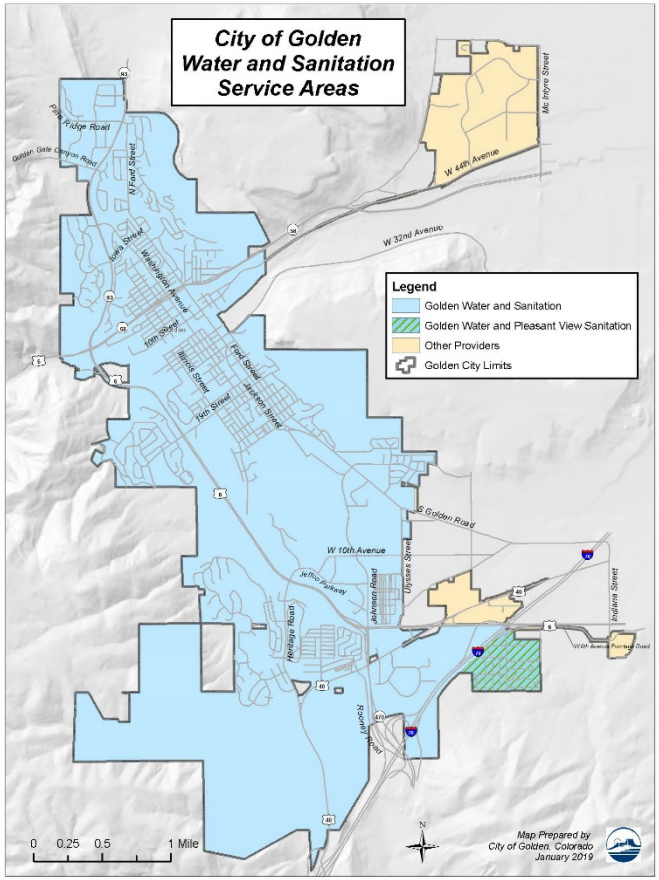
Water, Sewer and Stormwater Utilities

Utility Funds

- Each Utility – water, wastewater, and stormwater – is funded separately
- Fees cover the operating costs and asset maintenance for each utility
- Funds are kept separate and may not be used by another utility or toward other City Operations (i.e. cannot use water fees to pay for police or parks maintenance)
- Staff in lab and utility maintenance split time between water and wastewater utilities

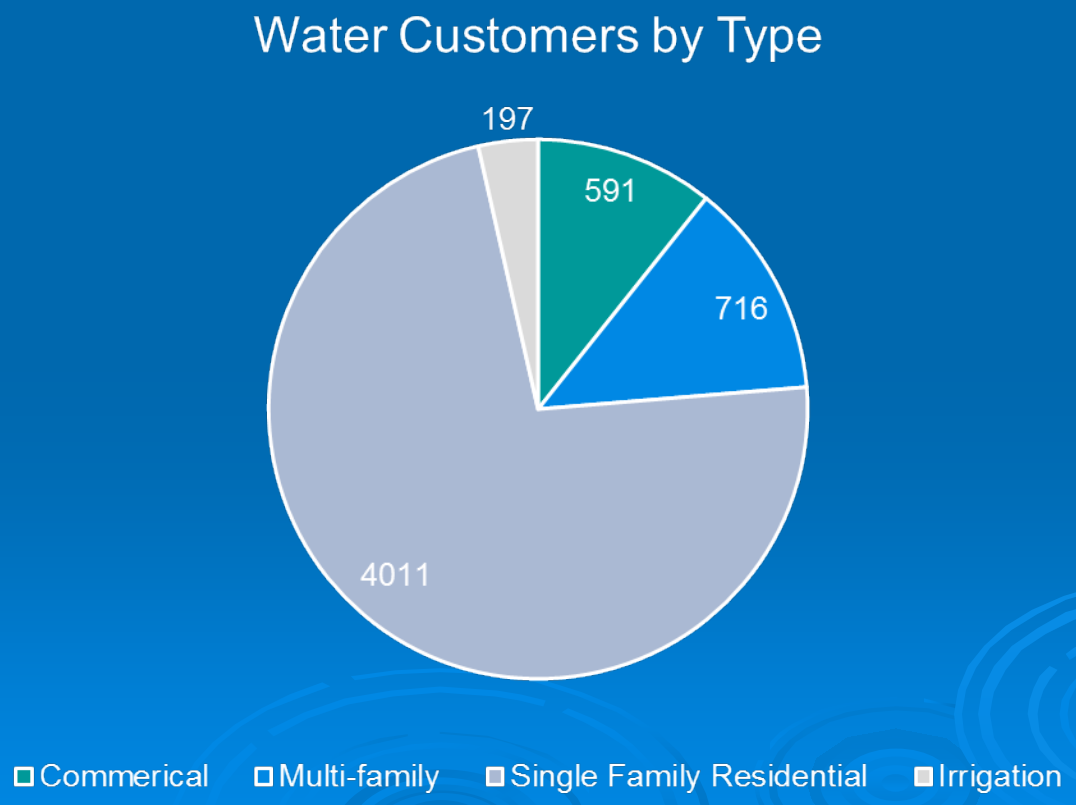
Water and Sanitation Service Area



- The water and wastewater utilities provides potable water and sanitation service to most, but not all, of the city.

Water Utility

- Provides potable water to 5473 homes and businesses in the city.



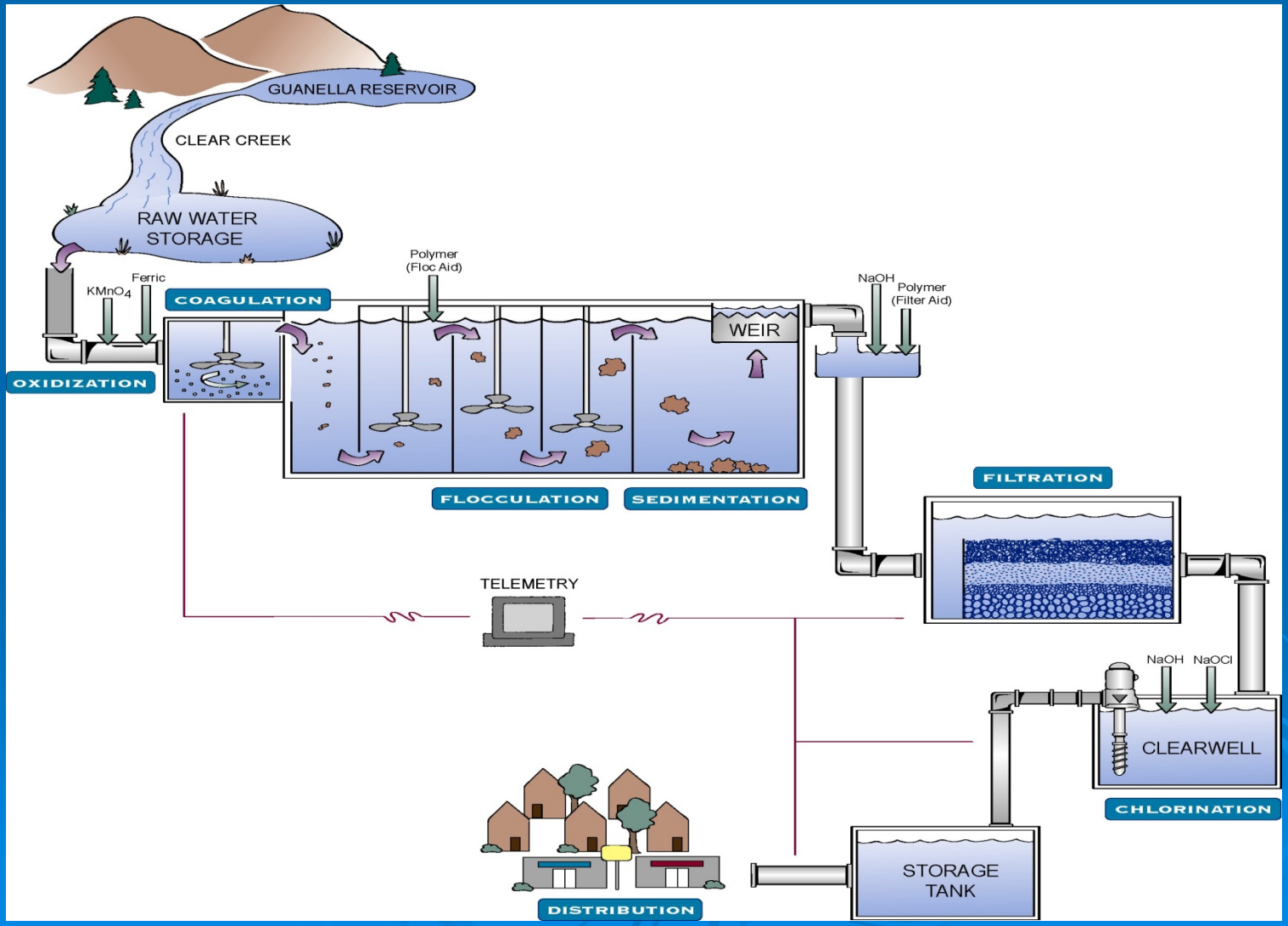
Water Utility

- Golden diverts all its water from Clear Creek
- Golden annually produces 1.1 to 1.5 billion gallons of water.
- 2000 was the largest demand year for Golden at just over 1.5 billion gallons
- Golden uses as much as 7.5 million gallons a day in the summer and 2 million in the winter

Water Supply and Raw Water Storage

- https://cityofgolden.maps.arcgis.com/apps/MapJournal/index.html?appid=f4c95c11c955458d85b1d1934b137871

Water Treatment Plant



Distribution System Assets

112 Miles of water mains that carry potable water from WTP to customers

963 Hydrants

5471 Meters

4027 Valves

18 Pump Stations/Control Vaults

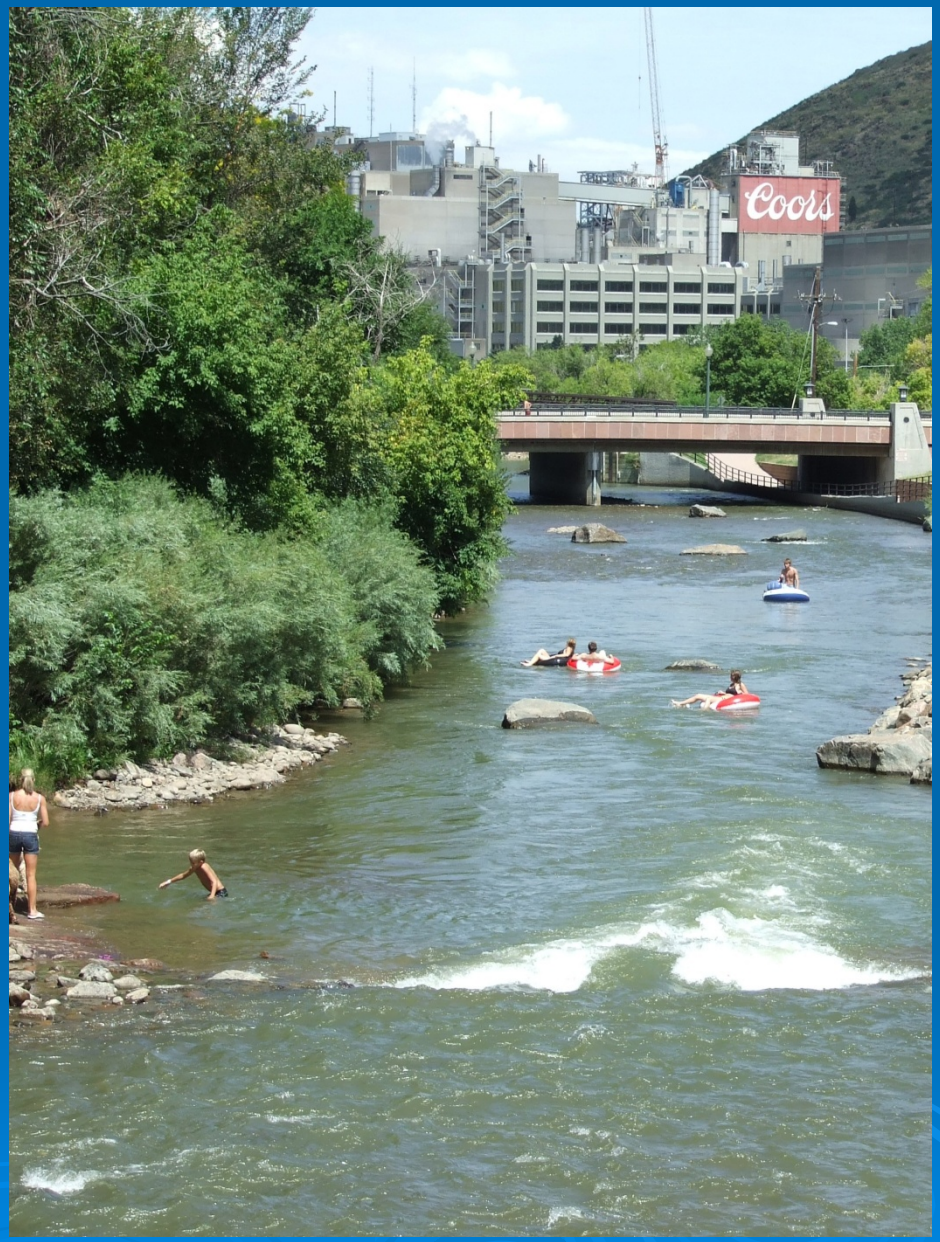
10 Tanks

Non-potable Irrigation

- Separate system from potable distribution system
- Provides untreated water to irrigate:
  - Fossil Trace Golf Course (delivery of GC owned water rights)
  - Lions Park
  - Ulysses Ball Fields
  - Golden Cemetery
  - Golden High School
  - Lookout Mountain Youth Services
- Reduces peak demand on water treatment plant by about 1.5 million gallons per day

Wastewater Utility

- Maintain sewer collection system of 73.5 miles of sewer mains
- No lift stations or pumps
- Coors provides wastewater treatment under contract to most of city
- West Third area served by Metro (through PVWSD)



Water and Wastewater Staffing

- Water rights 1 FTE
- Water Treatment Plant (24/7 operations)
  - 8 FTE
- Laboratory/Enviromental Services
  - 6 FTE (shared between utilities)
- Utilities (water distribution/sewer collection)
  - 10 FTE (shared between utilities)

Stormwater Utility

- Stormwater Utility maintains or manages all drainage and Water Quality facilities.
- Oversees private storm facilities to ensure owners properly maintain them.
- Maintains all City owned storm assets.
- Storm Mains, inlets, manholes, ponds, major drainage ways, WQ BMP's, etc…

Storm Utility Asset Examples

Storm Inlet

Detention Pond

Stormwater Utility Examples

Drainage Channel

Storm Mains and Manholes

Storm Utility Assets

City

- 12.3 miles of open channels
- 27.5 miles of storm sewers
- 514 Manholes
- 1014 Inlets
- 66 Ponds
- Approximately 24 Culverts

Non-City

- 7.9 miles of open channels
- 42.2 miles of storm sewers
- 527 Manholes
- 1920 Inlets
- 222 Ponds

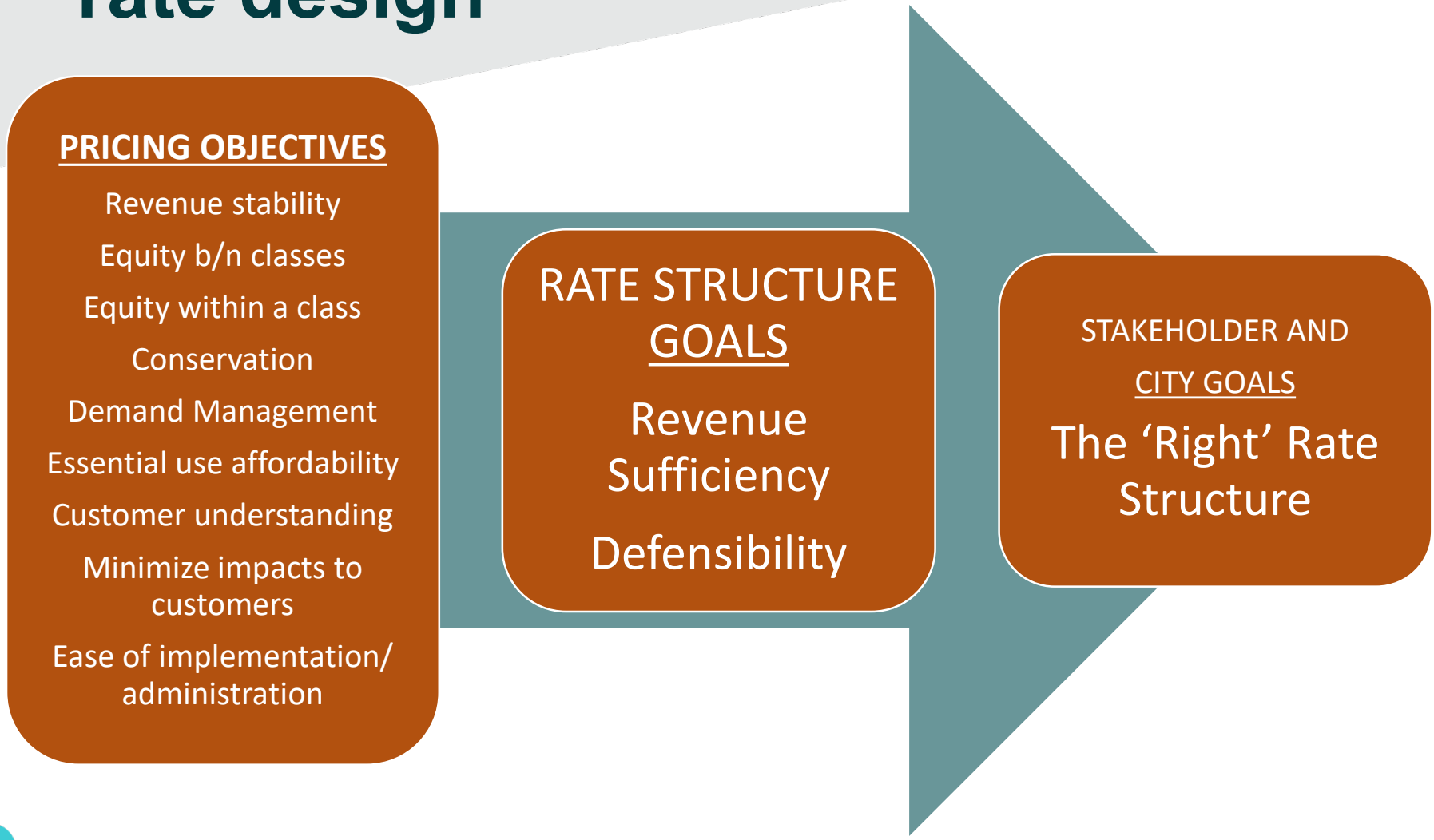
Storm Staffing

- 1 FTE Storm Supervisor
- 3 FTE

- Work by Storm Division ensures continued operation of Water Quality BMP's and efficient operation of conveyance systems to minimize flooding.

Questions?

Pricing objectives set the stage for rate design



Rate structure pricing objectives

- Defensibility
- Revenue sufficiency
- Equity between classes
- Equity within a class
- Conservation
- Demand management
- Essential use affordability
- Customer understanding
- Customer bill impact
- Ease of implementation/ administration

Pricing objective definitions

- ***Revenue sufficiency***
  - Rate structure should be set to recover the "full cost" of utility operations and capital projects
  - Rate structure should be sufficient to maintain short-term and long-term financial health
- ***Defensibility***
  - Rate structure achieves compliance with relevant local, state, and federal laws.
  - Rate structure meets requirements with contract customers and satisfies bond covenants

Pricing objectives definitions

- ***Equity between classes***
  - Equity between customer classes. Through a cost-of-service analysis, costs are recovered proportionately from each customer class' rate structure based on their unique demand characteristics.
- ***Equity within a class***
  - Equity between customers within a class. Intraclass equity is maximized when the rate structure results in individual customers paying, to the maximum extent possible, an amount that approximates their unique contribution to their customer class revenue requirement.

Pricing objectives definitions

- ***Conservation***
  - The rate structure should contain a pricing signal that encourages the wise use of water.
- ***Demand management***
  - The rate structure should contain a pricing signal to encourage a reduction of water use during peak times.

Pricing objectives definitions

- ***Essential use affordability***
  - A rate structure should provide essential water use at the lowest possible cost all the while allowing the utility to generate revenue sufficient to maintain their financial health.
- ***Customer understanding***
  - Rate structure should be subject to as few misinterpretations by the customer
  - Rate structure should be consistent with other water use-related communication from the utility

Pricing objectives definitions

- ***Customer bill impact***
  - Changes in a rate structure should be implemented in a manner that minimizes bill shock and minimizing the variability of shock among customer classes.
- ***Ease of implementation/administration***
  - Rate structure should be compatible with existing billing and accounting systems.
  - Information needed for rate structure implementation and administration should be based on readily available, accessible, and manageable data.

Finding the balance of competing objectives to design the right rate structure