Population and Demand Projections
Water Forward ‘24

POPULATION AND DEMAND PROJECTIONS

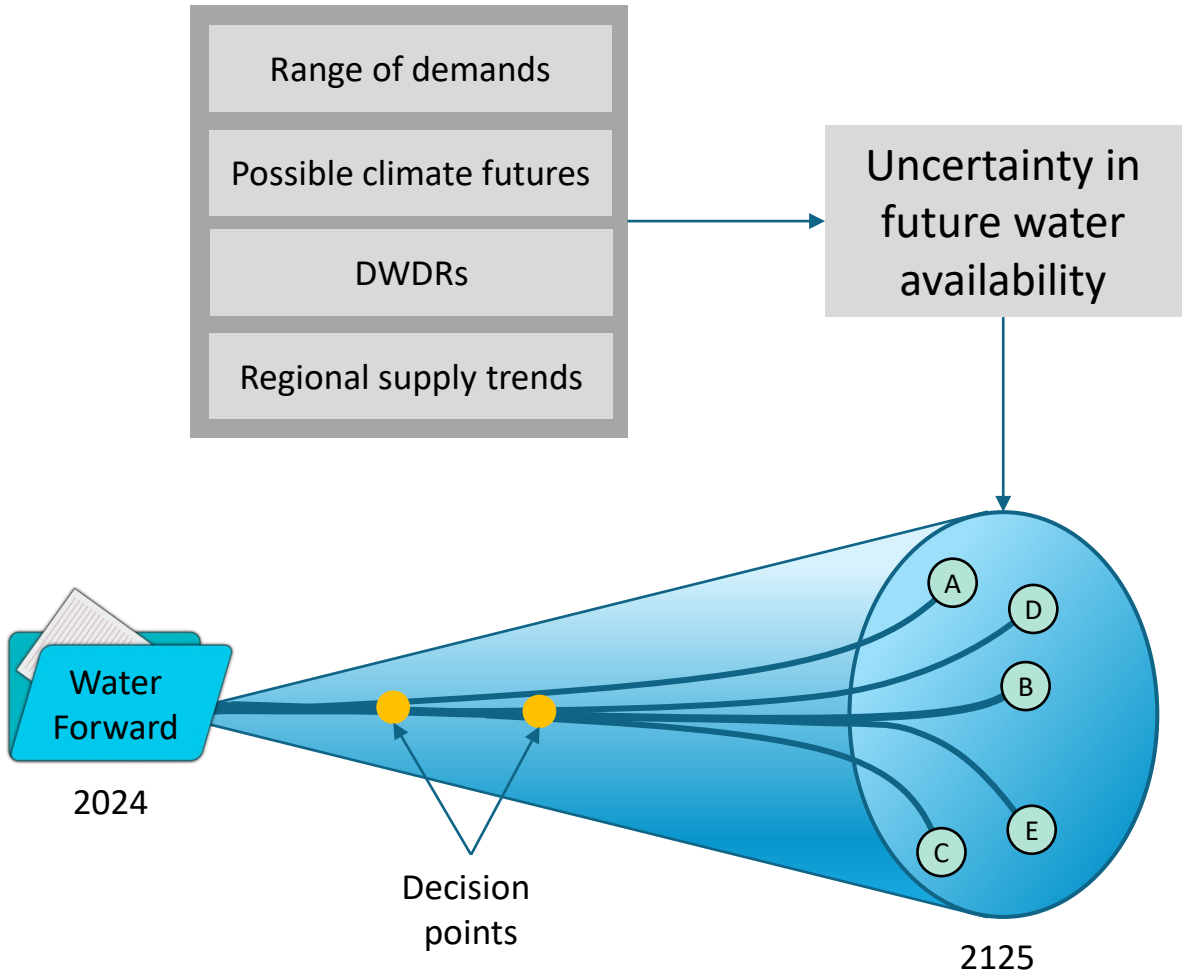
1. Purpose & Key Considerations
2. Demand Development Process
3. Results of DDM
4. Next Steps

PURPOSE AND KEY CONSIDERATIONS

WATER FORWARD:

PLANNING FOR UNCERTAINTY

- Develop a range of future conditions
- Find common near-term strategies that work for a broad range of futures
- Develop adaptive plan with key decision points
- Re-evaluate at key decision points



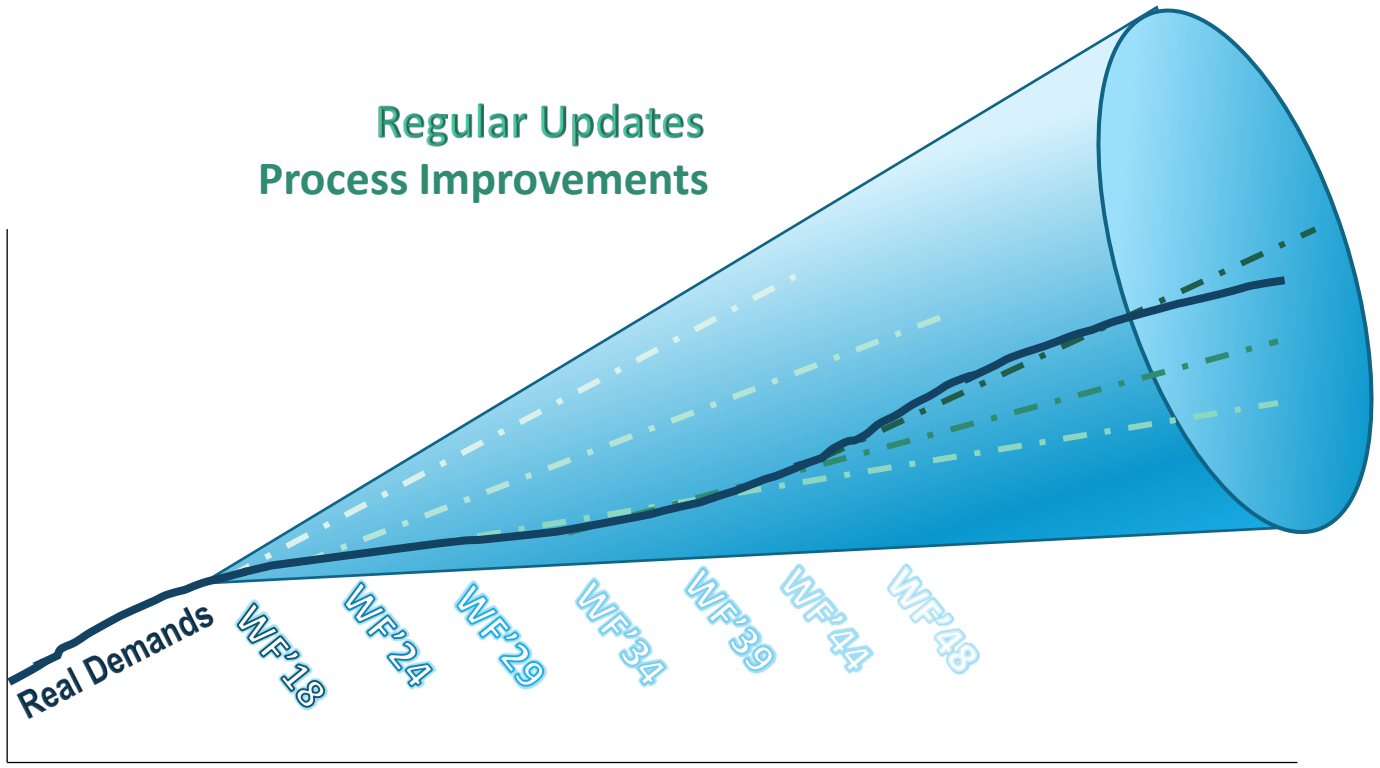
WATER FORWARD UPDATES:
ADAPTIVE MANAGEMENT

100-year look into the future

- This approach provides a **long view;** time to adapt and understand what steps may be necessary to meet AW's needs in 100 years.

5-year updates

- Regular updates of the plan will allow us to incorporate new or better data and review processes for potential improvements.



WATER FORWARD: PLANNING PROCESS

Preliminary Needs Assessment

BASELINE DEMANDS
– EXISTING SUPPLIES
= PRELIMINARY NEEDS

- Baseline demand projections
  - Reflect a continuation of recent trends in demand (i.e. passive conservation)
  - High, medium, and low projections
- Existing supply projections
  - Reflect >600 possible supply futures developed through climate modeling and various regional project scenarios

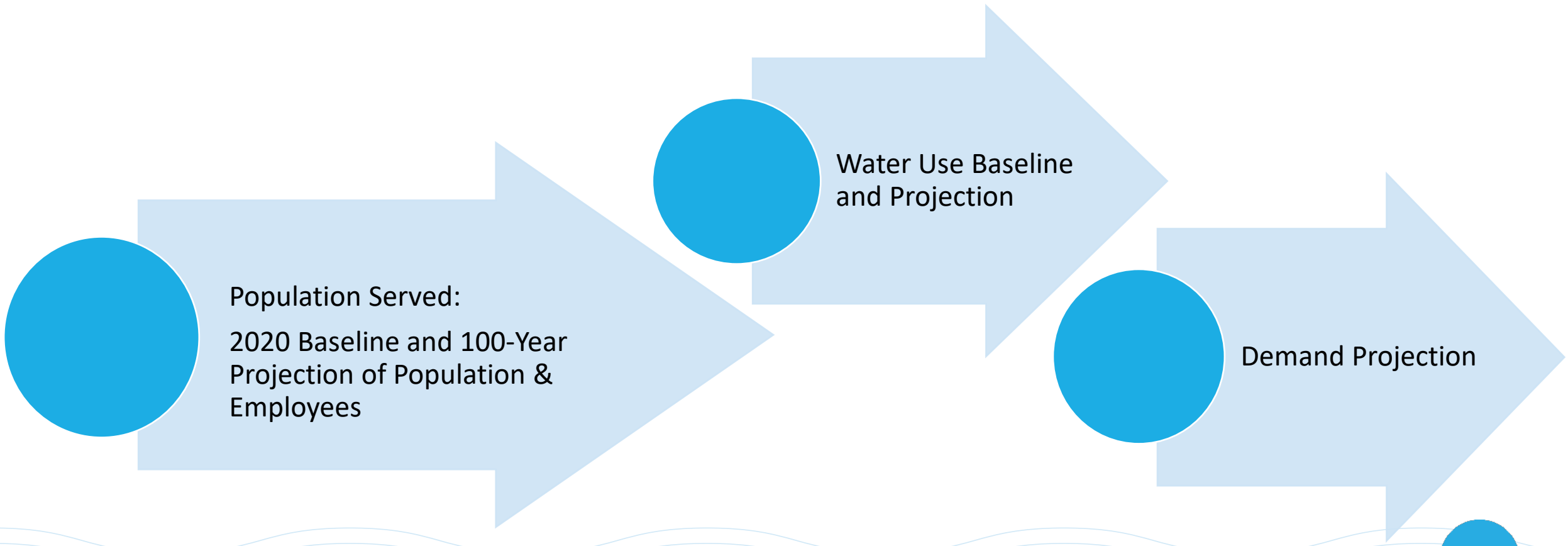
Evaluation of Strategies & Portfolios

(BASELINE DEMANDS – DEMAND REDUCTION)
<=
(EXISTING SUPPLIES + FUTURE SUPPLIES)

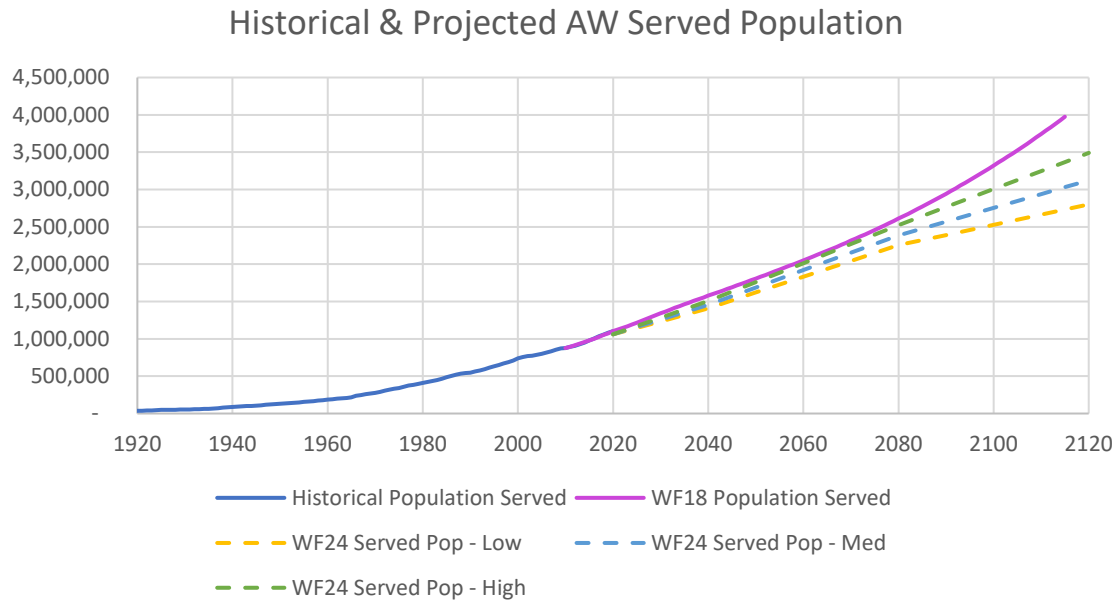
- Baseline demand projections will be reduced by new/expanded demand reduction strategies (i.e. additional conservation, fit-for purpose water)
- Supply strategies will be added to meet future demand

DEMAND DEVELOPMENT PROCESS & RESULTS

DISAGGREGATED DEMAND MODEL:
DEMAND PROJECTION PROCESS



DISAGGREGATED DEMAND MODEL:
POPULATION PROJECTIONS

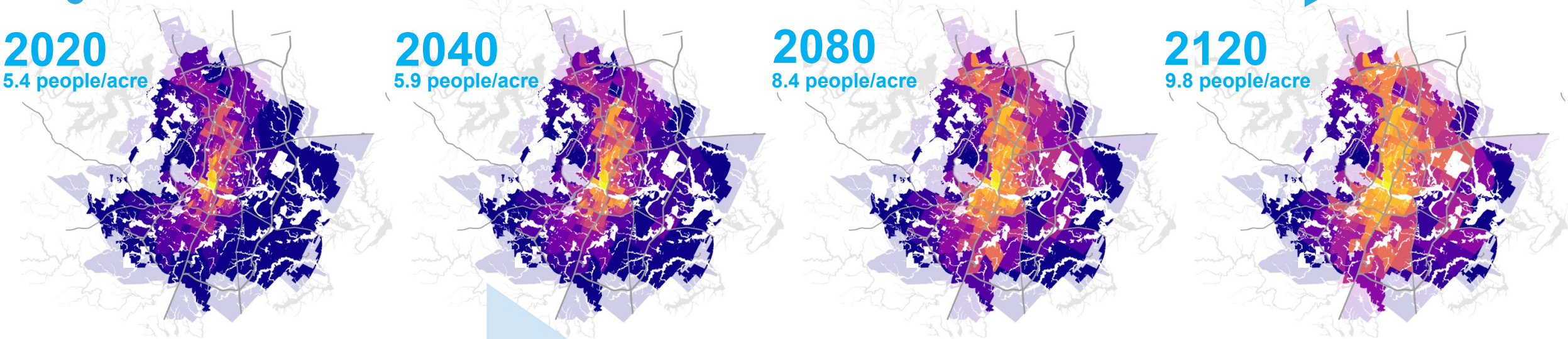


Population Served:

2020 Baseline and 100-Year Projection of Population & Employees

Served Population			
year	Low	Med	High
2020		1,060,000	
2040	1,410,000	1,460,000	1,500,000
2080	2,260,000	2,390,000	2,520,000
2120	2,800,000	3,120,000	3,490,000

DISAGGREGATED DEMAND MODEL:
POPULATION PROJECTIONS



Population Served:

2020 Baseline and 100-Year Projection of Population & Employees

- 100-year population projection includes a gradually slowing growth rate
- Infill and increased density across Austin, estimated distribution based on development data and Imagine Austin growth concept map
- Less greenfield development toward the end of the century

DISAGGREGATED DEMAND MODEL:
WATER USE PROJECTION PROCESS

Retail Sector Water Use /
Single- and Multi-family Residential Units
= Residential WUF

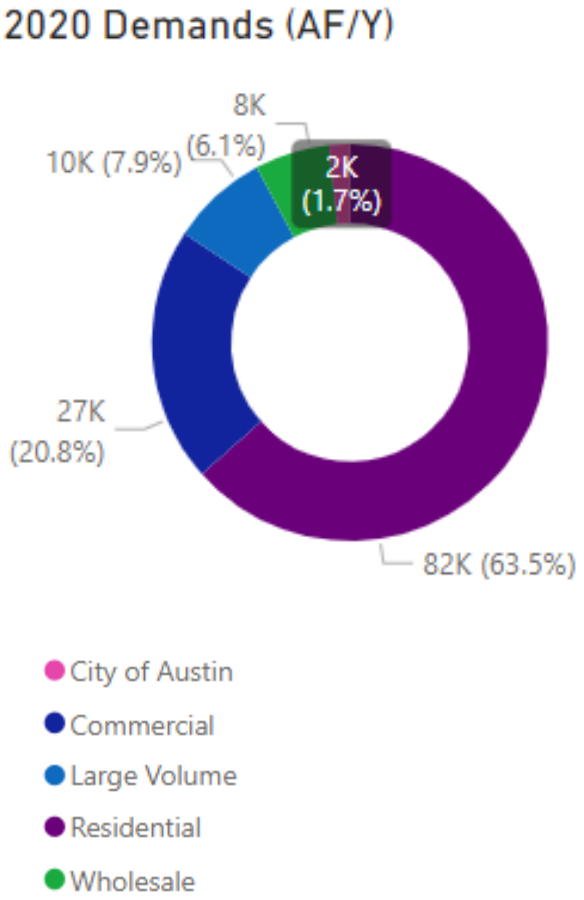
Commercial Subsector Water Use /
Employees
= Commercial WUF

Large Volume Customer Projections

Wholesale Projections

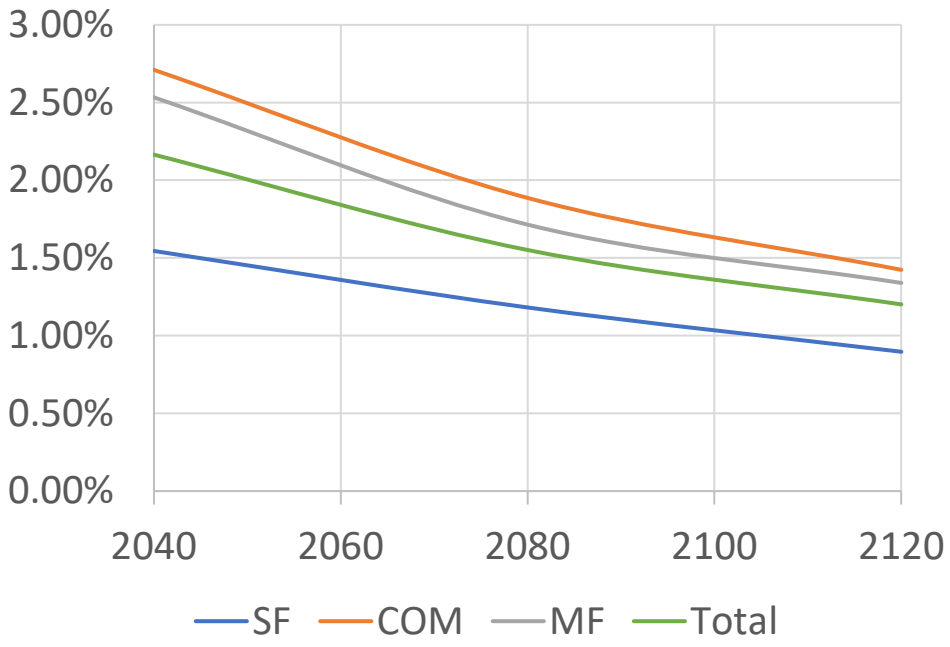
COA Projections

Water Use Baseline and Projection



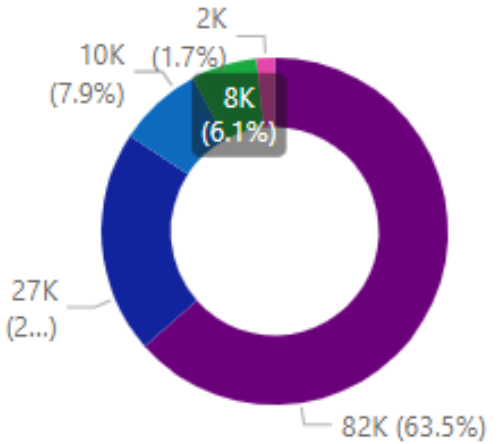
DISAGGREGATED DEMAND MODEL:
WATER USE PROJECTION PROCESS

Projected WUF % Reduction from Baseline

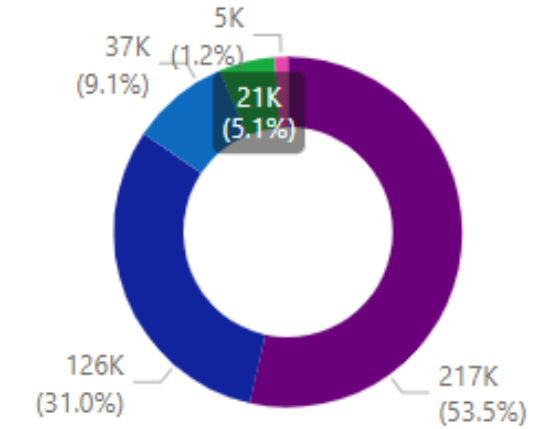


Water Use Baseline and Projection

2020 Demands (AF/Y)



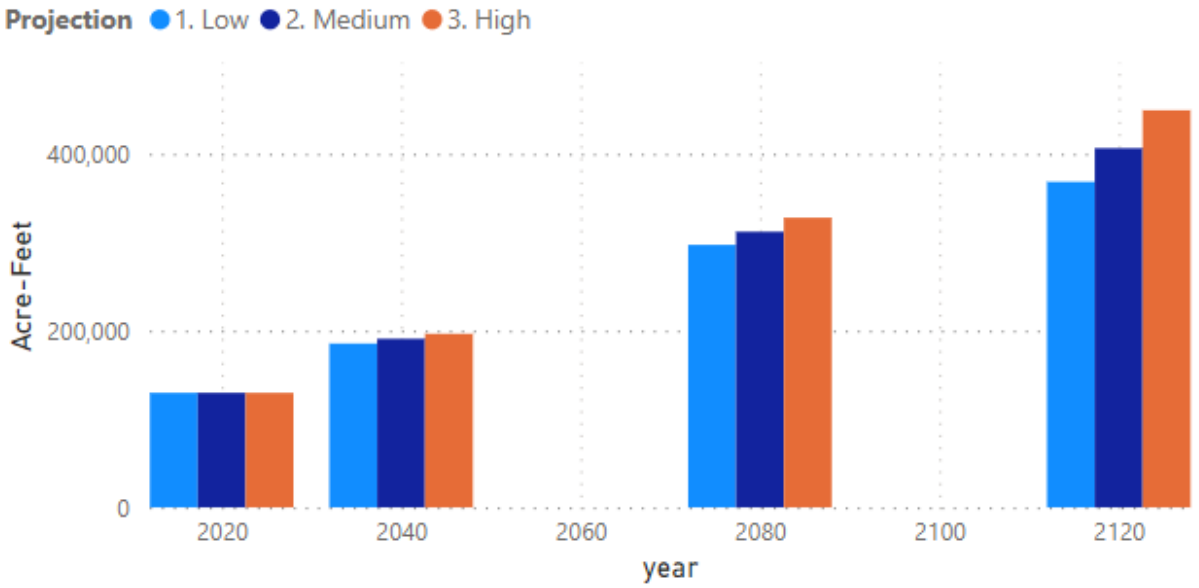
2120 Demands (AF/Y)



City of Austin
Commercial
Large Volume
Residential
Wholesale

DISAGGREGATED DEMAND MODEL:
BASELINE DEMAND RESULTS

Projected Units & Employees x Projected WUF = Sector/Subsector Demand

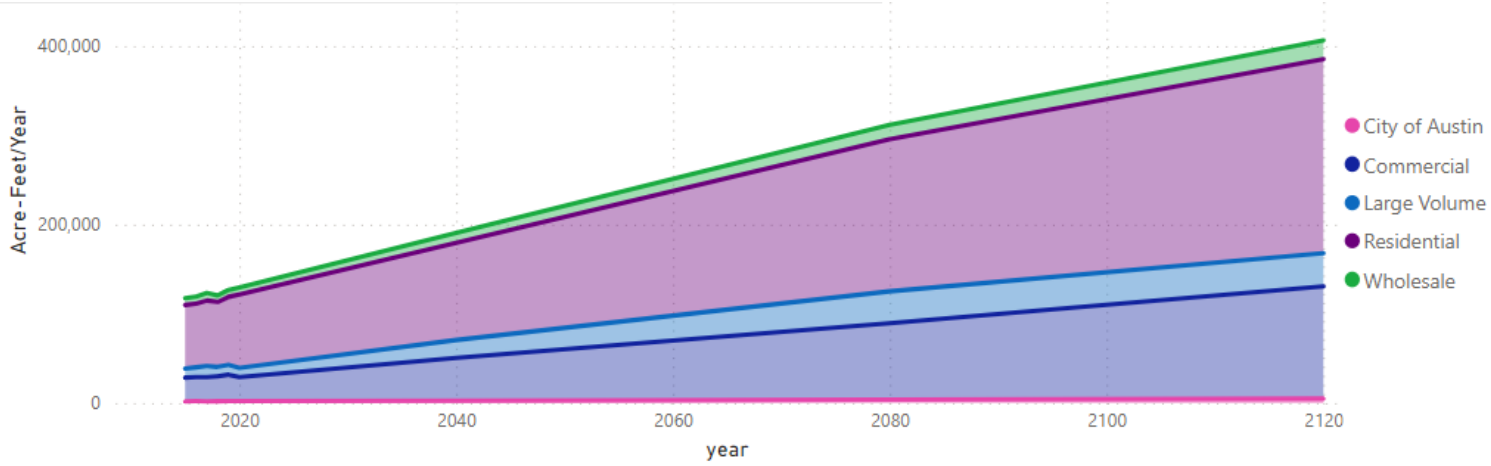


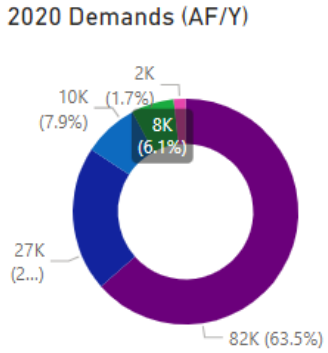
Total Demand (Acre-Feet/year)			
year	Low	Med	High
2020		130,000	
2040	185,000	191,000	196,000
2080	297,000	312,000	328,000
2120	368,000	406,000	449,000

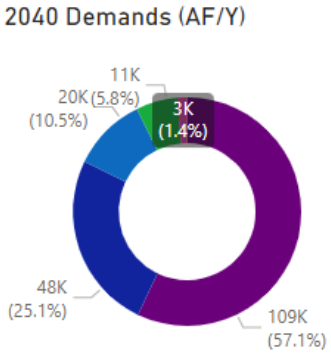
Demand Projection

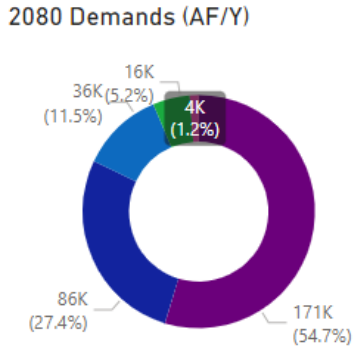
DISAGGREGATED DEMAND MODEL:
BASELINE DEMAND RESULTS

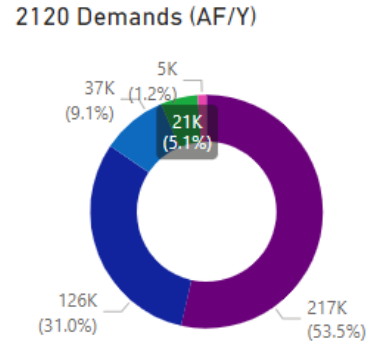
Projected Units & Employees x Projected WUF = Sector/Subsector Demand







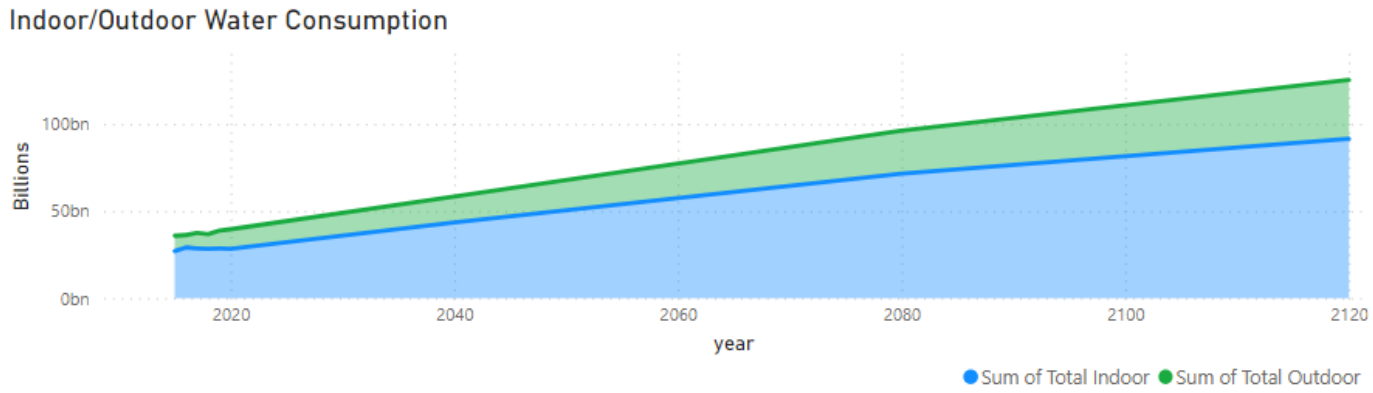


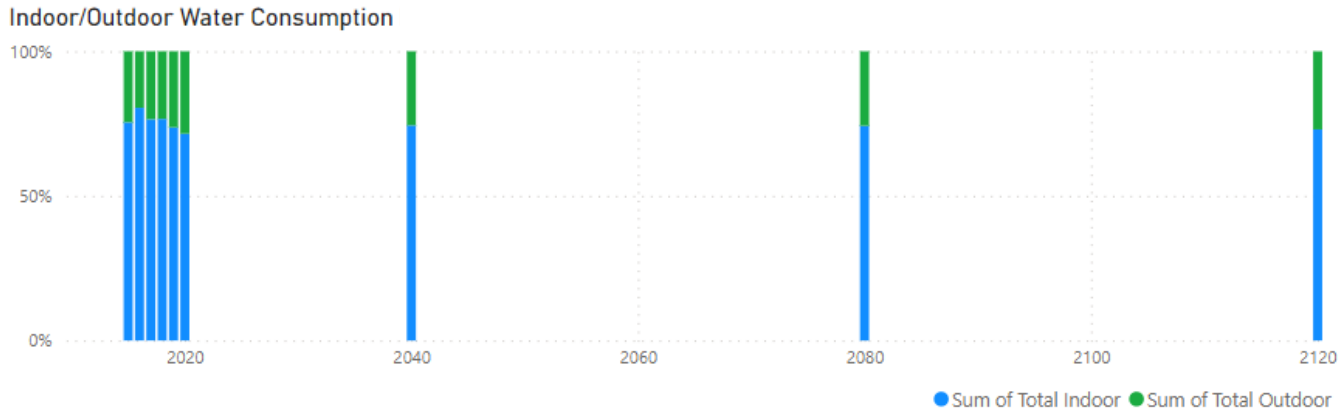


Demand Projection

DISAGGREGATED DEMAND MODEL:
BASELINE DEMAND RESULTS

Projected Units & Employees x Projected WUF = Sector/Subsector Demand

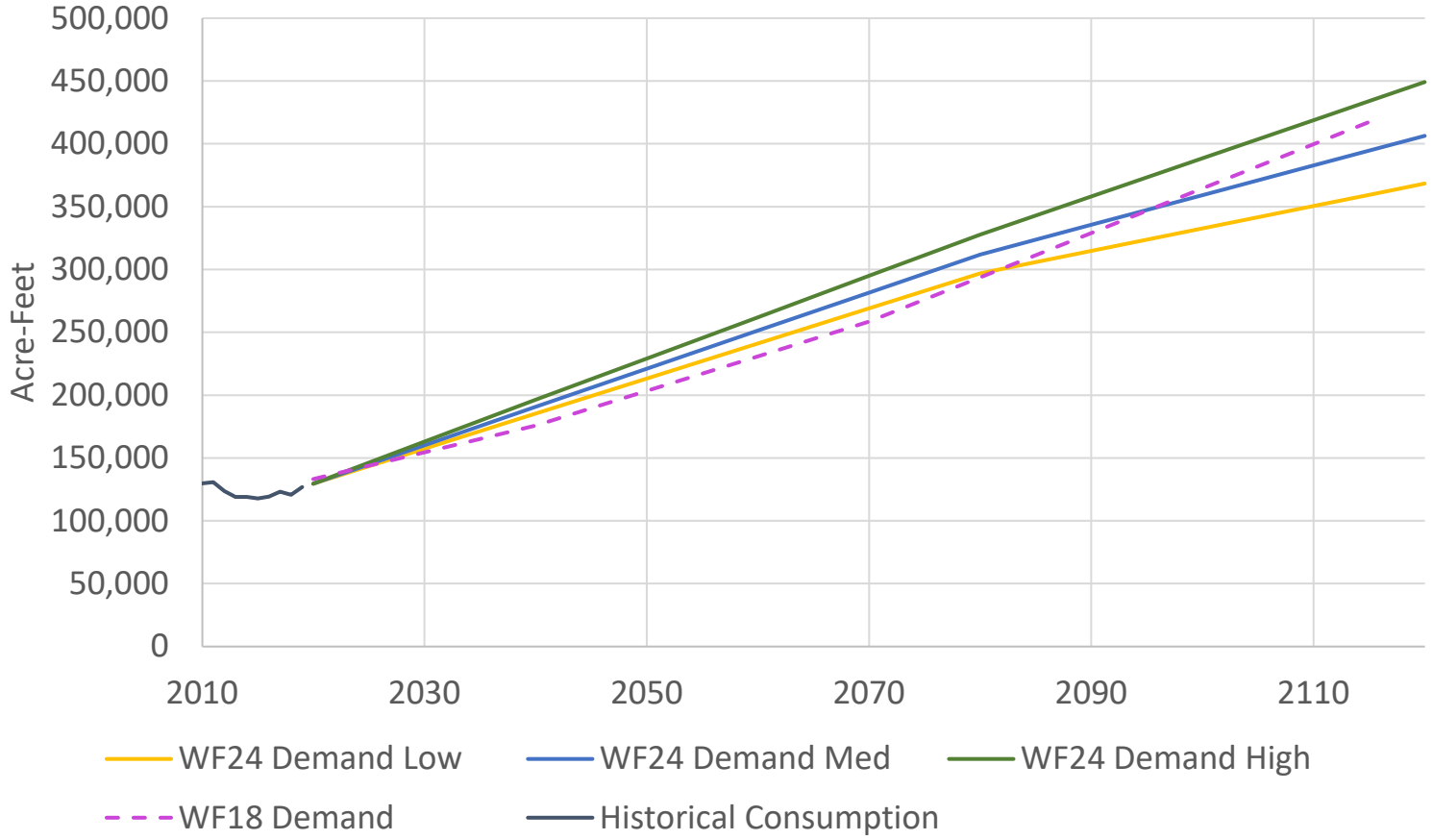




Demand Projection

BASELINE DEMAND PROJECTIONS:
COMPARISON WITH 2018

- Range of demands reflects uncertainty
- Updated demographic and water use inputs
- Refinements in demographic and WUF projection methodology



NEXT STEPS

- Preliminary needs analysis using the three demand projections
- Water Management Strategy characterization

Questions?