CHAPTER 2. EXISTING SEWER COLLECTION SYSTEM

The City of Chula Vista is a participating agency in the City of San Diego owned and operated METRO system. The system includes regional sewer interceptors and trunk sewers, lift stations, and treatment and disposal facilities. Currently, all wastewater flows generated within the City basins excluding the Sweetwater Basin are conveyed by City facilities to connections to the METRO system South Metro Interceptor. Flows generated in the Sweetwater Sewer Basin are conveyed to the County-owned Spring Valley Interceptor that in turn discharges to the South Metro Interceptor. The 72 to 114-inch diameter South Metro Interceptor conveys flow northward through two pump stations to the Point Loma Wastewater Treatment Plant (PLWWTP) located in the southern end of the Point Loma Peninsula. Currently, the City owns 20.864 mgd capacity in the METRO system.

2.1 SUMMARY OF WASTEWATER ASSETS

2.1.1 BASINS

The City's collection facilities convey wastewater flow generated within 8 main drainage basins to connections to regional sewerage facilities located along San Diego Bay to the west and Sweetwater River to the north. A map of all the basins is shown in Figure 2-1.

2.1.2 LIFT STATIONS AND STORAGE CAPACITY

There are currently 11 wastewater lift stations throughout the City. Those 11 lift stations are also shown in Figure 2-1. Four of the 11 lift stations were not included in the hydraulic model since those lift stations are used only for individual lots and do not contribute to the overall collection system. In addition to the pumps within the lift stations, each site contains operational storage and emergency storage reservoirs. Table 2-1 identifies the 11 lift stations and associated reservoirs.

Table 2-1: Existing Wastewater Lift Stations

Number	Lift Station Description	No. of Pumps	Maximum Pumping Capacity (GPM)	Available Wetwell Capacity (gallons)	Available Emergency Storage (gallons)	Total Available Storage Capacity (gallons)
1	Agua Vista	2	308	7,140	48,134	55,274
2	City Hall*	2	150	1,470		1470
3	Corral Ct	2	90	2,818	587	3,405
4	G Street	2	225	1,127	14,776	15,903
5	Hilltop	2	100	940	0	940
6	Max Field*	1	0.88	53	516	569
7	OTC	2	188	5,224	0	5,224
8	Police Dept*	2	104	2,202	0	2202
9	Parkside Dr	2	316	10,218	16,302	26,520
10	Salt Creek*	2	54	845	0	845
11	Surrey Pl	2	35	1,761	751	2,512

Ref: Information collected from City Staff, Dated July 2, 2013
*Individual Lift Stations are not included in the hydraulic model.

2.1.3 GRAVITY MAINS

The City owns and operates approximately 500 miles of pipe in the sewer collection system. Material for gravity mains was obtained from 2009-2012 Sewer Closed-Circuit Television and Condition Assessment data records collected by the City. As shown in Table 2-2, the predominant known material for gravity mains in the City is Polyvinyl Chloride Pipe (PVC) and to follow Vitrified Clay Pipe (VCP). Pipe material locations in the collection system have been illustrated in Figure 2-2.

Table 2-2: Gravity Mains by Material

Material Abreviation	Material Name	Total Length (ft)	Total Length (miles)	Percent of City Gravity Mains by Length
ABS	Acrylonitrile Butadiene Styrene	7455	1.41	0.3%
AC	Asbestos Cement	333	0.06	0.01%
CI	Cast Iron	335	0.06	0.01%
PVC	Polyvinyl Chloride Pipe	1455000	275.6	56.7%
RCP	Reinforced Concrete Pipe	892	0.17	0.03%
Vitrified Clay/Pipe	VCP	1094773	207.3	42.6%
UNK	Unknown	8651	1.6	0.3%
Total		*2,567,439*	486.3	*100%*

The City's sewer pipe infrastructure has also been categorized by pipe diameter, is shown in Table 2-3, with 8-inch gravity main predominating. Gravity mains displayed by diameter are shown in Figure 2-3. The City's current design standards call for a minimum of 8-inch to be used in future construction of gravity mains, so as infrastructure is improved in the future, the approximately 1.36 percent of the system that is 6 and 4-inch pipeline, will eventually be replaced by gravity mains of 8-inch diameter or larger.

Table 2-3: Gravity Mains by Diameter

Diameter (in)	Total Length (ft)	Total Length (miles)	Percent of City Gravity Mains by Length
4	770	0	0.03%
6	34,112	6	1.33%
8	2,097,360	397	81.68%
10	104,268	20	4.06%
12	113,177	21	4.41%
15	76,548	14	2.98%
18	57,771	11	2.25%
20	493	0	0.02%
21	24,066	5	0.94%
24	9,461	2	0.37%
27	780	0	0.03%
30	7,476	1	0.29%
36	8,455	2	0.33%
42	34,044	6	1.33%
Total	*2,567,778*	*486*	*100.00%*

N

0 5,000 10,000 Feet

Legend

City of Chula Vista Lift Stations

- PS AGUA VISTA
- PS CITY HALL
- PS G STREET
- PS HILLTOP DRIVE
- PS MAX FIELD REINSTRA SPORT COMPLEX
- PS OLYMPIC TRAINING CENTER
- PS PARKSIDE DR
- PS POLICE HQ
- PS RANCHO ROBINWOOD UNIT II
- PS RANCHO ROBINWOOD UNIT III
- PS SALT CREEK PARK

City of Chula Vista Wastewater Basins 2013

- "G" STREET BASIN
- BAYFRONT\BASIN
- DATE FAIVRE BASIN 1
- DATE FAIVRE BASIN 2
- MAIN STREET BASIN 1
- MAIN STREET BASIN 2
- MAIN STREET BASIN 3
- MAIN STREET BASIN 4
- MAIN STREET BASIN 5
- POGGI CANYON
- SALT CREEK BASIN
- SWEETWATER BASIN 1
- SWEETWATER BASIN 2
- TELEGRAPH CANYON BASIN
- G-Street Basin Piping
- Telegraph Canyon Basin Piping
- Sweetwater Basins Piping
- Combined Basins Piping
- <all other values>
- City of Chula Vista Boundary

Infrastructure ENGINEERING CORPORATION

City of Chula Vista
Wastewater Collection System Master Plan

Wastewater Basins and Lift Stations
FINAL

May 2014

Figure 2-1

N

0 5,000 10,000 Feet

Legend

MATERIAL

- Unknown
- ABS
- AC
- Cast Iron
- PVC
- Reinforced Concrete
- Vitrified Clay Pipe
- City of Chula Vista Boundary
- City Parcels

Infrastructure ENGINEERING CORPORATION

City of Chula Vista
Wastewater Collection System Master Plan

Gravity Mains by Material
FINAL

May 2014

Figure 2-2

N

0 4,850 9,700 Feet

Legend

Collection System Pipelines

Diameter

- 4-Inch
- 6-Inch
- 8-Inch
- 10-Inch
- 12-Inch
- 15-Inch
- 18-Inch
- 20-Inch
- 21-Inch
- 24-Inch
- 27-Inch
- 30-Inch
- 36-Inch
- 42-Inch
- City of Chula Vista Boundary
- City Parcels

Infrastructure ENGINEERING CORPORATION

City of Chula Vista
Wastewater Collection System Master Plan

Gravity Mains by Diameter
FINAL

May 2014

Figure 2-3