Water Demand (Use)

• Present Demands
  – Currently deliver about 26,000 ac-ft/year treated and 4,000 ac-ft/year of raw water
  – Demand levels have declined significantly
    • ~230 gpcd early 1990s
    • ~200 gpcd before 2002
    • ~150 gpcd over last several years
City of Fort Collins - Per Capita Water Use

Per Capita Water Use (GPCD)

Year


Actual Per Capita Use
Normalized Per Capita Use
Poudre water uses

Average of 2000-2009 diversions

Source: CDSS
2008 Daily Poudre River Gaged Flow and Fort Collins Poudre River Diversions (7-Day Average)

- Poudre River at Canyon Mouth
- Poudre River at Lincoln Street
- Fort Collins Poudre River Diversions

7-Day Average Flow (CFS)

Date

Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec
City of Fort Collins
Water Supply - Sources

Poudre River

CBT Project
Fort Collins Water Supply

- On average, about 50/50 split between Poudre River and Horsetooth Reservoir diversions
- Horsetooth Reservoir
  - Units from CBT project
  - Water from NPIC share ownership
  - Direct line from reservoir to WTF
- Poudre River
  - Senior direct flow rights
  - Converted agricultural rights
  - Michigan Ditch/Joe Wright Reservoir
Poudre River

- Direct senior flow rights (late 1800s to early 1900s)
  - 19.93 cfs in the summer
  - 15 cfs in the winter
  - Specific rights to Fort Collins pipeline
Poudre River

• Converted agricultural water rights (1970s to present)

• Irrigation ditches that run through the City
  – Pleasant Valley Lake and Canal
  – Arthur, Larimer No. 2, New Mercer, Warren Lake

• Water Supply and Storage Company
  – In process of converting rights
  – 4% of the Company
  – Innovative alternative to buy and dry
Poudre River

• Michigan Ditch/Joe Wright Reservoir
  – Located at Cameron Pass
  – Trans-basin diversion
  – Main source of the City’s reusable water
  – Effluent to Platte River Power Authority
Storage per Capita Comparison

Note: Based on 2010 population

- Storage Owned or Controlled by Provider
- Pro Rata Portion of CBT Project Storage
Water Supply

• Present Supply
  – Adequate supplies in most years
  – Based on 1-in-50 year drought criteria
  – 31,000 ac-ft/year treated water firm yield through 1-in-50 year drought
  – Surplus in wet and average years typically rented to agriculture
130% of Average Poudre River Flows (1986)

Direct flow rights in excess of demands.

Storage required to meet demands.

Water Supplies and Demands for Fort Collins Utilities
Water Supplies and Demands for Fort Collins Utilities

- Significant variation in water right yields.
- 30% of Average Poudre River Flows (2002)
- Some excess even in dry year.
- Much more storage required.

Flow (cfs)

Date

- Direct Flow Rights
- Water from Storage
- 2008 Actual Demands

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Surplus Raw Water

- Surplus water typically rented to agricultural users
  - Reduces customer rates
  - Only on year-to-year basis
  - Recognize interest in long-term arrangements
- Unused or unrented surplus water left in river
  - Distributed to next senior water right
  - Difficult to use for instream flows under current Colorado water law
- Utilities staff working with other City departments on initiatives to improve Poudre River flows
Cooperative Arrangements

- Joint Operating Plan - Wild and Scenic reach
  - WSSC, Greeley and Fort Collins (agreement)
  - November-March
    - FC releases 3 cfs
      - Joe Wright Reservoir & Chambers Lake
    - Greeley releases 7 cfs
      - Chambers Lake or other upper reservoirs
Cooperative Arrangements

• Winter Flows in North Fork
  – Fort Collins and NPIC (no agreement)
  – November through mid April
  – Fort Collins provides 500 AF to NPIC
  – Release ~1 cfs from Halligan Reservoir
  – Meets Fort Collins return flow obligations
  – Additional water provided to protect NPIC
Cooperative Arrangements

• Reduce River Dry Up Through Town
  – Fort Collins usually has excess CBT water in October due to dry-year demand planning
  – Water Fort Collins has no place to store
  – Water distributed to winter diverters that dry up river
  – Allows water to go past their headgates
  – Year to year basis – only done a few times
Questions