

3.4.2 Existing Stormwater System

3.4.2.1 Conveyance System

The existing conveyance systems throughout the City are comprised of gravity storm drainage pipes, open drainage ways or ditches, trench drains, and UICs. The existing stormwater system is shown in Figure 4. Approximately 125,000 feet of storm pipeline has been identified in the system inventory. Approximately half of this pipe drains to surface outfalls and half drains to infiltration areas, including UICs. The City is responsible for slightly less than 108,800 feet of pipe; however, the exact amount is unknown due to the fact that the current mapping does not distinguish private and county owned infiltration structures or minor surface systems from those that are owned by the City. Less than 1.5 percent of the pipelines in the system have documented diameter or pipe material type. Known diameters of existing pipes range from 4 inches to 36 inches. The majority of pipes that have known diameters are between 10 and 24 inches.

Approximately 16,000 feet of pipeline within the City is under the jurisdiction of ODOT or County, and captures and conveys runoff through surface drainage systems on Hwy 99E within City limits. Clackamas County is also responsible for an unknown number of UICs within the City, but these are not clearly defined and the locations are not known exactly. Pipeline that is not the responsibility of the City is not included in modeling in this report. Table 3.3 summarizes pipe in the system.

Table 3.3 Storm System Inventory

Category	Total Length of Pipe (feet)
Within City Limits	124,800
Surface Basins	60,800
Infiltration Systems/Private Systems	64,000
Total City Responsibility (Approximate)	108,800
ODOT/Clackamas County (Hwy 99E and S Ivy St)	16,000

3.4.2.2 Existing Drywells/UICs

The City has identified 384 existing UICs which are shown in Figure 5. Of these UICs, 284 are named and labeled with their identification (ID), and 100 are not named or labeled and are given the ID "None" in the City's database. The majority of the City's UIC's (357) appear to be functioning well and, through modeling, have been demonstrated to be protective of groundwater quality. Refer to the GSI Water Solutions report "Groundwater Protectiveness Demonstrations and Risk Prioritization for Underground Injection Control (UIC) Devices" (GWPD) attached as Appendix C for more detail concerning UICs and groundwater modeling.

A total of eight UICs have been identified for decommissioning and these are listed in Table 3.4. The UICs that the City has observed to exhibit failure characteristics were previously listed in Table 3.2, but not all of these require decommissioning as discussed below. GSI classified six UICs as high risk and requiring decommissioning. The Groundwater Protectiveness