OTA Industrial Water Management:
Sustainable Growth on the 495 Corridor

DEVELOP YOUR FACILITY'S IT WATER MANAGEMENT STRATEGY

Using IT to collect, analyze and communicate water data
creates new value for your water management information.

1. Be a water champion; develop management, employee and community support. Meet with your DPW water superintendent and start and intranet page.

2. Set a goal to reduce water use as you simultaneously reduce energy use and minimize environmental impacts.

3. Inventory your water uses and quality requirements to produce a water balance of your annual consumption.

   E.g. Measure or estimate flow rates for cooling, boiler/steam systems, sanitary, process and other uses and multiply by the flow. Also, check flow rate data on equipment name plates. Add all water-using activities to determine your annual consumption. Then, compare with your annual bills to set up a balance. Unaccounted for water should be less than 10%. Read meter on a regular basis. Add submeters for all significant water uses and to document water not entering the sewage system.

4. Collect all the water related costs for each water using operation on order to determine total potential water and $ savings by unit of production. Don't include water that goes into products such as food, beverages, drugs and others. It's a raw material there.

E.g.	**$/gallon**	**Energy $/gallon**	**Other $/gallon**	**Total $/gallon**	**Total $/unit**
Water purchase	X				
Chemical treatment	X		Chemicals		
Hot air or steam	X	X	(Labor)		
Separation technologies	X	X	(Labor)		
Pretreatment technologies	X	X	(Labor)		
Wastewater discharge	X		Permit, fines		
Solids disposal	X		Permit		
Total water costs	**Y**	**Y**	**Y**		

Conversion Factors
1 cubic foot (cf) = 7.48 gallons
100 cubic feet (hcf or ccf) = 748 gallons
1,000,000 gallons = 133,690 cf or 1,336.9 hcf

5. Identify and evaluate efficiency measures (reuse + recycle) recognizing total O&M savings. Eliminate all one-through cooling from ice machines, refrigeration systems, AC, process/lab equipment, air compressors, process tanks/baths, etc. Look at reuse and recycle especially for all high quality treated water. Calculate payback periods by dividing the Capital Cost ($) of the purchase + installation by the Net Annual Savings ($/year).

6. Make a plan to replace or install new equipment based on your required payback periods. Identify responsibility and time schedules. Set up an intranet employee participation program.

7. Implement the plan on your intranet with a reporting system for leaks and other wastes as well as an employee opportunity to develop their own ideas for water efficiency. Reward innovation.

8. Track and report results to your supporters. Use your website.

You now have an IT water management strategy.

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