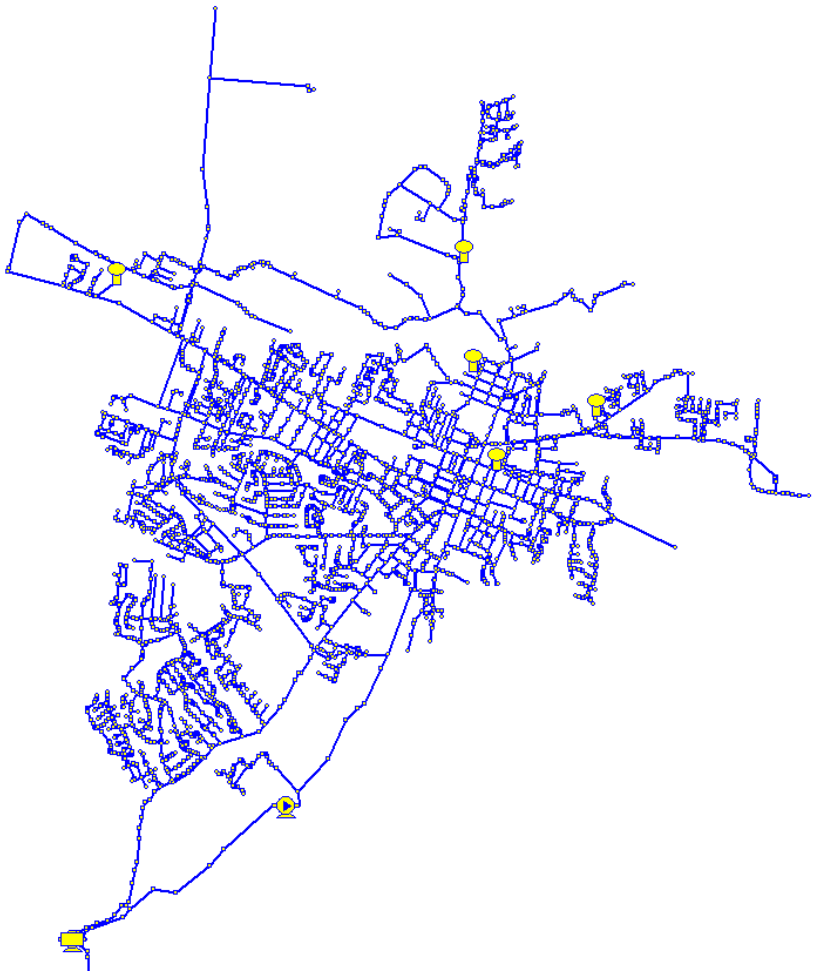
SYSTEM ID: KY 8

NARRATIVE DESCRIPTION

KY 8 is primarily a loop system in Kentucky with the following assets5 Tanks, 4, 1 Water Treatment Plant, and approximately 790116 feet of pipe. KY 8 provides 2.47 million gallons of water per day to its 11,712 customers at a rate which ranges between $5.88 and $7.57 per 1,000 gallons of water. Water loss for KY 8 is estimated at 87% of the water produced.

NETWORK SCHEMATIC:



HISTORY OF THE NETWORK FILE

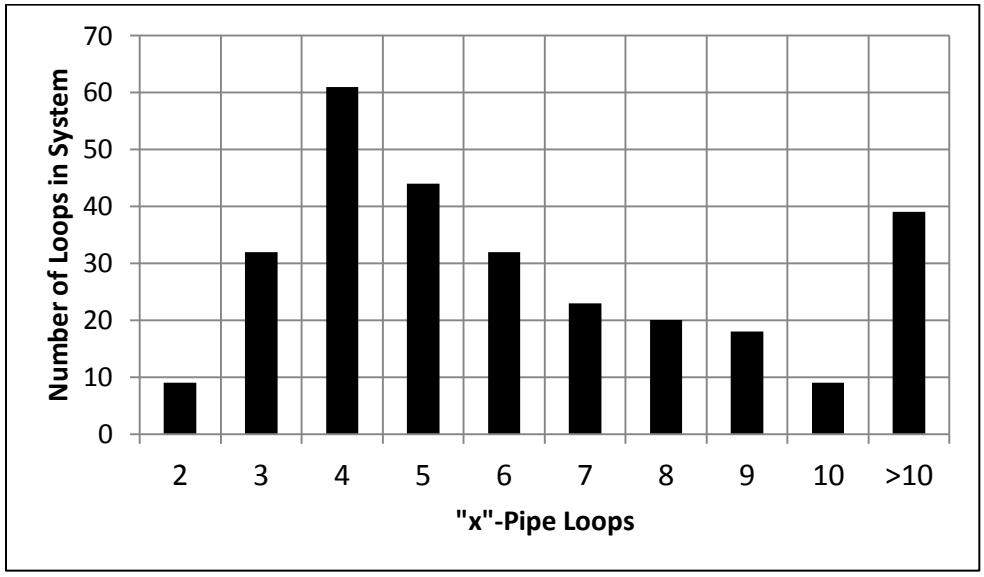
KY 8 was originally created by Matthew Jolly and Amanda Lothes in 2012 as part of the journal article “Research Database of Water Distribution System Models” which was published in 2014

in the *Journal of Water Resources Planning & Management*. This model was updated by Stacey Schal in 2013, and then updated again by Steven Hoagland in 2014.

AVAILABLE INFORMATION

Physical attributes	YES
Schematic diagram	YES
Network geometry data	YES
GIS data file	YES
Background map	YES
Elevation data	YES
Pipe data	YES
Pipe material	YES
Pipe age	YES
Pipe pressure class	NO
Nominal or actual diameters	YES
Pump data	YES
Useful horsepower	YES
Pump operating curves	NO
Tank data	YES
Elevation data	YES
Stage storage curves	NO
Water quality information	NO
Valve data	NO
PRV/FCV data	NO
Isolation valve data	NO
Hydrant data	NO
Demand data	YES
Total system demand	YES
Nodal demand data	YES
Temporal data demands	YES
System leakage	NO
Hydraulic data	YES
Hydraulically calibrated model	NO
Field hydraulic calibration data	NO
Water quality data	NO
Disinfection method	NO
Chlorine residual data	NO
Booster station data	NO
Fluoride/Chloride field data	NO
Water quality calibrated model	NO
Operational data	NO
SCADA datasets	NO
Operational rules	NO

PIPE/LOOP HISTROGRAM:



REFERENCES:

Jolly, M. D., Lothes, A. D., Bryson, L. S., & Ormsbee, L. (2014). Research Database of Water Distribution System Models. *Journal of Water Resources Planning and Management,* 410-416.

DETAILED DATA SUMMARIES

PHYSICAL ASSETS:

Asset Type:	# of Assets
Master Meters	-
Tanks	5
Pumps	4
Pump Stations	NA
Water Treatment Plants	1

NETWORK CHARACTERISTICS:

# Total Pipes:	1614
# Branch Pipes:	525
Ratio (Branch Pipes / Total Pipes):	0.325
# Junction Nodes	1319
# Reservoirs	2
# Tanks	5
# Regulating Valves	0
# Isolation Values	Unknown
# Hydrants	Unknown
Elevation Data	YES

PIPE DATA:

Diameter (in)	Length (ft)
1	1583
1.3	-
1.5	-
2	24,240
3	2,284
4	5,237
6	415,963
8	127,052
12	142,317
16	10,812
18	60,628
20	-

PUMP DATA:

Pump Horsepower	YES
Pump Curves:	NO

DEMAND STATISTICS:

Demographic Type	Population	Households
Directly Serviceable:	25,165	11,123
Indirectly Serviceable:	305,666	140,268
Total Serviceable:	330,831	151,391

Production Statistics	
Total Annual Volume Produced (MG):	1,605.640
Total Annual Volume Purchased (MG):	
Total Annual Volume Provided (MG):	1,605.640
Estimated Annual Water Loss:	87%

Water Costs	
Customer Type	Cost per 1000 gallons
Customers within the municipality	$5.88
Customers outside the municipality	$7.57

CUSTOMERS AND USAGE:

Customer Type	Customer Count	Average Demand (MG)
Wholesale:	2	210.188
Residential:	10,801	2.000
Commercial:	849	0.500
Institutional:		
Industrial:	60	1.500
Other:		
Total Customers:	11,712	
Flushing, Maintenance & Fire Protection:		
Total Water Usage:		214.188

DATA FILE ATTRIBUTES:

ATTRIBUTE		UNITS
Pipe Length & Diameter	X	Feet
Pipe Age	X	Yr. Installed
Node Elevation	X	Feet
Node Demand	X	GPM
Valves		
Hydrants		
Tank Levels	X	Feet
Tank Volume	X	Cubic Feet
PRVs		
WTP	X	
WTP Capacity	X	GPD
Pump Data	X	HP