

these lava flows are exposed and thin, weathering has nearly completely altered the lava flows to red clay soils.

Following the Boring Lava event, gravel and finer sediments were deposited in the Portland area. Glacial floods produced channeled scab lands and deltaic deposits of torrentially cross-bedded gravels. Continued erosion by Willamette Valley river systems, earthquakes and weathering of the area through geologic time, continued to carve and shape the Willamette Valley into its shape today. In the Canby area, this has resulted in a terrace overlooking the Willamette and Molalla Rivers.

The Oregon Department of Geology and Mineral Industries identified the prominent Surficial Geologic Units in the Canby Area [SDMP 1994b]. The results of the study were published in 1979. From the study, there are predominantly Alluviums and Lacustrine Sediments underlying the Canby urban area. The Lacustrine Sediments are unconsolidated cross-bedded to graded sedimentary beds deposited by the late Pleistocene glacial floods. There are three classifications of these sediments: Qws, Qls and Qdg. The characteristics of the Alluvium and Lacustrine Sediments are identified in Table 3.1 and the approximate limits of each of these series are depicted in Figure 1.

Table 3.1 Surficial Geologic Units

Classification	Characteristics
Lacustrine Sediments	
Qws	Lacustrine fine sandy silt and clay deposited up to 350 feet elevation. Beds range from a few inches to several feet thick. Occurs along the valleys of the Tualatin and other tributaries of the Willamette River.
Qls	Lacustrine and fluvial unconsolidated stratified to cross bedded sand and silt and occasional lenses of pebbles to gravel. Occurs along the Willamette River. Equivalent to lacustrine sands (Qls) and sand and silt deposits (Qs).
Qdg	Deltaic deposits of sand, gravel, and boulders up to 8 feet in diameter; torrential cross-bedding.
Alluvium	
Qal/Pt	Unconsolidated sand, gravel, and cobbles within stream channels and on adjacent flood plains; sandy silt up to 10 feet thick overlies gravel on flood plains.

In general, the Lacustrine Sediments are well drained when on terraces. However, when located in concave areas and within drainage ways, they are poorly drained. From Figure 1 it can be seen that the Alluvium is located adjacent to the Willamette River. This area has, in the past, been subject to flooding and has a high groundwater table. Thus, the Alluvium surficial unit is anticipated to be poorly drained during winter wet weather periods.

Additional description of the existing local geology underlying the City of Canby is provided in GSI's report "Groundwater Protectiveness Demonstrations and Risk Prioritization for Underground Injection Control (UIC) Devices" attached as Appendix C. This describes the