

## APPENDIX 3-1

### SURVEY METHODOLOGY

LTL Consultants obtained a list of all properties with sewer (based on sewer bills) from the Township. Using property maps from the County of Berks, LTL then identified the owners of all properties in Amity Township. The two lists were compared, and all properties with sewer were deleted. Large tracts of land, owned by known developers, were also excluded from the list, as were property owners with mailing addresses outside of Amity Township. LTL's initial estimate was that there were approximately 625 residential properties with on-lot sewage treatment; the amended mailing list contained 765 names. It is likely that most of the discrepancy is due to the inclusion of single unimproved lots, not easily identified with a developer. Also, a number of homes identified as being in Amity Township (from the County property maps) were in fact in neighboring Earl or Douglass Township.

According to the 2000 U.S. Census, there were 3,323 housing units in Amity Township. Sewer billing records show that 2,910 residential units were connected to sewer at the end of 2001, an increase of 190 connections (and housing units) over 2000. Assuming no new unsewered connections, the number of residences without sewer was estimated at 603.

2000 Housing Units		3,323
2001 Sewer Connections	+	190
2001 Housing Units w/sewer	-	<u>2,910</u>
<b>Total Units without sewer</b>		<b>603</b>

Very few unsewered lots have been developed since 2000 (8 in 2002); our best estimate is that there are 620-630 developed residential properties with on-lot sewage disposal.

The Department of Environmental Protection's (DEP) publication *Act 537 Sewage Disposal Needs Identification* lists sample size requirements for door-to-door surveys, based on population size. For a population of 501-1,000, a 20% sample is required; a population of 625 requires a sample size of 125. Assuming that all properties with OLDS also have on-lot wells, the sample size is the same for water testing.

The DEP guidelines require the sample to be random. The survey methodology was to go door-to-door in areas known to be outside the sewered area. The survey was conducted during the day on weekdays. Since only residents who were home during the day could be interviewed, the sample was randomized. There is no reason to believe that this method would somehow stratify or bias the sample. The exception to this was sampling done in Bel Air Estates, a mobile home park.<sup>1</sup> The manager of the sewage treatment plant identified this development as having likely malfunctioning OLDS; the survey targeted this development to be sure that there were surveys and water samples taken.

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The 1989 Plan noted problems with malfunctioning systems along portions of Valley Road, Limekiln Road, and Amity Park Road. Bel Air Estates is located in a parcel bounded by Limekiln and Valley Roads, near where Amity Park Road intersects Limekiln Road.