

Compilation and Analysis of Six Years of City of Franklin Drinking Water and Harpeth River Water Withdrawals Since the Issuance of the State ARAP permit: Nov. 2007-Jan. 2014

The charts below have been prepared from the City of Franklin’s monthly operating reports provided to HRWA in response to a TN Open Records Act request in January 2014. The request asked for the city’s daily data on volume of water withdrawn from the Harpeth that is used in the city’s drinking water plant, the volume of drinking water produced by the city’s small 2.1 million gallon a day (MGD) plant, and the volume of drinking water purchased from the city’s primary provider, the Harpeth Valley Utilities District (HVUD).

The TN Department of Environment and Conservation (TDEC) issued an ARAP permit (NRS06.332) that went into effect from November 28, 2007 to November 27, 2012. The permit established conditions on the city’s withdrawals from the Harpeth for the first time. Among other conditions, such as the removal of the lowhead dam, the permit specified that the Harpeth River’s flow “shall not be reduced below 10 cfs (cubic feet per second) as a result of the withdrawal” and that “water shall not be withdrawn at a rate of no more that 20% of the flow in the river at the intake.” The data compiled below covers the time period from the issuance of the ARAP permit through January 2014 when the information request was made.

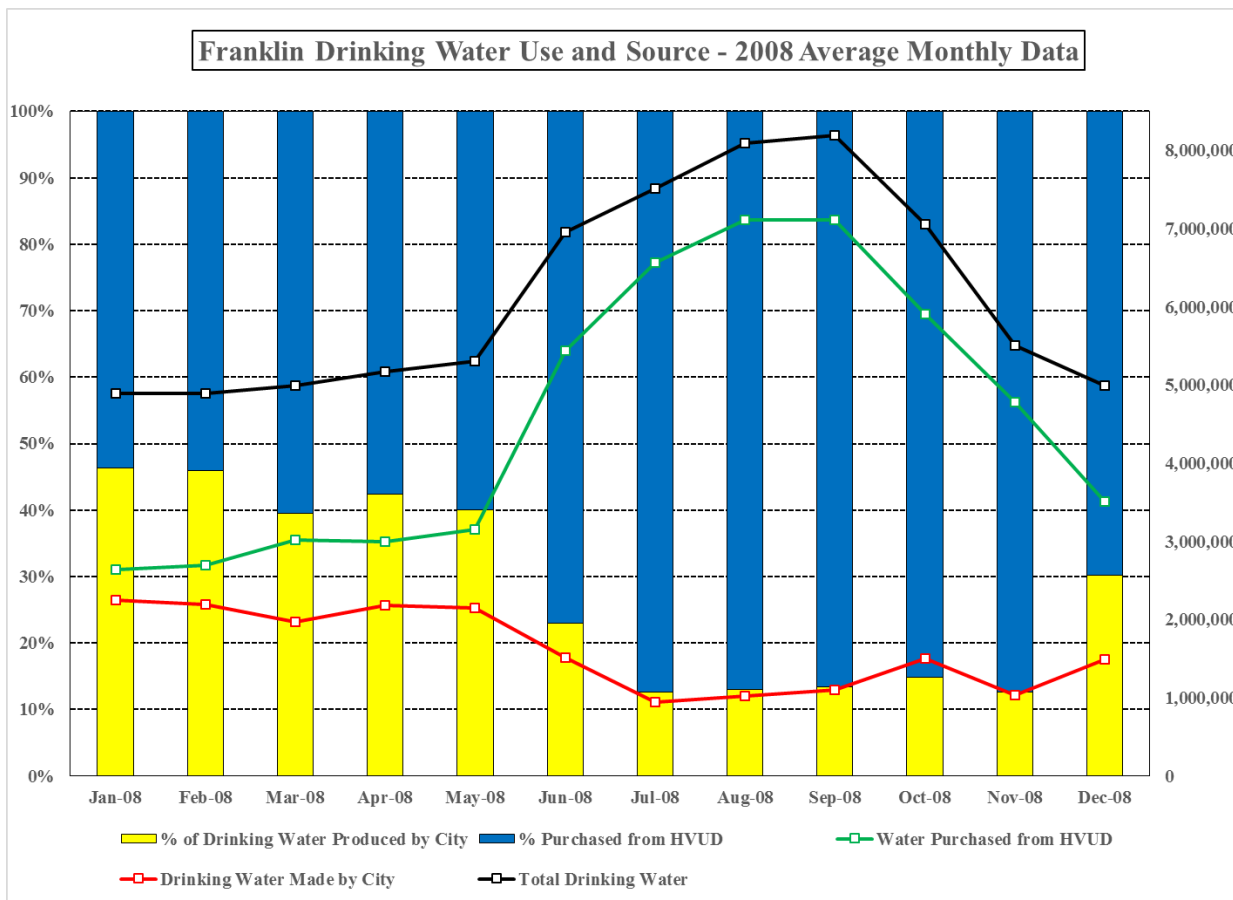
NOTE: Data from the city’s reports was retyped into excel spreadsheets. There are periods when the city’s drinking water production were not reported. These unreported days were adjusted to zero (0) when it was fairly clear that the city had not produced drinking water from its plant that day.

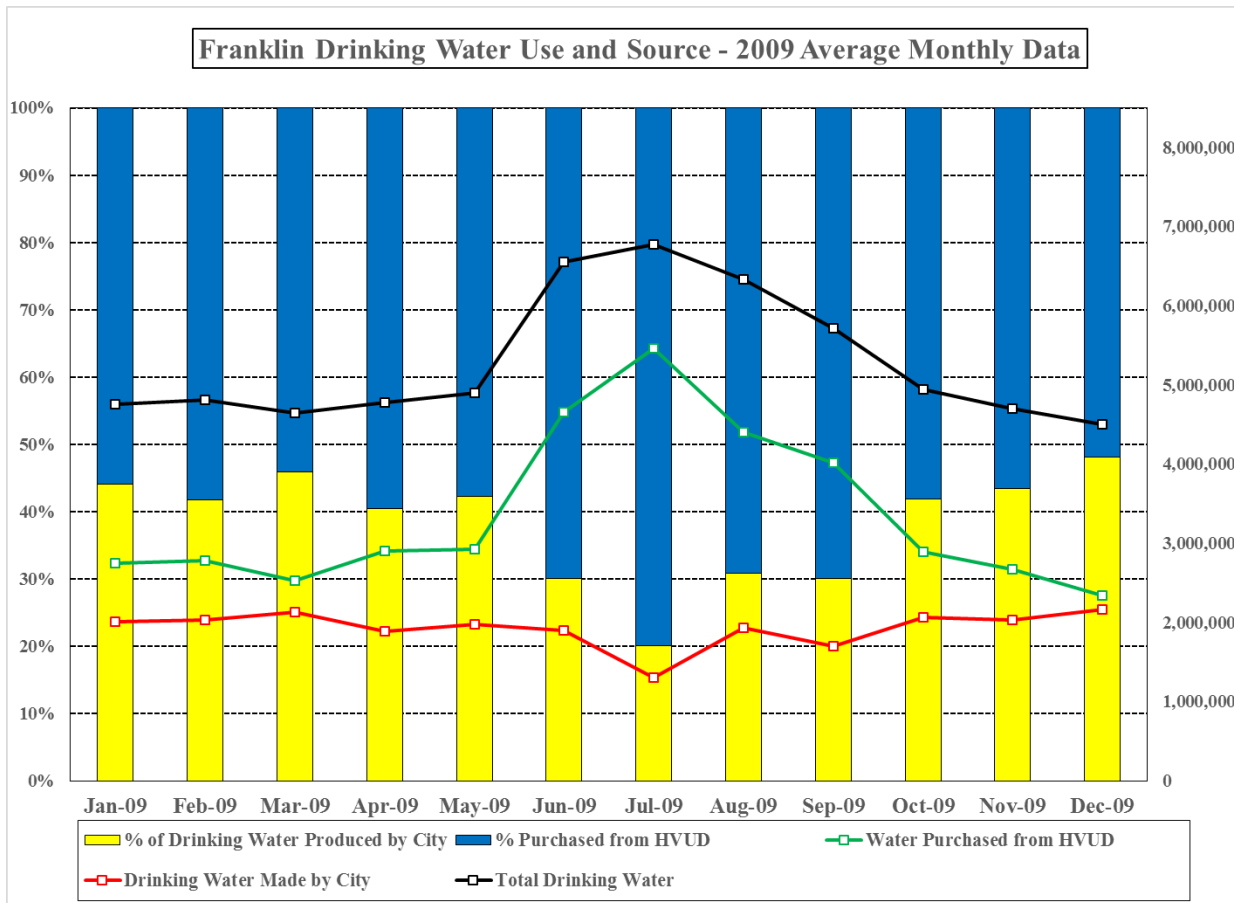
Chart 1 : Percent of Capacity Produced by the Franklin’s Drinking Water Plant (2.1MGD), Average(%) Per Month							
Year/ Month	2008	2009	2010	2011	2012	2013	Monthly Avg.
January	100%	95%	79%	67%	73%	89%	84%
February	100%	97%	73%	73%	75%	87%	84%
March	94%	100%	74%	91%	90%	85%	89%
April	100%	90%	88%	97%	86%	44%	84%
May	100%	94%	79%	97%	58%	43%	79%
June	72%	90%	82%	95%	50%	49%	73%
July	45%	62%	56%	70%	55%	41%	55%
August	49%	92%	77%	47%	40%	40%	57%
September	52%	81%	74%	45%	42%	26%	53%
October	49%	98%	75%	72%	28%	57%	63%
November	38%	97%	72%	65%	90%	63%	71%
December	71%	100%	60%	75%	88%	63%	76%
Yearly Avg.	72%	91%	74%	75%	65%	57%	72%

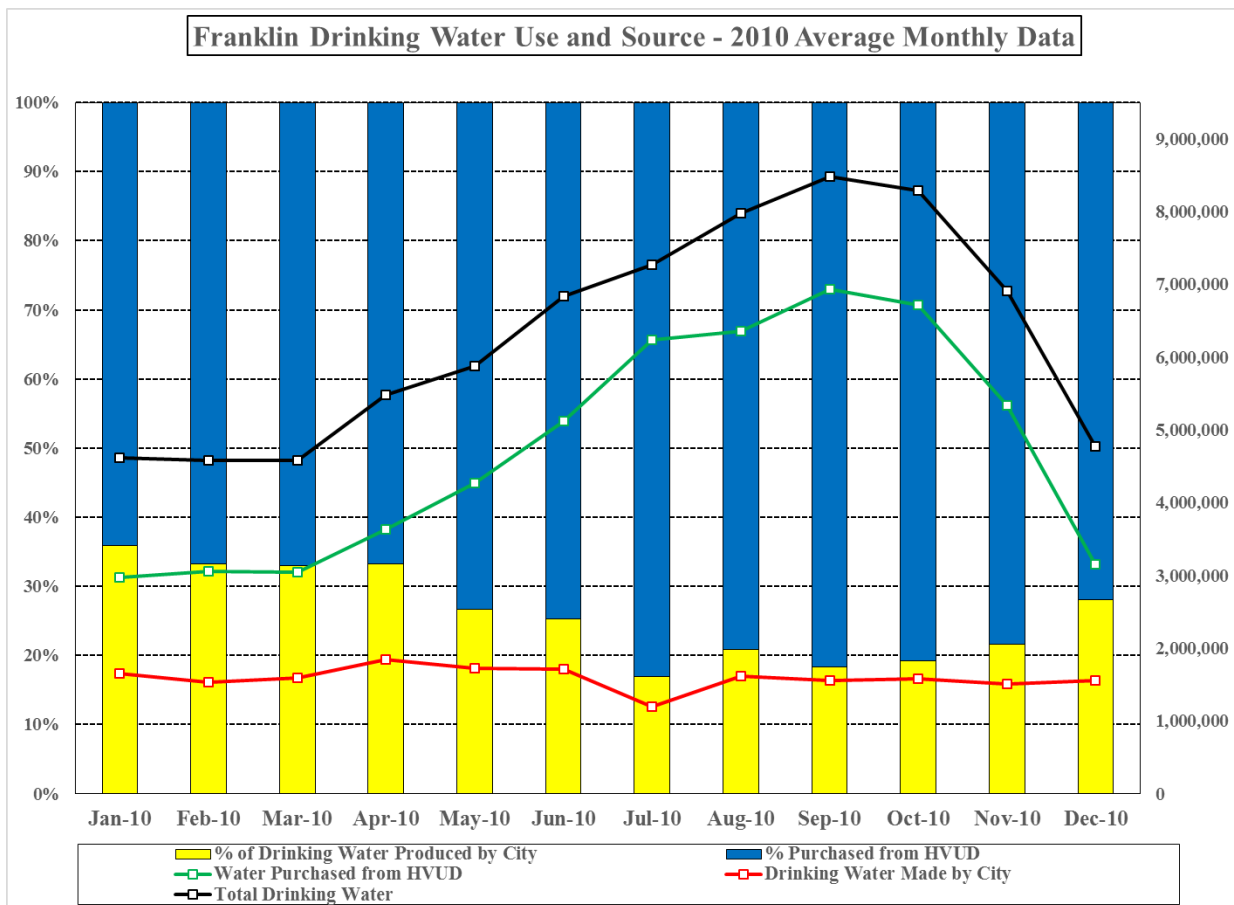
Chart 2: Franklin City Drinking Water Produced, Average(%) per Month							
Year/Month	2008	2009	2010	2011	2012	2013	Monthly Avg.
January	46%	44%	36%	29%	35%	36%	38%
February	46%	42%	33%	32%	36%	33%	37%
March	40%	46%	33%	40%	43%	33%	39%
April	42%	40%	33%	41%	36%	16%	35%
May	40%	42%	27%	38%	20%	15%	30%
June	23%	30%	25%	29%	13%	16%	23%
July	13%	20%	17%	20%	16%	14%	17%
August	13%	31%	21%	14%	12%	13%	17%
September	13%	30%	18%	14%	14%	8%	16%
October	15%	42%	19%	27%	11%	21%	22%
November	13%	43%	22%	29%	38%	28%	29%
December	30%	48%	28%	42%	39%	31%	36%
Yearly Avg.	28%	38%	26%	29%	26%	22%	28%

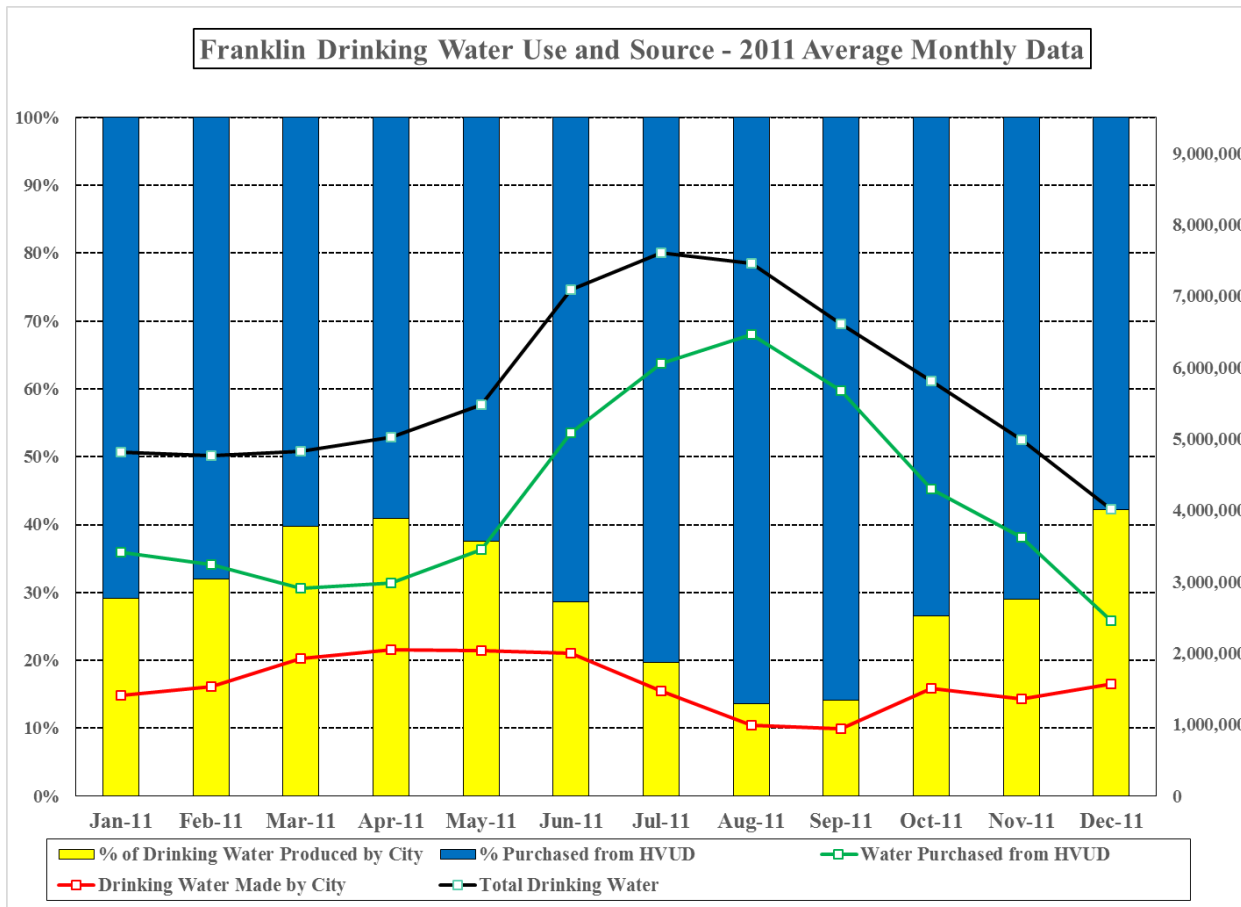
Chart 3: Percentage of HVUD Purchases, Average(%) Per Adjusted Data							
Year/Month	2008	2009	2010	2011	2012	2013	Monthly Avg.
January	54%	56%	64%	71%	65%	64%	62%
February	54%	58%	67%	68%	64%	67%	63%
March	60%	54%	67%	60%	57%	67%	61%
April	58%	60%	67%	59%	64%	84%	65%
May	60%	58%	73%	62%	80%	85%	70%
June	77%	70%	75%	71%	87%	84%	77%
July	87%	80%	83%	80%	84%	86%	83%
August	87%	69%	79%	86%	88%	87%	83%
September	87%	70%	82%	86%	86%	92%	84%
October	85%	58%	81%	73%	89%	79%	78%
November	87%	57%	78%	71%	62%	72%	71%
December	70%	52%	72%	58%	61%	69%	64%
Yearly Avg.	72%	62%	74%	71%	74%	78%	72%

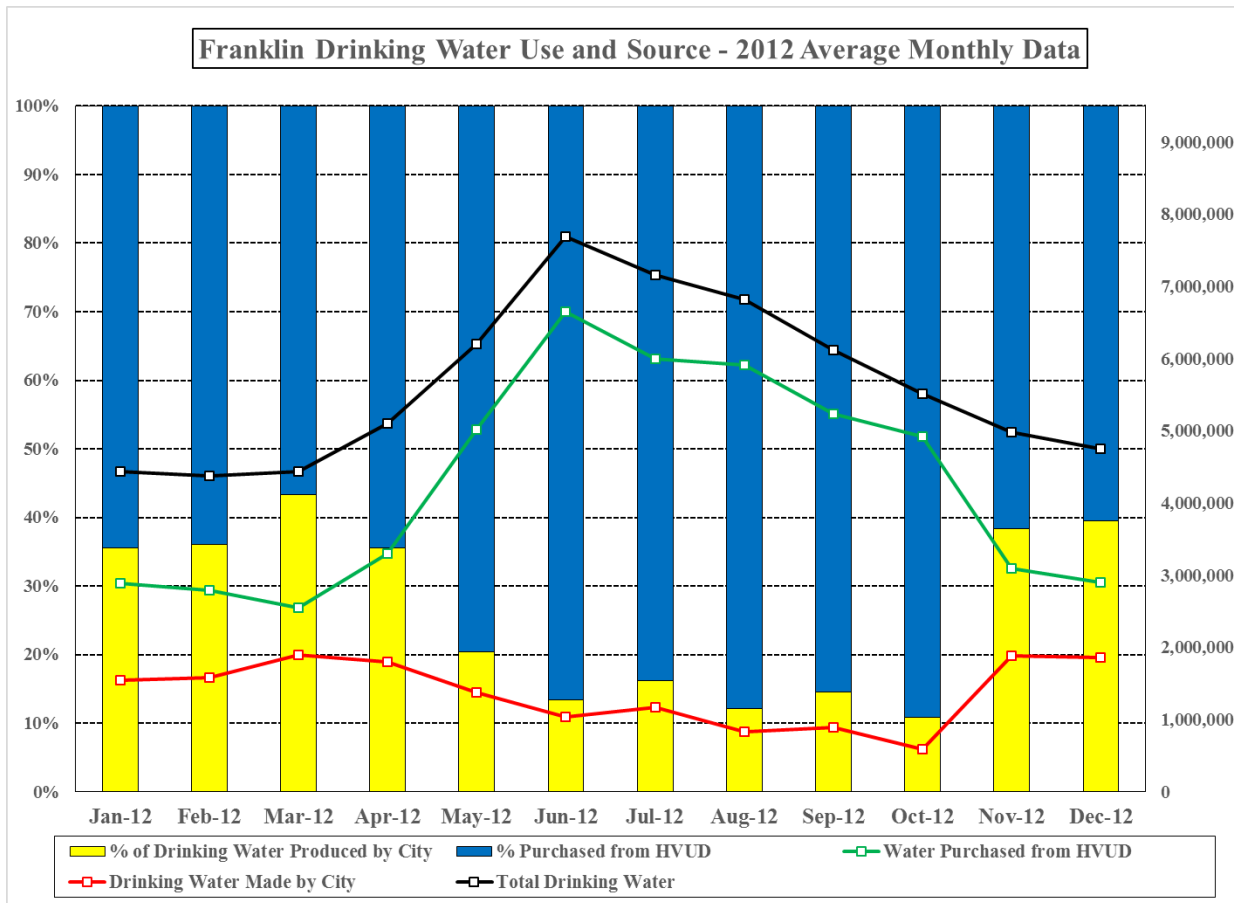
Chart 4: City's Water Withdrawal Operations Potentially not complying with 2007 ARAP permit withdrawal limits						
River Flow			Withdrawals			
Years	# Days river below 10CFS	# Days river at 10CFS	Total #Days withdrawal at or below 10CFS	#Days withdrawal above 20% flow	Total Days of Non-compliance	#Days withdrawal below 15% if the 2012 ARAP Permit Applied
2008	14	2	16	11	27	0
2009	8	3	11	29	40	0
2010	9	3	12	4	16	0
2011	9	2	11	12	23	0
2012	24(10)	6	30(10)	15(3)	45(13)	0
2013	4	3	7	0	7	6
In 2010 May-Oct. the City's water withdrawal data is exactly the same as the raw water production from plant. During this period the actual water withdrawal is unknown for this analysis.						
2012 numbers in () are not violations. These withdrawals occurred during the Lowhead Dam removal when TDEC authorized withdrawals to 3CFS.						

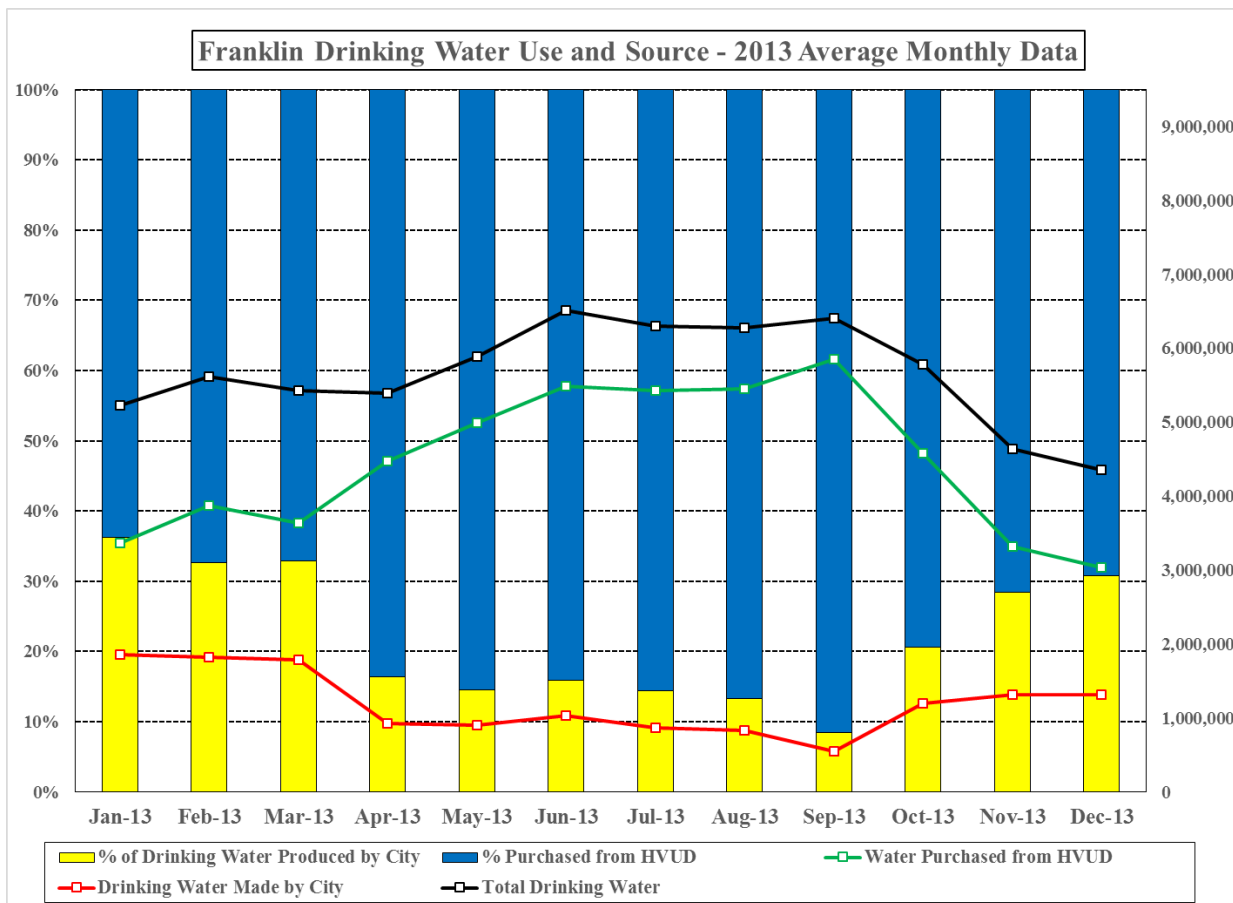












Final page