



**NOTICE OF WORKSHOP TO BE HELD BY THE  
MCALLEN PUBLIC UTILITY BOARD OF TRUSTEES**

**DATE:** Tuesday, July 26, 2022  
**TIME:** 2:00 PM  
**PLACE:** McAllen City Hall  
City Commission Chambers – 3<sup>rd</sup> Floor  
1300 W. Houston Ave.  
McAllen, Texas 78501

At any time during the course of this meeting, the McAllen Public Utility Board may retire to Executive Session under Texas Government Code 551.071(2) to confer with its legal counsel on any subject matter on this agenda in which the duty of the attorney to the McAllen Public Utility Board under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with Chapter 551 of the Texas Government Code. Further, at any time during the course of this meeting, the McAllen Public Utility Board may retire to Executive Session to deliberate on any subject slated for discussion at this meeting, as may be permitted under one or more of the exceptions to the Open Meetings Act set forth in Title 5, Subtitle A, Chapter 551, Subchapter D of the Texas Government Code.

Notice is hereby given that members of the McAllen Public Utility Board will participate in this workshop via teleconference or videoconference as allowed by the Governor's Order due to the COVID-19 pandemic. As allowed by this Order, a quorum will not be present at a physical location.

**CALL TO ORDER**

- 1. Presentation of Water and Wastewater Master Plan Update.**
- 2. EXECUTIVE SESSION, CHAPTER 551, TEXAS GOVERNMENT CODE, SECTION 551.071 CONSULTATION WITH ATTORNEY, SECTION 551.072 LAND TRANSACTION, SECTION 551.074 PERSONNEL MATTERS; SECTION 551.087 ECONOMIC DEVELOPMENT NEGOTIATIONS**
  - a) Consultation with City Attorney regarding Economic Development Matters. (T.G.C. 551.071)
  - b) Consultation with City Attorney regarding potential litigation before the PUC. (T.G.C. 551.071)

**ADJOURNMENT**

**IF ANY ACCOMMODATION FOR A DISABILITY IS REQUIRED (OR INTERPRETERS FOR THE DEAF), NOTIFY THE UTILITY ADMINISTRATION DEPARTMENT AT 681-1630 FORTY-EIGHT (48) HOURS PRIOR TO THE MEETING DATE. WITH REGARD TO ANY ITEM, THE McALLEN PUBLIC UTILITY BOARD MAY TAKE VARIOUS ACTIONS INCLUDING BUT NOT LIMITED TO RESCHEDULING AN ITEM IN ITS ENTIRETY FOR A FUTURE DATE OR TIME.**

**CERTIFICATION**

I, the Undersigned Authority, do hereby certify that the attached agenda of meeting of the McAllen Public Utility Board of Trustees is a true and correct copy and that I posted a true and correct copy of said notice on the bulletin board in the Municipal Building, a place convenient and readily accessible to the general public at all times, and said Notice was posted on the 22nd day of July, 2022 at 3:00 p.m. and will remain so posted continuously for at least 72 hours preceding the scheduled time of said meeting in accordance with Chapter 551 of the Texas Government Code.

  
Nyla L. Flatau, TRMC/CMC, CPM  
Utility Board Secretary

# **MCALLEN PUBLIC UTILITY**

## **WATER & WASTEWATER**

### **MASTER PLAN**

### **STATUS UPDATE**

**July 26<sup>th</sup>, 2022**

# MASTER PLAN STATUS

Population Projections

• 100% Complete

Pressure Recording & Flow Monitoring

• 100% Complete

Model Calibration

• 100% Complete

Existing System Assessment

• 100% Complete

Renewal Program Planning

• 75% Complete

Future System Assessment

• 90% Complete

Proposed CIP Development

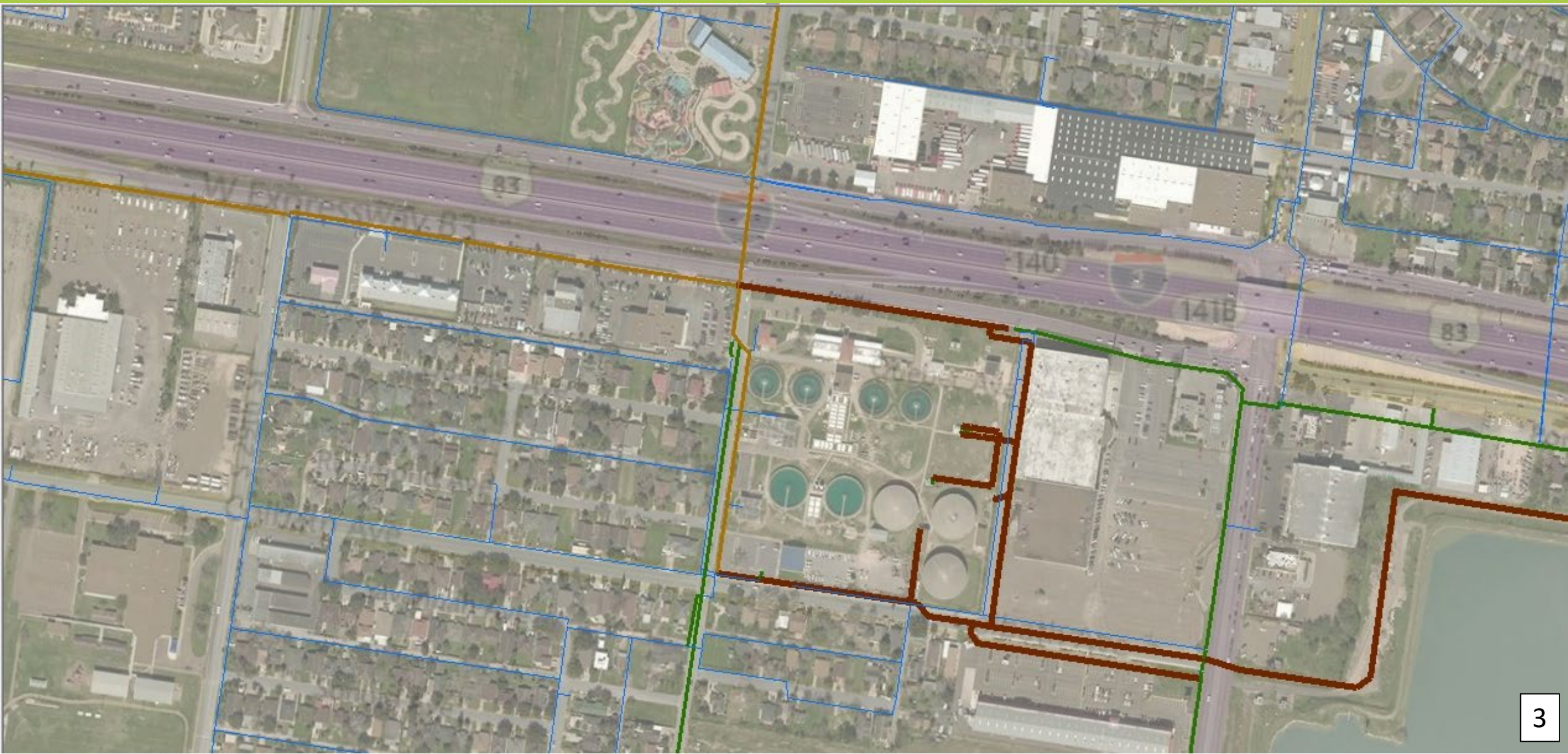
• 75% Complete

Draft Report

• 60% Complete



# WATER



# WATER DEVELOPABLE AREA

- Rated Capacity South WTP = 53.7 MGD
- Rated Capacity North WTP = 11.3 MGD
- **Total Rated Capacity = 65 MGD**
- Max Day Demand = 2 \* Average Day Demand
- Max Day Demand = 2 \* (6.3 + 19.3) = 51.1 MGD
- Approved Capacity – Max Day Demand =  
65 MGD – 51 MGD = **14 MGD**
- **14 MGD Water Capacity to grow**

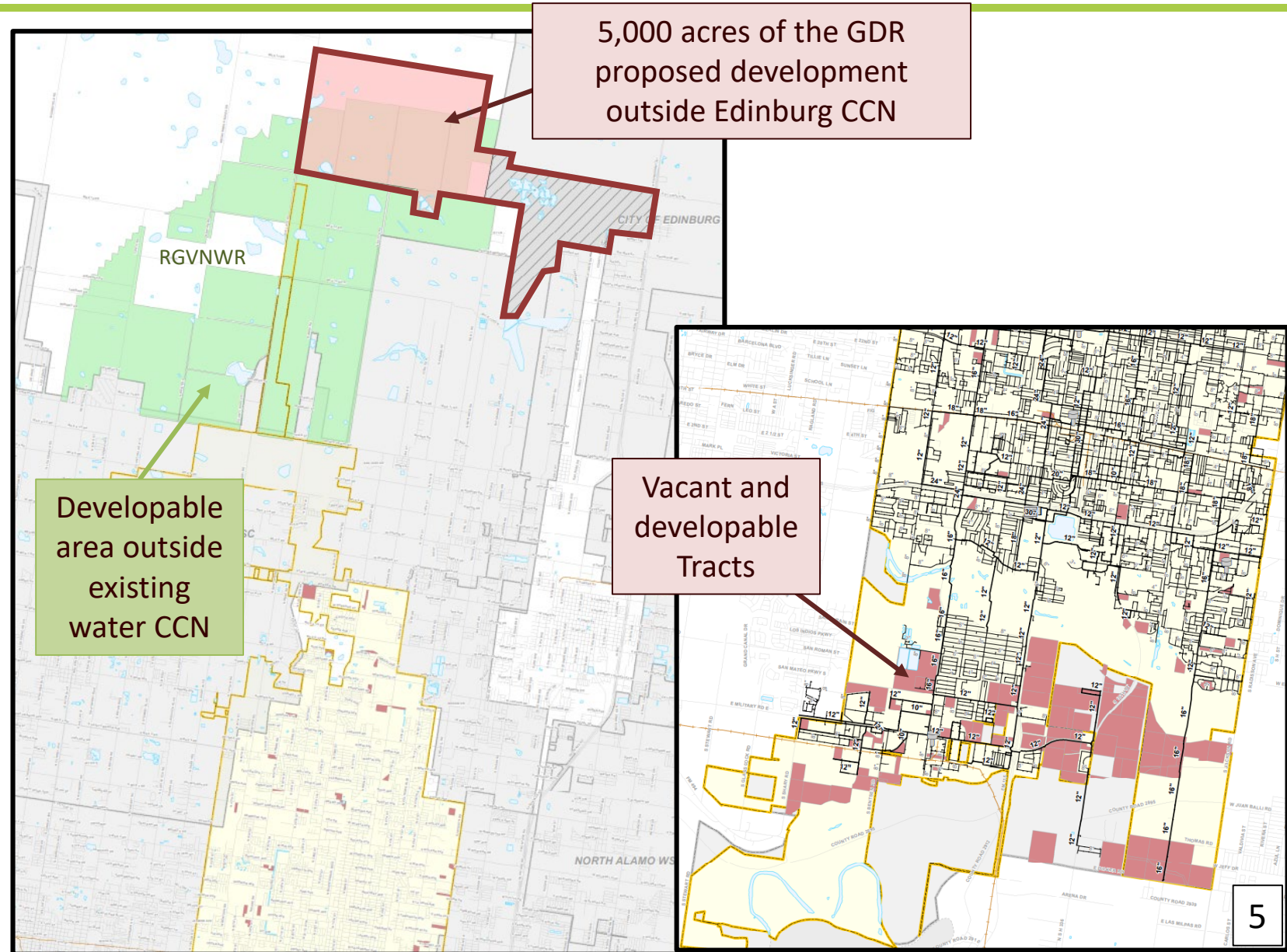
Meter Size	Land Use Designation	Average Consumption (gallons/person/day)
0.625	RE	140

Year	Average Production (MGD)	
	NW WTP	SWTP
2017	6.75	19.72
2018	4.33	20.59
2019	7.26	17.82
2020	6.70	18.97
Average	6.30	19.30



# WATER DEVELOPABLE AREA

- Gauranga Dream Ranch lies partially within Edinburg Water CCN
- Parcels in green represent developable lots outside of neighboring Water CCNs
- Red lots represent vacant lots inside the Water CCN





# GAURANGA DREAM RANCH

## Planning Assumptions:

2.5  
connections  
per acre



3.0  
people/  
connection



## Average Demands:

140 Gallons/  
Person/Day

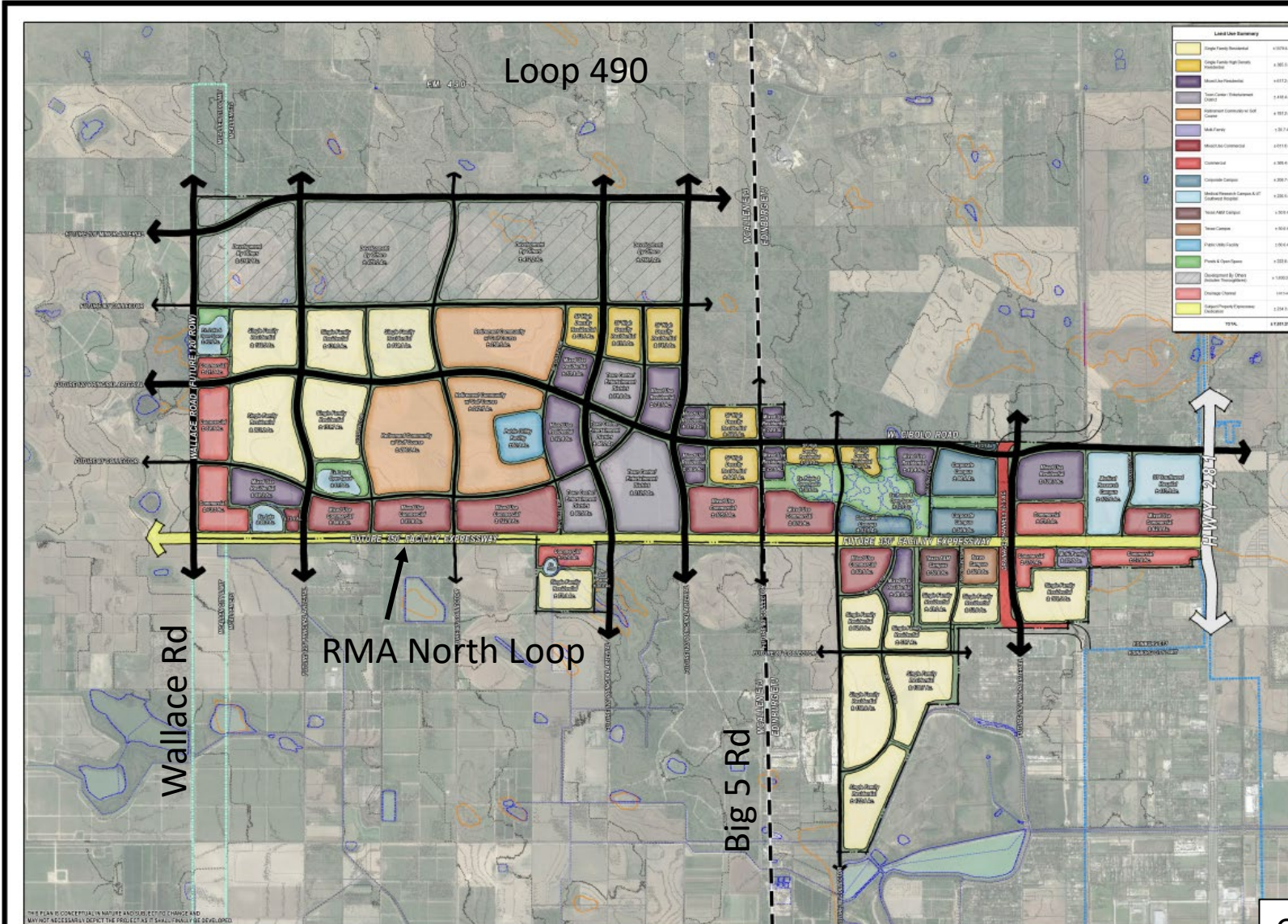
## Average Flow:

82 Gallons/  
Person/Day

5.4 MGD of  
Average  
Water  
Demand



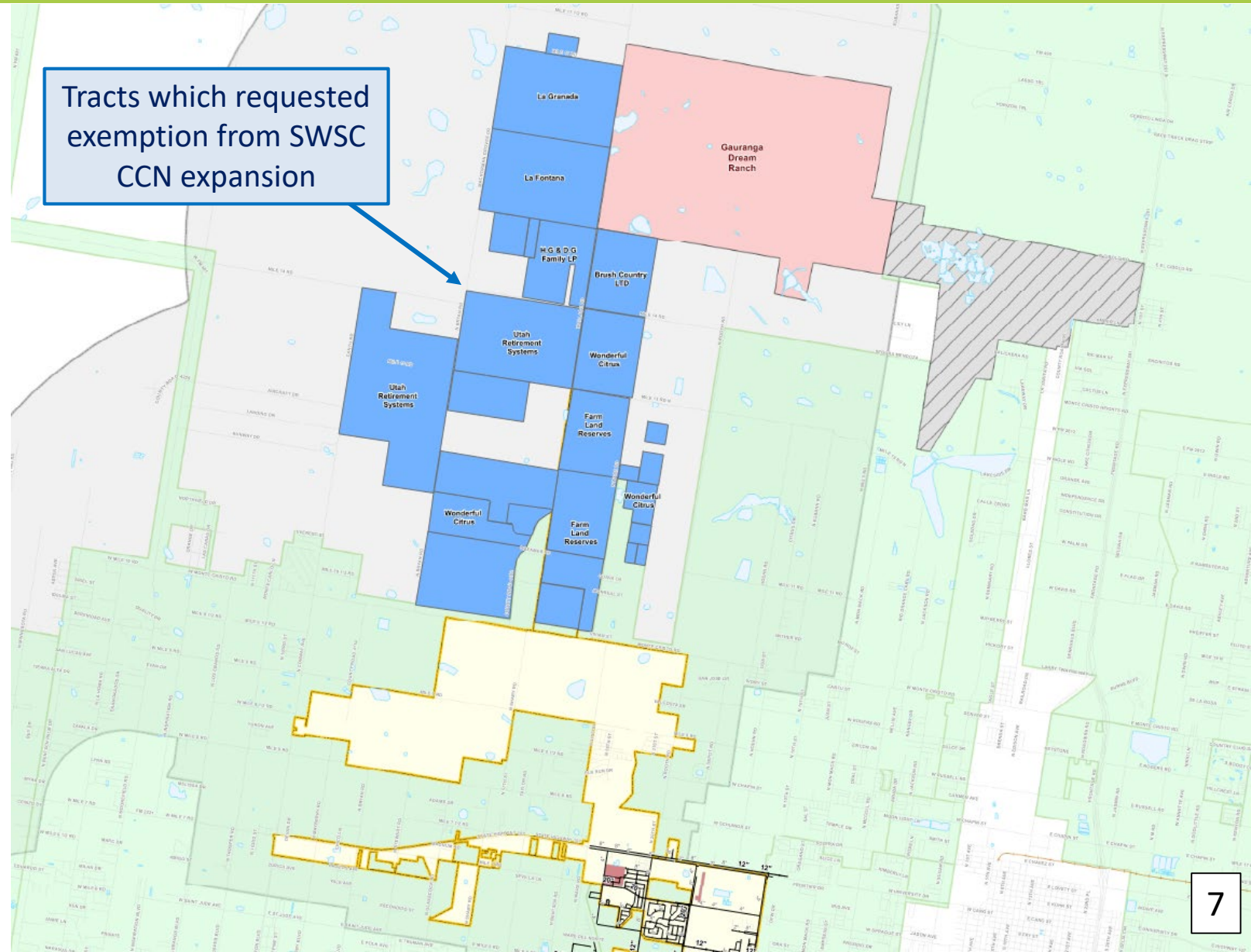
3.2 MGD of  
Average  
Wastewater  
Flow





# WATER DEVELOPABLE AREA (NORTH)

- Multiple property owners, totaling over 11,400 acres, requested to be exempted from Sharyland CCN expansion
- Including Gauranga Dream Ranch, over 16,000 developable acres to be served by future WTP
- Future possible demands = 18.8 MGD





# WATER POPULATION PROJECTIONS

Planning Assumptions:

2.5  
connections  
per acre



3.0  
people/  
connection



140 Gallons/  
Person/Day



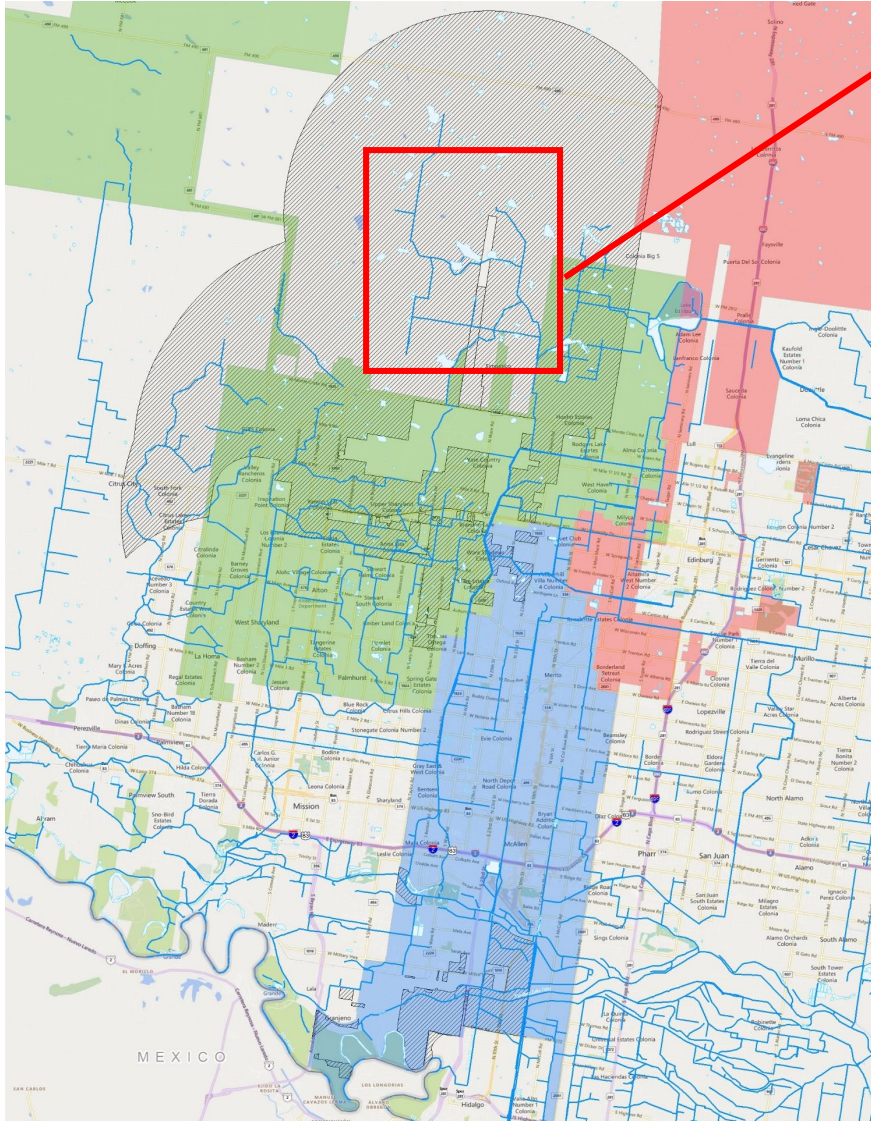
Additional  
Water  
Demand



	Area (ac)	Additional Connections	Additional Population	Additional Average Demand (MGD)
Vacant Lots served by Northwest WTP	17,939	44,848	134,544	18.8
Vacant Lots served by South WTP	3,063	7,658	22,973	3.2
<b>Grand Total</b>	<b>20,951</b>	<b>52,378</b>	<b>157,134</b>	<b>22</b>

*14 MGD surplus production – 22 MGD future demands  
= -8 MGD future capacity*

# WATER TREATMENT PLANT SITING



## Proposed Area for New WTP

- Existing Northwest WTP expandable to 22 MGD
- Additional capacity would be required to serve developable properties north of Sharyland CCN
- Irrigation canal system not preferred as source due to existing supply limitations and water quality (variable turbidity) issues
- Groundwater micro-filtration WTP common for other regional potable water suppliers



# WTP SITING CONSIDERATIONS

- Proposed WTP location may be influenced by developer interest and cost participation
- WTP should be expandable to accommodate growth
- Water quality and production rates may dictate method of treatment
  - Brackish groundwater typical in the area
- PUC hesitant to grant CCN expansions without documentation of requests for service

# CEDAR ELEVATED STORAGE TANK

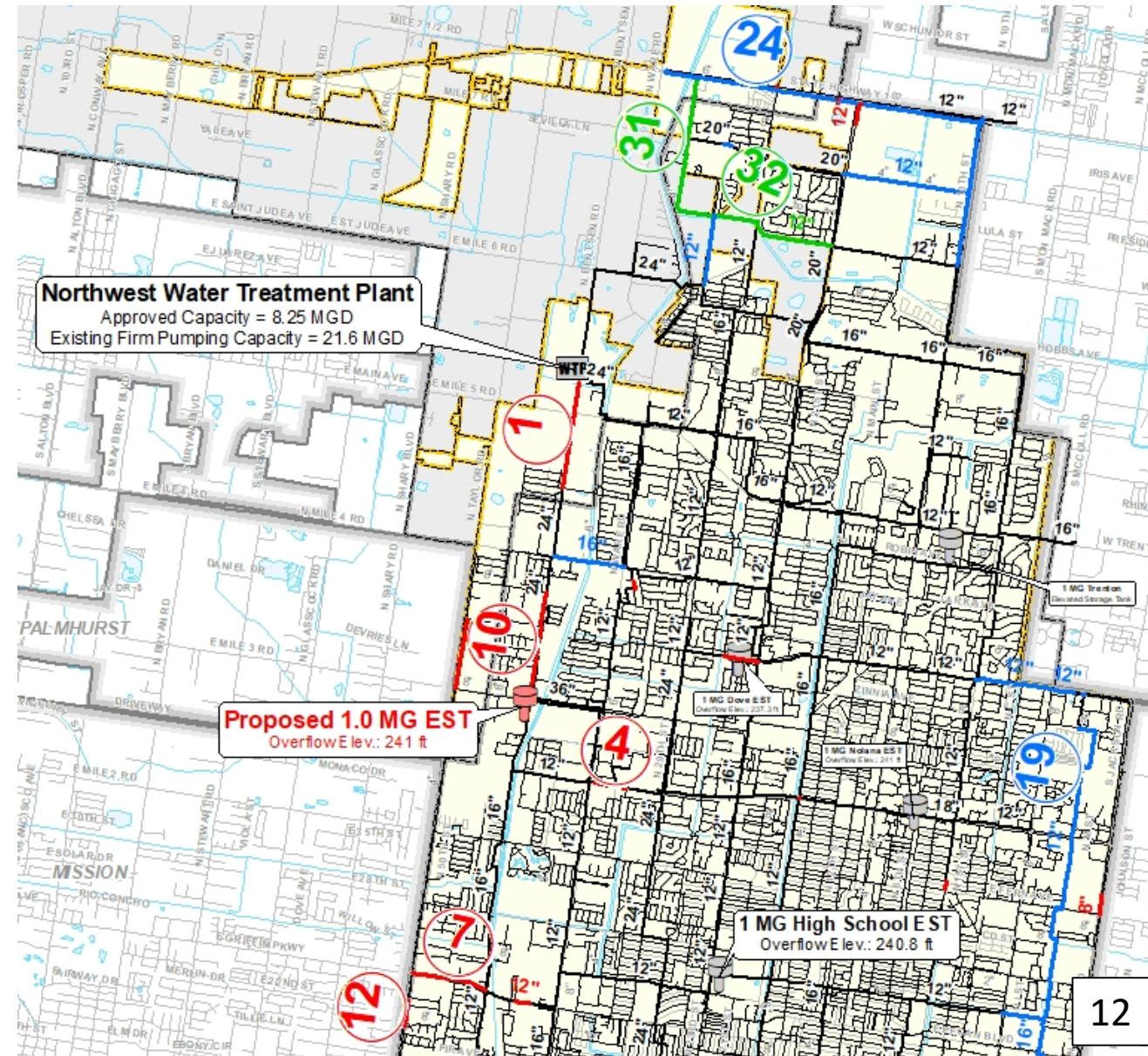
- Tank located too close to South WTP
  - Tank has difficulty draining due to overflow elevation and EST operation further from the WTP
- Existing condition issues require improvement or elimination
- Additional elevated storage proposed in CIP at more hydraulically advantageous location
- Existing telecommunications apparatus will need to be relocated





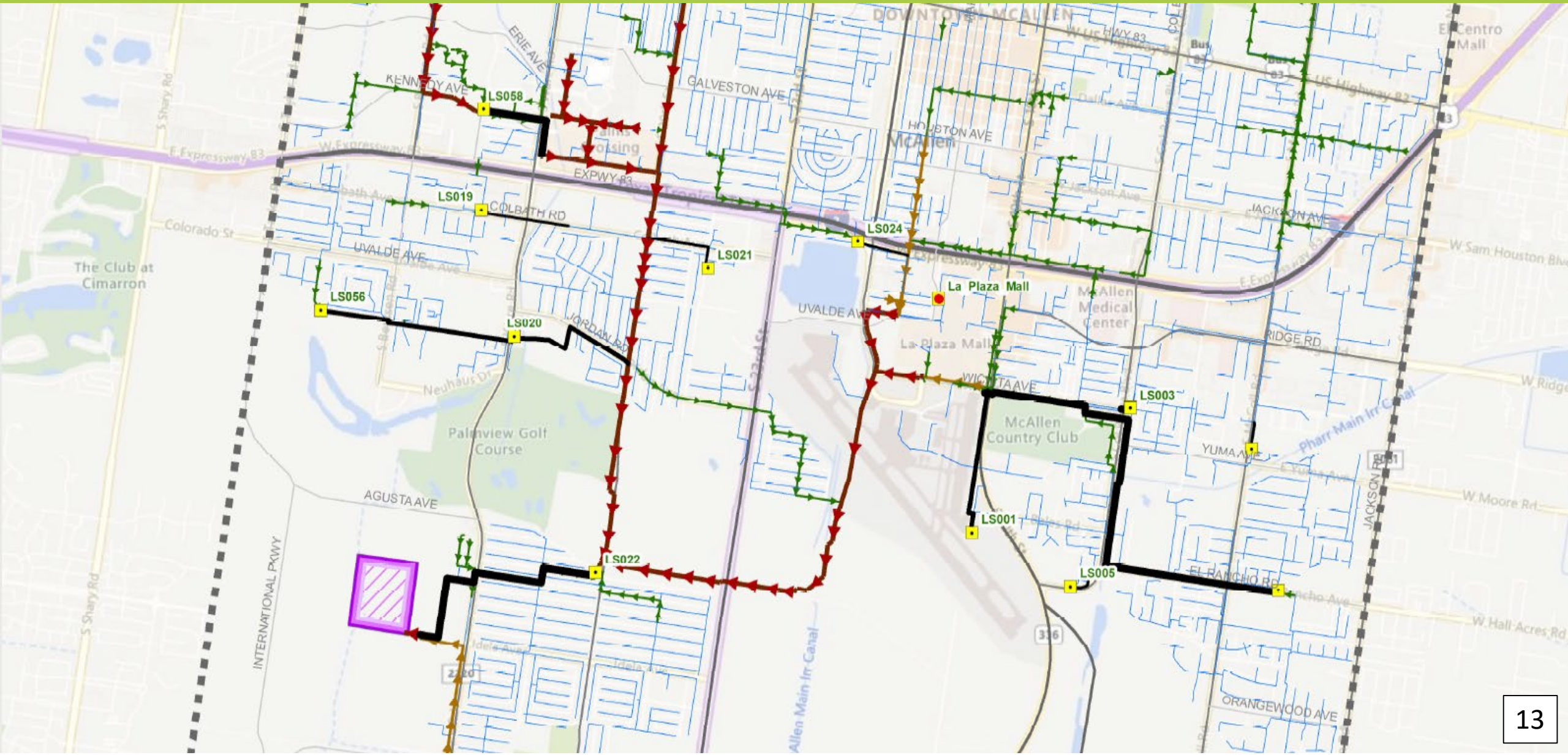
# PROPOSED TRANSMISSION MAINS

- Proposed transmission main improvements near the Northwest WTP consistent with previous Master Plan
- Proposed mains allow for greater utilization of NW WTP production
- Future expansions at the NW WTP will allow for maintenance of the South WTP
  - Transmission main improvements necessary to maintain service to all customers



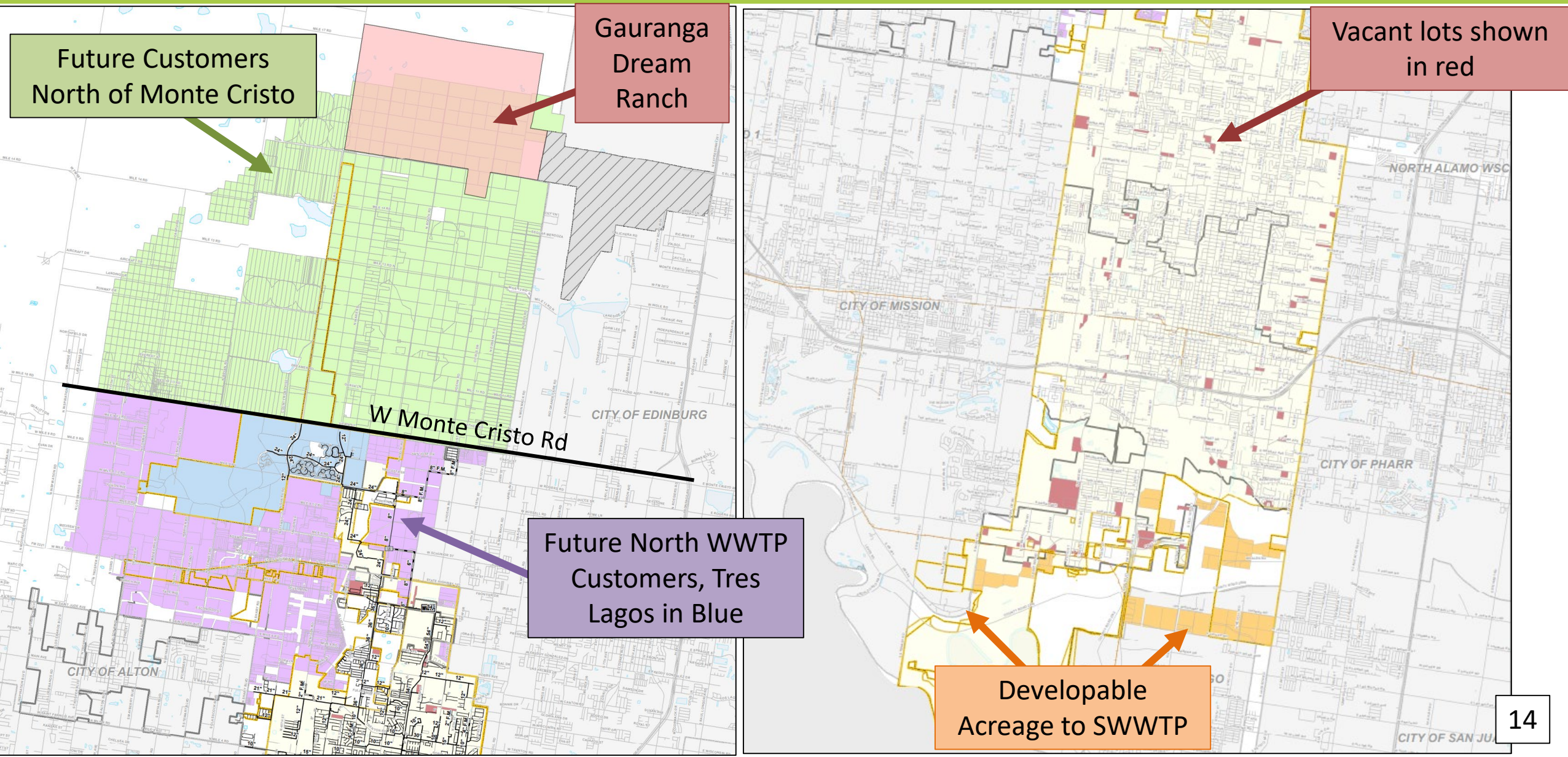


# WASTEWATER





# WASTEWATER SERVICE AREA



# FUTURE WW POPULATION PROJECTIONS

Planning Assumptions:

2.5  
connections  
per acre



3 people per  
connection



82 gallons  
per person  
per day



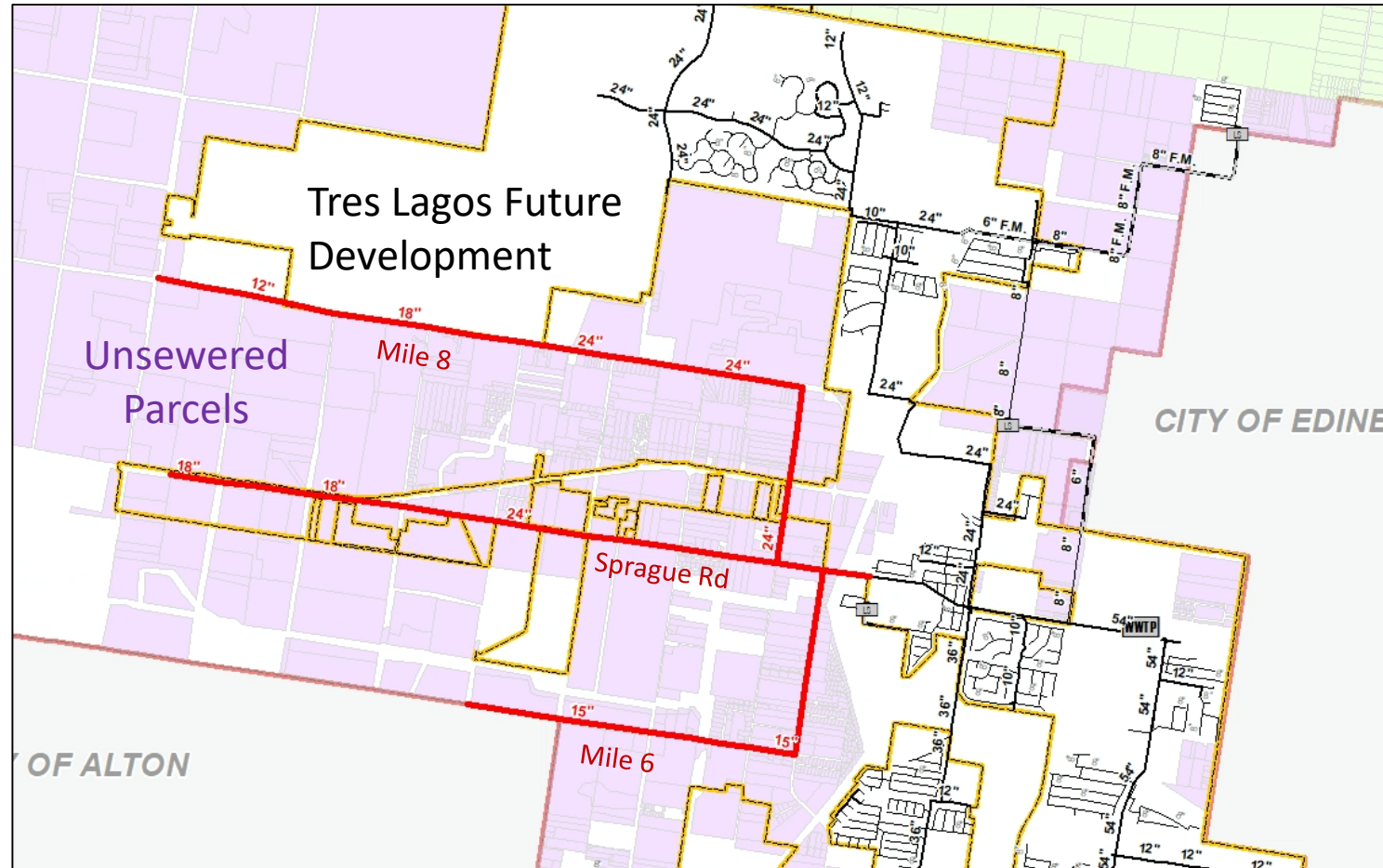
Total Additional  
Flow

WWTP	Area in Question	Area (ac)	Connections	Population	Additional Dry Weather Flow (MGD)
North	Total Developable Area North of Montecristo	22,920	57,300	171,900	<b>14.1</b>
	Total Developable Area within future N WWTP service area	10,100	25,250	75,750	<b>6.2</b>
	Total Developable Area within existing N WWTP service area	1,750	4,375	13,125	<b>1.1</b>
South	Total Developable Area within S WWTP service area	1,990	4,975	14,925	<b>1.2</b>



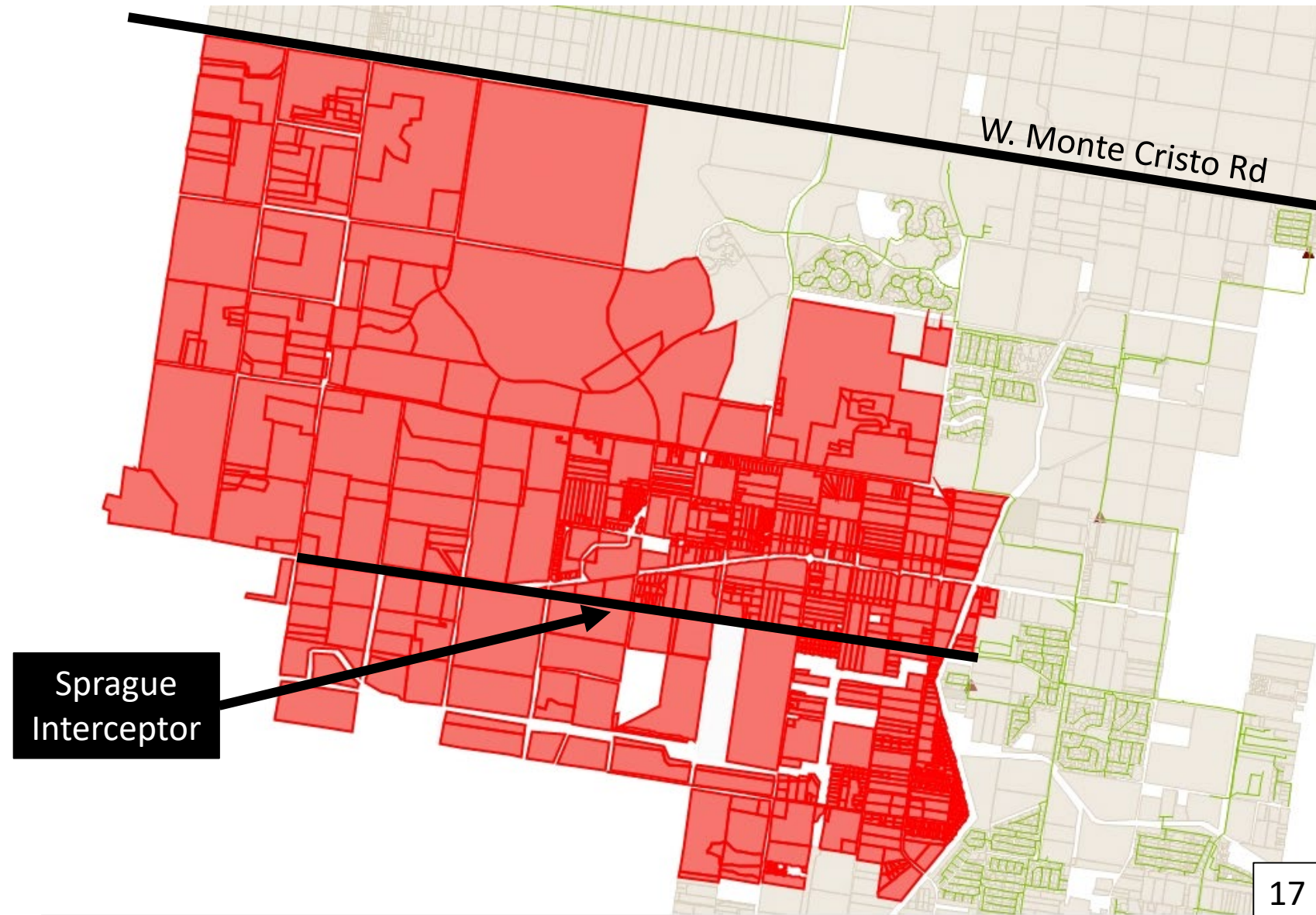
# NORTHWEST INTERCEPTORS

- Sprague Interceptor provides backbone for northwest future service area
- Mile 8 interceptor conveys from future Tres Lagos development which cannot be conveyed by the Ware Rd 24-inch main
- Mile 6 interceptor conveys future growth and redevelopment of underutilized parcels



# SPRAGUE INTERCEPTOR

- The available acreage for the Sprague Interceptor was allocated based on local topography
- Red parcels can flow towards Sprague Interceptor
- Sprague has about 6.6 MGD of DWF capacity available





# SPRAGUE INTERCEPTOR

Planning Assumptions:

2.5  
connections  
per acre



3 people per  
connection



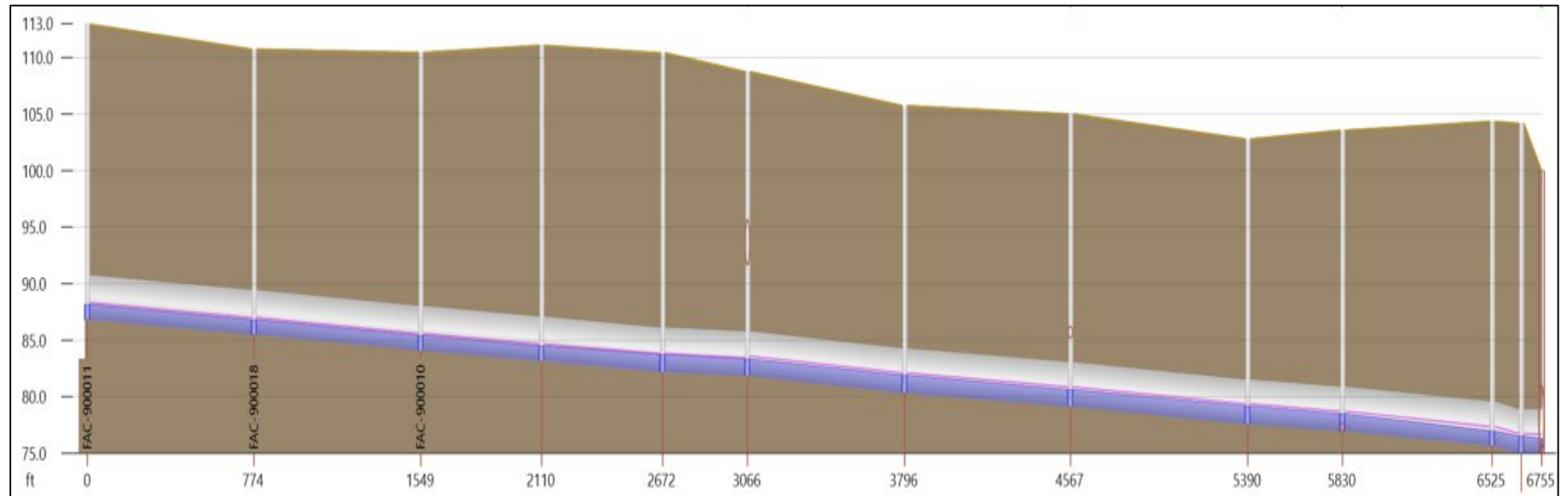
82 gallons  
per person  
per day



Total Additional  
Flow

- Sprague interceptor has 9.3 MGD of DWF capacity
  - Calibrated model predicts average existing flow of 2.7 MGD

	Remaining Additional Dry Weather Flow (MGD)	Acres (ac)	Additional Connections	Additional Population
Sprague Interceptor	6.6	8943	26,829	80,488

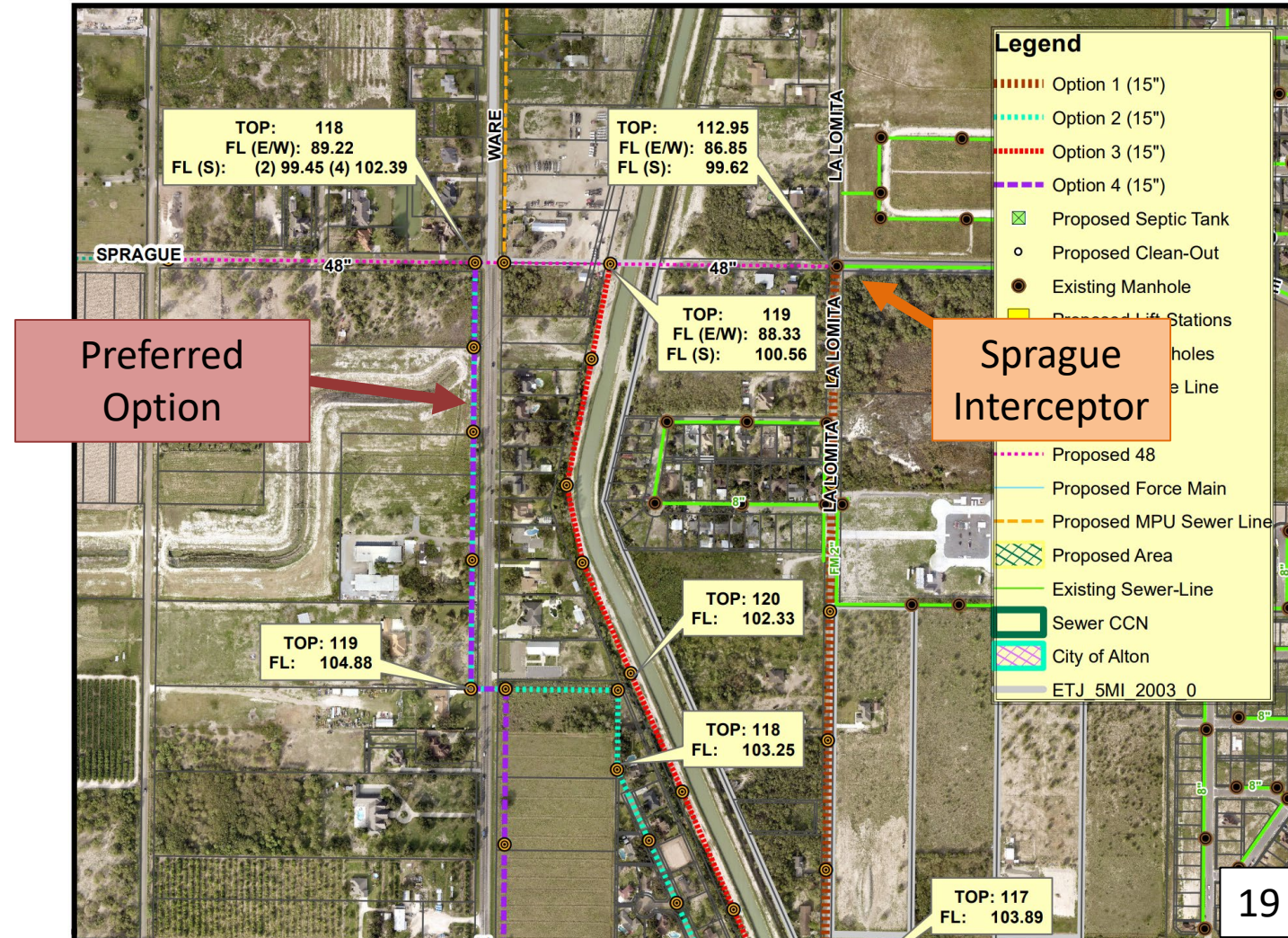


# 6 MILE - INTERCEPTOR



## SPRAGUE/6 MILE CONNECTION

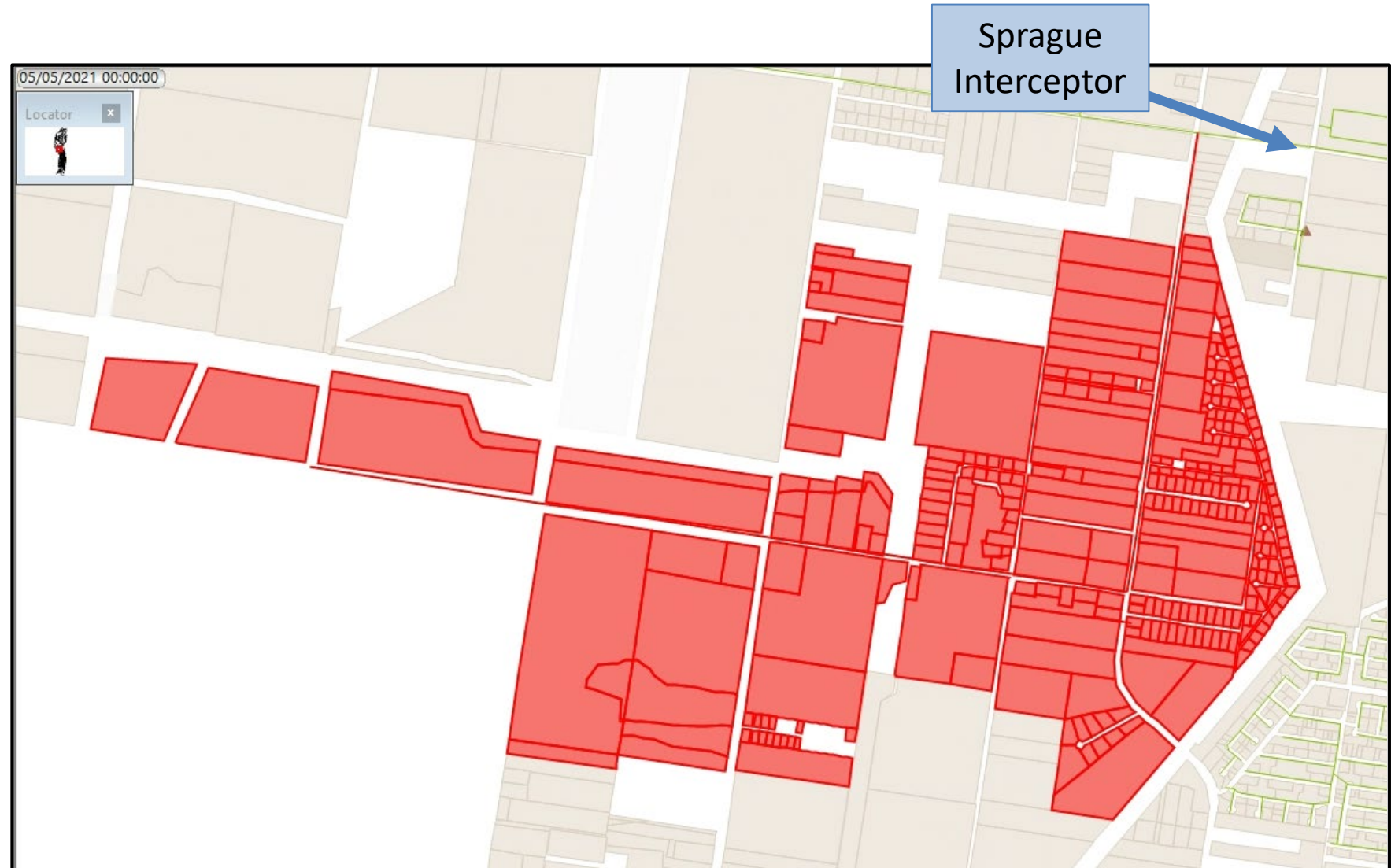
- Distributed parcels along 6 Mile Interceptor for future system analysis
- 6 Mile Interceptor has a capacity of 1.6 MGD
- Preliminary design can accommodate projected growth





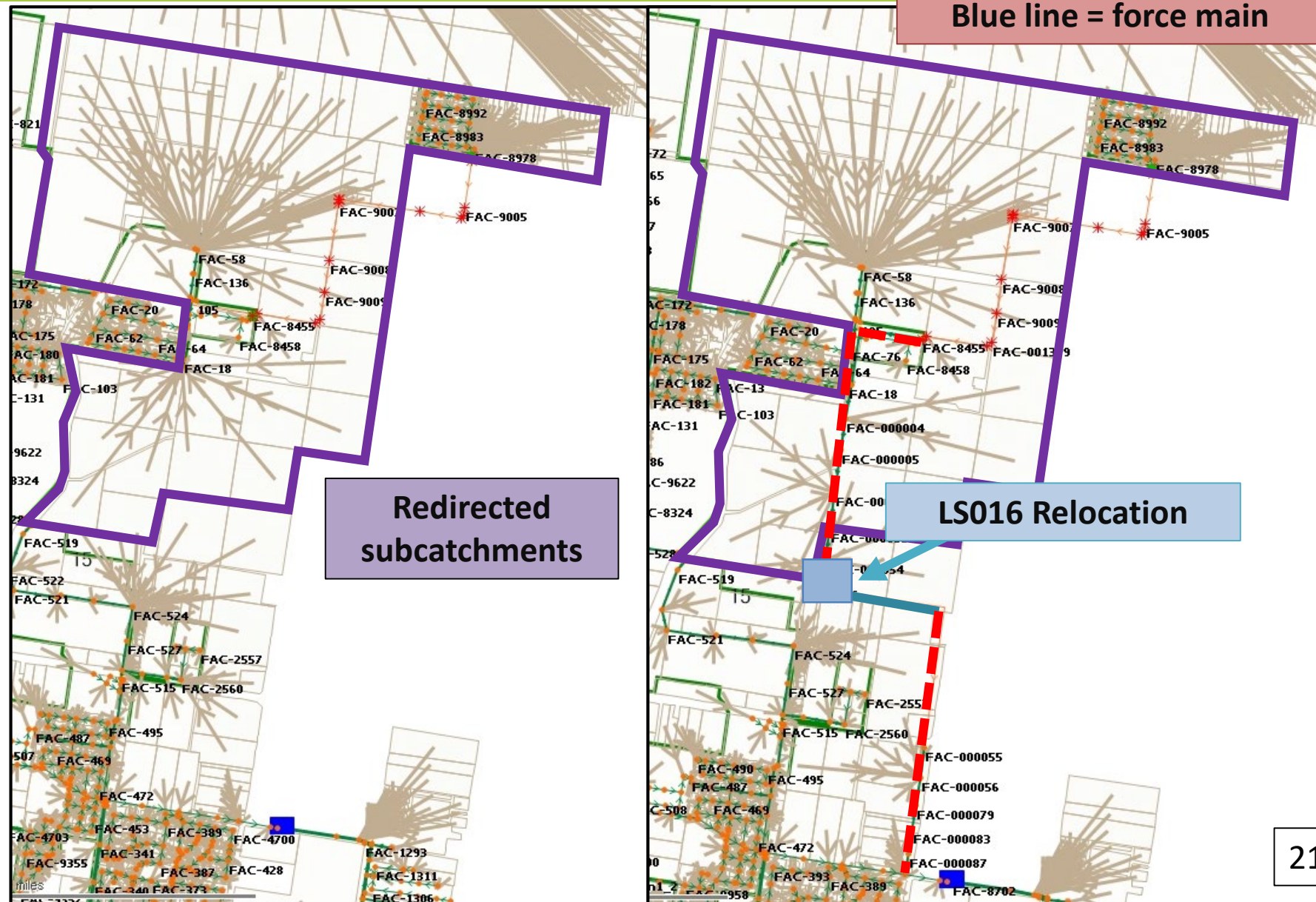
# 6 MILE - INTERCEPTOR

- Distributed parcels along 6 Mile Interceptor for future system analysis
- 6 Mile Interceptor has 650 acres of WW capacity



# LS016 RELOCATE

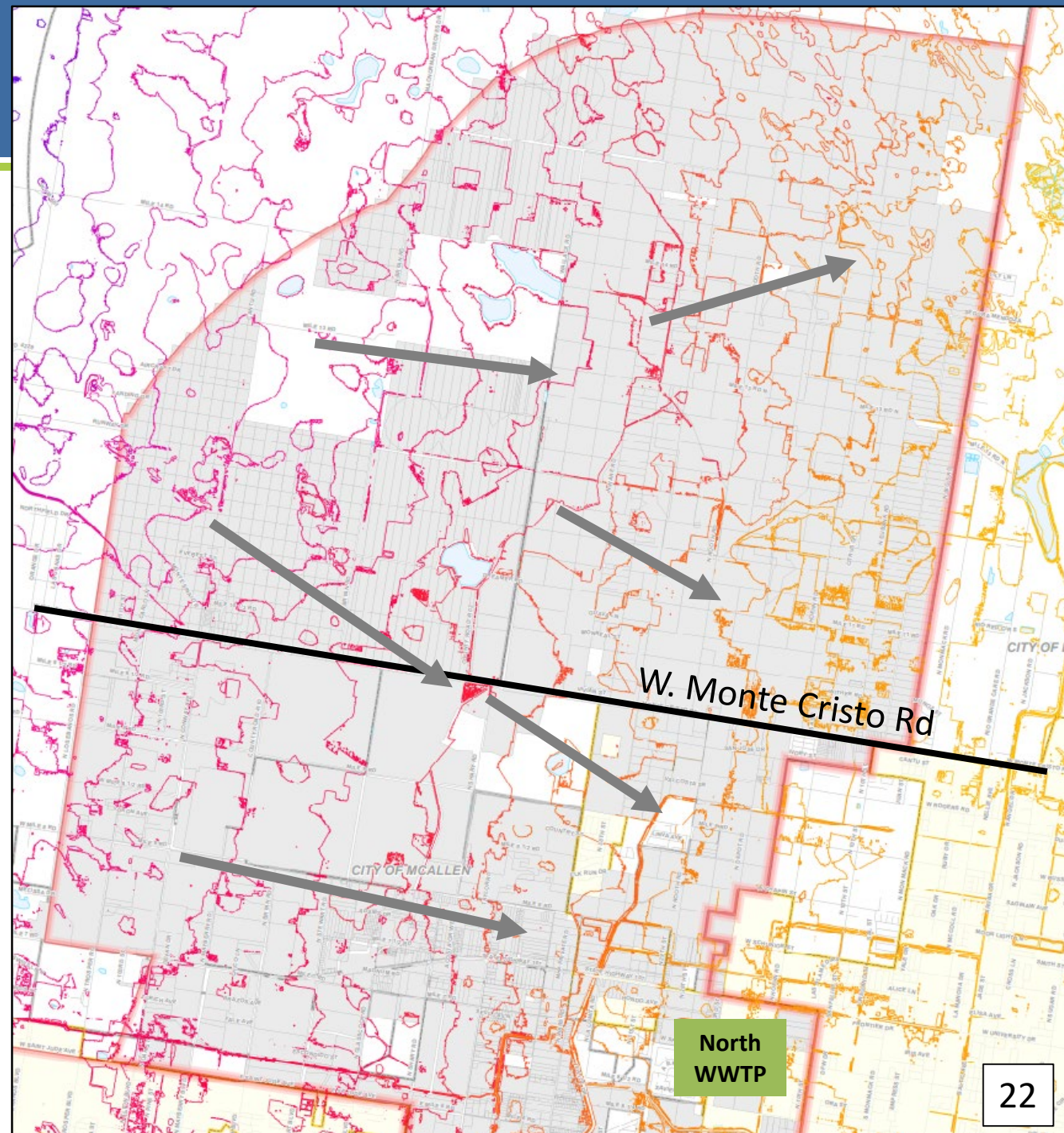
- Model currently generates 0.40 MGD of DWF downstream of LS016
- Relocating LS016 diverts approx. 0.70 MGD of future flow from Ware Rd 24-inch Interceptor





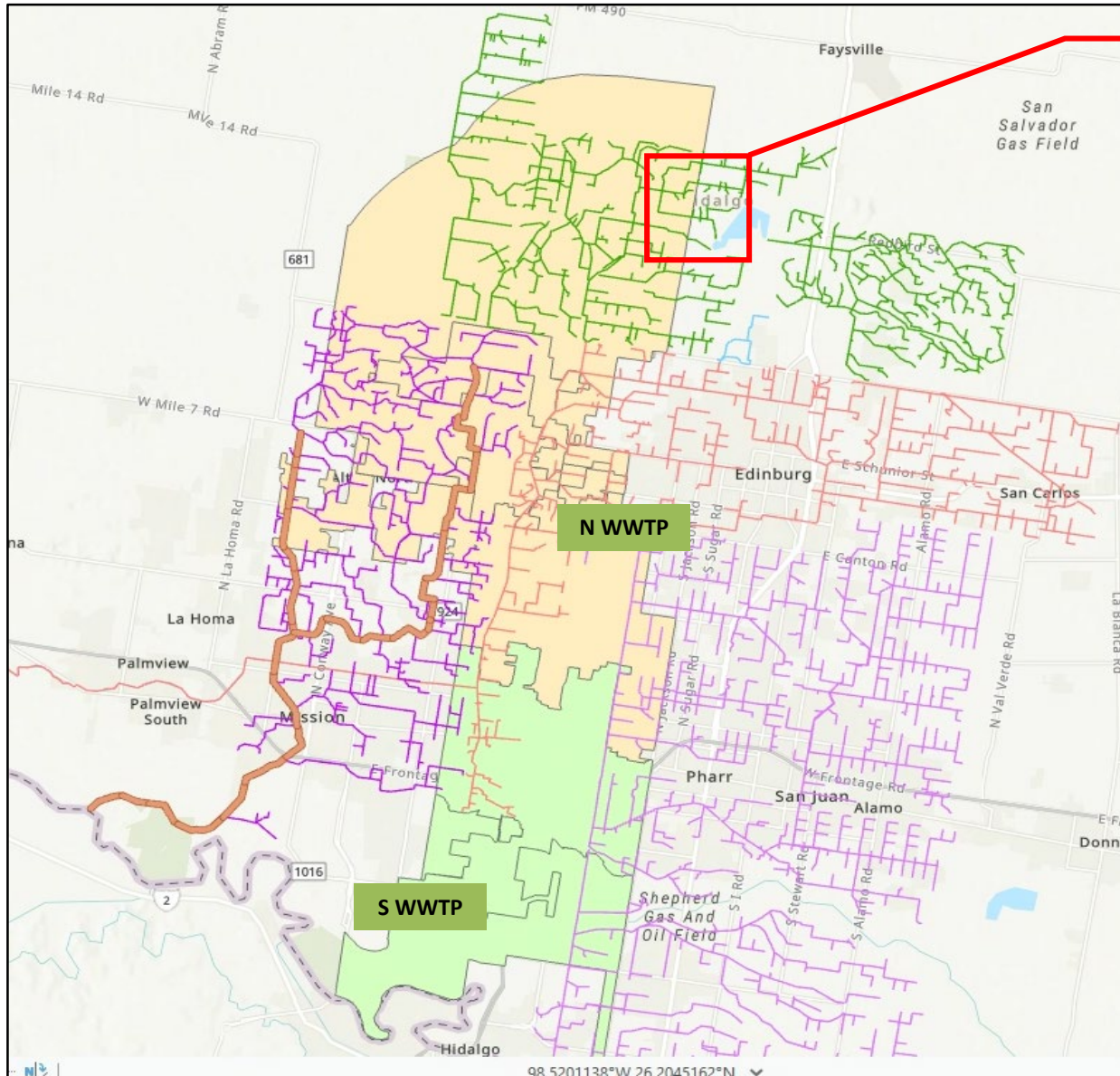
# LOCAL TOPOGRAPHY

- Elevations generally slope from West to East
- Developable parcels south of W Monte Cristo Rd. can be served by North WWTP

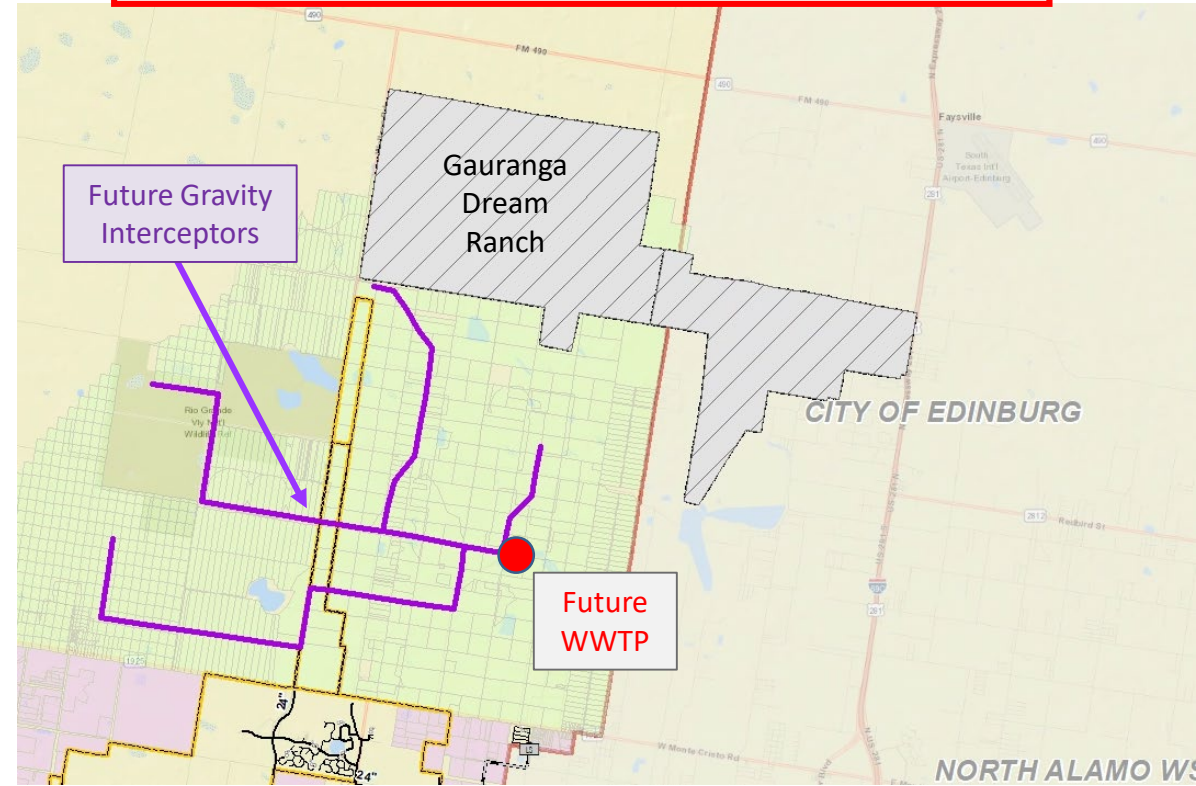




# WASTEWATER TREATMENT PLANT SITING



## Proposed Location of New WWTP



- Topography Drains East Towards Lake Edinburg
- Future WWTP to be Sited on the Eastern Border of the McAllen Wastewater CCN
- Drain to Hidalgo County Drainage District Channels Towards Lake Edinburg



# MCALLEN PUBLIC UTILITY

## WATER & WASTEWATER MASTER PLAN STATUS UPDATE

July 26<sup>th</sup>, 2022