivering supply water. Of prime concern is the lack of available fire flow in many areas of town.

Prioritized infrastructure upgrades are summarized in Table 24. Projects #1 through 5 represent approximately \$8,875,000 in capital costs. These projects will accomplish the following major tasks in Central and North Lillooet:

- compliance with IHA’s treatment guidelines
- replacement of failing wood stave reservoir
- upgrading of distribution system to improve fire flows and pressures in many areas of Town.

It is anticipated that these first five “projects” would sustain growth in the Central-North Lillooet areas for the next 20 years (approximate capacity – build out of existing service areas).

The necessity of project #6 (additional North Lillooet reservoir capacity) will be dependant on the results of future demand management strategies.

The remaining projects #7 and #8 focus on development of future service areas in East and South Lillooet. Construction of these future servicing concepts represent an additional estimated \$7,000,000 in capital costs. It is anticipated that these future expansion projects ever occur, they would be phased as described in previous sections.

Table 24: Recommendations and Upgrading Priorities

<i>Project</i>	<i>Description of Components</i>	<i>Estimated Cost</i>
1. Replace Central Upper Reservoir (Section 3.4.1)	<ul style="list-style-type: none"> • replace wood stave reservoir • construct central upper booster station • construct supply main from central-upper booster station to Shop Road area 	\$1,475,000
2. North Lillooet Interconnect (Section 3.3.1 – Option 1)	<ul style="list-style-type: none"> • Main St. watermain “bottleneck” • Central-North booster station 	\$450,000
3. Demand Management	<ul style="list-style-type: none"> • Universal Water Metering 	\$1,000,000
4. Supply/Treatment Upgrades – Option #1 (Section 3.3.1)	<ul style="list-style-type: none"> • complete Rec Well #2 • construct Dickey Creek water treatment plant • construct dedicated watermain from Rec Wells to interconnect “blend” location • decommission Conway Park wells 	\$5,500,000
5. Distribution System Upgrades (Section 3.5)	<ul style="list-style-type: none"> • Components A-H, except B (included in Project 2. above) 	\$450,000
6. Expand North Lillooet Reservoir Capacity (Section 3.3.3)	<ul style="list-style-type: none"> • construct additional reservoir cell 	\$400,000
7. East Lillooet Servicing (Section 4.0)	<ul style="list-style-type: none"> • PZ370 primary servicing • PZ480 primary servicing • distribution to additional existing homes 	\$1,800,000 \$2,400,000 \$1,500,000
8. South Lillooet Servicing (Section 5.0)	<ul style="list-style-type: none"> • source construction (groundwater well) • Roshard Drive servicing and reservoir construction • Texas Creek Road servicing • Upper Cook Road servicing 	\$200,000 \$600,000 \$130,000 \$370,000

In conclusion, it is the opinion of the TRUE Consulting Group that the District should move forward on the following issues and timelines:

Timeline – 1 Year Horizon (2008)

- Secure a location for construction of a reservoir to replace the failing wood stave tank, followed by design and construction of the new reservoir – utilizing approved infrastructure grant funds.
- Construct the North Lillooet watermain interconnect (Main Street “bottleneck” upgrade), utilizing approved infrastructure grant funds.
- Compile additional well quality (arsenic) and creek quantity (flow) data to allow accurate decision making for future sourcing options
- Complete a District wide water conservation strategy, and start implementation of this strategy.
- Implement a leak detection and repair program.
- Complete an evaluation of options for dealing with downstream consequences of abandonment of Town Creek as a water source. This could be incorporated into a more comprehensive Stormwater Management Plan.
- Conduct a hydrogeological assessment of existing wells to determine whether the wells are GUDI (which could impact future treatment requirements); initial stages of wellhead protection planning (well capture zone delineation) should also be incorporated into the hydrogeological assessment

Timeline – 2 to 5 Year Horizon (2009)

- Construct central-upper and central-north booster pumping stations - utilizing approved infrastructure grant funds.
- Secure funding for completion of Rec Well #2 and storm upgrades to handle Town Creek flows.
- Secure funding for construction of the surface water treatment (creek filtration) plant.
- Construct Rec Well #2 and abandon Town Creek, with associated downstream storm upgrades.

Timeline – 5 to 10 Year Horizon (2012)

- Construct the surface water treatment (creek filtration) plant, and dedicated supply watermain from the wells to allow “blending”.
- Improve water system fire flow capacity through construction of distribution system upgrades.
- Review results of demand management strategy and re-visit theoretical capacity deficiencies of the North Lillooet reservoir .

Timeline – 20 Year and Beyond

- Secure funding for implementation of water system service area expansion into East Lillooet.

It should be recognized that funding availability and government policy changes could encourage or require the above time line to change. However, we expect that the general order of improvements would remain as described. It might also be useful to review this report on a regular basis to confirm that recommendations remain pertinent and appropriate to future trends and policies.