

7.0 DYE TESTING

Dye testing was performed to confirm inflow sources identified as potential sources during the house to house survey and smoke testing in the three sewer catchment areas designated as priority inflow areas in the Phase 1 Part 1 CSO Control Plan report. Dye testing in Sewer Catchment Areas 1, 3, and 4 was conducted between September 12, 2006 and December 22, 2006 by ADS Environmental Services (ADS) generally between the hours of 8 AM and 5 PM. These catchment areas were designated as priority inflow areas in the Phase 1 Part 1 CSO Control Plan report. Dye testing was performed at 409 potential inflow locations in the 3 priority Catchment Areas. The results of the dye test confirm sources that are believed to be connected to the sewer system, or allow inflow into the system by some means.

Dye Testing Results

- A total of 409 dye tests were performed on potential rain leader inflow sources.
- Of those 409 suspected roof leader sources tested, 139 (34%) of the suspected inflow sources were confirmed connected to the sanitary sewer system.
- These 139 sources have an effective drainage area of approximately 116,071 square feet (sf) and are estimated to contribute approximately 1,723,000 gallons per day (gpd) of inflow.

Rehabilitation Recommendations

Based on the results of the dye testing, the three priority sewer catchments contain inflow sources that contribute significant inflow to the sewer system. Direct connections require correction or rehabilitation to prevent inflow from entering the sanitary system. The following are recommendations to reduce inflow into the sanitary sewer:

- Notify private property owners to disconnect roof drains and rain leaders from the sanitary sewer and redirect flow elsewhere.
- The Catchment Areas observed should be addressed in the following order, prioritized by inflow contribution to the sanitary sewer system: Area 1, Area 3, and Area 4.

Conclusions

The City should develop a program requiring private property owners to disconnect rain leaders and yard drains.

To date, the City has implemented a program to notify private property owners to disconnect sources of inflow identified during the dye testing. Initial notifications are scheduled to be sent to owners upon receipt of all dye test results from ADS and Earth Tech. Notification letters for inflow sources confirmed by dye testing will be similar to the notification letters sent to property owners with inflow sources identified and confirmed during smoke testing. A sample of the smoke testing notification letter was included in Chapter 5.

A detailed description of the dye testing investigation for inflow sources including procedures, results, classification of inflow sources and flow estimates by priority catchment area, recommendations, and conclusions is presented in the following Technical Memorandum.