

Semitropic GSA and Semitropic WSD

October 2021 Update

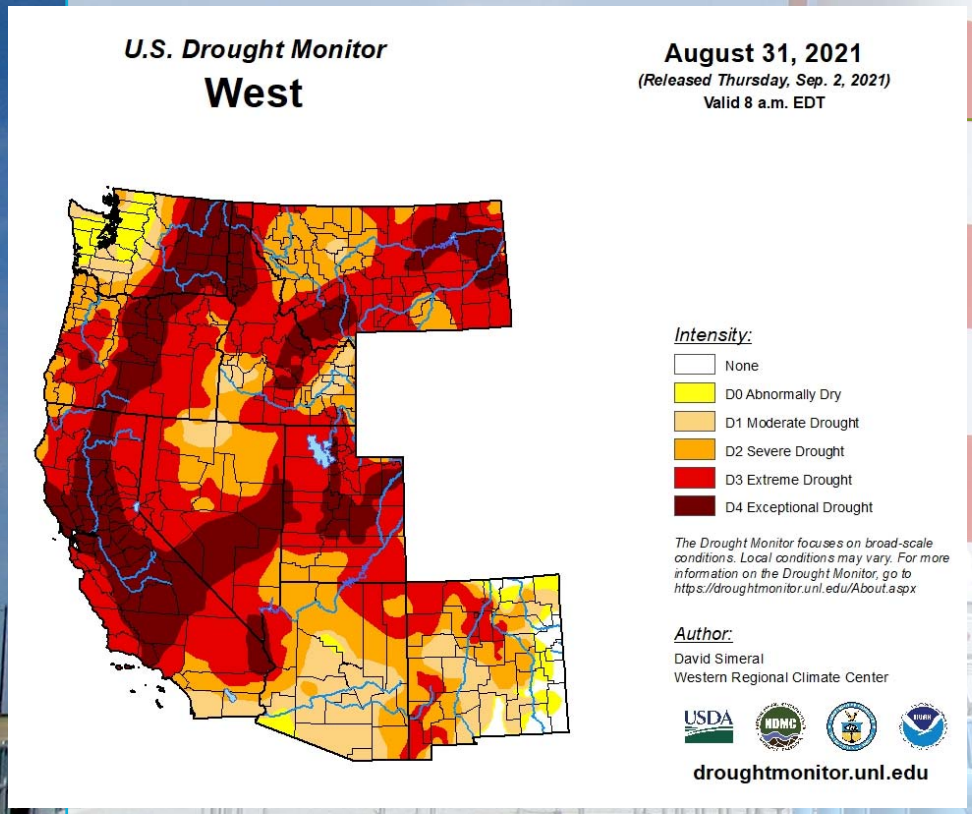
Overview

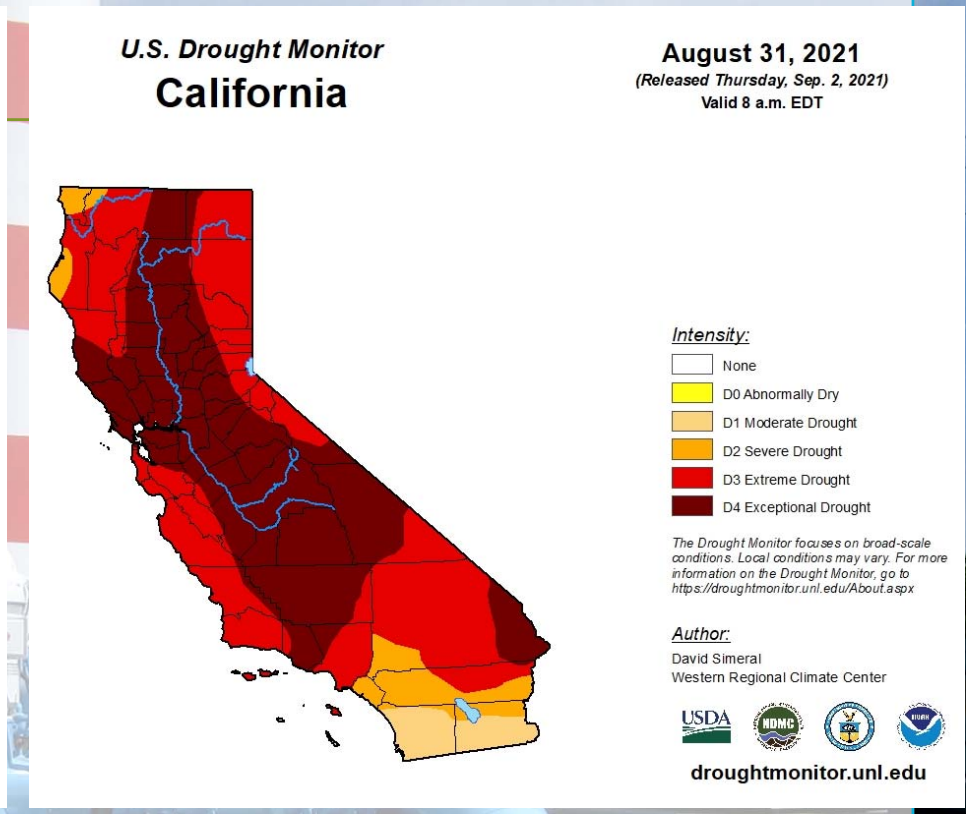
- Current District Operations and Water Supply Update
- Status of DWR's review of the Groundwater Sustainability Plan's
- Kern SGMA Coordination Activities
- Semitropic GSA SGMA Update
  - SGMA Activities to date and Sustainability Trends
    - Irrigated Acreage
    - Annual Et
    - Hydrographs
  - Management Action 1: Water Budgets
  - Management Action 2: Tiered Pricing
  - Management Action 3 and other Project Updates

2021 Water Supply Update and Current District Operations

- State Water Project Allocation: 5% (7,750 AF of 155,000 AF for SWSD)
- Drought Status: Critical
  - US Drought Monitor
  - CA Reservoir's
  - SWRCB Curtailment Action
- Banking Operations (2021)
  - Bank recovery Requests: 148,250
    - As of July 31, 2021, 33% recovered (48,804 AF)
    - Remaining 99,446 AF to be recovered (Aug 2021 – Jan 2022)

U.S. Drought Monitor

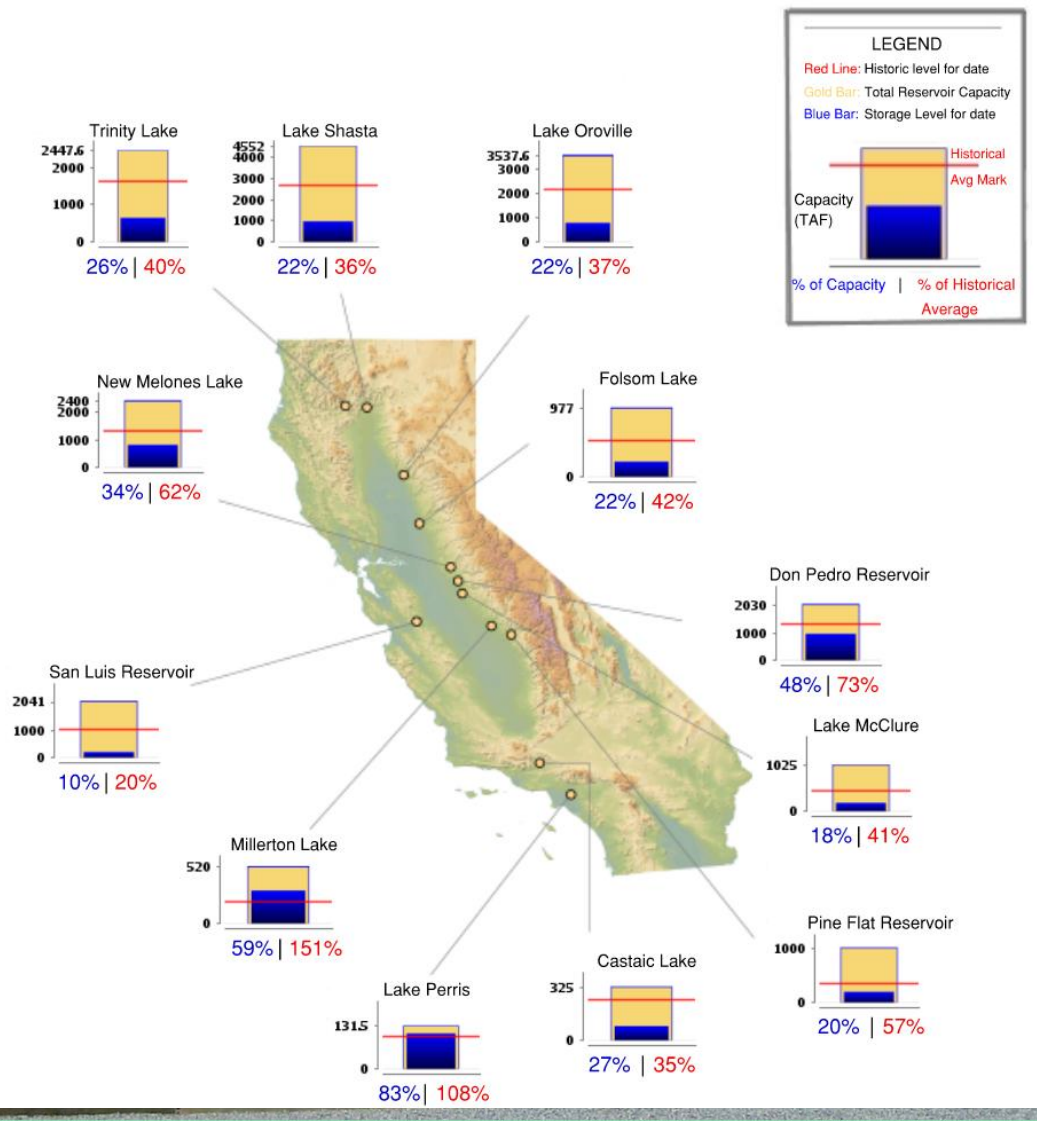


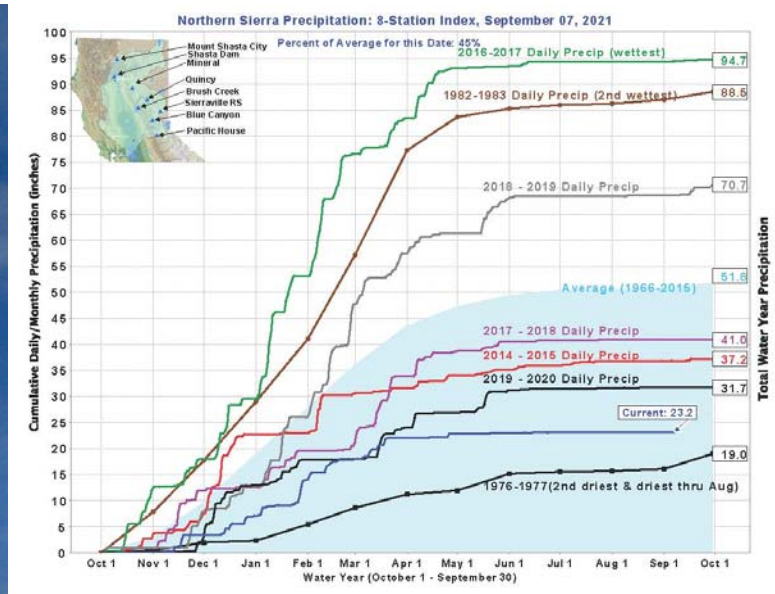


CURRENT RESERVOIR CONDITIONS

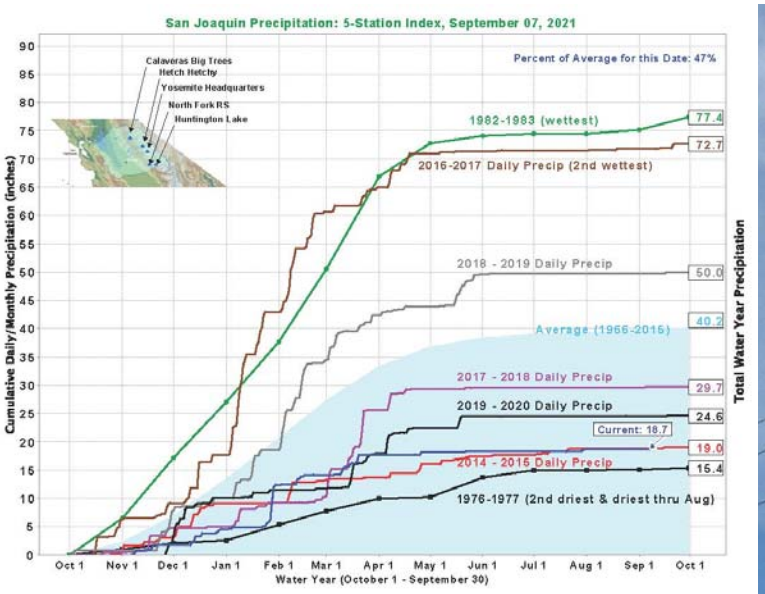
SELECTED WATER SUPPLY RESERVOIRS

Midnight: October 18, 2021

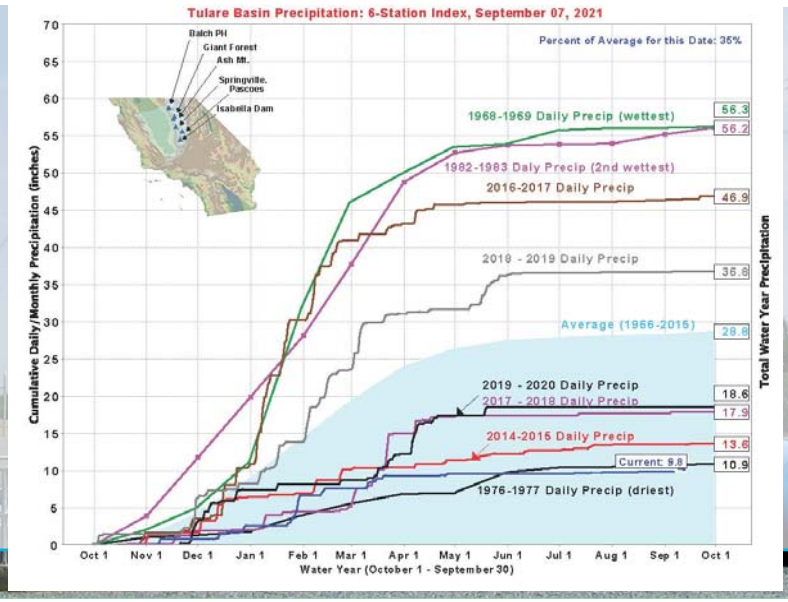



Northern Sierra Precipitation: 8-Station Index, September 07, 2021
Percent of Average for this Date: 45%
Mount Shasta City
Shasta Dam
Mineral
Quincy
Brush Creek
Sierraville RS
Blue Canyon
Pacific House
2016-2017 Daily Precip (wettest) 94.7
1982-1983 Daily Precip (2nd wettest) 88.6
2018 - 2019 Daily Precip 70.7
Average (1966-2015) 51.6
2017 - 2018 Daily Precip 41.0
2014 - 2015 Daily Precip 37.2
2019 - 2020 Daily Precip 31.7
Current: 23.2
1976-1977(2nd driest & driest thru Aug) 19.0
Cumulative Daily/Monthly Precipitation (inches)
Total Water Year Precipitation
Water Year (October 1 - September 30)
Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1 Aug 1 Sep 1 Oct 1



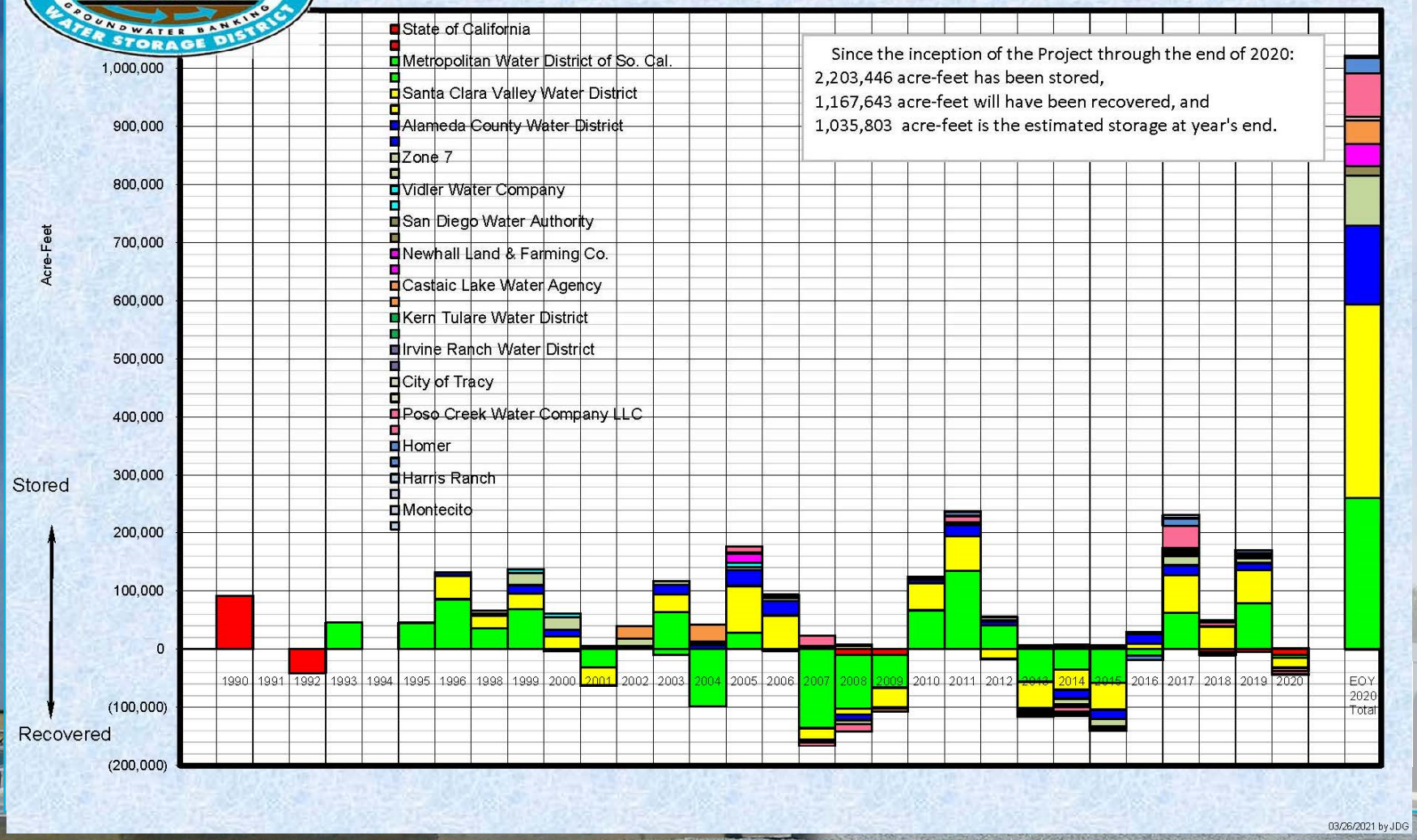

San Joaquin Precipitation: 5-Station Index, September 07, 2021
Percent of Average for this Date: 47%
Calaveras Big Trees
Hetch Hetchy
Yosemite Headquarters
North Fork RS
Huntington Lake
1982-1983 (wettest) 77.4
2016-2017 Daily Precip (2nd wettest) 72.7
2018 - 2019 Daily Precip 50.0
Average (1966-2015) 40.2
2017 - 2018 Daily Precip 29.7
2019 - 2020 Daily Precip 24.6
Current: 18.7
2014 - 2015 Daily Precip 19.0
1976-1977 (2nd driest & driest thru Aug) 15.4
Cumulative Daily/Monthly Precipitation (inches)
Total Water Year Precipitation
Water Year (October 1 - September 30)
Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1 Aug 1 Sep 1 Oct 1




Tulare Basin Precipitation: 6-Station Index, September 07, 2021
Percent of Average for this Date: 35%
Balch PH
Giant Forest
Ash Mt.
Springville.
Pascoes
Isabella Dam
1968-1969 Daily Precip (wettest) 56.3
1982-1983 Daily Precip (2nd wettest) 56.2
2016-2017 Daily Precip 46.9
2018 - 2019 Daily Precip 36.8
Average (1966-2015) 28.8
2019 - 2020 Daily Precip 18.6
2017 - 2018 Daily Precip 17.9
2014-2015 Daily Precip 13.6
Current: 9.8 10.9
1976-1977 Daily Precip (driest)
Cumulative Daily/Monthly Precipitation (inches)
Total Water Year Precipitation
Water Year (October 1 - September 30)
Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1 Aug 1 Sep 1 Oct 1


SEMITROPIC
GROUNDWATER BANKING
WATER STORAGE DISTRICT

History of Water Banking Activity

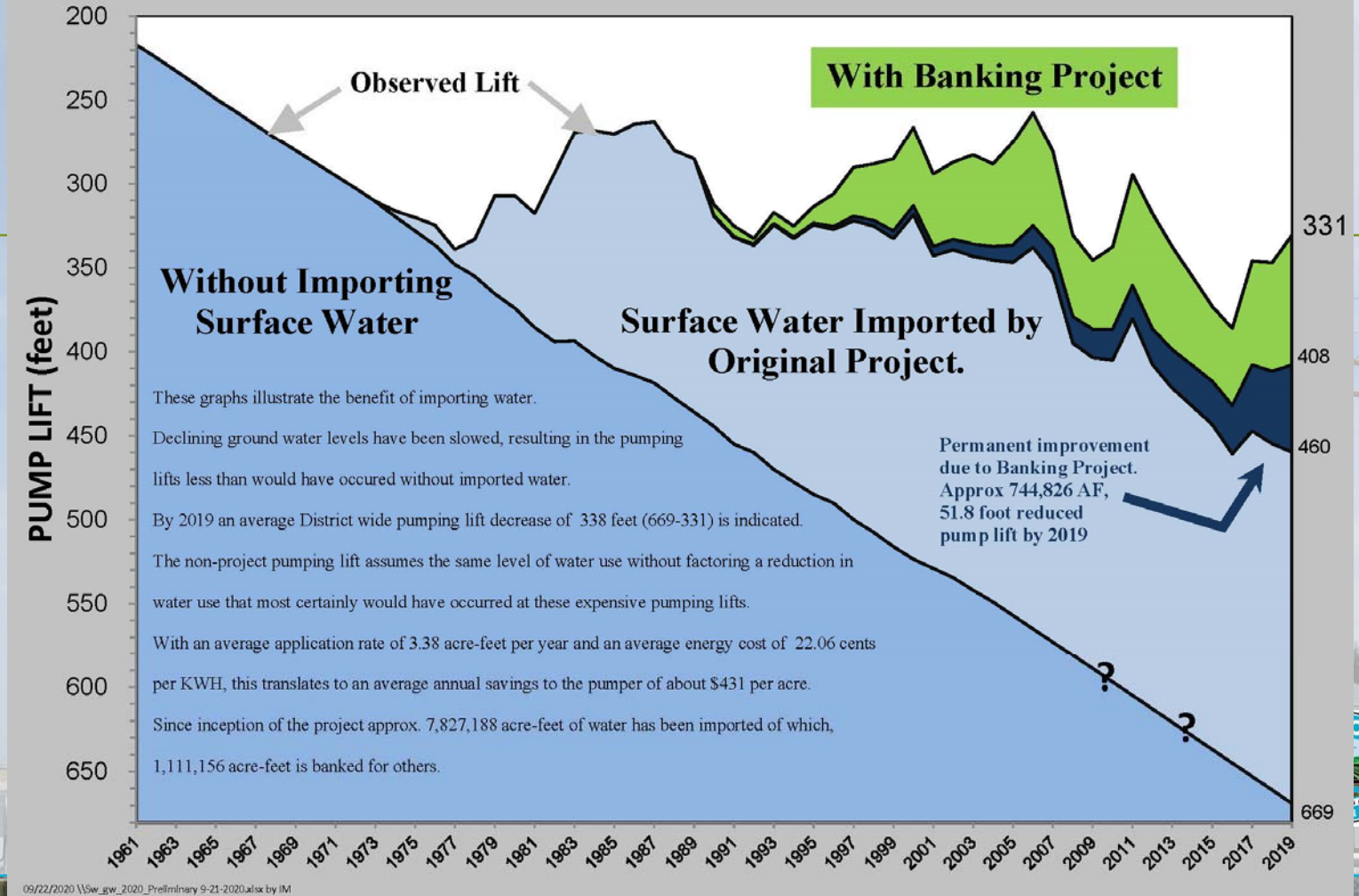


Semitropic Water Storage District

History of Ground Water Pumping Lifts

DRAFT

Estimated for 2019



These graphs illustrate the benefit of importing water.

Declining ground water levels have been slowed, resulting in the pumping lifts less than would have occured without imported water.

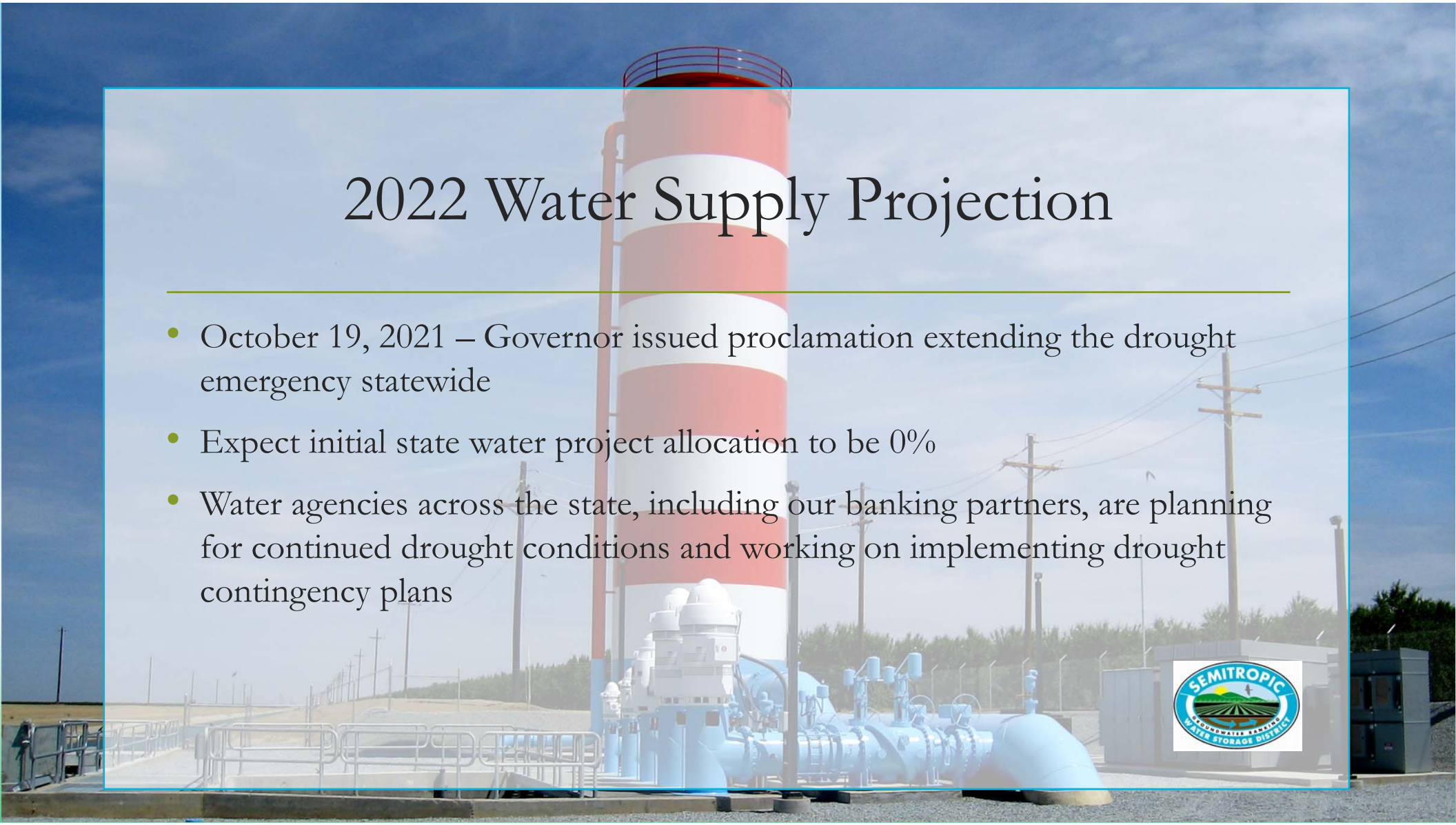
By 2019 an average District wide pumping lift decrease of 338 feet (669-331) is indicated.

The non-project pumping lift assumes the same level of water use without factoring a reduction in water use that most certainly would have occurred at these expensive pumping lifts.

With an average application rate of 3.38 acre-feet per year and an average energy cost of 22.06 cents per KWH, this translates to an average annual savings to the pumper of about $431 per acre.

Since inception of the project approx. 7,827,188 acre-feet of water has been imported of which, 1,111,156 acre-feet is banked for others.

09/22/2020 \\Sw_gw_2020_Preliminary 9-21-2020.xlsx by IM



2022 Water Supply Projection

- October 19, 2021 – Governor issued proclamation extending the drought emergency statewide
- Expect initial state water project allocation to be 0%
- Water agencies across the state, including our banking partners, are planning for continued drought conditions and working on implementing drought contingency plans

Semitropic GSP – Status Update

- Status - In review by California Department of Water Resources
  - 3 potential outcomes
    - Approved
    - Incomplete
      - GSA has 180 days to revise and resubmit
    - Inadequate
      - GSP referred to SWRCB to consider intervention
- Kern Coordination Activities
  - Subsidence Study
  - Data Management System
  - KGA – Exceedance Policy
  - KGA – Boundary Modification Policy

Semitropic GSA SGMA Update

- SGMA Activities to date and Sustainability Trends
  - Irrigated Acreage
  - Annual Et
  - Hydrographs
- Management Action 1: Water Budgets
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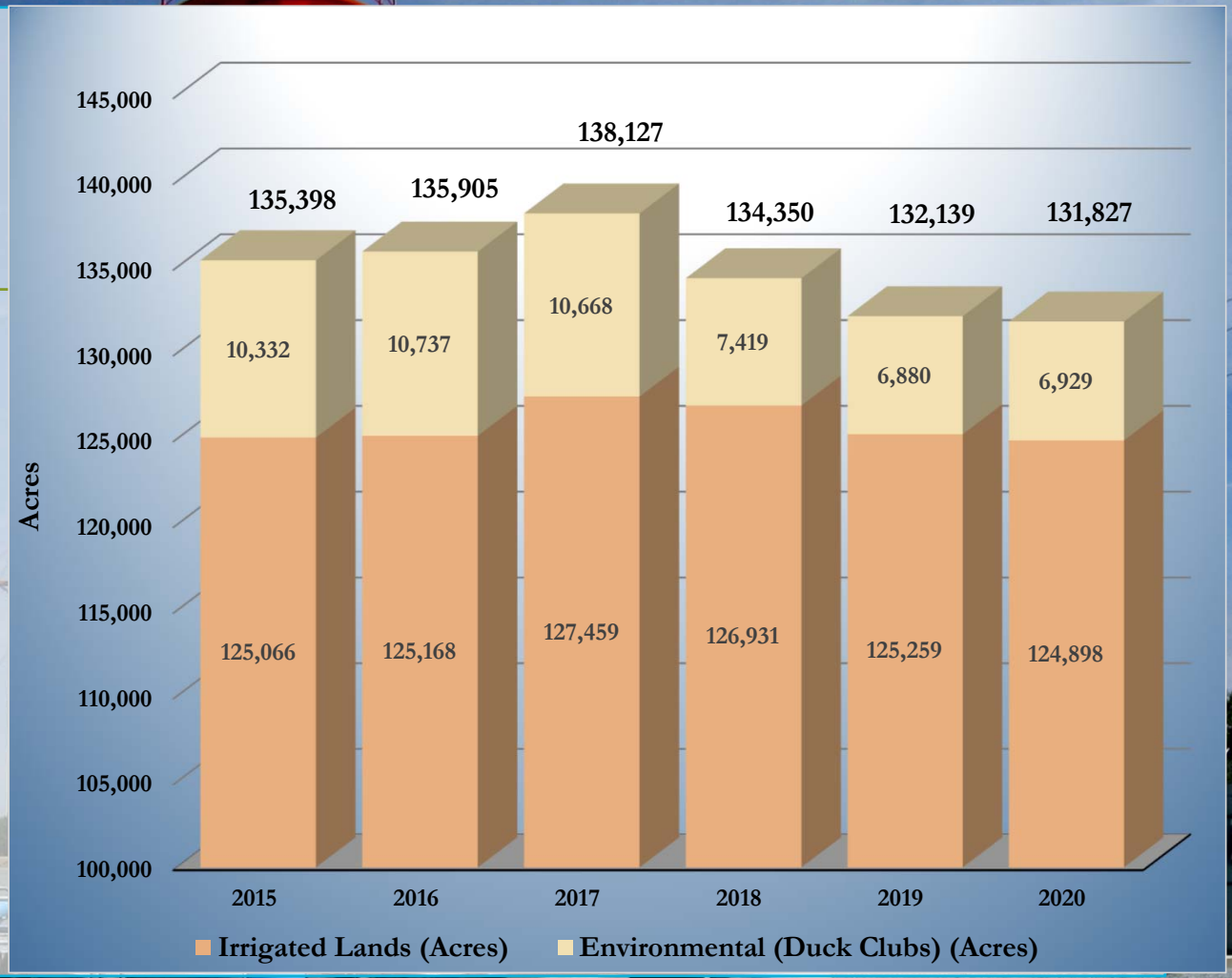
Land Use and Consumptive Use 2015-2020

- District staff conduct annual land use/crop surveys in coordination with ET monitoring performed by Land IQ.
- ET values for 2015-2017 based on in-District ET monitoring in 2018-2019.
- General decrease in irrigated acres and ET volumes over irrigated acres over monitoring period.

District Irrigated Acreage

3-percent decrease from 2015 to 2020 (3,571 acres)

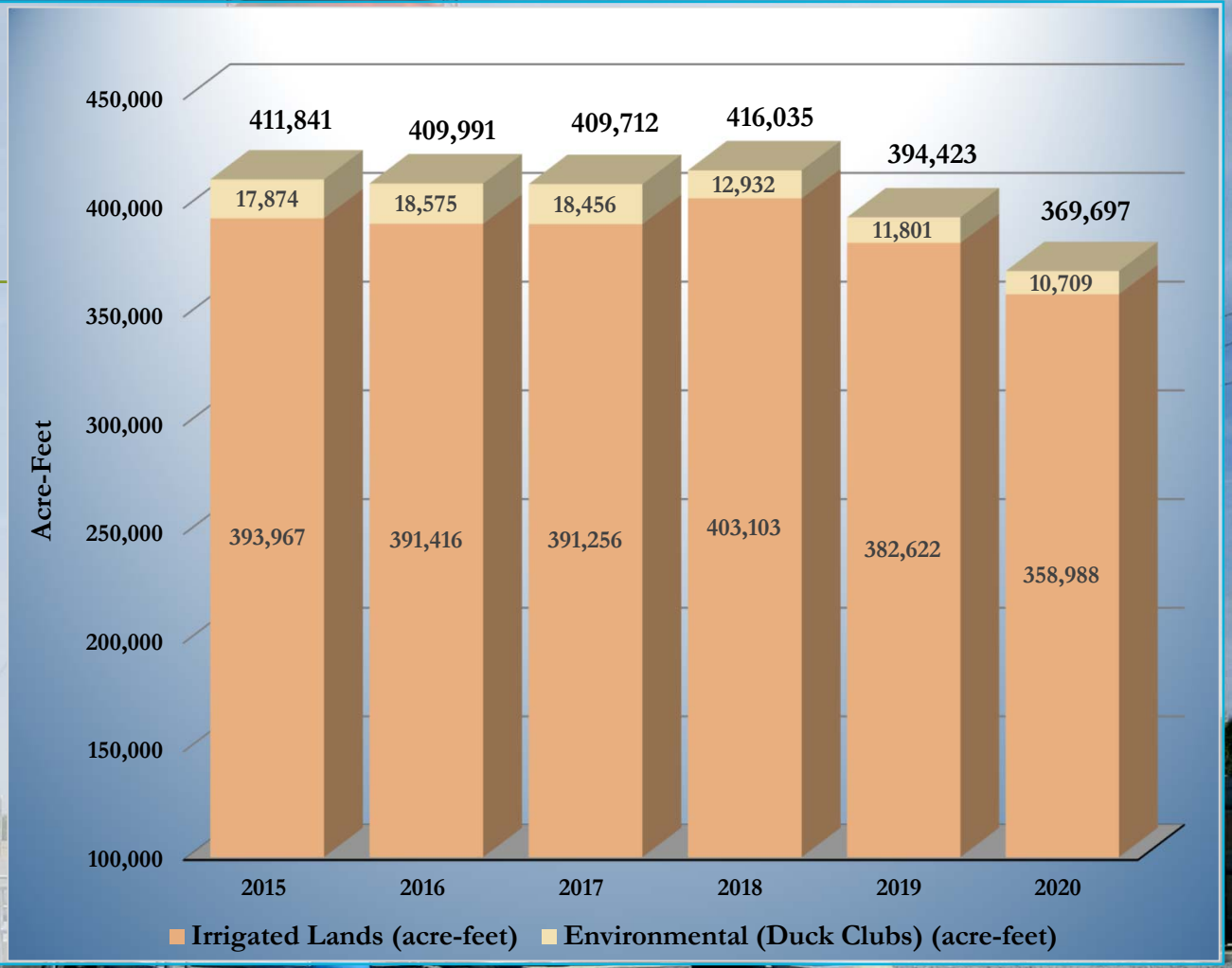
2-percent decrease from 2018 to 2020 (2,523 acres)



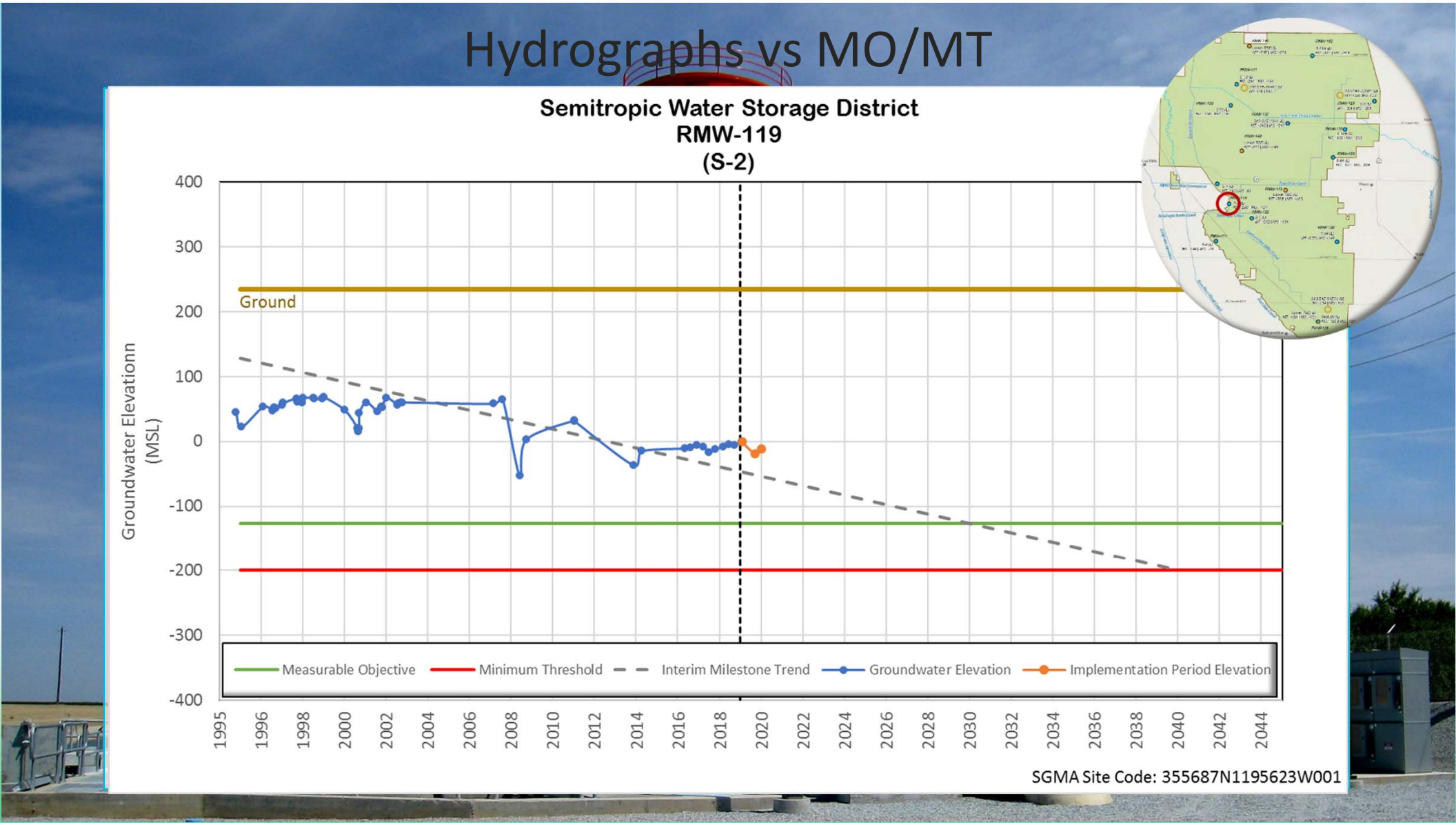
District ET

10-percent decrease from 2015 to 2020 (42,144ac-ft)

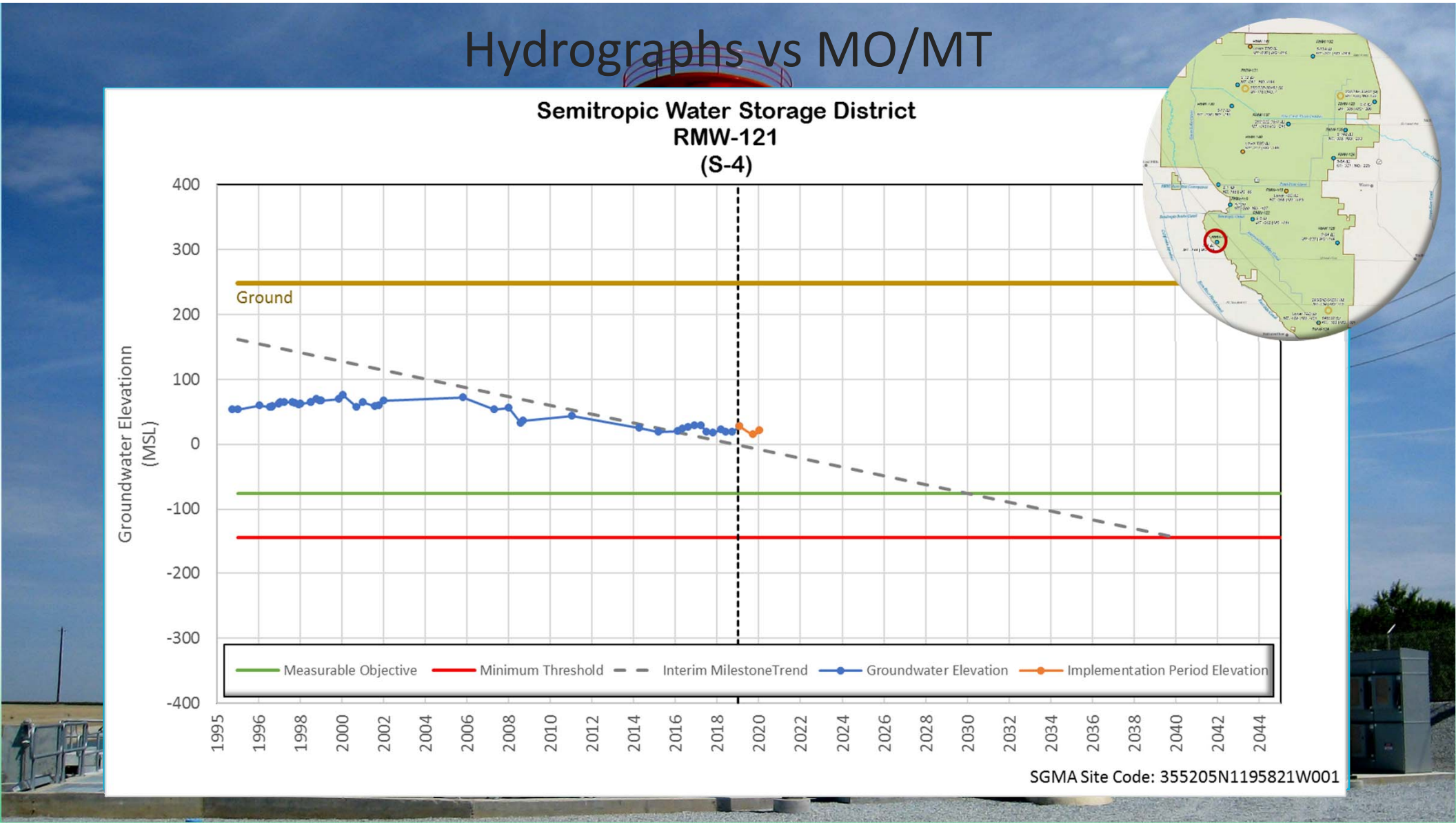
11-percent decrease from 2018 to 2020 (46,338 ac-ft)



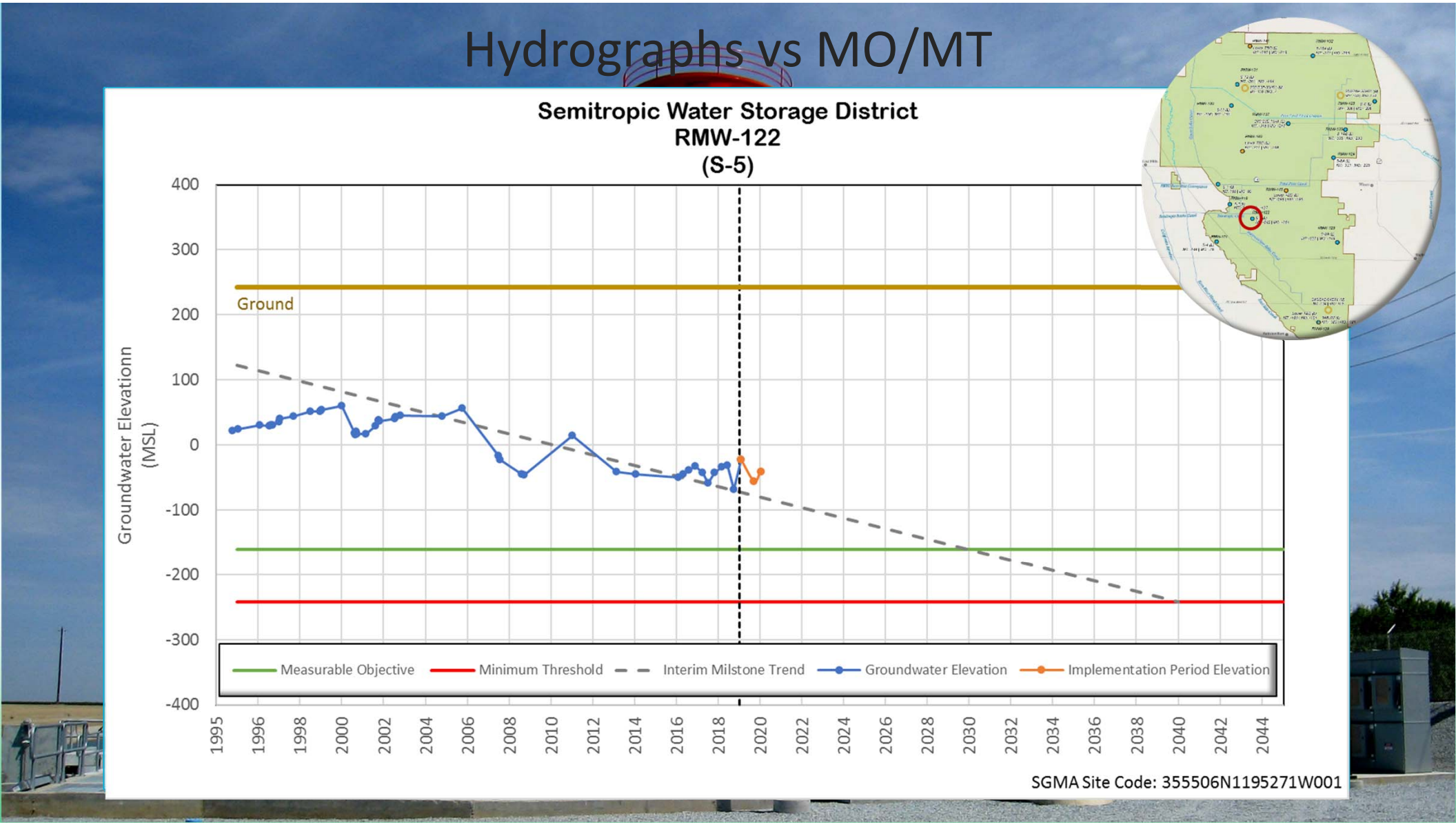
Hydrographs vs MO/MT



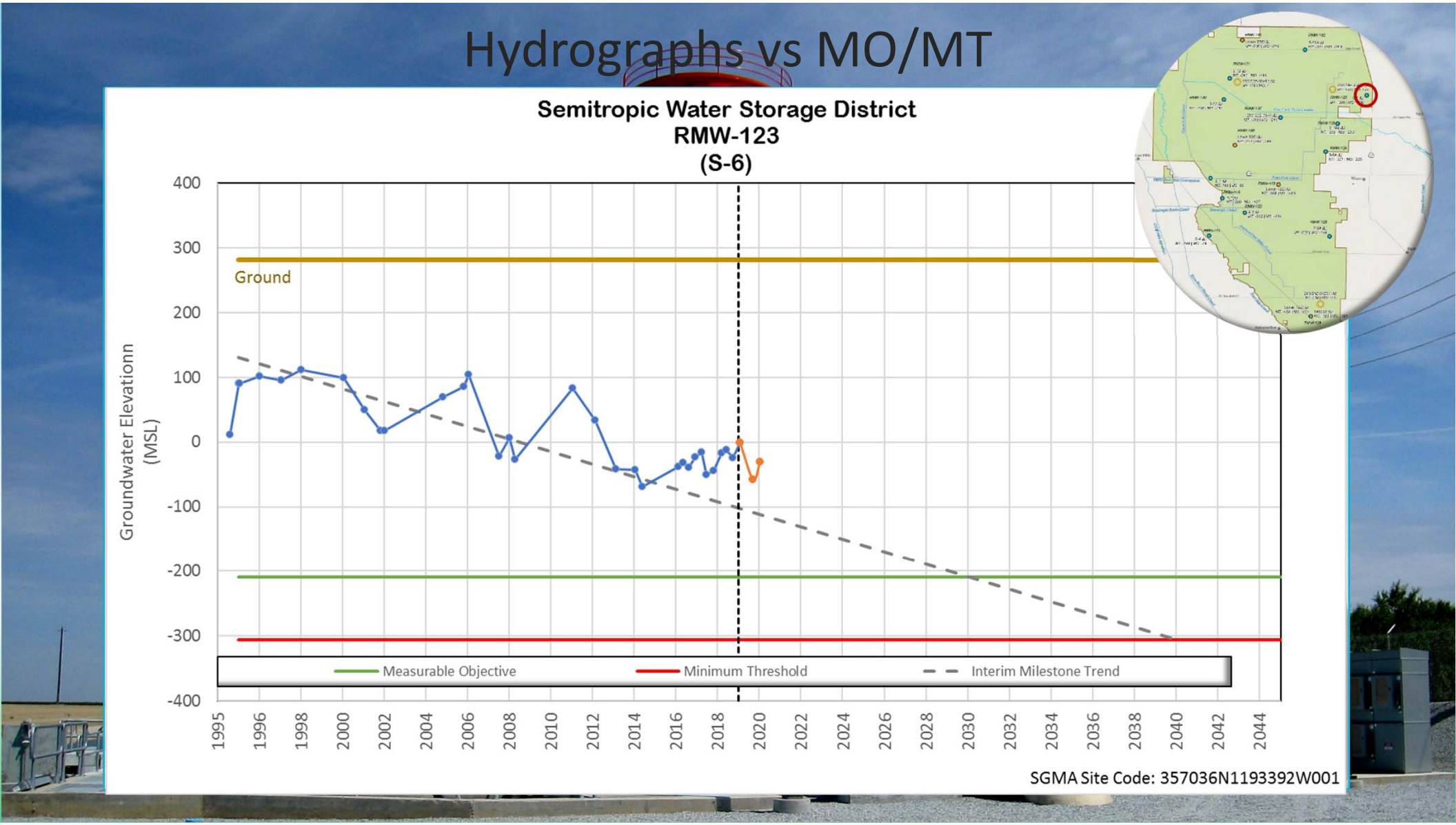
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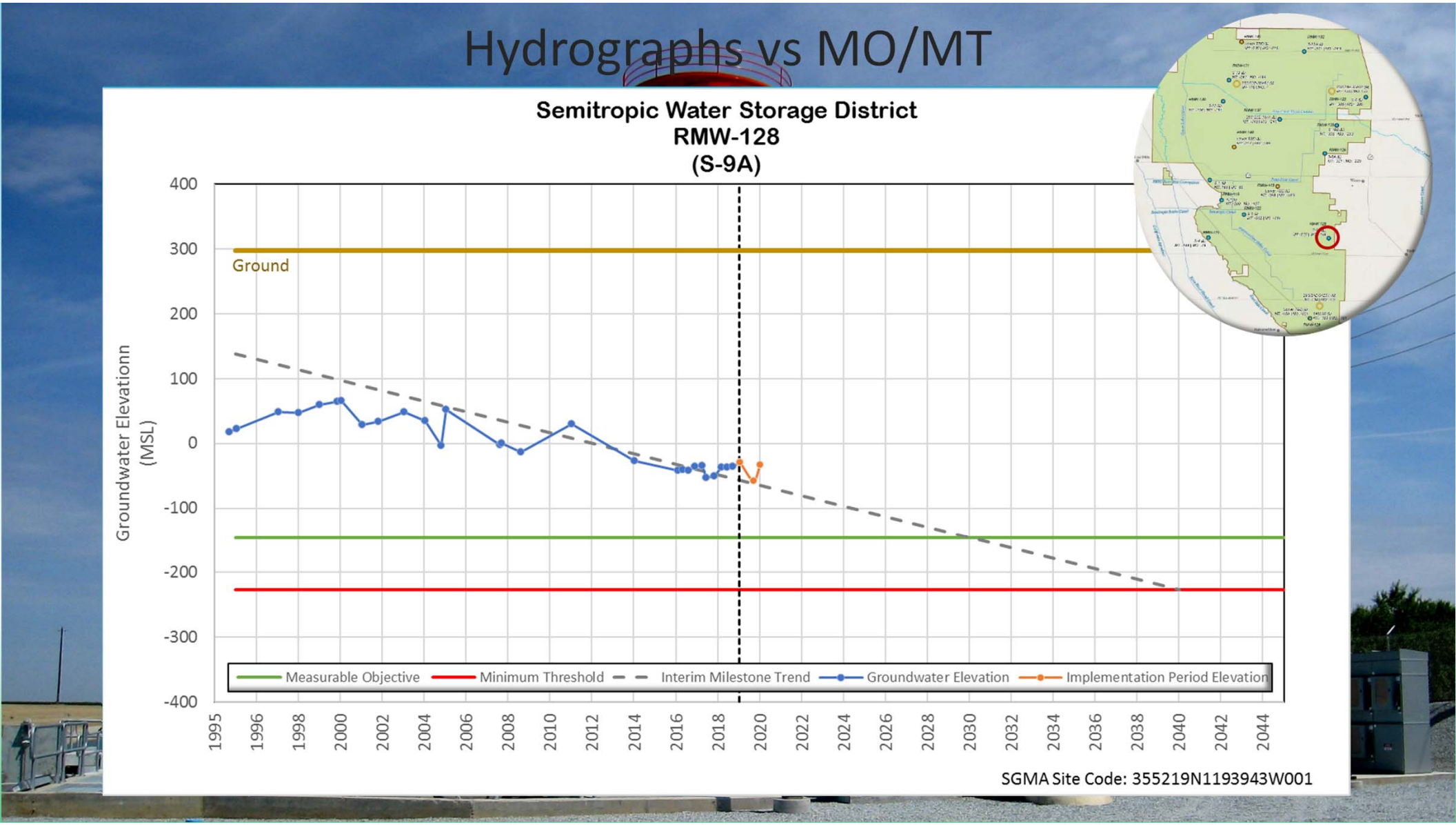
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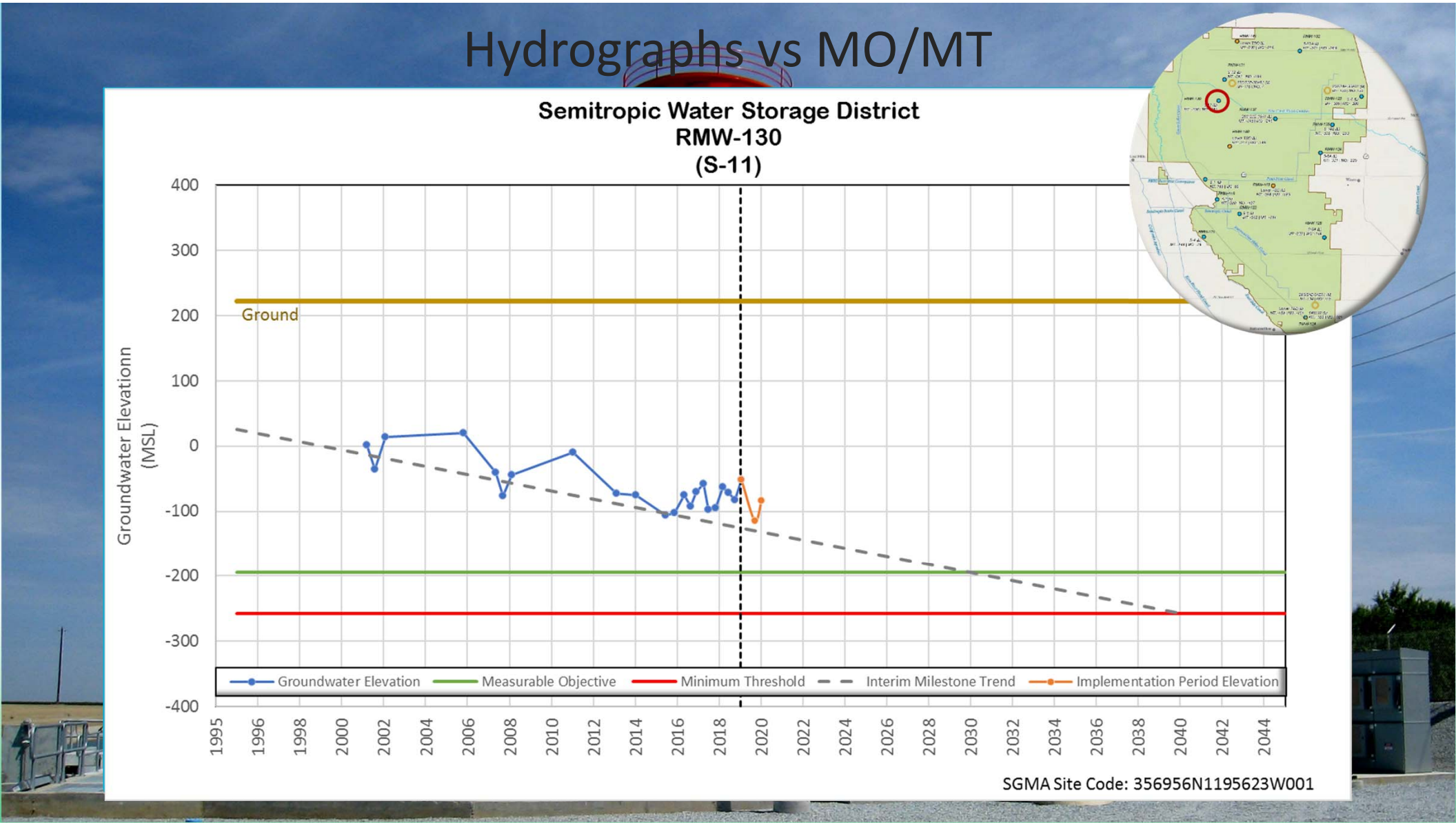
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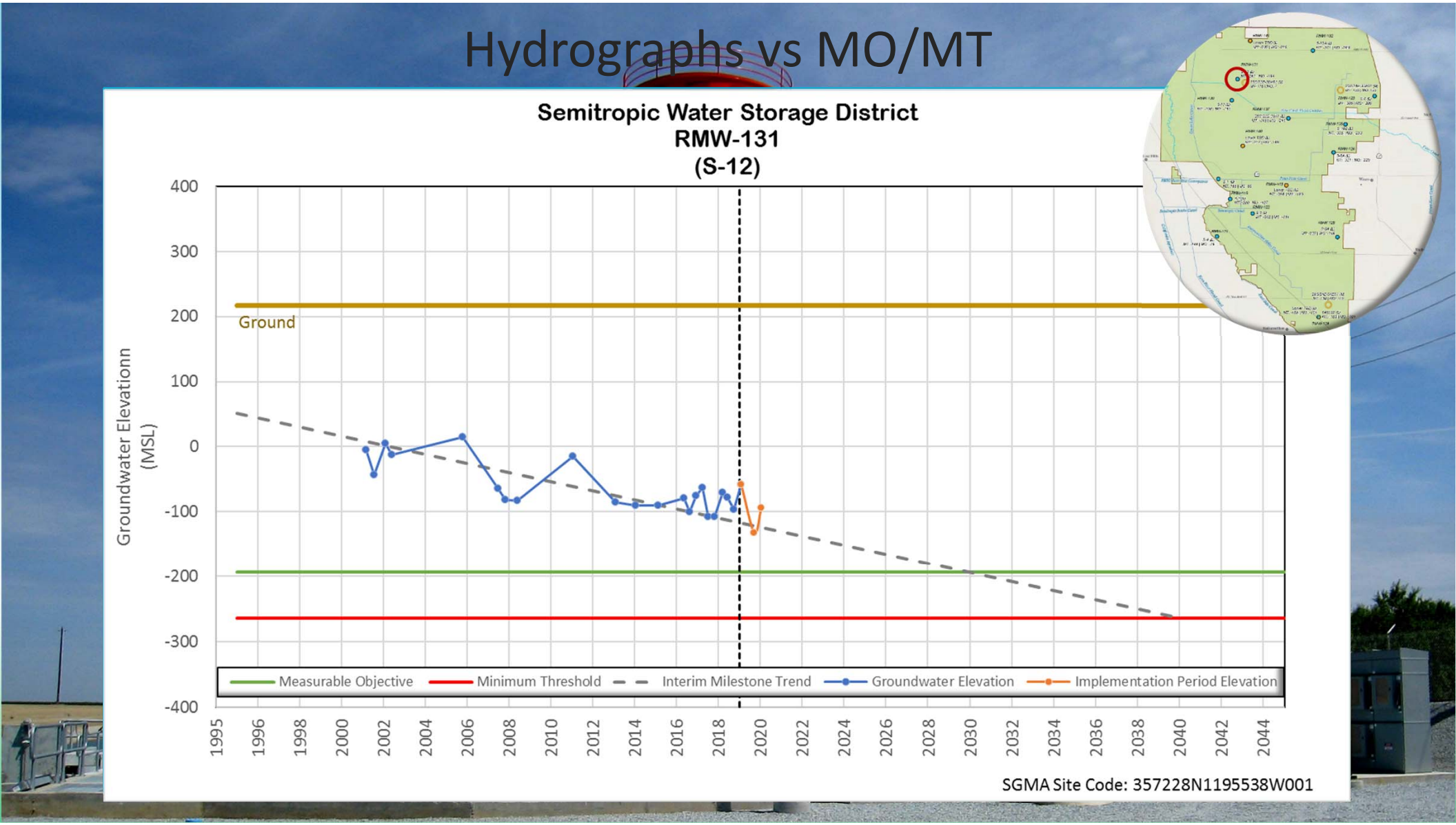
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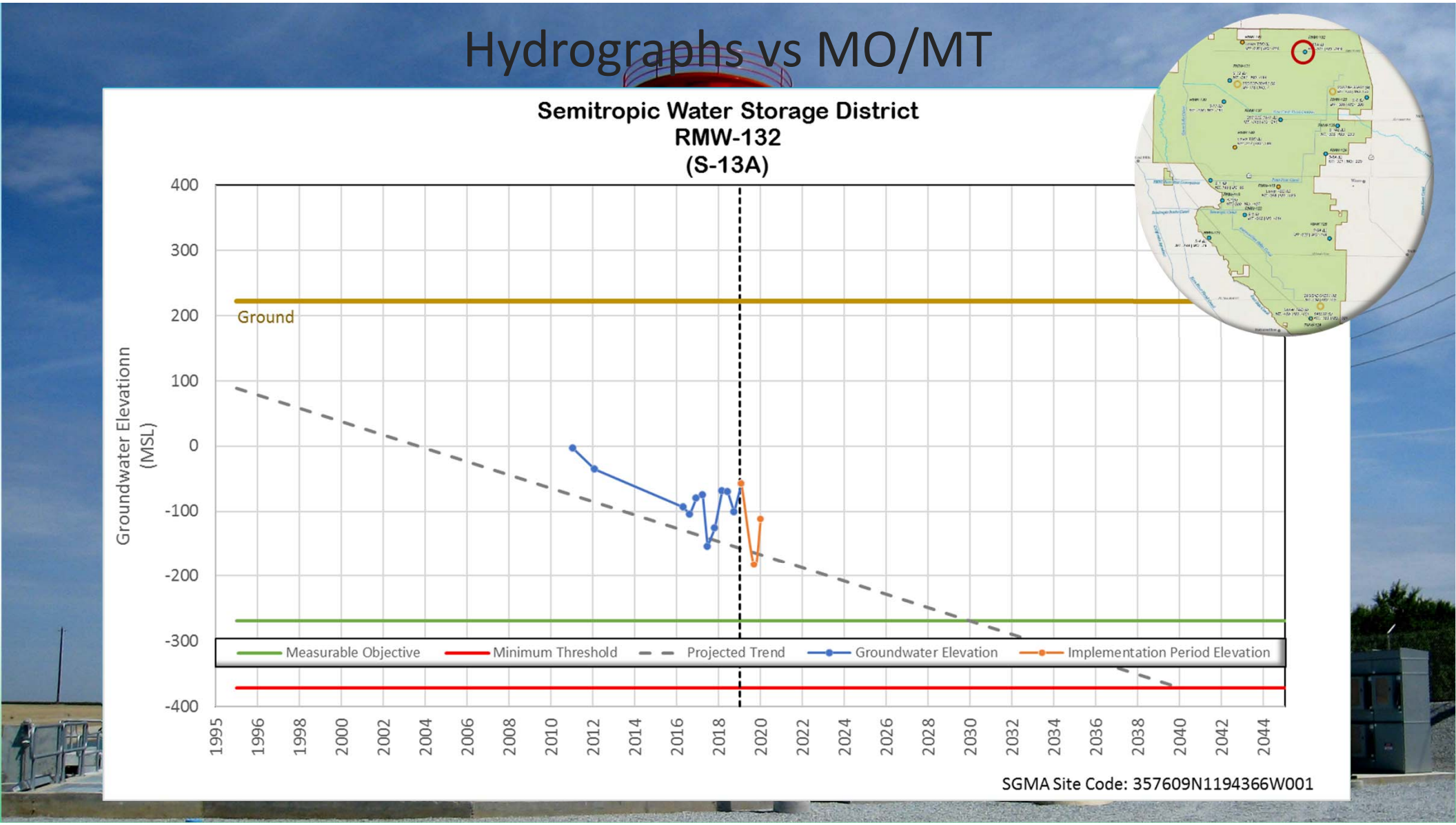
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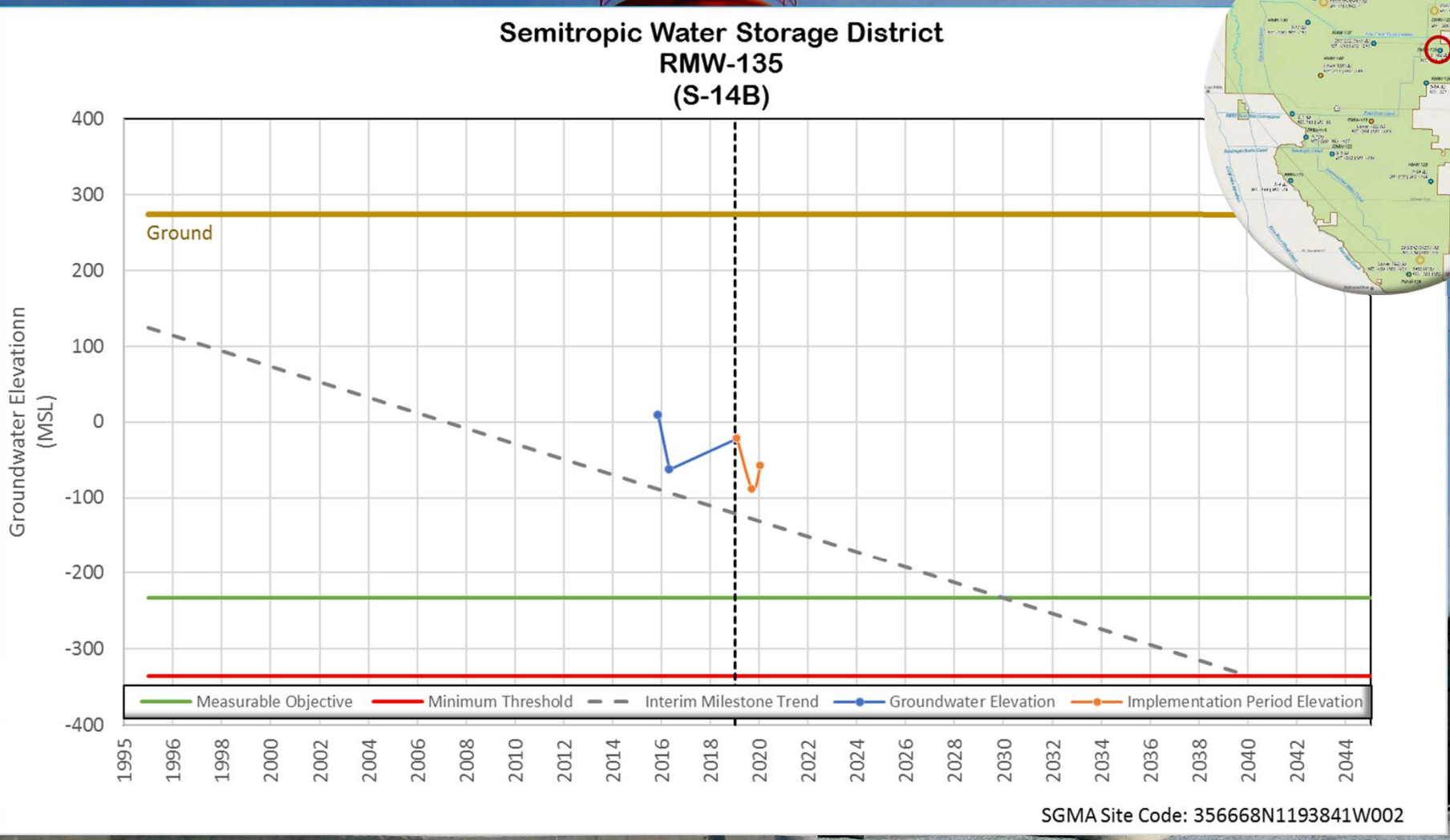
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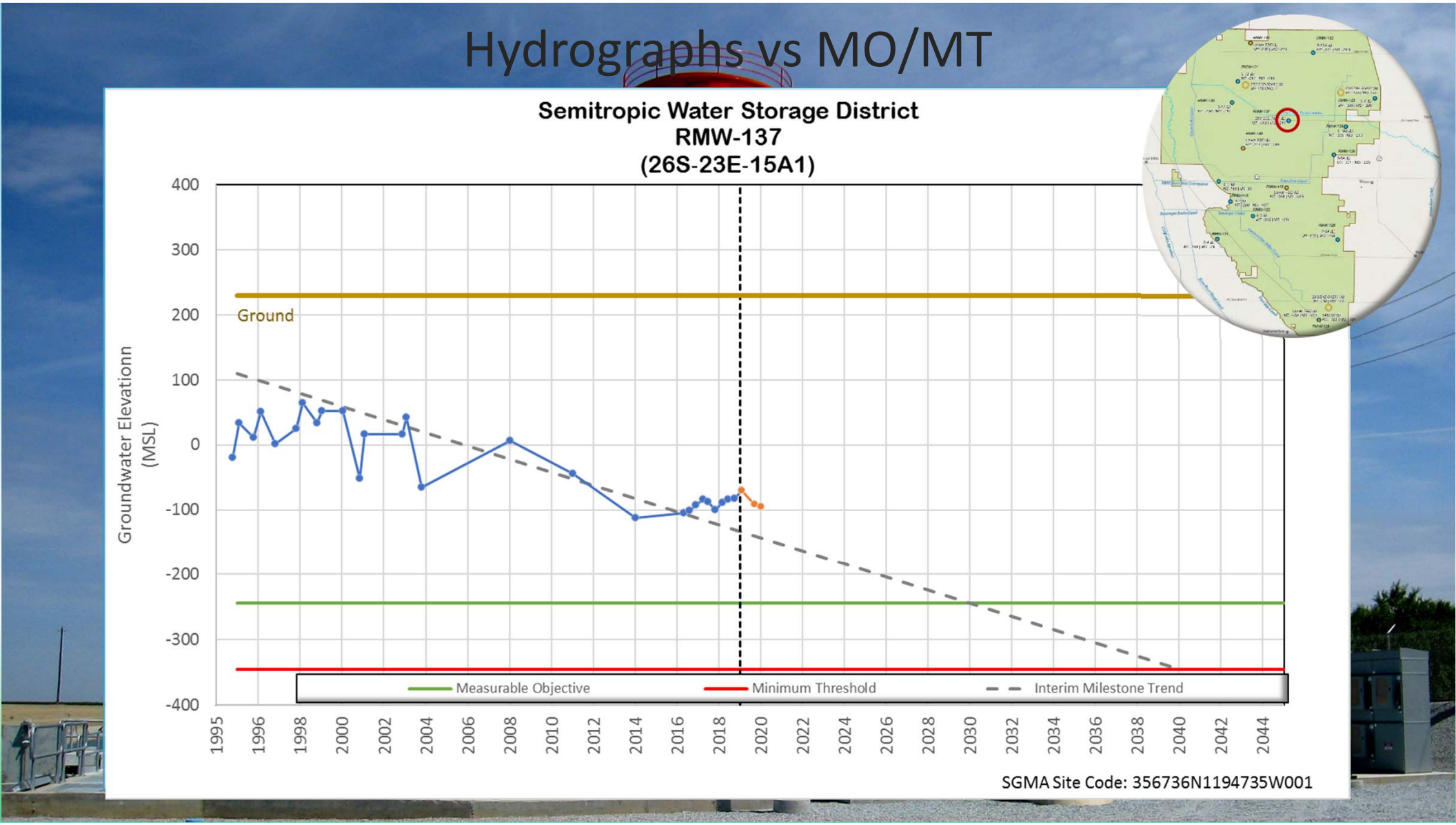
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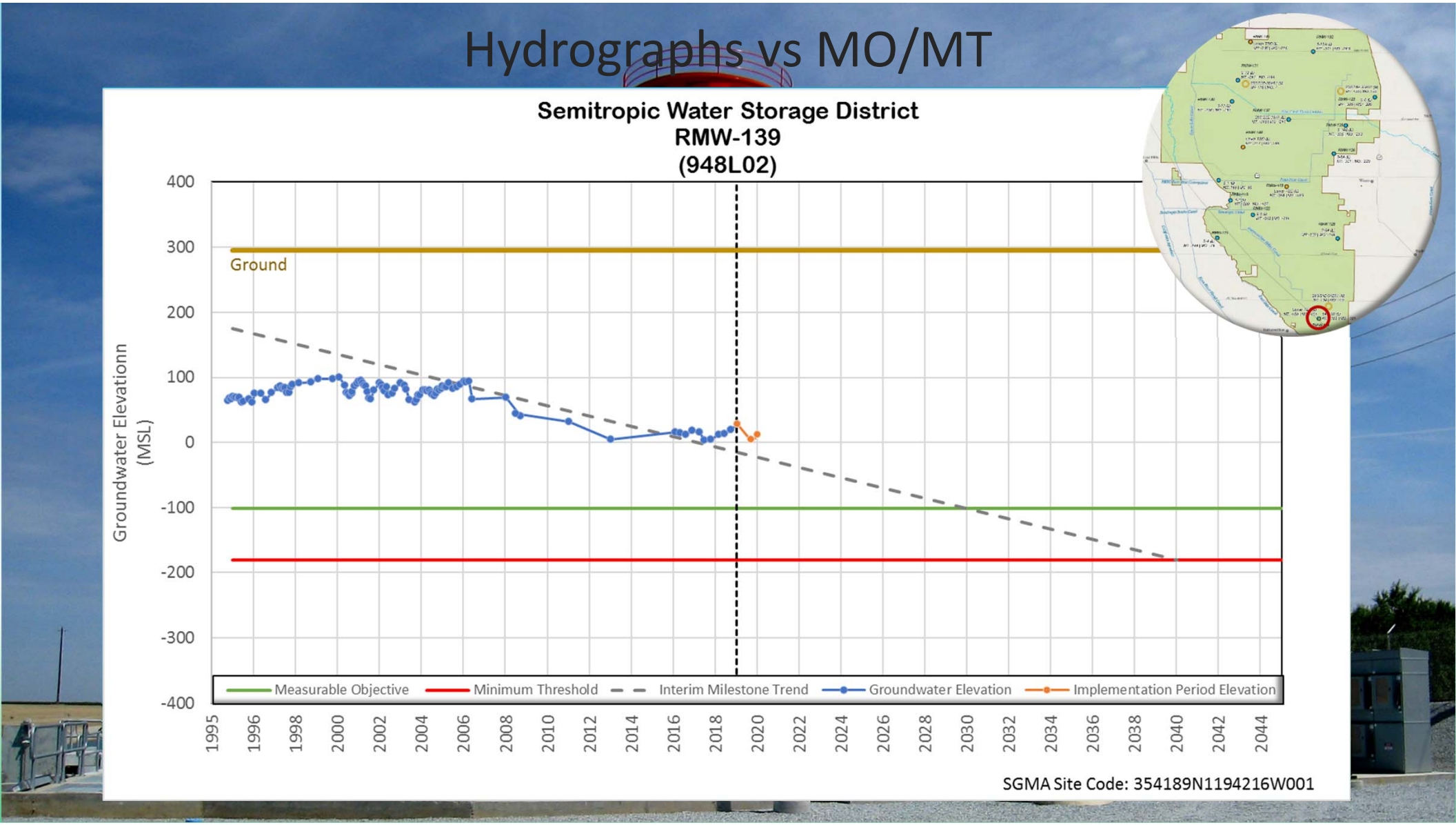
Hydrographs vs MO/MT



Hydrographs vs MO/MT



Hydrographs vs MO/MT



Management Action 1: Landowner Water Budgets

- Consumptive Use Water Budget – Not a “Pumped” or “Applied” Water Budget

2020 GSP Water Budget

Based on Historical Data to 2018

Water Supply Source	Projected Availability Acre-feet / year	Comment
State Water Project – Table A	**95,200**	*61% reliability 2017 DWR Delivery Capacity Report*
Supplemental Water Sources		
SWP Article 21	*3,400*	*Projected availability*
Imports, transfers & exchanges	*21,600*	*Historic avg (1990-2018)*
Poso Creek supplies	*400*	*Historic avg (1990-2018)*
Banking Project leave behind	*7,800*	*Historic avg (1990-2018)*
TOTAL 10-Year Average:	**33,200**	
Native Groundwater Supply	**55,400 to 166,100**	*0.25 to 0.75 af/acre*
Total Projected Supply	**183,800 to 294,500**	

2020 GSP Water Budget (Detailed)

Based on Historical Data to 2018

Water Supply Source	Projected Availability Acre-feet / year	Comment
State Water Project – Table A	**95,200**	*61% reliability 2017 DWR Delivery Capacity Report*
Supplemental Water Sources		
SWP Article 21	*3,400*	*Projected availability*
Imports, transfers & exchanges	*21,600*	*Historic avg (1990-2018)*
Poso Creek supplies	*400*	*Historic avg (1990-2018)*
Banking Project leave behind	*7,800*	*Historic avg (1990-2018)*
TOTAL 10-Year Average:	**33,200**	
Native Groundwater Supply *	**33,390**	*0.15 af/acre for all District acres (222,600)*
Precipitation *	**61,944**	*0.43 af/acre for developed acres (144,056 in 2018)*
Total Projected Supply	**223,734**	

* - Basin Negotiated

2021Water Budget

Based on Historical Data to 2020

Water Supply Source	Projected Availability Acre-feet / year	Comment
State Water Project – Table A	**89,990**	*58% reliability 2019 DWR Delivery Capacity Report*
Supplemental Water Sources		
SWP Article 21	*11,237*	*Historic avg (2011-2020)*
Imports, transfers & exchanges	*48,697*	*Historic avg (2011-2020)*
Poso Creek supplies	*3,803*	*Historic avg (2011-2020)*
Banking Project leave behind	*8,906*	*Historic avg (2011-2020)*
TOTAL 10-Year Average:	**70,759**	
Native Groundwater Supply	**33,390**	*0.15 af/acre for all District acres (222,600)*
Precipitation ***(10-year average)***	**57,489**	*0.397 af/acre for developed acres (144,801)*
Total Projected Supply	**251,628**	

Water Budget Differences

Water Supply Source	Change in Projected Availability Acre-feet / year	Comment
State Water Project – Table A	**-5,210**	
Supplemental Water Sources		
SWP Article 21	*7,837*	
Imports, transfers & exchanges	*27,097*	
Poso Creek supplies	*3,403*	
Banking Project leave behind	*1,106*	
TOTAL 10-Year Average:	**37,559**	
Native Groundwater Supply	**0**	
Precipitation ***(10-year average)***	**-4,455**	
Total Projected Supply	**27,894**	

Example Water Budgets

- Contract Lands and GPSC
- Groundwater Service Area (GPSC)
- Special GPSC (Duck Clubs)
- District "White Lands" – Not Provided (only receive Native Yield = 0.15 AF/AC per 2020 GSP)

2020 LANDOWNER WATER BUDGET

Prepared August 2021

Landowner: Landowner -Contract and GPSC

Shape GIS Acres:	81.50	**Contract Water**	
Parcel Acres:	80.65	Contract Entitlement:	282.28
Developed Acres:	80.65	Est LT Reliability:	58%
			163.72

	AF	AF/Parcel Ac
2020 Et (All Lands):	285.06	
2020 Et (Developed Lands):	285.06	3.53

			Native Supply					
Calendar Year	Contract Water (AF)	Supplemental Water (AF)	Native Groundwater Yield (AF)	Precipitation (AF)	Base Supply (AF)	Temporary Consumptive-Use Allowance (AF)	Total Consmptive Use Budget (AF)	Total Consmptive Use Budget (AF/Ac)
2020	163.72	41.19	12.23	31.99	249.13	89.60	338.73	4.20
2021	163.72	41.19	12.23	31.99	249.13	85.12	334.25	4.14
2022	163.72	41.19	12.23	31.99	249.13	80.64	329.77	4.09
2023	163.72	41.19	12.23	31.99	249.13	76.16	325.29	4.03
2024	163.72	41.19	12.23	31.99	249.13	71.68	320.81	3.98
2025	163.72	41.19	12.23	31.99	249.13	67.20	316.33	3.92
2026	163.72	41.19	12.23	31.99	249.13	62.72	311.85	3.87
2027	163.72	41.19	12.23	31.99	249.13	58.24	307.37	3.81
2028	163.72	41.19	12.23	31.99	249.13	53.76	302.89	3.76
2029	163.72	41.19	12.23	31.99	249.13	49.28	298.41	3.70
2030	163.72	41.19	12.23	31.99	249.13	44.80	293.93	3.64
2031	163.72	41.19	12.23	31.99	249.13	40.32	289.45	3.59
2032	163.72	41.19	12.23	31.99	249.13	35.84	284.97	3.53
2033	163.72	41.19	12.23	31.99	249.13	31.36	280.49	3.48
2034	163.72	41.19	12.23	31.99	249.13	26.88	276.01	3.42
2035	163.72	41.19	12.23	31.99	249.13	22.40	271.53	3.37
2036	163.72	41.19	12.23	31.99	249.13	17.92	267.05	3.31
2037	163.72	41.19	12.23	31.99	249.13	13.44	262.57	3.26
2038	163.72	41.19	12.23	31.99	249.13	8.96	258.09	3.20
2039	163.72	41.19	12.23	31.99	249.13	4.48	253.61	3.14
2040	163.72	41.19	12.23	31.99	249.13	0.00	249.13	3.09

20-year consumptive use water budget for: Landowner -Contract and GPSC

Notes:
Parcel: This is the Assessor's Parcel Number
SHAPE_ACRE: This is the true acreage of the parcel per District's GIS System
AC1: The acreage associated with the parcel paying the District's General Administrative Service Charge (GASC)
AC2: The acreage associated with the parcel paying the District's General Project Service Charge (GPSC)
AC3: The acreage associated with the parcel paying the District's GSPC
2020 Water Demand (Et): The water demand of the parcel as Evapotranspiration (Et) for the year 2020
Contract Ent.: The contract water supply entitlement associated with the parcel
LT Contract: The estimated Long Term Yield associated with the contract water supply, which is 58% based on DWR's *The Final State Water Project Delivery Capacity Report 2019* , this will be updated
Supplemental: Additional water supply provided to the parcel from District water supplies not including contract water supplies
NY: Native yield associated with the parcel, as of 2020 this is estimated to be 0.15 acre-feet per acre (Shape Acre)
Precip-Developed: This is the average annual precipitation associated with the portion of the parcel paying AC2 and/or AC3 (Developed Acres)
TCA: The parcels allocated Temporary Consumptive Use Allowance (TCA)
Total Consumptive Use Budget: This is the total water budget (acre-feet) available to the parcel available to offset the parcels water demand (Et)
Water Budget acre-feet/acre: This is the Total Consumptive Use Water Budget divided by parcel acres which results in acre-feet per acre

2020 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	89.60	338.73	4.20
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**89.60**	**338.73**	**4.20**

2021 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	85.12	334.25	4.14
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**85.12**	**334.25**	**4.14**

2022 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	80.64	329.77	4.09
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**80.64**	**329.77**	**4.09**

2023 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	76.16	325.29	4.03
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**76.16**	**325.29**	**4.03**

2024 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	71.68	320.81	3.98
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**71.68**	**320.81**	**3.98**

2025 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	67.20	316.33	3.92
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**67.20**	**316.33**	**3.92**

2026 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	62.72	311.85	3.87
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**62.72**	**311.85**	**3.87**

2027 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	58.24	307.37	3.81
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**58.24**	**307.37**	**3.81**

2028 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	53.76	302.89	3.76
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**53.76**	**302.89**	**3.76**

2029 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	49.28	298.41	3.70
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**49.28**	**298.41**	**3.70**

2030 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	44.80	293.93	3.64
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**44.80**	**293.93**	**3.64**

2031 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	40.32	289.45	3.59
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**40.32**	**289.45**	**3.59**

2032 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	35.84	284.97	3.53
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**35.84**	**284.97**	**3.53**

2033 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	31.36	280.49	3.48
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**31.36**	**280.49**	**3.48**

2034 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	26.88	276.01	3.42
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**26.88**	**276.01**	**3.42**

2035 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	22.40	271.53	3.37
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**22.40**	**271.53**	**3.37**

2036 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	17.92	267.05	3.31
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**17.92**	**267.05**	**3.31**

2037 Parcels	SHAPE_ACRE	AC1	AC2	AC3	2020 water Demand (Et)	Contract Ent.	Lt Cont	Supplemental	NY	Precip-Developed	TCA	Total Consumptive Use Budget	Water Budget

	(acres)	(acres)	(acres)	(acres)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	13.44	262.57	3.26
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**13.44**	**262.57**	**3.26**

2038 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	8.96	258.09	3.20
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**8.96**	**258.09**	**3.20**

2039 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	4.48	253.61	3.14
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**4.48**	**253.61**	**3.14**

2040 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	81.50	80.65	80.65	0.00	285.06	282.28	163.72	41.19	12.23	31.99	0.00	249.13	3.09
Grand Total	**81.50**	**80.65**	**80.65**	**0.00**	**285.06**	**282.28**	**163.72**	**41.19**	**12.23**	**31.99**	**0.00**	**249.13**	**3.09**

Explanation of Water Supply Categories Utilized in Landowner Water Budgets

Contract Water: The quantity of Contract Water allocated to each parcel is determined in the Contract between the District and the landowner, in Exhibit A of that Contract, which specifies the quantity of State Water Project (SWP) entitlement for each parcel covered in the Contract. Based on the entitlement per parcel, the long-term estimated yield of Contract Water is calculated by applying the current estimate of 58% long-term reliability of the SWP Table A deliveries to each parcel covered by the Contract. The long-term reliability of the SWP is as reported in the *Final State Water Project Delivery Capacity Report 2019* by the Department of Water Resources (August 2020).

> ***Example:*** Parcel 000-00-000 has a Contract entitlement of 350 acre-feet (AF). The long-term reliability of the Contract entitlement would be 350 AF x 58% = 203 AF. The 203 AF is then used as the estimate of long-term Contract Water supply for the parcel.

It is important to note that as the estimated long-term reliability of the SWP is updated by DWR the long-term Contract Water supply for each contract parcel will also be updated.

Supplemental Water: This category is comprised of all water supplies acquired by the District on behalf of all landowners paying the General Project Service Charge (GPSC) or the Special GPSC. These supplies are allocated to each landowner proportional to what they pay in assessments as either the GPSC, Special GPSC or combination of GPSC and Special GPSC. For the landowner water budgets Supplement Water is calculate as a 10-year running average, including the following supply sources:

- Leave behind from banking activity on behalf of third parties,
- SWP Article 21 water,
- Central Valley Project Section 215 water,
- Dry year purchases, and
- Other water purchases.

Supplemental Water supplies estimates will be updates annually.

Native Supply: This is the estimated amount of water available to each landowner from the Native Groundwater Yield of the Kern Subbasin and precipitation available to meet consumptive use. The Native Groundwater Yield of the Kern Subbasin is estimated to be 0.15 AF per acre and is applied to the shape acres associated with each parcel. The Native Groundwater Yield of the Kern Subbasin has been estimated based on current available data and in coordination with all Groundwater Sustainability Agencies in the Kern Subbasin and is subject to future revision.

Precipitation estimated to be 0.397 AF per acre, based on a 10-year average using the CIMIS Shafter Gauge (2011-2019) and five (5) District gauges (2020). The precipitation estimate is applied to only the portion of a parcel paying either the GPSC or the Special GPSC or in a few instances the aggregate of both the GPSC and Special GPSC for a parcel. Estimated precipitation is a 10-year average that will be updated annually.

Temporary Consumptive-Use Allowance (TCA): The TCA represents each landowner's share of the estimated groundwater overdraft during the 2020 to 2040 SGMA implementation period. The TCA has been established by the District such that on average no individual landowner will be short of groundwater necessary to meet their consumptive use demand at the initiation of the SGMA implementation period. The TCA is available to landowners for the consumptive use upon the properties owned by the landowner for a given year. Any unused TCA is not transferable, may not be separated from the property holding of the landowner and may not be accrued or carried over as a groundwater supply for future use. Furthermore, it is not the intent of the District for the TCA to be an asset, the TCA is the key tool of the Semitropic GSA to gradually reduce groundwater overdraft over the 20-year SGMA implementation period. Accordingly, under the District's GSP, the TCA will be reduced to 0 by 2040 and will be 0 from 2040 forward on all lands within the District. The initial TCA will be allocated to each property such that the total water supply available to a landowner at the beginning of the implementation period is equivalent to 4.2 AF per acre for lands paying the GPSC and the Special GPSC. District white lands or currently undeveloped / unirrigated lands that are not paying either the GPSC or the Special GPSC will not receive an TCA.

2020 LANDOWNER WATER BUDGET

Prepared August 2021

Landowner: Landowner GRD WTR + GPSC
Shape GIS Acres: 322.09
Parcel Acres: 320.00
Developed Acres: 320.00

	AF	AF/Parcel Ac
2020 Et (All Lands):	1,215.15	
2020 Et (Developed Lands):	1,215.15	3.80

Contract Water

Contract Entitlement:	-
Est LT Reliability:	58%
	-

			Native Supply					
Calendar Year	Contract Water (AF)	Supplemental Water (AF)	Native Groundwater Yield (AF)	Precipitation (AF)	Base Supply (AF)	Temporary Consumptive-Use Allowance (AF)	Total Consmptive Use Budget (AF)	Total Consmptive Use Budget (AF/Ac)
2020	-	163.43	48.31	126.94	338.69	1,005.31	1,344.00	4.20
2021	-	163.43	48.31	126.94	338.69	955.05	1,293.73	4.04
2022	-	163.43	48.31	126.94	338.69	904.78	1,243.47	3.89
2023	-	163.43	48.31	126.94	338.69	854.52	1,193.20	3.73
2024	-	163.43	48.31	126.94	338.69	804.25	1,142.94	3.57
2025	-	163.43	48.31	126.94	338.69	753.98	1,092.67	3.41
2026	-	163.43	48.31	126.94	338.69	703.72	1,042.41	3.26
2027	-	163.43	48.31	126.94	338.69	653.45	992.14	3.10
2028	-	163.43	48.31	126.94	338.69	603.19	941.87	2.94
2029	-	163.43	48.31	126.94	338.69	552.92	891.61	2.79
2030	-	163.43	48.31	126.94	338.69	502.66	841.34	2.63
2031	-	163.43	48.31	126.94	338.69	452.39	791.08	2.47
2032	-	163.43	48.31	126.94	338.69	402.13	740.81	2.32
2033	-	163.43	48.31	126.94	338.69	351.86	690.55	2.16
2034	-	163.43	48.31	126.94	338.69	301.59	640.28	2.00
2035	-	163.43	48.31	126.94	338.69	251.33	590.02	1.84
2036	-	163.43	48.31	126.94	338.69	201.06	539.75	1.69
2037	-	163.43	48.31	126.94	338.69	150.80	489.48	1.53
2038	-	163.43	48.31	126.94	338.69	100.53	439.22	1.37
2039	-	163.43	48.31	126.94	338.69	50.27	388.95	1.22
2040	-	163.43	48.31	126.94	338.69	(0.00)	338.69	1.06

20-year consumptive use water budget for: Landowner GRD WTR + GPSC

Notes:
Parcel: This is the Assessor's Parcel Number
SHAPE_ACRE: This is the true acreage of the parcel per District's GIS System
AC1: The acreage associated with the parcel paying the District's General Administrative Service Charge (GASC)
AC2: The acreage associated with the parcel paying the District's General Project Service Charge (GPSC)
AC3: The acreage associated with the parcel paying the District's GSPC
2020 Water Demand (Et): The water demand of the parcel as Evapotranspiration (Et) for the year 2020
Contract Ent.: The contract water supply entitlement associated with the parcel
LT Contract: The estimated Long Term Yield associated with the contract water supply, which is 58% based on DWR's *The Final State Water Project Delivery Capacity Report 2019* , this will be updated
Supplemental: Additional water supply provided to the parcel from District water supplies not including contract water supplies
NY: Native yield associated with the parcel, as of 2020 this is estimated to be 0.15 acre-feet per acre (Shape Acre)
Precip-Developed: This is the average annual precipitation associated with the portion of the parcel paying AC2 and/or AC3 (Developed Acres)
TCA: The parcels allocated Temporary Consumptive Use Allowance (TCA)
Total Consumptive Use Budget: This is the total water budget (acre-feet) available to the parcel available to offset the parcels water demand (Et)
Water Budget acre-feet/acre: This is the Total Consumptive Use Water Budget divided by parcel acres which results in acre-feet per acre

2020 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	502.57	672.00	4.20
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	502.74	672.00	4.20
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**1005.31**	**1344.00**	**4.20**

2021 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	477.45	646.87	4.04
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	477.60	646.86	4.04
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**955.05**	**1293.73**	**4.04**

2022 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	452.32	621.74	3.89
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	452.46	621.73	3.89
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**904.78**	**1243.47**	**3.89**

2023 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	427.19	596.61	3.73
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	427.33	596.59	3.73
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**854.52**	**1193.20**	**3.73**

2024 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	402.06	571.49	3.57
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	402.19	571.45	3.57
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**804.25**	**1142.94**	**3.57**

2025 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	376.93	546.36	3.41
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	377.05	546.32	3.41
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**753.98**	**1092.67**	**3.41**

2026 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	351.80	521.23	3.26
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	351.92	521.18	3.26
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**703.72**	**1042.41**	**3.26**

2027 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	326.67	496.10	3.10
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	326.78	496.04	3.10
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**653.45**	**992.14**	**3.10**

2028 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	301.54	470.97	2.94
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	301.64	470.90	2.94
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**603.19**	**941.87**	**2.94**

2029 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	276.42	445.84	2.79
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	276.51	445.77	2.79
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**552.92**	**891.61**	**2.79**

2030 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	251.29	420.71	2.63
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	251.37	420.63	2.63
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**502.66**	**841.34**	**2.63**

2031 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	226.16	395.58	2.47
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	226.23	395.49	2.47
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**452.39**	**791.08**	**2.47**

2032 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	201.03	370.46	2.32
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	201.10	370.36	2.31
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**402.13**	**740.81**	**2.32**

2033 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	175.90	345.33	2.16
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	175.96	345.22	2.16
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**351.86**	**690.55**	**2.16**

2034 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	150.77	320.20	2.00
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	150.82	320.08	2.00

Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**301.59**	**640.28**	**2.00**

2035 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	125.64	295.07	1.84
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	125.68	294.95	1.84
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**251.33**	**590.02**	**1.84**

2036 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	100.51	269.94	1.69
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	100.55	269.81	1.69
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**201.06**	**539.75**	**1.69**

2037 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	75.39	244.81	1.53
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	75.41	244.67	1.53
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**150.80**	**489.48**	**1.53**

2038 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	50.26	219.68	1.37
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	50.27	219.54	1.37
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**100.53**	**439.22**	**1.37**

2039 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	25.13	194.55	1.22
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	25.14	194.40	1.21
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**50.27**	**388.95**	**1.22**

2040 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XX-XX	161.59	160.00	160.00	0.00	607.77	0.00	0.00	81.71	24.24	63.47	0.00	169.43	1.06
XXX-XX-XX	160.50	160.00	160.00	0.00	607.38	0.00	0.00	81.71	24.08	63.47	0.00	169.26	1.06
Grand Total	**322.09**	**320.00**	**320.00**	**0.00**	**1215.15**	**0.00**	**0.00**	**163.43**	**48.31**	**126.94**	**0.00**	**338.69**	**1.06**

Explanation of Water Supply Categories Utilized in Landowner Water Budgets

Contract Water: The quantity of Contract Water allocated to each parcel is determined in the Contract between the District and the landowner, in Exhibit A of that Contract, which specifies the quantity of State Water Project (SWP) entitlement for each parcel covered in the Contract. Based on the entitlement per parcel, the long-term estimated yield of Contract Water is calculated by applying the current estimate of 58% long-term reliability of the SWP Table A deliveries to each parcel covered by the Contract. The long-term reliability of the SWP is as reported in the *Final State Water Project Delivery Capacity Report 2019* by the Department of Water Resources (August 2020).

> ***Example:*** Parcel 000-00-000 has a Contract entitlement of 350 acre-feet (AF). The long-term reliability of the Contract entitlement would be 350 AF x 58% = 203 AF. The 203 AF is then used as the estimate of long-term Contract Water supply for the parcel.

It is important to note that as the estimated long-term reliability of the SWP is updated by DWR the long-term Contract Water supply for each contract parcel will also be updated.

Supplemental Water: This category is comprised of all water supplies acquired by the District on behalf of all landowners paying the General Project Service Charge (GPSC) or the Special GPSC. These supplies are allocated to each landowner proportional to what they pay in assessments as either the GPSC, Special GPSC or combination of GPSC and Special GPSC. For the landowner water budgets Supplement Water is calculate as a 10-year running average, including the following supply sources:

- Leave behind from banking activity on behalf of third parties,
- SWP Article 21 water,
- Central Valley Project Section 215 water,
- Dry year purchases, and
- Other water purchases.

Supplemental Water supplies estimates will be updates annually.

Native Supply: This is the estimated amount of water available to each landowner from the Native Groundwater Yield of the Kern Subbasin and precipitation available to meet consumptive use. The Native Groundwater Yield of the Kern Subbasin is estimated to be 0.15 AF per acre and is applied to the shape acres associated with each parcel. The Native Groundwater Yield of the Kern Subbasin has been estimated based on current available data and in coordination with all Groundwater Sustainability Agencies in the Kern Subbasin and is subject to future revision.

Precipitation estimated to be 0.397 AF per acre, based on a 10-year average using the CIMIS Shafter Gauge (2011-2019) and five (5) District gauges (2020). The precipitation estimate is applied to only the portion of a parcel paying either the GPSC or the Special GPSC or in a few instances the aggregate of both the GPSC and Special GPSC for a parcel. Estimated precipitation is a 10-year average that will be updated annually.

Temporary Consumptive-Use Allowance (TCA): The TCA represents each landowner's share of the estimated groundwater overdraft during the 2020 to 2040 SGMA implementation period. The TCA has been established by the District such that on average no individual landowner will be short of groundwater necessary to meet their consumptive use demand at the initiation of the SGMA implementation period. The TCA is available to landowners for the consumptive use upon the properties owned by the landowner for a given year. Any unused TCA is not transferable, may not be separated from the property holding of the landowner and may not be accrued or carried over as a groundwater supply for future use. Furthermore, it is not the intent of the District for the TCA to be an asset, the TCA is the key tool of the Semitropic GSA to gradually reduce groundwater overdraft over the 20-year SGMA implementation period. Accordingly, under the District's GSP, the TCA will be reduced to 0 by 2040 and will be 0 from 2040 forward on all lands within the District. The initial TCA will be allocated to each property such that the total water supply available to a landowner at the beginning of the implementation period is equivalent to 4.2 AF per acre for lands paying the GPSC and the Special GPSC. District white lands or currently undeveloped / unirrigated lands that are not paying either the GPSC or the Special GPSC will not receive an TCA.

2020 LANDOWNER WATER BUDGET

Prepared August 2021

Landowner: Landowner - Special GSPC
Shape GIS Acres: 161.14
Parcel Acres: 157.99
Developed Acres: 157.99

	AF	AF/Parcel Ac
2020 Et (All Lands):	287.88	
2020 Et (Developed Lands):	-	-

Contract Water

Contract Entitlement:	-
Est LT Reliability:	58%
	-

			Native Supply					
Calendar Year	Contract Water (AF)	Supplemental Water (AF)	Native Groundwater Yield (AF)	Precipitation (AF)	Base Supply (AF)	Temporary Consumptive-Use Allowance (AF)	Total Consmptive Use Budget (AF)	Total Consmptive Use Budget (AF/Ac)
2020	-	5.50	24.17	62.67	92.35	571.21	663.56	4.20
2021	-	5.50	24.17	62.67	92.35	542.65	635.00	4.02
2022	-	5.50	24.17	62.67	92.35	514.09	606.44	3.84
2023	-	5.50	24.17	62.67	92.35	485.53	577.88	3.66
2024	-	5.50	24.17	62.67	92.35	456.97	549.32	3.48
2025	-	5.50	24.17	62.67	92.35	428.41	520.75	3.30
2026	-	5.50	24.17	62.67	92.35	399.85	492.19	3.12
2027	-	5.50	24.17	62.67	92.35	371.29	463.63	2.93
2028	-	5.50	24.17	62.67	92.35	342.73	435.07	2.75
2029	-	5.50	24.17	62.67	92.35	314.17	406.51	2.57
2030	-	5.50	24.17	62.67	92.35	285.61	377.95	2.39
2031	-	5.50	24.17	62.67	92.35	257.05	349.39	2.21
2032	-	5.50	24.17	62.67	92.35	228.48	320.83	2.03
2033	-	5.50	24.17	62.67	92.35	199.92	292.27	1.85
2034	-	5.50	24.17	62.67	92.35	171.36	263.71	1.67
2035	-	5.50	24.17	62.67	92.35	142.80	235.15	1.49
2036	-	5.50	24.17	62.67	92.35	114.24	206.59	1.31
2037	-	5.50	24.17	62.67	92.35	85.68	178.03	1.13
2038	-	5.50	24.17	62.67	92.35	57.12	149.47	0.95
2039	-	5.50	24.17	62.67	92.35	28.56	120.91	0.77
2040	-	5.50	24.17	62.67	92.35	(0.00)	92.35	0.58

20-year consumptive use water budget for: Landowner - Special GSPC

Notes:
Parcel: This is the Assessor's Parcel Number
SHAPE_ACRE: This is the true acreage of the parcel per District's GIS System
AC1: The acreage associated with the parcel paying the District's General Administrative Service Charge (GASC)
AC2: The acreage associated with the parcel paying the District's General Project Service Charge (GPSC)
AC3: The acreage associated with the parcel paying the District's GSPC
2020 Water Demand (Et): The water demand of the parcel as Evapotranspiration (Et) for the year 2020
Contract Ent.: The contract water supply entitlement associated with the parcel
LT Contract: The estimated Long Term Yield associated with the contract water supply, which is 58% based on DWR's *The Final State Water Project Delivery Capacity Report 2019* , this will be updated
Supplemental: Additional water supply provided to the parcel from District water supplies not including contract water supplies
NY: Native yield associated with the parcel, as of 2020 this is estimated to be 0.15 acre-feet per acre (Shape Acre)
Precip-Developed: This is the average annual precipitation associated with the portion of the parcel paying AC2 and/or AC3 (Developed Acres)
TCA: The parcels allocated Temporary Consumptive Use Allowance (TCA)
Total Consumptive Use Budget: This is the total water budget (acre-feet) available to the parcel available to offset the parcels water demand (Et)
Water Budget acre-feet/acre: This is the Total Consumptive Use Water Budget divided by parcel acres which results in acre-feet per acre

2020 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	571.21	663.56	4.20
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**571.21**	**663.56**	**4.20**

2021 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	542.65	635.00	4.02
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**542.65**	**635.00**	**4.02**

2022 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	514.09	606.44	3.84
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**514.09**	**606.44**	**3.84**

2023 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	485.53	577.88	3.66
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**485.53**	**577.88**	**3.66**

2024 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	456.97	549.32	3.48
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**456.97**	**549.32**	**3.48**

2025 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	428.41	520.75	3.30
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**428.41**	**520.75**	**3.30**

2026 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	399.85	492.19	3.12
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**399.85**	**492.19**	**3.12**

2027 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	371.29	463.63	2.93
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**371.29**	**463.63**	**2.93**

2028 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	342.73	435.07	2.75
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**342.73**	**435.07**	**2.75**

2029 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	314.17	406.51	2.57
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**314.17**	**406.51**	**2.57**

2030 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	285.61	377.95	2.39
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**285.61**	**377.95**	**2.39**

2031 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	257.05	349.39	2.21
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**257.05**	**349.39**	**2.21**

2032 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	228.48	320.83	2.03
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**228.48**	**320.83**	**2.03**

2033 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	199.92	292.27	1.85
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**199.92**	**292.27**	**1.85**

2034 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	171.36	263.71	1.67
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**171.36**	**263.71**	**1.67**

2035 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	142.80	235.15	1.49
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**142.80**	**235.15**	**1.49**

2036 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	114.24	206.59	1.31
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**114.24**	**206.59**	**1.31**

2037 Parcels	SHAPE_ACRE	AC1	AC2	AC3	2020 water Demand (Et)	Contract Ent.	Lt Cont	Supplemental	NY	Precip-Developed	TCA	Total Consumptive Use Budget	Water Budget

	(acres)	(acres)	(acres)	(acres)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	85.68	178.03	1.13
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**85.68**	**178.03**	**1.13**

2038 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	57.12	149.47	0.95
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**57.12**	**149.47**	**0.95**

2039 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	28.56	120.91	0.77
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**28.56**	**120.91**	**0.77**

2040 Parcels	SHAPE_ACRE (acres)	AC1 (acres)	AC2 (acres)	AC3 (acres)	2020 water Demand (Et) (acre-feet)	Contract Ent. (acre-feet)	Lt Cont (acre-feet)	Supplemental (acre-feet)	NY (acre-feet)	Precip-Developed (acre-feet)	TCA (acre-feet)	Total Consumptive Use Budget (acre-feet)	Water Budget (acre-feet/acre)
XXX-XXX-XX	161.14	157.99	0.00	157.99	0.00	0.00	0.00	5.50	24.17	62.67	0.00	92.35	0.58
Grand Total	**161.14**	**157.99**	**0.00**	**157.99**	**0.00**	**0.00**	**0.00**	**5.50**	**24.17**	**62.67**	**0.00**	**92.35**	**0.58**

Explanation of Water Supply Categories Utilized in Landowner Water Budgets

Contract Water: The quantity of Contract Water allocated to each parcel is determined in the Contract between the District and the landowner, in Exhibit A of that Contract, which specifies the quantity of State Water Project (SWP) entitlement for each parcel covered in the Contract. Based on the entitlement per parcel, the long-term estimated yield of Contract Water is calculated by applying the current estimate of 58% long-term reliability of the SWP Table A deliveries to each parcel covered by the Contract. The long-term reliability of the SWP is as reported in the *Final State Water Project Delivery Capacity Report 2019* by the Department of Water Resources (August 2020).

> ***Example:*** Parcel 000-00-000 has a Contract entitlement of 350 acre-feet (AF). The long-term reliability of the Contract entitlement would be 350 AF x 58% = 203 AF. The 203 AF is then used as the estimate of long-term Contract Water supply for the parcel.

It is important to note that as the estimated long-term reliability of the SWP is updated by DWR the long-term Contract Water supply for each contract parcel will also be updated.

Supplemental Water: This category is comprised of all water supplies acquired by the District on behalf of all landowners paying the General Project Service Charge (GPSC) or the Special GPSC. These supplies are allocated to each landowner proportional to what they pay in assessments as either the GPSC, Special GPSC or combination of GPSC and Special GPSC. For the landowner water budgets Supplement Water is calculate as a 10-year running average, including the following supply sources:

- Leave behind from banking activity on behalf of third parties,
- SWP Article 21 water,
- Central Valley Project Section 215 water,
- Dry year purchases, and
- Other water purchases.

Supplemental Water supplies estimates will be updates annually.

Native Supply: This is the estimated amount of water available to each landowner from the Native Groundwater Yield of the Kern Subbasin and precipitation available to meet consumptive use. The Native Groundwater Yield of the Kern Subbasin is estimated to be 0.15 AF per acre and is applied to the shape acres associated with each parcel. The Native Groundwater Yield of the Kern Subbasin has been estimated based on current available data and in coordination with all Groundwater Sustainability Agencies in the Kern Subbasin and is subject to future revision.

Precipitation estimated to be 0.397 AF per acre, based on a 10-year average using the CIMIS Shafter Gauge (2011-2019) and five (5) District gauges (2020). The precipitation estimate is applied to only the portion of a parcel paying either the GPSC or the Special GPSC or in a few instances the aggregate of both the GPSC and Special GPSC for a parcel. Estimated precipitation is a 10-year average that will be updated annually.

Temporary Consumptive-Use Allowance (TCA): The TCA represents each landowner's share of the estimated groundwater overdraft during the 2020 to 2040 SGMA implementation period. The TCA has been established by the District such that on average no individual landowner will be short of groundwater necessary to meet their consumptive use demand at the initiation of the SGMA implementation period. The TCA is available to landowners for the consumptive use upon the properties owned by the landowner for a given year. Any unused TCA is not transferable, may not be separated from the property holding of the landowner and may not be accrued or carried over as a groundwater supply for future use. Furthermore, it is not the intent of the District for the TCA to be an asset, the TCA is the key tool of the Semitropic GSA to gradually reduce groundwater overdraft over the 20-year SGMA implementation period. Accordingly, under the District's GSP, the TCA will be reduced to 0 by 2040 and will be 0 from 2040 forward on all lands within the District. The initial TCA will be allocated to each property such that the total water supply available to a landowner at the beginning of the implementation period is equivalent to 4.2 AF per acre for lands paying the GPSC and the Special GPSC. District white lands or currently undeveloped / unirrigated lands that are not paying either the GPSC or the Special GPSC will not receive an TCA.

Management Action 2: Tiered Pricing Structure

- In Development
- Interim:
  - California Water Code Section 10732, subdivision (a) (1) whereby a ***"A person who extracts groundwater in excess of the amount that person is authorized to extract under a rule, regulation, ordinance, or resolution adopted [by the GSA], shall be subject to a civil penalty not to exceed five hundred dollars ($500) per acre-foot extracted in excess of the amount that person is authorized to extract." and***
  - California Water Code Section 10732, subdivision (b) (1) whereby ***"A person who violates any rule, regulation, ordinance, or resolution adopted [by the GSA] shall be liable for a civil penalty not to exceed one thousand dollars ($1,000) plus one hundred dollars ($100) for each additional day on which the violation continues if the person fails to comply within 30 days after the local agency has notified the person of the violation."***
  - These penalties will be levied administratively by the Semitropic GSA.
  - Any overage/penalty may be corrected by drawing from a Landowner Bank Account or by transfer of water into Semitropic.
- The Basin Sustainability Charges and Credits program will be phased out after December 31, 2021.

Status of Projects and Management Actions for Semitropic GSA

Active / Ongoing Projec | Ongoing Project - Minimal Acti | Compeleted Projec

P&MA Number	P&MA Title	Summary Description	2020 GSP Sustainability Indicators Affected: Goundwater Levels and Storage	Goundwater Quality	Land Subsidence	Timetable for Initiation	2021 Annual Report Update: Updated Timeline	Comments
1	Landowner Water Budgets	Establish individual water budget for landowners by landowner classes	•	•	•	2020	Initiated	Draft budgets have been prepared and are to be provided to District landowners in 2021
2	Tiered Pricing for Groundwater Pumping	Develop pricing structure to incentize groundwater users to manage groundwater extractions to MA1 water Budgets	•	•	•	2020	Initiated	Pricing structure development initiated in September, 2020. Draft tiered pricing structure to be presented to the Board in early 2021.
3	District Fallowing Program	Support land fallowing as a District action and by individual landowners or groups of landowners.	•	•	•	2020	Initiated	The District has initiated two programs that incentivize land fallowing: 1) New Land Surcharge Program and 2) SGMA basin Sustainability Charge/Credits.
4	Enhanced Groundwater Recharge	Development of surface and subsurface recharge projects underlying developed agricultural lands to increase groundwater recharge capacity	•			2020	Initiated	District is supporting landowner installation of subsurface recharge projects and evaluation of recharge operations. District is also assessing feasibiltiy of subsurface recharge on 160 acres of District owned lands.
5	Monitoring Network Improvement Plan	Assess and identify monitoring network requirements for full compliance with SGMA and development of an implementation plan for achieving full compliance.	•	•	•	2020	Initiated	District continues to evaluate monitoring network in conjunction with collection of annual reporting data.

Status of Projects and Management Actions for Semitropic GSA

Active / Ongoing Projec | Ongoing Project - Minimal Acti | Compeleted Projec

P&MA Number	P&MA Title	Summary Description	2020 GSP: Sustainability Indicators Affected: Goundwater Levels and Storage	Goundwater Quality	Land Subsidence	Timetable for Initiation	2021 Annual Report Update: Updated Timeline	Comments
6	Evaluation and Assessment of GDEs with the Semitropic Area	Conduct additonal analysis to verify the presence and extend fo GDE's in the Semitropic and, if present, develop appropriate monitoring protocols.	•			2020	Initiated	District is coordinating evaluation of GDEs with representatives of the California Audubon Society and the Kern National Wildlife Refuge.
7	Brackish Water Desalination	Development of a braackish water treatment facility to treat locally sourced brackish water for District use.	•			2022	2022	Continuing to work with AquaVia on project development
8	In-District Water Markets and Transfers	District will allow for the development of market for in-district transfers	•			2022	2022	
9	Poso Creek MAR	Development of floodwater capture and recharge program from Poso Creek flood flows	•		•	2020	2020	Preliminary Cost Benefit analysis completed. Roadmap for next steps being developed.
10	Tulare Lake Project	Development of conveyance facilities to divert Kings River flood flows for direct use and recharge in the SWSD	•	•	•	2018	On-going	Water Rights applications have been filed and Project EIR is being completed.

Status of Projects and Management Actions for Semitropic GSA

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P&MA Number	P&MA Title	Summary Description	2020 GSP: Sustainability Indicators Affected: Goundwater Levels and Storage	Goundwater Quality	Land Subsidence	Timetable for Initiation	2021 Annual Report Update: Updated Timeline	Comments
11	Water Market Acquitions	Increased participation in state-wide water markets for spot market and long-term water transfers	•		•	2020	On-going	District is participating in several water transfers for 2020.
12	Stored Water Recovery Unit	Development of water storage to expand in-lieu service areas	•		•	On-going	2025	In 2017 the District initiated construction of the in-lieu portion of the Stored Water Recovery Unit Phase 2
13	Pond-Poso Spreading Grounds, Phase II	Development of spreading facililiteis to increase groundwater recharge capacity	•		•	2020	2022	Construction of spreading grounds was initiated in 2020 and expected to be complete in 2022
14	Pond-Poso Entrance Ponds	Development of spreading facililiteis to increase groundwater recharge capacity	•		•	2024	2024	
15	Multi-District Conveyance (CA to Friant-Kern Canal)	Development of a conveyance system to deliver surface water for groundwater recharge and irrigation	•		•	On-going	On-going	

Status of Projects and Management Actions for Semitropic GSA

Active / Ongoing Projec | Ongoing Project - Minimal Acti | Compeleted Projec

P&MA Number	P&MA Title	Summary Description	2020 GSP				2021 Annual Report Update	
			Sustainability Indicators Affected					
			Goundwater Levels and Storage	Goundwater Quality	Land Subsidence	Timetable for Initiation	Updated Timeline	Comments
16	Schuster Spreading Grounds	Development of spreading facililiteis to increase groundwater recharge capacity	•		•	2020	2022	Initiated geologic survey of area to refine design of recharge facilities in 2020
17	Leonard Avenue System	Development of an intertie system to provide east to west surface water conveyance to for supply in groundwater dependent areas	•		•	2019	2025	
18	Diltz Intertie	Connection of an intertie to provide surface water converyance for agricultural irrigation	•		•	2018	Completed	
19	Cox Canal Pump Station	Developed canal for the conveyance of surface water for groundwater recharge	•		•	2018	2022	
20	Stored Water Recovery Unit-XYZ		•		•	2019		

Questions