	Things to consider	**Your notes – include where you got the data, any calculations made, and any assumptions made.**
WATER SUPPLIED		
Volume from own sources	Are all Finished Water (FW) inputs metered; how many FW meters are in place; How often are the FW meters accuracy-tested – both hydraulic flow verification and electronic signal calibration;	
Master meter error adjustment	How are the FW meter readings recorded and archived; How often is the production data reviewed for errors;	
Water imported	Any bulk purchase agreements; Are they metered; How often are those meters accuracy-tested (hydraulics and electronics);	
Water exported	Any bulk sale (wholesale) agreements; Are they metered; How often are those meters accuracy-tested (hydraulics and electronics);	
AUTHORIZED CONSUMPTION		
Billed metered	Are all customers metered and read; How often are those meters tested for accuracy; How is the billing data archived; Need to make sure your consumption totals exclude any non-potable water such as sewer only accounts, deduction meters, raw water, reclaimed water, etc; Are there adjustments that need to be made for lag-time on customer meter readings;	
Billed unmetered	Any estimated or flat-rate billings; Any unmetered contractor sales;	
Unbilled metered	Any unbilled municipal or utility buildings; Any metered operational uses like W/WW Treatment facilities;	
Unbilled unmetered	Includes but not limited to any flushing, jetting, street cleaning, fire suppression/training/testing, irrigation, special events, unmetered facilities; This will typically require input from more than 1 department;	

	Things to consider	**Your notes – include where you got the data, any calculations made, and any assumptions made.**
WATER LOSSES		
Unauthorized Consumption	Theft can happen at the hydrant and at the tap/meter; Is theft documented when it's observed; Are there penalties for theft and are they enforced; Is there a clear policy for fire hydrant access/usage;	
Customer Metering Inaccuracies	Any accuracy test data on the customer meters; General condition of meter population; Do you have good meter records (inventory of types, cumulative use); How often are meters replaced or repaired; Consider these questions differently for small v large meters;	
Systematic Data Handling Errors	What quality control reports are in place in the billing system; Is billing data routinely audited; Are adjustments clearly recorded; Do inactive or zero-use accounts get removed from reading routes after some time period?	
SYSTEM DATA		
Length of mains	Paper v GIS; Are mapping records spot checked in field for verification; How are new line extensions / abandonments recorded and added to the database;	
# of active + inactive connections	Understand exactly how an account becomes inactive in the database; Are inactive accounts spot checked in field for verification; Cross reference total number of active accounts v how many bills are sent each billing cycle;	
Average length of service line	If your policy is to set meters at the customer property line, use a value of "0" and a grade of "10".	
Average operating pressure	Use static pressures; How are pressure measurements taken (hydrant flow tests, loggers, telemetry); How is that data recorded and archived; Sometimes you may not have enough data points to be representative – if so give low data grading; If multiple pressure zones, need average for each zone, then do a weighted average (by miles of main) among all zones; Are boundary valves between zones verified to be closed;	
COST DATA		
Annual operating cost (water)	Are all costs tracked and audited; Include O&M and Debt Service for the water system, but not the sewer system;	
Customer retail unit cost	If multiple volumetric rates, need to do a weighted average calculation; If sewer bill is based on water meter reading, it is recommended to include appropriate sewer rate in this calculation;	
Variable production cost	To start, include direct costs: power for pumps at plant and in distribution system + chemicals for treatment + residuals management; If you have them, it is recommended to include indirect costs: liability, residuals management, wear/tear on pumps and treatment equipment and impending expansion of supply as applicable;	

Additional Notes: