individuals) is \$50,000 to \$80,000 per year for all services, not just solid waste; therefore, ground-water monitoring alone would consume on average about 13–20% of a community's budget.

As discussed in the Preamble to the final part 258 MSWLF criteria (56 FR 50989), the Agency recognized that the landfill criteria could have a significant economic impact on those small landfills that could not regionalize to benefit from the economies of scale available to larger MSWLFs. RCRA §4010(c) directed the Agency to promulgate MSWLF criteria "necessary to protect human health and the environment \* \* \* [taking] into account the practicable capability of such facilities (emphasis added)." The Agency, when it developed the MSWLF criteria, interpreted the phrase 'practicable capability'' to allow for the consideration of the cost of the criteria to MSWLF owners and operators (see 56 FR 509830). Therefore, the Agency included a small landfill exemption in the original MSWLF criteria to exempt lower risk small MSWLFs from the two highest cost components of the rule: ground-water monitoring (27 percent of the total costs) and liners/leachate collection systems (40 percent of the total costs).

Based on the low risk associated with the qualifying small MSWLFs (as discussed in the previous section of today's preamble) and the high costs associated with full ground-water monitoring for qualifying small MSWLFs, the Agency continues to believe that some relief is warranted for these MSWLFs. Cost information developed by the Agency (discussed in Section VII of this Preamble), and similar information submitted in public comments and summarized above, indicates a significant financial burden would be placed on small communities due to implementation of all of the part 258 ground-water monitoring requirements. In particular, the Agency remains concerned about communities with exceptionally low operating budgets that are unable to participate in regional arrangements with neighboring communities to lower their cost of compliance. The ground-water monitoring flexibility provided in today's proposal is designed to alleviate some of the cost burden on affected small landfills, while still ensuring detection of contamination to ground water.

## 3. Obstacles to Regional Solid Waste Management Practices

In some areas of the U.S., the cost of compliance with the MSWLF criteria can be shared among a number of communities through the use of a regional disposal facility. However, the preamble of part 258 final rule (56 FR 50989) discusses why regionalization of solid waste management is not feasible for many small communities. The preamble states that, in addition to economic constraints, significant geographic obstacles exist particularly in remote areas of the country where communities are separated by great distances or where surface transportation is not available for extended periods of time during the year (such as in Alaska).

The Agency has performed an analysis to determine the costs for closing small landfills, opening a transfer station, and hauling a community's waste to a regional facility. The analysis concludes that for a 10 ton per day (TPD) landfill, the total annual cost is about \$160,000 (\$160 per household). For a 1 TPD landfill, the total annual cost is about \$18,000 (\$180 per household). This analysis assumes a one-way land traveled distance of 65 miles as discussed in the docket for this rulemaking (F-95-AGAP-FFFFF). The higher annual household cost for the 1 TPD landfill versus the 10 TPD facility arises from a smaller number of households being served by the 1 TPD facility. This cost analysis is discussed further in technical background document located in docket number F-95-AGAP-FFFFF.

Small remote communities also may experience practical obstacles to regional solid waste management. Commentors at the public meetings related the difficulties associated with transporting waste where communities are separated by large geographic distances, or are served only by unimproved roads that are not likely to be adequate for heavy truck traffic. In certain areas of Alaska, road systems may not be available at all.

## 4. Likelihood of Increased Illegal Dumping

Many commentors have asserted that the number and extent of illegal dump sites will increase dramatically if small landfills are no longer available or if the regionalization of solid waste is impractical or excessively expensive. This assertion is supported by data provided by the Texas Natural Resource Conservation Commission (TNRCC) and contained in docket number F–95– AGAP–FFFFF, that suggest a positive correlation between landfill closures and illegal dumping in Texas for the years 1988–1994.

## C. Additional Public Comments

## 1. Comments on Alternatives

When the Agency announced the public meetings on alternatives to ground-water monitoring (59 FR 23857, May 9, 1994), it asked for commentors to provide ideas regarding potential alternatives and their costs and limitations. This section describes various technical approaches to alternatives to ground-water monitoring that were mentioned at these public meetings.

Commentors strongly encouraged EPA to provide States and Tribes with greater flexibility to determine ground-water monitoring requirements for qualifying small MSWLFs, including the flexibility to allow alternatives to conventional ground-water monitoring on a sitespecific basis. Commentors indicated that in determining alternatives to ground-water monitoring that were able to detect ground-water contamination, consideration must be given to sitespecific factors such as rock and soil types, hydrogeology, and climate, and to other general factors such as equipment availability and cost of operation.

Commentors focused on alternatives that monitor conditions in the unsaturated zone, in the saturated zone (i.e., ground water), in surface waters, in the surrounding soils, and in the landfill itself. Commentors addressed situations when early detection monitoring used in the unsaturated zone would be advantageous over conventional groundwater monitoring. The Agency believes that in geologic settings where ground water lies hundreds of feet below the MSWLF, appropriately installed unsaturated zone monitoring devices placed just below the MSWLF and above the uppermost aquifer would have the capability to detect releases of leachate from the MSWLF before leachate contacts ground water. The docket for today's proposal (F-95-AGAP-FFFFF) contains several compilations of information on a variety of alternative monitoring techniques, including a description of the techniques and a discussion of the sitespecific conditions that are appropriate for each.

Commentors offered specific "early detection" methods, that include the measurement of moisture content within the soil or rock formations just beneath the landfill by using gypsum blocks, geophysical electrical resistivity surveys, and/or lysimeters. For further explanation of these methods, the reader is referred to two technical background documents: "Examples of Alternatives to Conventional Ground-Water Monitoring Wells at Small, Dry or