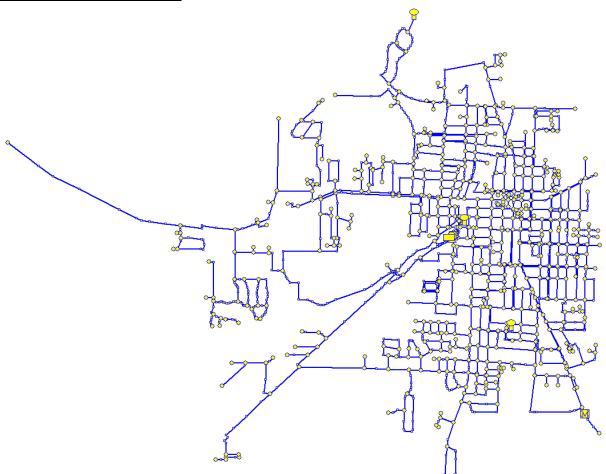
#### **NARRATIVE DESCRIPTION**

KY 2 is primarily a grid system in Kentucky with the following assets: 3 Tanks, 1 Pump, , and approximately 464,036 feet of pipe. KY 2 provides 2.09 million gallons of water per day to its 5,010 customers at a rate which averages\$7.02 per 1,000 gallons of water. Water loss for KY 2 is estimated at 9% of the water produced.

#### **NETWORK SCHEMATIC:**



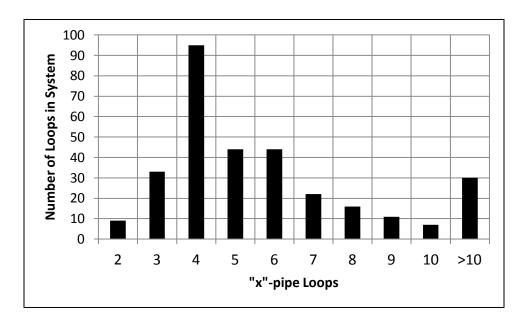
#### **HISTORY OF THE NETWORK FILE**

KY 2 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**

Schematic diagram         YES           Network geometry data         YES           GIS data file         YES           Background map         YES           Elevation data         YES           Pipe data         YES           Pipe data         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           Stage storage curves         NO           Water quality information         NO           Water quality information         NO           Water data         NO           PRVFCV data         NO           Isolation valve data         NO           Hydrant data         YES           Total system demand         YES           Temporal data demands         NO           Fleid hydrau	Physical attributes	YES
Network geometry data         YES           GIS data file         YES           Background map         YES           Elevation data         YES           Pipe data         YES           Pipe data         YES           Pipe age         YES           Pipe pressure class         NO           Nominal or actual diameters         YES           Pump data         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           Bodal demand data         YES           Total system demand         YES           Nodal demand data         YES           Temporal data demands         YES           System leakage         NO           Hydraulic data         NO           Hydraulic data         NO           Field hydraulic calibrated model         NO           Field hydraulic data         NO           Oboster station data	·	
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           Stage storage curves         NO           Water quality information         NO           Valve data         NO           Isolation valve data         NO           Isolation valve data         NO           Invaluation valve data         NO           Isolation valve data         NO           Isolation valve data         NO           Invaluation valve data         NO	<u> </u>	
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Operational data NO SCADA datasets NO	Water quality calibrated model	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	3
Pumps	1
Pump Stations	-
Water Treatment Plants	-

## **NETWORK CHARACTERISTICS:**

# Total Pipes:	1124
# Branch Pipes:	224
Ratio (Branch Pipes / Total Pipes):	0.199
# Junction Nodes	814
# Reservoirs	1
# Tanks	3
# Regulating Valves	0
# Isolation Values	Unknown
# Hydrants	Unknown
Elevation Data	YES

### **PIPE DATA:**

Diameter (in)	Length (ft)
1	-
1.3	-
1.5	-
2	72,597
3	687
4	96,412
6	220,602
8	60,659
12	13,079
16	-
18	-
20	-

## **PUMP DATA:**

Pump Horsepower	YES
Pump Curves:	NO

### **DEMAND STATISTICS:**

Demographic Type	Population	Households
Directly Serviceable:	10,710	5,015
Indirectly Serviceable:	5,755	2,538
Total Serviceable:	16,465	7,553

<b>Production Statistics</b>	
Total Annual Volume Produced (MG):	
Total Annual Volume Purchased (MG):	725.000
Total Annual Volume Provided (MG):	725.000
Estimated Annual Water Loss:	9%

Water Costs	
Customer Type	Cost per 1000 gallons
Customers within the municipality	\$7.02
Customers outside the municipality	\$7.02

## **CUSTOMERS AND USAGE:**

Customer Type	<b>Customer Count</b>	Average Demand (MG)
Wholesale:	2	
Residential:	4,318	241.000
Commercial:	690	416.000
Institutional:		
Industrial:		12.476
Other:		
Total Customers:	5010	
Flushing, Maintenance		5000
& Fire Protection:		3000
Total Water Usage:		662.000

# **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