

8.1.3 Energy Use of Wastewater Treatment Plants by Capacity and Treatment Level (kWh per Million Gallons)

Treatment Capacity (Million Gallons per Day)	Level Of Treatment				
	Less than Secondary	Secondary		Tertiary	
		<u>Trickling Filter</u>	<u>Activated Sludge</u>	<u>Advanced</u>	<u>Advanced with Nitrification</u>
1	-	1,811	2,236	2,596	2,951
5	-	978	1,369	1,573	1,926
10	-	852	1,203	1,408	1,791
20	-	750	1,114	1,303	1,676
50	-	687	1,051	1,216	1,588
100	-	673	1,028	1,188	1,558

Note(s): The level of treatment indicates the amount of processing involved before water is released from the treatment facility. Primary treatment removes solids and oils from wastewater. Secondary treatment uses biological processes to remove organic material from the water. Tertiary treatment includes additional processes to further refine the water. Nitrification is a process to remove nitrogen from water.

Source(s): Electric Power Research Institute, Water & Sustainability (Volume 4): U.S. Electricity Consumption for Water Supply & Treatment – The Next Half Century, 2002.