BARTLESVILLE SERVICE AREA

Bville Population – 37,000
Serve 3 surrounding municipalities and 6 rural water districts
Land area – 573 sq mi
Total Population – 55,000
Avg Daily Use – 5.5 MGD
Max Day – 14 MGD
Drought threatens Hulah Lake

Hulah could die if the drought conditions experienced in the past year continue for another 12 months.

Hendricks is preparing to gather an interagency coalition which will look at the many questions facing the drying lake bed.

Among those to be consulted for what Hendricks calls the "drought contingency plan" are the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service and Oklahoma Department of Environmental Quality.

One of the biggest questions to be answered is whether Bartlesville can continue to use the lake as a water supply.
Caney River Water Treatment Plant

Copan

Lost 30% of storage since 1949

WATER

Raw water gravity flows from Hudson Lake to WTP

Raw water pumped from Hulah Lake to Hudson Lake

Raw water pumped from the Caney River to WTP

Raw Water Supply (based on water rights)
Hulah – 72%
Caney River – 19%
Hudson – 9%

Hulah
Lost 58% of storage since 1958

Hudson
Lost 30% of storage since 1949

Water Treatment Plant

Caney River
WATER

PAST

- DROUGHT 2001-2002
  - WATER SUPPLY DOWN TO 20%

- 2002 – COUNCIL CREATED WATER RESOURCES COMMITTEE
  - 15 MEMBER COMMITTEE; COUNCIL MEMBERS, CITY STAFF, BUSINESS & SERVICE LEADERS, COUNTY/ADJACENT SERVICE DISTRICTS, FEDERAL LEGISLATIVE LIAISONS

- 2003 – COMMISSIONED STUDY THROUGH ARMY CORP OF ENGINEERS PLANNING ASSISTANCE TO STATES (PAS) PROGRAM
  - EVALUATE ALTERNATES FOR WATER SUPPLY THROUGH 2055
  - STUDY COMPLETED IN 2007
Projected Lake yield during 50 yr drought
PAS RECOMMENDATIONS

PURCHASE EX. STORAGE – COPAN ($7MM), REALLOCATE FLOOD PORTIONS OF FLOOD POOL TO STORAGE BOTH LAKES ($52.4MM). OVERALL COST $59.4MM

NEW PIPELINE FROM COPAN TO WATER PLANT $35MM
FEDERAL

- Sept. 2008 - City working with OK congressional reps for federal legislation on favorable pricing
- August 2014 – Congress requests GAO study on how COE establishes water pricing
- September 2017 – GAO study completed
  - Better data needed, GAO could not determine if price structure used by COE was fair
  - Pricing was set by COE administrative policy, not federal law
- January 2018
  - City requested $209/AF for remaining water storage at Copan Lake (1 MGD)
- September 2018 – COE rejected proposal – based on federal law
- October 2018
  - WRDA bill - municipality shall pay no more than 110% of the last contract rate for water storage, only applies to Verdigris River Basin - signed into law October 23.
WATER

WASTEWATER

- 2010 – PLANNING FOR WWTP IMPROVEMENTS
  - COMPLETED FACILITY PLAN INCREASE CAPACITY
  - BUILD SECONDARY WWTP

- 2012 - WATER FOR 2060 LAW APPROVED
  - GOAL TO CONSUME NO MORE FRESH WATER IN 2060 THAN CONSUMED STATEWIDE IN 2012
  - EXPAND WASTEWATER REUSE AND OTHER NON-POTABLE WATER SOURCES
2015 - STARTED TALKING TO CIVIC GROUPS, QUARTERLY RADIO PROGRAMS, COUNCIL PRESENTATIONS REGARDING LONG TERM WATER SUPPLY AND REUSE

2016 - AMENDED ENGINEERING CONTRACT TO REVISIT FACILITY PLAN LOOKING AT FEASIBILITY OF REUSE

- DESKTOP ANALYSIS

2017 - RECEIVED A BUREAU OF RECLAMATION GRANT FOR REUSE FEASIBILITY STUDY ($150k)

- SAMPLING, WASTELOAD ALLOCATION, CEC INVESTIGATION
Wastewater Treatment Plant
Raw Water pumped from Caney River to WTP
Treated wastewater pumped from wastewater plant
ESTIMATED COST OF WATER REUSE $8.8MM

BARTLESVILLE’S WATER REUSE
WATER

FUTURE – WATER REUSE

- 2019 - RECEIVED A GRANT FROM THE BUREAU OF RECLAMATION FOR CONSTRUCTION OF REUSE LIFT STATION AND PIPELINE ($750k)
  - JUNE 2021 STARTED CONSTRUCTION ON IMPROVEMENTS TO THE RAW WATER PUMP STATION ON THE CANEY RIVER ($1.2MM)
  - 1ST QUARTER 2022 - BEGIN CONSTRUCTION ON REUSE LIFT STATION AND PIPELINE (ESTIMATED COST $6.6MM)
    - COMPLETION ANTICIPATED JUNE 2023

- 2023 – BEGIN CONSTRUCTION ON WWTP UPGRADES, INCLUDING REUSE TREATMENT (ESTIMATED COST OF REUSE TREATMENT - $6MM)
UPDATE OF WATER DEMAND VERSUS HULAH LAKE YIELD
Based on 2006 Reallocation Study

Projected Water Use
(from 2006 Reallocation Study based on 2055 Population 63,000)

Actual Water Use
(trendline starts at 2008)

Hulah Lake Water Yield with Existing Water Rights (from 2006 Reallocation Study)

Hulah Lake Water Yield with Existing Water Rights, and Reuse (4 MGD additional)