

Effluent Sewer Costs

Orenco has helped hundreds of small communities throughout the United States to design, build, and maintain low-cost, reliable effluent sewers. Depending on terrain, effluent sewers are often half the cost of conventional sewers, or less.

A 1998 report from the Illinois Community Action Association, titled *Alternative Wastewater Systems in Illinois*, shows just that.* As part of a demonstration project, Illinois engineers designed and bid several community collection systems two different ways: conventional gravity and “alternative” (effluent sewer). Both bids included Recirculating Gravel Filters, as treatment. The report showed the following cost comparisons:

<u>Community</u>	<u>Cost: Effluent Sewer</u>	<u>Cost: Gravity Sewer</u>	<u>Total Savings</u>	<u>Savings/Home</u>
Eddyville	\$ 765,000	\$1,265,000	\$ 500,000	\$6,173
New Minden	\$1,090,000	\$2,090,000	\$1,000,000	\$7,693

Both Eddyville and New Minden used equipment and design assistance provided by Orenco. Decades of experience have shown us that the typical “per household cost” for installation of an effluent sewer system is about \$7,000-\$8,000. Compare that to the typical “per household cost” for installation of a gravity sewer: rarely under \$15,000 and often as high as \$30,000 or more!

Effluent sewers are cost-effective for a number of reasons, including the following:

- Inexpensive, small diameter collection lines are shallowly buried, just below the frost line, reducing material and excavation costs (not to mention disruption to the community).
- Expensive manholes and lift stations are eliminated.
- Treatment costs are significantly reduced because only low-strength effluent is collected (solids stay behind, to decompose in watertight tanks) and because there’s no infiltration and inflow (effluent sewers are completely watertight).
- Site costs are deferred; the onsite system isn’t installed until a lot is developed.

Not only do effluent sewers cost less for equipment and installation, they are so easy to maintain that they cost significantly less for annual Operations & Maintenance. As our Effluent Sewer FAQ sheet points out, a survey of effluent sewer projects in Oregon, Washington, and California showed that service calls average only 1.4 hours per month per 100 homes.

*A copy of the report and a companion video (*Wastewater Alternatives for Your Community*) are available from the Illinois Community Action Association. For your copies, call the Association at 217-789-0125.