

Peak Demand and Water Resource Planning

June 22, 2021

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Water Planning Arena

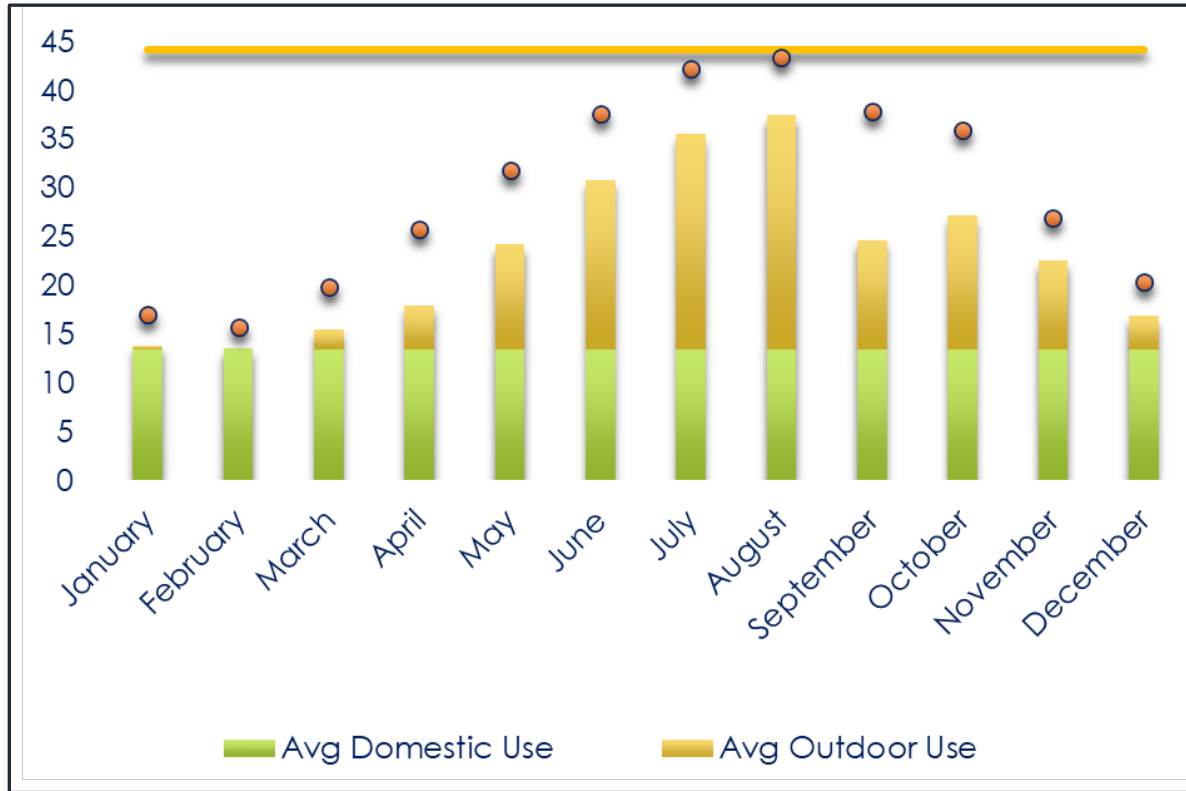
Water Resources

- Surface Water (BRA/LCRA)
- Ground Water
- Conservation
- Infrastructure
 - Lakes (Georgetown, Stillhouse, Belton)
 - Pipeline (Stillhouse /Belton)
 - Wells
- State Water Plan
 - Every 5 years
Region G – 2021
State - 2022
 - 50 year horizon

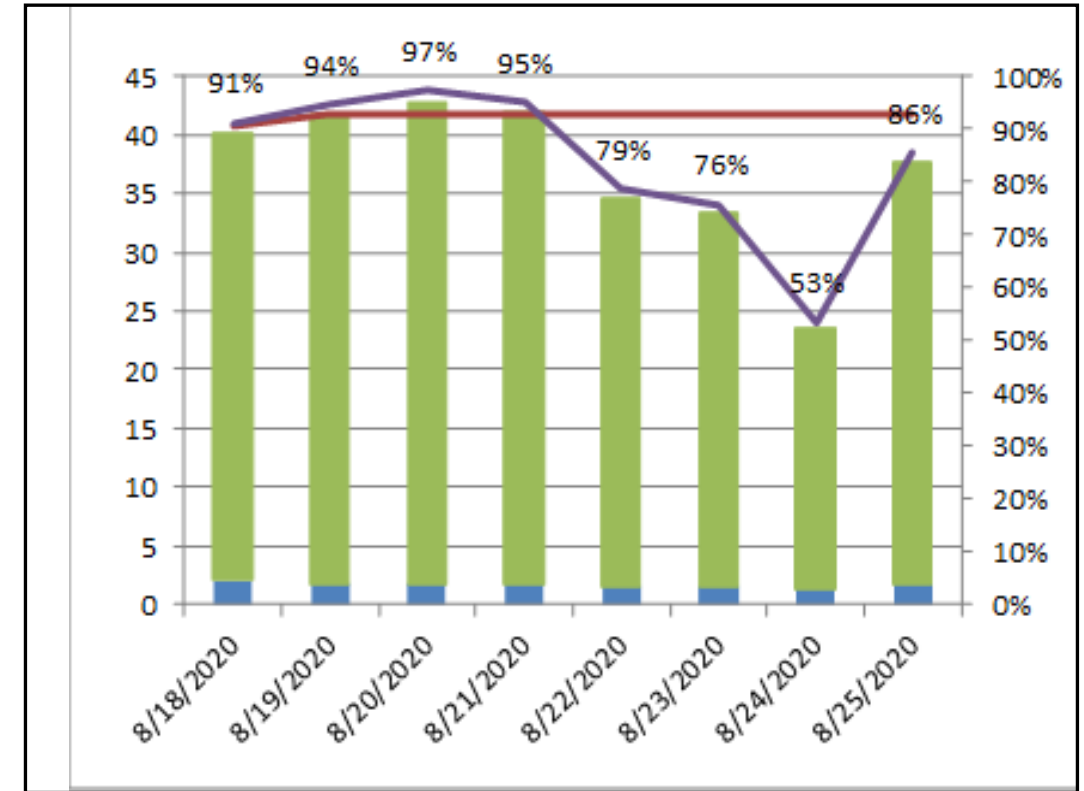
System Capacity

- Drinking Water
- Conservation
- Infrastructure
 - Plant
 - Pumps
 - Water Lines
 - Storage Tanks
- Water Master Plan
 - Every 4-5 years
2018, Update to be done this yr
 - 20 year horizon
- Annual CIP

2020 Usage Patterns

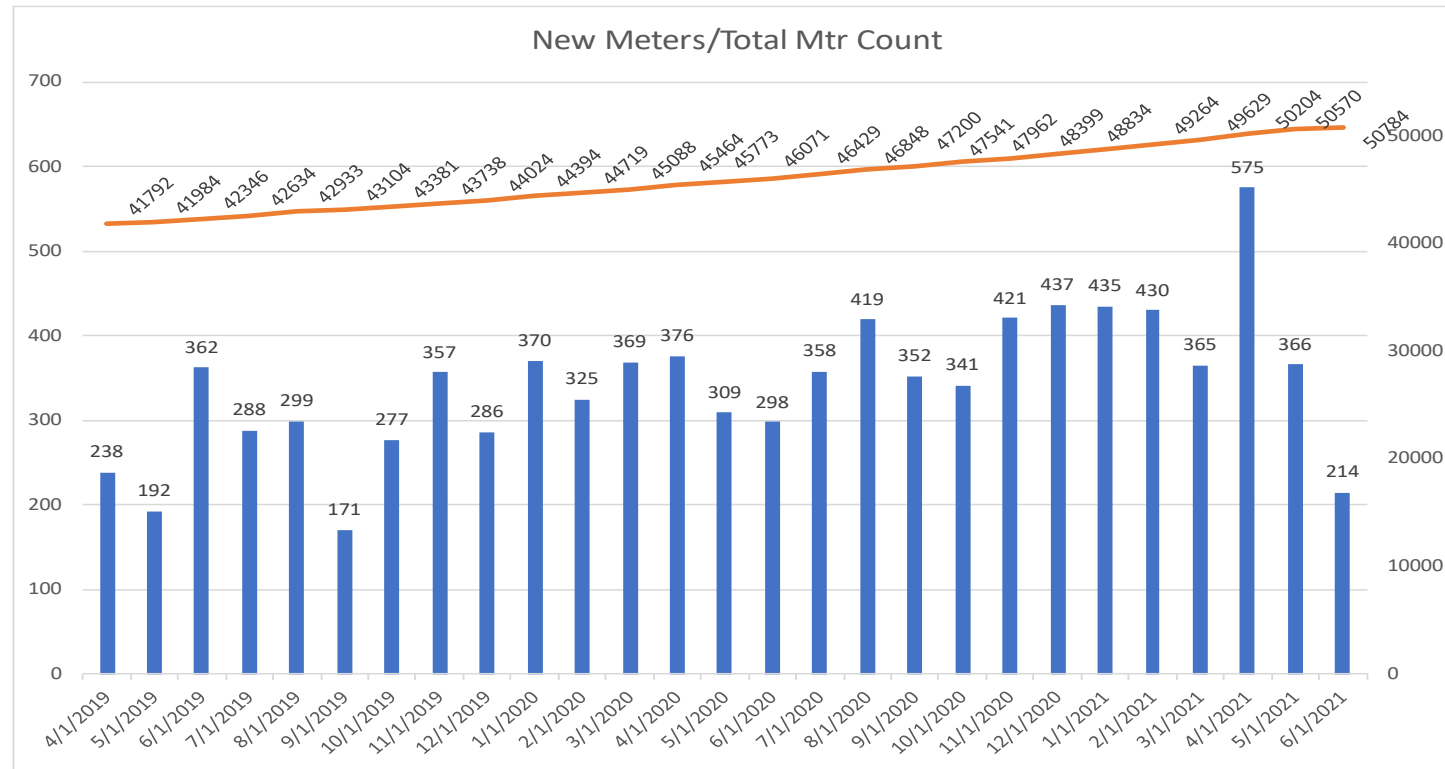


Yearly
Resource Driven



Peak Week
Capacity Driven

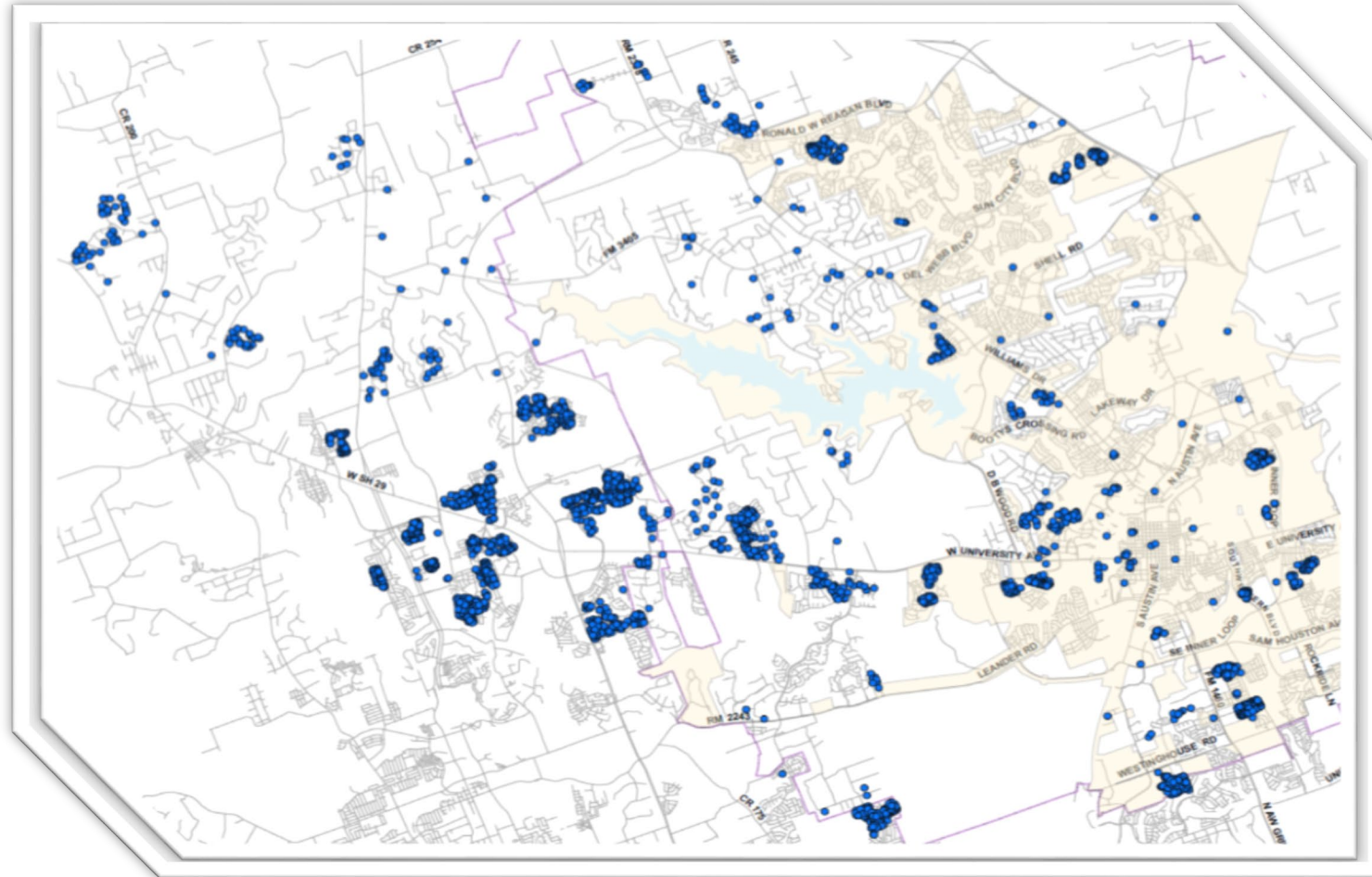
Current Growth (Calendar Yr.)



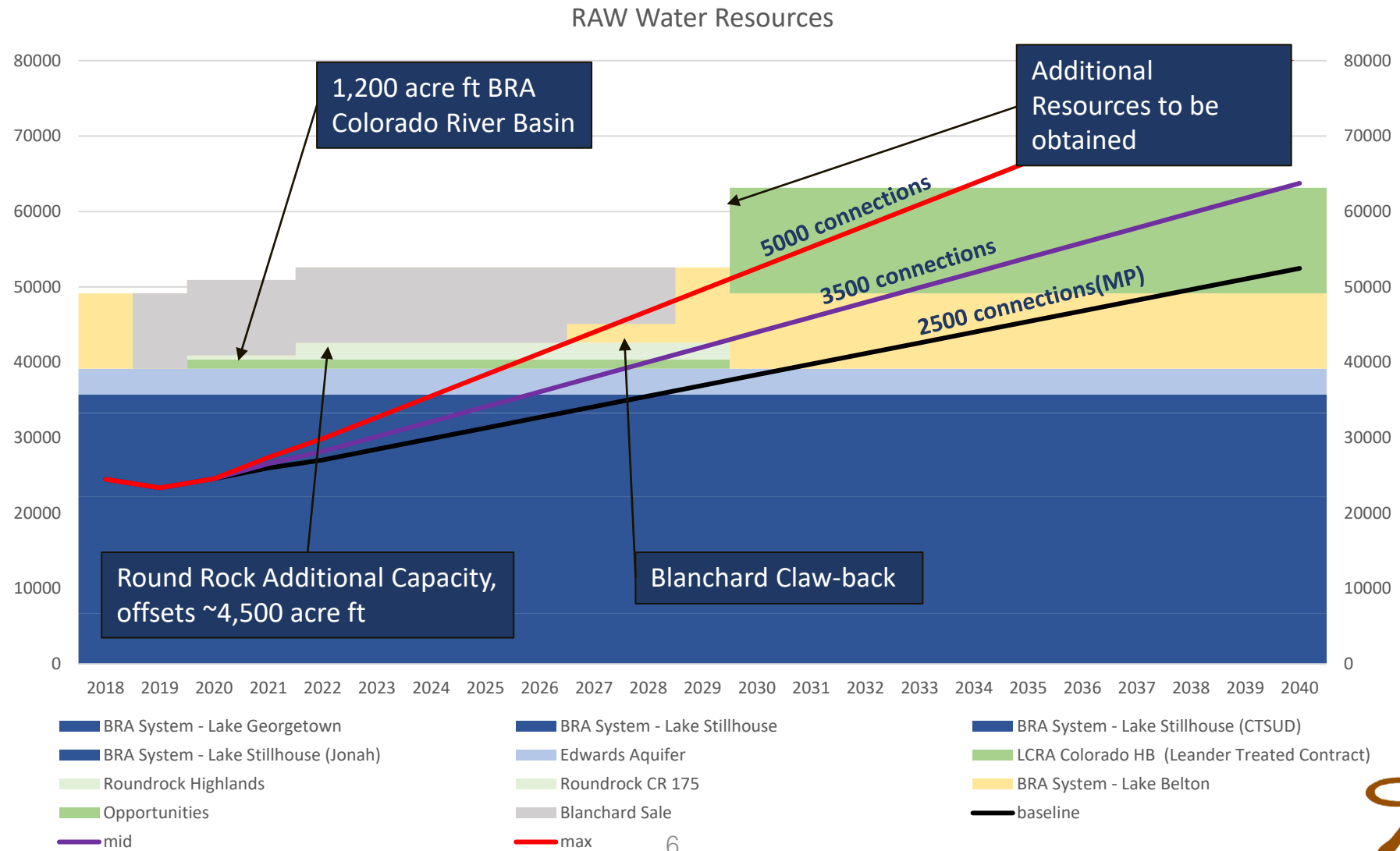
Yearly Total	2014	2015	2016	2017	2018	2019	2020	2021 YTD
Meter Count	31,981	34,026	36,148	38,486	40,714	43,908	48,217	50,784
New Meters per year		2,045	2,122	2,338	2,228	3,194	4,309	2,567/ 5,000
Meter Growth		106%	106%	106%	106%	108%	110%	

Growth Areas

New Meters in
2020 only

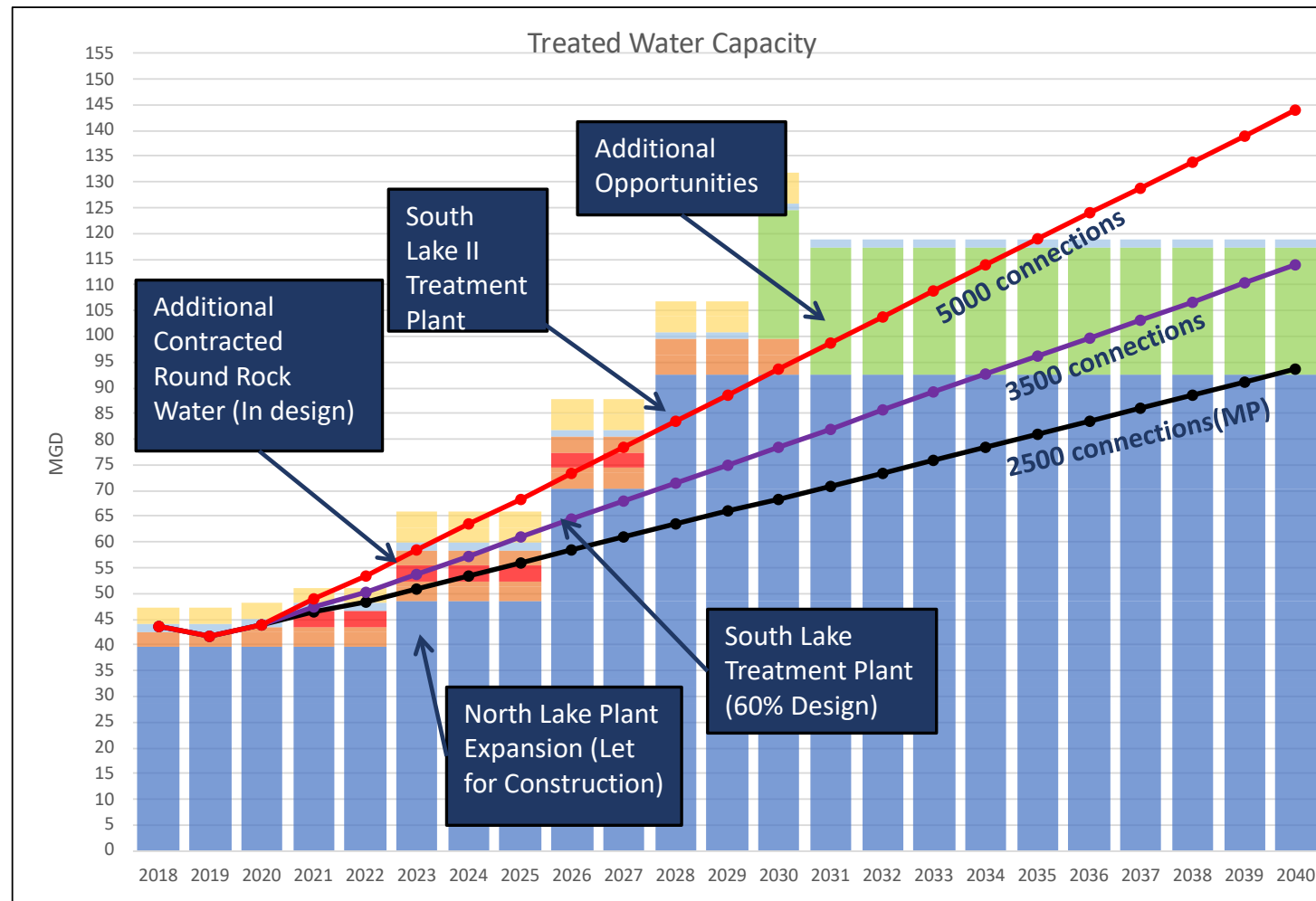


Resource Projections



Treated Water Capacity

		Production Asset	Cap- acity
OWNED BY GEORGETOWN	FIRM	North Lake	28.6
		South Side	3.2
		Domel Firm	1.5
		Park Plant	6.3
		Planned Expansions	
		North Lake Exp	8.8
		South Lake Ph 1	22
		South Lake Ph 2	22
		Other	0
	NON-FIRM	Domel	1.5
	Other	0	
CONTRACTED WATER	FIRM	RR Rabbit Hill	3
		RR Highlands	1
		Leander	3
		RR CR 175	3
		Opportunities	25
	NON-FIRM	RR Rabbit Hill	3
		RR CR 175	3
		other	0



Water Planning Existing

- **Current Resources and Capacity**

- Water Treatment Capacity Owned– 44 mgd / 39.5 mgd
 - Lake WTP – 28.6mgd
 - Park WTP – 6.2mgd
 - Southside WTP – 3.2mgd
 - Domel WTP – 3.0mgd firm at 1.5 mgd
 - Round Rock Interconnection – 3.0 mgd currently being renewed
 - (Additional 3mgd available w/ infrastructure improvements) non-firm

- **Contracted Supply - 7 mgd**

- Round Rock Highlands - 1 mgd (Firm/Max Day) 10 year contract
- Round Rock CR 175 - 3 mgd (Firm/Max Day) 8 year contract
 - Effective in 2022 CIP Project Required.
- Leander Interconnection – 3 mgd 7 year contract
 - CIP project Currently under award to the contractor

Opportunities

- Conservation
- Aquifer Storage and Recovery (ASR)
- Outside Water Purveyors
- CCN area Transfers
- Contract with Neighboring utilities

Conservation Strategies

- **Enforcement of Wrong day and water waste ordinances**
 - 2020 Cases – 1131 Total
 - 2021 Cases 460 to date
- **Rebates and Incentives (\$300,000 Annual Rebate Budget)**

Rebate Type	Number of Rebates (FY20)	Amount (FY20)	Number of Rebates (FY21)	Amount (FY21) as of Jan 2021
Irrigation Checkup	2,328	\$174,600	444	\$33,300
Smart/Weather Based Controller	141	\$15,962	28	\$4,368
Spray-to-Drip Conversion	31	\$4,361	9	\$1,154
Multi-Stream Nozzle Zone Conversion	114	\$15,962	23	\$3,308
Rain Barrel	14	\$350	4	\$100
Xeriscaping Conversion (Added in FY2021)	-	---	0	\$0
	2,628	\$211,235	508	\$42,230

Summer 2021

- **Operations**

- Leander 3MGD resources to be online at the end of Summer
- New 980 PS online

- **Drought Contingency Plan**

- Triggers based on three conditions
 - Resource
 - Lake Levels
 - Total Volume (Lake Georgetown/Stillhouse combined)
 - Capacity Triggers
 - System Failure

- Entered Into Phase 1 in 2019/2020

- Time of day restrictions on outdoor watering

Stage	Lake Level	Volume	Treatment Capacity
Phase 1	770ft	162,752 ac/ft	85%
Phase 2	765ft	105,001 ac/ft	90%
Phase 3	---	52,501 ac/ft	95%
Phase 4	Major system failure, or contamination of the water supply		

Aquifer Storage and Recovery

- **ASR – Ongoing Study (Ph 3 FY 2022)**
 - Storage of off peak treated flows (peaking)
 - Storage of water from the flood pool (peaking/raw capacity)
 - Storage of water from eastern water purveyors (peak/raw capacity)
 - 50-90 million of capital expenditures

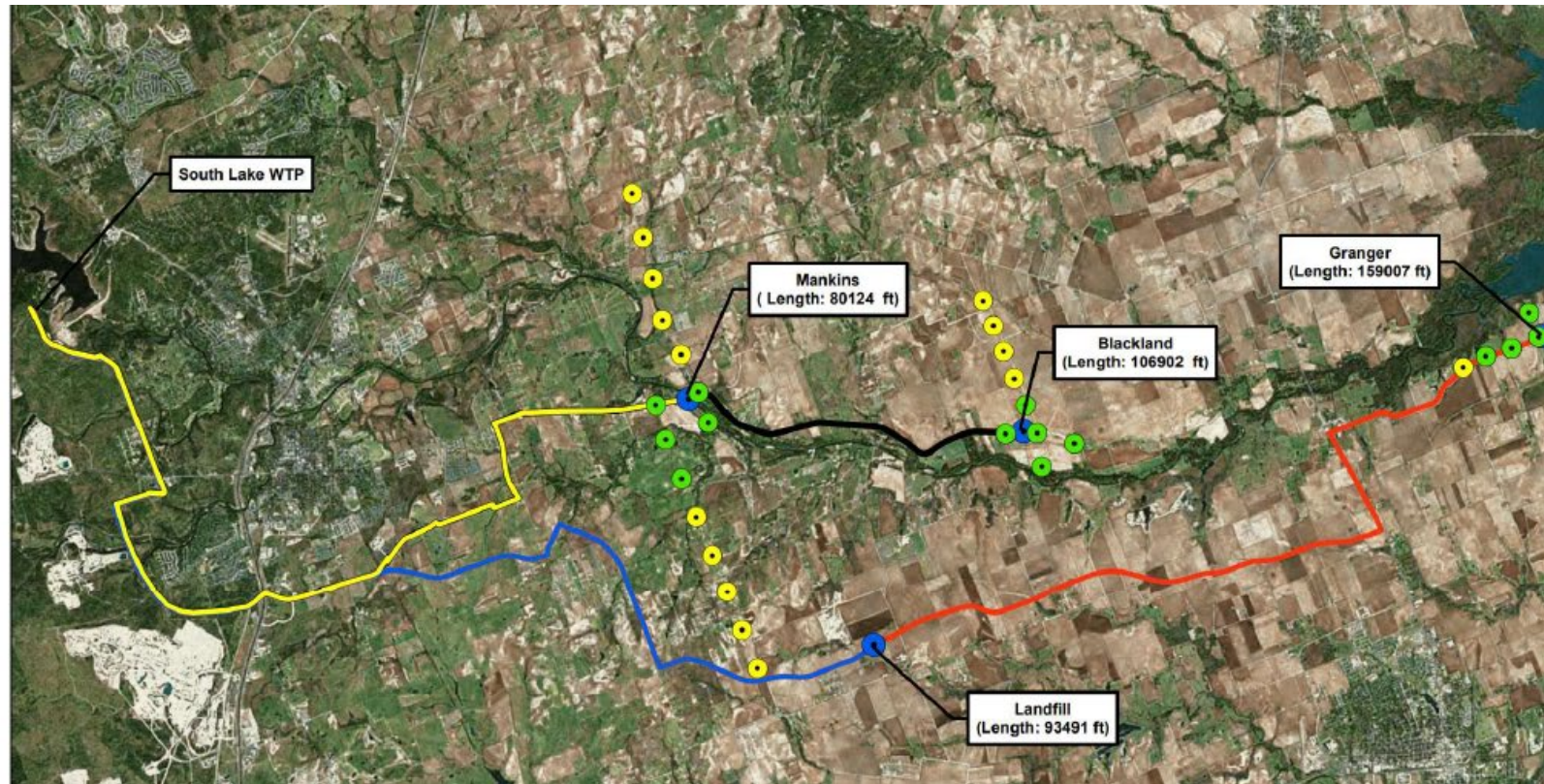
South Lake WTP



0 1 2 Miles

Legend

- Optimal
- Best Estimate
- Properties
- Mankins ASR
- Blackland ASR
- Granger ASR
- Landfill ASR



Summary ASR and Next Steps

- Phase 3

 - Address geologic uncertainties, Seismic Analysis \$2,275/mile

 - Pilot Drilling

 - Strategic importance of Pipelines needed

 - Testing of Well at BRA Granger

 - Water Quality Analysis

- Strategy recommendation within the next 18 months

Groundwater Resources to Date

- August 2020 – MOU Brazos River Authority, Georgetown, Round Rock to evaluate water resource options to meet future needs in Williamson County
- September - November 2020 – Brazos River Authority contracted a groundwater subject matter expert to evaluate the proposals
- December 2020 – Additional detail was requested from each proposer
- February 2021 – Proposers presented their proposed resource to the group
- Proposals
 - Epcor USA Inc.
 - Up to 44,800 AF/YR
 - Post Oak Savannah Groundwater Conservation District
 - Gatehouse Water, LLC
 - Up to 37,600 AF/YR
 - Lost Pines Groundwater Conservation District
 - Recharge Water, LP
 - Up to 46,000 AF/YR
 - Lost Pines Groundwater Conservation District

Groundwater Resources to Date

- **General Observations on Proposals**

- Simsboro Formation of the Carrizo-Wilcox aquifer
- Aquifer characteristics are supportive of a large project
- All proposals are feasible; however, each involve some degree of permitting risk

- **Next Steps**

- Continue discussions with selected provider(s) regarding specific terms of a contract to determine appropriate contracting options and strategy
- Evaluate timing, volume, term, phasing, delivery points
- Regional Approach required
- BRA conducting due diligence and permitting discussions
- Recommendation for next steps and potential agreements/MOU with the BRA within the next 18 months

CCN Transfers

- **Divest the CCN area where capable**
 - Rural is easier than urban or existing development
 - Neighboring community outreach - Jarrell, Liberty Hill, Florence, Leander all express resource challenges
 - Current Efforts
 - Jarrell-Schwertner – At the PUC for review
 - Liberty Hill (study by LH)
 - Kempner (contested at the PUC – Pulled)
 - Killeen is evaluating their ETJ area in conjunction with BCWCID #1

Next Steps

- Master Plan Update to address growth with an emphasis on resource development
- Expedited Capital Projects
- Continue to work with Brazos River Authority and City of Round Rock on Regional Water Solutions
- Determine Feasibility of ASR
- Continue to work with Neighboring Communities

Questions?