

Attachment 2: Water Resource Overview

WATER SUPPLY

The Town's primary source of water supply consists primarily of 7,381 Colorado Big Thompson (CBT) units. Each CBT unit has a firm annual yield of 0.5 acre-feet (AF), which provides a total annual yield of 3,690.5 AF. However, the actual yield varies year by year. In wet years the yield may remain at 0.5, whereas in dry years the yield is typically set higher. The historical average annual yield is roughly 0.7 AF. There are losses between the CBT and Town's systems through the treatment plant and leaks (though the Town's system is relatively new with low leakage).

The Town's second largest source of supply is the Town's 20 Windy Gap project units which are designed for a total annual yield of 2,000 AF, although the average historical yield is approximately 1,260 AF. Unlike CBT, this source is fully re-usable to extinction, and the ability to reuse this water can provide more total water to the Town via projects such as the Boulder Creek Project.

The Town currently leases 955 CBT units from Bijou Irrigation District and Company as part of a three-year lease that expires in 2028. The Town also has a 10-year 370 AF emergency supply lease with City of Boulder for water in Boulder Reservoir. The Town also has shares in various ditch companies that are primarily used as non-potable irrigation supplies, except for a portion of the Town's Leyner-Cottonwood ditch shares that can be delivered via South Boulder Canyon Ditch to the Lynn R Morgan Water Treatment Facility (LRM).

Water supplies are delivered to LRM in the winter and summer via Northern Water's Southern Water Supply Project (directly piped from Carter Lake), through the CBT system to Boulder Reservoir then released to the Boulder Supply Canal and picked up by the Town's Raw Water Pump Station near 75th Street and Jay Road in Boulder from where it generally travels west along Jay Road and then south down Highway 287 to Erie Lake, or bypassing Erie Lake and directly into LRM. Erie Lake holds roughly 300 AF and Thomas Reservoir holds roughly 240 AF both can act as sources to LRM. Currently winter (indoor) demands run just over 2 million gallons per day (MGD) and peak irrigation season demands run just over 11 MGD. LRM is rated at 16.7 MGD and can be expanded (not cheaply) to roughly 24 MGD. The Town's 2020 Water and Non-Potable Master Plan estimated a build-out future demand of 34 MGD. Town staff are currently beginning an update to this plan and expect that figure to come down measuredly due to ongoing water conservation efforts and more efficient plumbing systems.

The Re-Use Reservoir at the North Water Reclamation Facility (NWRF) holds 1,000 AF. The Re-Use water is generally distributed for irrigation to development on the east side of Town (Colliers, Highlands, Westerly, Summerfield) and to Erie Commons and Erie Community Park. The Town will continue to expand this system to make the most of its re-usable water rights. We are also looking into the possibility of converting this system from re-use to raw water, using the Boulder Creek Supply.

PLANNED WATER ACQUISITIONS

- **Chimney Hollow Reservoir**

Chimney Hollow Reservoir (aka Windy Gap Firming Project) is a new water source that will firm the yield of the Town's 20 Windy Gap units, which would result in an annual delivery of

approximately 1,900 AF of water to the Town, as of now this figure can swing wildly from year to year due to the lack of storage. The storage aspect of the Chimney Hollow project will firm up annual delivery to the Town for the full amount of 2,000 AF, minus 100 AF due to system losses (leakage, etc). Windy Gap water is fully re-usable; Chimney Hollow will allow us to expand our re-use supplies. When we call on this source we look to capture and store it in our re-use reservoir at the North Water Reclamation Facility where it is then either pumped throughout Town for irrigation or released to Boulder Creek to make up for out of priority (water right) depletions (water diversions or evaporation) or released and leased to downstream users. We strategically use this source to maximize our supply, which is why developing the Boulder Creek Well project to be used for raw water irrigation or to be blended into the Lynn R Morgan Water Treatment Facility is important.

Construction of the new Chimney Hollow Reservoir is complete, but delivery of water is delayed due to the presence of uranium. The Town will not receive water from this source until at least 2032, five years later than the original delivery date in 2027.

- **Northern Integrated Supply Project (NISP)**

NISP is a new 40,000 AF water supply project consisting of two reservoirs: Glade Reservoir, which is planned northwest of Fort Collins, and Galeton Reservoir, which is planned northeast of Greeley. Glade will primarily be filled by water from the Cache La Poudre River below Fort Collins and Galeton, originally intended to be filled by local ditches and the South Platte River, is now planned to be filled only from the South Platte due to Northern's failure to obtain agreement with two major ditch companies. The Town is currently the largest committed participant at 4,500 AF. Fort Collins Loveland Water District (FCLWD) recently indicated its desire to divest from the project its full commitment of 8,100 AF. This move by FCLWD was largely due to the escalating cost of the project and caused several other, primarily smaller, participants to drop out or reduce their planned participation.

Currently the committed participation is roughly 19,500 AF. Other parties have recently indicated an interest in participation, and Northern is soliciting participation from other potential participants, however this interest is not expected to create significant additional changes to the project. When this project was initially envisioned over 20 years ago it was estimated at just under \$500 million. After many years in the local, State, and federal permitting processes along with environmental suits, the project has ballooned to close to \$2 billion and shrunk from two reservoirs to one.

- **Colorado Big Thompson (CBT) Shares**

The Town has recently begun acquiring shares of CBT again, primarily due to the uncertainty of the above projects, but also because it is the easiest supply to get to LRM and is generally of good quality. Recent negotiations placed the value at \$57,000 – 62,000 per share. This is for transactions in the range of 3 –100 of CBT units.

UPCOMING WATER PROJECTS

The following projects are planned for the Town's water system. These projects will enhance the efficiency and use of the Town's existing water supply. Many are in the design phase and planned to be constructed in the next several years.

- **Zone 3 Water Storage Tank & Booster Pump Station (BPS)**

This roughly 4-million-gallon tank is our highest priority. We attempted to obtain the land for this tank, at exactly 5,320 feet of elevation to be hydraulically equal to our 5.5 million gallons of storage at the landfill, from developers for roughly 8 years, to no avail. Ultimately a site City of Lafayette had ruled out as an option in an earlier alternatives analysis became an option and we purchased it. The Town is in the process of awarding the design now and will look at all means to expedite the construction. A lack of treated drinking water storage limits the production capacity of LRM. This will be a fully buried tank.

- **Zone 2 Water Storage Tank & Booster Pump Station (BPS)**

This roughly 4-million-gallon tank is our second highest priority. With the cancellation of the North Water Treatment Plant, we are evaluating whether siting it at North Westerly or LRM is optimal. Burns & McDonnell is the design engineer. This tank will also be fully buried at either location. The Northwesterly site was previously owned by the State Land Board (SLB), who refused to sell it to us, and kept it tied up for about 6 years. Once SLB sold the land to Southern Land Company the Town was finally able to negotiate for its acquisition.

- **Lynn R Morgan Water Treatment (LRM) Facility Upgrades**

The Plant 1 portion of this facility is due for an upgrade based on its age. It has served the Town twice the amount of time than originally anticipated. Upgrading this part of the plant will also increase overall plant capacity from 16.7 MGD to 20 – 24 MGD. Some additional improvements will be added to this project to remedy some existing operational issues. Staff will develop a scope and release an RFP for design in 2026.

- **Boulder Creek Well Project**

While we chose to stop pursuing the North Water Treatment Facility (NWTF), which would treat our decreed Boulder Creek supply at the NWRF site, we are still advancing the design of the Boulder Creek alluvial well supply. We can utilize this water in our raw water/re-use system and in doing so take advantage of our Windy Gap reusable water rights. Over time we will look to blend this source into our raw water supply to LRM, thereby further maximizing the re-use aspect of this water right. We will need to "pre-treat" this water to reduce contaminants in Boulder Creek which we identified and quantified during the pilot plant operations for the NWTF project.