



WATER ENTERPRISE PLAN (WEP) REASSESSMENT



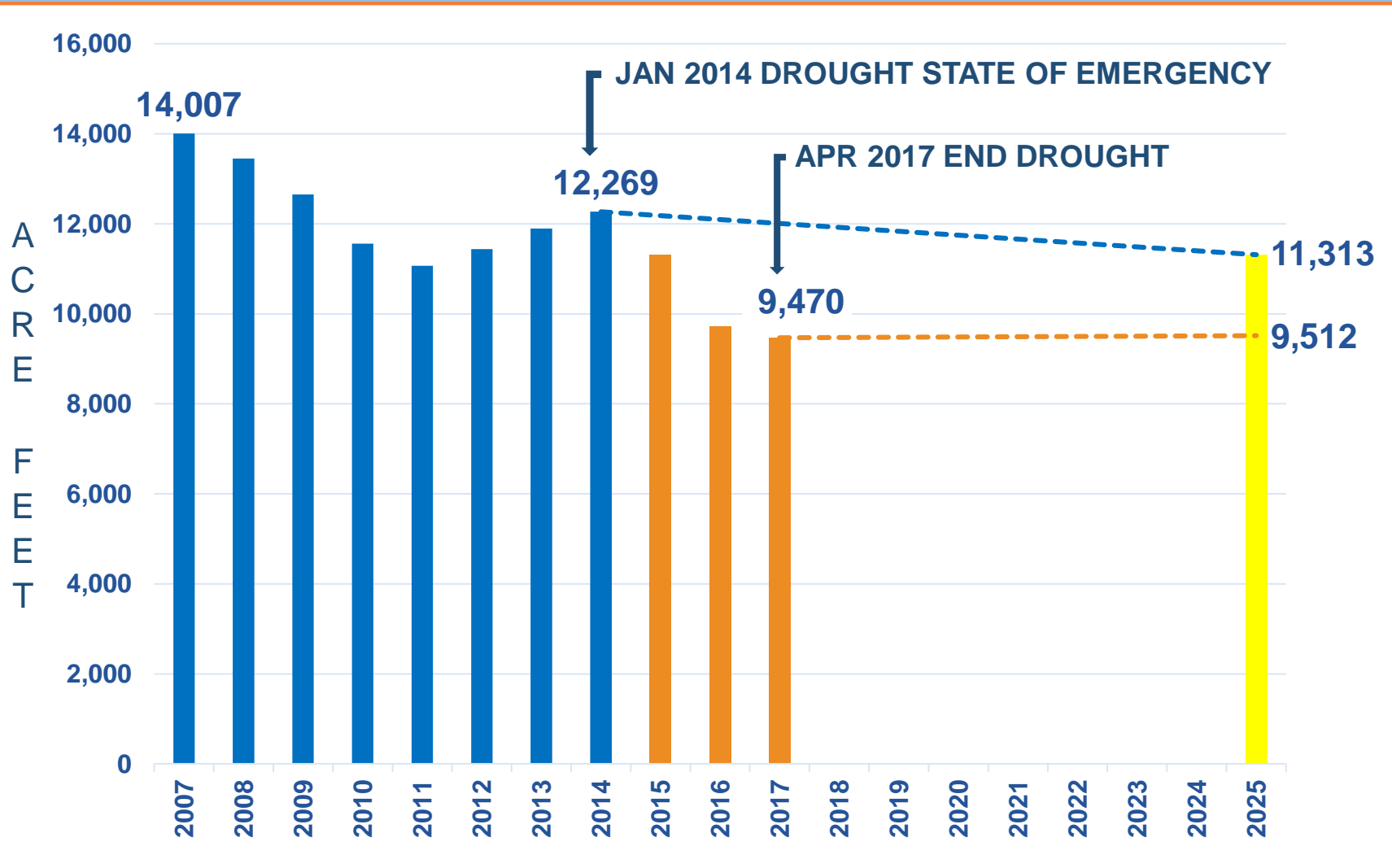
City of Beverly Hills
Public Works Commission

October 12, 2017

BACKGROUND

- City adopted 2015 WEP to enhance water supply portfolio
- Since then, the following has occurred:
 - Water conservation exceeded expectations
 - La Brea Groundwater PDR prepared
 - Drilled and tested Maple Yard wells
 - Existing Hollywood Basin wells - unexpected water quality
 - LA proposing new satellite WRF near Beverly Hills
 - Progress on Huntington Beach Desalination Project

WATER CONSERVATION

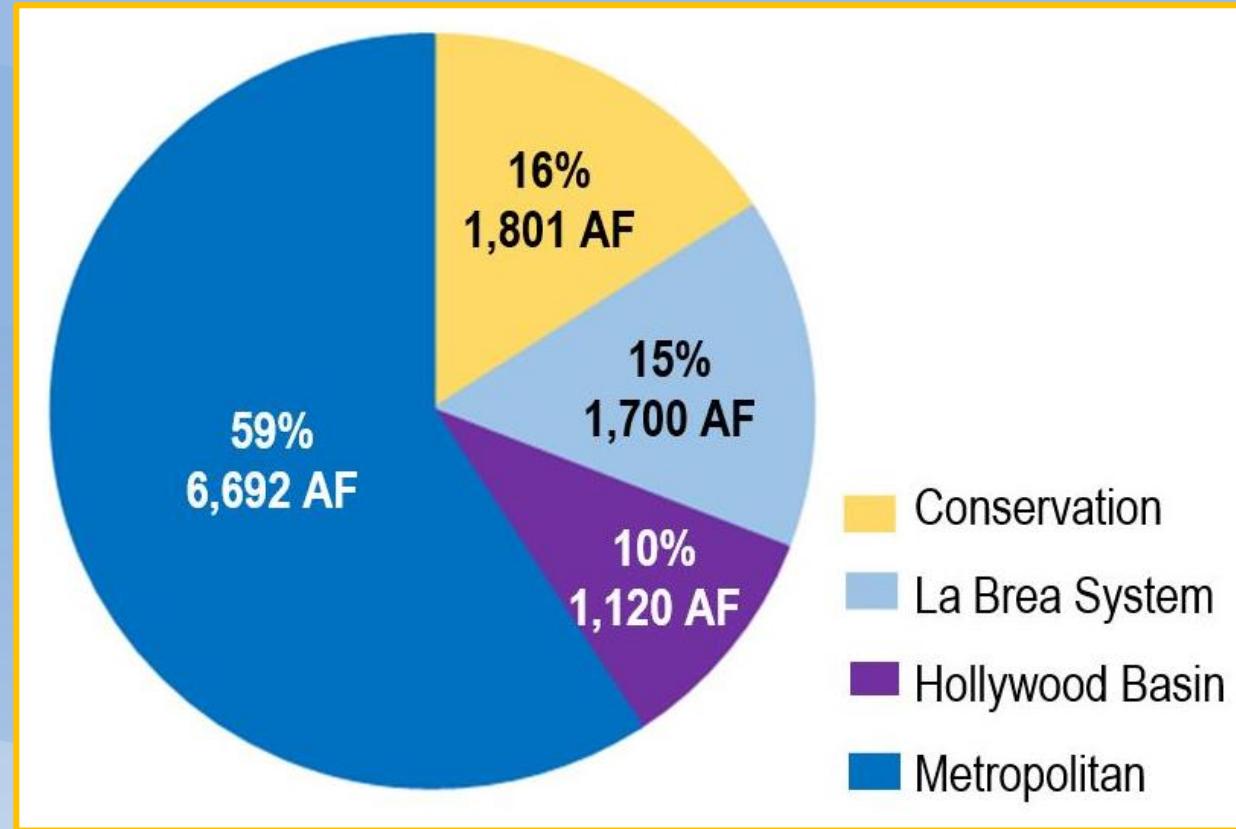


- More cost effective than any equivalent supply source in WEP
- City demand decreased by 2,799 AFY (2014 to 2017) and 1,801 AFY (vs. WEP projection)

WATER CONSERVATION AS A SUPPLY

- FY 2014 – FY 2017: Demand Reduced 2,799 AF at cost of \$590/AFY
- FY 2025 reduction now projected 1,801 AFY less than in 2015 WEP
- FY 2025 Costs:

	Capital Costs	Unit Cost
La Brea (1,700 AFY)	\$61M	\$2,913/AF
Metropolitan	---	\$1,422/AF
Water Conservation	---	\$235/AF



METROPOLITAN IMPORTED WATER

- City's most reliable and cost-effective supply
- SWP, Colorado River, storage, transfers, exchanges, water banking
- Met declared WSAP (15% reduction) April 2015
- Only second time Met has put WSAP in place
- Drought ended in April 2017 & WSAP lifted
- City has preferential rights of 11,800 AFY for priority Met deliveries

LOCAL WATER SUPPLY

- Provides some Met independence & increased supply reliability
- Met pipelines/facilities in high seismic areas across the State
- Met's facilities potentially out 1 to 6 months in "Extreme Event"
- Local supply is emergency water if Met outage or severely reduced supply
- Local water supply (in order of most local):
 1. Hollywood Basin groundwater
 2. Cabrillo shallow groundwater
 3. La Brea groundwater
 4. LASAN recycled water
 5. Huntington Beach desalinated water

CITY GROUNDWATER 2015 WEP RECOMMENDATION

- Continue Hollywood Basin treated groundwater system
- Develop 2 shallow Hollywood Basin Wells (Maple Yard Wells)
- Develop La Brea treated groundwater supply system
- Refurbish treatment plant & expand to treat La Brea supply
- Additional wells in Hollywood Basin instead of La Brea was not recommended due to higher cost

CITY GROUNDWATER 2017 REASSESSMENT

Since 2015 WEP prepared:

- Changed groundwater quality of existing wells
- Maple Yard wells drilled & tested
- Pre-treatment now recommended for all groundwater
- PDR estimated La Brea at \$61M (FY 2025 dollars)
- 2015 WEP estimate was \$38M (range of \$27M to \$57M)
- Alternative Hollywood wells still higher cost at \$71M
- La Brea system still recommended over expanded Hollywood Basin system

RECYCLED WATER

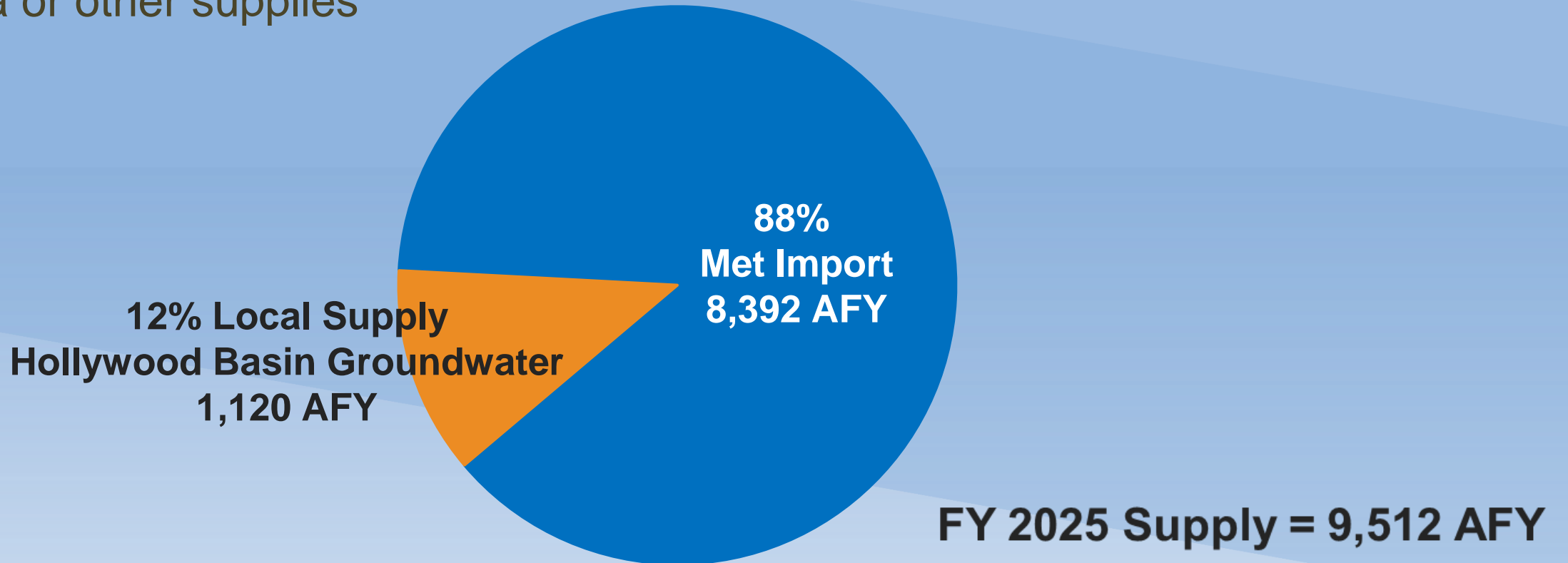
- In 2015 WEP, potential City recycled water was uncertain
- LASAN now proposing satellite WRF at Rancho Park Golf Course
 - Site identified in EWMP – could get stormwater quality credit
- LASAN estimates plant could be on-line by 2022 or 2023
- Study is needed to determine City demands & costs
- Costs could be \$2,000 to \$4,000/AF (purchase, convey, & retrofit sites)
- Potentially, the recycled water system could connect with Cabrillo shallow GW system to share infrastructure

DESALINATED WATER

- Desalination plant planned at Huntington Beach (HBDP)
- Poseidon to build/operate plant & OCWD to build/operate distribution system
- OCWD estimates plant conceivably on-line by 2022
- Receive imported water in lieu of desal water as a paper exchange - Normally
- Receive desal water from HBDP in Met emergency or WSAP
- Cost could be \$1,500 to \$3,000/AF depending on availability of subsidies

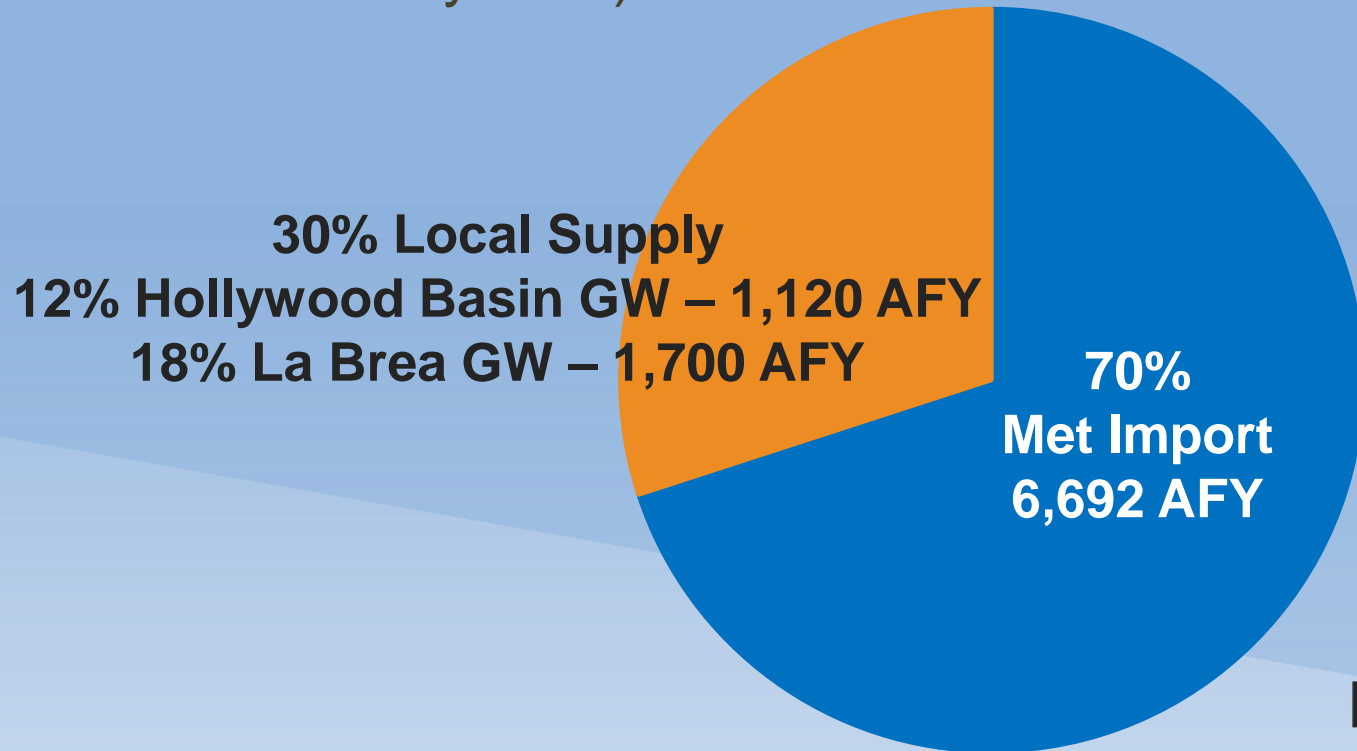
WEP REASSESSMENT ALTERNATIVE 1

Utilize imported water for 88% of FY 2025 supply and utilize existing Hollywood Basin Groundwater (existing and Maple Yard Wells) for 12% of supply, i.e. no La Brea or other supplies



WEP REASSESSMENT ALTERNATIVE 2

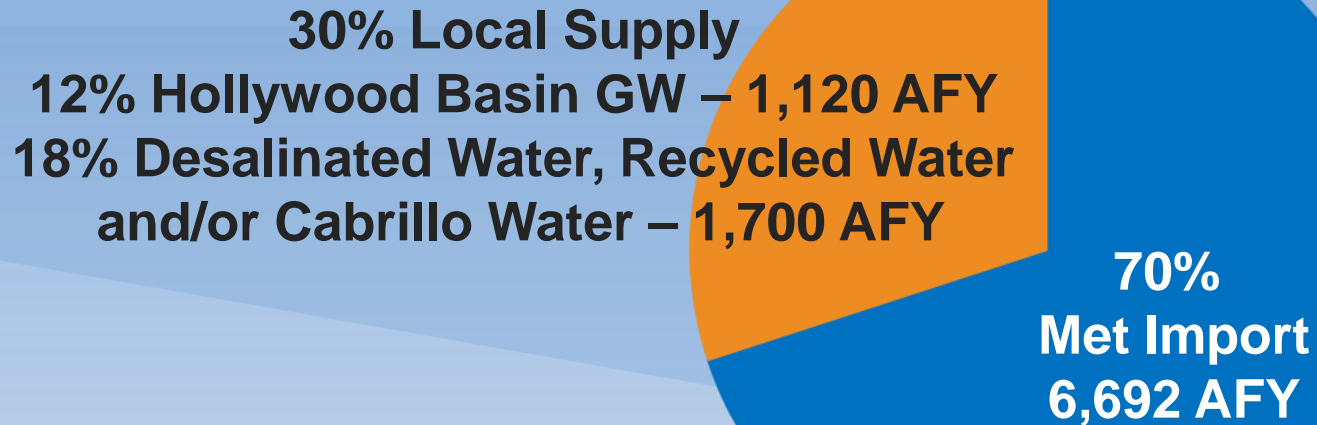
Proceed with La Brea system. Utilize imported water for 70% of FY 2025 supply and utilize local groundwater for 30% of supply (12% from Hollywood Basin and 18% from La Brea system).



FY 2025 Supply = 9,512 AFY

WEP REASSESSMENT ALTERNATIVE 3

Delay La Brea system to see if other potential local water supplies (desal, recycled water, Cabrillo) are more effective than La Brea; if more effective, then implement these supplies instead of La Brea. May not be capable of delivering 30%.



FY 2025 Supply = 9,512 AFY

RECOMMENDATION

- Proceed with La Brea system due to cost uncertainty of other potential local supplies and lower supply potential of recycled water and Cabrillo
- Potentially implement one or more of other local supplies in the future in addition to La Brea (if supply can also be cost effective relative to imported water supply)

WEP REASSESSMENT



has
Answers!

CABRILLO SHALLOW GROUNDWATER

- Shallow groundwater at Coldwater Canyon identified as potential City water supply
- Infrastructure to capture, store (new reservoir) & convey groundwater to 6 large irrigation sites = \$10.3 M (2017 capital cost)
- Supply is approximately 100 AFY at unit cost of \$6,375/AF

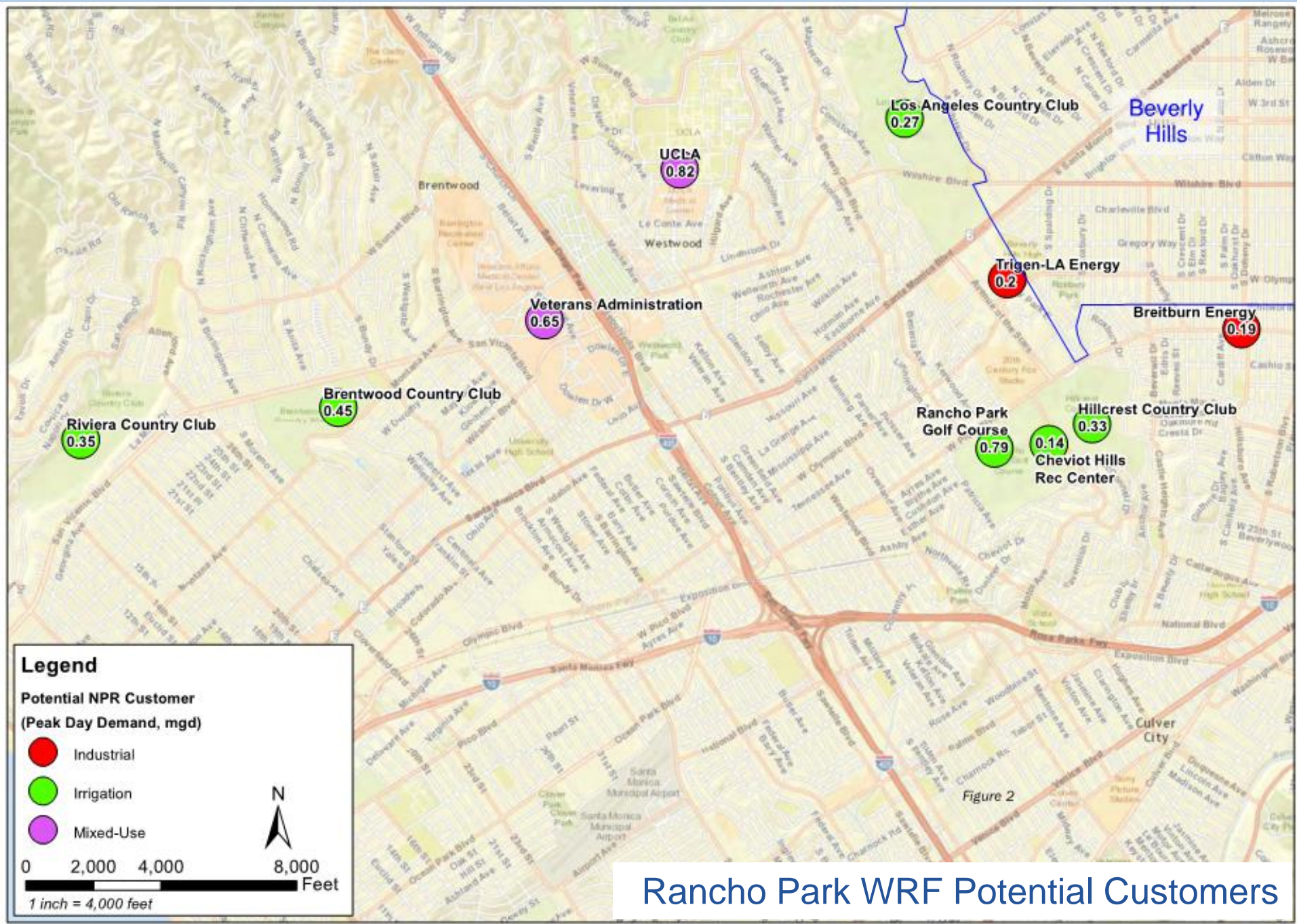


Figure 2

Rancho Park WRF Potential Customers