

The background image is a composite. The left half shows a vibrant scene of a city skyline with several tall, modern glass skyscrapers. In the foreground, a dense line of green trees separates the buildings from a body of water. Several people are seen on the water, some on paddleboards and others in small kayaks, enjoying a sunny day. The right half of the image is a solid blue overlay that contains the event's branding and date.

Decentralized Reclaimed Water Forward Task Force November Meeting



November 8, 2022

Agenda:

- Decentralized Reclaimed Overview, *15 minutes*
 - WF18 Targets
 - Where does Decentralized Reclaimed fit?
 - WF24 Update
- Major Takeaways & Next Steps, *5 minutes*
- Discussion & Questions, *5 minutes*

Decentralized Reclaimed

Decentralized Reclaimed is the collection of effluent from the wastewater system in development areas, treatment to non-drinking water quality at a small wastewater treatment plant, and reuse at the community scale via a decentralized reclaimed water distribution system that would be separate from the centralized reclaimed water system.

**Stormwater
Harvesting
Community Scale**



**Sewer Mining
Community Scale**



**Distributed
Wastewater Reuse
Community Scale**



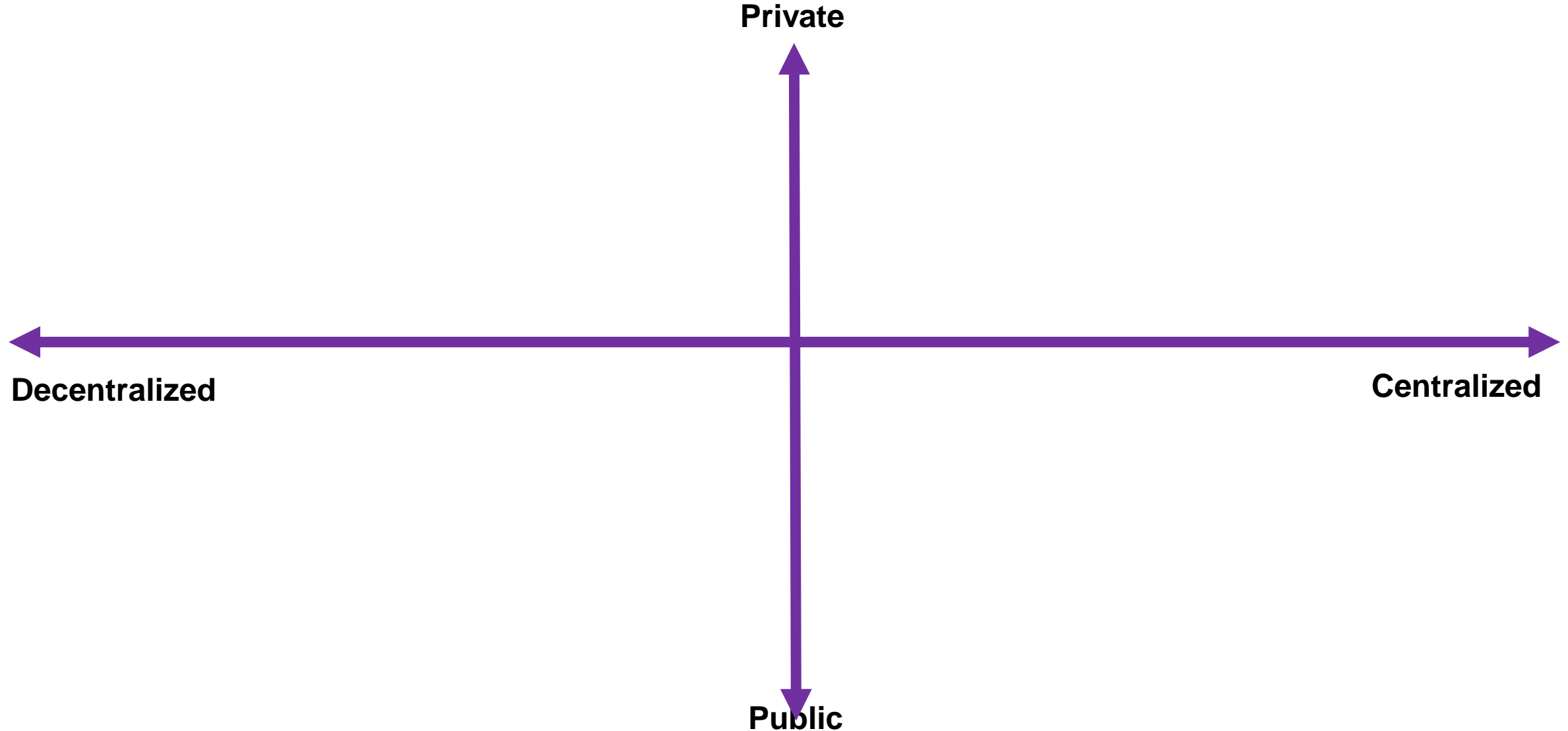
Decentralized Reclaimed Systems

Water Forward 18 Targets

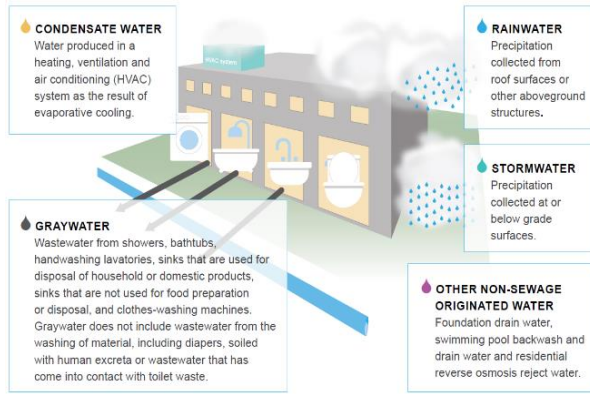
- WF Targets estimated based on assumed uptake/saturation rates for each strategy.
- Lot-scale reuse uptake rates ranged from 10% to 30%
- Distributed WW Reuse uptake assumed to be 70%

Strategy	SF	MF	COM	2040 Yield Target (MGD)	Scale
Rainwater Harvesting	●	●	●	1.38	Lot
Graywater Harvesting	●	●	●	1.90	Lot
Blackwater Reuse		●	●	1.18	Lot
A/C Condensate Reuse		●	●	0.97	Lot
Stormwater Harvesting		●	●	0.42	Lot/Community
Sewer Mining			●	0.89	Lot/Community
Distributed WW Reuse	●	●	●	2.81	Community
Other Demand Mgmt	●	●	●	21.2	Lot
Aquifer Storage & Recovery				53.5	N/A

Where does Decentralized Reclaimed Fit?



Where does Decentralized Reclaimed Fit?



Onsite Water Reuse

- Parcel/Site Scale
- Rainwater/Graywater/AC Condensate/Blackwater
- Private ownership/operation

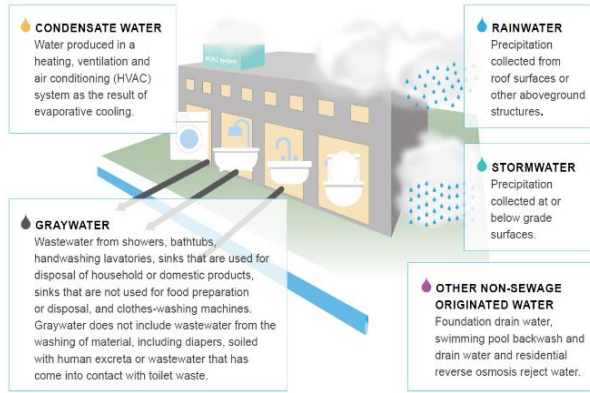
Private

Public

Decentralized

Centralized

Where does Decentralized Reclaimed Fit?



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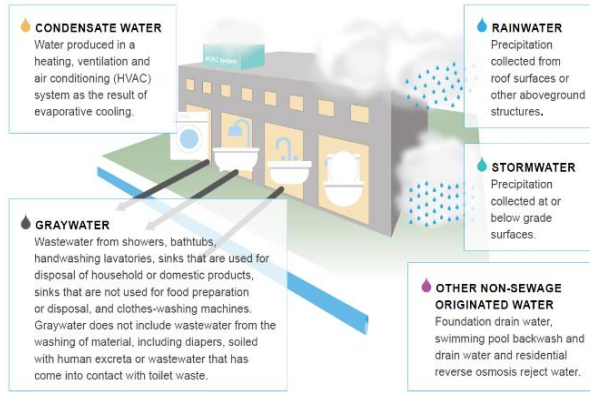


Centralized Reclaimed

- City/Service Area Scale
- Blackwater
- COA ownership/operation

Public

Where does Decentralized Reclaimed Fit?



Onsite Water Reuse

- Parcel/Site Scale
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- Private ownership/operation

Private

Decentralized

Decentralized Reclaimed

- District/Neighborhood Scale
- Blackwater/All of the Above
- COA ownership/operation



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Public

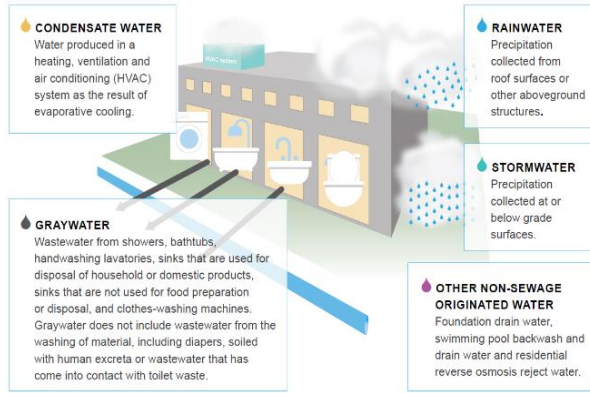
Centralized

Centralized Reclaimed

- City/Service Area Scale
- Blackwater
- COA ownership/operation



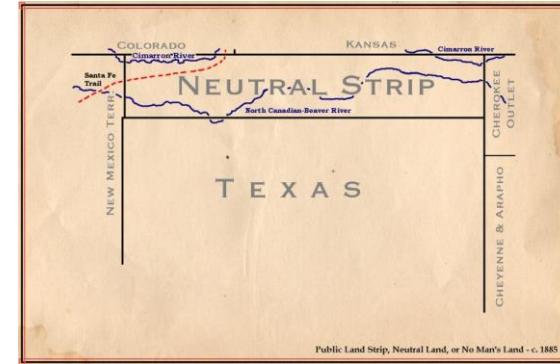
Where does Decentralized Reclaimed Fit?



Onsite Water Reuse

- Parcel/Site Scale
- Rainwater/Graywater/AC Condensate/Blackwater
- Private ownership/operation

Private



Wholesale Wastewater Customers

Decentralized

Decentralized Reclaimed

- District/Neighborhood Scale
- Blackwater/All of the Above
- COA ownership/operation



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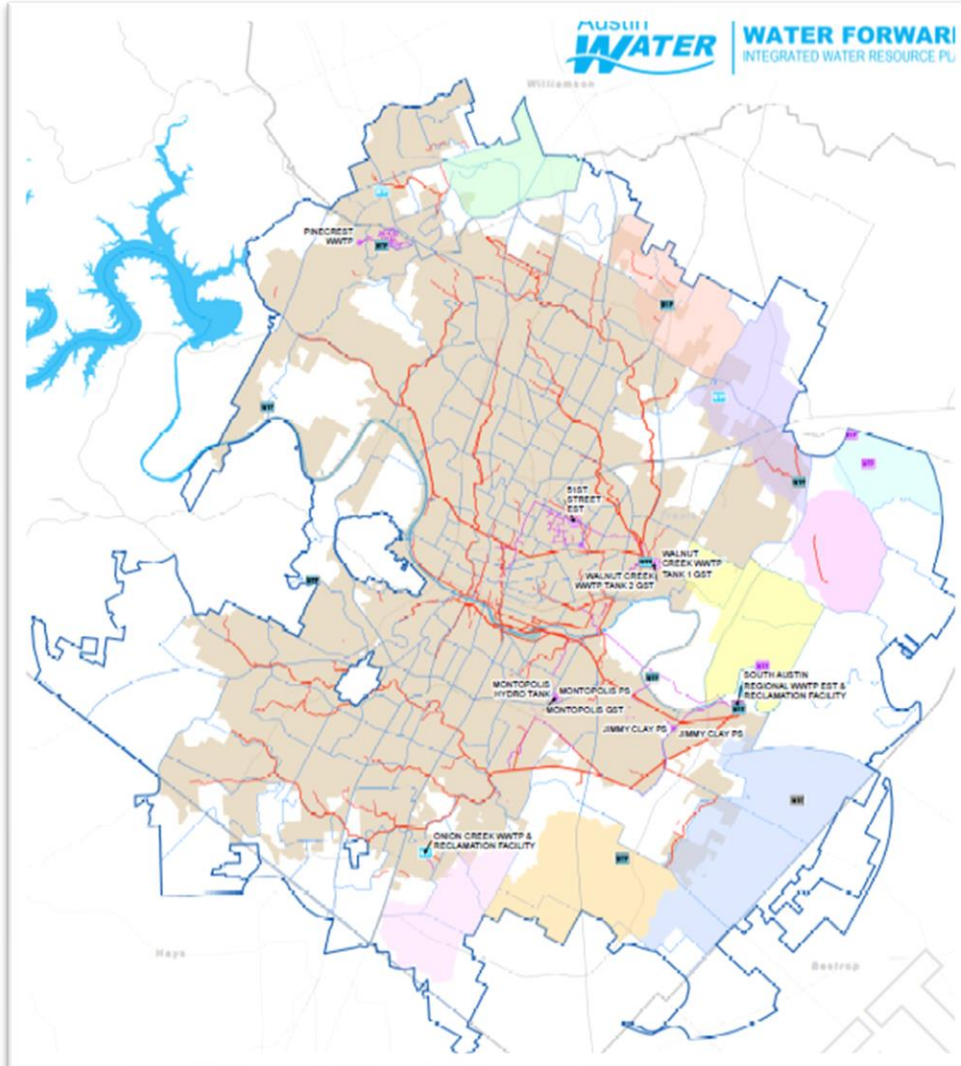
Centralized

Centralized Reclaimed

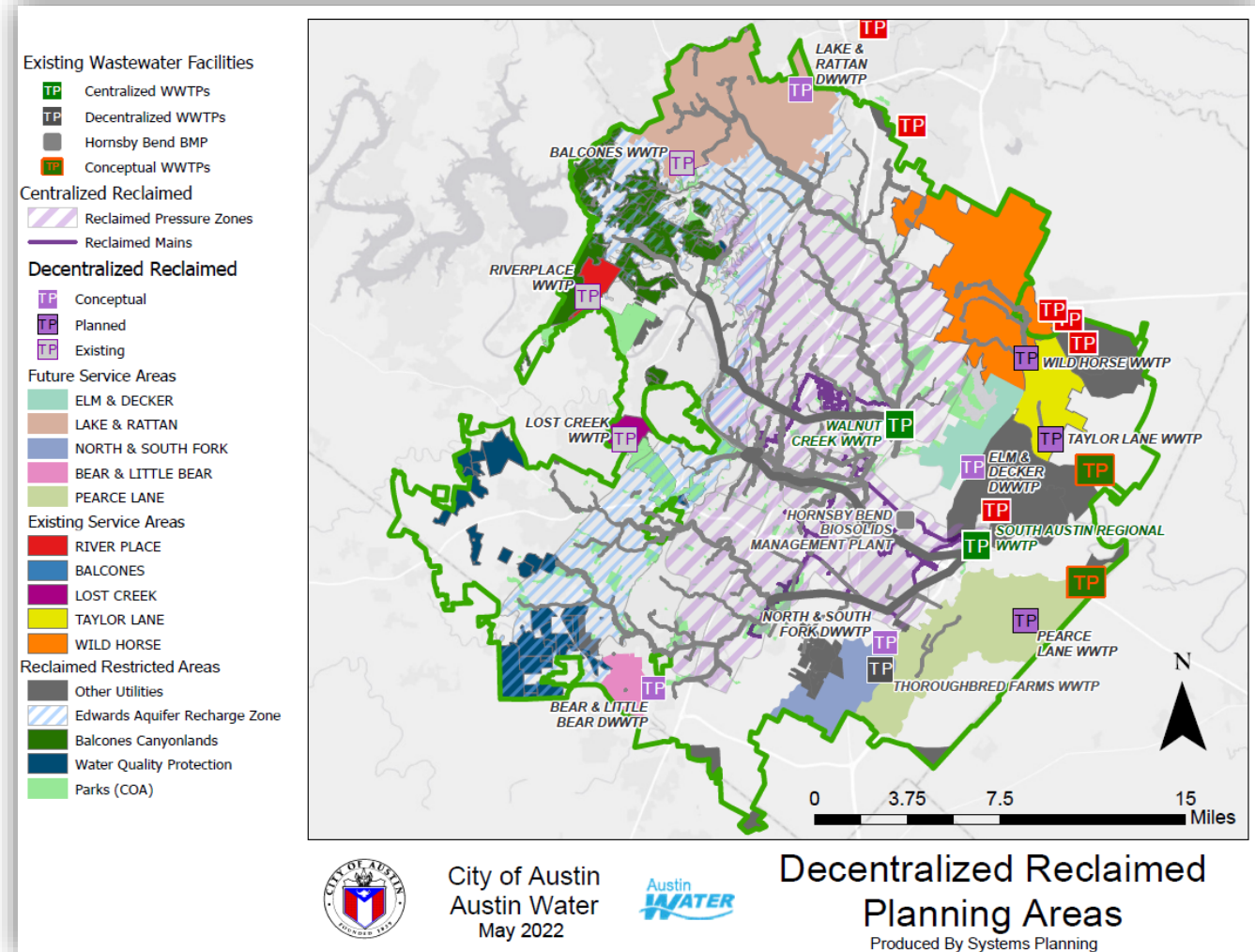
- City/Service Area Scale
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WF18 GHD Map

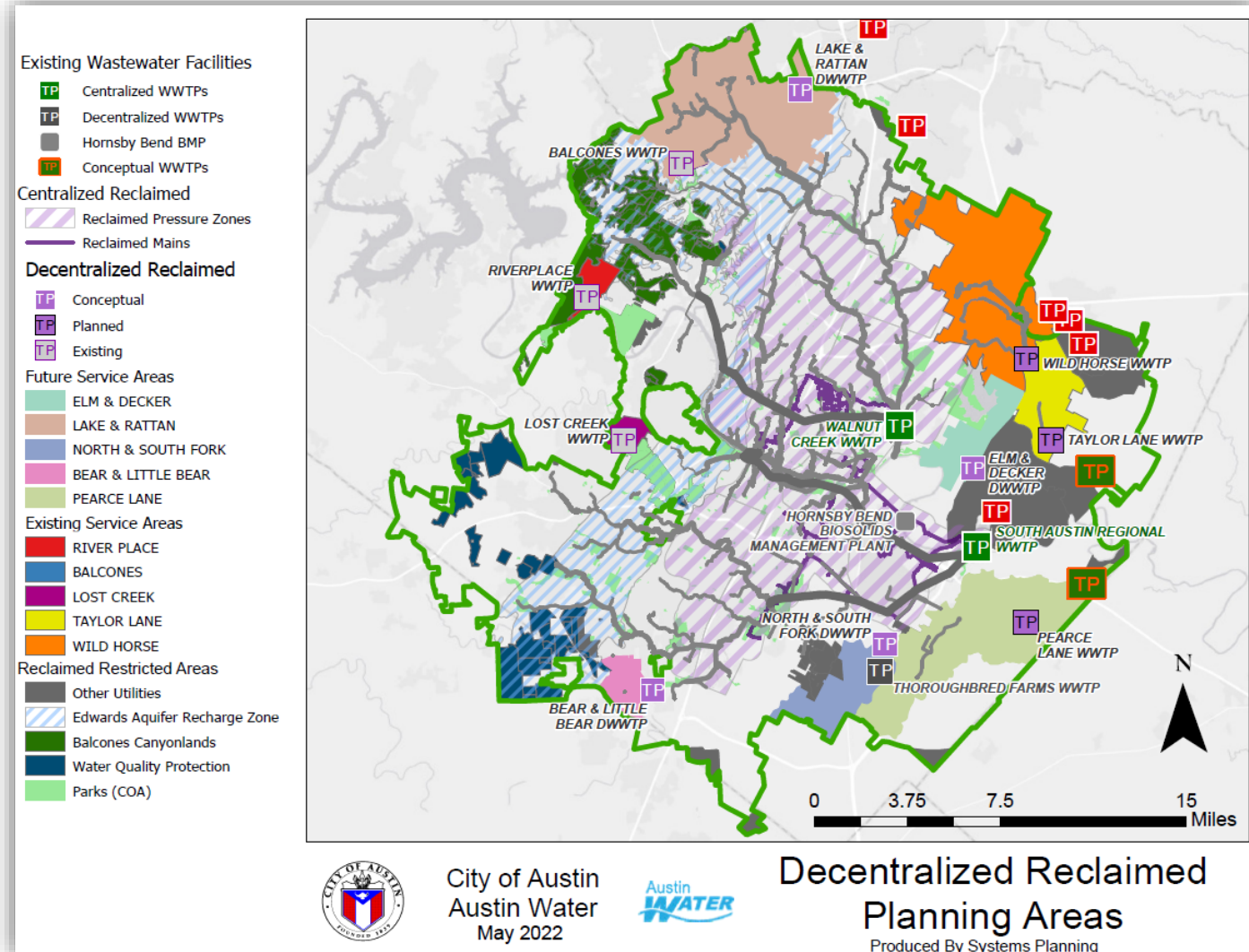


Updated Decentralized Reclaimed Map



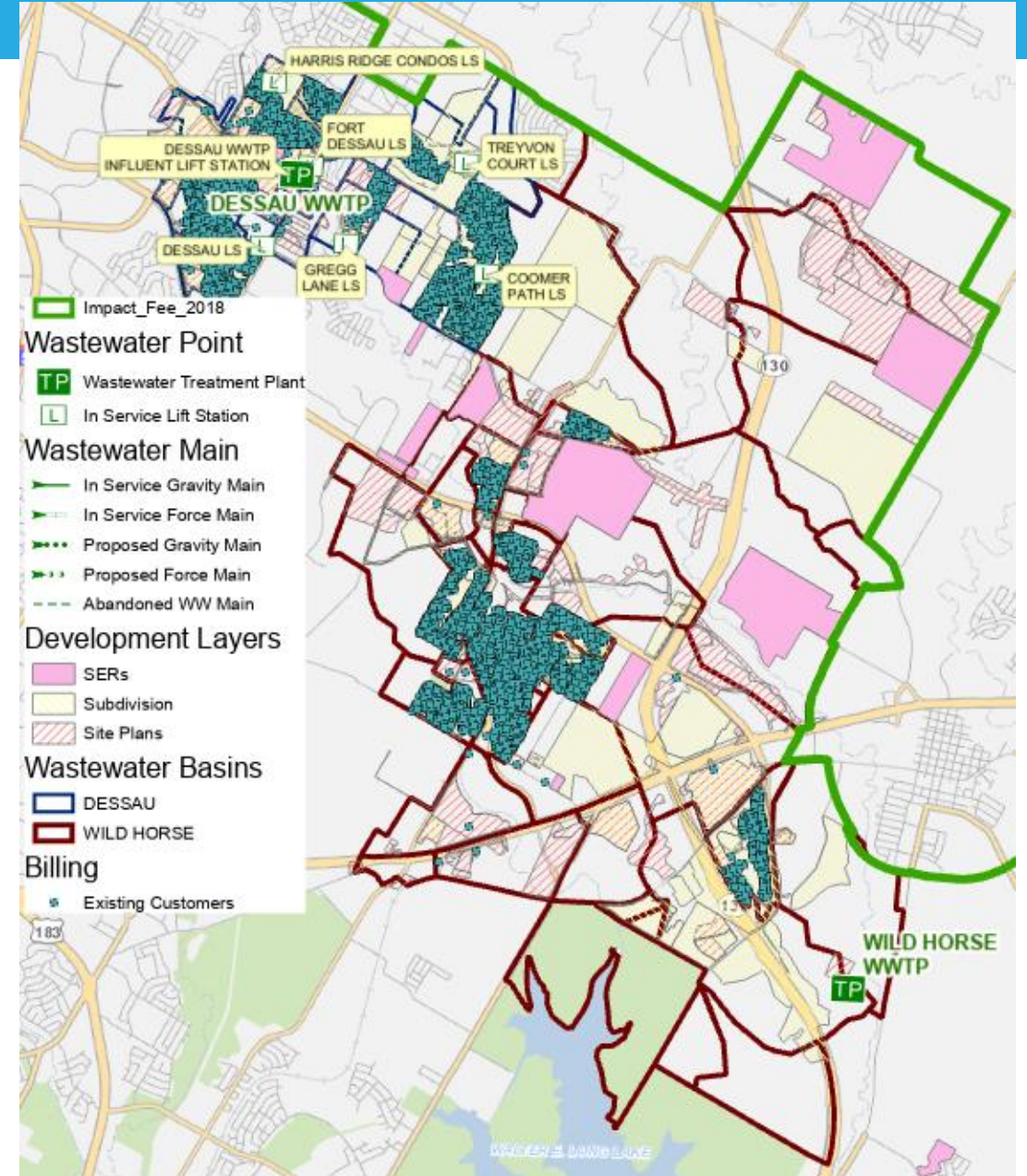
Distributed WW Reuse Overview

- Existing WWTPs with reclaimed
 - Balcones
 - Riverplace
 - Lost Creek
- Existing WWTPs with high reclaimed potential
 - Wild Horse
 - Taylor Lane
 - Pearce Lane
- Future/Conceptual WWTPs with reclaimed
 - Lake & Rattan
 - Elm & Decker
 - North & South Fork
 - Bear & Little Bear



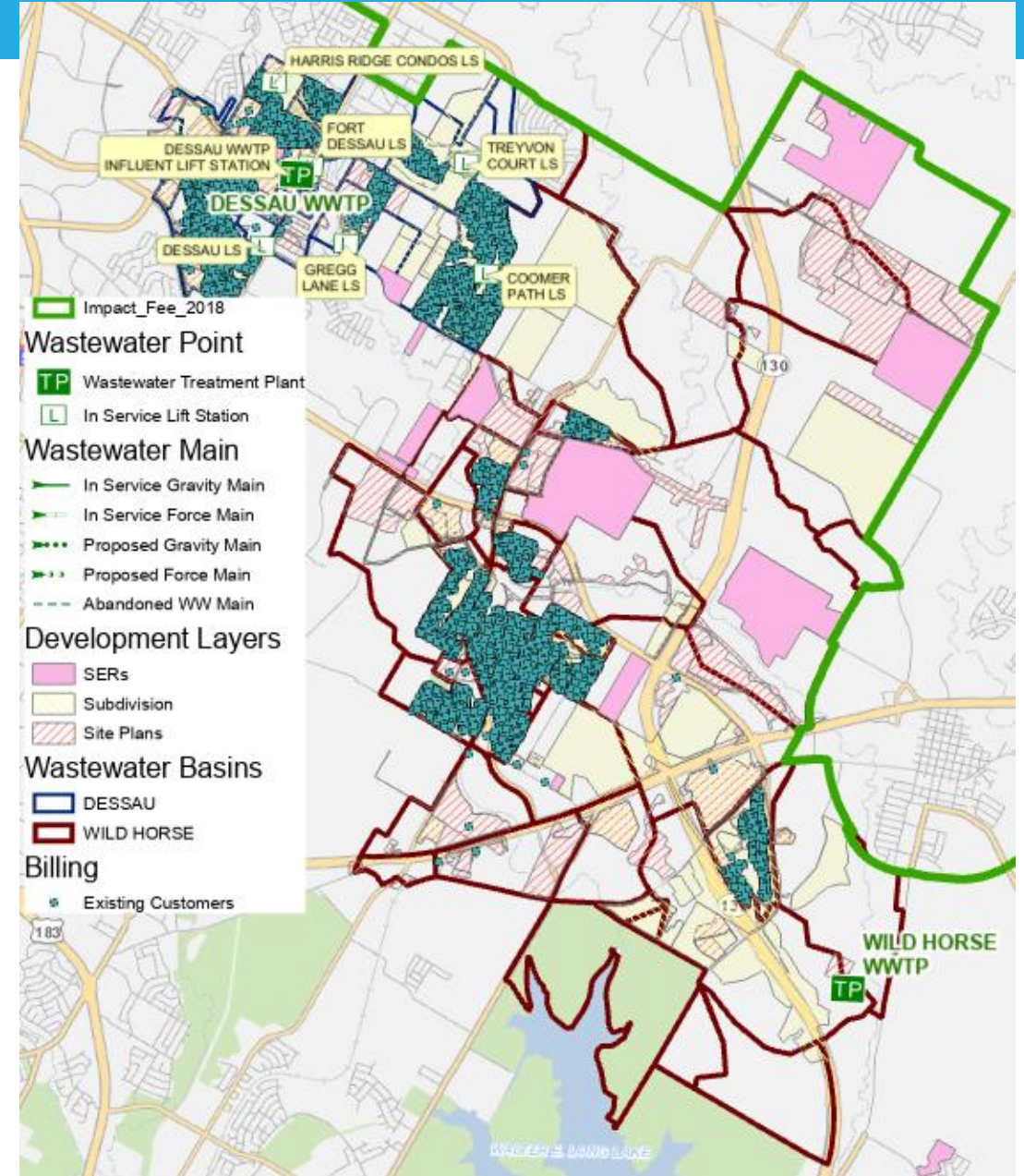
Wild Horse - Overview

- Located in the Gilleland Basin in Northeast Austin
- Wild Horse PUD initiated in early 2000s and constructed Wild Horse WWTP (0.75 MGD initial capacity)
- Expansion in progress to increase capacity to 2.25 MGD, additional expansions likely
- Rapid growth observed over past 10 years, much of the remaining undeveloped land has active development applications in progress



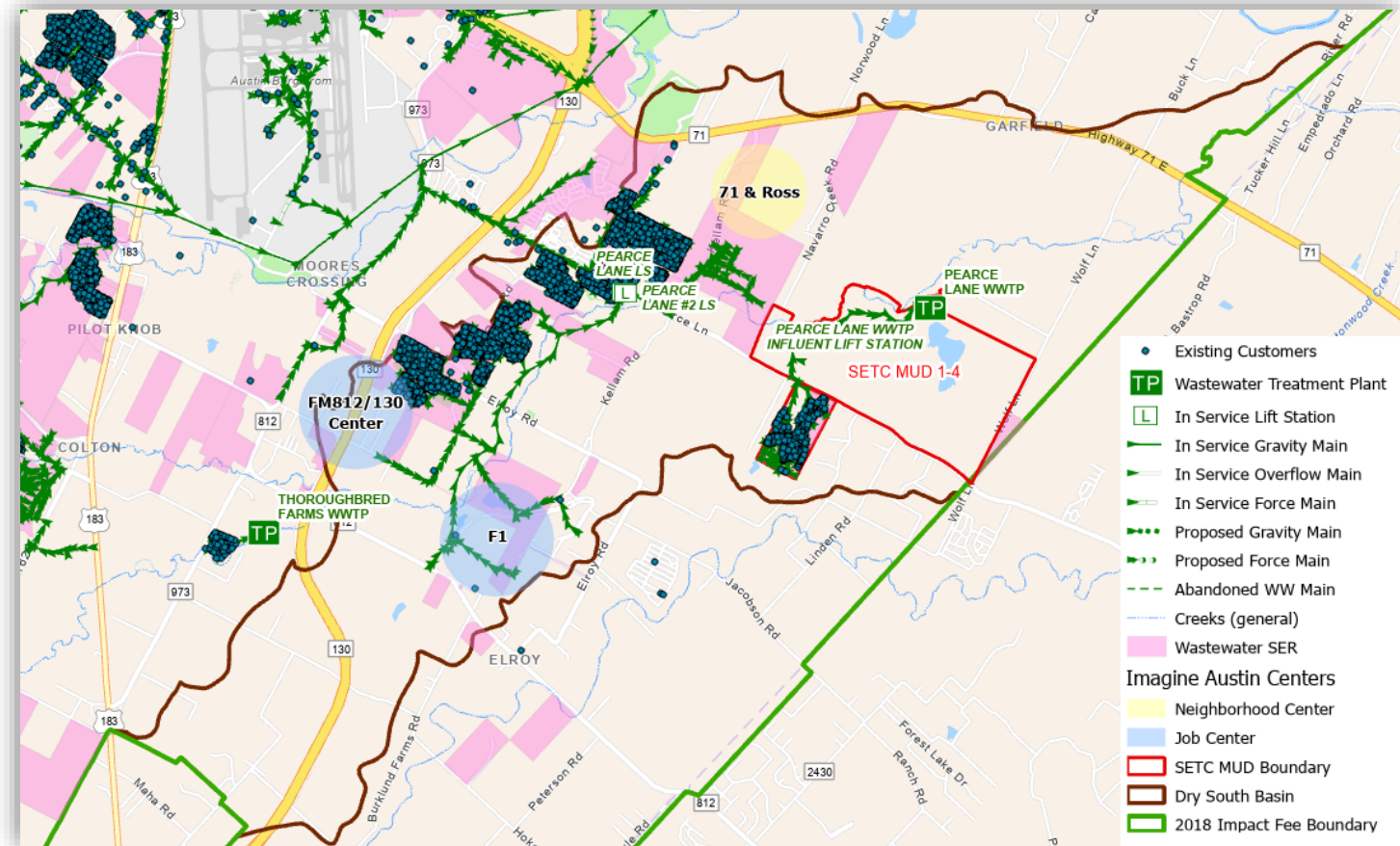
Wild Horse – Opportunities & Challenges

- Currently only plan for reclaimed is designation of space on WWTP site
- Adoption of decentralized reclaimed requires both infrastructure investment and accompanying policy mechanism to promote adoption
- Currently no mechanism to incentivize or mandate adoption of reclaimed water supply for existing customers. Reclaimed connection ordinance could be used for future developments



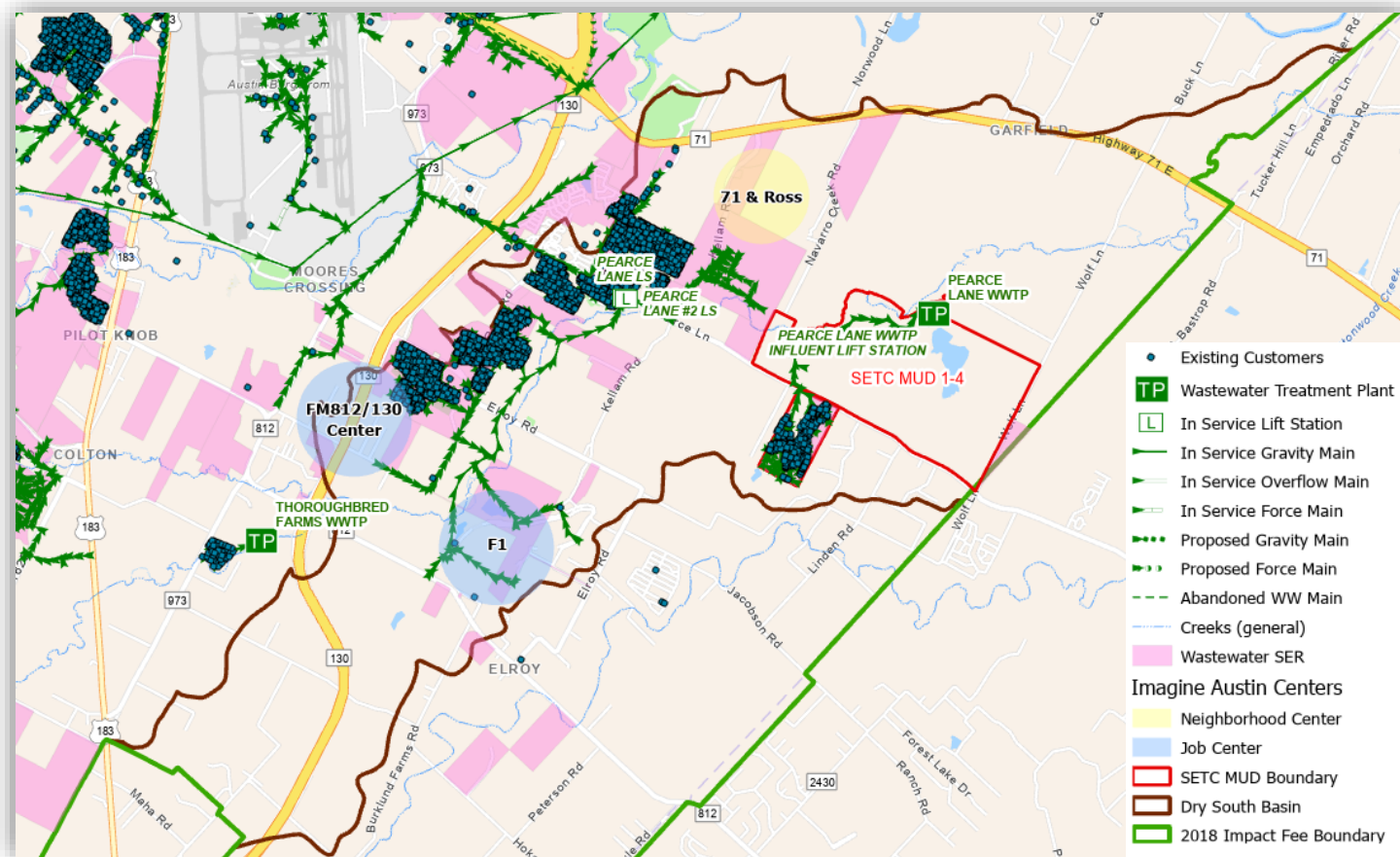
Pearce Lane WWTP Overview

- Located in the Dry South Basin in Southeast Austin
- SETC MUD initiated for the SunChase Development and constructed the Pearce Ln WWTP (0.3 MGD initial capacity)
- Ultimate WWTP Capacity: 2.25 MGD
- Potential for development & redevelopment within the basin



Pearce Lane WWTP – Opportunities & Challenges

- SETC MUD to construct Reclaimed Water Facilities at plant site as part of Consent Agreement
- Ultimate Reclaimed Facility Capacity: 2.25 MGD
- Opportunity to incorporate reclaimed sooner
- Policies would be needed to require potential customers to use these facilities



Major Takeaways & Next Steps

- Need CIP / Development Infrastructure Funding & policy instrument to require connections & dual-plumbing
- Requirement vs Incentives and respective urgencies
- Wild Horse area growth could out-pace necessary reclaimed infrastructure and policies
- Implementation coordination with SETC MUD to build reclaimed infrastructure and require potential customers to use these facilities
- Currently no mechanism to incentivize or mandate adoption of reclaimed water supply for existing customers. Reclaimed connection ordinance could be used for future developments



Discussion & Questions?