

Amendments to the Wastewater Master Plan For the London Area



Planning Commission Presentation
March 21, 2018



Subject Area

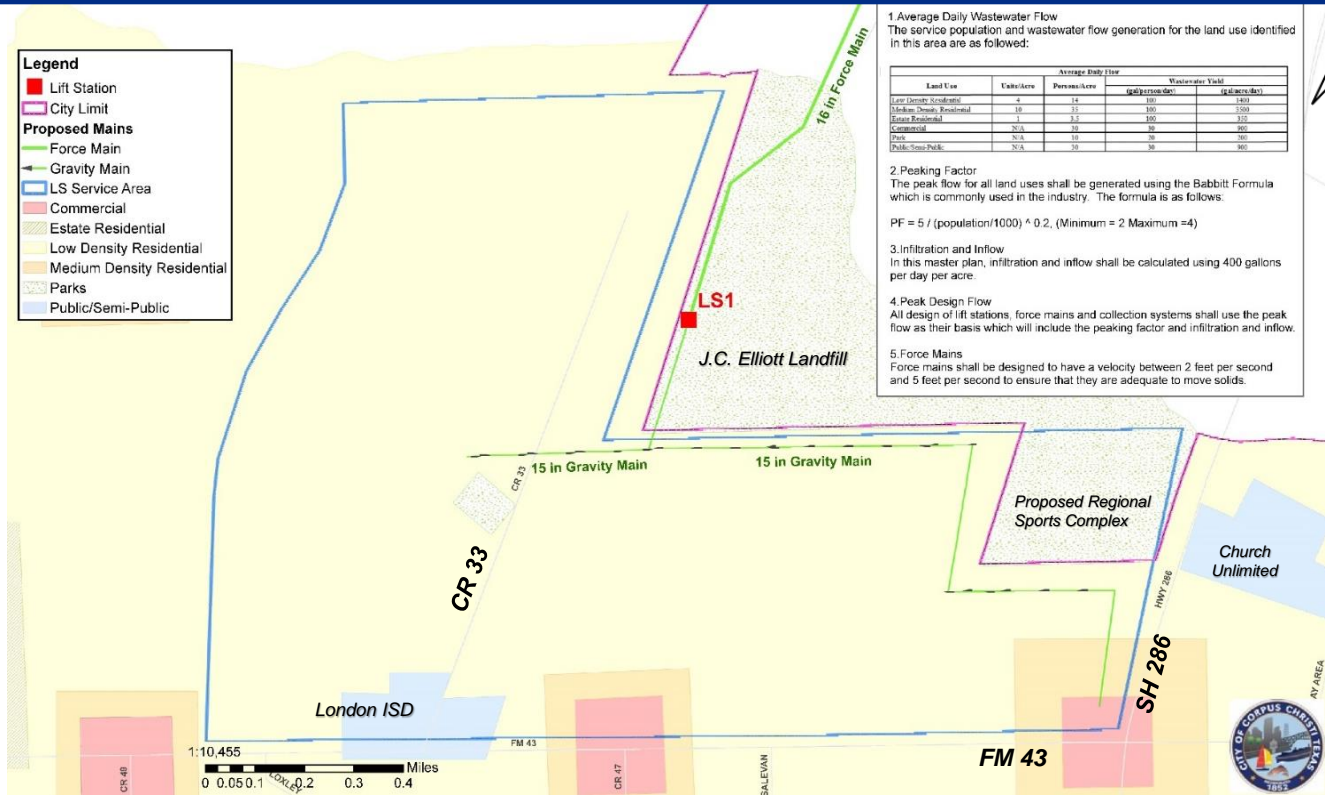




Current Master Plan

Legend

- Lift Station
- City Limit
- Proposed Mains**
- Force Main
- Gravity Main
- LS Service Area
- Commercial
- Estate Residential
- Low Density Residential
- Medium Density Residential
- Parks
- Public/Semi-Public



1. Average Daily Wastewater Flow
 The service population and wastewater flow generation for the land use identified in this area are as follows:

Land Use	Average Daily Flow		Wastewater Yield	
	Units/Acre	Persons/Acre	(gal/person/day)	(cubic ft./acre/day)
Low Density Residential	4	14	100	1400
Medium Density Residential	10	35	100	3500
Single Residential	1	3.0	100	300
Commercial	N/A	10	30	300
Park	N/A	10	30	300
Public/Semi-Public	N/A	30	30	900

2. Peaking Factor
 The peak flow for all land uses shall be generated using the Babbitt Formula which is commonly used in the industry. The formula is as follows:

$$PF = 5 / (\text{population}/1000) \wedge 0.2, (\text{Minimum} = 2 \text{ Maximum} = 4)$$

3. Infiltration and Inflow
 In this master plan, infiltration and inflow shall be calculated using 400 gallons per day per acre.

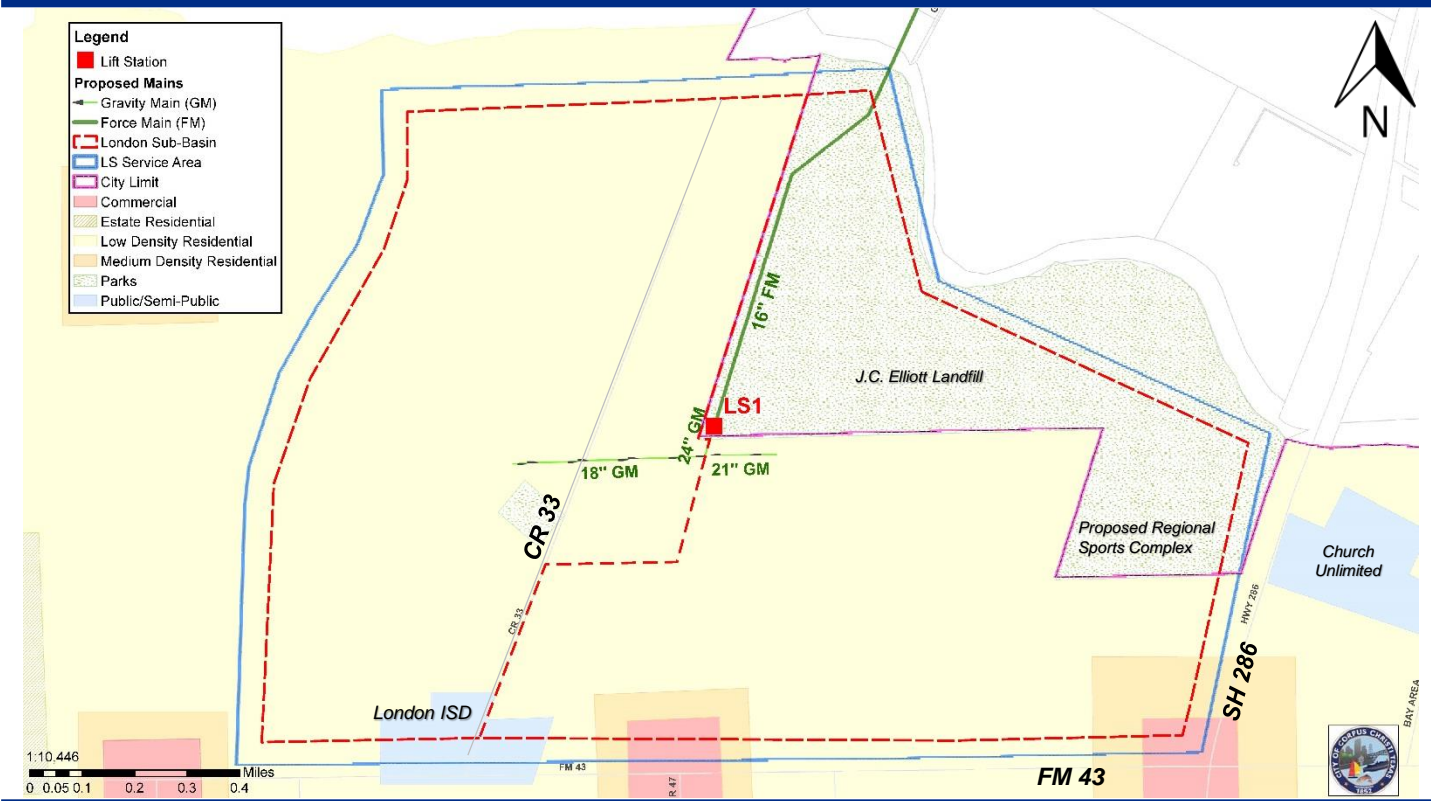
4. Peak Design Flow
 All design of lift stations, force mains and collection systems shall use the peak flow as their basis which will include the peaking factor and infiltration and inflow.

5. Force Mains
 Force mains shall be designed to have a velocity between 2 feet per second and 5 feet per second to ensure that they are adequate to move solids.





Proposed Master Plan





Staff Recommendation

Approval of the following amendments:

1. Correct service area to include City Landfill property south of the Oso Creek.
 2. Delineate sub-basin boundaries within the service area.
 3. Relocate the lift station approximately 1/4 mile south.
 4. Increase west gravity line from 15" to 18" diameter.
 5. Increase east gravity line from 15" to 21" diameter and reduce its length to approximately 100'.
 6. Increase the north-south gravity line that ties into lift station from 15" to 24".
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