

CHAPTER II

SURVEY BACKGROUND AND RESULTS

A. SURVEY BACKGROUND

In order to obtain additional information on the health of existing on-lot systems, the Township utilized West Chester University's Center for Social and Economic Research to conduct a Township-wide survey during the Spring of 2003. The goal of the survey was to identify the types of on-lot systems in the Township, the extent of failing on-lot systems, and to identify aggravating circumstances, such as lot size and water supply, that would be considered by the Township in determining the need for extending public sewer.

Dr. Lorraine Bernotsky, West Chester University, administered the survey during the spring/summer of 2003. All households *not served by public sewer* within the Township received a survey questionnaire in the mail. The survey questionnaire, which can be found in Appendix A, is identical, relative to the information requested, to the Sample Sewage Needs Mail Survey found in DEP's Sewage Disposal Needs Identification Guidance, March 1996. Approximately 1538 surveys were mailed and 1305 surveys were completed and returned which represents approximately an 85% response rate.

After the initial Township-wide survey, 100 respondents were randomly selected for personal interviews or telephone interviews to verify the information that they provided on the original questionnaire. West Chester University representatives determined that 100 follow-up surveys was a statistically significant portion of the overall respondents (1305) on which to test the validity of the original responses. In addition, the locations of the randomly selected 100 follow-up interviews were also verified to assure geographic distribution. The results of the 100 follow-up surveys indicated a 98% correlation between the original survey and the follow-up survey. As such, West Chester University has determined that the information obtained from the 1305 original respondents is valid.

B. SYSTEM AREAS

Chapter IX of the Base Plan divided the unsewered portions of the Township into 6 "System Areas" (See Map IX-3 of Base Plan). These System Areas, if provided with public sewer, would operate independently of one another in that they would flow into an existing gravity collection system, into a pump station or directly to a treatment plant. As such, in determining the need to extend public sewer, these areas will be evaluated independent of one another. The System Areas will serve as the backdrop for displaying and evaluating the results of the survey.

C. SURVEY RESULTS

As can be seen in Appendix A, the questionnaire asked a series of questions regarding size of property, age of the home, the type of on-lot system existing on the property, and the occurrence of symptoms indicating on-lot system problems. Participants were asked if any repairs to the system have been performed and the last time the system was pumped. Also, each participant was asked to identify any aggravating circumstances such as lot size of less than one acre (where a replacement area may not be available), and on-lot well water supply, or spring water supply.

A summary of the survey results is as follows:

- The **Survey Area** can be found on Map II-1.
- The **Survey Respondents** can be found on Map II-2.
- The **Follow-up Survey Respondents** can be found on Map II-3.
- Survey Respondents indicating **Lush Green Grass** can be found on Map II-4.
- Survey Respondents indicating **Odors** can be found on Map II-5.
- Survey Respondents indicating **Sluggish Drains** can be found on Map II - 6.
- Survey Respondents indicating **System Overflow** can be found on Map II -7.
- Survey Respondents indicating **Wetness or Spongy Areas** can be found on Map II - 8.
- Survey Respondents indicating **Water Ponding or Surfacing** can be found on Map II-9.
- Survey Respondents indicating **Wastewater Backing into Home** can be found on Map II-10.
- Survey Respondents indicating **Private Well and at Least One Symptom** can be found on Map II-11.
- Survey Respondents indicating **Lot Size Less than One Acre and at Least One Symptom** can be found on Map II-12.
- Survey respondents indicating **More than One Symptom** can be found on Map II-13.
- Survey respondent indicating **More than Two Symptoms** can be found on Map II-14.

D. SURVEY SUMMARY

In consideration of the results of the survey, the Township has concluded that all of the unsewered areas of the Township are in eventual need of public sewer. As can be seen in the map series, the survey revealed that symptoms of on-lot system problems were equally distributed throughout the Township. Although the percentage of residents experiencing problems with their on-lot system was considerable, the data would not identify one neighborhood as a priority for sewer service over another. Aggravating circumstances are, however, concentrated in the older communities where smaller lot sizes are common. Due to the predominance of aggravating circumstances in the eastern portion of the Township (indicated as the Westtown-Chester Creek Study Area in Base Plan), this Plan Addendum will focus on implementation of public sewers in this area.