2.0 EXISTING WATER DISTRIBUTION SYSTEM

2.1 Raw Water Sources and Transmission

The City obtains the majority of its raw water supply from the Tarrant Regional Water District (TRWD), with the balance supplied by the City's permitted capacity at Lake Worth, the Corps of Engineers (COE) permitted capacity at Lake Benbrook, and several small reuse projects. The City's supply from TRWD is per a long term contract, with no contractual limits on the water withdrawn from the Richland-Chambers and Cedar Creek Reservoirs, subject to the TRWD permit limits. The current water supplies for the City are as follows in **Table 2-1**:

Table 2-1 Water Supply Allocated to Fort Worth

Source	Water Right Holder	Permitted or Contracted Amount (MGD)
West Fork	TRWD	142.37
Lake Worth (Fort Worth Permit)	Fort Worth	11.85*
Lake Benbrook (COE Contract)	Fort Worth	0.65
Richland-Chambers Reservoir	TRWD	182.87
Cedar Creek Reservoir	TRWD	153.88

*Fort Worth has allowed this water right to be used as part of TRWD's West Fork System

Through a series of pump stations, the TRWD has implemented improvements to allow water from the Richland-Chambers and Cedar Creek Reservoirs to flow to Lake Benbrook. The blended water can then be pumped to Rolling Hills Water Treatment Plant (RHWTP), North Holly Water Treatment Plant (NHWTP)/South Holly Water Treatment Plant (SHWTP), or Westside Water Treatment Plant (WSWTP). TRWD implemented improvements to tie Lake Benbrook to Eagle Mountain Lake, where Fort Worth operates the Eagle Mountain Water Treatment Plant (EMWTP).

The existing raw water supply facilities are shown as follows in **Table 2-2**:

Table 2-2 Raw Water Supply Facilities

Unit	Capacity
Eagle Mountain Lake	66 mgd
Eagle Mountain Pump Station and Pipeline	105 mgd*
Lake Worth Intake and Pipeline	127 mgd
Clear Fork Pump Station	90 mgd*
Cedar Creek System	136 mgd*
Richland-Chambers System	118 mgd*

*Indicates firm capacity with largest pump out of service

2.2 Water Treatment Plants, Pump Stations and Storage

The City's distribution system consists of ten pressure planes. The pressure planes include the Holly, Eastside II (ES II), Northside II (NS II), Northside III (NS III), Northside IV (NS IV), Southside II (SS II), Southside III (SS III), Westside II (WS II), Westside III (WS III) and Westside IV (WS IV) Pressure Planes. Some pressure planes, such as Holly and ES II, are supplied principally by pump stations at the water treatment plants.

The City currently operates five water treatment plants, summarized in **Table 2-3** below. These plants take raw water from the TRWD reservoirs and treat it, and is then pumped into the distribution system through the high service pump stations at each treatment plant.

Table 2-3 Water Treatment Plant Facilities

Water Treatment Plant	Treatment Capacity (MGD)
North Holly Plant	80
South Holly Plant	80
Rolling Hills Plant	200
Eagle Mountain Plant	108
Westside Plant	12

In order to provide adequate pressure to each of the City's ten pressure planes, the City operates a series of twenty-one pump stations. A summary of the existing system pumping capacities of each high service pump station as well as the in-system pump stations can be found in **Appendix A**. These pump

stations are used to fill the twenty-seven ground and elevated storage tanks located throughout the City. A summary of the existing system storage capacities of the ground and elevated storage tanks can be found in **Appendix B.**