

**TOWN OF SPRING CITY
SEWER SYSTEM SUMMARY**

SEPTEMBER 2005

MTAS reviewed the wastewater gallons treated, and wastewater gallons billed for the calendar year of January to December 2004:

Total Gallons treated	229,292,000
Total Gallons billed	<u>45,655,270</u>
Difference	183,636,730

This shows that Spring City treated 80% more wastewater than was billed to customers. It is not unusual to treat more than is billed, however this amount is excessively high. The difference is primarily due to two factors. First a small difference may be attributed to having older water meters in the system that have slowed and are not recording the full volume of water. The vast majority of the difference is due to Inflow and Infiltration (I & I) of the sewer lines and system. I & I occurs when there are cracks in the sewer lines and manholes allowing rainwater to enter the system. In heavy rain events the plant may well be treating as much, or more, rainwater than waste.

Impacts of I & I on the Spring City sewer system

I & I has two major impacts on the sewer system. First, the plant may become overloaded, reducing capacity. This is especially important for Spring City as you consider adding additional capacity, and customers, to the system. The other impact is financial, even if you only consider the bare essentials of treatment.

Utilities	\$37,740
Repairs & Maint	\$ 6,412
Chemicals	\$18,071
Supplies	<u>\$ 1,751</u>
Total	\$63,974

Additional cost due primarily to I & I for 2004:

Utilities	\$ 0.83 per 1,000 gallons
Repairs & Maint	\$ 0.14 per 1,000 gallons
Chemicals	\$ 0.40 per 1,000 gallons
Supplies	<u>\$ 0.04 per 1,000 gallons</u>
Total	\$ 1.41 per 1,000 gallons

$$183,636,730 / 1,000 = 183,637 \times \$1.41/1,000 \text{ gals} = \mathbf{\$258,928}$$

This amount does not include any additional personnel cost which may be incurred due to I & I.

