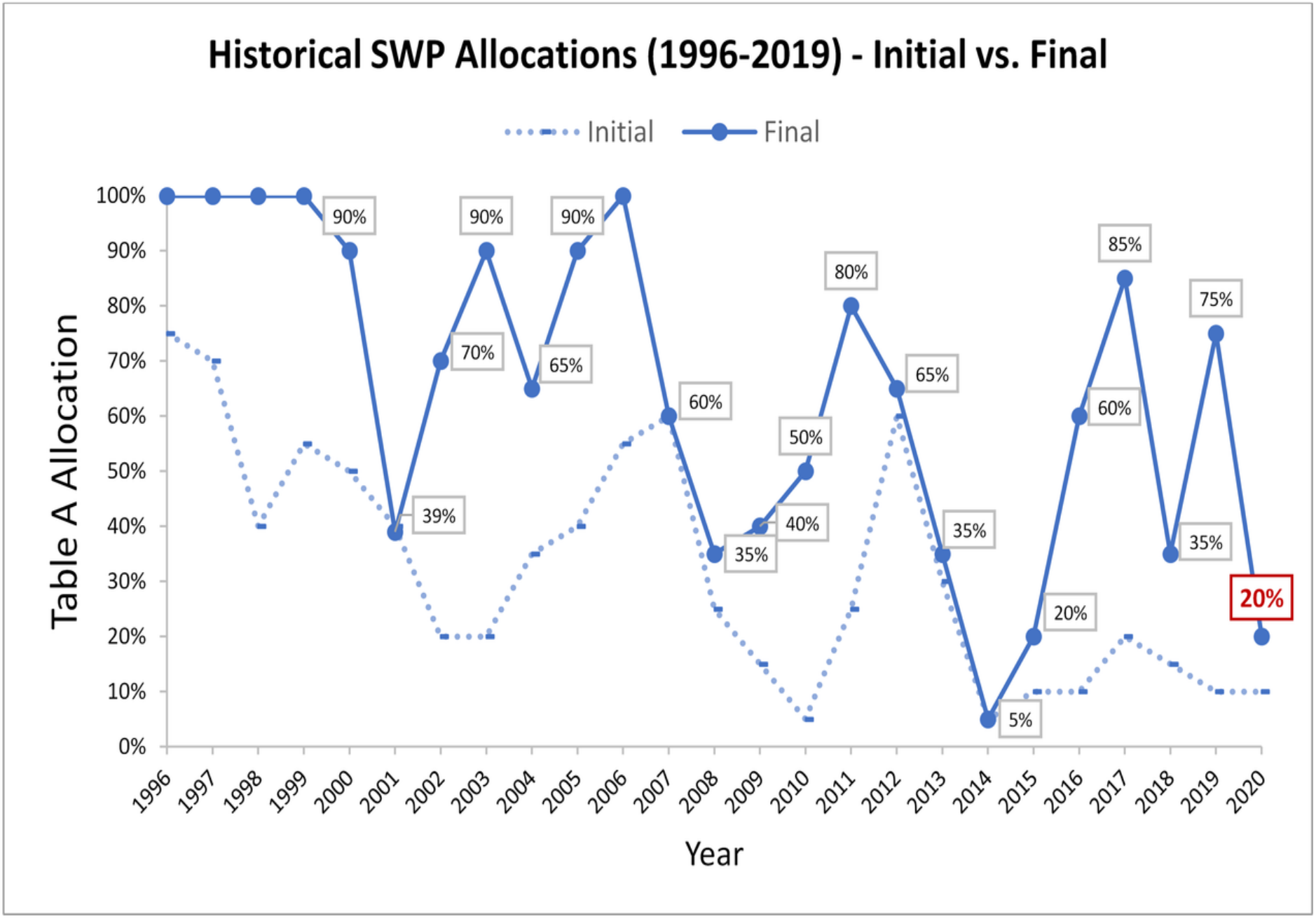
La Cumbre C.C. Recycled Water Discussion

2019

Water How did we get here?

- This site has always been challenged for a dependable water source.
- From the cattle drives of the 1800s
- Cachuma Dam 1950s
- State Water project 1990s
- Droughts 1950s 1980s 2008 2015
- Increased populations in Santa Barbara County from 90k in the 50s to it's present level of 450k
- No new sources of water seance the 90s and this has dependable delivery issues. But the population has increased 100k after it's completion.


Historical SWP Allocations (1996-2019) - Initial vs. Final
Initial
Final
Table A Allocation
Year
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
90%
90%
90%
39%
70%
65%
60%
35%
40%
50%
80%
65%
35%
5%
20%
60%
85%
35%
75%
20%

Golfs Water usage in So. California

- 1900s to 1950s Typically only greens irrigated on a regular basis. Fairways during summer months with water tanks or Quick coupler irrigation with an annual water usage around maybe 41acre ft. First Rainbird customer was LACC in 1935
- 1950s to 1970s Sprinkler irrigation was main irrigation and starting to get automatic systems in larger areas of the course. Typically Greens Fairways and Tees. This drove up annual usage to maybe 80 to 120 acre ft. annually. First fully automatic irrigation system was Brentwood Country Club in the 1950s. Plus PVC and Tranisite pipe was being mass produced now.
- 1980s to 2012 Plastic sprinklers and Computer Controlled irrigation. Golf went wall to wall full irrigation this drove annual water usage up to 210 to 240 acre ft at this site. All areas in play and out irrigated to full capacity or over watered for green lush look
- 2012 to Present areas taken out of irrigation in response to historic drought. Bringing annual usage down to 150 to 190 acre feet
- So in review you can see the level we irrigate at now was never available until the 80s. With but sense then with urban growth and no new water delivery systems developed or scheduled. All systems have been drafted to their maximum levels. Even with modern technologies as in low flow systems in building construction and urban irrigation. Water availability and delivery is in a deficit mode still.

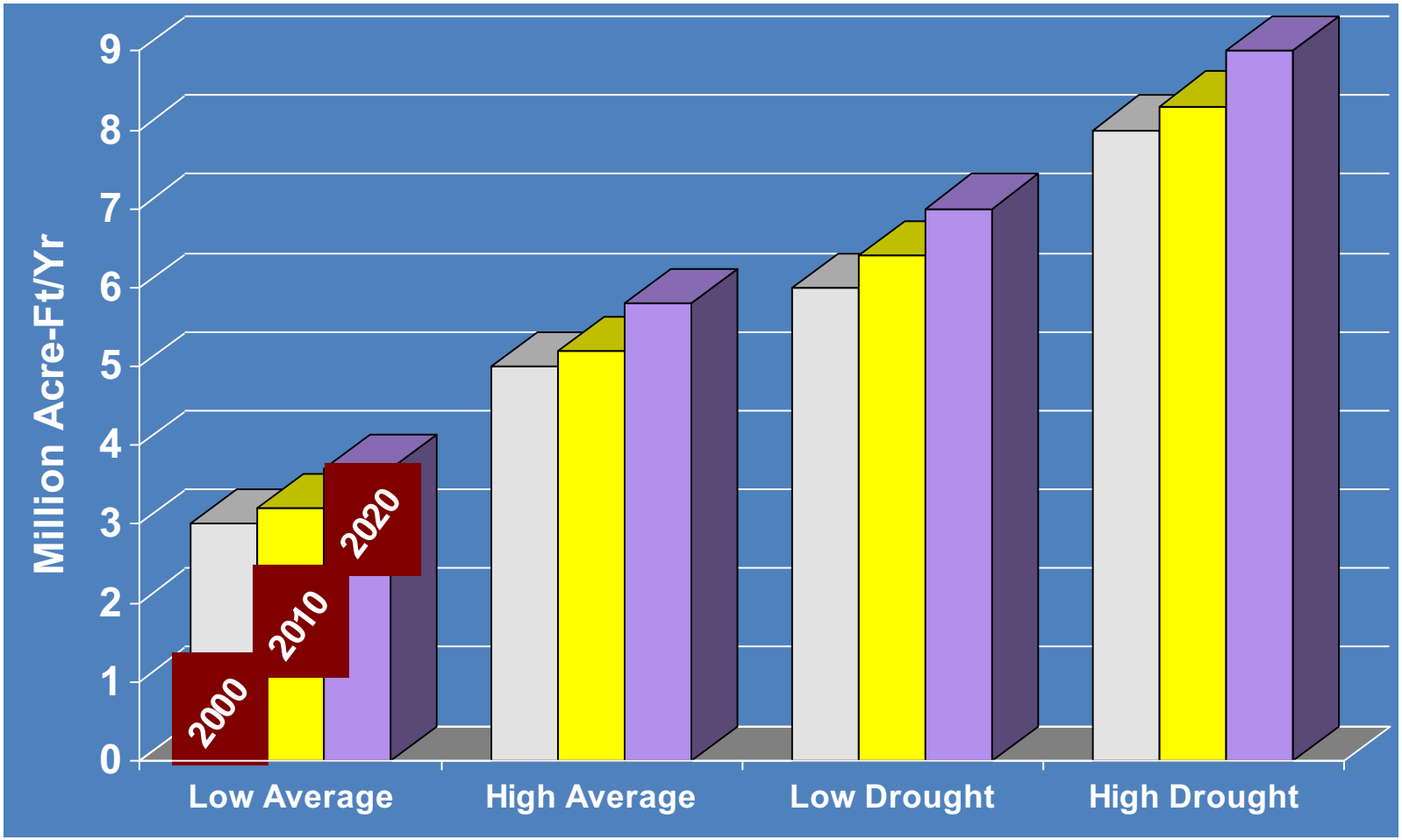
Past Irrigation Footprints

Todays Current Irrigation Footprint

California Water Code Section 13550a (Results of AB 174)

- **13550**. **(a)** The Legislature hereby finds and declares that **the use of potable domestic water for nonpotable uses, including, but not limited to,** cemeteries, **golf courses,** parks, highway landscaped areas, and industrial and irrigation uses**, is a waste or an unreasonable use of the water** within the meaning of Section 2 of Article X of the California Constitution if recycled water is available which meets all of the following conditions, as determined by the state board, after notice to **any person or entity who may be ordered to use recycled water or to cease using potable water** and a hearing held pursuant to Article 2 (commencing with Section 648) of Chapter 1.5 of Division 3 of Title 23 of the California Code of Regulations:

Projections of Statewide Water Deficit



Source: **California Department of Water Resources**

State Water Project Coastal Branch Deficit

- 1991 EIR Re: Santa Barbara County
  - Water deficits in SB County approx. 60,000 AF/YR.
  - Shortages were being met with groundwater overdraft.
  - Projections for year 2035 indicated: without development of new supplies, assumed 14-percent conservation by residents of SB County, overdraft rate was projected to increase to about 62,000 AF/YR.

State Water Project Coastal Branch Allocations

- SB County SWP Allocation - 39,078 AF/YR
  - Long Term Avg. 30,434 AF/YR (75% - Accounts for recent environmental laws requiring more water retained in rivers and riparian habitat)
- La Cumbre Mutual Water Company SWP Allocation - 1000 AF/YR
  - Long Term Average 750 AF/YR
- *How much potable water will be available in a severe drought?*

Recycled & Alternative Water Sources

Advantages

- Uninterruptable supply *(Somewhat drought proof?)*
- Reduce Fertilizer Inputs
- Overall Costs depend upon final agreements. Plus future cost of potable
- Public Perception signs around perimeter of property that reclaimed water is being used for irrigation

Disadvantages

- Higher but manageable Salinity / Sodium
- May require soil amendments (gypsum, etc)
- Lose some of “complete control” (water window, nutrients)

Considerations

- Basic Premise of Western Water Law
  - First in time, first in right
  - Does it apply to recycled water?
  - More than likely,,, Yes
- Santa Barbra County Integrated Regional Water Supply Plan (Includes RW)
  - http://www.countyofsb.org/pwd/pwwater.aspx?id=16852

Next Steps?

- Water Supply Assessment
  - Protect La Cumbre CC from conflicts of interest
  - Evaluate **all** available options.
    - Groundwater,
    - Recycled Water
    - Potable from 2 different sources
    - Lake modification to use areas for higher irrigation storage
    - Reduce or eliminate full irrigation of non playing areas
    - Landscape modification to reduce water usage

2009 First Study
Have been trying to get this connection for 11 years

Irrigation & Turfgrass Services
34001 Amber Lantern Street #A, Dana Point, California 92629

La Cumbre Country Club
Santa Barbra, California

Recycled / Ground Water Irrigation Source Feasibility

12-07-2009

Golf & Sports Turf Management Consulting
Effluent & Irrigation Water Quality Assessment / Management Programs
Alternative Water Supply Feasibility Studies
Graphic Sprinkler Uniformity Analysis & Performance Testing
Telephone 949-388-5097 *Fax: 949-661-4157* *Cellular 949-697-4158*

Work to complete for deliveries and County Health Department requirements

- 1,200 lin ft of 8in piping will be brought from Calle Los Amigos to the property behind 6 green
- 3 runs of piping and conduit will be run from Behind 6 green to irrigation blending box at irrigation island 3,800 lin ft.
- Reclaimed Water, Well Water, Goleta Water co. water and communication wires.
- 1 6in pipe from La Cumbre Water Co. POCs from state water and well water to existing pipe on 10^{th} hole to 15^{th} hole. 1,600 lin ft
- Label all irrigation component's with purple color caps or tags
- Cross connection inspection on Course and Clubhouse areas

Note: 2.68 miles of pipe and 1.25 miles of trench.


Reclaimed Piping Work Plan
Write a description for your map.
Legend
Feature 1
Hidden Valley Park
La Cumber Water to irrigation pond
La Cumbre Country Club
La Cumbre Water
Point of connection to City Reclaimed System / Valve and Meter
Reclaimed piping Routing
Reclaimed/Well/Goleta 6/Irri Pond
La Cumbre Water 10in Backflow State Water
La Cumbre Water 6in Backflow Well Water
La Cumbre Water 6in Backflow Well Water
La Cumbre Water 10in Backflow State Water
Laguna Blanca
Goleta 4in Back Flow Potable
Goleta 4in Back Flow Potable
Termination of La Cumbre Water REclaimed pipeline
Hidden Valley
Point of connection to City Reclaimed System / Valve and Meter
Point of connection to City Reclaimed System / Valve and Meter
Hitchcock
Via Zorro
Via Sinuosa
Via Hierba
Via Laguna
Via Esperanza
Las Palmas Dr
Lago Dr
Laguna Blanca Dr
La Cumbre Cir
Mariana Way
Casiano Dr
Ferrara Way
Palermo Dr
Calabria Dr
Veronica Springs Rd
La Entrada
Modoc
Calle Real
El Camino Real
Hitchcock Way
Cordero Dr
Stevens Rd
Northview Rd
Vista Vallejo
Ardilla Dr
San Jose Ln
Mas Amigos
Canon Rd
Monte Dr
Paloma Dr
Pescadero Dr
Via Rosita
Google Earth
© 2020 Google
2000 ft
N

Projected Cost

• Engineering in street work	60k
• Engineering on course work	3.5k
• In street pipeline (8/19 proposal)	232k
• On site pipeline work (11/19 pricing)	517k
• Health Dept. Work Id purple	20k
• Misc. Unknowns, Rental etc.	40k
Total	872.5k