



# 2019 Field Operations Year in Review

**Liquid Assets Review:**  
**from Source to Course**

# Source

## Granlees Pumping & Diversion Station

- 2018-2019 Pumping Season: 2,262 Ac. ft. (744.06 million gallons “MG”) pumped  
Started filling on Nov. 21, 2017.
- **2019-2020 Pumping Season:** 233.52 Ac. ft. (99.1 MG) pumped *so far* this **SEASON** (as of 2/4/20; began pumping December 13, 2019)

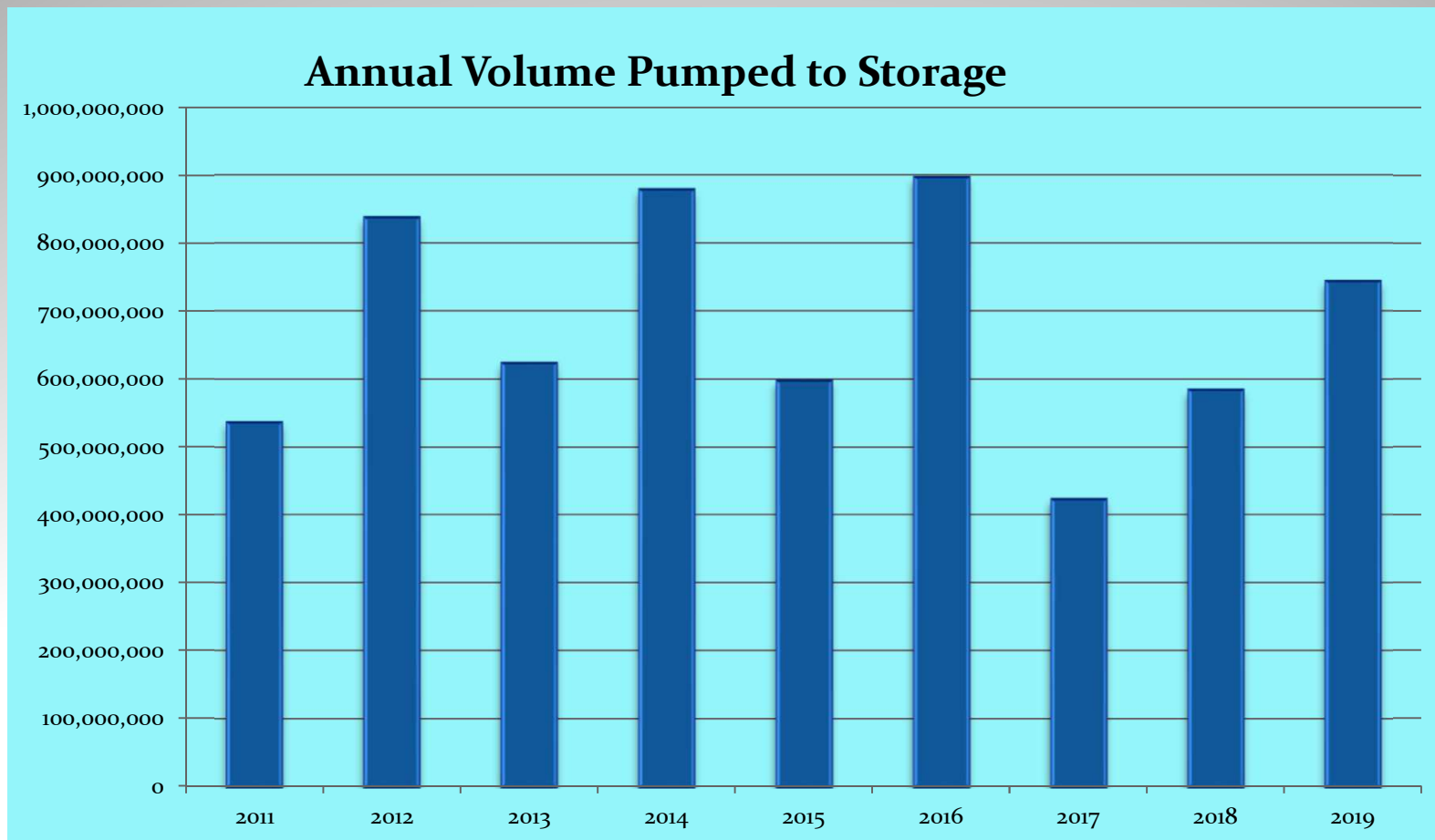
The District may pump water from the Cosumnes River from November 1 thru May 31 of each year for raw water storage. Amounts and times vary depending on river flow. River diversion through the Cosumnes Irrigation Association (CIA) ditch is utilized to convey water for downstream uses.



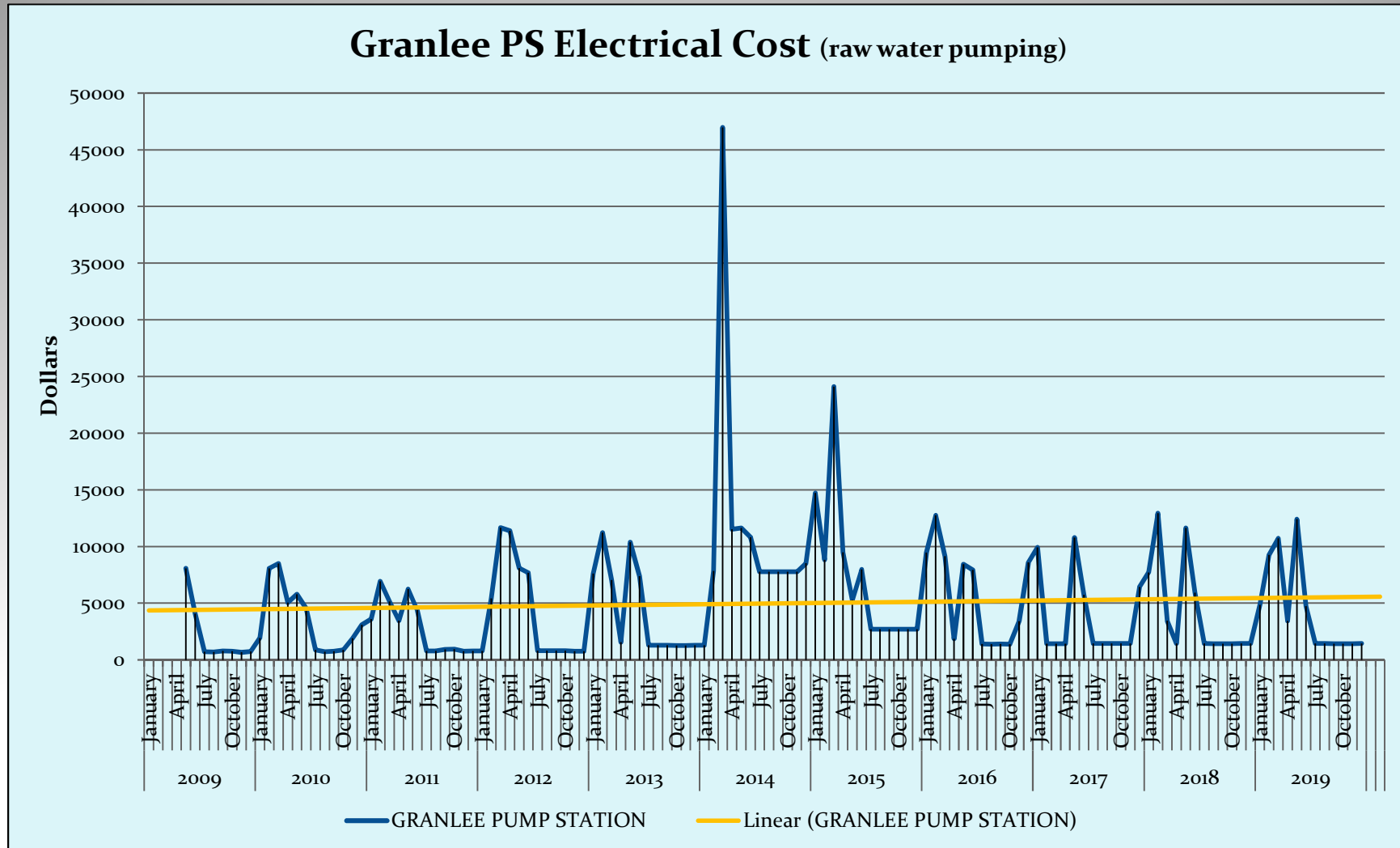
# Granlees Pumping & Diversion Station



# Annual Amounts Pumped from River to Storage



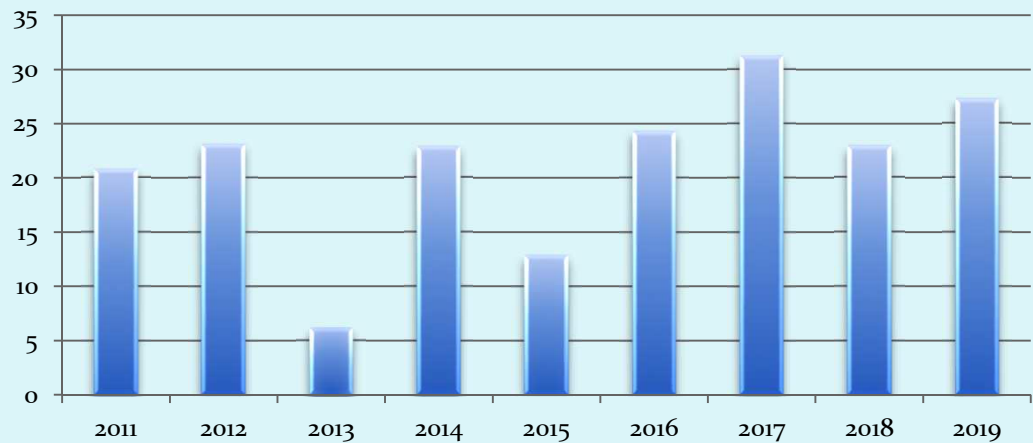
# Water Pumping Costs from River



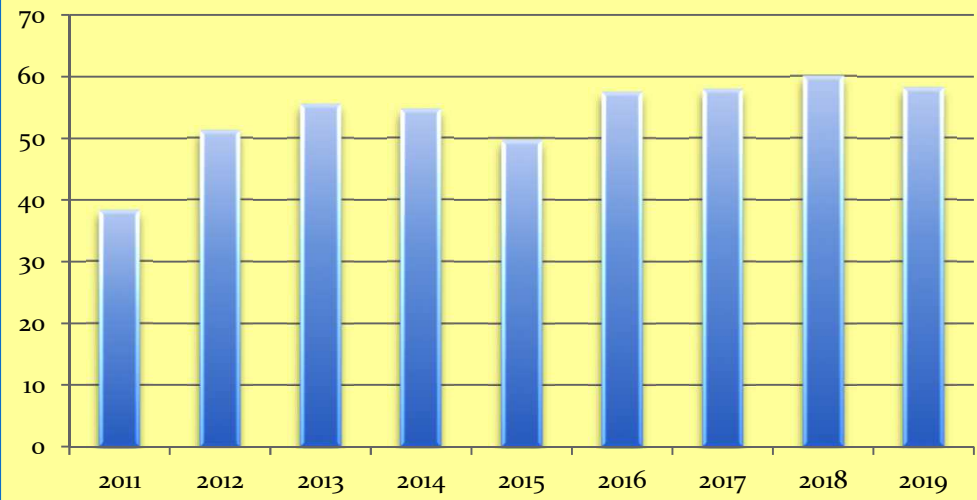


# Rainfall & Evaporation

**INCHES OF RAINFALL MEASURED AT WASTEWATER PLANT**

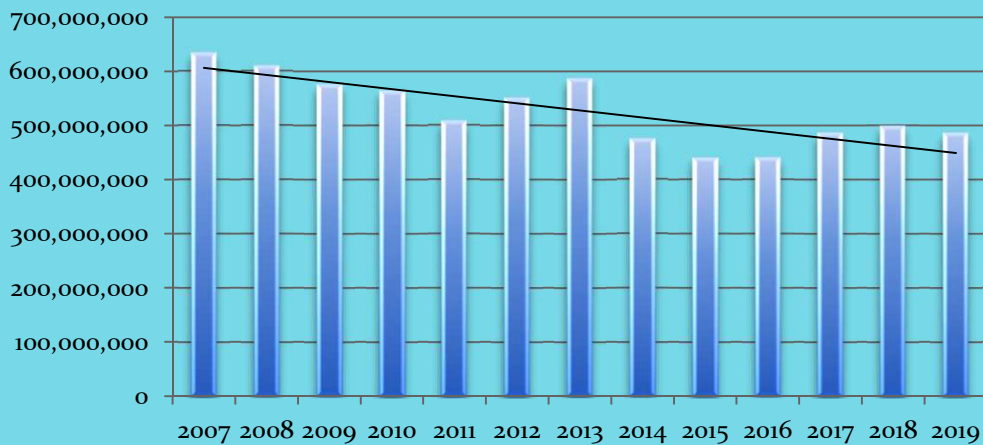


**Evaporation in inches**

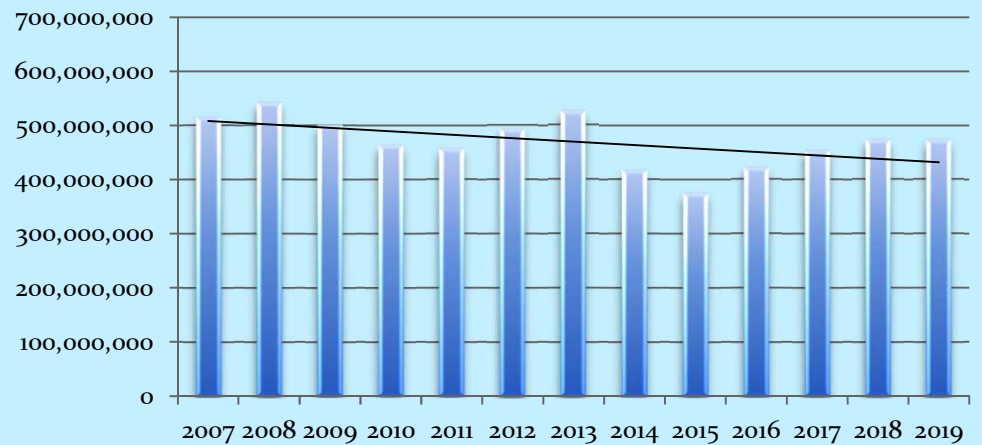




### TOTAL WATER PRODUCTION FROM WATER TREATMENT PLANTS



### Potable Water Consumption - from Administration

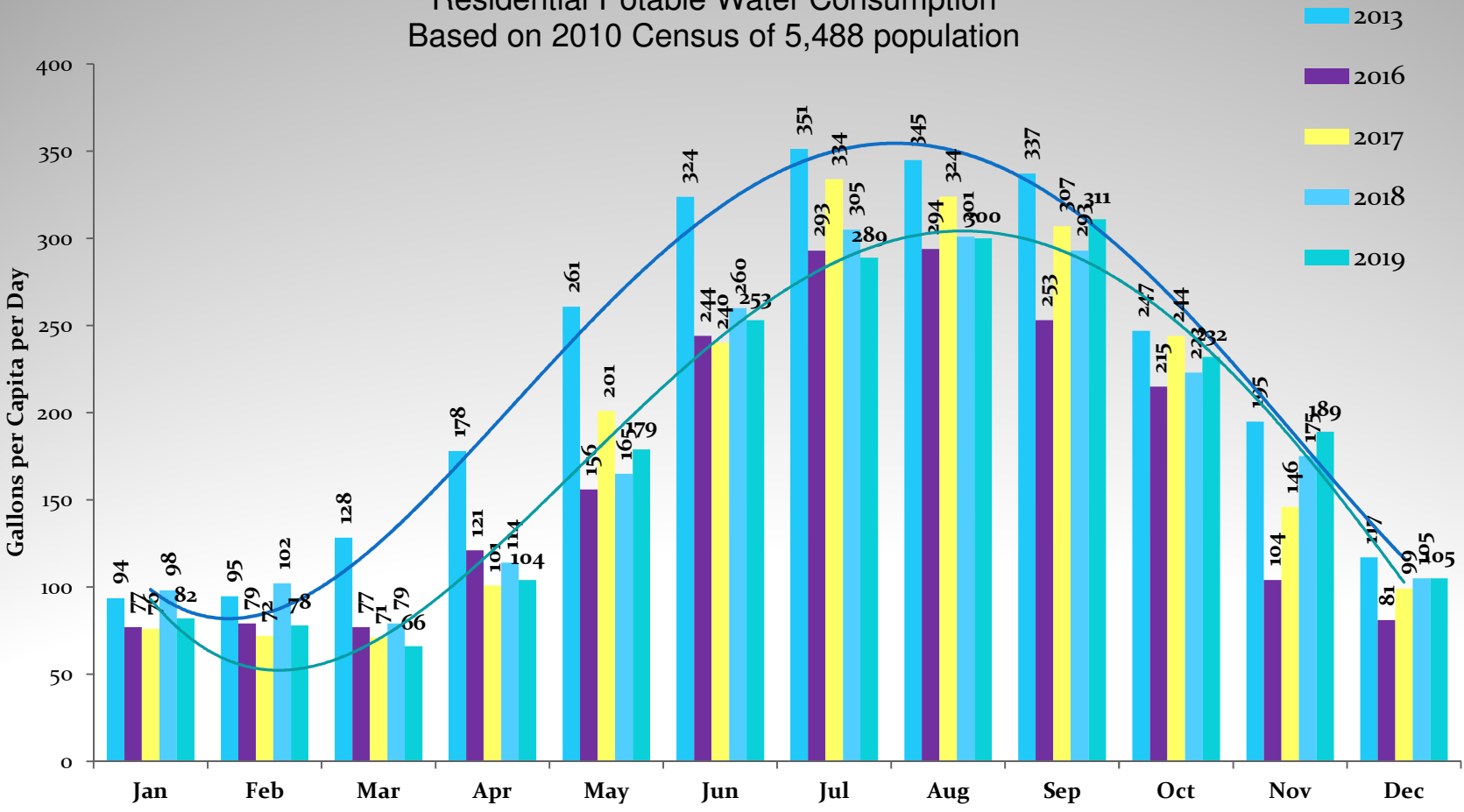


124 new connections added between 2007-2019

# Conservation

## Rancho Murieta - Residential Gallons per Capita per Day

Comparison of 2013 (drought base yr) and 2019  
 Residential Potable Water Consumption  
 Based on 2010 Census of 5,488 population

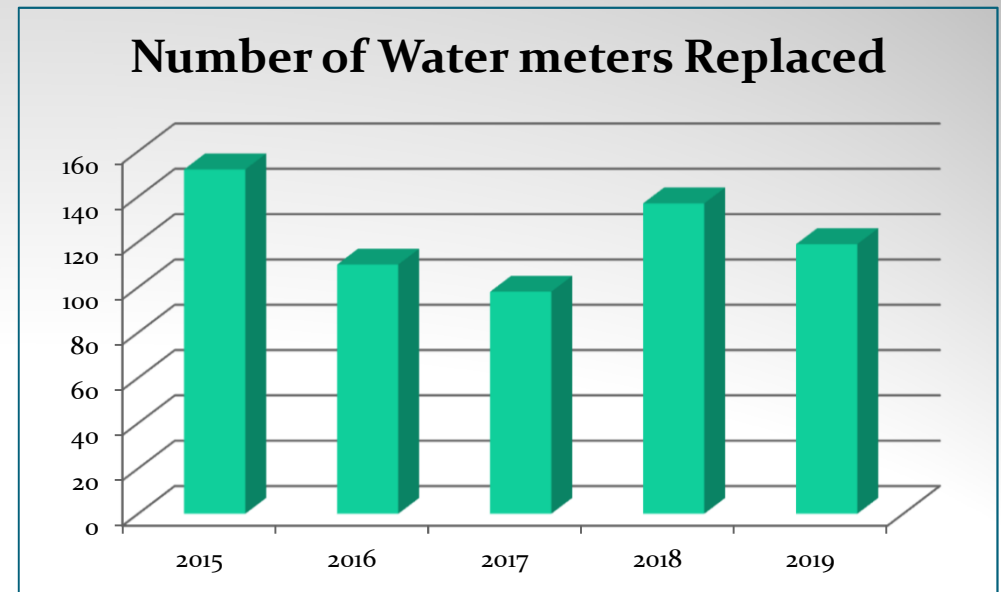
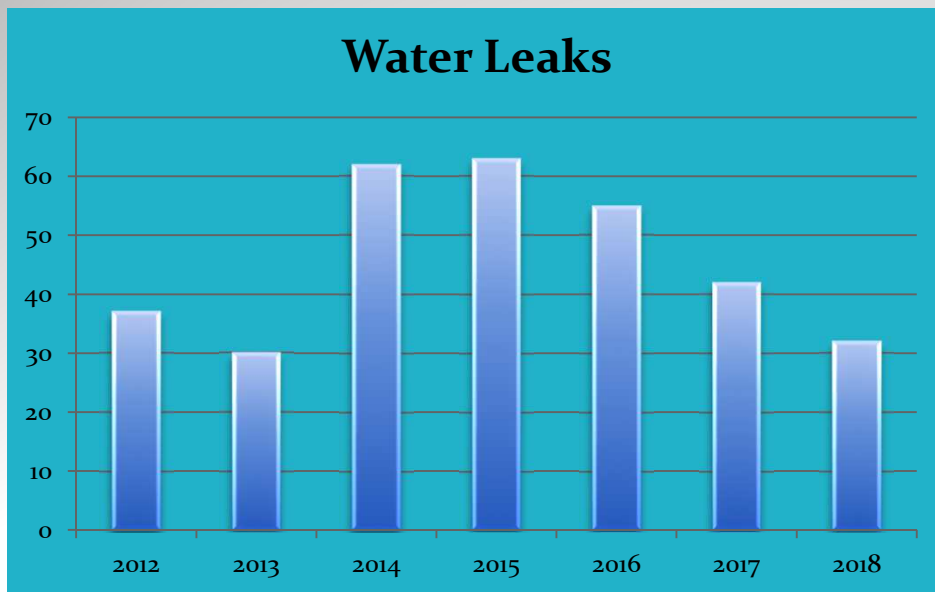


Total Conservation achieved in 2019 versus 2013: 18.4%



# Water Distribution & Maintenance

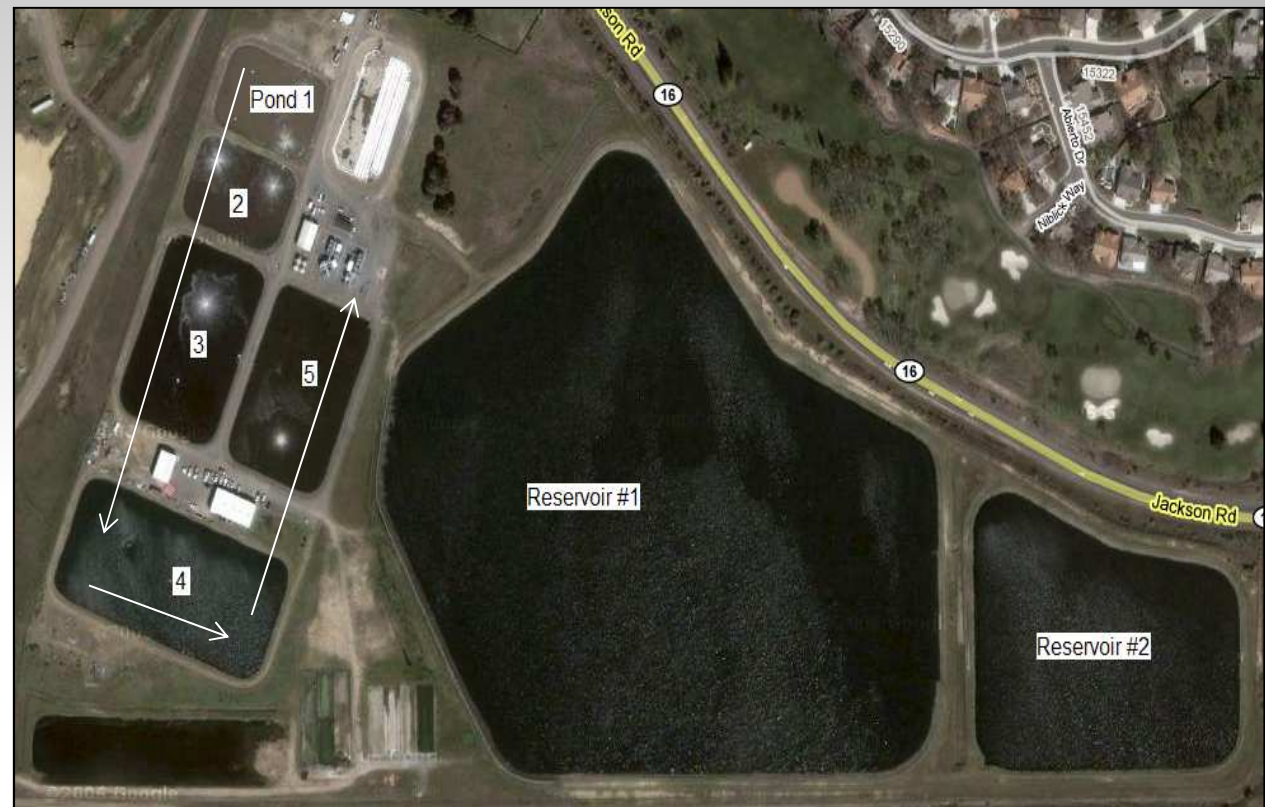
- **32 Water Leak Repairs in 2019**
- **119 Meters Replaced**
- **27 MXU's Replaced**



# Wastewater Treatment System Overview

- **2019** influent flow received was **157.7 MG** (483.9 acre-feet)
- Treated wastewater is stored in two reservoirs until needed for reclamation use by RMCC during summer months.

• Stored secondary treated wastewater is pumped through a Dissolved Air Floatation (DAF) system and then filtered, disinfected with chlorine, becoming tertiary treated water, and supplied to the golf courses for irrigation.





# To Course

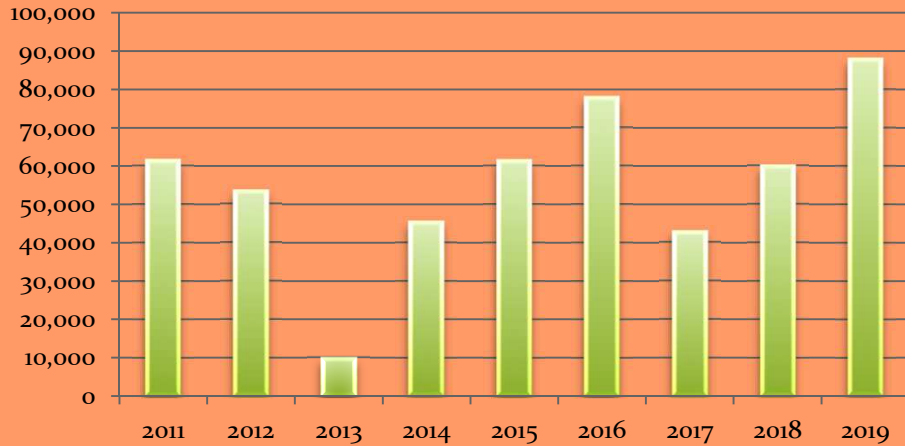
155.8 MG  
(478.3 Acre-feet) of  
tertiary water was  
delivered in 2019 for  
RMCC irrigation use.





# Sewer Metrics

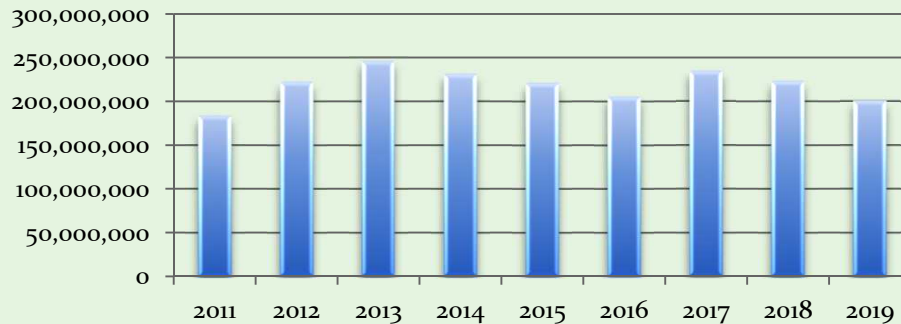
## Sewer Line Cleaned - Feet



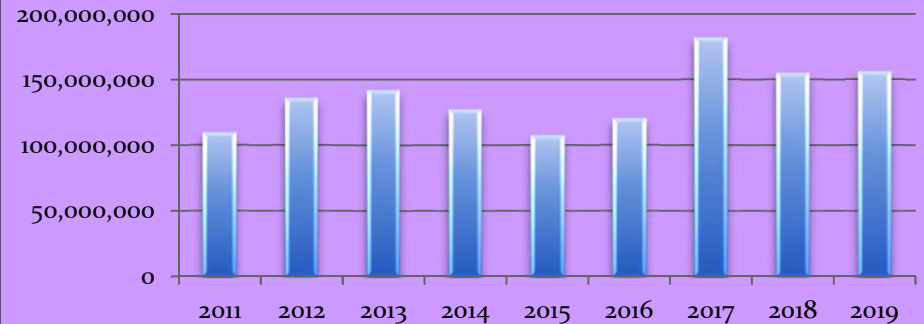
## Total Wastewater gallons in to Wastewater Plant



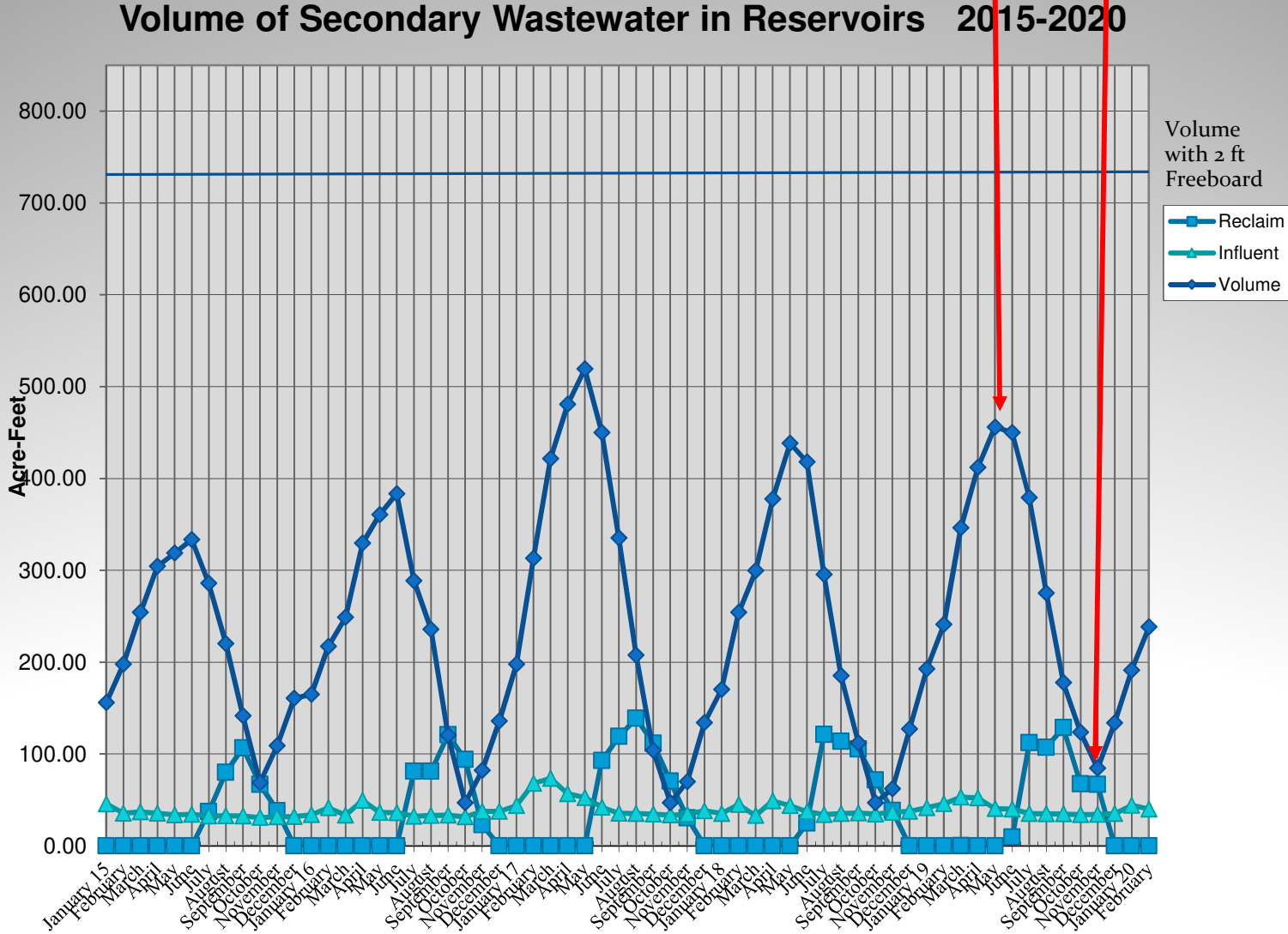
## RMCC RECLAIMED/RAIN/RIVER WATER USED FOR GOLF COURSE IRRIGATION



## TREATED RECLAIMED WASTEWATER DELIVERED FOR GOLF COURSE IRRIGATION

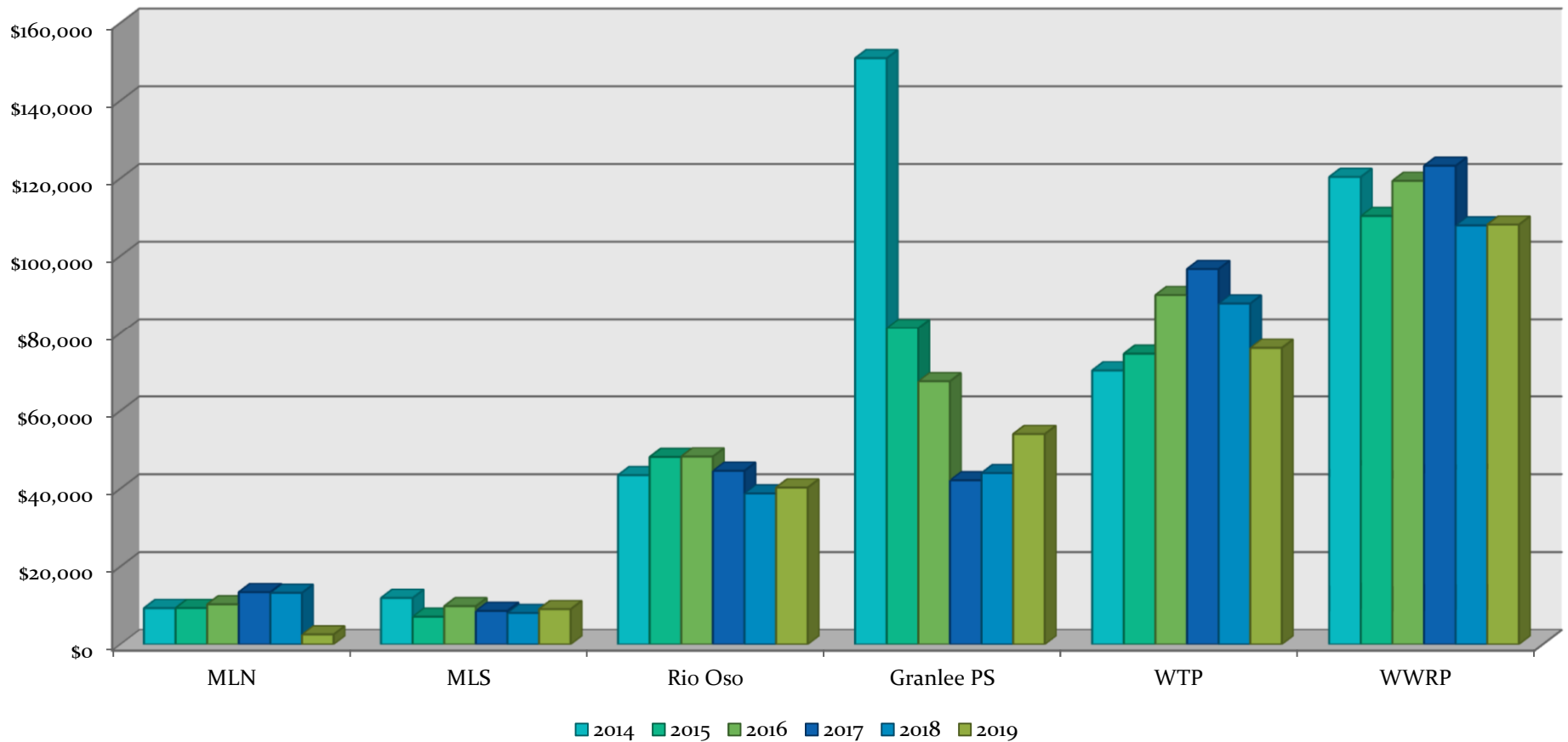


We effectively lowered secondary wastewater storage to 84 acre-feet. The highest storage volume for the year was 456 acre-feet.



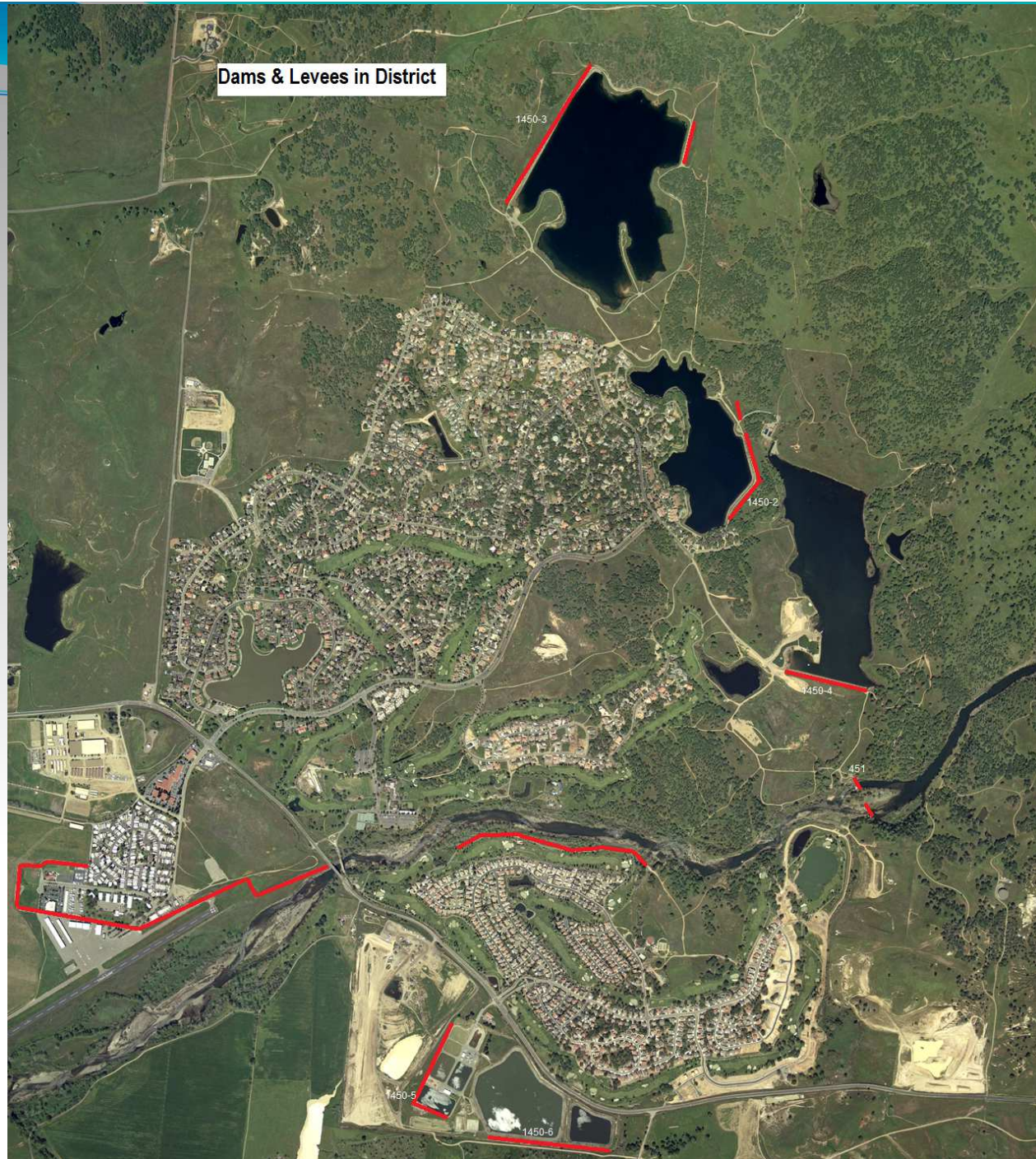
# Total Annual Power Costs –largest users only

## Primary Electrical Accounts - Annual Costs





# Dam Inundation Analysis



# Projects Completed

- Cantova Sewer Lift Station Pump Upgrades
- Cantova Sewer Lift Station force-main repair & re-route
- Alameda Sewer Lift Station pump replacement
- Proposition 84 Projects
  - Sought and received Board approval to change project from Well/s to Water Augmentation with recycled water
  - Re-wrote project description and submitted to Regional Water Authority / Department of Water Resources for Approval
- Wastewater Reclamation Plant compressor replacements
- Wastewater – West DAF Saturator tank replacement
- Sludge Removal from Wastewater Process Ponds
- Wastewater Sludge valve replacement to drying beds
- Wastewater Drying Bed #6 & 7 rehabilitation
- Culvert Replacement behind Wastewater Plant



# Cantova Sewer Lift Station upgrade





# Cantova Sewer Lift Station forcemain repair & re-route

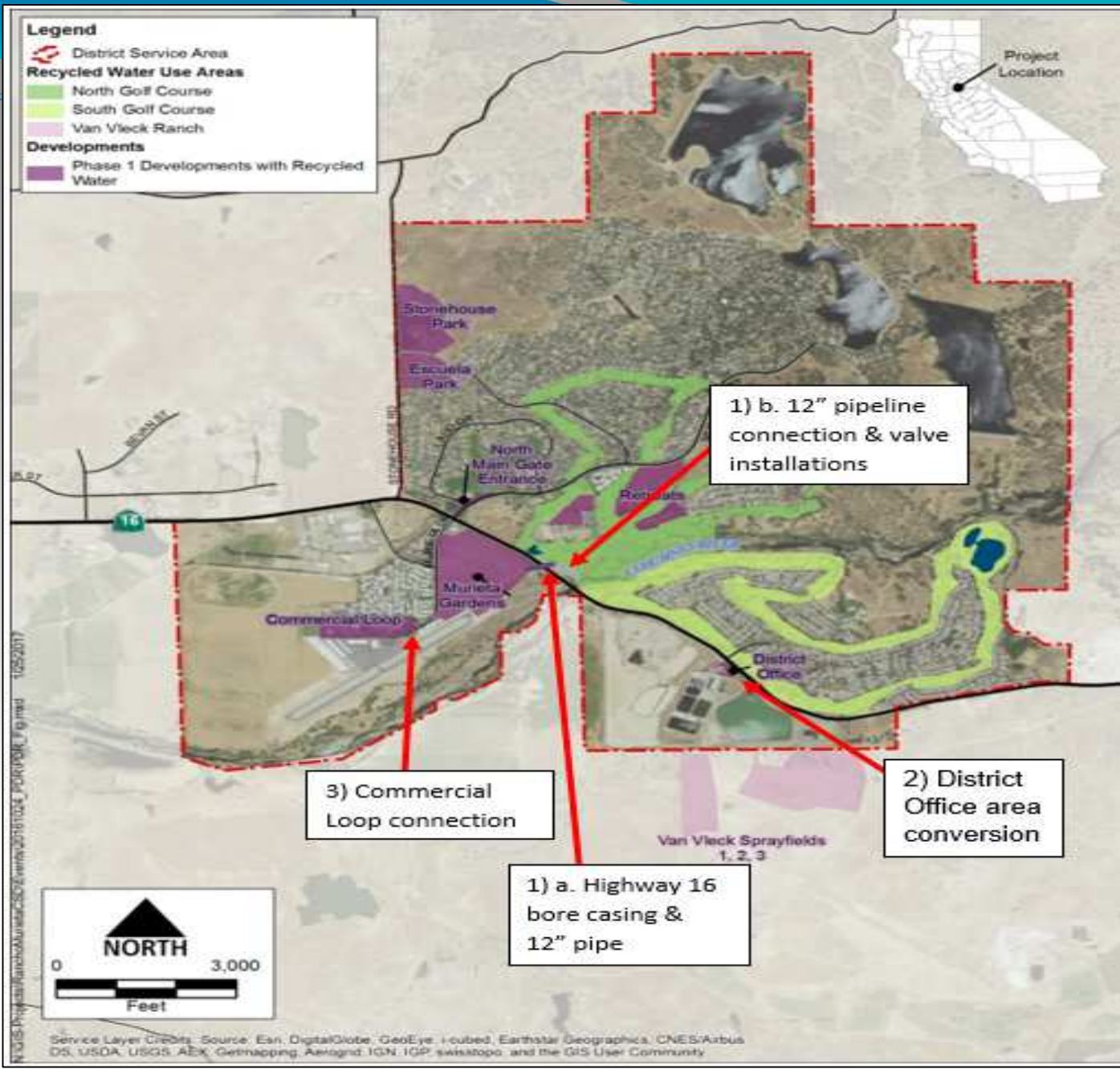


# Proposition 84 - Projects

- Within a 5 month timeframe
  - Defining of new projects
  - Reassignment of project description & obtain approvals
  - Engineering, bidding, & reimbursement agreements
  - Procurements through completion of projects within shortened timeframe
  - Completion reports and submittal of invoicing for reimbursements

|    | Projects  |
|----|---|
| 1a | Bore and casing installation & Caltrans encroachment permit |
| 1b | 12" pipe and appurtenance installations                     |
| 2  | District office area irrigation conversion                  |
| 3  | Cantova Commercial loop – 6" recycled water service         |







# Prop. 84 Project 1



*Photo of point of connection from recycled water line going to Bass lake to Murieta Gardens/Commercial areas      Boring under Highway 16*

Engineering the route for piping; Caltrans encroachment permit; staking the route for the piping; boring under Highway 16 and installation of pipe casing & installation of 12inch pipe and conduits within the casing and running the conduits back to a valve vault at the point of tie-in; installation of the valve vault and valves; tie-in into the 12-inch recycled water pipeline running to Bass Lake; routing the 12-inch pipe at the Murieta Gardens project with a future connection point.



# Prop. 84 Project 2 – Office irrigation





# Prop. 84 Project 3 – Recycled Water extension to commercial area



*Photos of 6 inch recycled water line running towards Cantova Drive from Murieta Gardens Lot 66*



# West DAF Saturator tank replacement



# Sludge Removal from Wastewater Process Ponds





# Wastewater Sludge valve replacement to drying beds





# Drying Beds #6 & 7 rehabilitation



# Culvert Replacement behind Wastewater Plant





# Unfunded mandates & looming \$'s

- Drainage:
  - Pyrethroid (pesticide) monitoring
  - Special tax doesn't keep up with inflation at 2%/yr
- Wastewater:
  - ELAP (Environmental laboratory accreditation program) fee increases for next year have gone up 16%
- Water:
  - Urban Water Management Plan required at 3,000 connections
  - Assembly Bill 685 – Human Right to Water





# Thank You!

With the continued support of the Board and community, we will continue to make improvements and keep the District running with a high standard of service and operation.