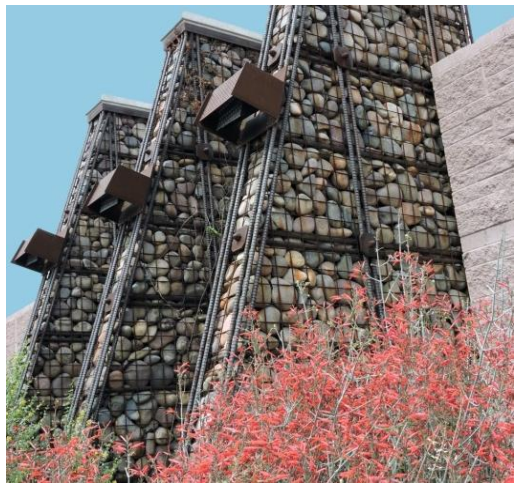
SCOTTSDALE WATER



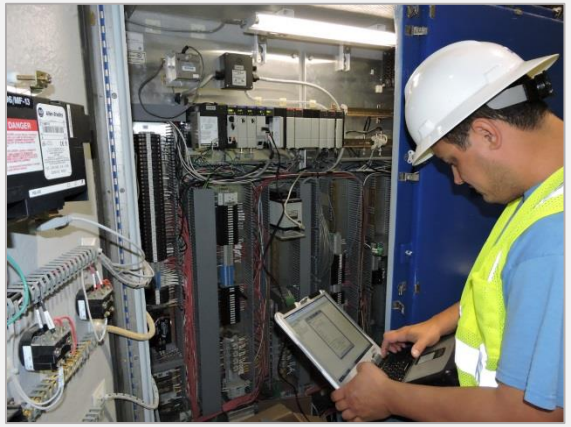




Balancing Energy and Water Efficiencies

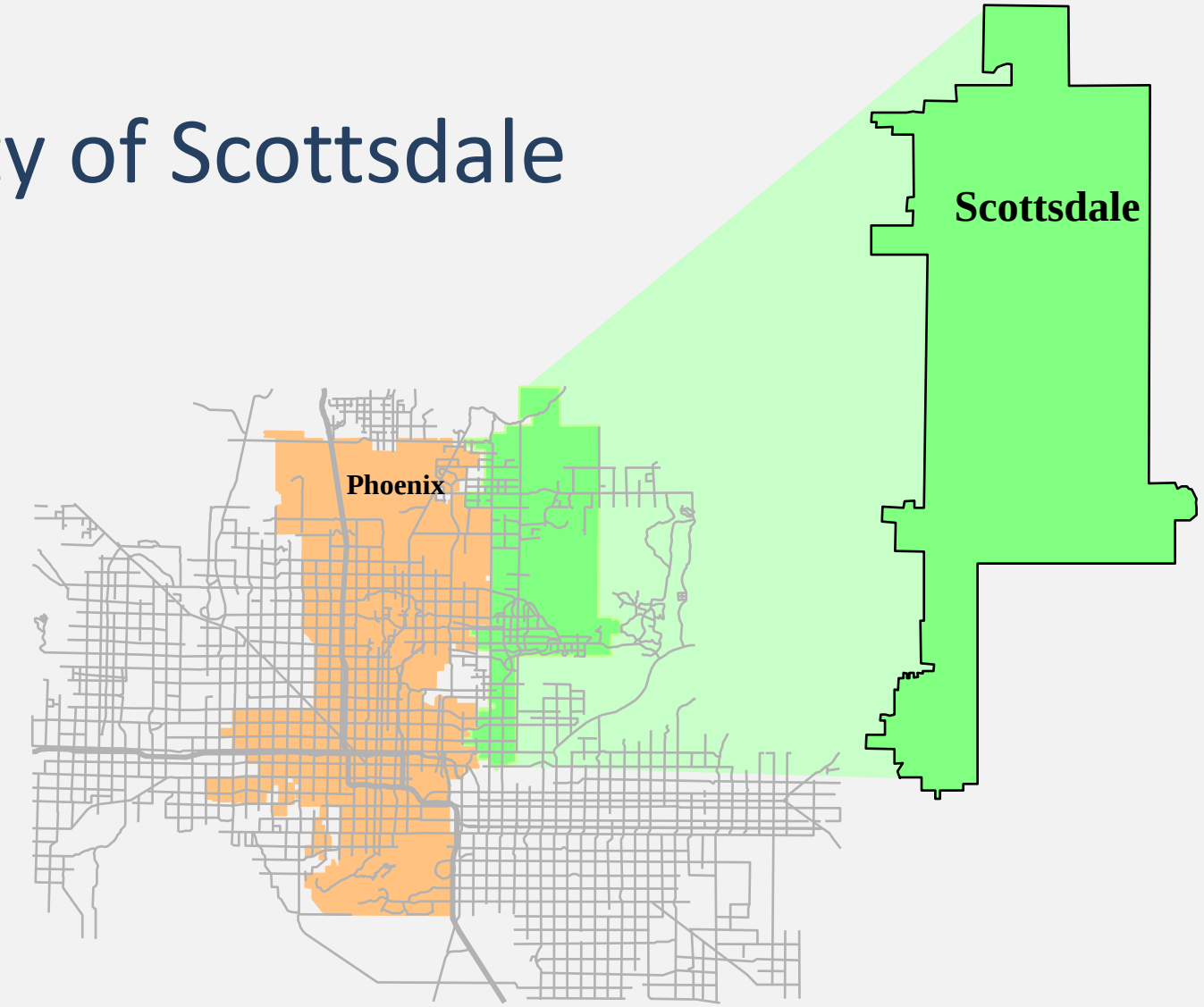
Brian K. Biesemeyer, P.E.

CITY OF SCOTTSDALE

About Scottsdale Water

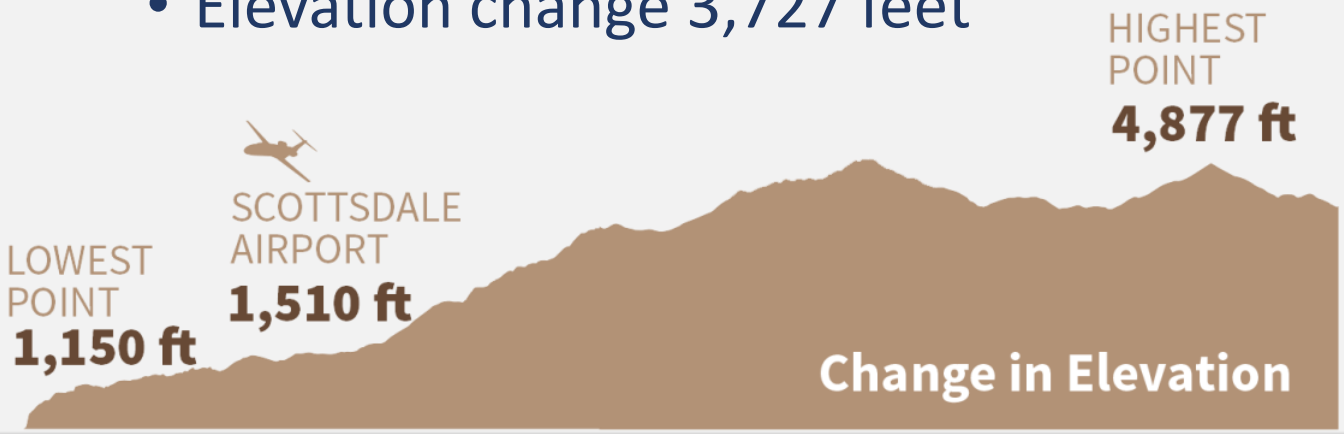


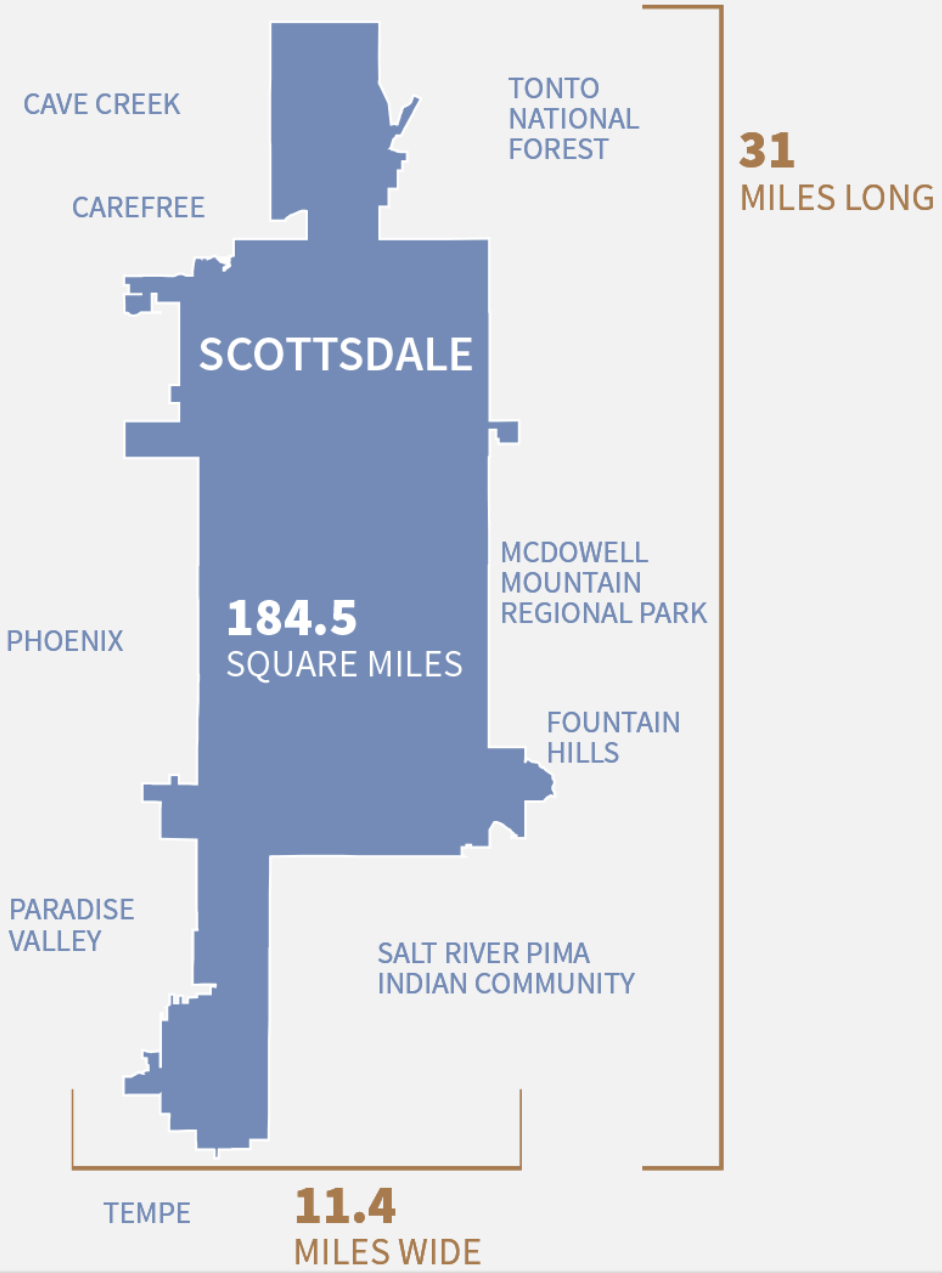
City of Scottsdale



About Scottsdale

- Population ~ 255,000
- Build Out ~ 300,000
- New Growth – North
- Redevelopment – South
- 184.5 square miles
- 31 miles long
- Elevation change 3,727 feet





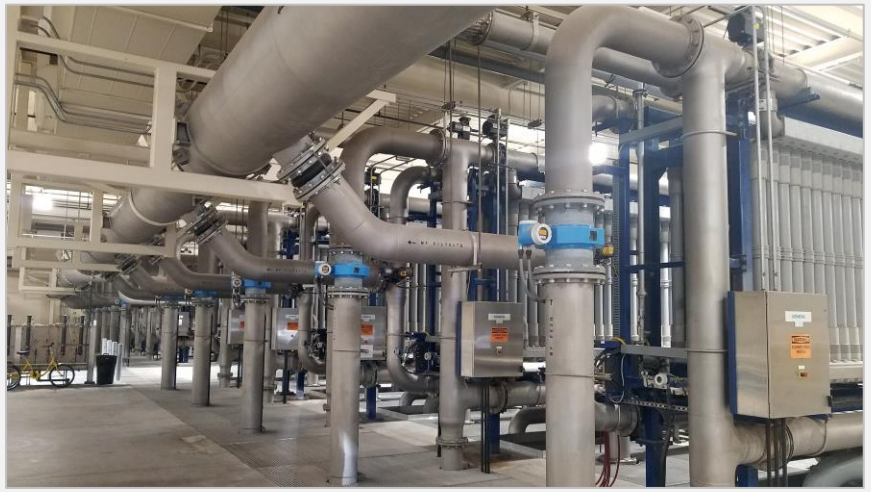
Award-winning Utility

- 2019: Sustainability Champion, Arizona Forward Environmental Excellence Crescordia Award
- 2018: Sustainable Utility Management Award, American Association of Metropolitan Water Agencies
- 2017: Public Education Program of the Year (Scottsdale Water Citizen Academy), WateReuse Association
- 2016: Utility of the Future Today, EPA and national consortium of water organizations

1969 50 2019

ARIZONA FORWARD
ENVIRONMENTAL EXCELLENCE
CRESCORDIA AWARD
2019

Sustainable Utility Management Award
Association of Metropolitan Water Agencies



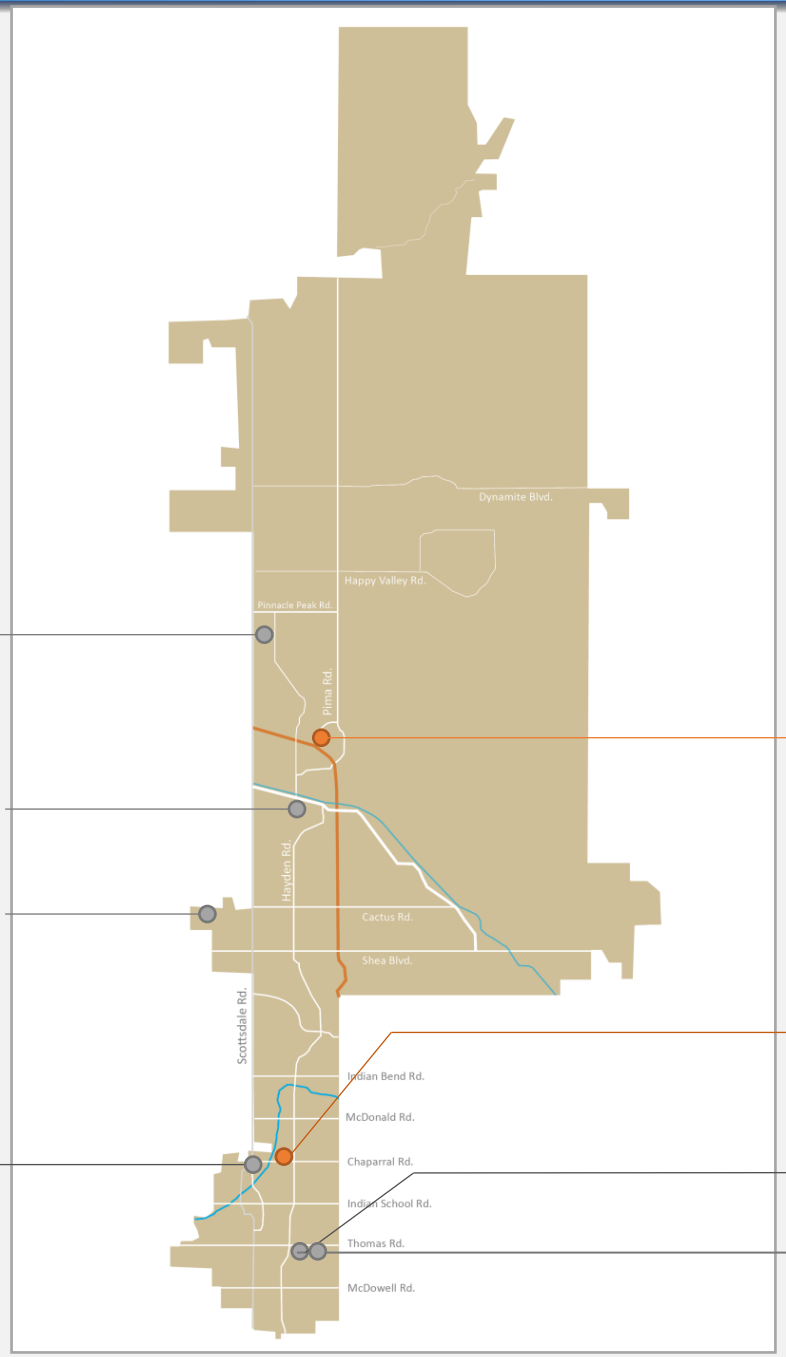
Scottsdale Water's History of Sustainable Water Practices

- Gainey Ranch Water Reclamation Facility - 1981
- Water Campus – October 1998
  - CAP Water Treatment Facility
  - Water Reclamation Plant
  - Advanced Water Treatment Facility
    - Ozone/Ultrafiltration/Reverse Osmosis/Ultraviolet Photolysis
    - Two end uses: recharge, turf irrigation
- Safe Yield 2006
- First Facility DPR Permit – September 2019

Operating Systems

- Drinking Water System:
  - CAP WTP (Water Campus)– 70 MGD (combined traditional treatment 50 mgd with membrane treatment 20 mgd and GAC)
  - Chaparral WTP (SRP Water) – 30 mgd (submerged membrane system)
  - 3 Arsenic Treatment Plants
  - 2 Superfund Treatment facilities (air stripping and GAC)
  - 1 Groundwater Treatment facility (underconstruction)
  - 16 wells
  - 21 booster station
  - 43 reservoirs

Drinking Water Treatment Facilities



Arsenic Treatment Facility 115

Arsenic Treatment Facility 7

Arsenic Treatment Facility 32

North Groundwater Treatment Facility (4 mgd)

CAP Water Treatment Plant (70 MGD)

Chaparral Water Treatment Plant (27 MGD)

Central Groundwater Treatment Facility (12 MGD)

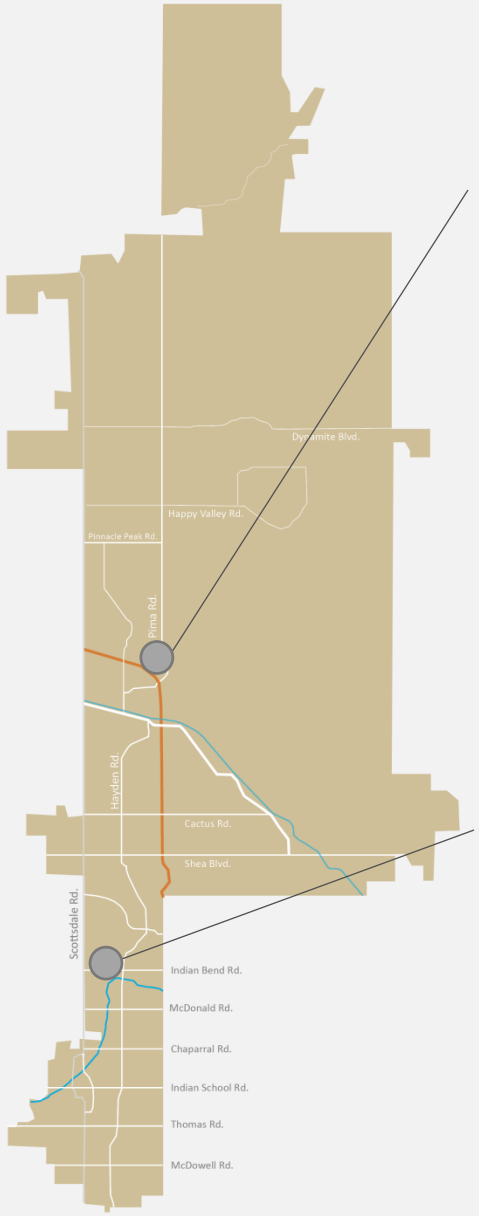
Thomas Groundwater Treatment Facility (online 2021)

SCOTTSDALE WATER

Operating Systems (continued)

- Water Reclamation
  - SROG connection (20 mgd)
  - Water Campus Reclamation Facility (20 mgd)
  - Water Campus Advance Water Treatment Facility (20 mgd)
  - 5 Pump Back Stations
  - Gainey Ranch Water Reclamation Facility (1.8 mgd)
  - 33 Lift Stations

Water Reclamation Facilities



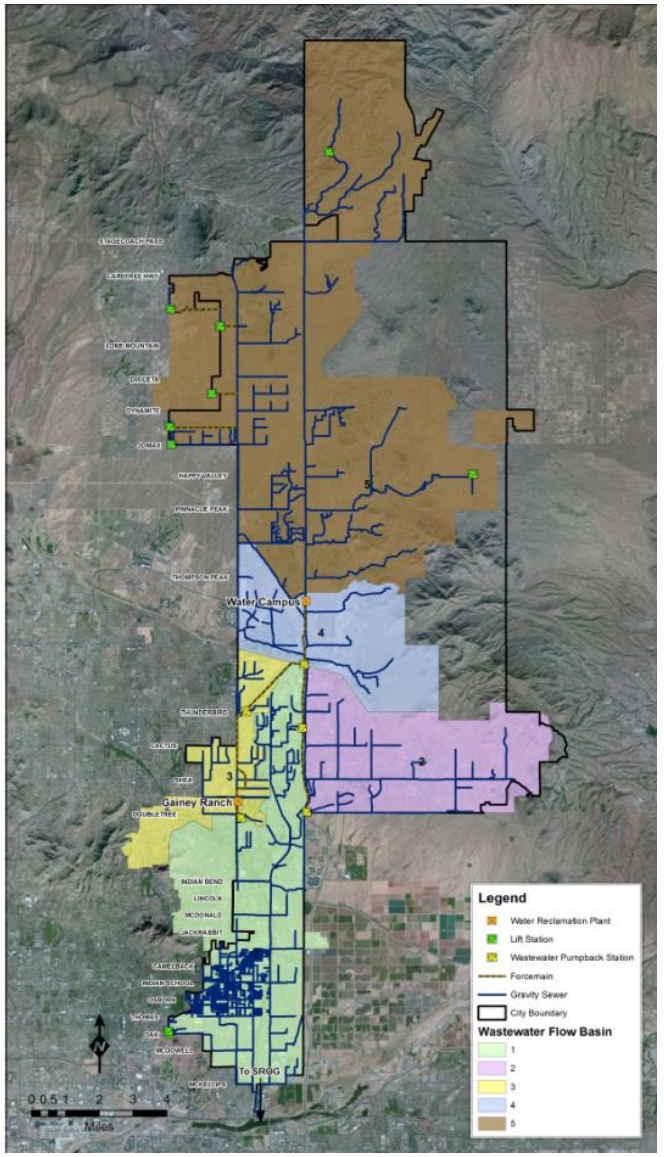
Water Campus

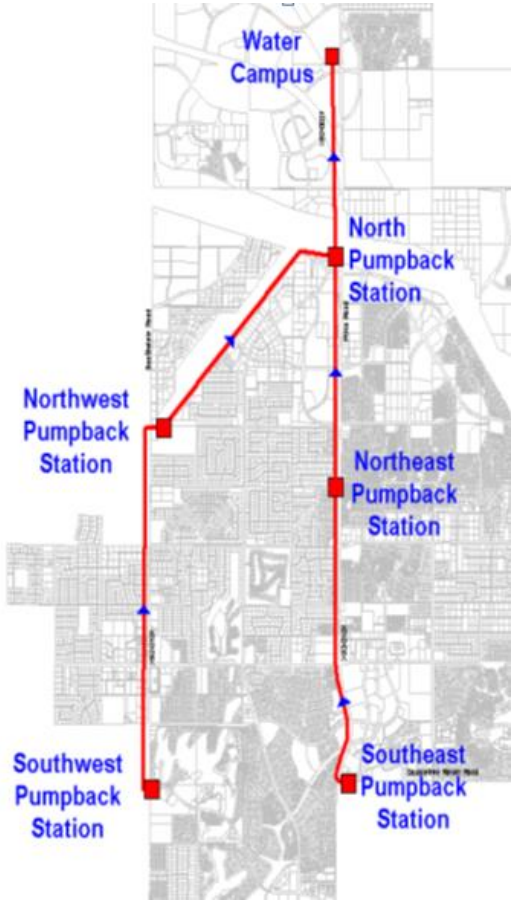
- Water Reclamation Plant – 20 mgd
- Advanced Water Treatment Plant – 20 mgd

Gainey Ranch WRP – 2 mgd

SCOTTSDALE WATER

Pumpback System





SCOTTSDALE WATER

Operating Systems (continued)

- Reclaimed Water Distribution System
  - 23 Golf Course
  - 14 miles of distribution system
  - 4 booster stations

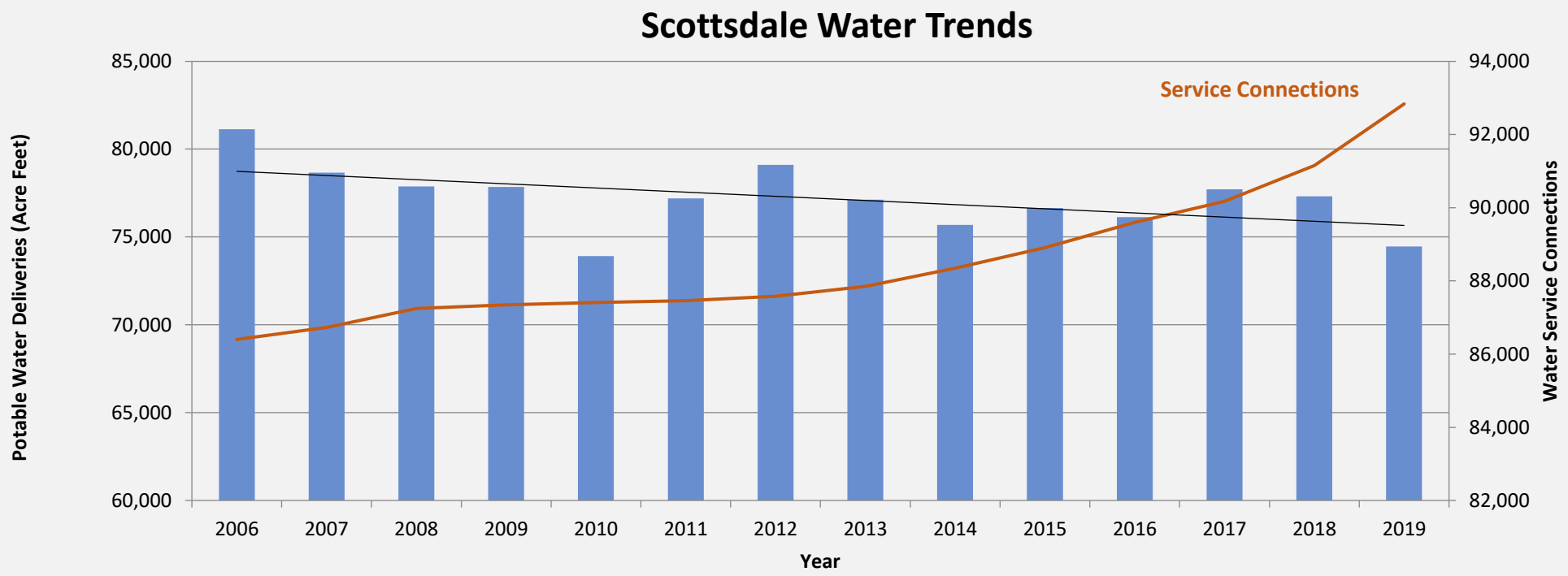
- Recharge Operations
  - 61 vadose zone wells (Water Campus)
  - 2 ASR wells
  - Westworld and Desert Mountain Recharge sites

Scottsdale's Energy and Water Efficiency Efforts

- Optimization Control Room
  - Staffed 24-7-365 with experienced operators
  - Responsible for:
    - Water deliveries (including water balancing)
    - Optimizing Energy
    - Repair and maintenance scheduling
    - Communications hub

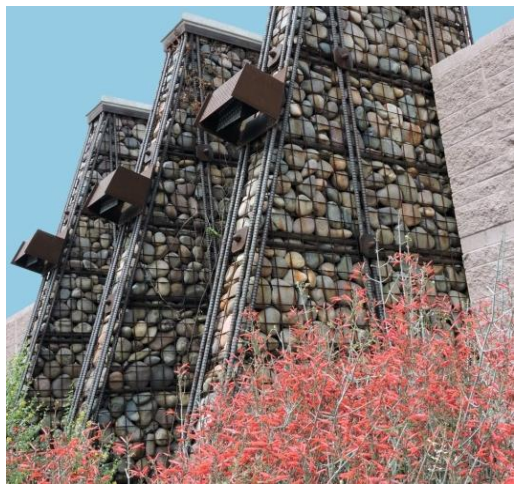
Scottsdale's Energy and Water Efficiency Efforts

- Hoover Dam Power Allocation
  - 2.371 MW
  - 28% of our Water Campus energy requirements
- Peak Solutions Demand Response Program
  - In 2020 over 5 days saved over 16,000 kW at peak periods
  - Over the previous eight years of participating, received rebate checks of over $1.0 Million
- Non-Revenue Water/Water Conservation


Scottsdale Water Trends
Potable Water Deliveries (Acre Feet)
85,000
80,000
75,000
70,000
65,000
60,000
94,000
92,000
90,000
88,000
86,000
84,000
82,000
Water Service Connections
Service Connections
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Year

Questions?




SCOTTSDALE WATER

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