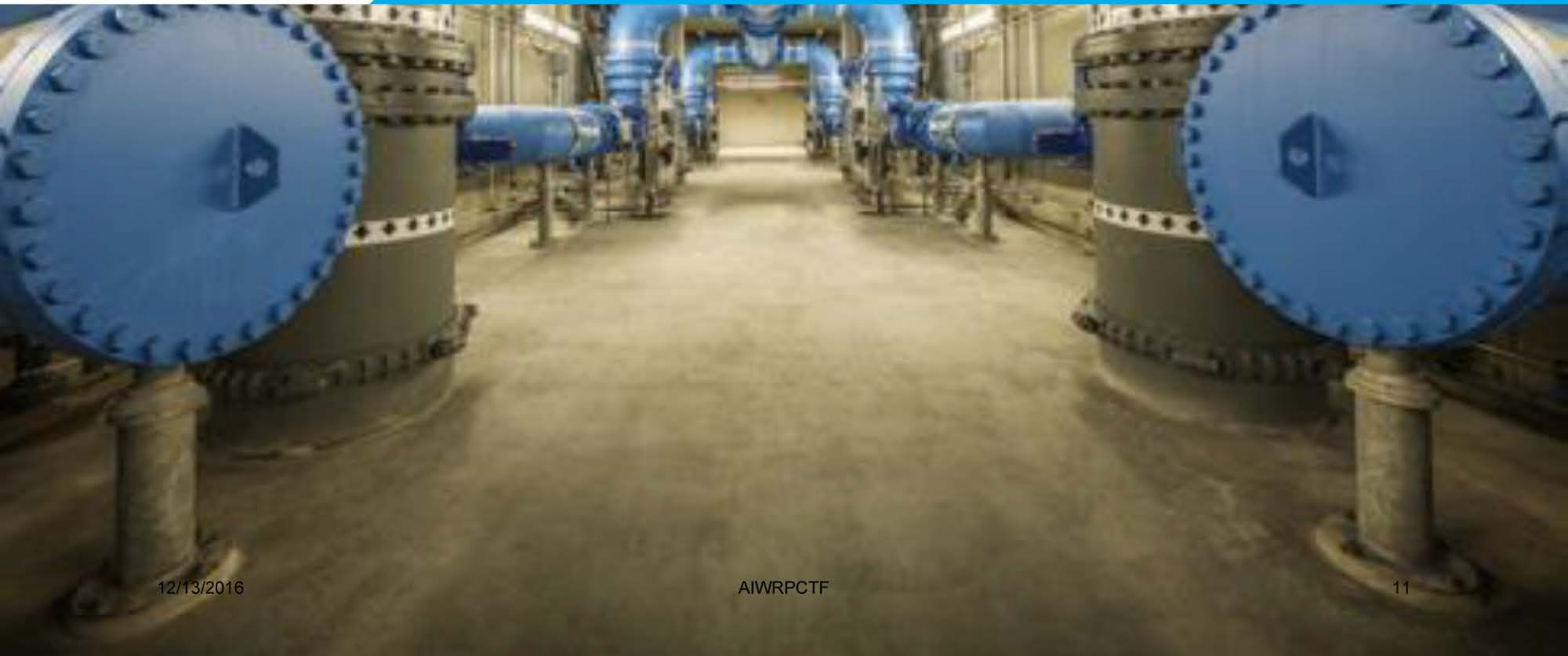




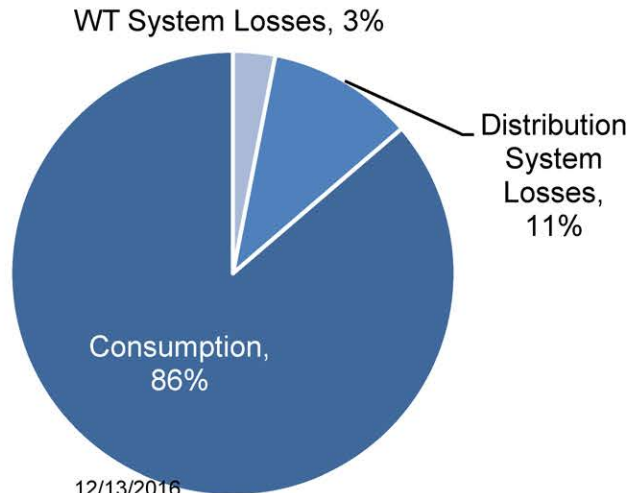
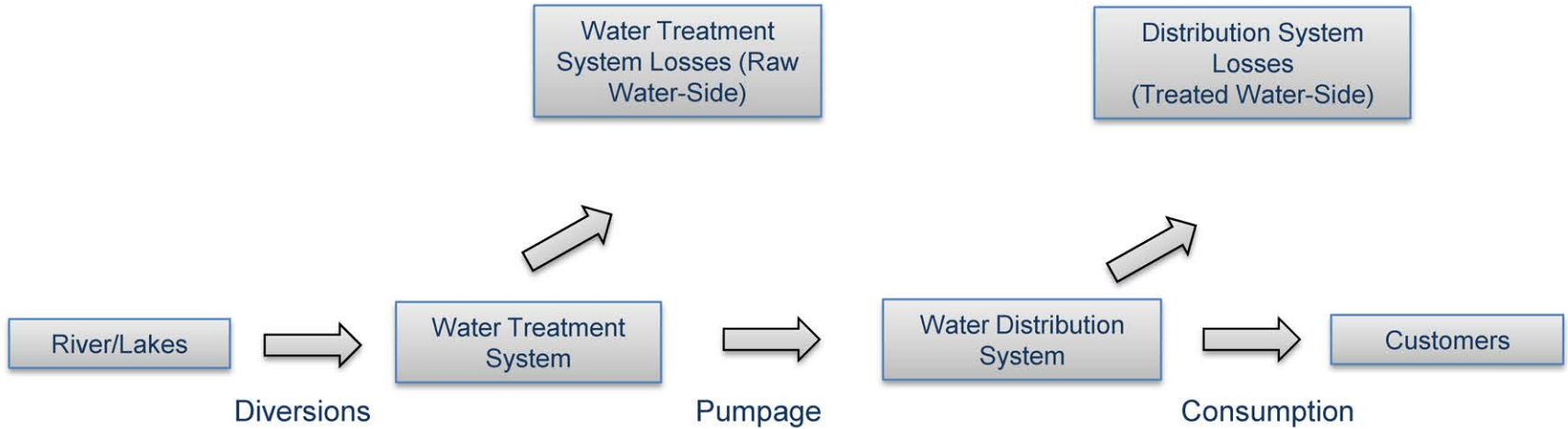
Disaggregated Demand Model

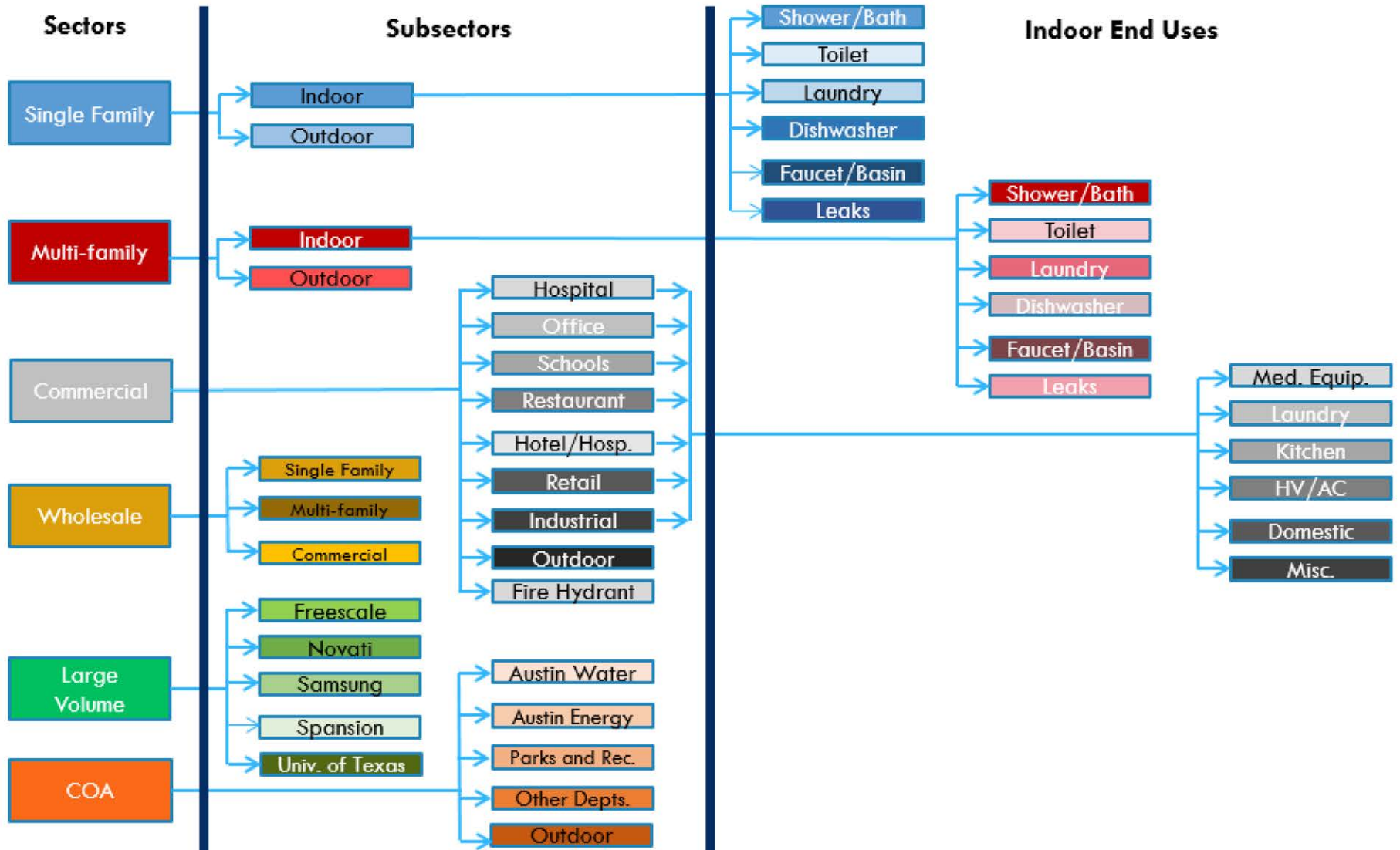
December 13, 2016



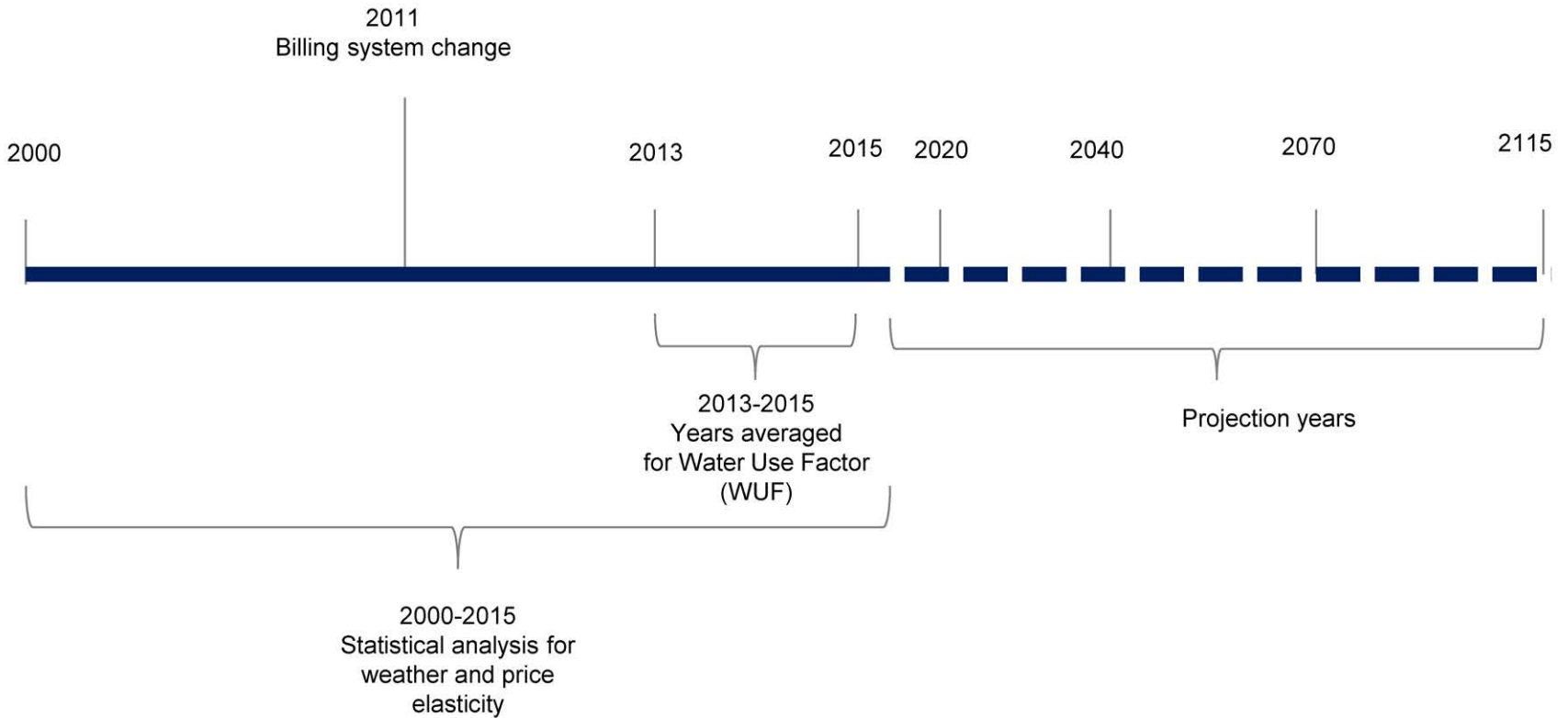
What Does The Model Do?

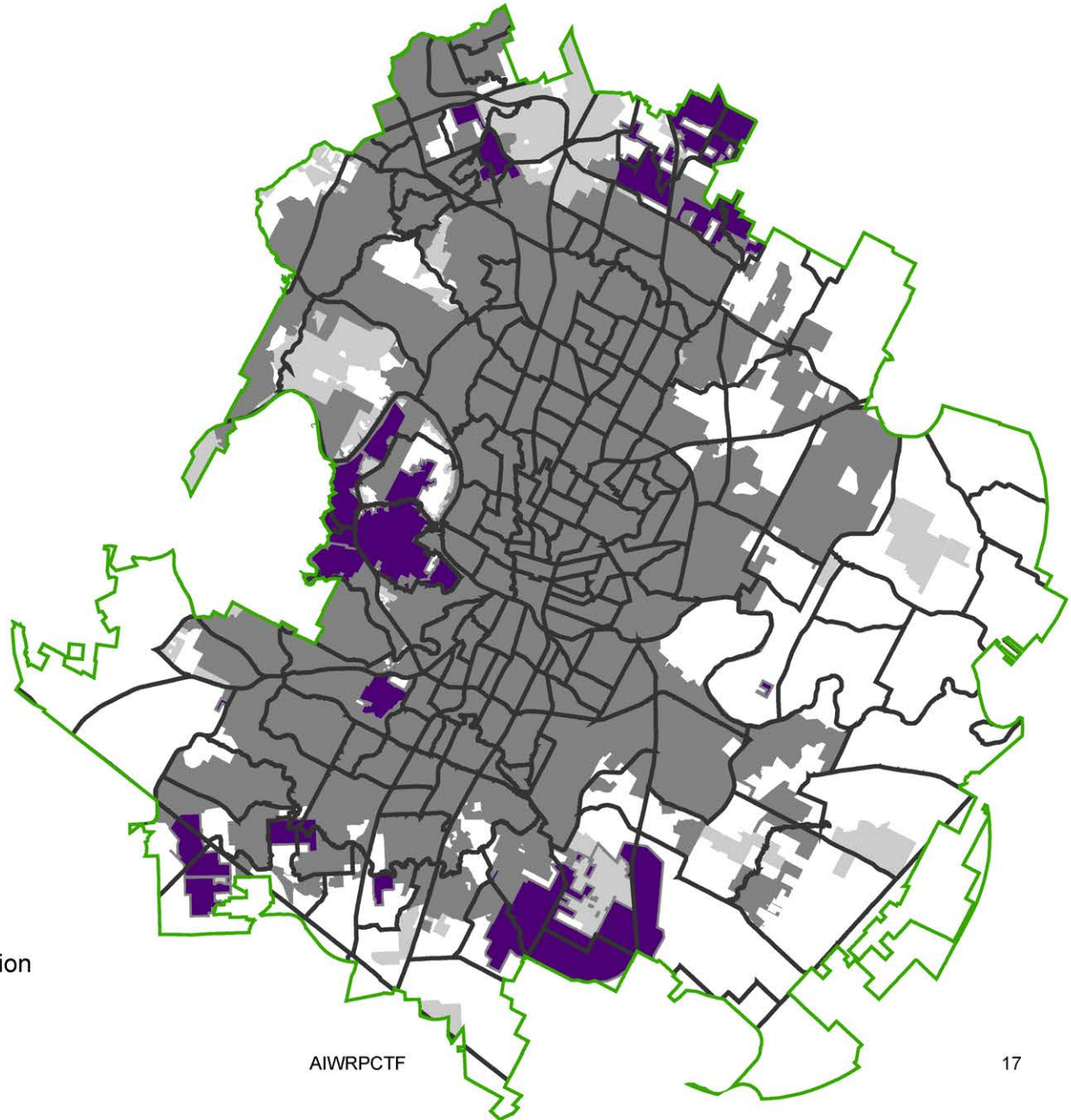
Typical Water-Flow In Austin's Water System










Analysis Timeline

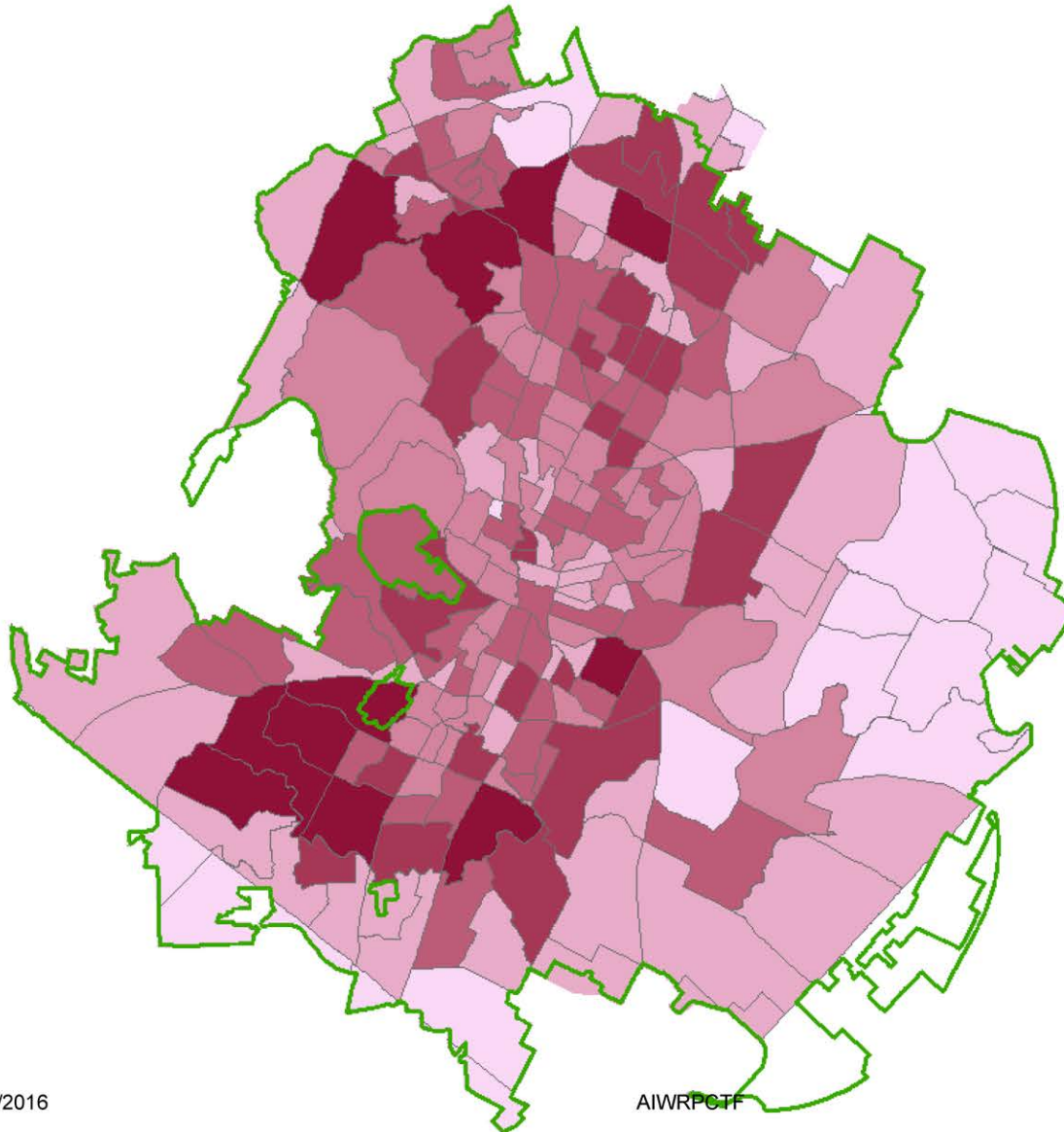




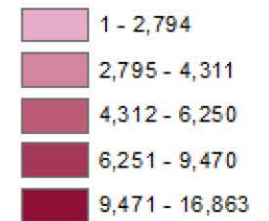
-  DTI polygons
-  Impact fee boundary
-  Austin full purpose jurisdiction
-  Austin limited purpose jurisdiction
-  Wholesale service areas

How Does The Model Work?

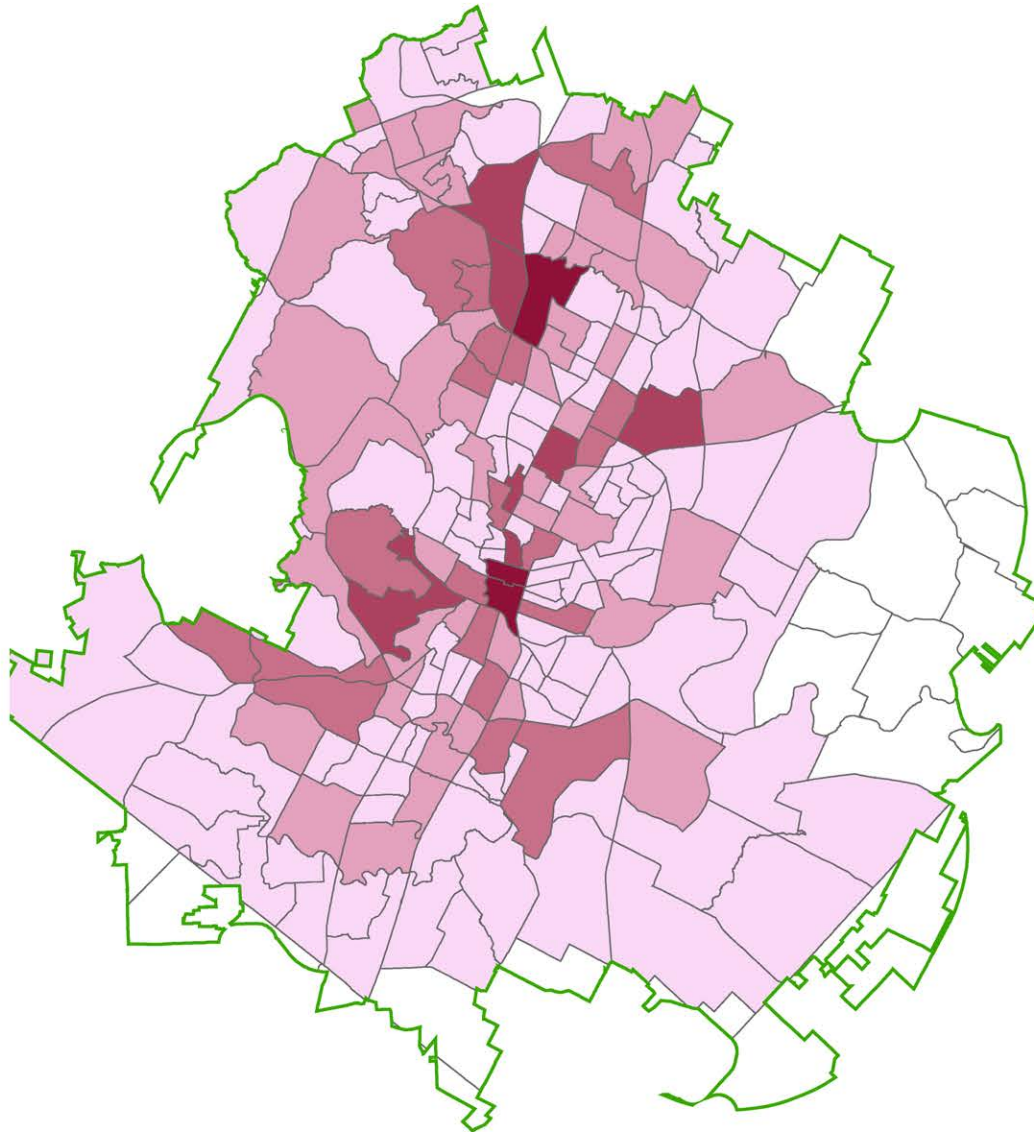
Served Population Distribution 2010



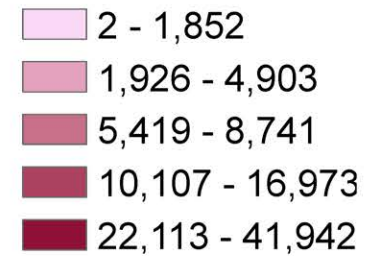
2010 Served Population

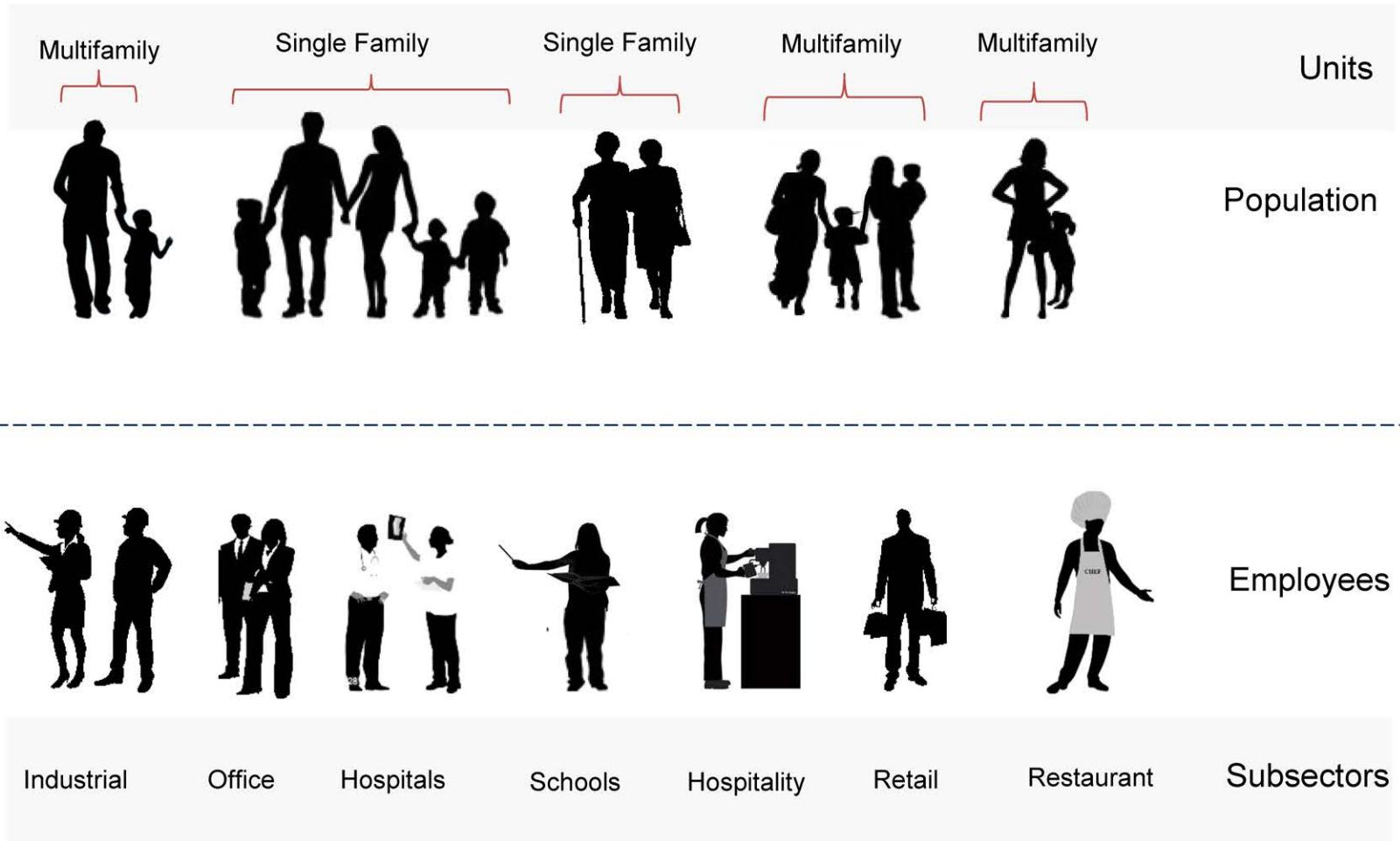


Employment Distribution 2010



2010 Employment





Water Use Factor Development

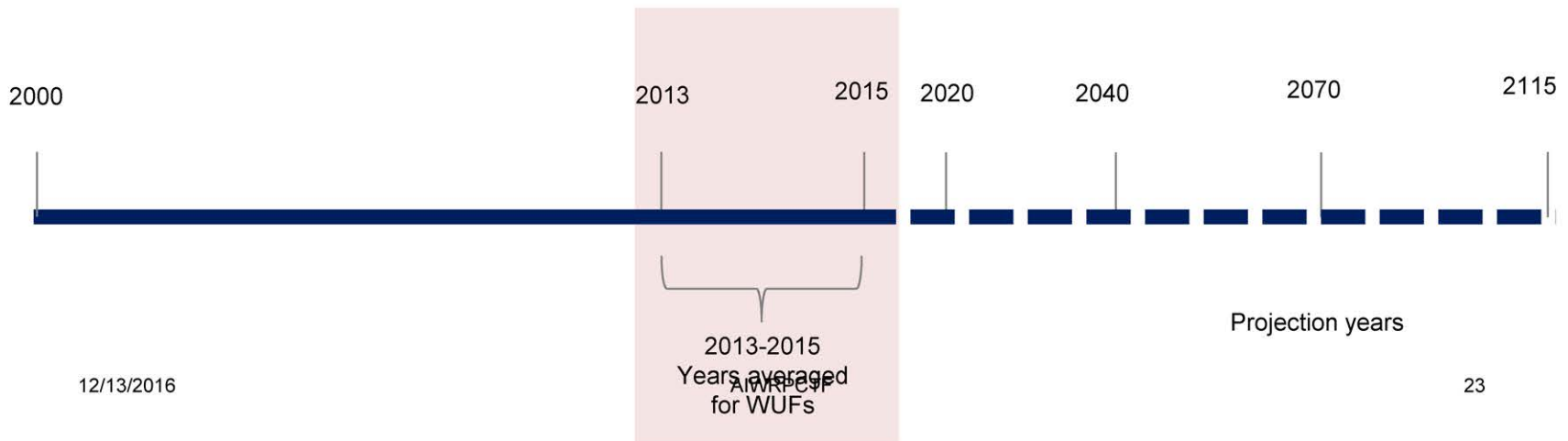
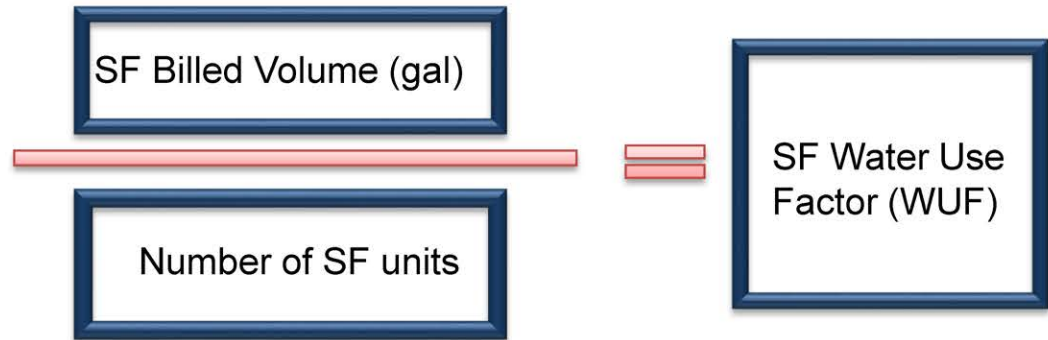
Eg: DTI polygon 89

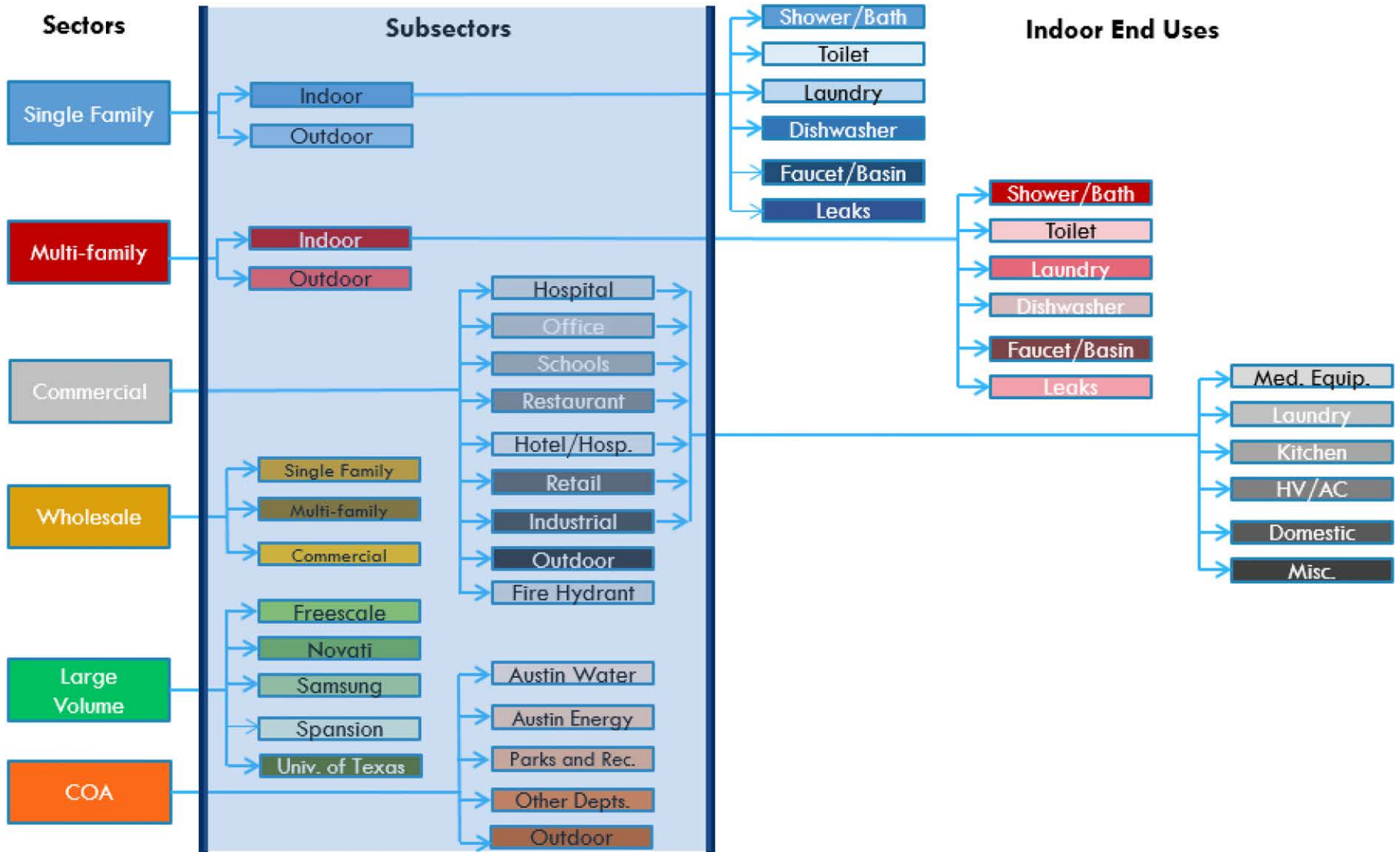


-  Commercial
-  Multi-Family Residential
-  Single Family Residential

Water Use Factor (WUF) Calculation

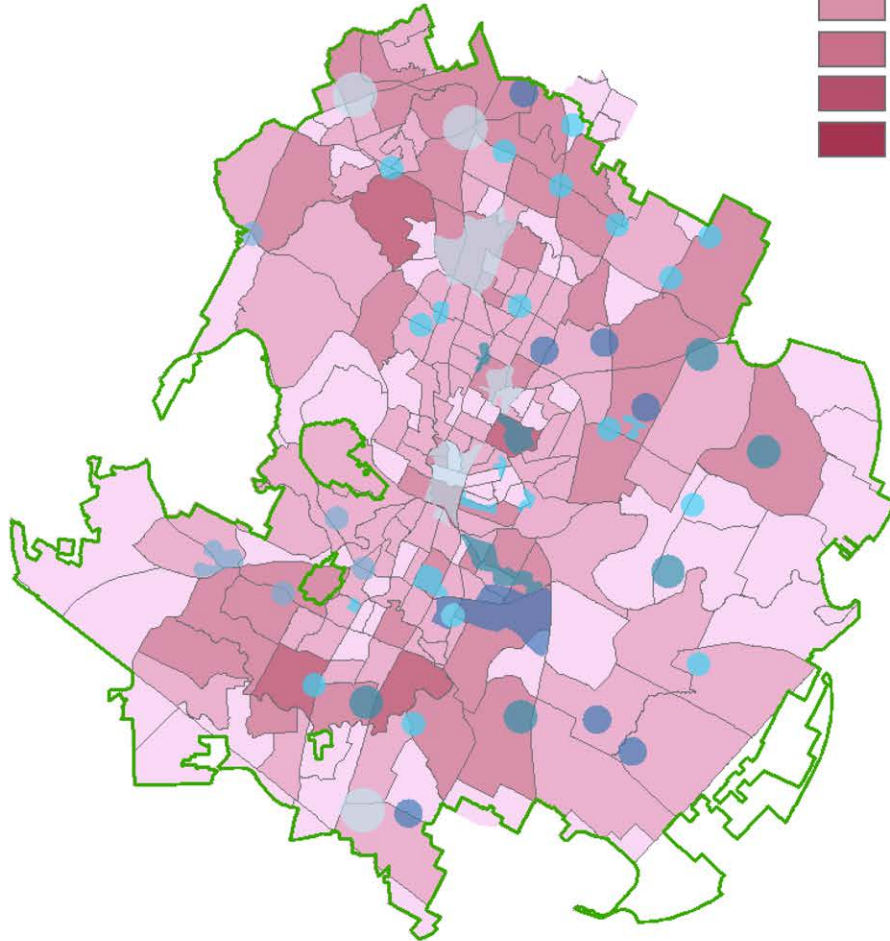
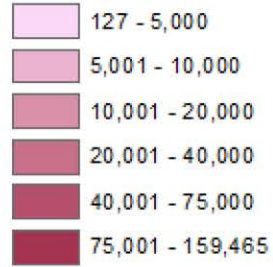
Example of WUF calculation for Single Family Residential





Served Population Projections

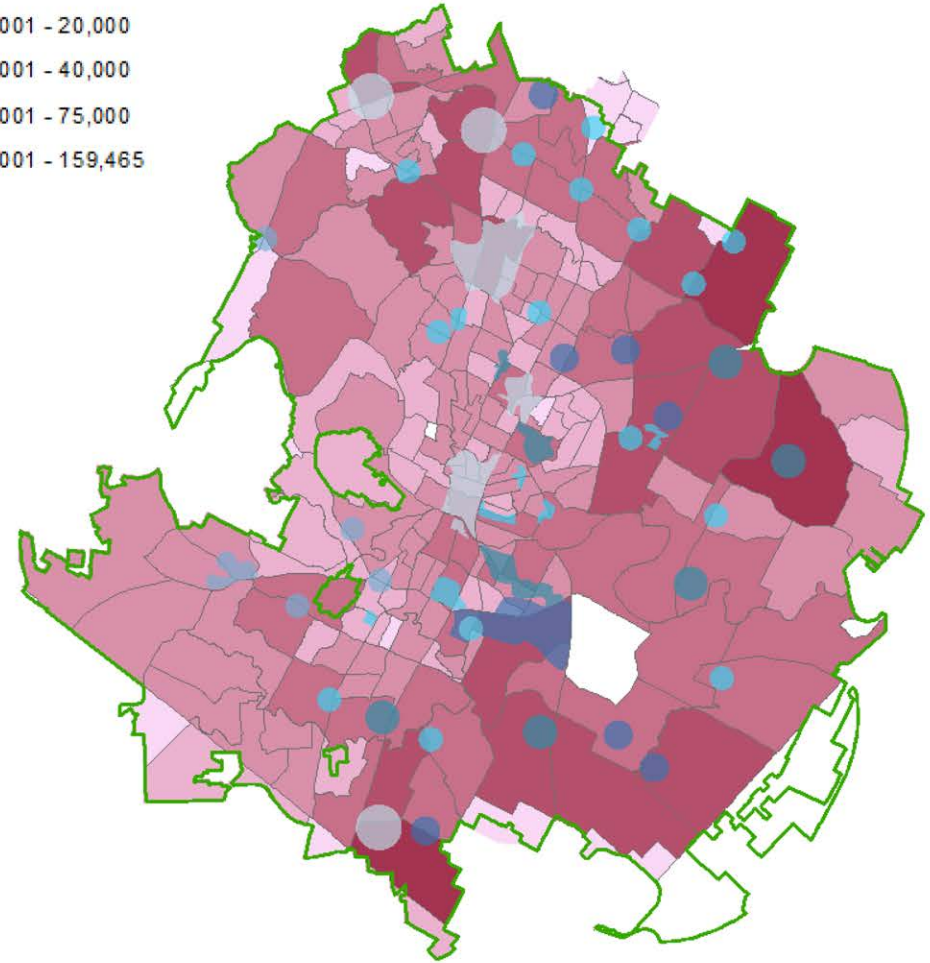
Served Population



12/13/2016

2040

AIWRPCTF

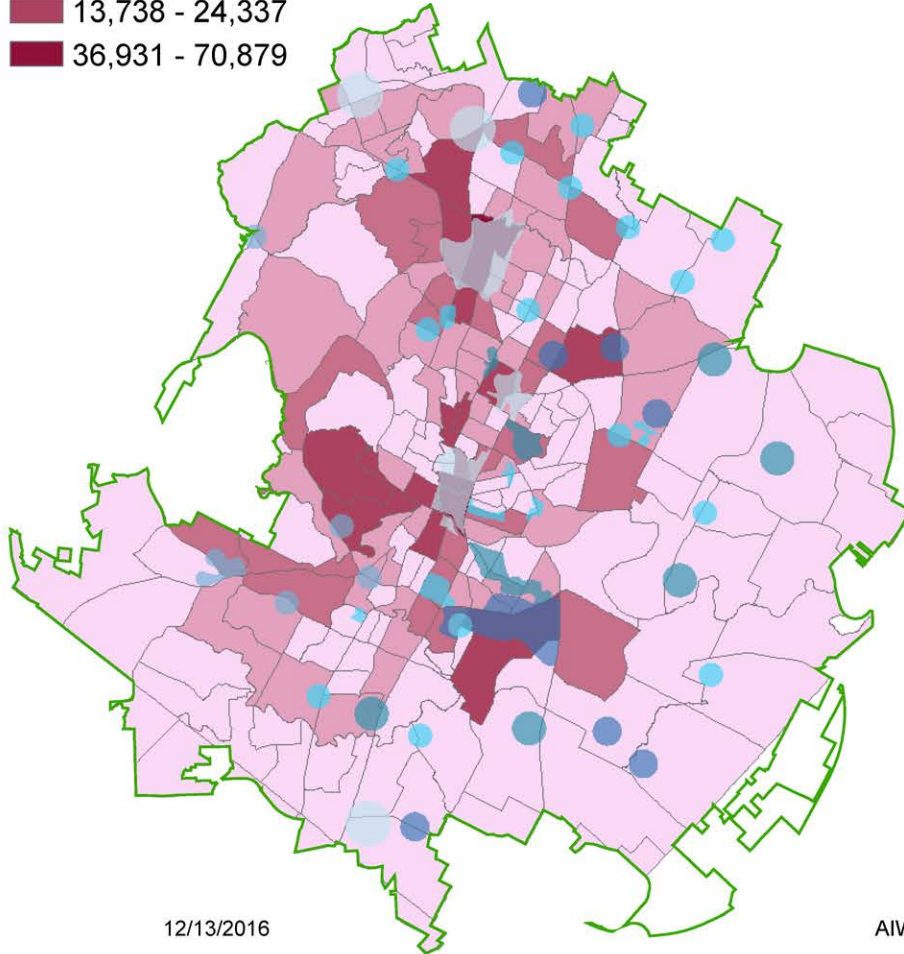
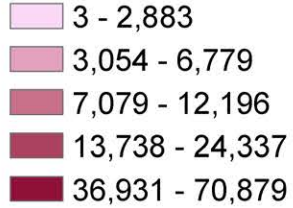


2115

25

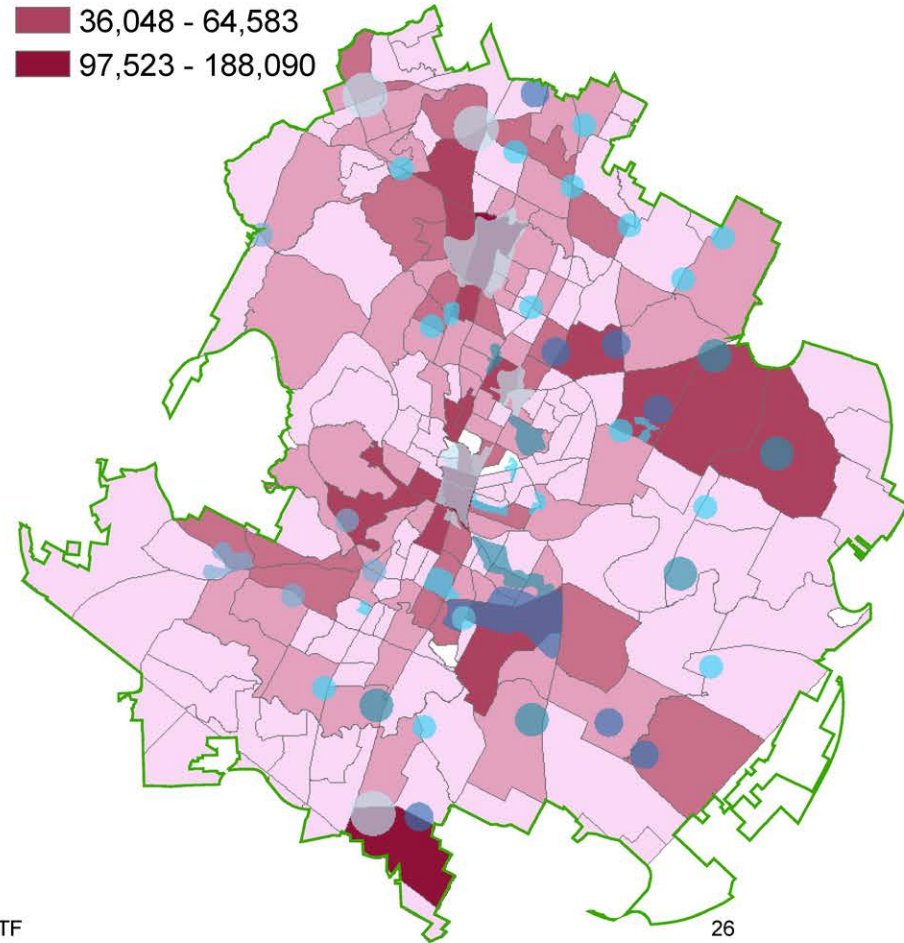
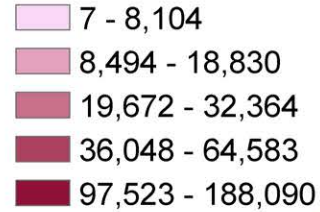
Employment Projections for 2040 and 2115

2040 Employment



12/13/2016

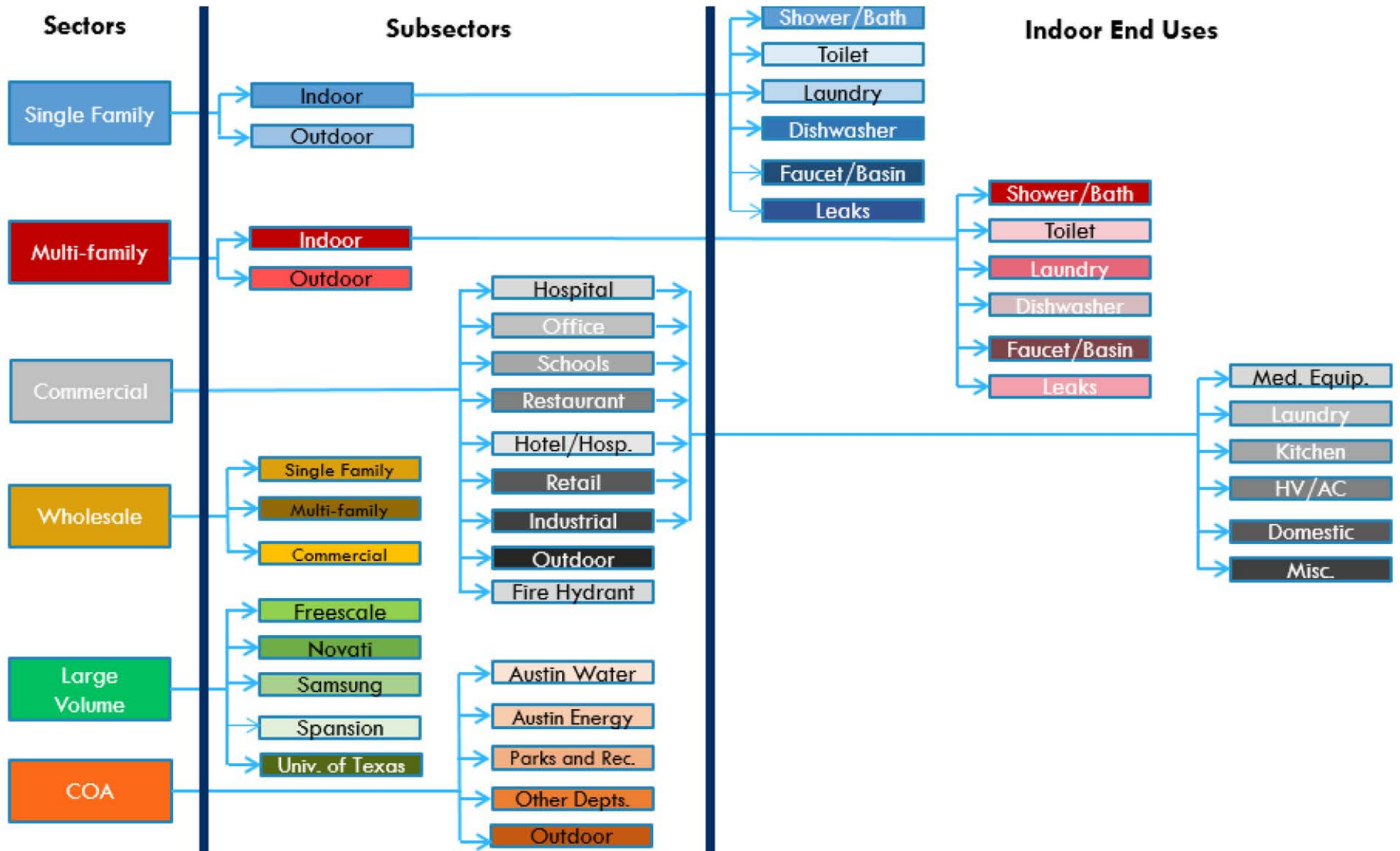
2115 Employment



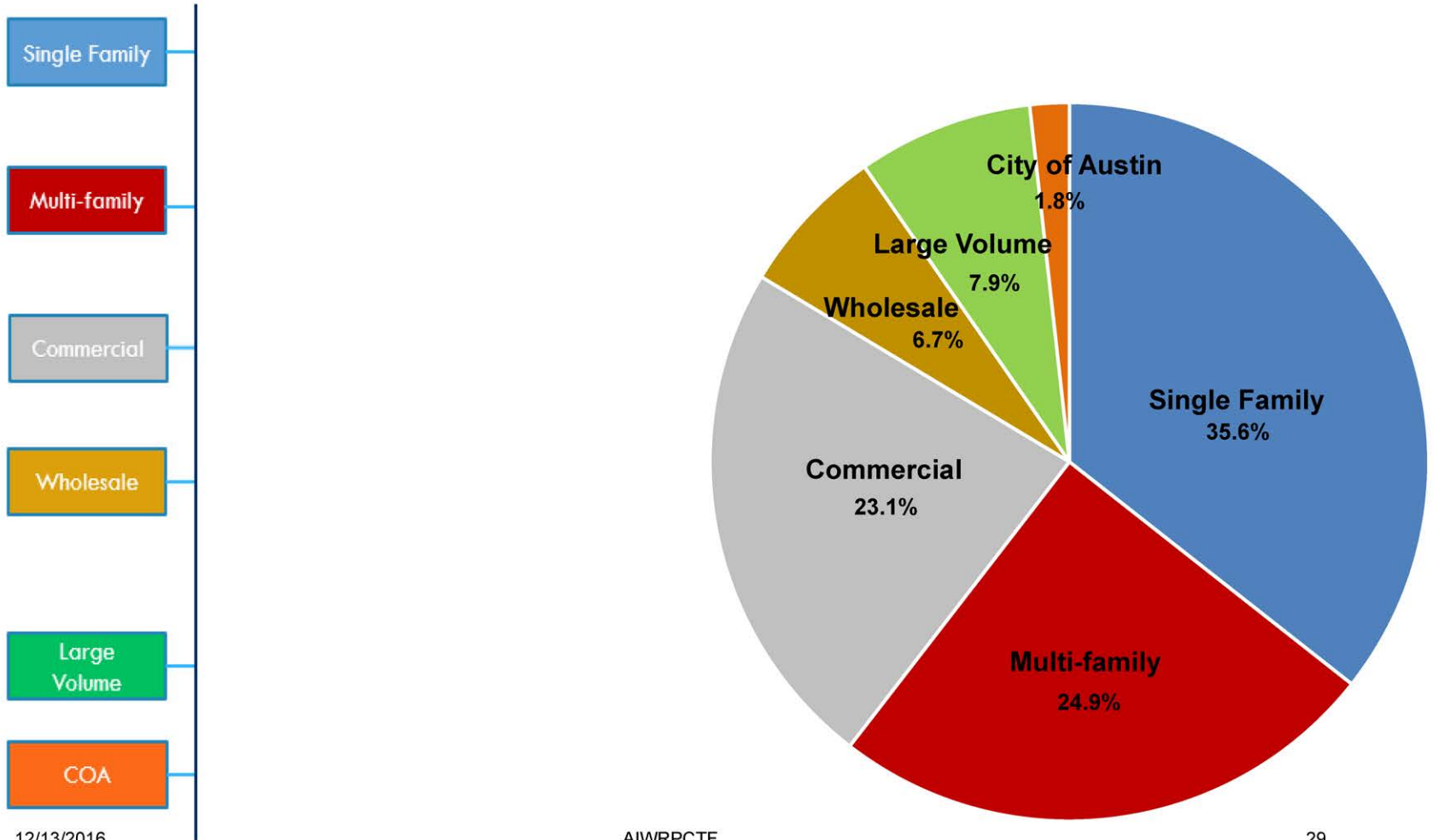
AIWRPCTF

26

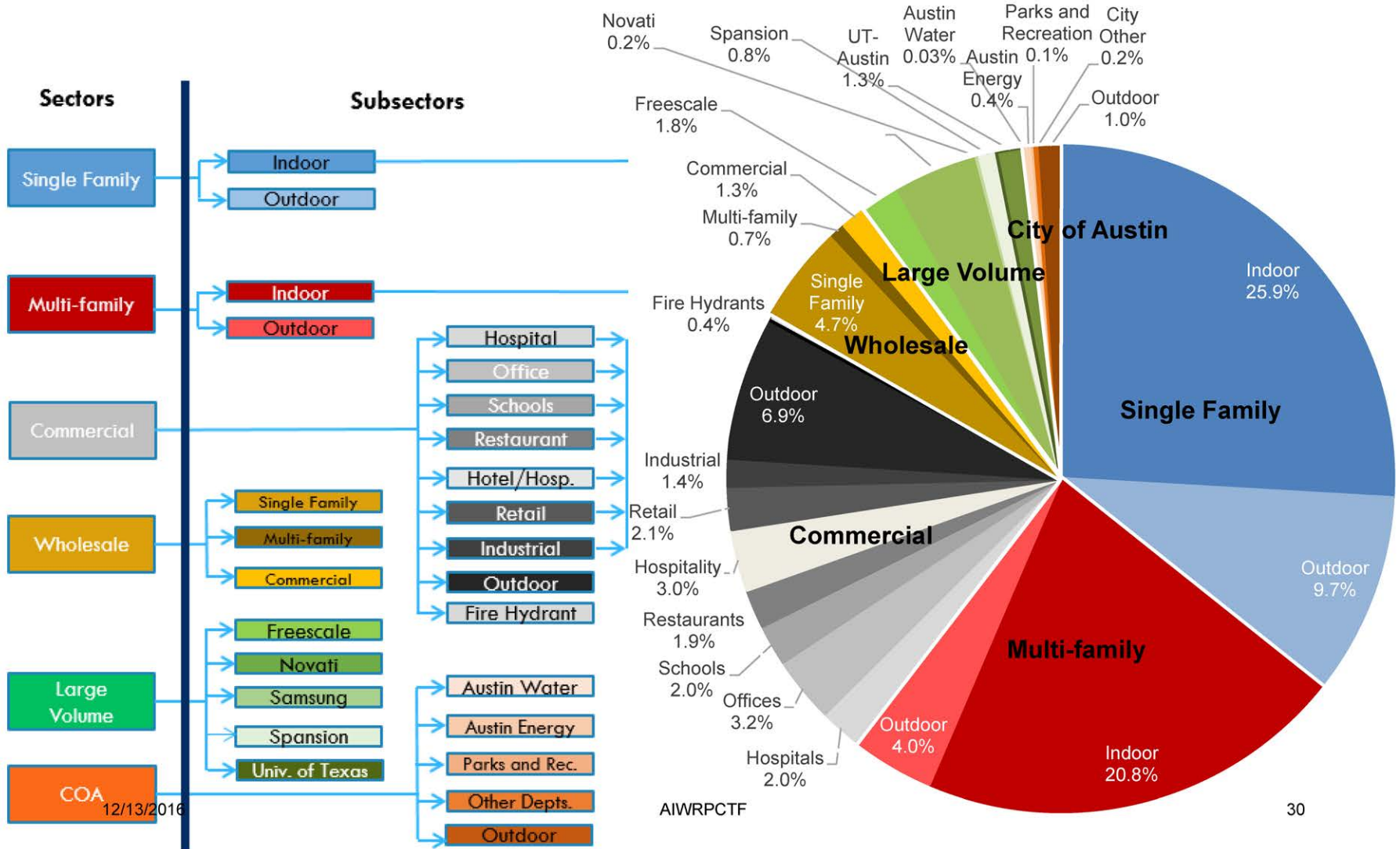
Preliminary Results From the Model



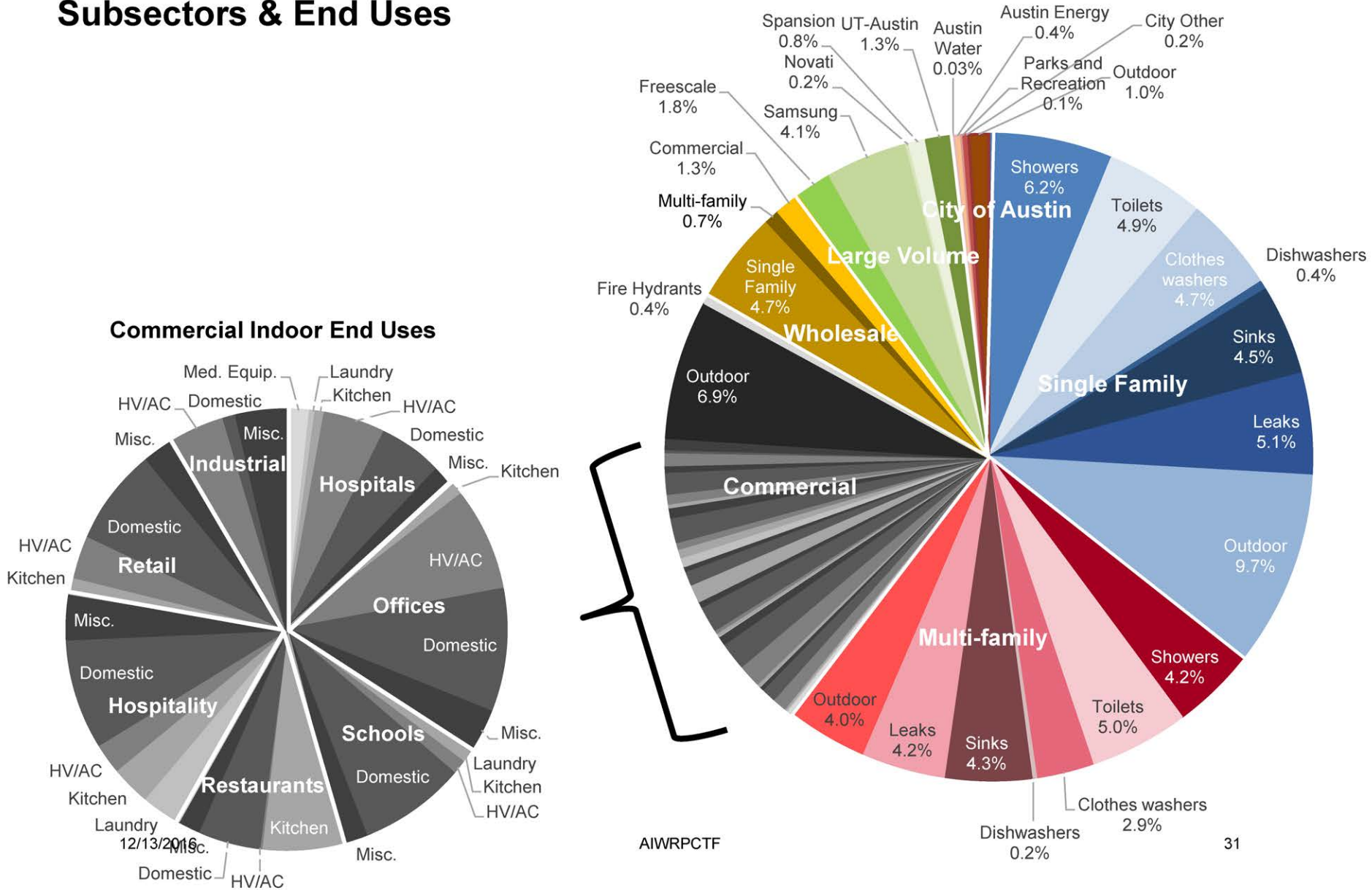
Base Year Consumption Sectors



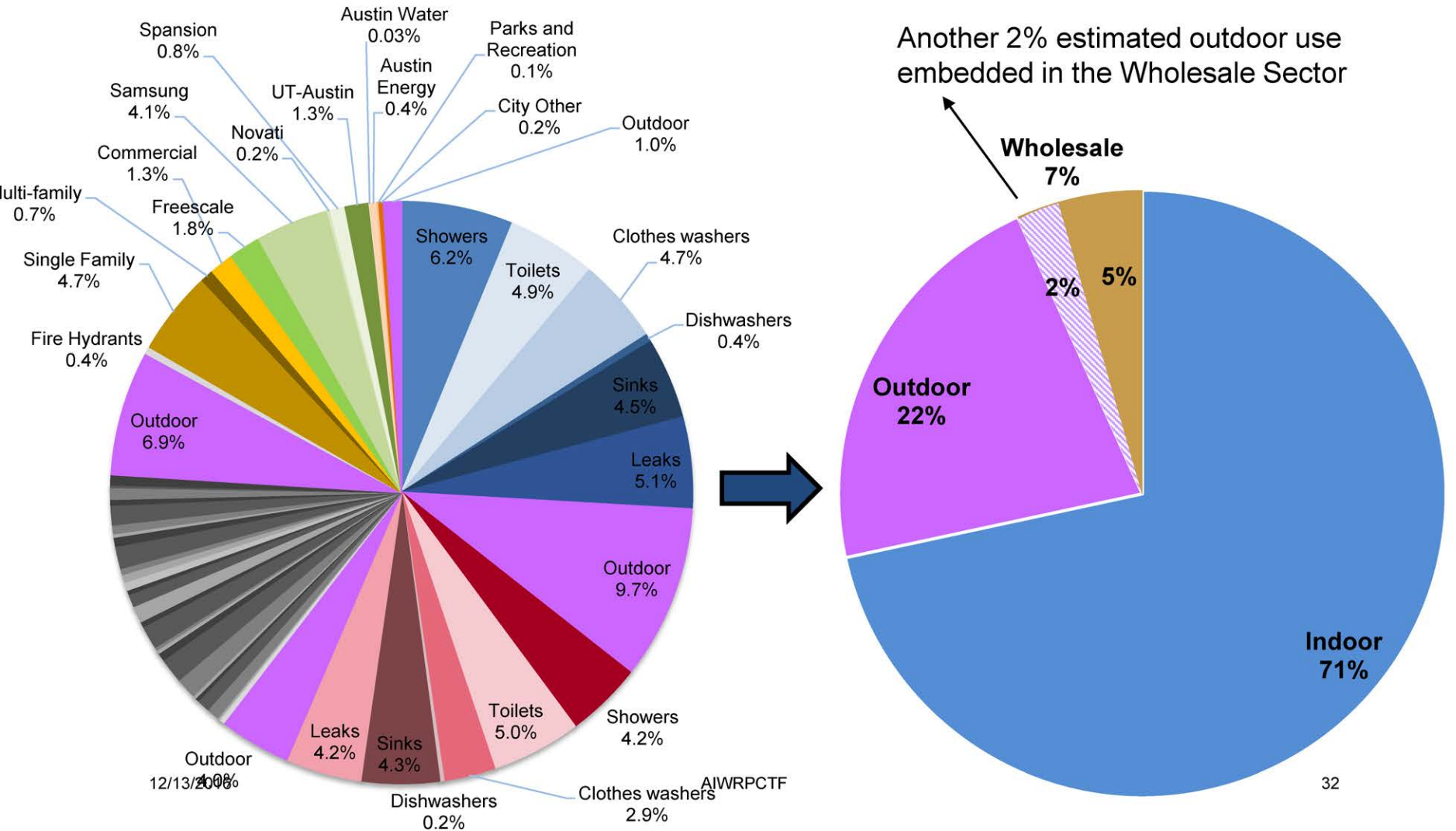
Base Year Consumption Subsectors



Base Year Consumption Subsectors & End Uses

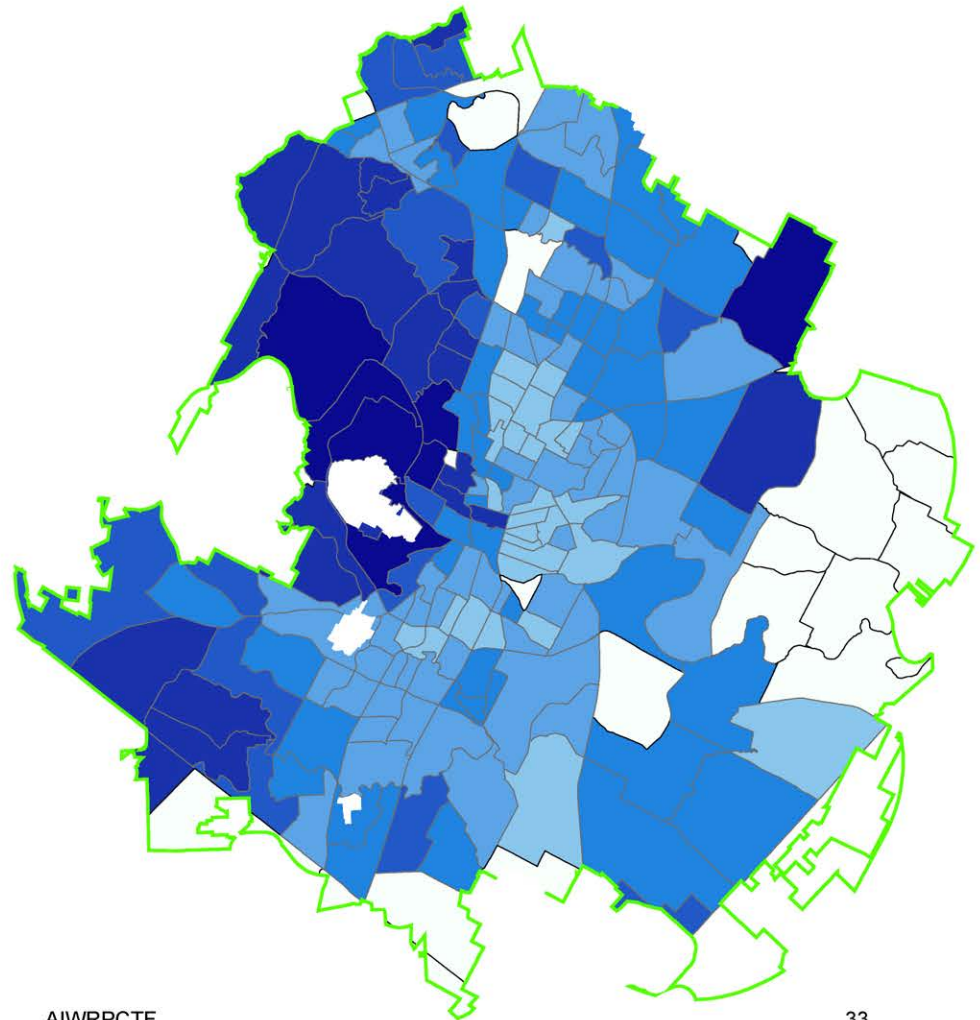
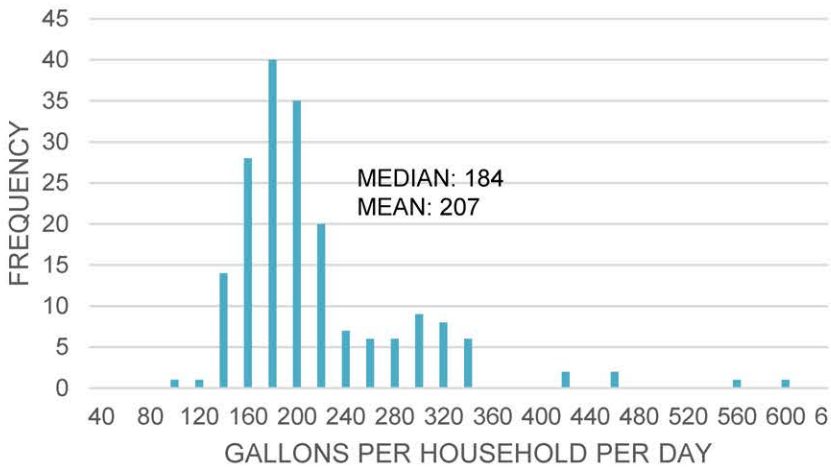


Indoor vs. Outdoor Consumption

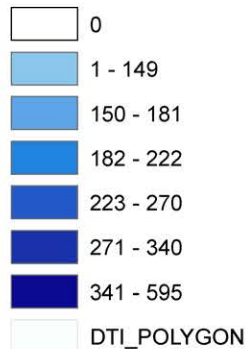


Base Year Single Family Daily Household Consumption

Single Family Daily Household Consumption



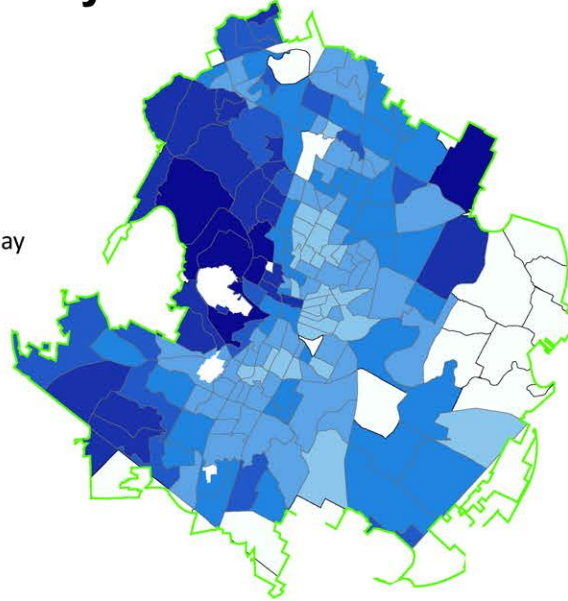
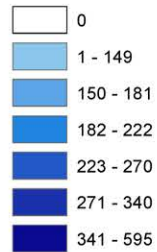
Gallons/Household/Day



Base Year Single Family Daily Household Consumption

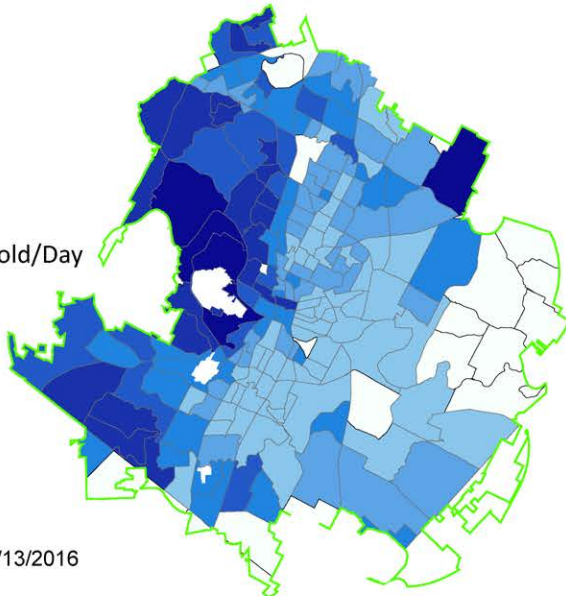
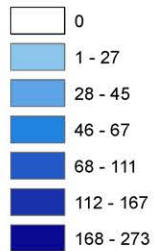
Indoor + Outdoor

Gallons/Household/Day



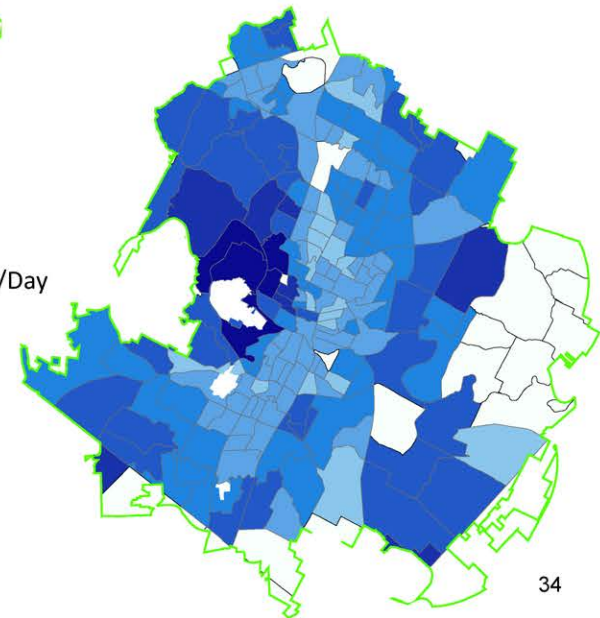
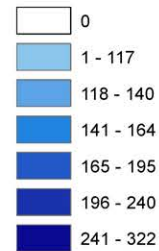
Outdoor

Gallons/Household/Day

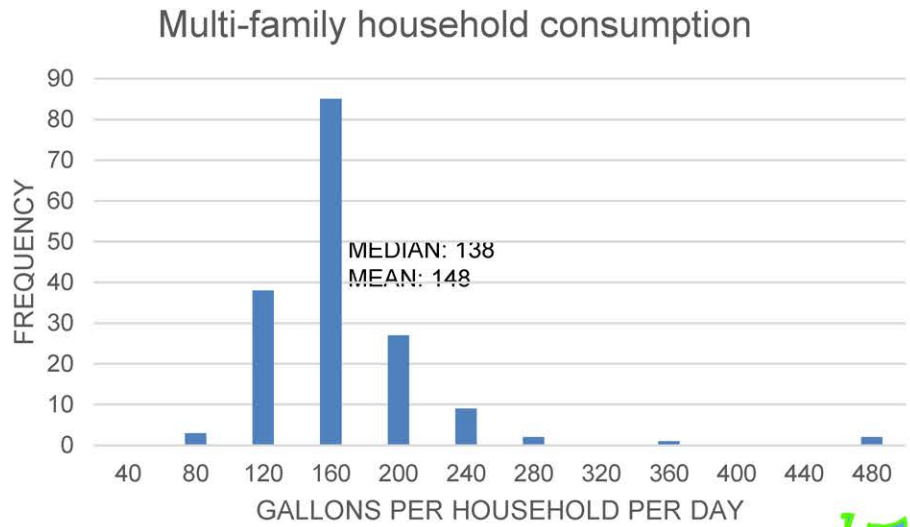


Indoor

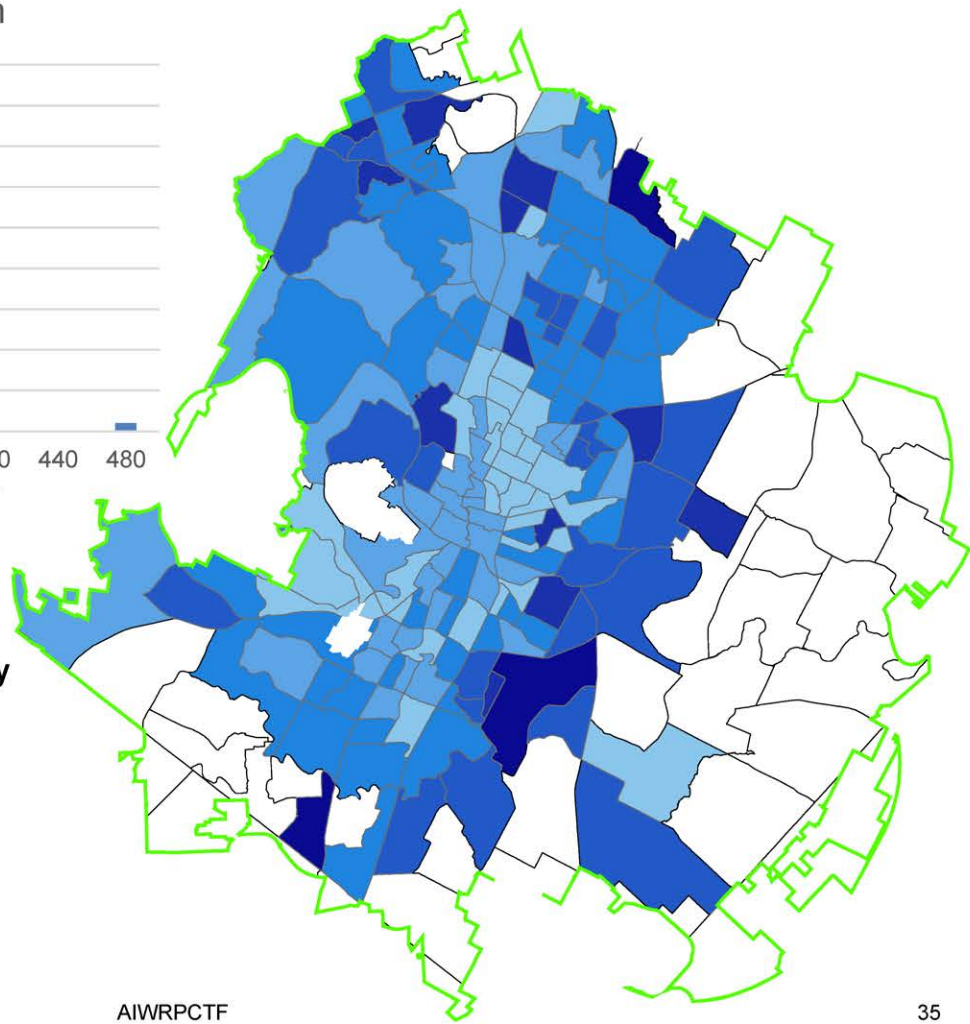
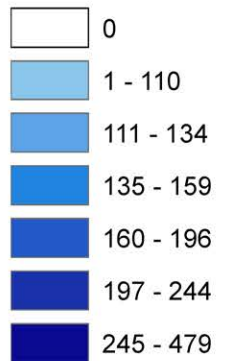
Gallons/Household/Day



Base Year Multi-Family Daily Household Consumption



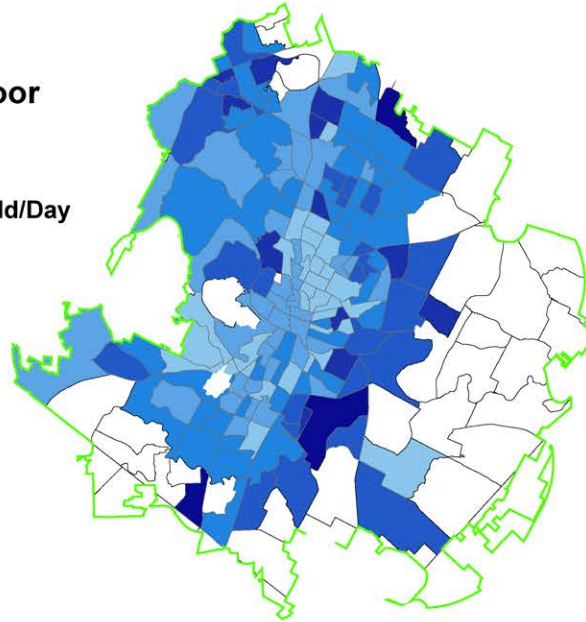
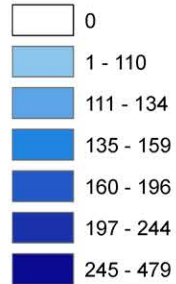
Gallons/Household/Day



Base Year Mutli-Family Daily Household Consumption

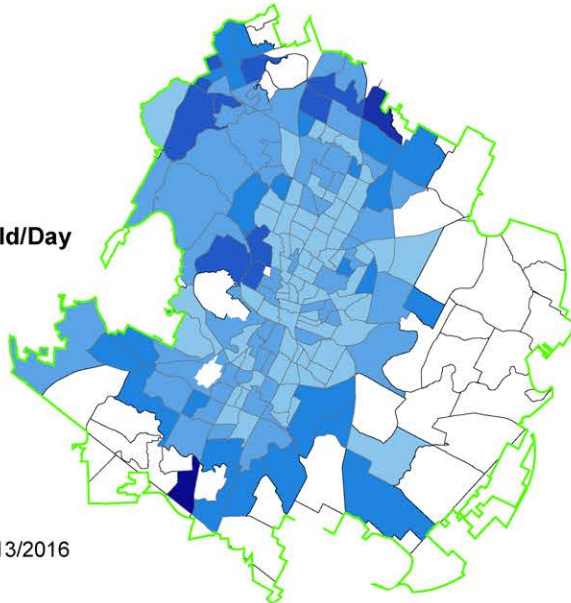
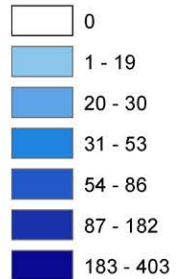
Indoor + Outdoor

Gallons/Household/Day



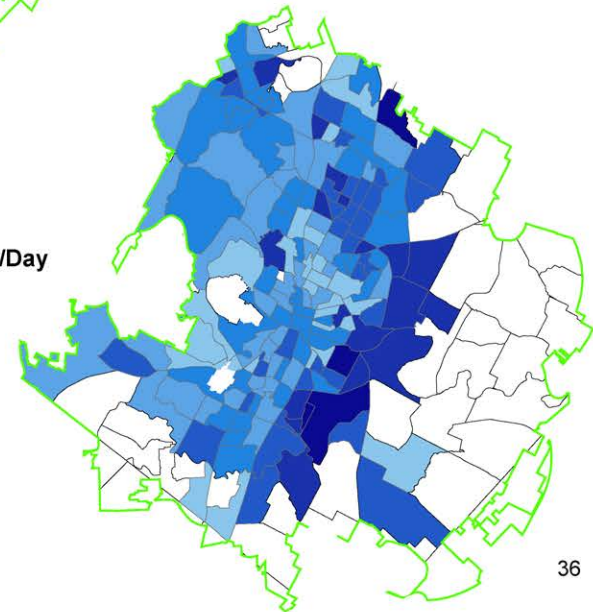
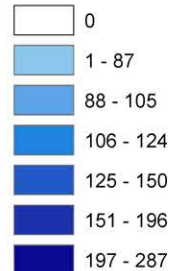
Outdoor

Gallons/Household/Day



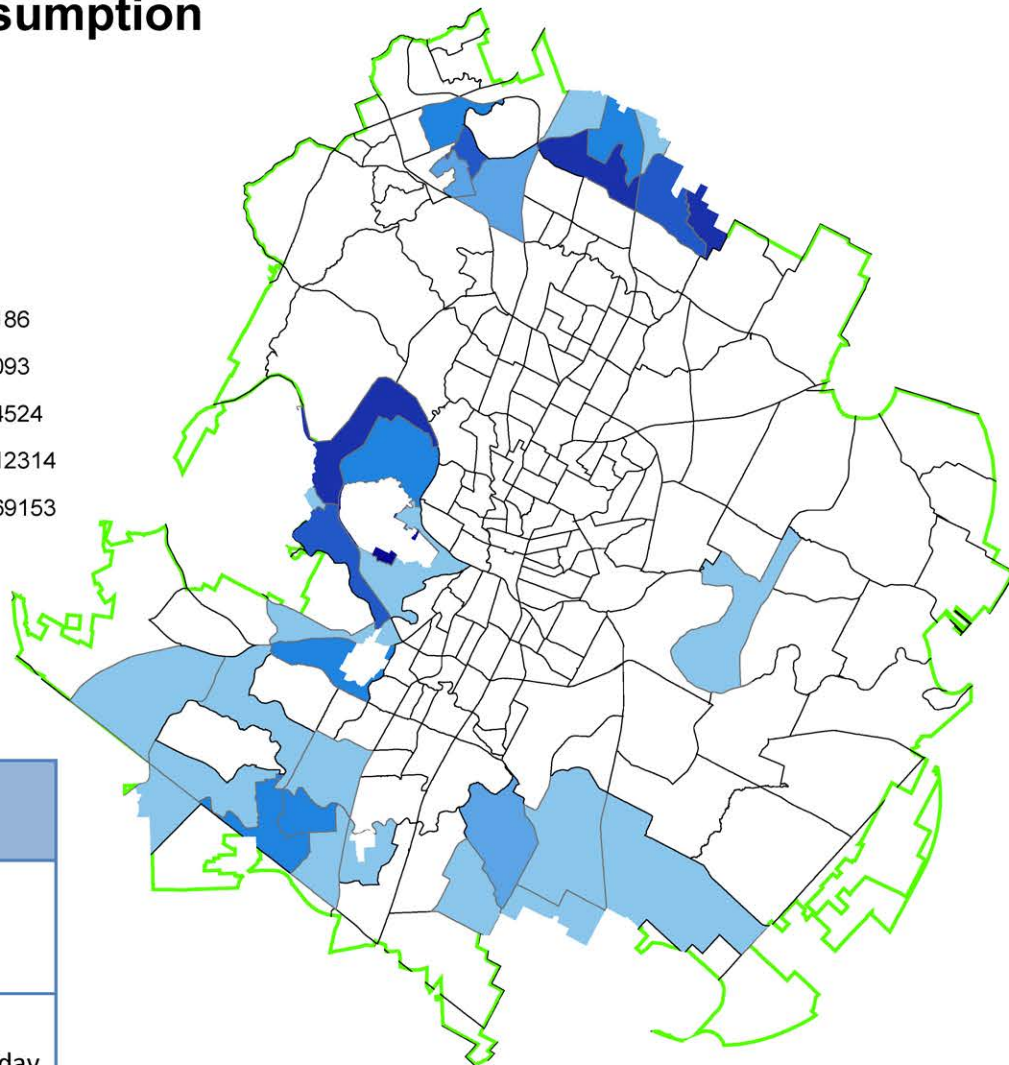
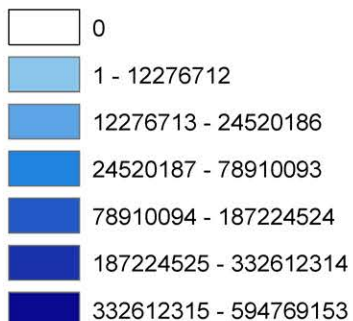
Indoor

Gallons/Household/Day



Base Year Wholesale Annual Consumption

Gallons

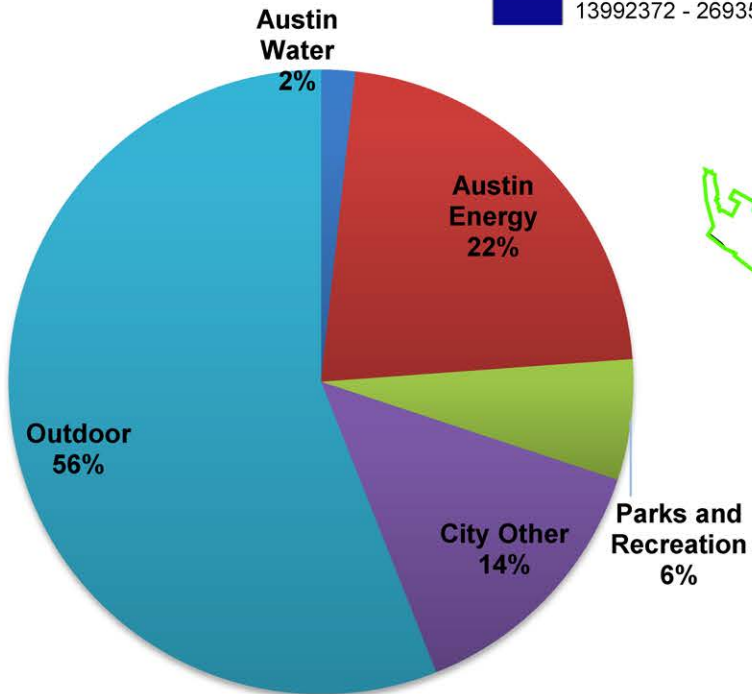
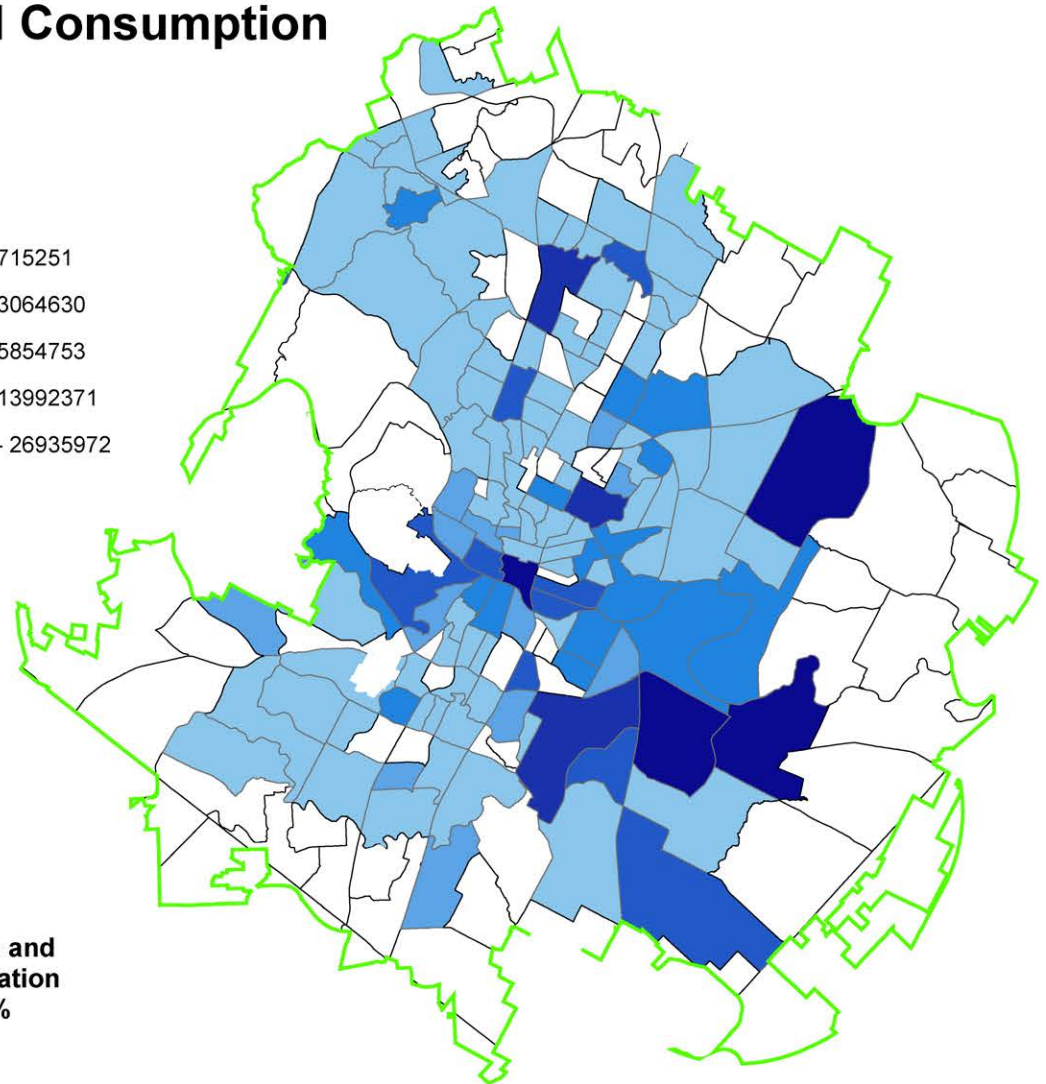
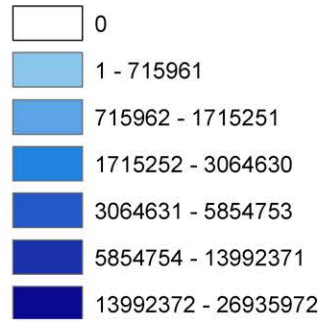


Wholesale WUFs

Wholesale WUFs		
Single Family	Multi-family	Commercial
342 Gallons/household/day	150 Gallons/household/day	313 Gallons/employee/day

Base Year City of Austin Annual Consumption

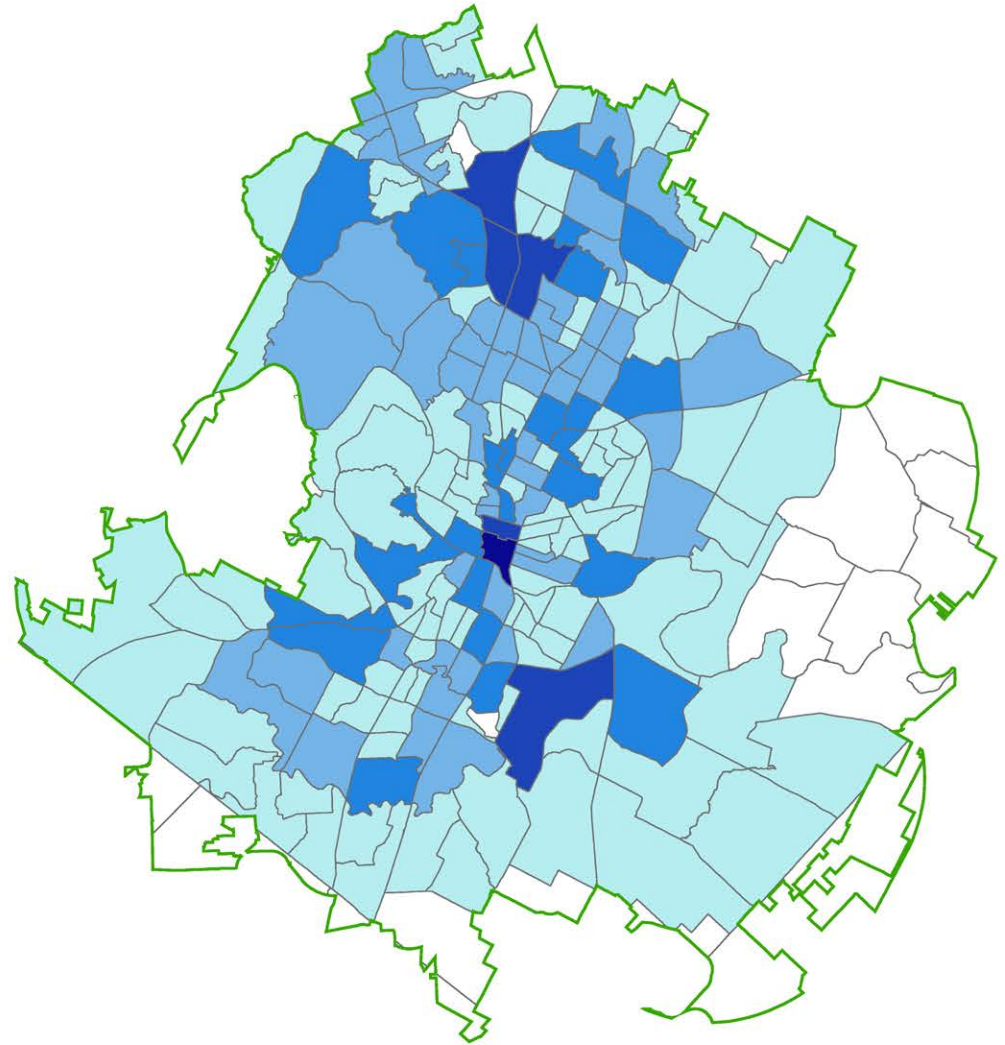
Gallons



Base Year Commercial Annual Consumption

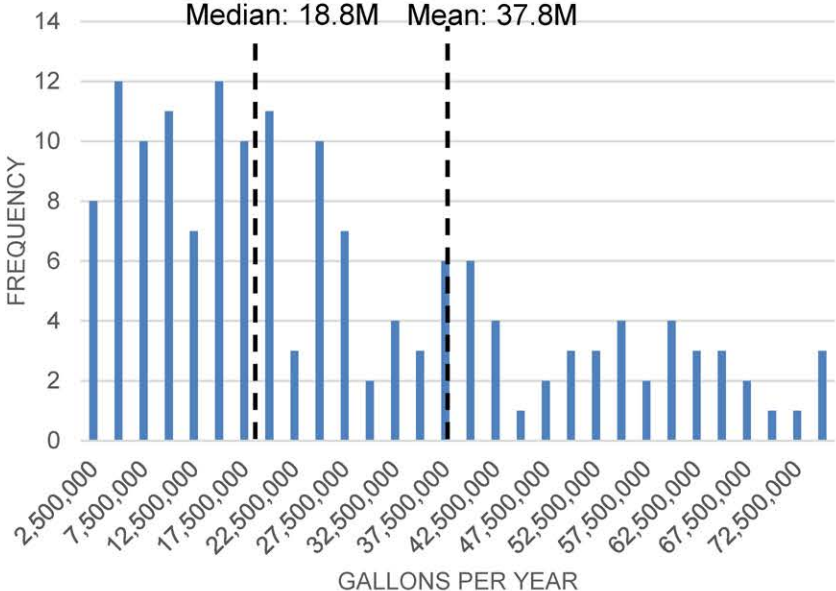
Total Consumption (Gallons/Year)

- 205,767 - 31,642,622
- 33,485,570 - 78,989,262
- 81,085,439 - 146,817,696
- 188,837,818 - 371,615,468
- 580,619,414



Annual total commercial consumption

Median: 18.8M Mean: 37.8M

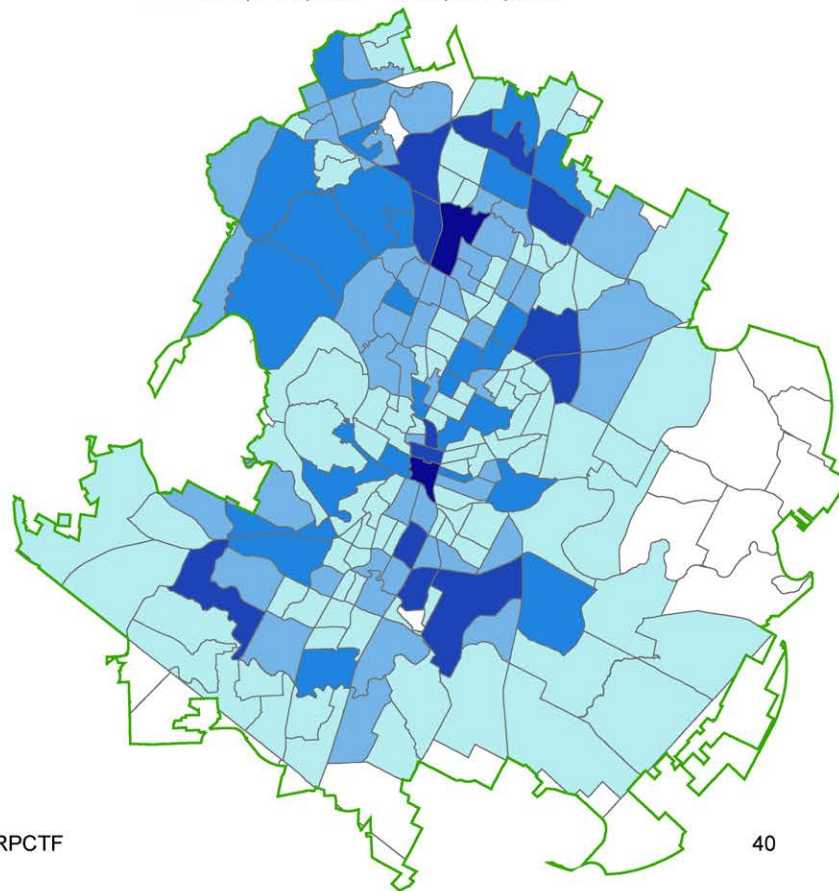
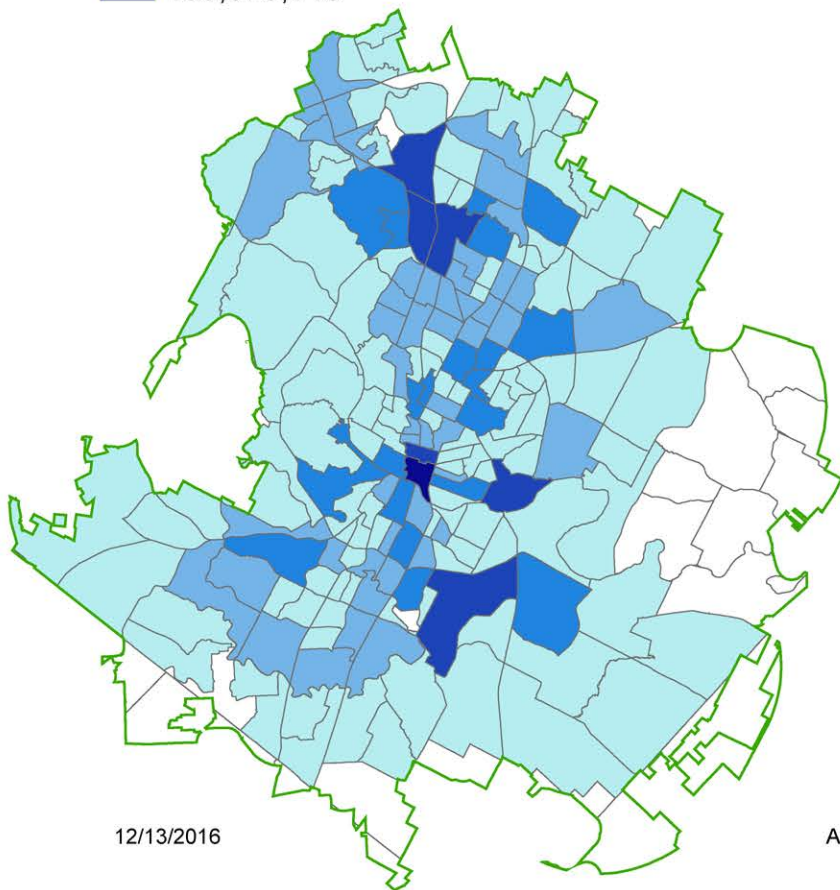


Base Year Commercial Annual Consumption

Indoor Annual Consumption (Gallons/Year)



Outdoor Annual Consumption (Gallons/Year)



Large Volume Annual Consumption

Large Volume Annual Consumption (Gallons/Year)

