REGULAR BOARD OF DIRECTORS MEETING

501 Taft Highway
Bakersfield, California

TUESDAY, June 15, 2021

AGENDA

CALL TO ORDER AND ANNOUNCEMENT OF QUORUM **12:30PM**

CLOSED SESSION:

A. Conference with Legal Counsel – Existing Litigation – Closed Session Pursuant to Gov. Code § 54956.9(d)(1):
1. SWRCB Kern River
2. Rosedale Rio Bravo Water Storage District, et al. v. Kern County Water Agency, et al.

B. Conference with Legal Counsel – Initiation of Litigation – Closed Session Pursuant to Gov. Code § 54956.9(d)(4):
1. Two Matters

REGULAR SESSION: 1:30PM

INTRODUCTION OF GUESTS AND PUBLIC

I. **PUBLIC COMMENT** (Members of the public may address the Board of Directors on any matter not on the agenda, but absent extraordinary circumstances, the Board may not act on such matters. Members of the public may address items of interest that are listed on the agenda prior to the Board's decision on such items.)

II. **CONSENT CALENDAR** (The Board will consider various non-controversial routine items and issues relating to matters which are of interest to the District. Any Board Member may request that any or all items be considered and acted upon independently of the others.)

A. Approval of Minutes from the Regular Board Meeting of June 1, 2021.

B. Approval of May/June District Construction and Water Banking Disbursements.

C. Approval of May/June District Disbursements.

III. **BUSINESS AND FINANCE** (The Board will consider various items and issues relating to financial matters which are of interest to the District.)

A. Business & Finance Committee Report– June 10, 2021.
   i. Approval of May 2021 Financial Reports.
   ii. Annual Audit Update.

IV. **OPERATIONS AND PROJECTS** (The Board will consider various items and issues relating to matters which have been, or will be, considered by committees of the Board and which are of interest to the District.)

A. Operations and Projects Committee Report – June 1, 2021.
   i. District Facility and Maintenance Update.

ii. District Encroachment Permit Report.

B. Sunset Groundwater Recharge Facility Project – Update.

C. Old River Basins – Conceptual Design.

D. Potential East Branch Canal Property Conveyance to Kern Delta (APN 169-210-19).

E. City Annexation No. 697 (Taft Highway No. 3).

V. KERN RIVER WATERMASTER (The Board will consider various items and issues relating to the Kern River Watermaster that are of interest to the District.)

A. District Watermaster Report.
   i. State Water Project 5% allocation.
   ii. Kern River Runoff Forecast 17% A-J.

B. Kern River Watermaster Report.
   i. Isabella Dam Safety Remediation Report.

VI. MANAGER'S REPORT (The General Manager will discuss, and the Board will consider various items and issues relating to the ongoing and future operations of the District which are of interest to the Board)

A. External Agency Report.

B. Water Banking Projects Report.

C. VAWC Legislative Update.

VII. ATTORNEY'S REPORT (Legal Counsel will discuss, and the Board will consider items and issues of legal interest to the District.)

VIII. BOARD MEMBER COMMENTS (This item provides Board Members with an opportunity to make announcements or provide general comments.)

IX. ADJOURN

Requests for disability related modifications or accommodations, including auxiliary aids or services may be made by telephoning or contacting Madelyne Rodriguez at the District Office (661-834-4656). Please attempt to make such requests known at least 24 hours before the scheduled meeting. Pursuant to Government Code section 54957.5, any materials relating to an open session item on this agenda, distributed to the Board of Directors after the distribution of the agenda packet, will be made available for public inspection at the time of distribution at the District, 501 Taft Highway, Bakersfield, CA.

Tab II

KERN DELTA
WATER DISTRICT

To: Kern Delta Water District Board of Directors

From: Steven Teglia – General Manager

Date: June 15, 2021

Re: Agenda Item II – Consent Calendar

RECOMMENDATION:

Approve items A through C listed under Agenda Item II – Consent Calendar.

DISCUSSION:

Consent Calendar items are non-controversial routine matters. Board Members may request that any or all items listed under the Consent Calendar be moved to the regular agenda to be discussed and voted on separately. Otherwise, all items will be approved through one motion and vote.

II A. Approval of Minutes from the Regular Board Meeting of June 1, 2021 (attached).

II B. Approval of May/June District Construction and Water Banking Disbursements totaling $399,478.10* (attached) partially recommended for approval by the Operations and Projects Committee *(see June 1, 2021 Operations and Projects Committee Minutes for additional detail).*

II C. Approval of May/June District Disbursements (attached) recommended for approval by the Business and Finance Committee *(see June 10, 2021 Business and Finance Committee Minutes for additional detail).*

**The total includes disbursements approved by the Operations and Projects Committee ($165,329.51) and an additional amount ($234,148.59) for invoices which came in after June 1, 2021.*

MINUTES OF THE REGULAR MEETING OF THE BOARD OF DIRECTORS

June 1, 2021

TUESDAY, June 1, 2021, 12:00PM– 1:08PM

DIRECTORS PRESENT: Palla, Kaiser, Tillema, Antongiovanni, Collins, Mendonca, and Spitzer.

DIRECTORS ABSENT: Bidart and Garone.

STAFF PRESENT: General Manager Teglia, Water Resources Manager Mulkay, Assistant General Manager Bellue, and General Counsel Iger.

OTHERS PRESENT: George Capello.

CLOSED SESSION DECLARED AT 12:00PM

President Palla called to order the Closed Session of the Kern Delta Board of Directors at 12:00PM regarding the following agenda items:

A. Conference with Legal Counsel – Existing Litigation – Closed Session Pursuant to Gov. Code § 54956.9(d)(1):

1. SWRCB Kern River
2. Rosedale-Rio Bravo Water Storage District, et al. v. Kern County Water Agency, et al.

B. Conference with Legal Counsel – Initiation of Litigation – Closed Session Pursuant to Gov. Code § 54956.9(d)(4):

1. One Matter

Closed Session was concluded at 12:31PM.

Closed Session Report: District General Counsel Iger reported the following:

Item A: No reportable action.
Item B: No reportable action.

REGULAR SESSION DECLARED AT 12:32PM

President Palla called to order the Regular Session of the Kern Delta Board of Directors at 12:32PM.

INTRODUCTION OF GUESTS AND PUBLIC

George Capello was introduced as a guest at 1:04PM.

I. PUBLIC COMMENT

None.

II. MANAGER'S REPORT

A. Approval of the Minutes of the Regular Board Meeting of May 18, 2021:

M/S/C (Antongiovanni/Spitzer) (yes-7, no-0): With Directors Bidart and Garone absent, the Board approved the minutes of the regular board meeting of May 18, 2021, as presented.

B. Groundwater Banking Program Update: Staff provided an update regarding current year recovery operations related to the groundwater banking program. Staff also discussed potential future banking program enhancements.

III. BOARD MEMBER COMMENTS

None.

IV. ADJOURNMENT:

There being no further business, President Palla adjourned the meeting at approximately 1:08PM.

Approved by Board,

Richard Tillema, Board Secretary

Respectfully Submitted,

Steven Teglia, General Manager

To: Kern Delta Water District Board of Directors

From: Steven Teglia

Date: June 15, 2021

Re: Invoices and Disbursements, Special Projects & Water Banking Project Operation/Construction.

RECOMMENDATION:

Staff recommends payment of the following ten payables divided into three overall groups of: 1) water banking program design, construction, and construction support -- $00.00; 2) water banking variable -- $165,329.51; 3) Kern Delta Water District construction -- $00.00. The total expenditure in May for these areas is $165,329.51 (plus additional PG&E well energy stand-by cost).

DISCUSSION:

The following ten payables can be divided into three overall groups: 1) water banking program design, construction, and construction support, 2) water banking variable, and 3) Kern Delta construction.

First group (Water Banking Program Design, Construction, and Construction Support):

Second group (Water Banking Variable):

1) BC Labs – $225.00
2) PG&E – $24,024.13 (AE-02, Power/stand-by energy cost for the wells associated with the Water Banking water production)
3) PG&E – $22,272.40 (AE-03, Power/stand-by energy cost for the wells associated with the Water Banking water production)
4) PG&E – $23,856.91 (AE-04, Power/stand-by energy cost for the wells associated with the Water Banking water production)
5) PG&E – $13,175.58 (FR-03, Power/stand-by energy cost for the wells associated with the Water Banking water production)
6) PG&E – $14,917.47 (KD-01, Power/stand-by energy cost for the wells associated with the Water Banking water production)
7) PG&E – $20,883.77(KD-02, Power/stand-by energy cost for the wells associated with the Water Banking water production)
8) PG&E – $23,851.99 (KI-07, Power/stand-by energy cost for the wells associated with the Water Banking water production)
9) PG&E – $21,810.00 (KI-08, Power/stand-by energy cost for the wells associated with the Water Banking water production)
10) Quinn – $312.26 (Air/Oil filters)

Third group (Kern Delta Construction):

KERN DELTA WATER BANKING PROGRAM DISBURSEMENTS
RECOMMENDED BY THE OPERATIONS & PROJECTS COMMITTEE
June 1, 2021

#	PAYEE		AMOUNT	CHECK
1	BC LABS.	Water Samples	225.00	3019
2	PGE-AE2	Well Utilities	24,024.13	3020
3	PGE-AE3	Well Utilities	22,272.40	3021
4	PGE-AE4	Well Utilities	23,856.91	3022
5	PGE-FR3	Well Utilities	13,175.58	3023
6	PGE-KD1	Well Utilities	14,917.47	3024
7	PGE-KD2	Well Utilities	20,883.77	3025
8	PGE-KI7	Well Utilities	23,851.99	3026
9	PGE-KI8	Well Utilities	21,810.00	3027
10	QUINN	Air/Oil Filters	312.26	3028
		TOTAL	**$165,329.51**	

The following were received after the June 1st, 2021 Operations & Projects committee meeting and will be reviewed at the June 10th, 2021 Business and Finance Committee meeeting.

#	PAYEE		AMOUNT	CHECK
1	GRAINGER	Lightbulbs, fans	79.73	3029
2	KCWA	2021 3rd qtr CVC operating charges	228,279.00	3030
3	KCWA	2021 3rd qtr CVC power charges	1,552.00	3031
4	PGE-BV2	Well Utilities	54.13	3032
5	PGE-BV3	Well Utilities	50.59	3033
6	PGE-BV4	Well Utilities	46.13	3034
7	PGE-BV5	Well Utilities	42.71	3035
8	TARGET SPECIALTY	Roundup	4,044.30	3036
		TOTAL	**$234,148.59**	

KERN DELTA WATER DISTRICT
DISBURSEMENTS RECOMMENDED BY THE BUSINESS AND FINANCE COMMITTEE
THURSDAY, JUNE 10, 2021

MAY 2021 SUB TOTAL $ 188,939.70

#	PAYEE	AMOUNT	CHECK
1	AMERIFUEL - fuel	6,849.11	44711
2	COUNTRY TIRE & WHEEL - tires #106	309.93	44712
3	ELITE SITE SERVICES - portable restroom rental	185.80	44713
4	HARBOR FREIGHT TOOLS, INC. - jack	422.16	44714
5	HOME DEPOT CREDIT SERVICES - bolt	10.59	44715
6	JIM BURKE FORD - filters	128.41	44716
7	JORGENSEN - gloves, ear plugs	55.63	44717
8	KERN COUNTY PUBLIC WORKS - dumping fee	840.83	44718
9	MARCOM GROUP - website hosting	95.00	44719
10	O'REILLY AUTO PARTS - oil filters	4.74	44720
11	PACIFIC GAS & ELECTRIC - office utilities	1,079.02	44721
12	PRINCIPAL LIFE INSURANCE - 06/01/21-06/30/21 premium	4,745.70	44722
13	PROGRESSIVE TECHNOLOGY, INC. - phone service	438.06	44723
14	SPARKLE TEXTILE RENTAL SERVICE - uniforms, mats	1,078.26	44724
15	SSD ALARM - fire alarm service	65.90	44725
16	TARGET SPECIALTY PRODUCTS - Cheetah, Torpedo	36,776.64	44726
17	BSE RENTS - concrete	144.70	44727
18	CASH - petty cash replenish	64.80	44728
19	COX, CASTLE & NICHOLSON LLP - professional services	249.00	44729
20	ELLISON, SCHNEIDER & HARRIS L.L.P. - professional services	3,313.22	44730
21	JIM BURKE FORD - pump, gasket, sensor #210	424.59	44731
22	KERN COUNTY DEPARTMENT OF AGRICULTURE - fine	500.00	44732
23	KERN COUNTY SEWER - service septic	700.00	44733
24	O'REILLY AUTO PARTS - lubricants	84.37	44734
25	PEDRO J. PEDROZA, PLS - land surveying	19,382.50	44735
26	SAN JOAQUIN TRACTOR CO. - blade #403	190.52	44736
27	SPARKLE TEXTILE RENTAL SERVICE - uniforms, mats	359.42	44737
28	SPECTRUM - internet service	360.27	44738
29	VERIZON - cell service	660.14	44739
30	CENTRALIZE HR- administration fee May	1,895.00	Wire
31	CENTRALIZE HR- administration fee June	1,895.00	Wire
32	LINCOLN LIFE - retirement program	13,193.22	Wire
33	LINCOLN LIFE - deferred comp.	3,191.00	Wire
34	MASS MUTUAL - deferred comp.	1,840.00	Wire
35	PAYROLL #11	68,739.40	Wire
36	PAYROLL PEOPLE #11	160.75	Wire
37	EDD-STATE P/R #11	4,859.67	Wire
38	EFT-IRS P/R #11	23,729.44	Wire
39	LINCOLN LIFE - retirement program	13,111.39	Wire
40	LINCOLN LIFE - deferred comp.	3,191.00	Wire
41	MASS MUTUAL - deferred comp.	1,840.00	Wire
	MAY 2021 TOTAL	**406,104.88**	

#	PAYEE	AMOUNT	CHECK
1	A-1 ANSWERING SERVICE - answering service	624.49	44740
2	AMERIFUEL - fuel	7,021.61	44741
3	V O I D	-	44742
4	BHT BAKERSFIELD MH LLC - overpayment reimbursement	157.80	44743
5	CITY OF BAKERSFIELD - 2021 1st QTR Clearing	44,776.65	44744
6	CITY OF BAKERSFIELD - 2021 1st QTR Isabella Storage	3,933.12	44745
7	DONALD COLLINS - directors fee	200.00	44746
8	COUNTRY TIRE & WHEEL - flat repair #328, #327	1,800.44	44747
9	EL PUEBLO RESTAURANT - board lunch	656.36	44748
10	FRED GARONE - directors fee	100.00	44749
11	GRAINGER - cooler pump, pads	649.81	44750
12	GREENFIELD COUNTY WATER DIST. - office utilities	129.03	44751
13	JIM BURKE FORD - lubricants	179.00	44752
14	DAVID KAISER - directors fee	200.00	44753
15	KAMAN INDUSTRIAL TECHNOLOGIES - flange	131.57	44754
16	KERN COUNTY AUDITOR-CONTROLLER- vouchers	25.50	44755
17	KERN COUNTY RECORDER - redemptions	40.00	44756
18	KERN COUNTY WATER AGENCY - State Water Payment 2nd installment	454,233.00	44757
19	KERN DELTA WATER BANKING PROJECT - 3rd QTR 2021 CVC O&M share	57,457.75	44758
20	McMURTREY & HARTSOCK - professional services	12,670.00	44759
21	JOEY MENDONCA - directors fee	200.00	44760
22	MOTOR CITY - throttle # 283	268.52	44761
23	PITNEY BOWES - lease	260.80	44762
24	POPS TEST ONLY SMOG - smog test #285 & #293	100.00	44763
25	PRICE DISPOSAL - dump fee	13.22	44764
26	PROGRESSIVE TECHNOLOGY, INC. - IT support	2,028.01	44765
27	QUINN - pivot pin, a/c repair #403	4,020.75	44766
28	RKL SOLUTIONS, LLC - IT support	48.75	44767
29	ROSS E. SPITZER - directors fee	200.00	44768
30	STERICYCLE, INC. - shred service	179.47	44769
31	STINSON STATIONERS - office supplies	1,376.14	44770
32	THOMSON REUTERS - legal subscription	500.00	44771
33	THREE WAY CHEVROLET - sensor, gasket #293	232.20	44772
34	V O I D	-	44773
35	VACUSWEEP - parking lot maintenance	200.00	44774
36	VALLEY DECAL - decals	107.17	44775
37	WESTAIR GASES & EQUIPMENT, INC. - cylinder purchase	1,406.30	44776
38	WHITE CAP - safety supplies	355.00	44777
39	KEVIN ANTONGIOVANNI - directors fee	200.00	44778
40	RICHARD TILLEMA - directors fee	200.00	44779
	JUNE 2021 SUB TOTAL	**596,882.46**	

KERN DELTA WATER DISTRICT
Anticipated Disbursements - Month End - June 2021

Payee	Reason	June 2021 Estimated
AMERIFUEL	Gas/Diesel fuel	7,021.61
BLACK/HALL CONSTRUCTION	Construction progress billing	43,879.49
CENTRALIZE HR	HR admin fee	1,895.00
COUNTRY TIRE	Vehicle tires	350.00
ELITE SITE SERVICES	Monthly restrooms rental	185.80
ELLISON, SCHNEIDER, & HARRIS	State Board mediation	3,500.00
HERC RENTALS	Equipment rental	700.00
HOME DEPOT	Shop supplies	50.00
JIM BURKE	Truck maintenance/repair	696.74
K.C. WASTE	Dumping	1,400.00
KERN COUNTY RECORDER	Lien redemption fees	100.00
KERN MACHINERY	Truck maintenance/repair	325.00
LINCOLN FINANCIAL	Pension/deferred comp contributions	16,691.00
MARCOM GROUP	District web site support	95.00
MASSACHUSETTS MUTUAL	Deferred comp contributions	1,840.00
MOTOR CITY	Truck maintenance/repair	100.00
NORTH KERN WSD	Weather modification, watermaster wages	9,222.00
O'REILLY AUTO PARTS	Vehicle repair parts	144.11
P.G.&E.	District office utilities	2,564.50
POP'S TEST ONLY SMOG	Vehicle smog testing	50.00
PRINCIPAL LIFE INS.	Dental/vision/life insurance premium	4,745.70
PROGRESSIVE TECH.	IT and computer system support	438.06
QUINN	Motorgrader maintenance/repair	459.58
RELIABLE JANITORIAL	Janitor service	1,185.00
SCHWEBEL PETROLEUM	Oil/lubricants	1,058.83
SPARKLE	Uniform/laundry service	1,437.68
SPECTRUM	Internet access	360.27
SSD SYSTEMS	Office alarm monitoring	65.90
STINSON'S	Office supplies	503.00
TARGET	Weed control chemicals	25,000.00
TODD ENGINEERS	Professional services	1,000.00
UNITED AG	Medical insurance monthly premium	31,943.73
VERIZON	Operations phones and cellular service	660.14
WESTAIR	Welding supplies	250.00
		159,918.14

Tab III

KERN DELTA
WATER DISTRICT

BUSINESS & FINANCE COMMITTEE MEETING

501 Taft Highway
Bakersfield, CA

THURSDAY, June 10, 2021
10:00AM

A G E N D A

1. **Call to order**

2. **Public Comment Period**

3. **Approve Minutes of May 13, 2021 Business & Finance Committee Meeting**

4. **Financial Reports and Accounts Payable:**
   a. Approve May and June District and Banking Project Disbursements
   b. Approve May 2021 Financial Reports

5. **District Controller's Report:**
   a. Purchasing Policy Revision Review and Recommendation
   b. Annual Audit of District Financials – Update

6. **Committee Comments**

7. **Adjourn**

Bryan Duncan
District Controller

Posted: Monday June 7, 2021
Bakersfield, California

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MINUTES OF THE BUSINESS & FINANCE COMMITTEE
Thursday, June 10, 2021

DIRECTORS PRESENT: Antongiovanni, Garone, Tillema
OTHERS PRESENT: From KDWD: General Manager Teglia, Assistant General Manager Bellue, Controller Duncan, General Counsel Iger, Administrative Assistant Rodriguez

1. **CALL TO ORDER**
   Chair Antongiovanni called the meeting to order at 10:23 A.M.

2. **PUBLIC COMMENTS**
   None.

3. **APPROVAL OF PREVIOUS COMMITTEE MEETING MINUTES**
   a. **M/S/C (Tillema/Garone) (yes – 3, no – 0):** The Business & Finance Committee approved the minutes of the Business & Finance Committee meeting held on May 13, 2021.

4. **FINANCIAL REPORTS AND DISBURSEMENTS**
   a.- b. Approval of May 2021 and June 2021 Disbursements and May 2021 Financial Reports.
   M/S/C (Garone/Tillema) (yes – 3, no – 0): The Business & Finance Committee recommends the Board approve the May 2021 and June 2021 District Disbursements, the updated June 2021 Water Banking Project Disbursements, the anticipated June 2021 end of month Disbursements, and the May 2021 District and Water Banking Project Financial Statements, Treasurer's Reports, and Delinquency Report as presented.

5. **DISTRICT CONTROLLER'S REPORT**
   a. Staff presented a revised draft of the District's revised Purchasing Policy for the committee to review for further discussion at the next committee meeting.

   b. Staff provided a brief update regarding the District's annual financial audit.

6. **ADJOURN**
   Chair Antongiovanni adjourned the meeting at 11:30 A.M.

Respectfully submitted,

_____
Kevin Antongiovanni – Chair

Kern Delta Water District
Balance Sheet
As of May 31, 2021

Assets	May 31, 2021	April 30, 2021	Month-to-Month Variance
Current Assets:			
Cash & Securities in Bank	$ 22,464,367	$ 22,558,879	$ (94,512)
Accounts Receivable	910,043	926,340	(16,297)
Due From KDWBP	-	-	-
Inventories & Prepaid Expenses	277,279	303,758	(26,480)
Total Current Assets	23,651,689	23,788,978	(137,289)
Fixed Assets			
District Structures, Rights of Way	$ 15,733,298	$ 15,733,298	$ -
Construction in Progress	2,135,148	2,133,602	$ 1,546
CVC Expansion	8,776,668	8,776,668	-
Machinery & Equipment	2,471,897	2,469,053	2,844
	29,117,011	29,112,621	4,390
Accumulated Depreciation	(6,803,146)	(6,764,146)	(39,000)
Net Fixed Assets	22,313,865	22,348,475	(34,610)
Investment in Joint Powers Authority	$ 11,480	$ 11,480	$ -
Investment in MET Program	8,890,130	8,890,130	-
Total Assets	$ 54,867,164	$ 55,039,063	$ (171,899)
Liabilities & Equity			
Current Liabilities:			
Trade Accounts Payable	$ 139,228	$ 80,092	$ 59,136
Deferred Revenue	-	-	-
Accrued Liabilities	180,812	168,848	11,964
Total Current Liabilities	320,040	248,940	71,100
Long-Term Liabilities:			
Bonds & COP Borrowing	$ 4,015,000	$ 4,015,000	$ -
Bonds Premium & Costs	148,858	148,858	-
Total Long-Term Liabilities	4,163,858	4,163,858	-
Total Liabilities	4,483,897	4,412,797	71,100
Equity:			
Equity From Past Years	$ 50,269,300	$ 50,269,300	$ -
Accumulative Equity - Current Year	113,967	356,966	(242,999)
Total Liabilities & Equity	$ 54,867,164	$ 55,039,063	$ (171,899)

Kern Delta Water District
Cash Variance Analysis
May 31, 2021

Cash Received:	
Accounts Receivable Collections	307,941
Share of Property Tax Receipts	61,838
Interest Received	13,337
	383,115
Cash Disbursed:	
Cash Disbursements for Goods and Services	(173,285)
Wells Fargo COP Interest	(72,972)
Payrolls Paid	(231,370)
	(477,627)
Net positive/(negative) variance	**(94,512)**

Kern Delta Water District
Accounts Receivable Variance Analysis
May 31, 2021

Revenue Added to Accounts:	
Water Sales - Utility Water	257,588
Water Sales - State Water	8,961
District Wells Revenue	900
Annual Storm Drain Agreement(s)	20,068
Other Misc Revenues	4,126
	291,643
Cash Received on Account:	
Water Payments	(220,888)
Misc Payments	(23,781)
Assessments Payments	(63,272)
	(307,941)
Interest Payments	-
	(307,941)
Net positive/(negative) variance	**(16,297)**

Kern Delta Water District
Inventory/Prepaids Variance Analysis
May 31, 2021

Additions to Accounts:	
Weed Control Chemicals Purchased	36,777
Prepaid Additions	-
	36,777
Usage/Amortization:	
Chemicals Consumed During Month	(49,364)
Amortization of Prepaid Accounts	(13,893)
	(63,257)
Net positive/(negative) variance	**(26,480)**

Kern Delta Water District
Operating Results - Year To Date
Through the Month Ended May 31, 2021

	Actual Current Month	Actual Year to Date	Annual Budget	YTD as % of Annual Budget (Target is 42%)	Budget Remaining
REVENUES:					
State water sales	$ 8,961	$ 8,961	$ 1,179,193	1%	$ 1,170,232
Utility water sales	257,452	971,850	3,214,297	30%	2,242,447
COB/Cal Water/GCWD Revenue	-	114,752	900,000	13%	785,248
Equalization	-	4,145	9,147	45%	5,003
Assessments	(0)	1,011,395	1,014,767	100%	3,372
Share of county tax	61,838	2,152,235	4,316,386	50%	2,164,151
ILRP Contract Revenue	-	-	-		-
Interest income	13,337	68,551	441,000	16%	372,449
Other income	22,030	194,736	175,000	111%	(19,736)
Water Transfer Charges	-	365,500	731,000	50%	365,500
Water Banking Expense Reimbursement	-	-	150,000	0%	150,000
Total income	$ 363,617	$ 4,892,124	$ 12,130,790	40%	$ 7,238,666
EXPENDITURES:					
Source of supply:					
State water costs	$ -	$ 1,961,766	$ 2,725,000	72%	$ 763,234
Exchange fees	-	1,400	76,500	2%	75,100
Watermaster, City, Isabella	57,679	111,523	361,400	31%	249,877
Miscellaneous source costs	-	10,098	500,000	2%	489,902
Total Source of supply	$ 57,679	$ 2,084,787	$ 3,662,900	57%	$ 1,578,113
Transmission and Distribution:					
Labor	$ 227,105	$ 1,049,651	$ 2,627,040	40%	$ 1,577,389
Employee benefits	63,628	335,944	842,305	40%	506,361
Maintenance & Repairs	89,877	281,963	1,197,812	24%	915,849
Total Transmission and Distribution	$ 380,610	$ 1,667,558	$ 4,667,157	36%	$ 2,999,599
Administrative & other costs:					
Engineering consultant	$ -	$ 63,521	$ 50,000	127%	$ (13,521)
Legal consultants	-	3,430	200,000	2%	196,570
Special legal/engineering	18,798	177,199	200,000	89%	22,801
Kern River GSA	-	-	200,000	0%	200,000
Insurance	17,935	57,855	163,194	35%	105,339
Office operations	18,529	123,437	334,782	37%	211,345
Special expenses (see Footnote below):	-	307,190	576,500	53%	269,310
Construction Expense - Peripheral	1,094	28,207	-		
Bond Interest expense	72,972	72,972	131,290	56%	58,318
Depreciation	39,000	192,000	456,000	N/A	264,000
Total adminstrative & other	$ 168,328	$ 1,025,812	$ 2,311,766	44%	$ 1,314,162
Total expenses	$ 606,616	$ 4,778,157	$ 10,641,823	45%	$ 5,863,666
Net Fav/(Unfav) Operating Results	$ (242,999)	$ 113,967	$ 1,488,967		$ 1,375,000

KERN DELTA WATER DISTRICT
Labor and Benefits Tracker
2021

Actual Cost	Jan	Feb	Mar	Apr	May	**TOTAL 2021**
Wages & Salaries	200,842	199,837	215,685	206,183	227,105	1,049,652
Payroll Taxes - Employer Paid	14,251	14,140	14,165	21,192	14,988	78,736
Medical/Dental/Vision - Cost	35,145	35,471	35,941	34,058	30,486	171,101
Medical/Dental/Vision - Employee Withheld	(4,658)	(4,658)	(4,643)	(6,766)	(4,548)	(25,273)
Life/LTD/AD&D	1,378	1,452	1,415	1,415	1,415	7,075
Retirement Plan	17,143	17,055	17,226	26,254	20,533	98,211
Uniforms and Other Benefits	1,115	1,168	1,316	1,741	754	6,094
Total Benefits	64,374	64,628	65,420	77,894	63,628	335,944
Total Labor and Benefits	265,216	264,465	281,105	284,077	290,733	1,385,596
Budgeted Cost						
Wages & Salaries	215,859	194,970	215,859	208,896	226,674	1,062,258
					-	
Payroll Taxes - Employer Paid	16,513	14,915	16,513	15,981	17,341	81,263
Medical/Dental/Vision - Cost	34,457	34,457	34,457	34,457	34,457	172,285
Medical/Dental/Vision - Employee Withheld	(4,960)	(4,960)	(4,960)	(4,960)	(4,960)	(24,800)
Life/LTD/AD&D	1,500	1,500	1,500	1,500	1,500	7,500
Retirement Plan	19,753	18,073	20,335	19,679	22,734	100,574
Uniforms and Other Benefits	2,123	2,123	2,123	2,123	2,123	10,615
Total Benefits	69,386	66,108	69,968	68,780	73,195	347,437
Total Labor and Benefits	285,245	261,078	285,827	277,676	299,869	1,409,695
Budget vs Actual Variance - Fav/(Unfav)						
Wages & Salaries	15,017	(4,867)	174	2,713	(431)	12,606
Payroll Taxes - Employer Paid	2,262	775	2,348	(5,211)	2,353	2,527
Medical/Dental/Vision - Cost	(688)	(1,014)	(1,484)	399	3,971	1,184
Medical/Dental/Vision - Employee Withheld	(302)	(302)	(317)	1,806		885
Life/LTD/AD&D	122	48	85	85	85	425
Retirement Plan	2,610	1,018	3,109	(6,575)	2,201	2,363
Uniforms and Other Benefits	1,008	955	807	382	1,369	4,521
Total Benefits	5,012	1,480	4,548	(9,114)	9,979	11,905
Total Labor and Benefits	20,029	(3,387)	4,722	(6,401)	9,548	24,511

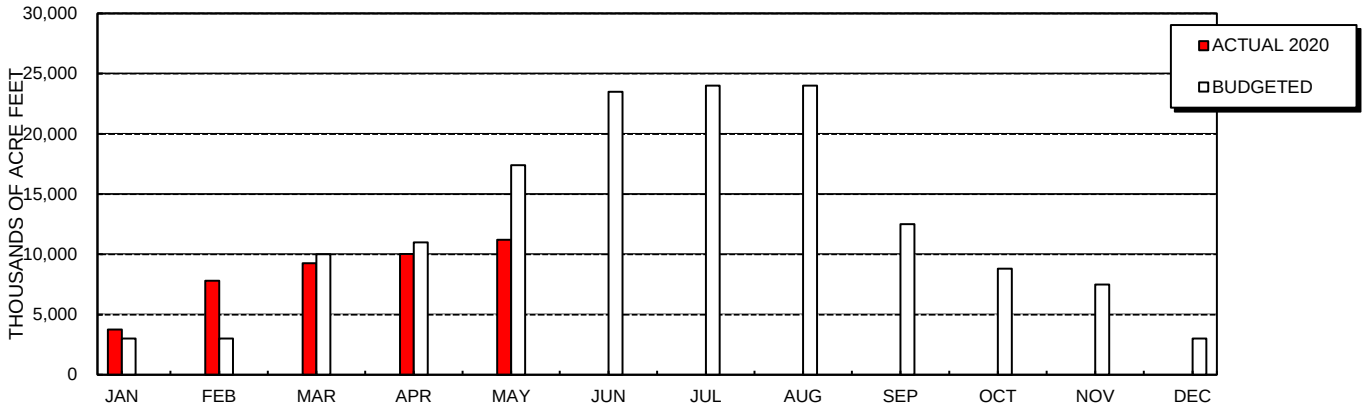
TREASURER'S REPORT

May 2021

		2021	2020	2019	2018
Cash & Securities on hand - May 1		$ 22,558,879	$ 21,552,046	$ 16,762,128	$ 15,011,541
Add: May receipts		383,115	341,475	683,905	398,887
Less: May disbursements		477,627	352,704	615,211	686,407
Cash & Securities on hand - May 31, 2021		**$ 22,464,367**	**$ 21,540,817**	**$ 16,830,822**	**$ 14,724,021**
Petty Cash	**$ 500**				
Citizens Business Bank	**426,071**				
Kern County Treasury	**22,037,796**				
	$ 22,464,367				
Restricted Reserves:					
Restricted Reserve Fund - General Manager		$ (300,000)	$ (300,000)	$ (300,000)	$ -
Unrestricted Reserves:					
Pipeline Maintenance		(213,845)	(213,845)	(213,845)	(213,845)
Water Rights Protection & Litigation Reserve		(2,746,648)	(3,199,724)	(3,270,788)	(3,344,550)
2015-A COP Reserve Fund		(4,015,000)	(372,600)	(372,600)	(372,600)
Operating Reserve		(5,000,000)			
Capital Reserve		(2,000,000)			
Groundwater Program Reserve		(3,500,000)			
Total Reserves		**$ (17,775,492)**	**$ (4,086,169)**	**$ (4,157,233)**	**$ (3,930,995)**
Cash Available - May 31, 2021		**$ 4,688,874**	**$ 17,454,649**	**$ 12,673,590**	**$ 10,793,027**

Kern Delta Water District
Monthly Water Sales Volume
in Acre Feet

	2020	2021										
	Actual (Accum-ulated)	Budgeted		Actual								
		Monthly	(Accum-ulated)	Monthly				Accumulated				% of Budget
				Utility	State	Contracts	Total	Utility	State	Contracts	Total	
JAN	4,488	3,000	3,000	3,612	0	145	3,757	3,612	0	145	3,757	125%
FEB	12,169	3,000	6,000	7,461	0	341	7,801	11,073	0	486	11,559	193%
MAR	17,600	10,000	16,000	8,881	0	371	9,252	19,954	0	857	20,811	130%
APR	21,713	11,000	27,000	9,608	0	411	10,018	29,561	0	1,268	30,829	114%
MAY	33,840	17,400	44,400	10,727	103	371	11,202	40,289	103	1,639	42,031	95%
JUN	54,218	23,500	67,900									
JUL	74,182	24,000	91,900									
AUG	85,938	24,000	115,900									
SEP	92,178	12,500	128,400									
OCT	96,158	8,800	137,200									
NOV	99,138	7,500	144,700									
DEC	100,282	3,000	147,700									



KERN DELTA WATER DISTRICT

Aged Accounts Receivable
Past Due Accounts
June 15, 2021

Account	Name	0-30 Days	31-60 Days	61-90 Days	Over 90 Days	Total Past Due
592	Costa, Joe & Mary	2,013.57	-	-	-	2,013.57
887	Forney, Bruce	5.65	5.57	5.48	365.38	382.08
897	Poncetta, David	-	-	-	-	-
1270	Jassar, Sikander & Daljeet	928.03	-	-	-	928.03
3238	Greenfield Union School Dist	137.83				137.83
3529	Sanchez, Alfredo	193.08	-	-	-	193.08
3713	Cruz, Juan Carlos & Nancy	8.02	7.90	7.79	519.38	543.09
4775	Ackerman, Samuel	144.45				144.45
	OTHER	230.04	3.54	0.59	39.16	273.33
		3,660.67	17.01	13.86	923.92	4,615.46

Kern Delta Water Banking Project
Balance Sheet
May 31, 2021

Assets

	May 31, 2021	April 30, 2021	Month-to-Month Variance
Current Assets:			
Cash & Securities in Bank	$ 7,206,558	$ 7,534,941	$ (328,382)
Interest Receivable	-	-	-
Due from Metropolitan Water District	662,673	-	662,673
Due from SBVMWD	-	-	-
Inventory and Prepaids	111,051	111,051	-
Due from KDWD	-	-	-
Total Current Assets	$ 7,980,282	$ 7,645,992	$ 334,291
Fixed Assets at cost less depreciation:			
All structures	$ 63,033,367	$ 62,954,549	$ 78,818
Machinery and equipment	418,064	418,064	-
	$ 63,451,431	$ 63,372,613	$ 78,818
Less: Accumulated depreciation	(10,812,531)	(10,718,031)	(94,500)
Total fixed assets	$ 52,638,900	$ 52,654,582	$ (15,682)
Total Assets	$ 60,619,182	$ 60,300,573	$ 318,609

Liabilities & Equity

Current Liabilities:			
Trade accounts payable	$ -	$ -	$ -
Due to KDWD	-	-	-
Total current liabilities	$ -	$ -	$ -
Equity:			
Contributions to equity - KDWD (Land purchases)	$ 8,890,130	$ 8,890,130	$ -
Equity from past years	52,202,620	52,202,620	-
Equity enhanced this year	(473,568)	(792,177)	318,609
Total Equity	$ 60,619,182	$ 60,300,573	$ 318,609
Total Liabilities & Equity	$ 60,619,182	$ 60,300,573	$ 318,609

Kern Delta Water Banking Project
Cash Variance Analysis
May 31, 2021

Cash Received:	
Interest Received	5,062
	5,062
Cash Disbursed:	
Accounts Payable Paid	(333,445)
	(333,445)
Net positive/(negative) variance	**(328,382)**

Kern Delta Water Banking Project
Statement of Operating Results
Through the Period Ended May 31, 2021

	Current Month	Year to Date
REVENUE:		
MET Revenues	$ 662,673	$ 662,673
Water Sales	-	-
Interest Income	5,062	26,032
Total of all income	$ 667,736	$ 688,705
Transfer and Exchange Fees:		
Exchange Fees	$ -	$ 5,200
Wheeling Fees	-	-
Total Exchange Fees	$ -	$ 5,200
Other Costs		
Power - KB1-8, KDW1-2	$ 183,195	$ 356,367
Power - AE1, AE2, AE3, AE4	70,255	100,783
Power - BV1, BV2, BV3, BV4, BV5	199	710
CVC Operating Costs	-	228,279
CVC Power Costs	-	1,516
O&M Spreading	-	3,091
Other O&M & Miscellaneous Costs	977	(6,173)
Legal & Accounting	-	-
Depreciation	94,500	472,500
Total Other Costs	$ 349,127	$ 1,157,073
Total all expenses	$ 349,127	$ 1,162,273
Favorable/(Unfavorable) Operating Results	$ 318,609	$ (473,568)
Estimated 2nd Qtr Revenue - MWD		$ 1,375,000
Estimated Fav/(Unfav) Operating Results		$ 901,432

KERN DELTA WATER BANKING PROJECT

TREASURER'S REPORT

May

		2021	2020	2019	2018
Cash & Securities on hand - May 1, 2021		$ 7,534,941	$ 13,088,761	$ 9,320,537	$ 9,453,184
Add: May receipts		5,062	1,440,206	872	6
Less: May disbursements		333,445	202,939	72,775	2,138
Cash & Securities on hand - May 31, 2021		**$ 7,206,558**	**$ 14,326,028**	**$ 9,248,635**	**$ 9,451,052**
Citizens Business Bank	**$ 333,009**				
Kern County Treasury	**6,873,549**				
	$ 7,206,558				
Restricted Cash included in above:	OM&R Spreading	$ (365,591)	$ 801,602	$ (574,976)	
	OM&R Extraction	(555,198)	(86,757)	(189,289)	
	OM&R CVC/Delivery Canal	-	(3,176,927)	(3,318,405)	
	Take/Put Fees	(1,464,681)	(4,821,397)	(648,255)	
Total Restricted		$ (2,385,470)	$ (7,283,479)	$ (4,730,925)	
Cash Available for Construction - May 31, 2021		$ 4,821,088	$ 7,042,549	$ 4,517,711	

Tab IV

KERN DELTA
WATER DISTRICT

OPERATIONS AND PROJECTS COMMITTEE MEETING

501 Taft Highway
Bakersfield, CA

TUESDAY June 1, 2021
10:30 AM

A G E N D A

1. **Call to Order**

2. **Public Comment Period**

3. **Assistant General Manager's Report:**
   a. Approve the minutes of the Operations and Projects Committee Meeting of May 4, 2021
   b. Encroachment Permit Update:
      i. Approve Culvert Extension on Eastside Canal at Redbank Road
      ii. Approve Panama Lane Easement at the Central Canal - City of Bakersfield
   c. District Facility and Banking Maintenance Report
   d. Old River Basins - Conceptual Design
   e. East Branch Canal - APN 169-210-19
   f. City Annexation No. 697 (Taft Hwy No. 3)
   g. Water Banking Construction and Power Invoices

4. **Adjourn**

Chris Bellue
Assistant General Manager

Posted: Friday, May 28, 2021
Bakersfield, California

Requests for disability related modifications or accommodations, including auxiliary aids or services may be made by telephoning or contacting Madelyne Rodriguez at the District Office (661-834-4656). Please attempt to make such requests known at least 24 hours before the scheduled meeting. Pursuant to Government Code section 54957.5, any materials relating to an open session item on this agenda, distributed to the Board of Directors after the distribution of the agenda packet, will be made available for public inspection at the time of distribution at the District, 501 Taft Highway, Bakersfield, CA.

MINUTES OF THE OPERATIONS AND PROJECTS COMMITTEE
Tuesday, June 1, 2021

DIRECTORS PRESENT: Collins, Kaiser, Mendonca, Spitzer
OTHERS PRESENT: From KDWD: General Manager Teglia, Water Resources Manager Mulkay, Assistant General Manager Bellue, General Counsel Iger, Staff Engineer Deleon, and Administrative Assistant Rodriguez

CALL TO ORDER

Chair Collins called the meeting to order at 10:34 A.M.

1. PUBLIC COMMENTS

None.

2. ASSISTANT GENERAL MANAGER'S REPORT:

a. Approve minutes of the Operations and Projects Committee Meeting of May 4, 2021: **M/S/C (Mendonca/Kaiser) (yes–4, no–0):** The Committee approved the minutes of the Operations and Projects Committee meeting held on May 4, 2021.

b. Encroachment Permit Update: Mr. Bellue presented four encroachment requests, the first being a request from US Irrigation to install a pump connection to a turnout on the Rim Ditch. A request from SCEI to install a water and gas line underneath the canal on the Central Branch at Panama Lane. The last two were brief updates on two ongoing requests, a request from City of Bakersfield for additional road right-of-way on Panama Lane at the Central Branch and a request from McIntosh and Associates to extend the Redbank Road Culvert on the Eastside Canal.

c. District Facility and Banking Maintenance: Mr. Bellue discussed several items of note including repairs on the BV Canal, Rim Ditch and Stine for rodent damage, the removal and stockpile of concrete pipe at the Sunset Basins and aquatic treatments for algae control at various locations within the District.

d. Old River Basins – Conceptual Design: Staff provided a report regarding this item.

e. East Branch Canal – APN 169-210-19: Staff discussed a recent request to convey a specific parcel to the District.

f. City Annexation No. 697 (Taft Hwy No. 3): Staff presented and discussed the annexation proposal for lands within the District.

g. Water Banking Construction and Power Invoices: **M/S/C (Spitzer/Kaiser) (yes-4, no-0):** The Committee recommended the Board approve payment of Water Banking and Power Invoices totaling $165,329.51 (plus additional PG&E well energy costs). See the attached June 15, 2021 Invoice and Disbursements memo to the Board for a full breakdown of the Invoices.

3. ADJOURN

Chair Collins adjourned the meeting at 11:33 A.M.

Respectfully submitted,

_____

Donald Collins – Chair

Maintenance Report

May 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
    a. Repair Kern Island breach at Bear Mountain Blvd
    b. Repair wash ins on BV and Stine
    c. Repair rodent damage on BV, Rim and Stine
    d. Clean turnouts on BV and Stine
2. **Shop.** The following jobs were completed during the month;
    a. Normal service and repairs on District vehicles and equipment.
    b. Repair smog system sensors/check engine light on truck # 210
    c. Repair dump bed switches on truck 323
    d. Service and repair bathroom, coolers and lights in shop and office
    e. Fuel and service Grader / John Deere
    f. Repair trailer T12
3. **District Wells.**
    a. Monthly service and inspection of all District wells to check dripper operation and clean well pads.
    b. Replace panel lights and dripper glass.
4. **Motor Grader # 403** The following canals were sloped, and roads graded;
    a. Central, Eastside and 20-Foot
5. **Backhoe # 402** The following jobs were completed during the month;
    a. Remove and stockpile concrete pipe at Sunset Basins.
    b. Remove debris prior to startup of the BV and Stine Canals
    c. Collapse gopher holes on the KI, BV and Stine
6. **Backhoe # 404** The following jobs were completed this month;
    a. Removed debris from Kern Island, Central, Branch 1, East Branch, Randal, Farmers, BV and Eastside Canals
    b. Remove and stockpile concrete pipe at Sunset Basins.
7. **Weed Spraying.** The following canals were sprayed during the month;
    a. Weeds were sprayed on BV, Stine, KI and Eastside
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; treatments were made to Central, Randal, Eastside, Farmers, 13 Ditch and Kern Island
9. **Rodent Control**
    a. Bait Stations were filled throughout the District this month.
10. **Trash Removal.**
    a. Daily cleaning of crossings, weirs, and screens
    b. Remove debris from the BV, Stine, Central, East Branch, Kern Island & Branch 1; (Both trash trucks were used to haul debris to the landfill)

11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
    a. Kern Island – 30th St., 34th St. and Columbus
    b. Eastside – Quantico, Columbus and 34th
    c. Branch 1 – Smoke Tree Trailer Park, South Gate and Harris
    d. Stine – California and Real, Chester Lane & Garnsey, Grisham and White Lane
    e. Basins – DiGiorgio and Romero
12. **Safety Meetings.** Weekly tailgate safety topics were;
    a. Chemical Safety – Identifying Hazards
    b. Proper Tarping of Trash Trucks
    c. Eye Safety / Safety Glasses
    d. Tire Safety – ID Hazards / Proper Inflation
13. **Water Banking Activities.** The following jobs were completed during the month;
    a. Mowing cells at the Kern Island and Romero Basins
    b. Removal of tumbleweeds from fences due to windstorms at Kern Island Basins
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
    a. Install meters on Stine at Bladder.
    b. Finish repairs to Multipurpose Room

15. **Future Water Banking Projects.**
    a. Remove tumble weeds and debris near housing at the Branch 1 Basins.
    b. Continue pipe removal at Sunset Basins.
    c. Pipe Removal at Marlette property
    d. Pipe removal at AC Electric Property

To: Kern Delta Water District Board of Directors

From: Steven Teglia

Date: June 15, 2021

Re: Encroachment Permit Applications

DISCUSSION:
Following are the organizations that have applied for an encroachment permit with Kern Delta Water District and a summary of their intended locations and purposes for encroaching.

Organization: QK
Location: Central Branch at Panama Lane
Purpose: Road easement grant to City of Bakersfield for additional road right-of-way
Anticipated Start Date: TBD

Organization: McIntosh and Associates
Location: Eastside Canal at Redbank Road
Purpose: Extend the Redbank Road culvert ~20 feet south.
Anticipated Start Date: TBD

Organization: US Irrigation
Location: Rim Ditch
Purpose: Work within Rim Ditch right-of-way (installation of pump connection to turnout).
Anticipated Start Date: TBD

Organization: SCEI
Location: Central Branch at Panama Lane
Purpose: Install water and gas line underneath canal.
Anticipated Start Date: TBD

OLD RIVER BASINS

CONCEPTUAL LAYOUT

NOTES:
1. POND BOTTOM ACREAGE SHOWN
2. ±144 GROSS ACRES
3. EIGHT PONDS TOTAL
4. LAYOUT SUBJECT TO CHANGE DUE TO TOPOGRAPHIC AND BOUNDARY SURVEY

LEGEND

- STRUCTURE
- # POND NUMBER
- WELL

DRAWN BY: DLD	KERN DELTA WATER DISTRICT
DATE: 05-13-2021	EXHIBIT 4 OLD RIVER BASINS PROPOSED LAYOUT 4
SCALE: N.T.S	

ARNOLD ANCHORDOQUY
PATRICK J. OSBORN
MICHAEL L. O'DELL
GROVER H. WALDON
JOHN R. SZEWCZYK
STEPHEN H. BOYLE†
DONALD C. OLDAKER
BETH A. KUNEY

† LLM TAXATION

STEPHEN T. CLIFFORD (2018)
JAMES E. BROWN (RETIRED)

CLIFFORD & BROWN
A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

BANK OF AMERICA BUILDING
1430 TRUXTUN AVENUE, SUITE 900
BAKERSFIELD, CALIFORNIA 93301-5230

TELEPHONE NO (661)322-6023 • FACSIMILE NO (661)322-3508

WWW.CLIFFORD-BROWNLAW.COM

TABATHA JONES
OFFICE ADMINISTRATOR

ANTHONY L. LEGGIO
DANIEL T. CLIFFORD
WINIFRED THOMSON HOSS

OF COUNSEL

May 5, 2021

STEVEN TEGLIA
General Manager
Kern Delta Water District
501 Taft Highway
Bakersfield, CA 93307

VIA US MAIL AND EMAIL
steven@kerndelta.org

Re: APN 169-210-19-00-7:
Conveyance of Property to Kern Delta Water District

Dear Mr. Teglia:

Our office represents Circle O Investment Co., L.P., a California limited partnership, ("Circle O") and Thelma O'Meara, its general partner. We are contacting you regarding the above referenced property (the "Property"). The Property is a wedge-shaped parcel consisting of approximately 11,000 square feet that runs parallel to the East Branch Canal and E. Belle Terrace. We are attaching a parcel map to help you identify the Property's location.

In 1979, Kern Delta Water District ("Kern Delta") granted the Property to Robert Michael O'Meara through a Corporation Quitclaim Deed recorded on January 8, 1979 as Document No. 002176. We are attaching a copy of this Quitclaim Deed as well. Our understanding is that this conveyance was part of an exchange between Mr. O'Meara and Kern Delta through which Mr. O'Meara received the Property and Kern Delta received a piece of property from the O'Meara family to widen the curve of E. Belle Terrace at the point that it converges with the East Branch Canal. Over the years the Property was passed from Michael O'Meara to different O'Meara family entities, and most recently to Circle O.

Circle O would like to convey the Property back to Kern Delta at this time given that Circle O has no current or anticipated use for the Property. Given its proximity to the East Branch Canal, we assume the Property would benefit Kern Delta in its operations. Circle O is not requesting compensation for the Property, but requests that Kern Delta prepare the Grant Deed and the Certificate of Acceptance and pay for the recordation costs.

Please advise if this arrangement is acceptable to Kern Delta. Should you require additional information or have any questions, please do not hesitate to contact us.

Sincerely,

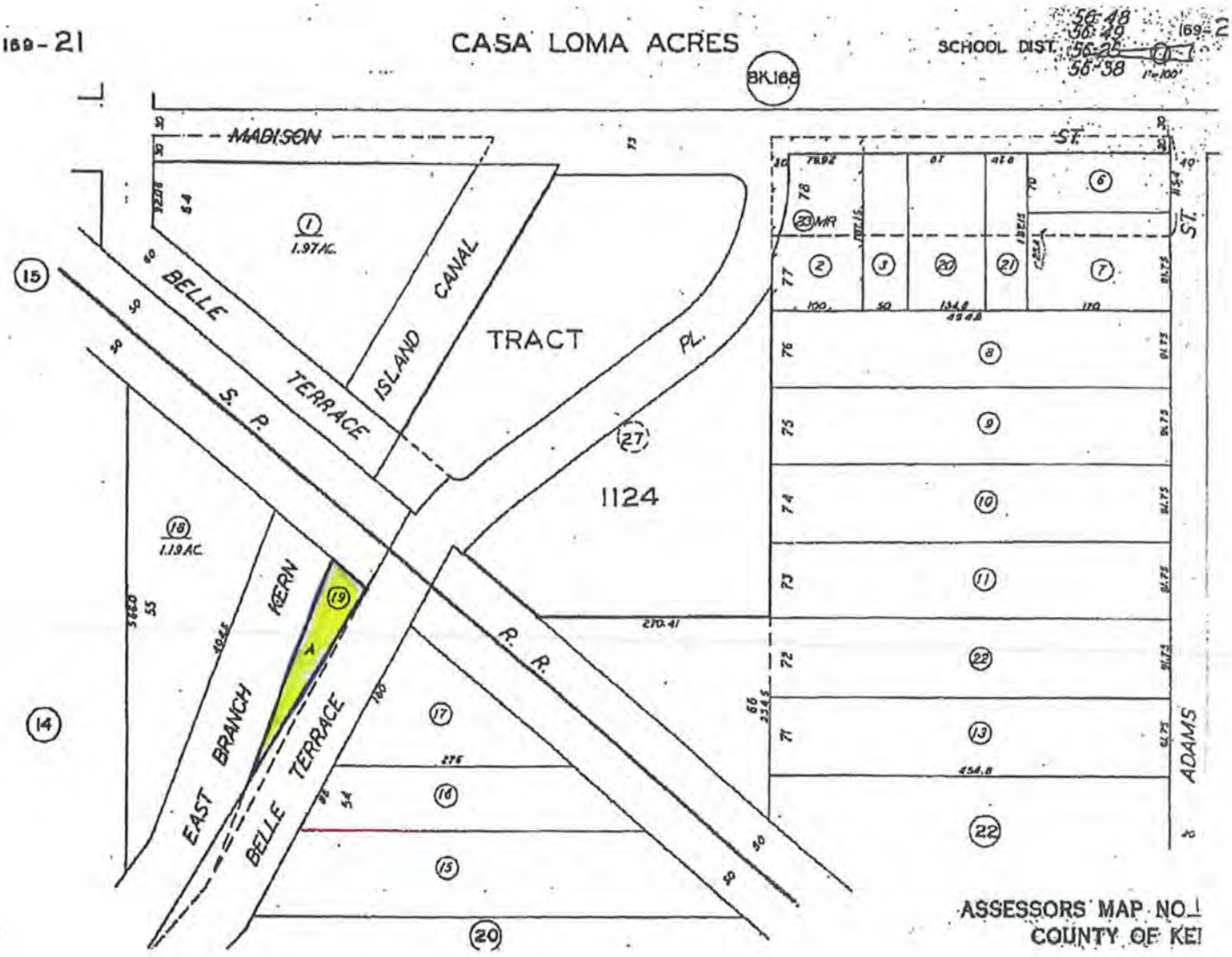
GROVER H. WALDON

GHW/bak
Enclosures as noted

cc: Thelma O'Meara
Patrick O'Meara
Shawna Bishop

GHW/bak/B/54060-6/TEGLIA-KERN DELTA WATER-LTR 050521

PARCEL MAP


169-21
CASA LOMA ACRES
SCHOOL DIST.
BK168
MADISON
ST.
BELLE TERRACE
S. P.
ISLAND CANAL
TRACT
PL.
1124
1.97 AC.
1.19 AC.
EAST BRANCH KERN
BELLE TERRACE
R. R.
ADAMS
ASSESSORS MAP NO.
COUNTY OF KE

BOOK 5167 PAGE 517

AND WHEN RECORDED MAIL TO

Name R.M. O'Meara.
Street Address 421 E. Belle Terrace.
City & State Bakersfield, Calif. 93307

002178

1979 JAN -8 PM 1:41

RECORDED BY
RAY A. VERCAMMEN
KERN COUNTY RECORDER

A 4.00 ORS
R7809 A 01/08/79 4.00 CASH

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL TAX STATEMENTS TO

Name
Street Address Same.
City & State

DOCUMENTARY TRANSFER TAX $ CONSIDERATION LESS THAN $100.00
COMPUTED ON FULL VALUE OF PROPERTY CONVEYED,
OR COMPUTED ON FULL VALUE LESS LIENS AND ENCUMBRANCES REMAINING AT TIME OF SALE.
Signature of Declarant or Agent determining tax. Firm Name

TO 403.1 CA (11-69)

Corporation Quitclaim Deed

THIS FORM FURNISHED BY TITLE INSURANCE AND TRUST COMPANY

4-
PD
A

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

KERN DELTA WATER DISTRICT

a corporation organized under the laws of the state of California

hereby REMISES, RELEASES AND QUITCLAIMS to

ROBERT MICHAEL O'MEARA

the following described real property in the unincorporated area of the County of Kern, State of California:

(SEE EXHIBIT "A")

In Witness Whereof, said corporation has caused its corporate name and seal to be affixed hereto and this instrument to be executed by its ____ President and Assistant Secretary thereunto duly authorized.

Dated: August 24, 1977

KERN DELTA WATER DISTRICT

By Stanley E. Willis President

By Gene R. McMurtrey Assistant Secretary

STATE OF CALIFORNIA
COUNTY OF KERN } SS.

On August 24, 1977 before me, the undersigned, a Notary Public in and for said State, personally appeared Stanley E. Willis, known to me to be the ____ President, and Gene R. McMurtrey known to me to be Assistant Secretary of the Corporation that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and

LINDA K. ALVARADO
NOTARY PUBLIC - CALIFORNIA

EXHIBIT "A"

All right, title and interest in and to that portion of the South half of Section 5, Township 30 South, Range 28 East, MDB&M, County of Kern, State of California, being a parcel of land described as:

Commencing at the angle point in the centerline of County Road No. 286 (Belle Terrace), said angle point being in the North line of Casa Loma Acres Subdivision as shown on Map filed May 11, 1921, in Book 3, Page 38 of Maps in the Office of the Kern County Recorder, from which point the Northwest corner of said Tract bears South 89° 59' 35" West; THENCE along last named centerline the following 2 courses;

THENCE (1) South 50° 11' 55" East, a distance of 170 feet;

THENCE (2) South 62° 17' 40" East, a distance of 413.79 feet;

THENCE (3) North 30° 21' 36" East, a distance of 30 feet to a point in the Northeasterly line of said County Road No. 286; being the true point of beginning;

THENCE along said Northeasterly line, the following 2 courses;

THENCE (4) North 62° 17' 40" West, a distance of 411.849 feet;

THENCE (5) North 50° 11' 55" West, a distance of 116.279 feet;

THENCE (6) departing from said Northeasterly line, South 59° 38' 24" East, a distance of 526.111 feet to the true point of beginning.

EXCEPT THEREFROM any portion lying within the right of way of the Southern Pacific Company Railroad.

EXHIBIT "A"


169-140-04
169-140-01
169-130-01
East Branch Canal
E Belle Terrace
Bunting Dr
Bakersfield
169-210-18
East Branch Canal
E Belle Terrace
169-210-19
169-210-01
East Branch Canal
169-201-08
169-201-09
169-201-07
169-201-01
169-210-15
169-210-35
169-210-20
169-201-06
169-272-01
169-271-01
169-272-02
169-272-03
169-260-03

BAKERSFIELD

THE SOUND OF *Something Better*

May 6, 2021

TO: Mailing List

RE: Proposed annexation of your property into the City of Bakersfield

The purpose of this letter is to inform you of a proposed annexation initiated by the City of Bakersfield of an area that includes your property (see attached map). It is the City's policy to contact property owners to see if there is interest in annexing into the City.

As shown on the attached map, this area is located within a "county island," also known as an unincorporated area that is adjacent to land already within the City limits. Annexation would allow for a streamlining of municipal services to this area, and your property may benefit in the long term with the future availability of all City services (e.g., potable water, sewer service, representation by the City Council, and more). All legal uses in the County would remain in effect for your property provided that the activity does not cease for more than one year. For example, if you legally own animals or operate a home business at the time of annexation, you could continue to do so. There is also no cost to you for the annexation.

Attached to this letter is a factsheet that answers frequently asked annexation questions, including common questions regarding taxes, improvements, and emergency services. Also attached is a brochure specific to your annexation area, with maps, an example of potential tax reductions resulting from annexation, etc. There is also a survey form attached to this letter asking if you are supportive or opposed to annexation of the area that includes your property. Please take a moment to fill out the survey and return to the City Planning Division in the self-addressed, stamped envelope provided in the packet.

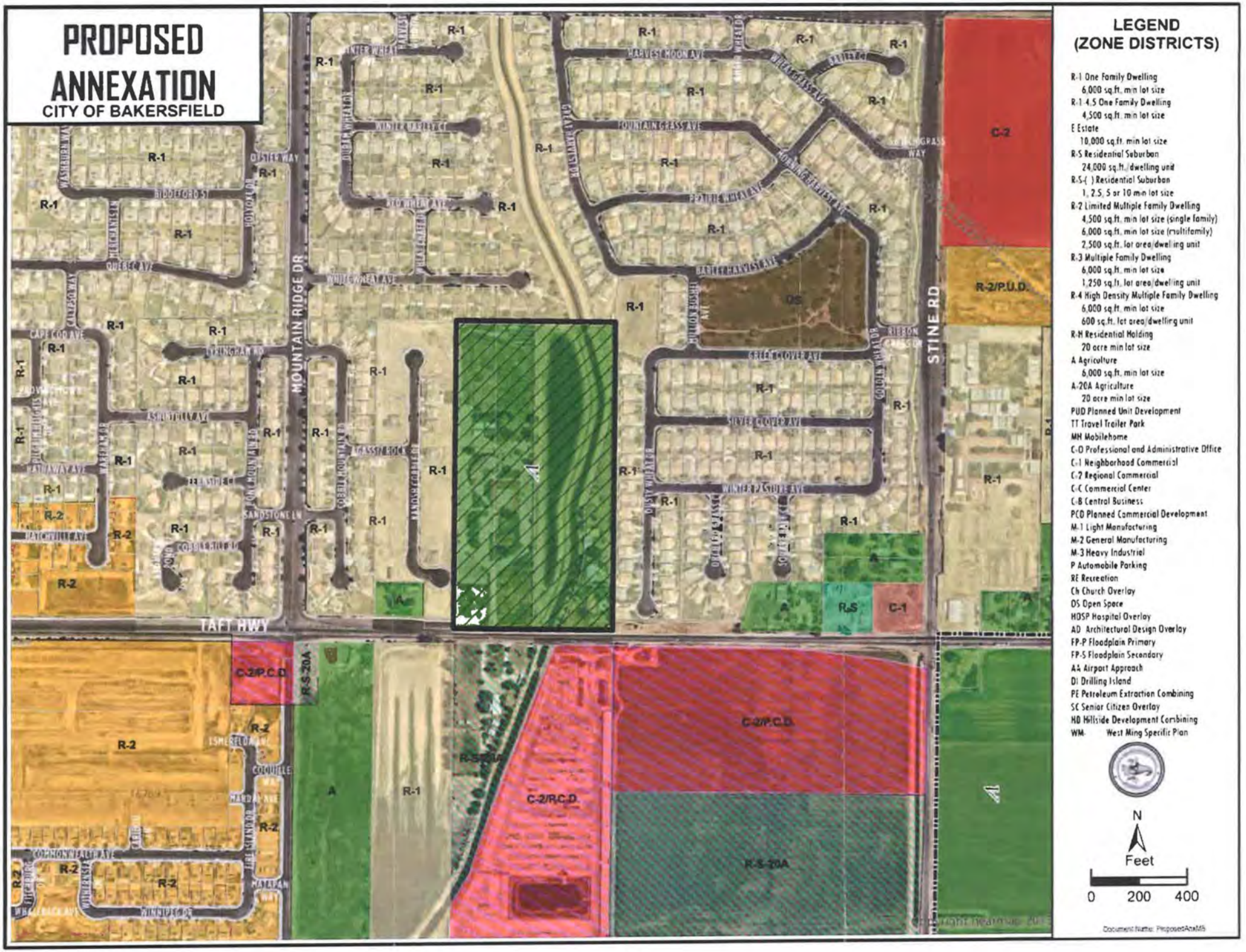
Please contact Steve Esselman, Principal Planner, at (661) 326-3733 or sesselman@bakersfieldcity.us should you have any questions or would like to discuss further.

Sincerely,

Steve Esselman
Principal Planner

Attachments: Survey Form
Mailing List
Frequently Asked Questions
Area Maps
Example of Potential Tax Reductions
Brochure

Development Services Department
1715 Chester Avenue, Bakersfield, CA 93301
Planning: 661-326-3733 Building: 661-326-3720
FAX Planning: 661-852-2136 Building: 661-325-0266


PROPOSED
ANNEXATION
CITY OF BAKERSFIELD
MOUNTAIN RIDGE DR
STINE RD
TAFT HWY
R-1
R-2
A
OS
C-2
R-2/P.U.D.
C-2/P.C.D.
R-S-20A
C-2/R.C.D.
R-S
C-1
LEGEND
(ZONE DISTRICTS)
R-1 One Family Dwelling
6,000 sq.ft. min lot size
R-1 4.5 One Family Dwelling
4,500 sq.ft. min lot size
E Estate
10,000 sq.ft. min lot size
R-S Residential Suburban
24,000 sq.ft./dwelling unit
R-S-( ) Residential Suburban
1, 2.5, 5 or 10 min lot size
R-2 Limited Multiple Family Dwelling
4,500 sq.ft. min lot size (single family)
6,000 sq.ft. min lot size (multifamily)
2,500 sq.ft. lot area/dwelling unit
R-3 Multiple Family Dwelling
6,000 sq.ft. min lot size
1,250 sq.ft. lot area/dwelling unit
R-4 High Density Multiple Family Dwelling
6,000 sq.ft. min lot size
600 sq.ft. lot area/dwelling unit
R-H Residential Holding
20 acre min lot size
A Agriculture
6,000 sq.ft. min lot size
A-20A Agriculture
20 acre min lot size
PUD Planned Unit Development
TT Travel Trailer Park
MH Mobilehome
C-O Professional and Administrative Office
C-1 Neighborhood Commercial
C-2 Regional Commercial
C-C Commercial Center
C-B Central Business
PCD Planned Commercial Development
M-1 Light Manufacturing
M-2 General Manufacturing
M-3 Heavy Industrial
P Automobile Parking
RE Recreation
Ch Church Overlay
OS Open Space
HOSP Hospital Overlay
AD Architectural Design Overlay
FP-P Floodplain Primary
FP-S Floodplain Secondary
AA Airport Approach
DI Drilling Island
PE Petroleum Extraction Combining
SC Senior Citizen Overlay
HD Hillside Development Combining
WM- West Ming Specific Plan
N
Feet
0 200 400
Document Name: ProposedAnxMS

Tab V

KERN DELTA
WATER DISTRICT

KERN DELTA WATER DISTRICT

June 9, 2021

	6/9/2021	Last Year
KERN RIVER 3 DAY MEAN INFLOW	286 CFS	727 CFS
KERN RIVER MEAN OUTFLOW	697 CFS	1,100 CFS
ISABELLA RESERVOIR STORAGE	88,957 ACFT	223,041 ACFT
REQUESTED OUTFLOW	680 CFS	1,045 CFS

Estimated: (CFS)

KDWD DAILY DIVERTED: (JUNE 9, 2021)	@HEAD	STATE	XCHNG	BANKING
KERN ISLAND	141	4	0	0
EASTSIDE	59	10	0	0
BUENA VISTA -LEVEE	112	33	0	0
STINE	48	15	0	0
OTHER - River Channel	0	0	0	0
K.I. / A.E. Exchange Gate	0	0	0	0
STINE / A.E. Exchange Gate	0	0	0	0
Total CFS	360	62	0	0

Estimated: (Acre Feet)

DIVERTED (MAY 2021)	UTILITY	STATE	PURCHASE	BANKING
KERN ISLAND	12,490	83	0	0
EASTSIDE	3,076	20	0	0
C.O.B. Misc.	0	0	0	0
BUENA VISTA	0	0	0	0
STINE	32	0	0	0
FARMERS	0	0	0	0
SOUTH FORK	0	0	0	0
West Side State Sale	0	0	0	0
MONTHLY TOTAL	15,598	103	0	0
YEAR TO MAY 31, 2021	62,193 ACFT	278	0	0
Year to May 31, 2021 Utility - State - Banking	62,471 **ACFT**			

ACFT. STORAGE BALANCE AS OF:	5/31/2021	Estimate 6/9/2021	Max Storage
KERN ISLAND	6,222	5,965	14,000
BUENA VISTA	1,076	415	Store All
STINE	1,344	451	Store All
FARMERS	1,333	657	Store All
STATE (20) Carryover	4,431	3,428	N/A
STATE (21) Contract	0	0	N/A
RRBWSD STORAGE	23,805	23,805	N/A
PIONEER PROJECT STORAGE	23,285	23,285	N/A
TOTAL ACFT.	61,496	58,006	

K.D.W.D. CLIMATOLOGICAL OBSERVATION:		*ISABELLA CLIMATOLOGICAL OBSERVATION:*
54	MINIMUM TEMPERATURE	46
81	MAXIMUM TEMPERATURE	73
58	PRESENT TEMPERATURE	55
0.00	PRECIPITATION - 24 HR. DAY	0.00
0.00	PRECIPITATION - MONTH	0.00
Seasonal 2.04	YEAR TO DATE PRECIP.	3.80 *Seasonal*

ISABELLA RESEVOIR:

LAKE ELEVATION (FT.)	*2,543.89*	MAY AC. FT. INFLOW	*29,764*
STORAGE ACFT.	*88,957*	MAY AC. FT. OUTFLOW	*23,839*
STORAGE CAPACITY	*568,075*	ACCUMULATIVE ACFT. INFLOW (20-21)	*129,468*
% OF CAPACITY	*16%*	ACCUMULATIVE ACFT. OUTFLOW	*118,050*
COE STORAGE CAPACITY	*360,000*	% OF COE CAPACITY	*25%*

Summary of Utility Water Diverted Year to Date: 5/31/2021

	Uility	*North Kern**	*Other Exchanges*
January	*6,805*	*0*	*0*
February	*13,083*	*0*	*0*
March	*12,456*	*0*	*0*
April	*14,251*	*0*	*0*
May	*15,598*	*0*	*0*
June			
July			
August			
September			
October			
November			
December			
Total	*62,193*	*0*	*0*

Summary of Other Water Diverted Year to Date: 5/31/2021

	State	Purchase	Banking
January	*0*	*0*	*0*
February	*0*	*0*	*0*
March	*48*	*0*	*0*
April	*127*	*0*	*0*
May	*103*	*0*	*0*
June			
July			
August			
September			
October			
November			
December			
Total	*278*	*0*	*0*

Water owed to K.D.W.D as of: 5/31/2021

B.V.W.S.D. 2020 State Carryover*:		***4,431***
2021 State Contract: Table A		
Quantities in acft.	TOTAL	4,431

**Maximum State Carryover Balance: 6,000 acre feet*

Summary of Total State Water Used Year to Date: 5/31/2021

	(OWED)	**(USED)**
2020 Carryover	***4,153***	***278***
2021 Contract		
Total	***4,153***	***278***
Net Owed to KDWD	TOTAL	4,431

B-120 WATER SUPPLY FORECAST UPDATE SUMMARY

UNIMPAIRED FLOW FOR - JUNE 2021

(Provisional data, subject to change)

Report generated: June 03, 2021 11:47

APRIL-JULY FORECAST UPDATE SUMMARY (IN THOUSANDS OF ACRE-FEET)								
DAYS OF MONTH	**JUNE 02**							
WATERSHED PERCENTILES	**AJ VOL**	**% AVG**	**AJ VOL**	**% AVG**	**AJ VOL**	**% AVG**	**AJ VOL**	**% AVG**
Shasta Lake, Total Inflow								Average = 1,756
90% Exceedance	730	42						
50% Exceedance	760	43						
10% Exceedance	790	45						
Sacramento River above Bend Bridge (near Red Bluff)								Average = 2,421
90% Exceedance	1,040	43						
50% Exceedance	1,080	45						
10% Exceedance	1,130	47						
Feather River at Oroville								Average = 1,704
90% Exceedance	480	28						
50% Exceedance	520	31						
10% Exceedance	560	33						
Yuba River near Smartsville								Average = 968
90% Exceedance	270	28						
50% Exceedance	290	30						
10% Exceedance	310	32						
American River below Folsom Lake								Average = 1,199
90% Exceedance	350	29						
50% Exceedance	370	31						
10% Exceedance	390	33						
Mokelumne River, Inflow to Pardee Reservoir								Average = 457
90% Exceedance	145	32						
50% Exceedance	150	33						
10% Exceedance	160	35						
Stanislaus River below Goodwin Res (blw New Melones)								Average = 682
90% Exceedance	195	29						
50% Exceedance	210	31						
10% Exceedance	230	34						
Tuolumne River below La Grange Res (blw Don Pedro)								Average = 1,193
90% Exceedance	440	37						
50% Exceedance	470	39						
10% Exceedance	510	43						
Merced River below Merced Falls (blw Lake McClure)								Average = 623
90% Exceedance	200	32						
50% Exceedance	220	35						
10% Exceedance	240	39						
San Joaquin River below Millerton Lake								Average = 1,228
90% Exceedance	340	28						
50% Exceedance	370	30						
10% Exceedance	400	33						
DAYS OF MONTH	**JUNE 02**							
WATERSHED PERCENTILES	**AJ VOL**	**% AVG**	**AJ VOL**	**% AVG**	**AJ VOL**	**% AVG**	**AJ VOL**	**% AVG**
Kings River below Pine Flat Reservoir								Average = 1,210
90% Exceedance	275	23						
50% Exceedance	300	25						
10% Exceedance	325	27						
Kaweah River below Terminus Reservoir								Average = 285
90% Exceedance	45	16						
50% Exceedance	50	18						
10% Exceedance	55	19						
Tule River below Lake Success								Average = 63
90% Exceedance	5	8						
50% Exceedance	5	8						
10% Exceedance	6	10						
Kern River, Inflow to Lake Isabella								Average = 458

APRIL-JULY FORECAST UPDATE SUMMARY (IN THOUSANDS OF ACRE-FEET)		
90% Exceedance	73	16
50% Exceedance	80	17
10% Exceedance	90	20

NOTES

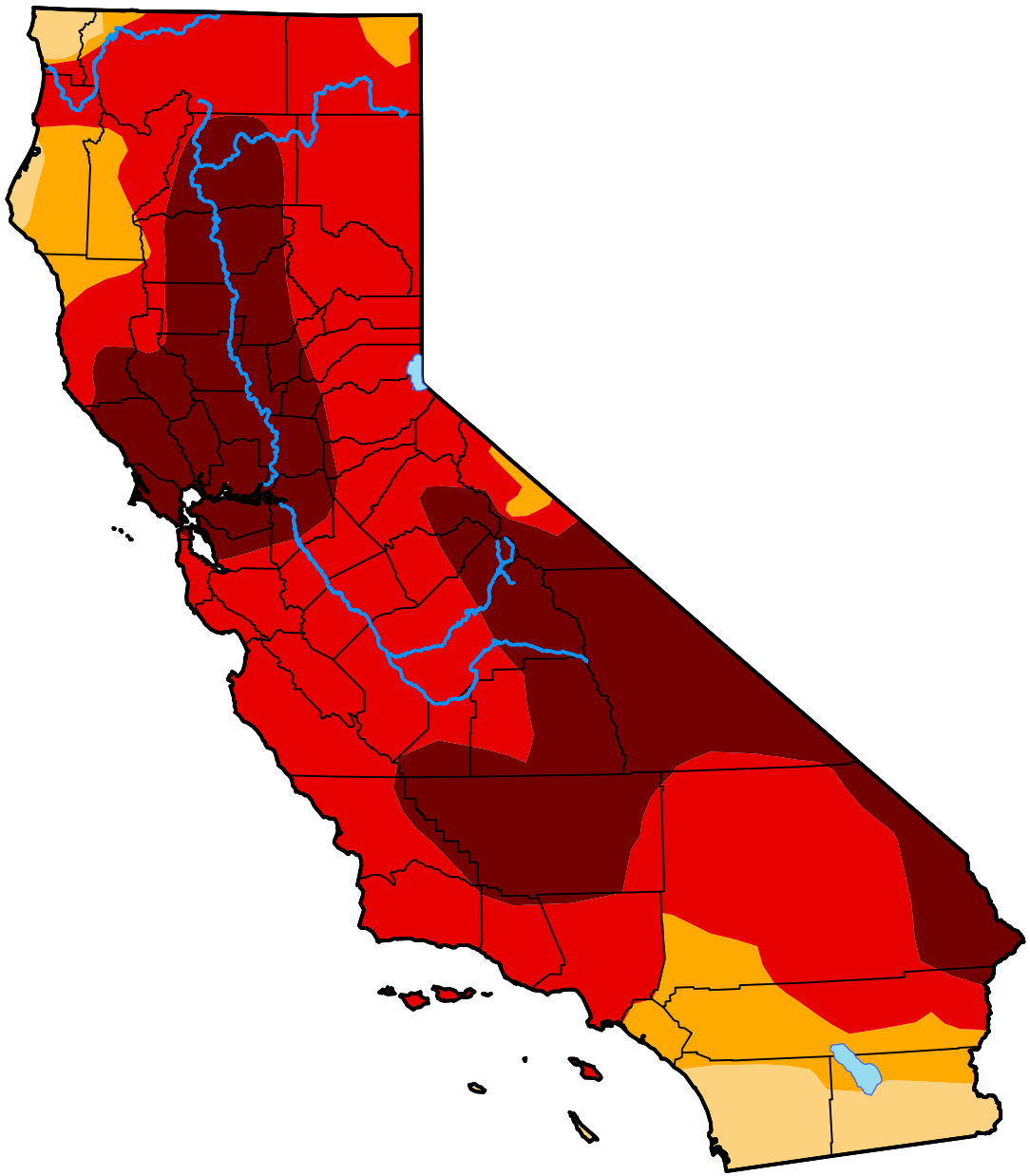
- Runoff forecasts are unimpaired (full natural) flows which represent the natural water production of the river basin, unaltered by upstream diversions, storage, or export or import of water to or from other watersheds.
- Runoff exceedance levels are derived from historical data. The 90 percent exceedance level and the 10 percent exceedance level together comprise a range about the median forecast in which the actual runoff should fall 8 times out of 10.
- Forecasts are stated in 1,000's of acre-feet and percent of (50-year) average.
- The averages are for the period 1966 to 2015.

CONTACT INFORMATION

FIRST NAME	LAST NAME	EMAIL	PHONE
Sean	de Guzman	Sean.deGuzman@water.ca.gov	(916) 572-2208
Andrew	Reising	Andrew.Reising@water.ca.gov	(916) 574-2181
Ashok	Bathulla	Ashok.Bathulla@water.ca.gov	(916) 574-2634
Lauren	Alkire	Lauren.Alkire@water.ca.gov	(916) 574-1433
Anthony	Burdock	Anthony.Burdock@water.ca.gov	(916) 574-2637

U.S. Drought Monitor

California



June 8, 2021

(Released Thursday, Jun. 10, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	94.75	85.20	33.32
Last Week *06-01-2021*	0.00	100.00	100.00	94.61	74.46	26.04
3 Months Ago *03-09-2021*	0.75	99.25	90.89	58.59	29.54	3.75
Start of Calendar Year *12-29-2020*	0.00	100.00	95.17	74.34	33.75	1.19
Start of Water Year *09-29-2020*	15.35	84.65	67.65	35.62	12.74	0.00
One Year Ago *06-09-2020*	41.79	58.21	46.74	20.84	2.45	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

Brian Fuchs

National Drought Mitigation Center

droughtmonitor.unl.edu

KERN DELTA WATER DISTRICT

Depth-to-Groundwater 2021

		JAN 2015	JAN 2016	JAN 2017	JAN 2018	JAN 2019	JAN 2020	JAN 2021	FEB 2021	MAR 2021	APR 2021	MAY 2021	JUN 2021	JUL 2020	AUG 2021	SEP 2020	OCT 2021	NOV 2021	DEC 2021	HIGH	LOW	AVERAGE
Northwest Quadrant	30/26-26C	R	196	206	190	R	204	L	L	L	L	L	L							0	0	####
	30/26-26G	187	199	207	197	R	199	L	L	L	L	L	L							0	0	####
	30/26-27J	177	198	206	198	R	210	L	L	L	L	L	L							0	0	####
	30/26-35N			NR	181	184	171	169	175	175	175	180	R							180	169	175
	30/27-31E	185	202	214	181	202	219	201	208	218	213	211	219							219	201	212
	31/26-08G	152	168	NR	168	NR	204	205	202	NR	NR	NR	202							205	202	203
	31/26-10J	175	206	NR	170	202	NR	203	201	201	201	204	234							234	201	207
	31/27-06C	200	195	202	NR	208	215	203	209	209	205	205	214							214	203	208
	31/27-07B	189	198	NR	199	R	200	NR	223	R	R	215	222							223	215	220
	AVERAGE					199	203	196	203	201	199	203	218							218	196	203
Southwest Quadrant	31/26-13N			198	180	201	NR	NR	208	R	R	211	R							211	208	210
	31/26-15J			200	168	205	NR	201	200	200	203	201	234							234	200	207
	31/26-16P			NR	168	207	204	202	209	211	203	201	200							211	200	204
	31/26-17Q			NR	NR	210	203	219	219	201	203	209	219							219	201	212
	31/26-21N			NR	175	238	204	204	202	202	201	213	267							267	201	215
	31/26-30G			186	159	240	268	203	R	R	201	200	260							260	200	216
	31/27-18D01			NR	NR	206	201	203	204	211	R	R	234							234	203	213
	32/26-08J			132	189	215	209	212	206	206	203	203	NR							212	203	206
	32/27-07N			160	NR	200	288	200	200	202	NR	NR	208							208	200	203
North-Central Quadrant	30/28-29B			NR	236	243	229	225	223	R	R	R	R							225	223	224
	31/27-01L			190	260	220	232	219	217	206	230	228	233							233	206	222
	31/27-04A			158	176	183	184	179	178	186	170	172	177							186	170	177
	31/27-05J			NR	200	NR	228	207	207	211	R	R	228							228	207	213
	31/27-10B			NR	NR	NR	208	208	207	207	204	200	222							222	200	208
	31/27-11K			171	170	330	227	333	328	331	NR	NR	336							336	328	332
	31/27-12Q			NR	140	140	139	141	140	R	R	R	R							141	140	141
	31/28-08A			216	220	243	244	249	248	250	255	247	R							255	247	250
South-Central Quadrant	31/27-20H			NR	NR	NR	211	NR	NR	208	208	205	222							222	205	211
	31/27-21M			NR	160	L	L	NR	NR	189	R	R	200							200	189	195
	31/28-20D			NR	180	190	201	R	202	R	R	R	R							202	202	202
	32/27-15B			192	196	231	202	200	NR	NR	NR	NR	234							234	200	217
	32/28-19A			216	NR	215	222	222	220	222	233	227	238							238	220	227
	32/28-05A			NR	NR	250	239	220	202	227	228	225	R							228	202	220
	32/28-05B			NR	NR	226	201	205	211	202	203	204	R							211	202	205
	32/28-08R			NR	NR	224	253	222	238	202	228	220	229							238	202	223

depth to groundwater unit of measurement = feet

KERN DELTA WATER DISTRICT

Depth-to-Groundwater 2021

		JAN 2015	JAN 2016	JAN 2017	JAN 2018	JAN 2019	JAN 2020	JAN 2021	FEB 2021	MAR 2021	APR 2021	MAY 2021	JUN 2021	JUL 2020	AUG 2021	SEP 2020	OCT 2021	NOV 2021	DEC 2021	HIGH	LOW	AVERAGE
Northeast Quadrant	30/28-11F	240	250	254	248	263	263	264	263	264	259	269	267							269	259	264
	30/28-13C			299	290	R	300	331	308	328	R	303	R							331	303	318
	30/28-24R			NR	NR	306	311	309	305	309	R	R	NR							309	305	308
	30/28-26R			NR	NR	287	NR	NR	NR	NR	R	300	R							300	300	300
	30/28-36A						212	NR	308	311	R	NR	318							318	308	312
	30/29-31C			319	323	327	338	330	338	328	320	323	370							370	320	335
	31/28-02H			NR	288	291	290	295	238	241	296	290	305							305	238	278
	31/28-10A			328	249	253	253	258	266	260	261	263	274							274	258	264
	31/28-12P			NR	222	286	284	NR	260	R	288	288	R							288	260	279
Southeast Quadrant	31/28-13H2					NR	NR	NR	285	R	277	279	276							285	276	279
	31/28-14D			226	233	239	230	235	233	236	R	232	242							242	232	236
	31/28-23H			NR	278	290	286	275	293	NR	R	R	NR							293	275	284
	31/28-34H			NR	NR	337	206	204	NR	NR	NR	NR	239							239	204	222
	31/29-18A			NR	234	335	333	241	336	328	330	333	341							341	241	318
	31/29-28C	326	257	NR	219	347	344	NR	348	338	NR	340	346							348	338	343
	31/29-30H			NR	NR	NR	NR	331	R	R	R	R	R							331	331	331
	31/29-33D			NR	294	342	250	338	326	318	331	323	329							338	318	328
	32/28-14F	287	NR	NR	NR	NR	222	241	245	246	240	241	244							246	240	243
	32/28-15R	250	305	NR	300	263	272	291	290	307	300	217	285							307	217	282
	32/28-01P			NR	NR	NR	NR	NR	NR	NR	NR	212	318							318	212	265
	32/29-06P	193	198	201	NR	183	177	208	189	NR	194	NR	NR							208	189	197

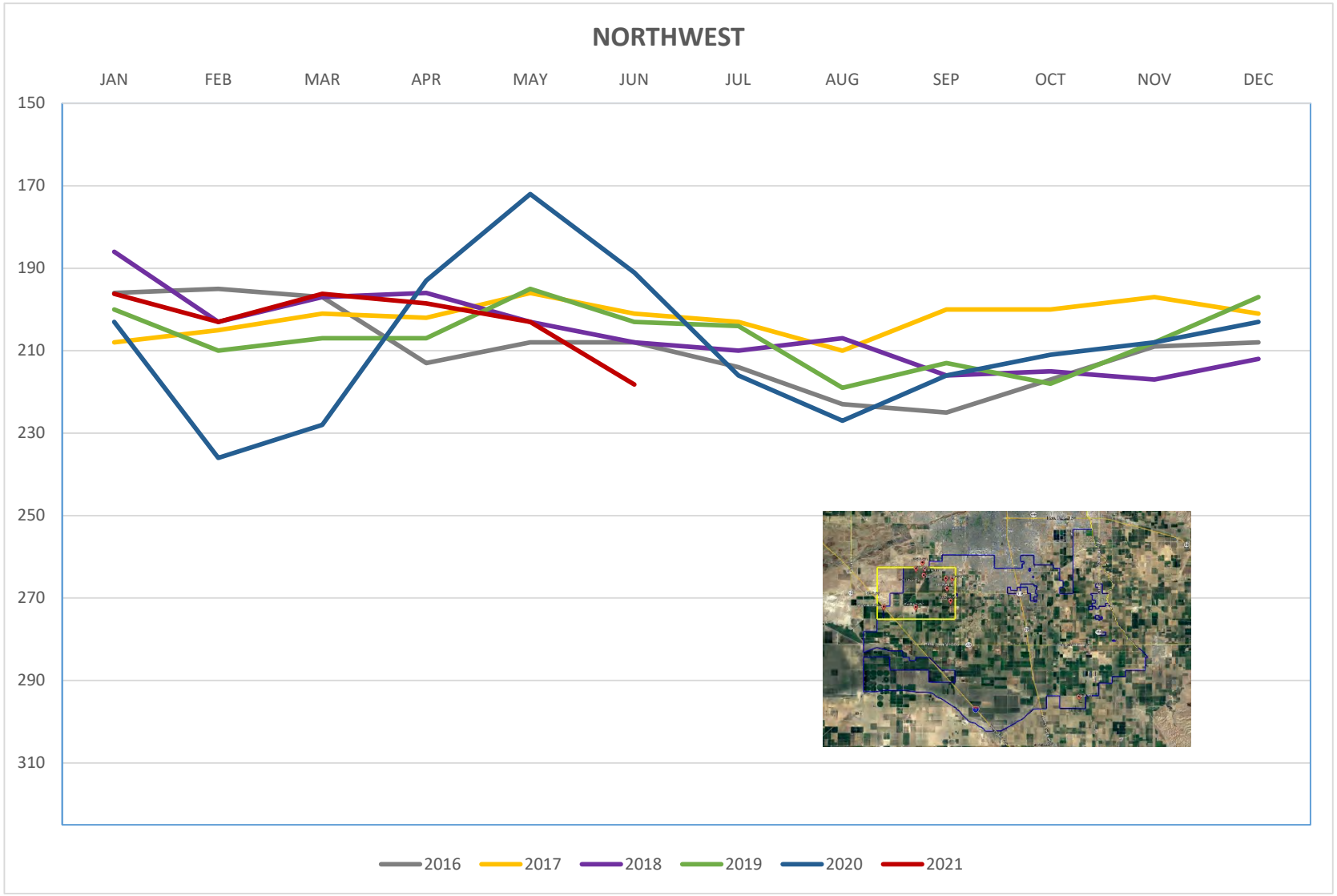
	High	Low	Ave.
NORTHWEST	234	169	204
SOUTHWEST	267	200	209
NORTH-CENTRAL	336	140	221
SOUTH-CENTRAL	238	189	212
NORTHEAST	370	238	295
SOUTHEAST	348	189	277

A=anomalyous reading (either wildly high or wildly low, therefore not included in data)
R = Pump Running
NR = No Reading (well temporarily inaccessible, unreliable reading, etc)
CAP = Well has been Capped
WA= Well added to rotation
NW = No well, well removed since previous well run
L = Gated well, letter has been sent to property owner requesting access

depth to groundwater unit of measurement = feet

KERN DELTA WATER DISTRICT

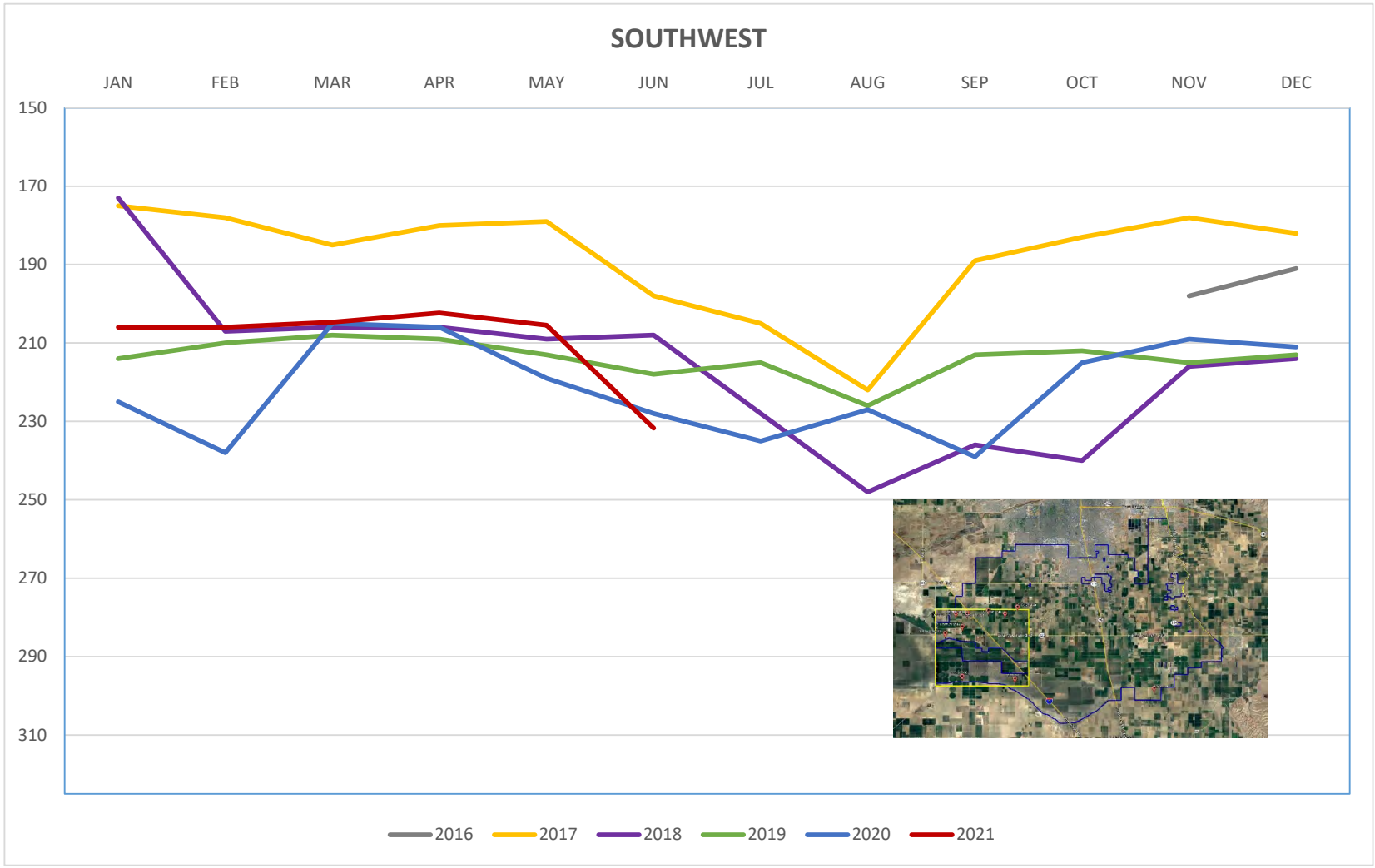
Depth-to-Groundwater 2021



depth to groundwater unit of measurement = feet

KERN DELTA WATER DISTRICT

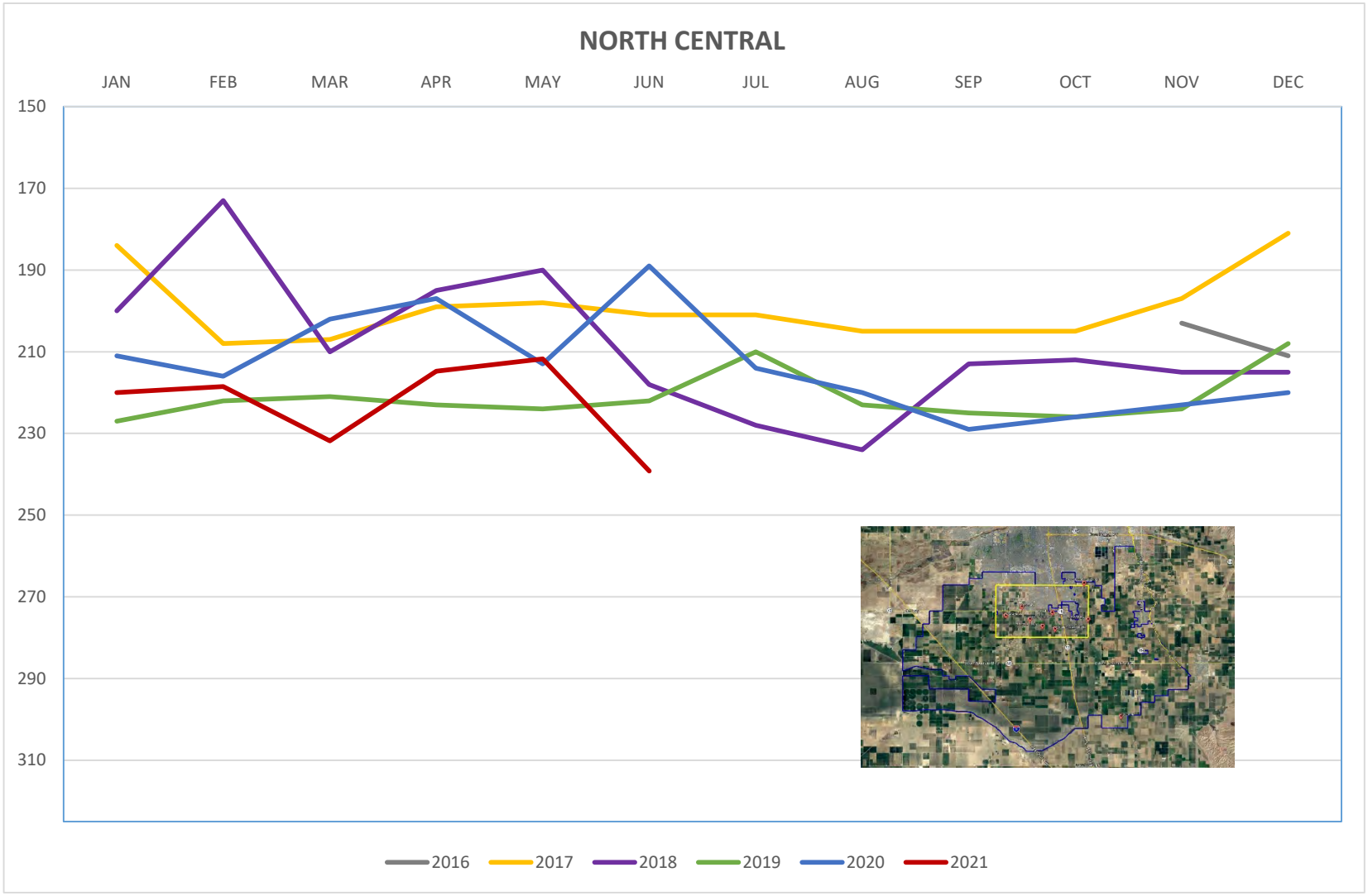
Depth-to-Groundwater 2021



depth to groundwater unit of measurement = feet

KERN DELTA WATER DISTRICT

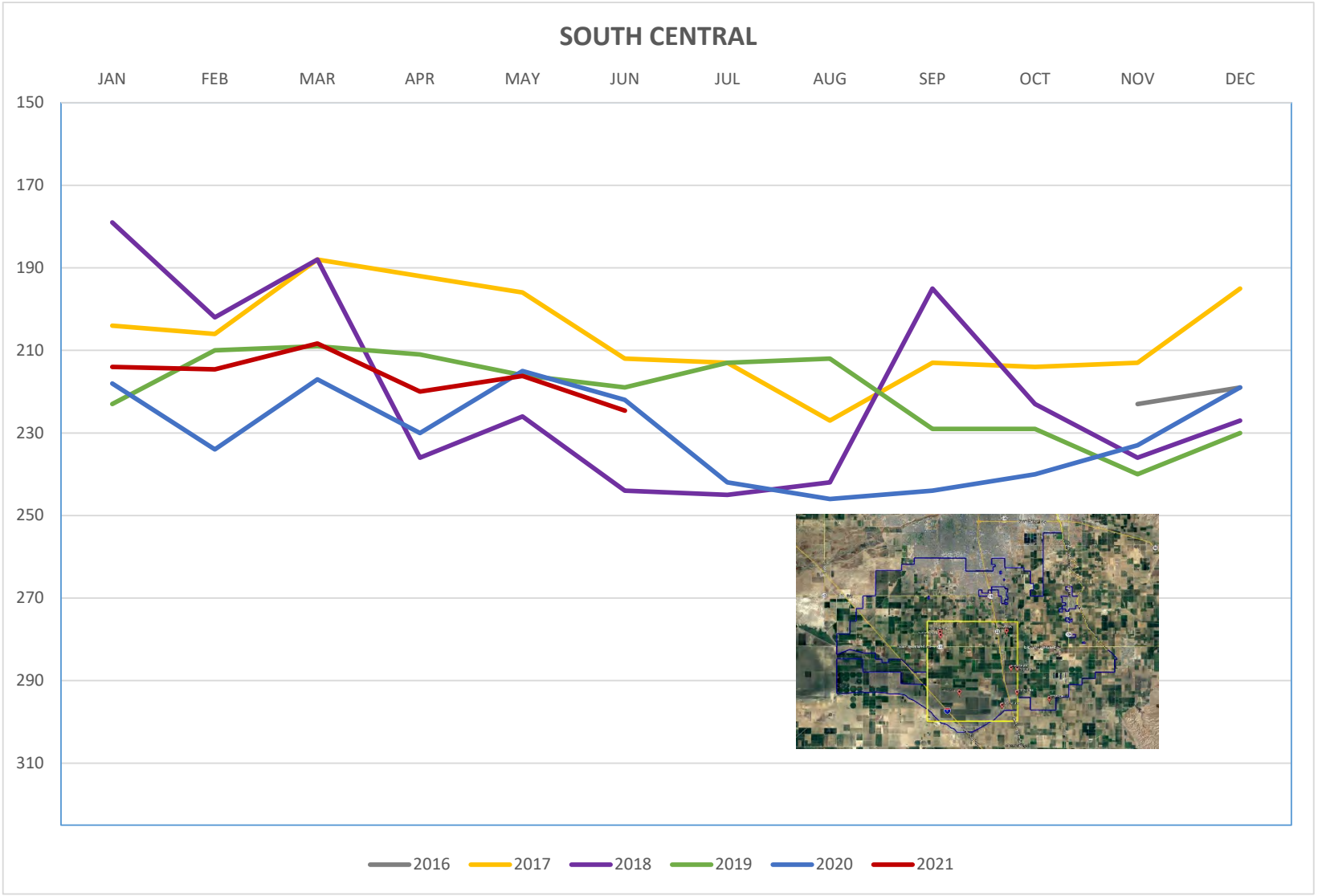
Depth-to-Groundwater 2021



depth to groundwater unit of measurement = feet

KERN DELTA WATER DISTRICT

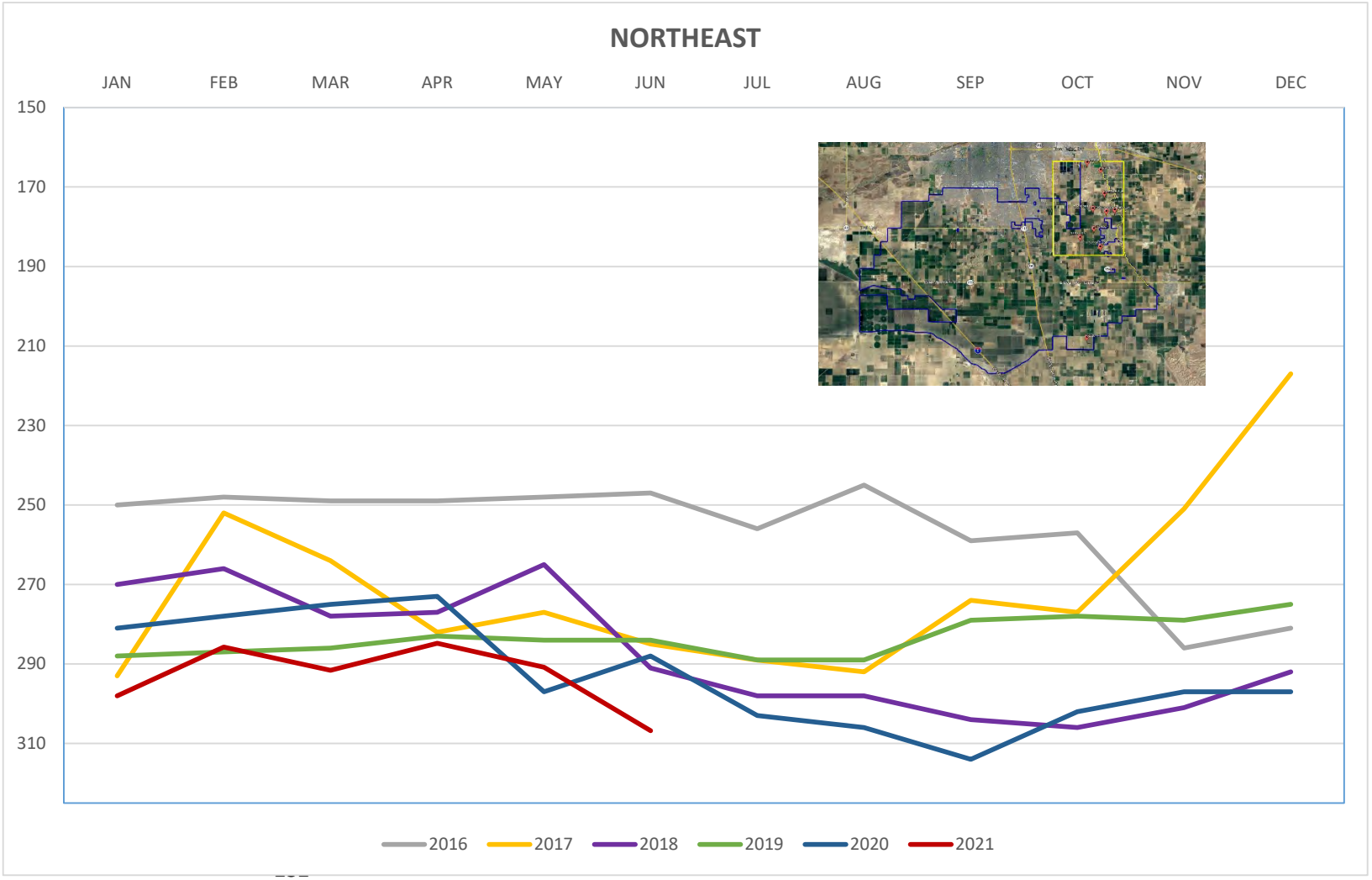
Depth-to-Groundwater 2021



depth to groundwater unit of measurement = feet

KERN DELTA WATER DISTRICT

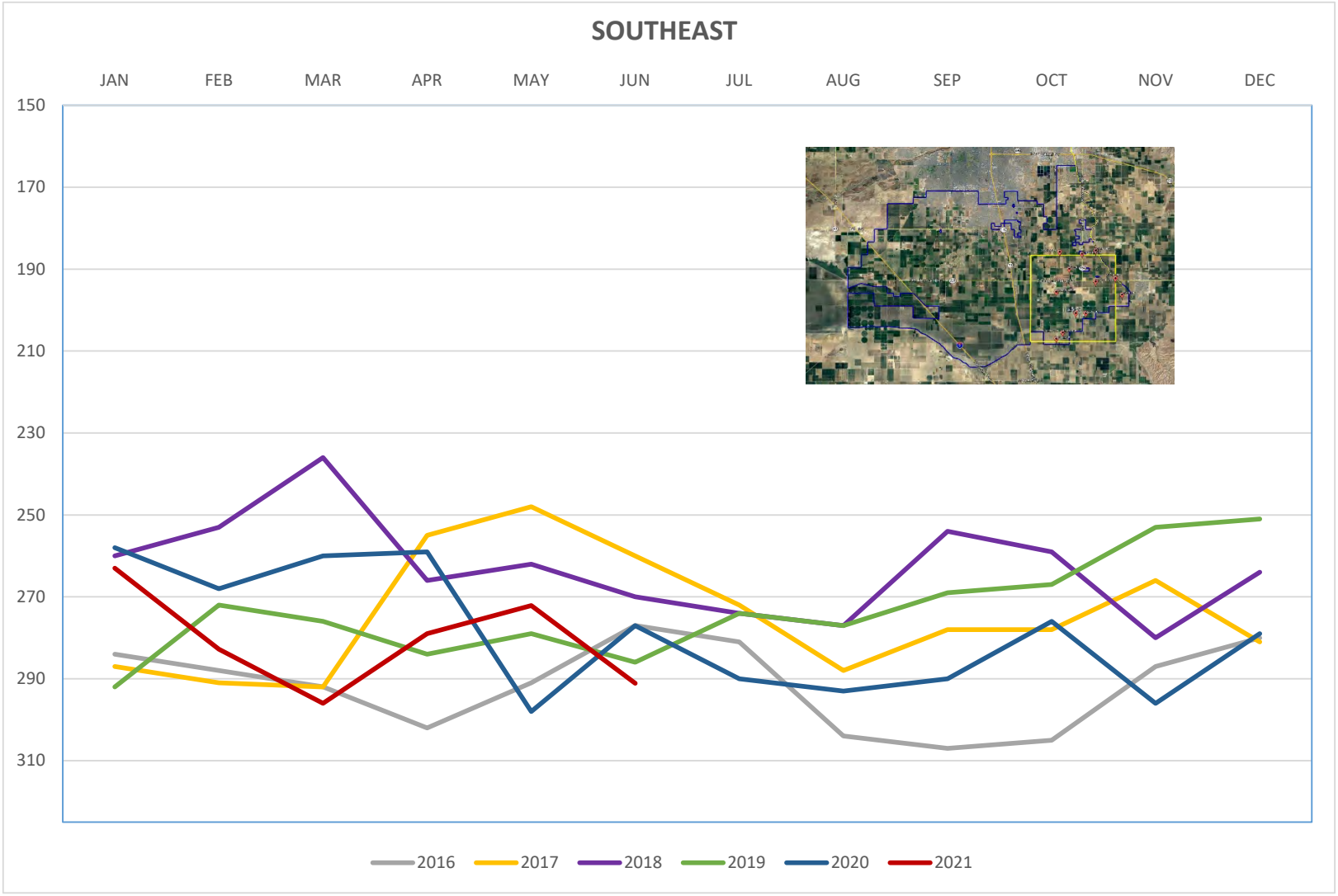
Depth-to-Groundwater 2021



depth to groundwater unit of measurement = feet

KERN DELTA WATER DISTRICT

Depth-to-Groundwater 2021



depth to groundwater unit of measurement = feet

KERN FAN MONITORING COMMITTEE
WELLS USED FOR HYDROGRAPHS

SEMITROPIC WSD
CAWELO WD
NORTH KERN WSD
ROSEDALE RANCH ID
ROSEDALE-RIO BRAVO WSD
BUENA VISTA WSD
IMPROVEMENT DISTRICT 4
KERN WATER BANK
PIONEER NORTH
PIONEER CENTRAL
BERRENDA MESA
COB 2800
PIONEER SOUTH
McALLISTER RANCH
WEST KERN WD
KERN DELTA WD
HENRY MILLER WD
BUENA VISTA WSD
WHEELER RIDGE-MARICOPA WSD

T 28 S/R 23 E
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T 28 S/R 27 E
T 29 S/R 23 E
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T 31 S/R 27 E

31B, 08L, 16R, 24H, 25M, 27N, 31H, 34N, 35H, 06B, 02C01, KCWA-31, 05D01, 03D01, 18K01, 08H53, 04J, 07A, 06L, 11P, 13D, 16B, 10P, 14M, 16L, 22K, 19B, 15N, 21L, 21G, 23M, 29B, 22R, 28D01, 28C02, 21R, 25A, 36R, 32N, 35N01, 10J01, 16P01, 32B

Miles
0 0.5 1 2 3

Legend
Hydrograph Wells
Monitor (Single)
Monitor (Cluster)
Monitor (Nested)
Production Well

30S/26E-25A

KCWA GROUNDWATER DATABASE

GS Elevation 348.0 ft.

Data provided by: Kern County Water Agency

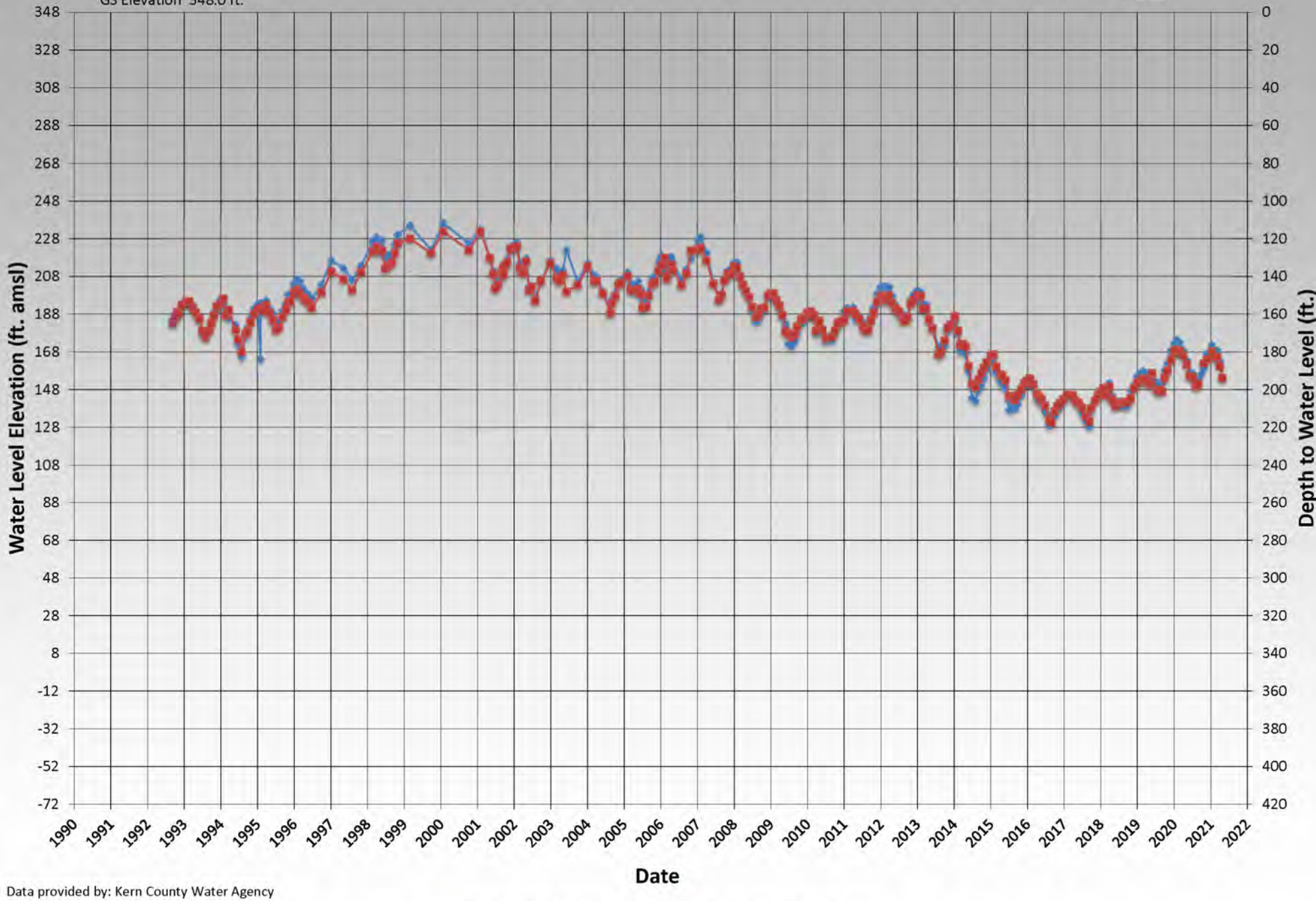
25A02 PERF INT 590'-690'

25A03 PERF INT 290'-390'

30S/26E-25A

KCWA GROUNDWATER DATABASE

GS Elevation 348.0 ft.



Data provided by: Kern County Water Agency

25A02 PERF INT 590'-690'

25A03 PERF INT 290'-390'

30S/26E-35N01

KCWA GROUNDWATER DATABASE

GS Elevation 336.1 ft.

Data provided by: Kern Delta Water District

35N01 PERF INT 200'-470', 530'-650', 750'-850'

30S/26E-35N01

KCWA GROUNDWATER DATABASE

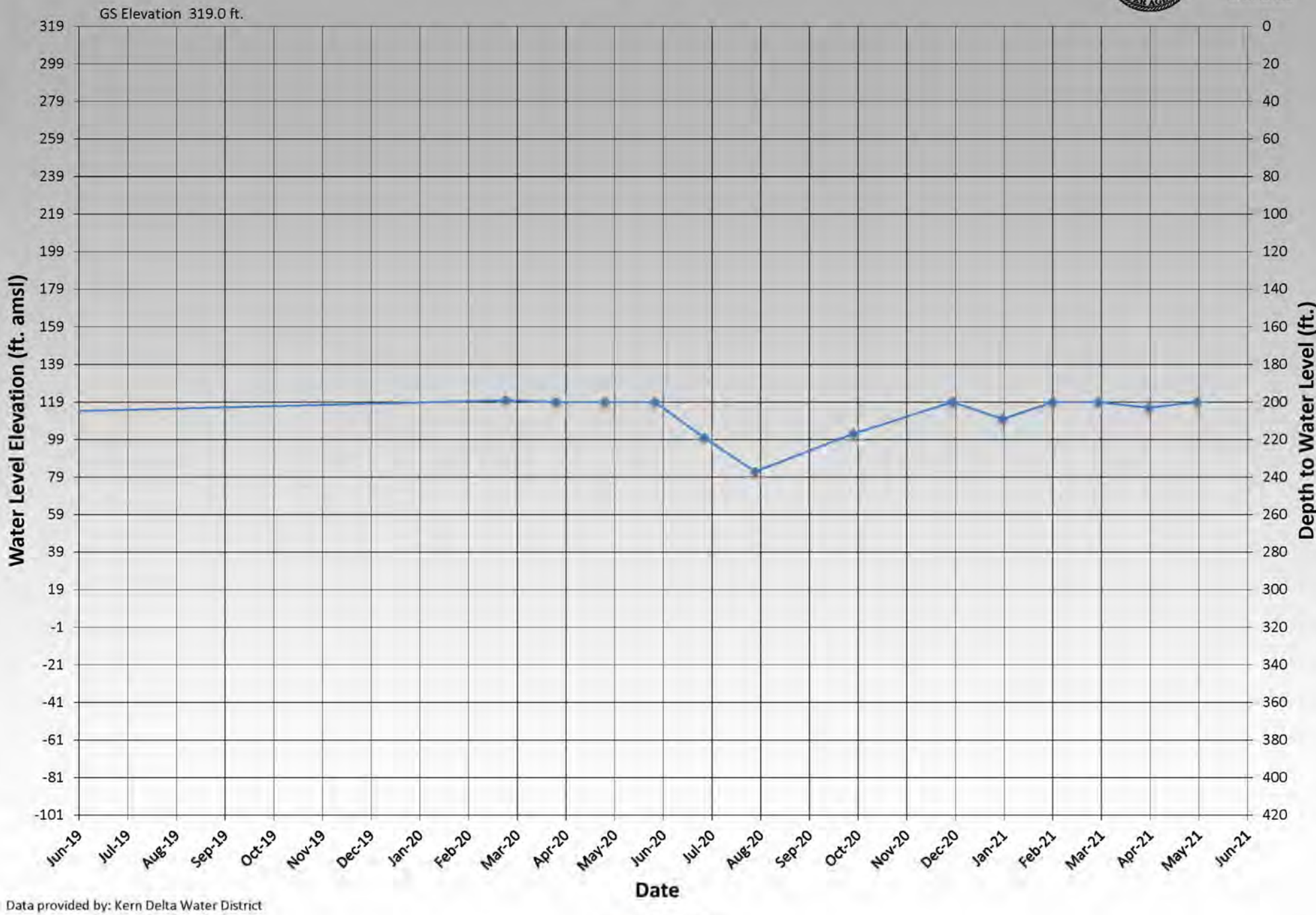
GS Elevation 336.1 ft.

Data provided by: Kern Delta Water District

35N01 PERF INT 200'-470', 530'-650', 750'-850'

31S/26E-10J01

KCWA GROUNDWATER DATABASE

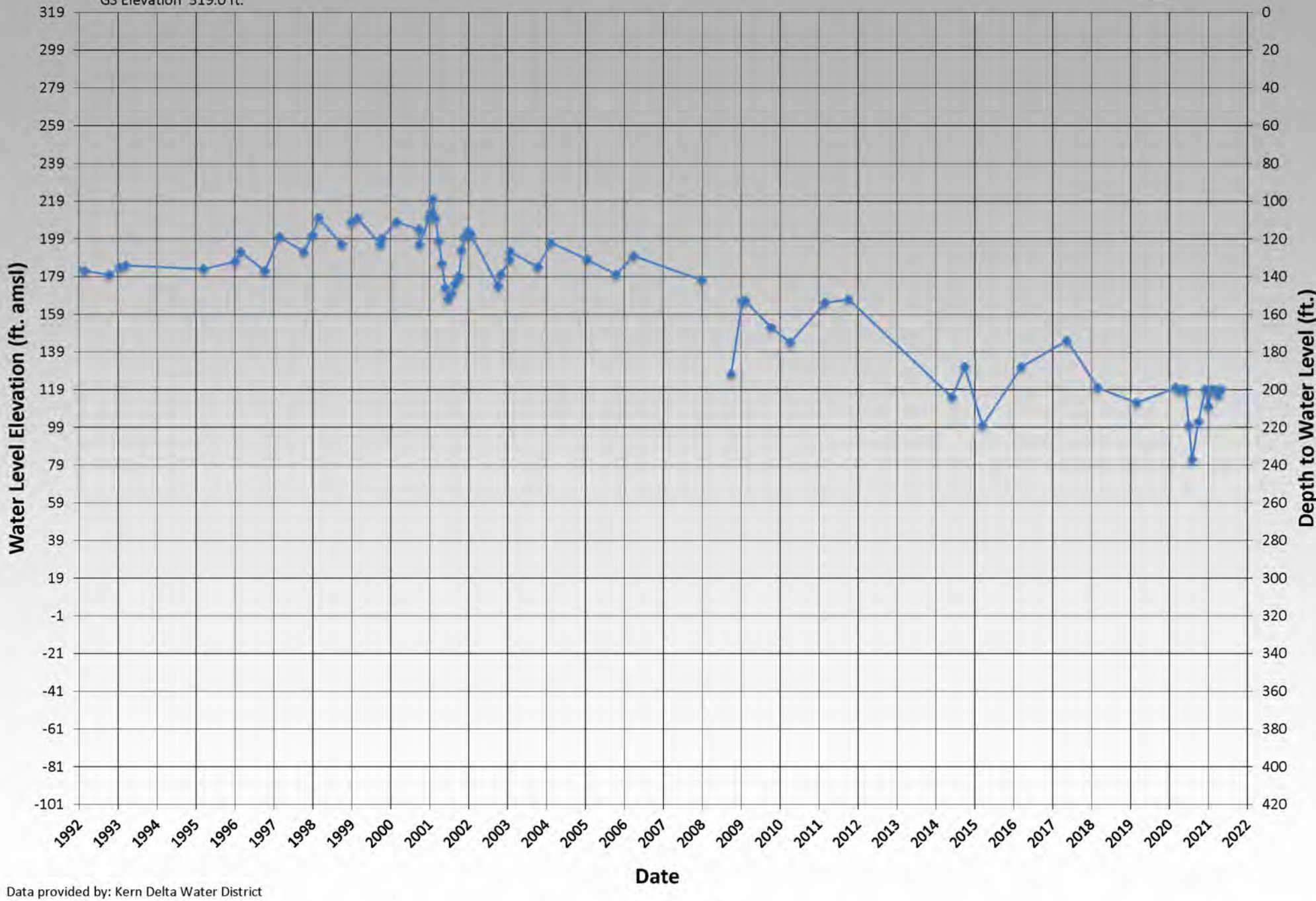


Data provided by: Kern Delta Water District

31S/26E-10J01

KCWA GROUNDWATER DATABASE

GS Elevation 319.0 ft.



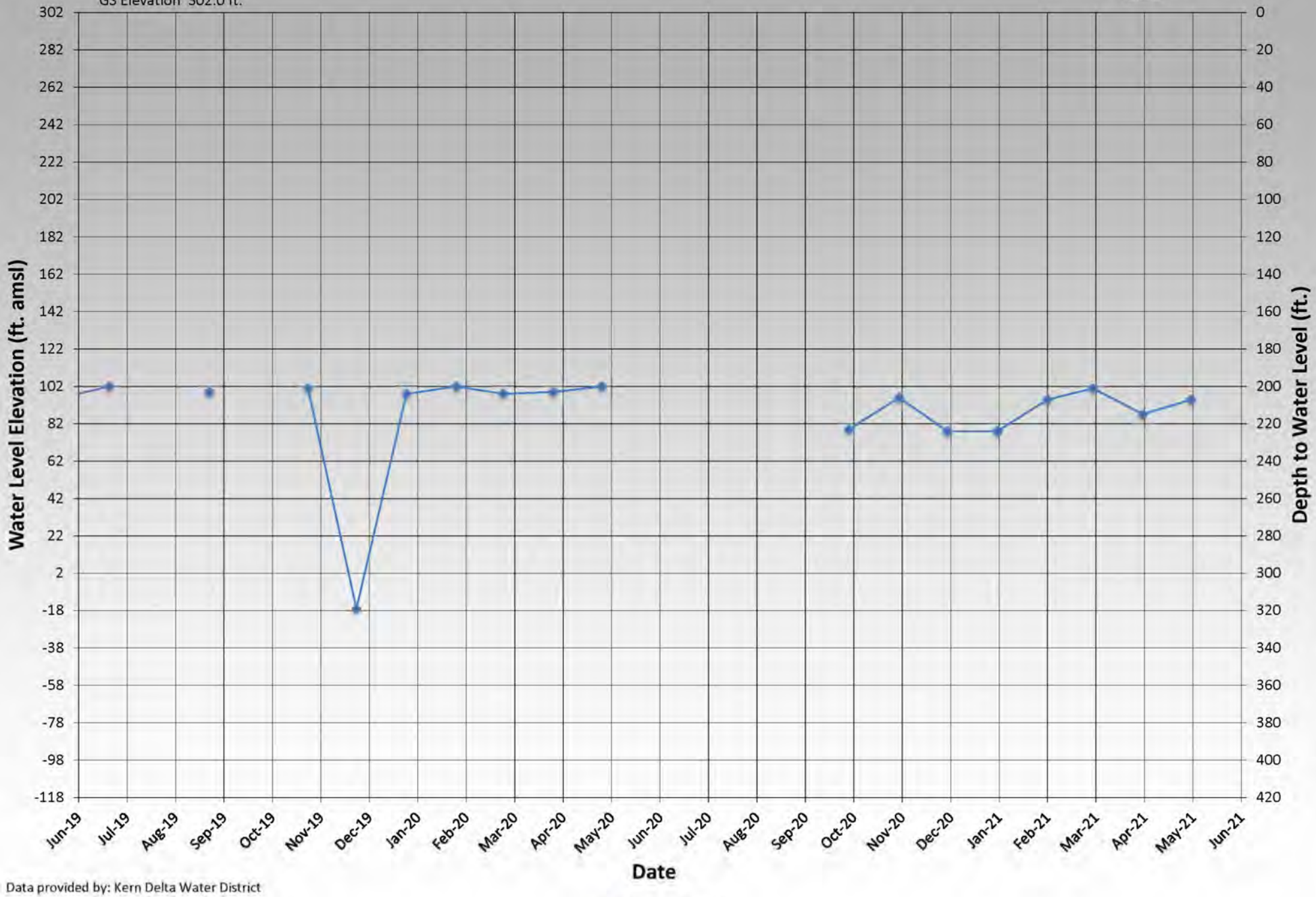
Data provided by: Kern Delta Water District

31S/26E-10J01

31S/26E-16P01

KCWA GROUNDWATER DATABASE

GS Elevation 302.0 ft.

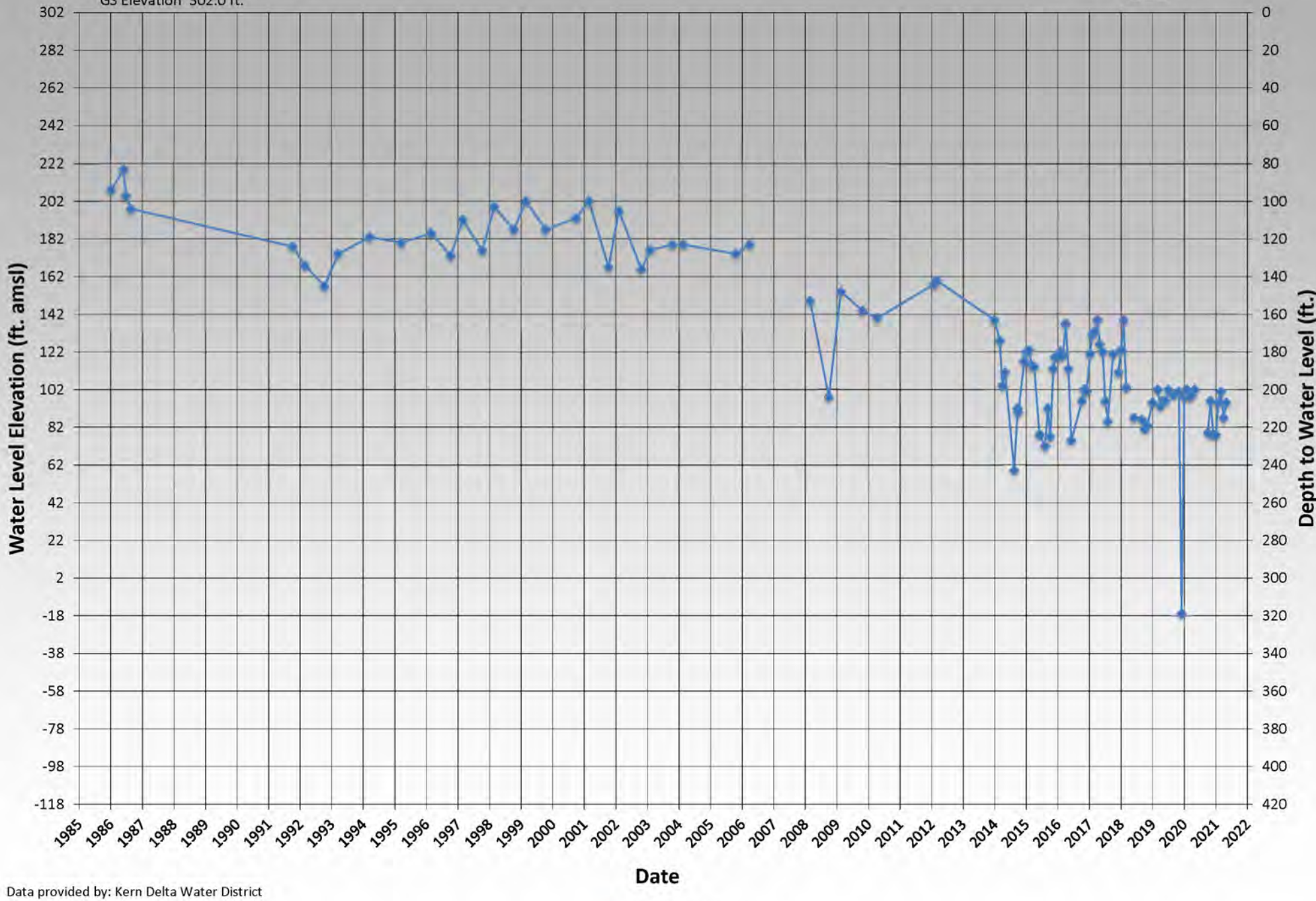


Data provided by: Kern Delta Water District

31S/26E-16P01

KCWA GROUNDWATER DATABASE

GS Elevation 302.0 ft.



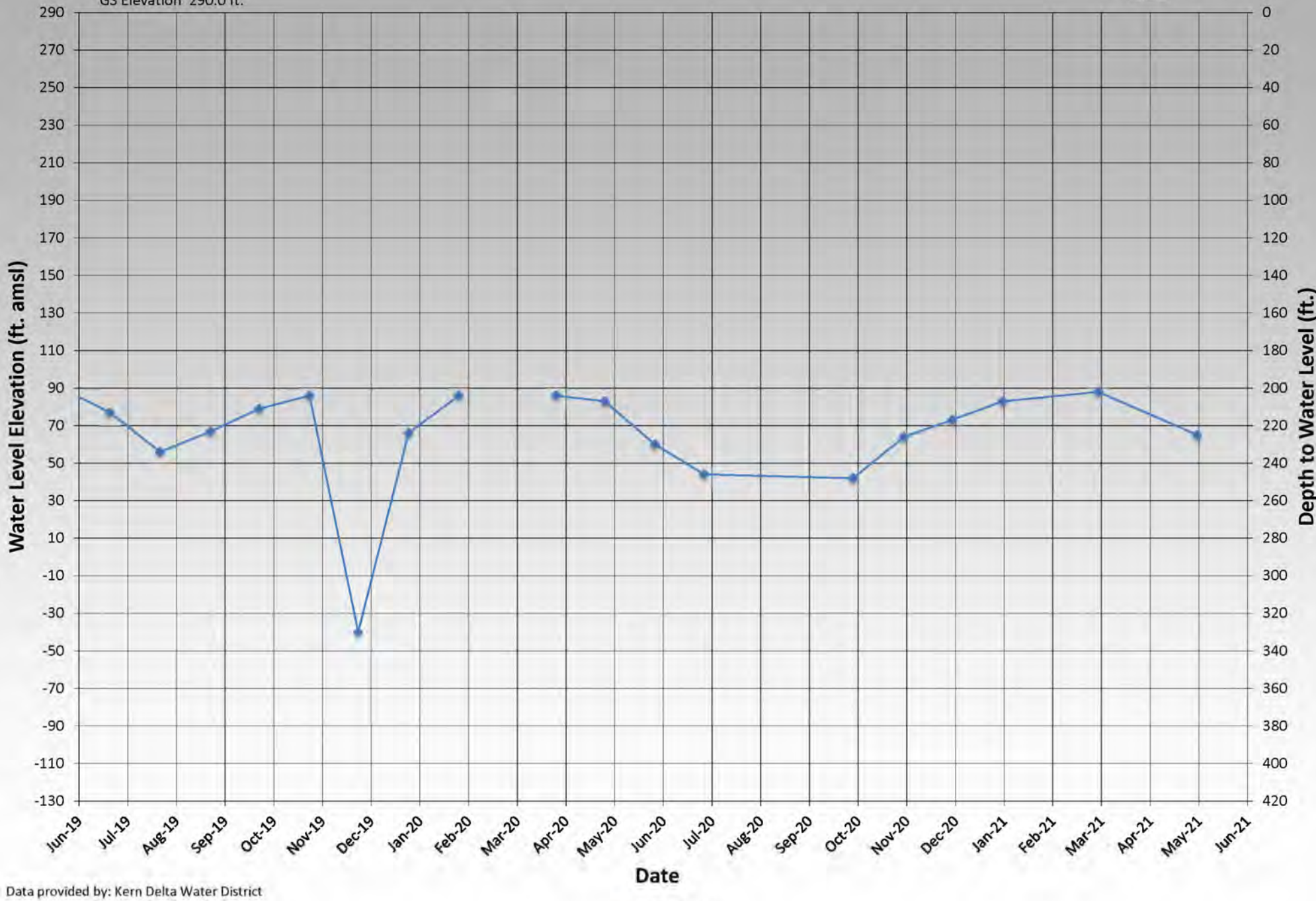
Data provided by: Kern Delta Water District

31S/26E-16P01

31S/26E-32B

KCWA GROUNDWATER DATABASE

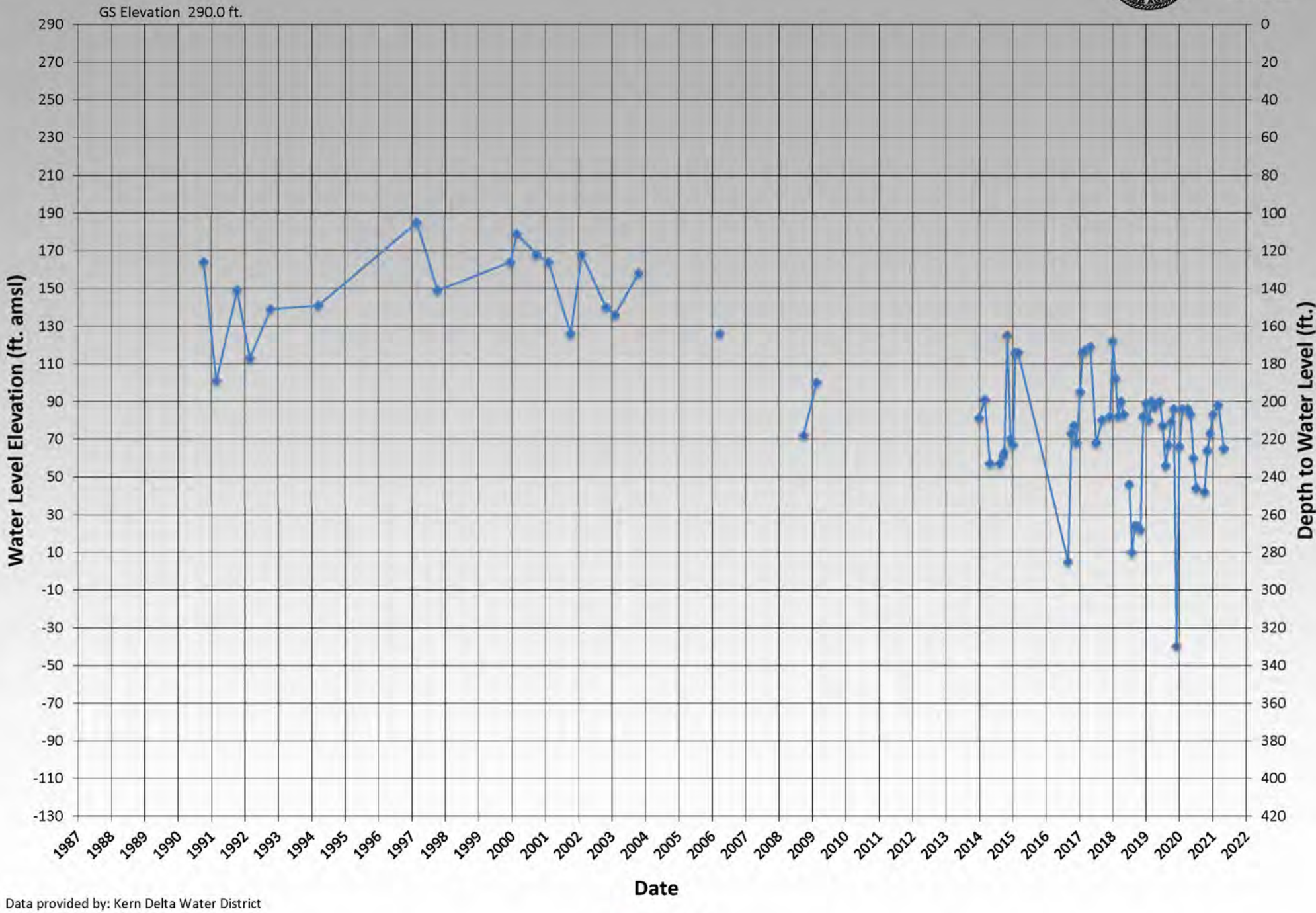
GS Elevation 290.0 ft.



Data provided by: Kern Delta Water District

31S/26E-32B

KCWA GROUNDWATER DATABASE



Data provided by: Kern Delta Water District

ISABELLA LAKE, CA CONSTRUCTION

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

June 2021

Location & Description

Isabella Lake Dam (consisting of a Main Dam, Auxiliary Dam and service spillway) is located about 40 miles northeast of Bakersfield in Kern County, California, and became fully operational in 1953. The Main Dam is located near the confluence of the north and south forks of the Kern River and the Auxiliary Dam is located about half a mile east of the Main Dam. The Main Dam is a 185-foot-high earth-fill dam, and the Auxiliary Dam is a 100-foot-high earth-fill dam. The service spillway is located between the two dams. The reservoir (Isabella Lake) has a gross storage capacity of 568,075 acre feet.

Advisory

- USACE has established enhanced protocols to ensure the safety of our employees and our partners, and to take necessary precaution to prevent the spread of COVID-19.
- The Phase II Dams and Spillways contractor continues construction activities. As a result, the site including Engineers Point is an active construction area and is off limits to the public.
- Corps policy prohibits public operation of unmanned aircraft systems, such as drones, on or above federal lands and waters managed by USACE. The policy is intended to ensure critical infrastructure security and public safety.

Looking Ahead Next 30+ days)

- Excavation and slope stabilization continues on the Emergency Spillway (pictured above). Steel rebar, slab, and wall placement work also continues on the Labyrinth Weir.
- Auxiliary Dam embankment continues to work towards elevation 2637 so that work at the dogleg adjacent to HWY 178 can begin in mid-June.
- Main Dam embankment began May 24 and will continue through the end of September.
- USACE provided a briefing to the US Forest Service on May 26 to present an overview of the alternative site locations for the permanent relocation of the visitor center. USFS is currently evaluating all site alternatives and expects to reach a decision by mid-June. The Final EA is scheduled to be complete by the end of June.
- USACE will provide updates on any changes via public outreach, the monthly SITREP, and the Isabella Task Force engagements.

Current Lake Status (as of June 1, 2021)

The current pool resides at 94,445 acre-feet (elevation 2,545 feet-IPD), which is 26% of restricted pool.

As part of our interim risk reduction measures, Isabella Lake is restricted to 361,250 acre-feet (elevation 2,585.5 feet-IPD) outside of flood season. During flood season (~November-March), flood conservation pool is restricted to 170,000 acre-feet (elevation 2,560.4 feet-IPD). Current lake status can be viewed at https://go.usa.gov/xE2pX

Milestones	
Pre-Construction Engineering and Design	**Complete**
Construction of USFS Fire Station and Admin Facilities	**Complete**
U.S. Forest Service Visitor's Information Center	**In Planning**
Dams and Spillways Construction	**2018-2022**

U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT, 1325 J ST., SACRAMENTO, CA 95814
www.spk.usace.army.mil/Missions/CivilWorks/IsabellaDam.aspx
916-557-5100
Isabella@usace.army.mil

Tab VI

KERN DELTA
WATER DISTRICT

To: Kern Delta Water District Board of Directors

From: Steven Teglia – General Manager

Date: June 15, 2021

Re: Agenda Item VI A. – External Agency Report

RECOMMENDATION:

Receive report, informational item only.

DISCUSSION:

Staff participates in / monitors multiple external agency meetings monthly. Below is a summary including items of note from the various meetings:

Kern County Water Agency:

- The KCWA Board met May 27, 2021.
- Next meeting will be June 24, 2021.
- SWP allocation decreased from 10% to 5%.
- Proposed FY 2021-22 Preliminary Budget.
- Summary of groundwater and overdraft correction accounts (attached).
- Delta Conveyance project timeline (attached).

Kern Fan Authority:

- The KFA met May 26, 2021.
- Discussed topics such as the Pioneer Project, SGMA, and Kern Fan Monitoring Committee.

Kern River Groundwater Sustainability Agency (KRGSA):

- The KRGSA met June 3, 2021.
- New Water Well Permit Letter (see attached).
- Basin wide Native Yield Study/Kern Model Upgrade Proposal (see attached).

Kern Groundwater Authority (KGA):

- The KGA met May 26, 2021.
- Update regarding DWR GSP review.

Kern River Watershed Coalition Authority (KRWCA)(ILRP):

- The KRWCA meeting of June 3, 2021 was canceled.

South Valley Water Resources Authority:

- The SVWRA met May 27, 2021.
- Cash call approved.
- Pilot project continued discussion.
- Blueprint near-term projects.

Integrated Regional Water Management Plan:

- No Report.

Water Association of Kern County (WAKC):

- Virtual 2021 Water Summit held May 25, 2021.

Kern County Water Agency
Estimated Summary of Groundwater Bank Accounts
As of March 31, 2021

Preliminary - Subject to Revision

Quantities in acre-feet

District	Estimated Balance as of December 31, 2020	Estimated Balance as of March 31, 2021					
		Pioneer Property	2800 Acres	Pioneer Project Subtotal	Berrenda Mesa	Kern Water Bank	Total
Belridge WSD	94,409	70,290	10,329	80,619	8,950	0	89,569
Berrenda Mesa WD	113,460	68,192	7,545	75,737	30,446	0	106,183
Buena Vista WSD	37,934	31,295	1,939	33,234	0	4,700	37,934
Cawelo WD	0	0	0	0	0	0	0
Dudley Ridge WD	58,097	0	0	0	0	55,099	55,099
Henry Miller WD	5,365	5,365	0	5,365	0	0	5,365
Improvement District No. 4	243,810	44,733	22,912	67,645	0	172,342	239,987
Kern County Water Agency	196,607	110,832	62,153	172,985	3,499	17,958	194,442
Kern Delta WD	23,285	23,285	0	23,285	0	0	23,285
Lost Hills WD	100,054	58,290	26,587	84,877	10,523	0	95,400
Rosedale-Rio Bravo WSD	41,232	41,232	0	41,232	0	0	41,232
Semitropic WSD	249,001	33,184	42	33,226	0	211,351	244,577
Tehachapi-Cummings CWD	5,820	0	0	0	0	5,820	5,820
Tejon-Castac WD	61,108	2,193	1,247	3,440	0	55,731	59,171
Westside Mutual Water Co.	427,288	0	0	0	0	408,215	408,215
Wheeler Ridge-Maricopa WSD	215,675	17,693	18,317	36,010	11,327	158,428	205,765
Total	1,873,145	506,584	151,071	657,655	64,745	1,089,644	1,812,044

Kern County Water Agency
Estimated Summary of Overdraft Correction Accounts
As of March 31, 2021

Preliminary - Subject to Revision

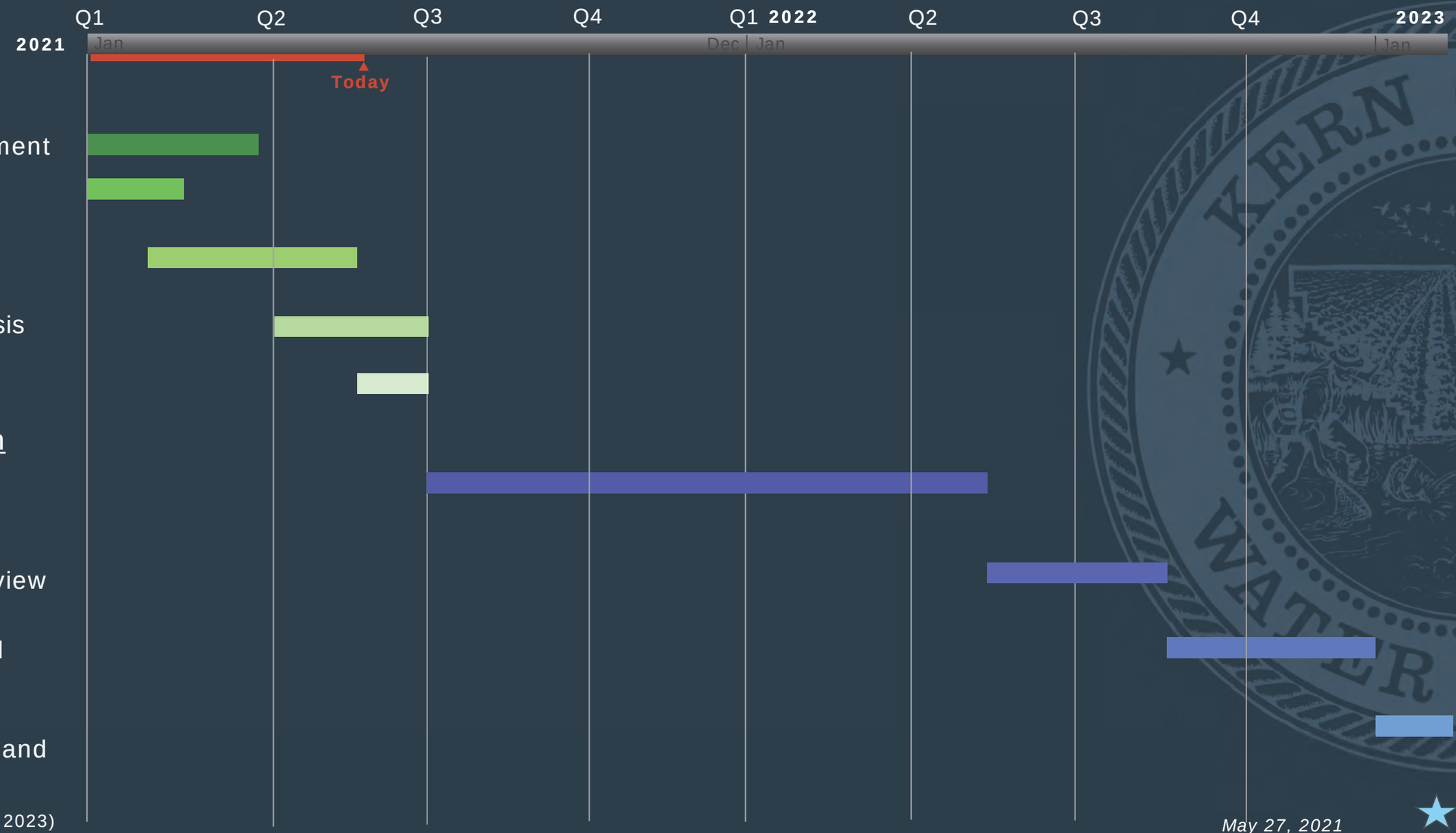
Quantities in acre-feet

District	Estimated Balance as of December 31, 2020	Estimated Balance as of March 31, 2021					
		Pioneer Property	2800 Acres	Pioneer Project Subtotal	Berrenda Mesa	Kern Water Bank [1]	Total
Buena Vista WSD	46,115	39,246	0	39,246	0	6,869	46,115
Henry Miller WD	65,077	42,526	375	42,901	2,584	19,592	65,077
Kern County Water Agency	55,030	35,356	7,121	42,477	0	12,553	55,030
Kern Delta WD	79,947	57,032	409	57,441	1,508	20,998	79,947
Rosedale-Rio Bravo WSD	214,697	158,627	4,190	162,817	2,725	49,155	214,697
Total	460,866	332,787	12,095	344,882	6,817	109,167	460,866

[1] Does not include purchase of 2011 4% reserve water.

Attachment 1

Delta Conveyance Planning and Permitting Timeline



Impact Assessment

- Model Refinement
- Operational Modeling
- Additional Modeling
- Impact Analysis
- Mitigation Development

Documentation

- Admin Draft Development
- Public Draft Release & Review Period
- Comment and Response
- Final EIR Development and Review
- NOD (End of Q1, 2023)

May 27, 2021

Board Members:
Rodney Palla, Chair
Gene Lundquist
Bruce Freeman

KERN RIVER GSA

SPECIAL MEETING

Thursday, June 3, 2021
10:00 a.m.
City of Bakersfield Water Resources Department
1000 Buena Vista Drive, Bakersfield CA 93311
Large Conference Room

AGENDA

1. **CALL TO ORDER**
2. **ROLL CALL**
3. **PUBLIC STATEMENTS**
4. **APPROVAL OF MINUTES** of the April 1, 2021, Regular Meeting
5. **NEW BUSINESS**
   - A. Election of Chairman
   - B. Correspondence Received (City Clerk, Chianello)
   - C. Finance Updates (Randy McKeegan)
     - i. Receive and File Financial Report
   - D. Management Group Updates (Beard, Chianello, Teglia)
     - i. New Water Well Permit Letter
     - ii. Boundary Adjustments
     - iii. Round Mountain Aquifer Exemption
     - iv. Basin Coordination Committee Updates
     - v. KRGSA 2021 Annual Report Presentation (Phyllis Stanin, Todd Groundwater)
6. **COMMITTEE COMMENTS**
7. **ADJOURNMENT**

KRGSA KERN RIVER GROUNDWATER SUSTAINABILITY AGENCY

[INSERT DATE]

[INSERT PROPERTY ADDRESS]

RE: Kern River Groundwater Sustainability Agency Notification Letter

Dear Landowner/Well Owner:

The purpose of this letter is to serve as notification to the landowner that your [property / water well] is located within the jurisdictional boundaries of the KRGSA, which is the Groundwater Sustainability Agency ("GSA") responsible for implementing the Sustainable Groundwater Management Act ("SGMA") within a portion of the Kern County Subbasin, as required by the State's Department of Water Resources (DWR).

DWR designated the Kern County Subbasin as a high priority, critically-overdrafted groundwater Subbasin. As a result, SGMA regulations required the KRGSA to adopt a Groundwater Sustainability Plan ("GSP") assessing groundwater conditions within the KRGSA Plan Area by selecting appropriate sustainable management criteria and developing projects and management actions to achieve and maintain long-term groundwater sustainability throughout the 20-year planning horizon. The adopted GSP and related documents may be downloaded through the KRGSA website (www.kernrivergsa.org).

The GSP includes management actions designed to fill data gaps related to groundwater use and to support overall groundwater management in the KRGSA. These actions may take the form of adopted policies and may be implemented in the future as required by SGMA in order to achieve sustainability within the Kern County Subbasin. For example, a groundwater extraction reporting program will be developed by the KRGSA which will likely require meters on all extraction wells within the KRGSA Plan Area except those used for *"de minimus"* production as defined by SGMA, which is less than 2 acre-feet per year. Additionally, well owners will be required to report production on an annual basis.

The KRGSA recommends all landowners/ well owners within the KRGSA boundaries stay informed by visiting the GSA's website. On the website, interested stakeholders are able to obtain copies of the GSP, gain access to board meeting information, and are able to stay informed through the "Stakeholder/Community Outreach" section by joining the KRGSA's mailing list.

Sincerely,

Kern River Groundwater Sustainability Agency

KRGSA KERN RIVER GROUNDWATER SUSTAINABILITY AGENCY

[INSERT DATE]

[INSERT WATER WELL PERMIT APPLICANT ADDRESS]

RE: KERN COUNTY WATER WELL PERMIT APPLICATION NO. XXXXXX

Dear Kern County Water Well Permit Applicant:

On [INSERT DATE], The Kern River Groundwater Sustainability Agency ("KRGSA") received the above-referenced new water well application from the Kern County Environmental Health Division.

The purpose of this letter is to serve as notification to the landowner that the proposed water well is located within the jurisdictional boundaries of the KRGSA, which is the Groundwater Sustainability Agency ("GSA") responsible for implementing the Sustainable Groundwater Management Act ("SGMA") within a portion of the Kern County subbasin, as required by the State's Department of Water Resources (DWR).

DWR has designated the Kern County Subbasin as a high priority, critically-overdrafted groundwater subbasin. As a result, SGMA regulations required the KRGSA to adopt a Groundwater Sustainability Plan ("GSP") assessing groundwater conditions within the KRGSA Plan Area by selecting appropriate sustainable management criteria and developing projects and management actions to achieve and maintain long-term groundwater sustainability throughout the 20-year planning horizon. The adopted GSP and related documents may be downloaded through the KRGSA website (www.kernrivergsa.org).

The GSP includes management actions designed to fill data gaps related to groundwater use and to support overall groundwater management in the KRGSA. These actions may take the form of adopted policies and may be implemented in the future as required by SGMA in order to achieve sustainability within the Kern County Subbasin. For example, a groundwater extraction reporting program will be developed by the KRGSA which will likely require meters on all extraction wells within the KRGSA Plan Area except those used for de minimus production as defined by SGMA, which is less than 2 acre-feet per year. Additionally, well owners will be required to report production on an annual basis.

The KRGSA recommends all water well permit holders within the KRGSA boundaries stay informed by visiting the GSA's website identified above. On the website, interested stakeholders are able to obtain copies of the GSP, gain access to board meeting information, and are able to stay informed through the "Stakeholder/Community Outreach" section by joining the KRGSA's mailing list.

Sincerely,

Kern River Groundwater Sustainability Agency

May 20, 2021

DRAFT PROPOSAL

To: Kern County Subbasin Groundwater Sustainability Agencies (GSAs)
Patty Poire, Kern County Subbasin GSP Plan Manager

From: Mike Maley, PG, CHG, Principal Hydrogeologist / Groundwater Modeler
Phyllis Stanin, PG, CHG, Vice President / Principal Geologist

Re: REVISED **DRAFT** Proposal - Kern County Subbasin Native Yield Study and C2VSimFG-Kern Model Recalibration

The Kern County Subbasin Groundwater Sustainability Agencies (GSAs) are cooperating on the implementation of their recently completed Groundwater Sustainability Plans (GSPs). One of the management actions listed in the Kern Groundwater Authority (KGA) Umbrella GSP was the development and implementation of a Native Yield Study to refine the understanding and allocation of the available native groundwater yield within the Subbasin. A second management action is to address data gaps and recalibrate the C2VSimFG-Kern groundwater model for the Kern County Subbasin to improve the understanding of groundwater reactions to the implementation of projects and management actions, relationship to minimum thresholds and measurable objectives, determination of the native yield of the Subbasin, and subsurface flow within and out of the Subbasin. Since these two management actions are interrelated, the GSAs has recommended that that the work for these management actions should be conducted concurrently.

Todd Groundwater has been asked to develop both an approach to meet the objectives of both of these management actions and a proposal to conduct the work. The scope of work for the Native Yield Study and the C2VSimFG-Kern model recalibration are presented as separate scopes of work.

NATIVE YIELD STUDY

Our approach assumes that this proposal is a technical study to quantify of the unallocated natural water budget in Kern County Subbasin through a systematic analysis of the available data. We understand that the definition of the native yield will be developed by the Kern County Subbasin GSAs and local stakeholders. Incorporated in this study are multiple meetings to provide opportunity to review of the technical work during the course of the study so that a consensus of the unallocated natural water budget is reached by the end of the study. The goal of the study outlined in this proposal is to provide technical support for these deliberations to determine the allocation of groundwater resources.

Background

The native yield is planned to be considered by Kern County GSAs for future groundwater allocation issues within the basin. In general, the sustainable yield of a basin is the amount of groundwater that can be withdrawn annually without causing undesirable results. The native yield is essentially a subset of the sustainable yield where only the natural, unallocated portion of the groundwater recharge is included in the calculation.

For the 2020 GSPs, the native yield was calculated using both the C2VSimFG-Kern model and a basinwide spreadsheet water balance approach. However, questions persisted about the underlying data used for these calculations. The KGA GSP acknowledges these data gaps in the parameters used to define the native yield. The KGA GSP notes that as those data gaps are addressed and management actions are implemented, the estimate of native yield is subject to change. Because of this, the GSAs of the Kern County Subbasin have agreed to the continued analysis and refinement of the native yield, on both a technical and policy basis.

Objectives

During the process of working through the water budget allocations for the entire Kern County Subbasin with the GSAs, the native yield was one of the most critical supply sources to be coordinated. Because of this, we recognize that the development of the native yield is an important yet sensitive topic. Therefore, the overall objective of the Native Yield Study is to provide the necessary technical data to the local water managers, policy makers and stakeholders that they need to make decisions regarding the allocation of basinwide groundwater resources. To achieve this overall objective, we consider the following points as key to conducting a successful Native Yield Study.

The primary focus of the Study is to develop a *technically credible analysis*. Our approach to this Study starts with a comprehensive compilation and review of available data. We will develop the key data sets from the available basinwide data. These basinwide data will be validated by comparison to detailed local data for multiple areas in different parts of the Subbasin, as available. The purpose of this process is to obtain agreement on the basic data sets being used to develop the native yield.

In addition, we recognize the need for *transparency* and *effective communication* of the data, methodologies, and results of the Study throughout the process. Therefore, our approach includes technical support to the GSAs through *coordination with numerous agencies and stakeholders* in the Subbasin across a variety of venues. The stakeholder process needs to consider a wide range of stakeholders that include, but are not limited to, private well owners, disadvantaged communities, wastewater agencies, among others. Accordingly, multiple meetings and workshops with the Subbasin GSP managers and policy decision-makers are incorporated into the scope and budget. The scope and budget envision broad support of the stakeholder outreach process by the GSAs.

Ultimately, the Study will need to *align the technical analyses with policy decisions* to protect water rights while supporting beneficial uses. To support this need, our approach is to vet the methodologies and results with local water managers, policy makers and stakeholders during the Study. Our approach includes interim documentation of each of the major technical tasks with sufficient time allowed in the schedule for review and comment periods by interested parties. Each task includes time to address these comments as the Study progresses. In this manner, we can address issues and concerns during the process with the goal to achieve general agreement on the approach as the Study progresses.

The Kern County Subbasin Coordination Agreement refers to the local groundwater-surface water model (C2VSimFG-Kern) as the agreed upon method for generating coordinated water budgets for the Kern County Subbasin. To support future water budget analyses, the Study data and methodologies will be *aligned with planned revisions to the C2VSimFG-Kern model*. In this manner, the Native Yield Study data will be embedded into the model so that future water budget analyses are consistent with the Study results. Therefore, the Native Yield Study provides a dual function by also making key revisions to the C2VSimFG-Kern model; thereby providing a *cost benefit by addressing part of the planned model revisions as part of the Native Yield Study*.

These and other concepts are embedded in our approach for the Native Yield Study. Additional details of our proposed approach – along with a scope of services, schedule, and budget – are provided in this proposal.

Approach for the Native Yield Study

Our approach for the Native Yield Study is to develop a systematic, basinwide technical analysis of the natural groundwater recharge in the Kern County Subbasin based on a comprehensive compilation and analysis of the relevant data to provide local water managers, policy makers and stakeholders with the data and information needed for allocating basinwide groundwater resources.

Conceptually, natural groundwater recharge that provides native yield is derived primarily from precipitation and runoff from unallocated streams. Therefore, this study will focus on assessing the climate and hydrological data for determining the native yield. We will compile available climatic and hydrologic data from local agencies and regional studies by state and federal agencies. Based on these data, we will develop rainfall distribution maps to assess the volume of precipitation in different areas of the Subbasin. Consideration of other native yield components such as bedrock inflow and return flows will be addressed during the Study.

The infiltration of precipitation, runoff and return flows into the subsurface is primarily controlled by the land use and soil properties. We will map local soil properties from local soil surveys to assess the runoff/infiltration partitioning of the precipitation. We will review existing local land use and crop type maps and update them, as necessary. We will assess the magnitude and transport of surface runoff during high rainfall events. Consideration of recharge and evaporative losses of natural runoff at ephemeral lakes and ponded areas will be included.

The natural recharge will be determined using a water balance approach similar to that used for the GSPs and the C2VSimFG-Kern model. The climate and hydrologic data will be evaluated over the historical period as that provides average hydrologic conditions as the basis for assessing the sustainable yield for the GSPs. A soil moisture budget approach will be used to assess the deep percolation of natural recharge below the root zone. The projected-future baseline scenario in the GSPs repeated the historical natural hydrology, so this approach is appropriate for supporting the Native Yield Assessment.

The distribution of the natural groundwater recharge is also affected by the geology of the unsaturated zone and principal aquifers. The unsaturated zone may contain clay layers that form local perching horizons. Several of these features have been identified in the GSPs. We will compile a map of these areas to factor perching horizons into the analysis. Four principal aquifers have been defined, so the natural recharge to each of these will be evaluated. Several aquifer exemption areas for oilfield activities have also been defined, so we will assess the effect of these areas on natural recharge. These and other revisions emphasize the need for coordination across multiple agencies during this Study.

The Study will include incorporating the Native Yield Study data into the C2VSimFG-Kern model. The revised model to be used as a validation step in assessing natural recharge for the Subbasin for the Study. We will rerun the historical and projected future scenarios using the revised model. We can then compare the change in the natural recharge and native yield estimates of the revised model relative to the model results provided in the 2020 GSPs.

During this Study, each step will be vetted with local water managers, policy makers and stakeholders to provide an opportunity for these groups to review and comment on the technical study data, methodology and results. The goal of our approach is to help the local water managers, policy makers, and stakeholders reach a consensus on the volume of natural groundwater recharge available for allocation. To achieve this, communication and transparency of development and results of the Native Yield Study is a focus of this scope. Therefore, a significant amount of time and budget is allocated to meetings to inform these parties of the ongoing progress and receive feedback on policy and Subbasin coordination issues related to the Native Yield Study.

For each of the primary technical tasks, a technical memo and data package will be developed to provide local water managers, policy makers and stakeholders with preliminary results for review and comment. Final technical memoranda will address comments and be included as attachments to the final technical report to provide detailed documentation of data, methodology and results. The Final Technical Report will include a discussion of the Native Yield Study results in more general terms for an intended audience that includes local policymakers, stakeholders, and other interested parties. The technical documentation will be included in the technical memoranda attachments. By structuring the final report to address both a general audience and a technical audience, our goal is to provide clear, defensible documentation for the wide range of parties interested in the Native Yield study.

PROPOSED SCOPE OF SERVICES

The following scope of work provides additional details and a stepwise process for accomplishing the Native Yield Study.

Task 1: Natural Hydrology Data Compilation and Mapping

Task 1 involves gathering data necessary to determining natural recharge, incorporating the data into a GIS format, and performing an initial assessment of the data. This will center around the basic climatic and hydrologic data for the Subbasin. The assessment of precipitation is the primary step, which provides the foundation of natural groundwater recharge. Second, data sets will be compiled on the physical properties of the basin and surrounding watersheds that control the runoff-infiltration portioning of the rainfall. Finally, this task includes a comprehensive bibliography of relevant previous studies that can serve as a source of data and/or assessment of hydrologic processes in Kern County Subbasin. Several subtasks for Task 1 are outlined below:

- **Subtask 1.1 - Historical Precipitation Data**: Todd Groundwater will compile regional precipitation data from the PRISM Climate Group at Oregon State University. The PRISM data includes both daily and monthly rainfall data for Kern County. The PRISM data will be verified by comparison with available local measured precipitation data. The precipitation data will be mapped using GIS to evaluate regional precipitation patterns. Monthly and annual precipitation totals will be calculated. Periods of high-intensity rainfall will be evaluated on a daily scale to assist in evaluating runoff during high rainfall events.

- **Subtask 1.2 - Basin and Surrounding Watershed Hydrology Data**: The physical properties of the basin and surrounding watersheds will be compiled and mapped using GIS. These include land use, vegetation types, geology, soil properties, ET, slope, and other relevant hydrology information. Todd Groundwater already has much of this data in the C2VSimFG-Kern model. We will review and update data, as necessary. We will compile relevant previous studies from state and federal agencies on the regional hydrology of Kern County Subbasin. We will also request available hydrologic studies from local agencies. A bibliography of relevant studies will be developed.
- **Subtask 1.3 - Define Native Yield Components**: Several other hydrologic components may include other natural recharge components such as bedrock inflows, return flows, unallocated stream flow. It is our understanding that the native yield will not include allocated water rights. For example, specific agencies or parties have water rights to specified volumes of flow and recharge for the Kern River; therefore, those flows would not be included as part of the native yield. For this subtask, a preliminary assessment of these other potential components will be developed and vetted with local water managers, policy makers and stakeholders under Task 5. From these discussions, local policy makers will decide how these components should be addressed in the Study.
- **Subtask 1.4 - Task 1 Technical Memorandum (TM) / Data Package**: The data sources, methodology and analysis will be documented in a technical memorandum (TM), along with a data package of climate and hydrological data in GIS format. A draft TM will be issued for review and comment by local stakeholders. The final TM will be addressed in Task 4 for the final report.

The results of this compilation will be summarized using tables and GIS maps that put the data into a consistent format to illustrate a range of conditions and identify potential data gaps. An assessment of these data will be performed to determine the overall strengths and weaknesses of the different data sets. The schedule includes time for presentation and review of this information by local water managers, policy makers and stakeholders under Task 6.

Task 2: Natural Hydrological Evaluation

Task 2 involves hydrological evaluations to determine the runoff-infiltration portioning of the rainfall for different areas of the Kern County Subbasin and surrounding watersheds. This will focus first on the surface conditions during rainfall, including a drainage assessment to evaluate transport of surface runoff. A soil moisture budget approach will be used, similar to that used for the C2VSimFG-Kern model, to assess the volume of the natural recharge taken up by evapotranspiration and the remaining volume available for deep percolation below the root zone. The root zone properties from the model will be reviewed and updated as necessary to better reflect local conditions.

The approach is to conduct these evaluations for limited areas with higher quality data to work out the details of applying the methodology and distributing parameters over areas of differing hydrologic characteristics. We have added time to each subtask for coordination with local agencies and stakeholders to vet our methodology to improve our ability to estimate the natural hydrology recharge based on local data and water management practices. In addition, we have added time for collaboration with DWR, USGS California Water Science Center and local universities on our technical approach to each subtask.

Once the methodology and parameters are defined, then the evaluation will be scaled-up to a basinwide evaluation. By focusing on these local areas first, we can improve the efficiency in completing the hydrological evaluations. Several subtasks are outlined below that address the following subtasks:

- **Subtask 2.1 - Watershed Hydrological Assessment**: The hydrology of the surrounding watersheds is distinctly different from those in the Subbasin. The goal of this subtask is to characterize the watershed areas to determine the volume of runoff and baseflow emanating from these areas into the Subbasin. The hydrology assessment will also examine the route of surface water runoff as it flows through the Subbasin, including the ultimate destination of high flows. We will also consider the potential for bedrock inflows from these watersheds based on available information.
- **Subtask 2.2 - Basin Hydrological Assessment**: The hydrology of the basin will primarily follow the soil moisture budget approach used in the C2VSimFG-Kern model to insure consistency of methods. Because of this, we have many of the required parameters in the model already. However, the mapping of the climate, hydrologic, physical, and other properties throughout the Subbasin will be reviewed and updated, as necessary. It is anticipated that the assessment will employ the IDC tool, which is a standalone module of the C2VSimFG-Kern model. The IDC tool tracks return flows through the soil zone from precipitation and applied water separately to allow for a determination of natural recharge return flows.
- **Subtask 2.3 - Assessment of Other Native Yield Components**: The other hydrologic components that are selected by local policymakers from Subtask 1.3 will be addressed under this task. The methodology for return flows and unallocated stream recharge may overlap with Subtasks 2.1 and 2.2. Bedrock inflow and potentially other identified native yield components will be addressed in this subtask following the approach developed in Subtask 1.3.
- **Subtask 2.4 - Task 2 Technical Memorandum (TM) / Data Package** : The methodology and analysis will be documented in a technical memorandum (TM), along with a data package, which will summarize the Subbasin and watershed hydrological assessments. A draft TM will be issued for review and comment by local stakeholders. Comments will be addressed in the final TM and incorporated into the final report as described in Task 5.

The results of this compilation will be summarized using tables and GIS maps that put the hydrological and water budget components into a consistent format to illustrate the potential range of conditions and identify potential data gaps. An assessment of these data will be performed to determine the overall strengths and weaknesses of the different data sources. The schedule includes time for presentation and review of this information by local water managers, policy makers and stakeholders under Task 6.

Task 3: Natural Groundwater Recharge Evaluation

Task 3 consists of an assessment of the volume and distribution of natural groundwater recharge within the Kern County Subbasin as the basis for determining a native yield. This task first involves updating the Task 2 analysis based on newly available data or comments by local stakeholders. Then the basinwide natural groundwater recharge will be calculated based on the Task 1 and 2 data and methodologies. For the native yield assessment, the distribution of the natural groundwater recharge will be evaluated with respect to the four principal aquifers. Potential losses of natural recharge to perched groundwater systems or exempt aquifers will also be considered. Based on this assessment, a native yield will be developed. Several subtasks for Task 2 are outlined below:

- **Subtask 3.1 - Update Data and Hydrological Assessment**: It is anticipated that after review of the information presented in the Task 1 and 2 TMs, there will be additions or modifications to the

data, mapping or methodologies used. We will address these comments and update the Task 1 and 2 evaluations as appropriate. The goal of the study is to reach a consensus, so this subtask provides to revise Task 1 and 2 results in preparation for Task 3 based comments on the Task 1 and 2 TMs and presentations.

- **Subtask 3.2 - Groundwater Basin Natural Recharge**: We will apply the data and methodology to develop a basinwide distribution of natural groundwater recharge for the Kern County Subbasin. This will integrate the recharge from precipitation, runoff and other identified natural recharge components both within the basin and from the surrounding watersheds. The groundwater recharge will be calculated monthly and compiled annually to determine the volume and distribution of recharge. We will also look at losses of natural water in the root zone and evaporation from lakes and ponded areas.
- **Subtask 3.3 - Native Yield Assessment**: Using the results from Subtask 3.2, we will further assess the location of the natural groundwater recharge with respect to the underlying aquifers. We will assess the recharge that goes to each of the four principal aquifers. Recharge to perched groundwater systems or oil-field aquifer exemptions will be assessed whether any of that recharge ultimately goes to a principal aquifer. Based on this assessment, a preliminary estimate or range of estimates of the potential Kern County Subbasin native yield will be developed.
- **Subtask 3.4 - Task 3 Technical Memorandum (TM) / Data Package** : The methodology and analysis will be documented in a technical memo, along with a data package of summarizing the natural groundwater recharge evaluation. A draft TM will be issued for review and comment by local stakeholders. The final TM will be addressed in Task 5 for the final report.

Task 3 is the primary technical analysis for assessing the native yield. Therefore, the schedule includes pauses in the study to allow for review by local water managers, policy makers and stakeholders. There will be multiple presentations of this information under Task 6.

The results of this compilation will be summarized using tables and GIS maps that put the distribution of the natural groundwater recharge and native yield assessment into a consistent format to illustrate the potential range of conditions and identify potential data gaps. An assessment of these data will be performed to determine the overall strengths and weaknesses of the different data sets.

Task 4: Technical Report

A technical report will be developed that documents the work performed for this scope of work. The technical report will provide the technical basis for the data compilation, hydrologic evaluations, and natural recharge assessments for the Kern County Subbasin and the surrounding watersheds. The Native Yield Study Technical Report will provide a concise discussion of the Native Yield Study results in a more general manner for an intended audience that includes local policymakers, stakeholders, and other interested parties. The more detailed technical documentation will be provided by the Tasks 1, 2 and 3 TMs that will be included in the Technical Report as attachments. Several subtasks for Task 4 are outlined below:

- **Subtask 4.1 - Finalize TMs as Report Attachments**: The Task 1, 2 and 3 technical memos will be finalized by addressing comments. The finalized TMs will be included as attachments to the final technical report to provide detailed documentation of data, methodology and results for the Native Yield Study.
- **Subtask 4.2 - Draft Report**: The draft Technical Report will focus on a discussion of the Native Yield Study results in a more user-friendly format for local decisionmakers. A summary of the

data and analysis used for the study will be provided in the report with reference to the attached TMs.

- **Subtask 4.3 - Final Report**: The draft technical report will be finalized by making revisions that address comments.

For costing purposes, we assume that the draft technical report will require two draft versions. An Administrative Draft Technical Report will be prepared. Comments will be incorporated into a Draft Technical Report for stakeholder review and comments. The Final Technical Report will address final comments. Electronic submittal is assumed for each version.

Task 5: Project Coordination and Meetings

This task covers project coordination and meetings with the client and local stakeholders throughout the project. A high level of interaction with local water managers, policy makers and stakeholders are included in this task to allow for transparency in performing the analysis, to receive feedback on the methods, and to engage in discussion of the issues involved with developing a native yield. As demonstrated by the level of effort in this task, communication during the development of the Native Yield Study is a high priority. Several subtasks for Task 5 are outlined below:

- **Subtask 5.1 - GSA Coordination and Water Manager Meetings**: The Kern County Subbasin water managers have regular meetings to discuss water issues. We anticipate providing a series of update presentations on the progress of the Native Yield Study. Because the water managers experience, these meetings will also serve the role of a technical advisory committee to provide feedback to help improve the evaluations as they are underway.
- **Subtask 5.2 - Policy Team Updates**: Regular presentations to provide regular updates to the Kern County Subbasin Policy Team are included. We provide time and budget for technical support for multiple presentations to local policymakers to answer questions and obtain feedback from the policymakers regarding the Native Yield Study.
- **Subtask 5.3 - Stakeholder Workshops**: A series of presentations to the local stakeholders are included. As key element of the project, we provide time and budget for technical support for multiple presentations to local stakeholders and policymakers as part of the stakeholder outreach process by the GSAs. It is assumed that these presentations will be provided in different locations in Kern County at different stages of the project. It is further anticipated that these events will be coordinated to minimize travel expenses.
- **Subtask 5.4 - Project Coordination**: Coordination with the client will include project planning, on-going communications, and project status updates. We assume that communication during the project will be conducted via emails, telephone and/or web meetings, if needed.

In addition to attendance and travel to each of the meetings, the Task 5 budget includes preparation time for development of PowerPoint presentations and other meeting materials for each of meeting. Preparation also allows time for review of technical work and preparation for anticipated questions.

Included in the subtasks is an initial set of meetings are anticipated to outline the general approach of the Native Study with local water managers, policy makers and stakeholders. The objective is to introduce the study and get initial feedback on data, methodology and objectives. Subsequent meetings will be scheduled and facilitated through the Kern County GSP Planning Coordinator.

Task 6: Supplemental Technical Support

Due to the importance and potential sensitivity of the Native Yield Study to the Kern County Subbasin GSAs and local stakeholders, it is anticipated that questions or concerns will arise during the course of the Study that will require us to revisit or expand upon work performed in Tasks 1 through 5. Task 6 provides a mechanism to address and track these supplemental tasks that are currently undefined by defining a task that addresses these unresolved or emerging issues as they arise. Supplemental tasks are anticipated to include additional analysis, documentation or presentations that respond to specific questions or concerns from local water managers, policy makers and stakeholders. Subtasks for Task 6 are outlined below:

- **Subtask 6.1 - Supplemental Technical Analysis:** As-needed supplemental technical support is intended to cover requests by local water managers, policy makers and stakeholders for supplemental technical analysis to address questions about the data and analysis to address new or unresolved questions or concerns about the technical analysis in Tasks 1, 2, and 3.
- **Subtask 6.2 – Supplemental Documentation and Communication:** This subtask provides for additional time for increased documentation and communication in Tasks 4 and 5 to address issues that may emerge during the course of the Native Yield Study.

For budgeting purposes, the level of effort is defined as ten percent of the associated task budgets. Use of the Task 6 budget will require approval by email from the Kern County Subbasin GSP Plan Manager.

COST ESTIMATE

The approach for the Native Yield Study is a comprehensive and detailed data analysis for the entire Kern County Subbasin. Our assumption is that we are building up the analysis from a comprehensive data compilation and analysis. This is to address questions and concerns about the native yield estimates from the 2020 GSPs. Our budget includes time for a comprehensive technical analysis under Tasks 1, 2, 3 and 4. In addition, we have included a significant budget towards meetings and presentations with local water managers, policy makers and stakeholders under Task 5. Our assumption is that we will be requested to provide multiple presentations of the Native Yield Study over the course of the project. There may be opportunities for cost-savings by limiting the number of meetings, and/or shifting some of these meetings to videoconferences. In addition, the detailed analysis also serves a dual purpose, as the results of this study will also address planned revisions to the C2VSimFG-Kern model that are also listed as a management action by the KGA and other GSAs.

A cost estimate summary is provided at the end of this text in **Table 1** with a more detailed cost estimate in **Table 2** (located after the text). As summarized on **Table 1**, the subbasin water budget analysis is estimated to total **$1,285,550**. Costs include labor, fees, subconsultants and expenses for each project task.

Todd Groundwater will track schedule and budget monthly. Invoices will clearly show team members, hours, costs, and progress on project tasks. A monthly progress report will be prepared for each invoice showing progress made during the month, next steps for the following billing cycle, and status of both schedule and budget.

TABLE 1 – Kern County Subbasin Native Yield Study Budget Summary

TASKS	Estimated Hours	ESTIMATED COST
Task 1 Natural Hydrology Data Compilation and Mapping	436	$82,020
Task 2 Natural Hydrological Evaluation	1,342	$253,810
Task 3 Natural Groundwater Recharge Evaluation	1,548	$295,780
Task 4 Technical Report	834	$166,810
Task 5 Project Coordination and Meetings	1,710	$413,570
Task 6 As-Needed Supplemental Technical Support	348	$73,560
TOTAL	**6,218**	**$1,285,550**

SCHEDULE

The Todd Groundwater Team can initiate the project within 30 days of the receipt of a notice-to-proceed. The total length of the project is anticipated to occur over 24 to 36 months.

We anticipate the technical analysis (Tasks 1, 2, and 3) will be completed over a 16 to 24-month period from the notice-to-proceed. The schedule allows for considerable time for review and comment by local water managers, policy makers and stakeholders through multiple presentations and TMs so that feedback can be incorporated into the Study. However, the proposed schedule may provide opportunities to expedite the project.

After the completion of the technical analysis (Tasks 1, 2, and 3), we plan to allow for 9 to 12 months to develop the draft and final Native Yield Study Technical Report (Task 4). This length of time allows for sufficient review by local water managers, policy makers and stakeholders of this important and sensitive report before it is finalized. We assume close coordination and cooperation with the Subbasin GSAs to meet this schedule.

A key element of this Native Yield Study is the proposed series of meetings and workshops with workshop meetings with local water managers, policy makers and stakeholders (Task 5). These meetings and workshops will occur regularly over the entire duration of the project; however, the frequency of these meetings and workshops is anticipated to increase in the latter half of the projected schedule. It is during the latter half of the projected schedule that the Supplemental Tasks (Task 6) are anticipated to be more highly utilized to address issues and concerns that arise from these meetings. It is anticipated that the scheduling of these meeting and potential issues that may be raised will be a key factor in determining the timeline for the project schedule. Therefore, schedule flexibility is represented by the range of times for completion of tasks.

C2VSIMFG-KERN MODEL RECALIBRATION

The Kern County Subbasin Coordination Agreement refers to the local groundwater-surface water model (C2VSimFG-Kern) as the agreed upon method for generating coordinated water budgets for the Kern County Subbasin. Appendices 2 and 4 of the Kern County Subbasin Coordination Agreement include a technical report on the development and application of C2VSimFG-Kern for these purposes. To support the Kern County Subbasin Groundwater Sustainability Plans (GSPs) that were submitted in January 2020, DWR's C2VSimFG-Beta model with locally-derived historical data for the Kern County subbasin to better represent local water conditions. Historical surface water diversion, water bank recharge and water bank withdrawal information were collected from local GSAs, management areas, water agencies and purveyors.

Because the model update was done concurrently with the development of the Kern County GSPs, DWR's existing hydrogeologic conceptual model and data management structure were maintained in C2VSimFG-Kern. This was done to focus the modeling effort for the 2020 GSPs on updating the water budgets and in anticipation that improvements in the hydrogeologic conceptual model and other relevant data would be advanced during the GSP process. Therefore, the next step in the water budget analysis is to begin to address the data gaps and other model improvements identified during the GSP process that were recommended for future C2VSimFG-Kern updates.

BACKGROUND

During the time that the Subbasin was evaluating various modeling alternatives, DWR was in the process of updating the regional C2VSim model through water year (WY) 2015. In addition, the GSP regulations stated that DWR would provide the C2VSim model "for use by Agencies in developing the water budget." DWR's 2018 release of C2VSimFG-Beta includes historical input data for WY1922 to WY2015. C2VSimFG-Beta includes historical precipitation, stream inflow, land use and crop acreage for the entire Central Valley. These data include monthly precipitation and annual land use for each model element and estimated monthly evapotranspiration for each modeled land use type and agricultural crop. Historical surface water data include monthly surface water inflow for each river entering the model boundary and monthly surface water diversions and deliveries.

Todd Groundwater was contracted to modify DWR's C2VSimFG-Beta model with locally-derived historical data for the Kern County subbasin to better represent local water conditions. Historical surface water diversion, water bank recharge and water bank withdrawal information were collected from local GSAs, management areas, water agencies and purveyors. Urban land use was restricted to developed areas, and urban populations and per-capita water demands were updated. Model structure (elements, streams, stratigraphy, etc.) was not modified. Model parameters were not calibrated, although some model parameters were adjusted to improve model performance in specific geographic areas.

The C2VSimFG-Kern performs well in the Kern County Subbasin, producing simulated water budget components that generally match historical values compiled by local agencies. C2VSimFG-Kern simulated groundwater levels provide a reasonable approximation of observed groundwater levels in the central part of the Kern County Subbasin. The model is well suited for estimating the impacts of management actions on the Subbasin groundwater storage and is also well suited as a planning tool in meeting compliance of SGMA. During the model update, several outstanding issues were identified that

should be addressed in future updates to C2VSimFG-Kern. The following actions and model improvements are recommended:

- Improve streamflow simulations of the Kern River and Poso Creek
- Improve the geologic and hydrogeologic conceptual model of the Kern County portion of the Central Valley
- Simulation of deep percolation and small watersheds
- Root Zone Parameters
- Investigate development of a stand-alone Kern County Subbasin model
- Adjust the finite element grid to honor water management boundaries
- Quantify boundary flows around the Kern County Subbasin Boundary
- Utilize more complex water management features of IWFM.
- Calibrate the improved model for the Kern County Subbasin.

The following scope of work outlines the tasks and level of effort necessary to update the C2VSimFG-Kern model used for the 2020 GSPs and Annual Report based on the recommendations listed in the Model Report included as Appendices 2 and 4 of the Kern County Subbasin Coordination Agreement. The list of recommendations from the Model Report is provided as an attachment.

Model Recalibration Approach

C2VSimFG-Kern is a regional planning model designed to support SGMA compliance through a consistent basin-wide approach for evaluating groundwater and surface water conditions for the Kern County Subbasin. C2VSimFG-Kern is not intended to supersede any local model but rather to represent local model data in assessing the basin-wide conditions. However, through this process C2VSimFG-Kern may provide modeling support for areas that do not otherwise have a local model available.

Our approach focuses on sequencing of work in a stepwise, systematic manner. As part of this approach, the IWFM model would be functional after the completion of each task. We have included—as a quality assurance process—to run the model simulation during each subtask and verify the model results at the calibration targets to verify that model input parameters are performing as expected. This process will help to identify any model setup issues during each subtask so that they can be appropriately addressed. Therefore, at the end of this process, we can proceed directly to the final calibration task to avoid potential schedule delays.

The model upgrade includes incorporating data from available local models as a method to maintain consistency of modeling approaches in the Subbasin. Local models will, however, contain local scale data pertinent to local conditions and the overall purpose of that model. As a regional planning model, data from local models would be "scaled-up" to provide input to C2VSimFG-Kern at the regional-scale.

During the model update, two versions of the model will be maintained. One version of the model (Production Model) will stay consistent with the 2020 GSP version of the model to provide consistent water budget and change in storage results for Annual Reports. The second version of the model (Developmental Model) will include the in-progress model upgrades where water budgets and change in storage may be variable as new features and data are incorporated. It is preferable for the Kern County Subbasin GSAs to continue to present a consistent set of water budget results in the Annual Report while the model upgrades are being implemented. This will avoid having to explain ongoing water budget changes in the Annual Reports. Once the Developmental Model is fully calibrated and agreed to

by the Kern County Subbasin GSAS, revised water budgets, change in storage and sustainable yields can be simulated in the future.

The C2VSimFG-Kern model will be updated for White Wolf Subbasin concurrently with the Kern County Subbasin. This will require coordination with the White Wolf GSA; however, it is anticipated that the Kern County Subbasin GSAs and the White Wolf GSA will continue to maintain independent versions of the model.

PROPOSED SCOPE OF SERVICES

The following discussion provides additional details on our approach including some initial recommendations on addressing model update objectives and issues. As initial recommendations, we understand that we will work with the TAC on defining the final model upgrade tasks for implementation.

Task 1 –Northern Kern County Subbasin Boundary Modification

For Task 1, the focus is on how to represent the areas outside of Kern County in future simulations with the focus on the northern Kern County Subbasin boundary and whether to include the areas beyond this boundary in the model. The key objectives Task 1 include the following:

- Coordinate with adjacent Groundwater Basins to better quantify boundary flow simulations based on shared data with GSAs in adjacent basins.
- Develop a stand-alone Kern County Subbasin model to provide a more-efficient platform focused on Kern County conditions and data.

Our proposed scope of work to complete the Task 1 is described below.

- **Subtask 1.1 –** Develop Kern County Subbasin Focused Model - To develop the Kern County Subbasin focused version of the model, all of the elements north of the boundary condition would be removed from the model input files.
- **Subtask 1.2 –** Coordinate with Adjacent SGMA Basins - A key part of this scope of work is to coordinate with GSAs in neighboring groundwater subbasins to the north– the Tulare Lake and Tule subbasins – to obtain groundwater level data and simulation results to help in defining the northern boundary condition. Since both of the northern adjacent subbasins have groundwater models to forecast their projected-future groundwater conditions, the exchange of data will include results from the various models. It is anticipated that the GSAs in neighboring groundwater basins will request similar data sets from the Kern County Subbasin. The modeling team will work with the Kern County Subbasin GSA representatives on this coordination process.
- **Subtask 1.3 –** Implement and Validate Northern Boundary - For Task 3, an initial assessment of the measured and simulated groundwater levels will be made to define a northern boundary condition to simulate the transition of groundwater conditions in the Kern County Subbasin with the neighboring subbasins to the north. These will be further assessed by comparing them with the simulated groundwater levels from C2VSimFG-Kern for both the historical and projected future simulations. These preliminary boundary conditions will be further developed during future model updates. This new northern boundary will be implemented into the Developmental Model. The developmental model will be run with the northern boundary condition using historical and projected future scenarios. Task 3 also includes post-processing of

the scenario results to provide the necessary tables, graphs and maps to sufficiently validate the model modifications.

Task 2 – Refine Model Grid

The C2VSimFG-Kern finite element grid developed by DWR is not well optimized for evaluating conditions in Kern County and may be a limiting factor in implementing the planned model upgrades. The approach for modifying the C2VSimFG-Kern finite element grid is to prioritize the key hydrologic features and water management boundaries that should be considered. Topics to be included in the prioritization are anticipated to include the following:

- Align grid with surface water features such as rivers, major creek, and major canals.
- Align grid with water management boundaries, urban areas and major riparian or groundwater dependent ecosystem locations.
- Prioritize element density to be highest in high stress locations such as wellfield and banking operations.
- Define a maximum element size for irrigated agricultural areas.
- Apply larger elements over undeveloped areas.
- Consider grid alignment for simulation of the four principal aquifers.
- Identify and address problematic areas such as oilfield exempt aquifers, etc.

Modification of the finite element grid is a time-consuming process; therefore, it is assumed that the finite element grid will be finalized during Task 2 and no further modifications of the grid will be conducted in later tasks of the model upgrade.

- **Subtask 2.1 Generate Revised Mode Grid** - Once the prioritization of the finite element grid modification with the TAC is decided, a modified grid will be developed. Finite grid generation software will be used to map the elements and nodes to the appropriate geographic locations based on the prioritization. The finite element grid will be mapped using ArcMap GIS for review and comment by the TAC. A draft grid will be presented at a Manager's Committee meeting.
- **Subtask 2.2 Remap Model Parameters to New Grid** - model input data will be remapped to the revised finite element grid. This process will include update the data management which provides the added benefit of supporting the Task 3 and 4 as well. The model input file data will be verified to the Task 1 model. The Task 2 Developmental Model will be run to validate that the results are comparable with the with the 2020 GSP for the Annual Report results to further ensure consistency in water budget results due to finite element grid modification.

Task 3 – Update Surface Water Management

During the C2VSimFG-Kern modeling for the 2020 GSPs, several agencies noted some inconsistencies in the application or results of the managed water supply and demand. These were noted as limitations in the 2020 C2VSimFG-Kern Model Report that would be addressed in future model updates. The key objectives of Task 3 Model Upgrades include the following:

- Improve simulation of rivers to better represent streamflow of the Kern River and Poso Creek.
- More fully utilize the water management simulation features of IWFM to provide increased accuracy of water supply, distribution and demands.
- Remap the areal distribution land use including agricultural, urban, riparian and native.

- Update root zone and agricultural parameters to better simulate deep percolation and small watershed inflows.

The Modeling Team will prioritize the IWFM features for streams and the IWFM Demand Calculator (IDC) functions that should be adjusted. It is anticipated that the focus will be on those that have the most significant impact on the water budget. These will be coordinated with similar activities being performed as part of the Native Yield Study.

- **Subtask 3.1 - Redefine Simulated Rivers -** Flows in the Kern River channel, including local stream-groundwater interactions, are not well replicated and surface water diversions are not dynamically simulated. Some rejected recharge occurs in the Kern Fan area in very wet years, with significant outflow of groundwater to the Kern River especially in the Kern Fan banking area (i.e., rejected recharge). One key issue is the selection of the stream simulation options that DWR applied that did not accommodate streambed conductance varied as a function of stage but did not considered the width, or wetted perimeter, of the stream. This approach works for northern California streams, but is not sufficient for simulating the highly variable flows that occur on the Kern River and Poso Creek. This one of the key reasons to develop a Kern-only model since the streambed approach applies to the entire model. To address this, the stream simulation options will be changed to a more appropriate streamflow simulation option that is available in IWFM.
- **Subtask 3.2 - Update Urban Water Management Parameters:** Update urban water supply and demand components of the model with emphasis on disadvantaged communities, small water systems, Industrial and domestic water data.
- **Subtask 3.3 - Update C2VSimFG-Kern with Native Yield Study Data:** The data used for the Native Yield Study will be incorporated into the C2VSimFG-Kern model for the small watershed and root zone modules. This will focus on the IWFM Demand Calculator (IDC) function in the model, and include update for the soil, root zone and agricultural parameters to better simulate deep percolation and small watershed inflows.

The Task 3 Developmental Model will be run to validate that the results are comparable with the with the 2020 GSP for the Annual Report results to evaluate the resulting changes in water budget results due to the Task 3 modifications.

Task 4 – Update Hydrogeological Conceptual Model

Task 4 includes updates to the Hydrogeologic Conceptual Model (HCM) to better represent local geologic and hydrogeologic conditions. Due to the number of modifications that were required to the HCM and aquifer parameters during the C2VSimFG-Kern development, it is recommended that a more rigorous and systematic model update be conducted that will make the HCM and aquifer parameters more consistent with the Kern County Subbasin GSPs. In addition, further calibration of C2VSimFG-Kern is recommended to revise aquifer parameters in the Kern County Subbasin. HCM work will be done by GSAs and MAs with Todd Groundwater providing compilation services to link these together. Issues to be reconciled will be passed back to the appropriate GSAs and MAs. In order to improve the representation of the HCM in the C2VSimFG-Kern model, the following tasks are proposed:

- **Subtask 4.1 - Compile and review model aquifer parameters:** Aquifer property information will be compiled from the 2020 GSPs and available groundwater models. These will be reviewed and tabulated to define the spatial distribution and variation of model aquifer parameters.
- **Subtask 4.2 - Update Principal Aquifer Layer Definitions:** Modify the model layer elevations to better align with the geometry from detailed geologic and HCMs in the Kern County Subbasin GSPs, other technical studies and local groundwater models. Differentiate the four Principal Aquifers that have been identified in the Kern County Subbasin based on definitions from local management area GSPs and supporting data.
- **Subtask 4.3 - Incorporate key natural features that affect groundwater flow:** Identify the locations and characteristics of natural features that affect groundwater recharge and movement (faults, ridges, clays). This includes representation of exempt aquifers that may affect the definition of the accepted horizontal and vertical bounds of the Kern County Subbasin as presented in the 2020 GSPs.

It is assumed that the development of the key local conditions will be done by GSAs and MAs. The Modeling Team will compile the HCM data and work to link these together. If information and maps are inconsistent across the Subbasin, specific issues will be identified for reconciliation by the appropriate GSAs and MAs.

Task 5 – C2VSimFG-Kern Recalibration

During the calibration process, the aquifer properties and boundary conditions will be varied within an acceptable range until the closest fit of the simulated versus measured groundwater elevation data is achieved. Because there are multiple combinations of aquifer properties and boundary conditions that can be used to match a single set of groundwater elevation data, it is important to calibrate the model over a long historical period that contains varying hydrologic conditions and thereby to demonstrate that the model has the capability of simulating historical changes in groundwater elevations and surface water flows in the Basin. Localized areas can be further calibrated by evaluating short term conditions related to multi-day aquifer pumping tests.

The C2VSimFG-Kern model calibration will be performed using data from the Native Yield Study. The Native Yield Study provides a dual function of revising the C2VSimFG-Kern model that will be performed in Subtask 4.3. Following the update, the historical and projected future baseline scenarios will be rerun. This tasks primarily serves as a validation step to check that the results can be reproduced using the revised model. This will be conducted concurrently with the Native Yield Study, so any issues found in the model calibration can be addressed.

- **Subtask 5.1 - Recalibration of C2VSimFG-Kern Model:** Model calibration will consist of history-matching of simulated versus measured groundwater elevation data. Calibration will be performed by comparing simulated versus measured groundwater elevation data. Long-term historical calibration conducted over the 1994 to 2024 simulation period that includes wet, dry, and normal years with varying degrees of pumping. Calibrating the model over a long period of variable hydrologic conditions constrains the calibration to reduce uncertainty. Assessment of calibration will be performed by using a series of metrics to evaluate the calibration results including a statistical analysis of simulated to measured groundwater levels, hydrograph trends, and groundwater gradients.
- **Task 5.2 - Generate revised historical water budgets:** We will use the IWFM Z-Budget feature to develop the subbasin water budgets from the revised C2VSim. The water budgets will

quantify the required elements required for SGMA including simulation results for subsurface inflows and outflows, managed aquifer recharge and irrigation pumping and return flows.

- **Task 5.3 – Sensitivity Analysis:** The model provides a platform to vary parameters used to assess the relative sensitivity of variations in the data on the model results. The model sensitivity analysis will be done to screen for the most sensitive parameters. This will also support the Native Yield Study.
- **Task 5.4 – Update SGMA Projected-Future Scenarios:** The projected future baseline scenarios will be rerun using the updated C2VSimFG-Kern model. Projected future water budgets for the Kern County Subbasin will be developed to evaluate the performance of proposed management actions with respect to achieving groundwater sustainability. Based on these results, participating agencies will be asked to provide updated lists of projected future management actions to be implemented by WY2040. The updated model results will be compared to the 2020 GSP model results as a validation step in assessing calibration.

The results of Task 5 will produce an updated historical water budget and change in groundwater in storage estimates for the Kern County Subbasin in preparation of the 2025 GSP updates. These results can be applied for developing updated sustainable and native yield estimates as well. The emphasis is to better represent local groundwater conditions including representation of water levels in the four principal aquifers and higher accuracy in simulating changes in groundwater levels over time.

Final updates for the projected-future scenarios are not part of this scope of work, and will be performed as part of the scope of work to support the 2025 GSP development. That is because the final projected future model updates will depend upon input from the Kern County Subbasin GSAs that will include their updated lists of projected future management actions to be implemented by WY2040 based on their 2025 GSP updates. For the 2025 GSP Updates, the projected future water budgets for the Kern County Subbasin will be developed using the recalibrated model to evaluate the performance of proposed management actions with respect to achieving groundwater sustainability.

Task 6 – Technical Report

A technical report will be developed that documents the work performed for the model recalibration. The technical report will provide the technical basis for setting up the baseline, documenting the model results, and developing the projected water budgets. The modeling results and water budgets produced for the Technical Report will be consistent with DWR's SGMA guidelines and BMPs. It is anticipated that this report will provide sufficient compliance for all GSAs in the subbasin for the GSP requirements of current and historical water budgets. The following subtasks are included in Task 6.

- **Subtask 6.1 – Draft Technical Report:** For costing purposes, we assume that the draft technical report will require two draft versions. An Administrative Draft Technical Report will be prepared for stakeholder review and comments. Comments will be incorporated into a Draft Technical Report. Electronic submittal is assumed for both versions.
- **Subtask 6.2 – Final Technical Report:** The Final Technical Report will address final comments and will be submitted to the GSAs for GSP supporting documentation. For costing purposes, we assume an electronic delivery for the Final Technical Report.

Task 5 supports the modeling and basin-wide water budget requirements for the 2025 GSP updates by developing the projected future baseline and climate changes water budgets as required by the GSP regulations and consistent with DWR guidance. Projected future water budgets will be run for Baseline

conditions and Climate Conditions over the 50-year planning and implementation horizon. These scenario models provide a basis of comparison for evaluating proposed sustainability management actions and projects over the SGMA planning and implementation horizon.

Task 7: Project Coordination and Communication

This task covers project coordination with the client throughout the project. Coordination will include project planning, on-going communications and project status updates. We assume that communication during the project will be conducted via emails, telephone and web meetings.

- **Subtask 7.1 – GSA Coordination and Water Manager Meetings:** Several project updates (via conference call) and three workshops are included in the scope of work over the duration of the project to keep KRGSA and other Kern County Subbasin GSAs up-to-date on the modeling process. We believe that this effort will support the overall transparency of the modeling efforts and help to achieve acceptance of the results to keep the GSPs on schedule to meet GSP deadlines.
- **Subtask 7.2 – Project Coordination:** This task covers project coordination with the client throughout the project. Coordination will include project planning, on-going communications and project status updates. We assume that communication during the project will be conducted via emails, telephone and/or web meetings, if needed. Todd Groundwater will track schedule and budget monthly. Invoices will clearly show team members, hours, costs, and progress on project tasks. A monthly progress report will be prepared for each invoice showing progress made during the month, next steps for the following billing cycle, and status of both schedule and budget.

MODEL RECALIBRATION COST ESTIMATE AND SCHEDULE

A cost estimate summary to complete the proposed C2VSimFG-Kern model recalibration is provided at the end of this text in **Table 3** with a more detailed cost estimate in **Table 4** (located after the text). As summarized on **Table 4**, the subbasin water budget analysis is estimated to total **$799,610**. Costs include labor, fees, subconsultants and expenses for each project task.

Todd Groundwater will track schedule and budget monthly. Invoices will clearly show team members, hours, costs, and progress on project tasks. A monthly progress report will be prepared for each invoice showing progress made during the month, next steps for the following billing cycle, and status of both schedule and budget.

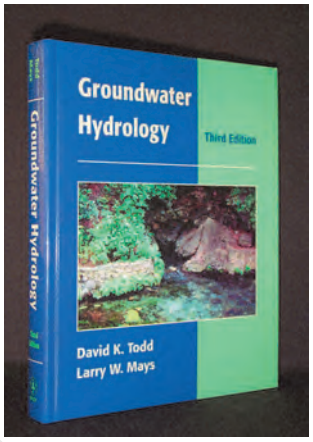
TABLE 3 – Kern County Subbasin Model Recalibration Budget Summary

TASKS	Estimated Hours	ESTIMATED COST
Task 1 Modify Northern Kern County Subbasin Boundary	256	$50,760
Task 2 Refine Model Grid	384	$66,680
Task 3 Update Surface Water Management	660	$125,660
Task 4 Update Hydrogeological Conceptual Model	898	$170,710
Task 5 C2VSimFG-Kern Recalibration	980	$190,820
Task 6 Technical Report	576	$113,020
Task 7 Project Coordination and Meetings	356	$81,960
TOTAL	**4,110**	**$799,610**

The proposed schedule outlines the time needed to conduct the work and to allow sufficient time for water managers and stakeholders to review and comment on model upgrades. The schedule assumes that Task 1 would begin in late 2021 and that the phased approach would follow in a consistent manner over the period. This is designed to allow sufficient time to improve C2VSimFG-Kern in time for use in development of the 2025 GSP Updates. The schedule will also be coordinated with the accompanying Native Yield Study where key model input parameters will be developed.

The schedule also allows time for key management actions to address data gaps to evolve during the period so that additional data are available for the model upgrade. It is assumed that the work of the Modeling Team is primarily focused on incorporating data for the Model Upgrade. It is assumed that the Modeling Team will rely on data provided by the local GSAs and MAs so that the Model Upgrade is consistent with the data and interpretations presented in the GSPs for their areas.

KEY PROJECT TEAM PERSONNEL



Todd Groundwater is a consulting firm specializing in groundwater studies, including evaluation, monitoring, modeling, management, and protection of groundwater resources. Our firm was founded in 1978 by Dr. David Keith Todd, internationally recognized expert in groundwater and author of the textbook, *Groundwater Hydrology*.

Todd Groundwater's professional staff members have advanced degrees in civil engineering, geology, hydrogeology, geochemistry, geography, and environmental sciences. All senior geologists and engineers are professionally registered in California and all senior geologists also are certified hydrogeologists. While providing the breadth of training and experience needed for groundwater planning, management, development, and protection, we have remained a small firm to provide specialized and responsive groundwater services to our clients. Todd Groundwater provides its clients with reliable and consistent service from a cohesive team. Based in Alameda, Todd Groundwater provides consulting services throughout California, with numerous clients in the Central Valley and Kern County. Our focus is groundwater, with most of our work conducted for California public agencies: water agencies, cities, and counties. We provide the full range of groundwater services with a focus on groundwater basin management, particularly compliance with the Sustainable Groundwater Management Act (SGMA).

Todd Groundwater is pleased to offer an experienced team for the Native Yield Study and C2VSimFG-Kern Recalibration. The leaders of the Project Team include the following:

- Phyllis Stanin will serve as the Principal-In-Charge and will be responsible for overseeing the Todd Groundwater team performance to ensure responsive service during the course of this project. Phyllis has a long -history of supporting a wide range of projects in the Kern County Subbasin.
- Mike Maley will serve as Project Manager. He has 30 years of hydrogeological and groundwater modeling experience. As the Project Manager and Lead Modeler for development of the C2VSimFG-Kern integrated surface water/groundwater model, Mike offers brings a unique knowledge and understanding of all of the Subbasin-wide surface water and groundwater data sets necessary for developing the Native Yield Study.

The project leaders will be assisted by Todd Groundwater staff with specialized groundwater modeling and GIS experience, as needed. Additional administrative staff will provide with graphics and administrative support.

Todd Groundwater plans to retain Dr. Charlie Brush, Ph.D., PE through his modeling consulting firm, Hydrolytics, LLC, for support with the C2VSimFG-Kern model update. Dr. Brush collaborated with Todd Groundwater on the previous C2VSimFG-Kern development. He has over 20 years of experience developing groundwater models and was one of the original developers of C2VSim while he was at DWR.

Todd Groundwater proposes a selected team, who bring groundwater basin management experience, SGMA expertise, requisite technical skills, knowledge of the Kern County Groundwater Subbasin, and understanding of Kern County groundwater users. Leaders of the Project Team from Todd Groundwater and Hydrolytics LLC are described below. More detailed resumes of key personnel can be provided upon request.

Phyllis Stanin, PG, CEG, CHG, Principal in Charge

Phyllis Stanin, Vice President and Principal Geologist will serve as Principal in Charge. She has been a professional geologist for more than 35 years with expertise in hydrogeology and groundwater basin management. She has prepared numerous groundwater management plans and several groundwater sustainability plans — including in the Kern County Subbasin and other subbasins in the San Joaquin Valley. She has had the opportunity to work with many of the Subbasin managers in the Kern County Subbasin and has worked with several of the DWR SGMA staff for many years. As such, she is highly qualified to provide overall guidance for this important project.

She also serves as the Watermaster Engineer for the Antelope Valley Watermaster and has provided key technical guidance to establishment of rules, regulations, and procedures as the Basin implements the adjudication and Final Judgment. She has also managed water resource monitoring, tracking of groundwater production, meter specifications, well permitting, documentation of groundwater quality, database development, and annual reporting for the Watermaster.

Michael Maley, PE, PG, CHG, CEG, Project Manager

Mike Maley, Senior Hydrogeologist, will serve as Project Manager and Technical Leader. Mike is both a licensed professional geologist and civil engineer with more than 30 years of experience in water resources and environmental projects, with expertise in numerical modeling and handling large data sets. He is an experienced project manager who has successfully managed large, complex projects. He has also supported grant management by public agencies by providing clear project summaries and other supporting data to meet DWR requirements.

Mike has extensive Kern County Subbasin experience through his work with local agencies in developing the SGMA subbasin model (C2VSimFG-Kern), preparing GSPs, developing the WY2019 Annual Report and conducting groundwater analyses for local groundwater projects. Mike has developed a strong working relationships with all of the key Project Team staff over the past 15 years that will facilitate project coordination. As Project Manager, Mike will serve as the primary point of contact with the Kern County Planning Coordinator and GSA member agencies. He will be responsible for communicating project status, overseeing the execution of the work, schedule, and budget, participating in public meetings, and coordinating team efforts.

Eugene B. (Gus) Yates, PG, CHG, Senior Hydrologist

Gus Yates is an accomplished hydrogeologist and water resources expert. His 30 years of experience—initially with the USGS and also as a consulting hydrogeologist—has been science-based and focused on projects that require critical thinking skills and the application of hydrologic principles and methods.

Mr. Yates brings substantial experience with GWMPs and GSPs, including surface water/GDE assessments and application of numerical models. He was primary author of the original GWMP for San Benito County Water District and is a key contributor to the North San Benito Basin GSP with responsibility for identification of interconnected surface water and GDEs and for update and expansion of the basin-wide numerical model, which is being applied to evaluate groundwater budgets (including inter-basin flow and future climate change) and sustainability criteria. He has been project manager, numerical modeler, and primary author of the Arroyo Seco GSP. Mr. Yates also brings considerable knowledge of Southern California hydrology including surface water modeling and groundwater-surface water interactions assessments for three recent GSPs in Riverside County.

Charles F. Brush, PhD, PE, Groundwater Modeler (Hydrolytics, LLC)

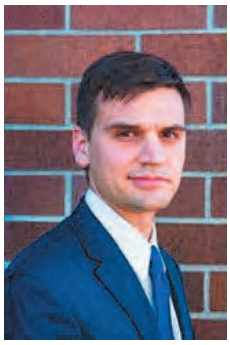
Dr. Brush has 23 years of comprehensive civil engineering experience in both the public and private sectors. During his 20 years with the USGS and California Department of Water Resources (DWR), Dr. Brush developed several groundwater flow models and integrated hydrologic models using the IWFM and MODFLOW applications. Dr. Brush was the principal developer of DWR's California Central Valley Groundwater-Surface Water Simulation Model (C2VSim). Dr. Brush's private sector work has included supporting DWR in updating the C2VSim model, working with local stakeholders in Kern, Colusa and Tehama Counties to update local portions of the C2VSim model for use in GSP development, and assisting in the development and calibration of other Central Valley models.

Dr. Brush has completed numerous hydrologic modeling studies including Central Valley water use under climate change, streamflow impacts of groundwater pumping and water transfers, and economic impacts of water shortages. Dr. Brush has also conducted technical reviews of numerous models, including the USGS Central Valley Hydrologic Model (CVHM) and MODFLOW FARM Package. Dr. Brush has served on advisory committees, including the Groundwater Resources Association Technical Advisory Committee (GRA TAC) and Northern Sacramento Valley Technical Advisory Committee. Dr. Brush recently led the GRA TAC's review of DWR's draft 2020 California Groundwater report (Bulletin 118). Dr. Brush's expertise in software applications includes MODFLOW, IWFM/IDC, PEST, ArcMap and python.

Maureen Reilly, PE: Project Engineer

Maureen Reilly has 15 years of experience in groundwater, environmental, and information systems projects. She is experienced in analytical and semi-analytical groundwater modeling programs, numerical methods, water quality analysis, monitoring, data management, and reporting in the context of groundwater basin management, including compliance with the Sustainable Groundwater Management Act (SGMA).

She has served as the lead data manager and analyst for the Kern River GSA. She processed the METRIC and other data for the C2VSim Update. For the Kern Fan Model, she built the database. developed model input files, completed the final model calibration and ran project scenarios. She is a Professional Engineer with over 15 years of experience with analytical and numerical groundwater models.



Brent M. Johnson, PG, Associate Geologist

Mr. Johnson is an Associate Geologist with more than eight years of experience as a consulting geologist. He has experience working on the preparation of multiple Groundwater Sustainability Plans (GSP) in Riverside County and the Central Valley. He was responsible developing lithologic and geospatial information for a GIS database. The data were used to determine final alignment of cross section transects that would provide the highest resolution of subsurface conditions. Mr. Johnson then generated geologic cross section for the basin based on surficial geology, lithologic data, existing fault datasets. The cross sections served as were incorporated into the hydrogeologic conceptual model. In addition, he has extensive field experience that includes soil and groundwater sample collection, well drilling oversight, design and construction; and groundwater level monitoring. In addition, he is skilled in data management and water quality analysis.

Nicole Grimm, MS, Staff Hydrogeologist

Ms. Grimm has worked on projects focused on drinking water, stormwater, and groundwater. From these projects she has gained experience in laboratory testing, data collection and analysis, water quality monitoring and analysis, mapping in Geographic Information Systems (GIS), and isotope hydrology for water budget analysis. She worked with the Groundwater Sustainability Agency (GSA) in Butte County with their Groundwater Sustainability Plan (GSP) for the Sustainable Groundwater Management Act (SGMA). She analyzed the stable isotopes of water and noble gas recharge temperature to gain information on aquifer recharge sources for flow patterns. She compared the results to independently computed residence times from the Integrated Water Flow Model (IWFM).

Mike Wottrich, GIS and Database Analyst

Mike Wottrich employs a data-driven approach to providing a variety of geographic information, database management, and infographic services. His experience includes the production and maintenance of various tabular and graphic representations for reports, presentations, and exhibits. He has advanced skills with various data-driven software like ArcGIS Desktop, SQL Server Management Studio, EVS and other specialized software to aid the production of high-quality maps and infographics. He also has extensive experience with the automation of complex and/or repetitive tasks to help with the standardization of data input and output processes using software including Visual Studio and FME. As Graphics Coordinator, Mr. Wottrich is also responsible for final QA/QC of all Todd Groundwater graphics. In addition to his technical skills, he also provides a keen sense of design.

To: Kern Delta Water District Board of Directors

From: Steven Teglia – General Manager

Date: June 15, 2021

Re: Agenda Item VI B. – Water Banking Projects Report

RECOMMENDATION:
Receive report, informational item only.

DISCUSSION:
Below is a summary of activities of note related to various water baking projects/activities of interest to the District.

Kern Fan Recovery Activity:

- As of June 8, 2021, Kern Fan groundwater recovery was approximately 748cfs from 176 wells, as reported via KCWA weekly call.
- See attached graphs provided by KCWA for recovery information through April 30, 2021.

Pioneer Participant Meeting:

- The Pioneer Project Participant Meeting of June 10, 2021 was canceled.

Kern Fan Monitoring Committee:

- The Kern Fan Monitoring Committee met May 19, 2021.
- Chair: Dave Beard; Vice-Chair: Jon Parker.
- Discussion regarding review of cost % split between projects/agencies to take place.
- Next meeting scheduled for July 14, 2021.

KDWD Water Banking Project:

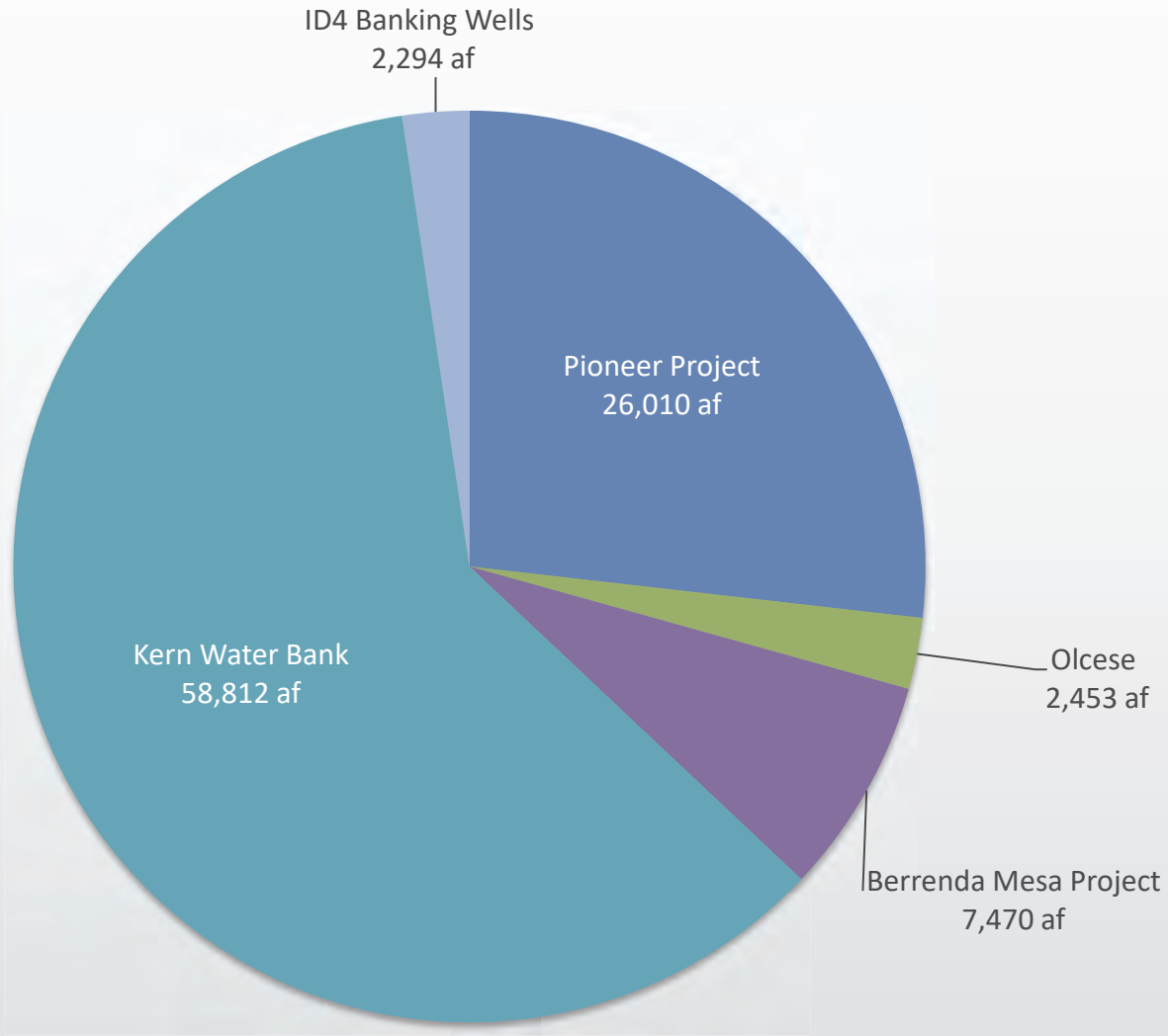
- MET has provided the District with an official request for the return of regulated water for calendar year 2021. The District has developed and implemented a plan to return just over 40,000af of return water to MET by December 31, 2021.
- SBVMWD has withdrawn their request for return water in 2021.

Cross Valley Canal Advisory Committee:

- The CVC Advisory Committee met May 26, 2021.
- Allocation of costs related to CVC litigation.
- See attached graphs provided by KCWA regarding CVC utilization.

Attachment 1

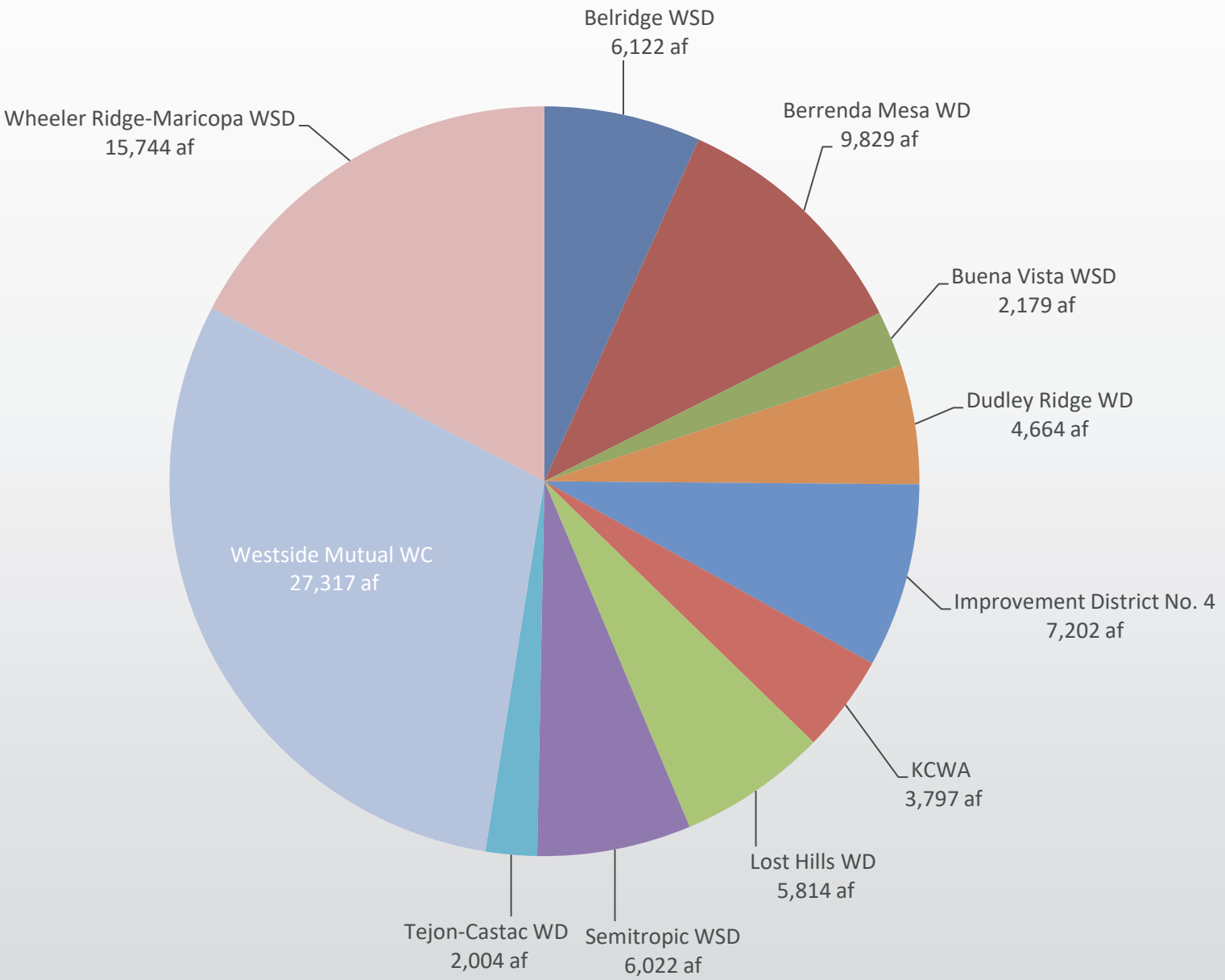
Kern Fan Banking Projects
2021 Estimated Gross Recovery by Project
Through April 30, 2021



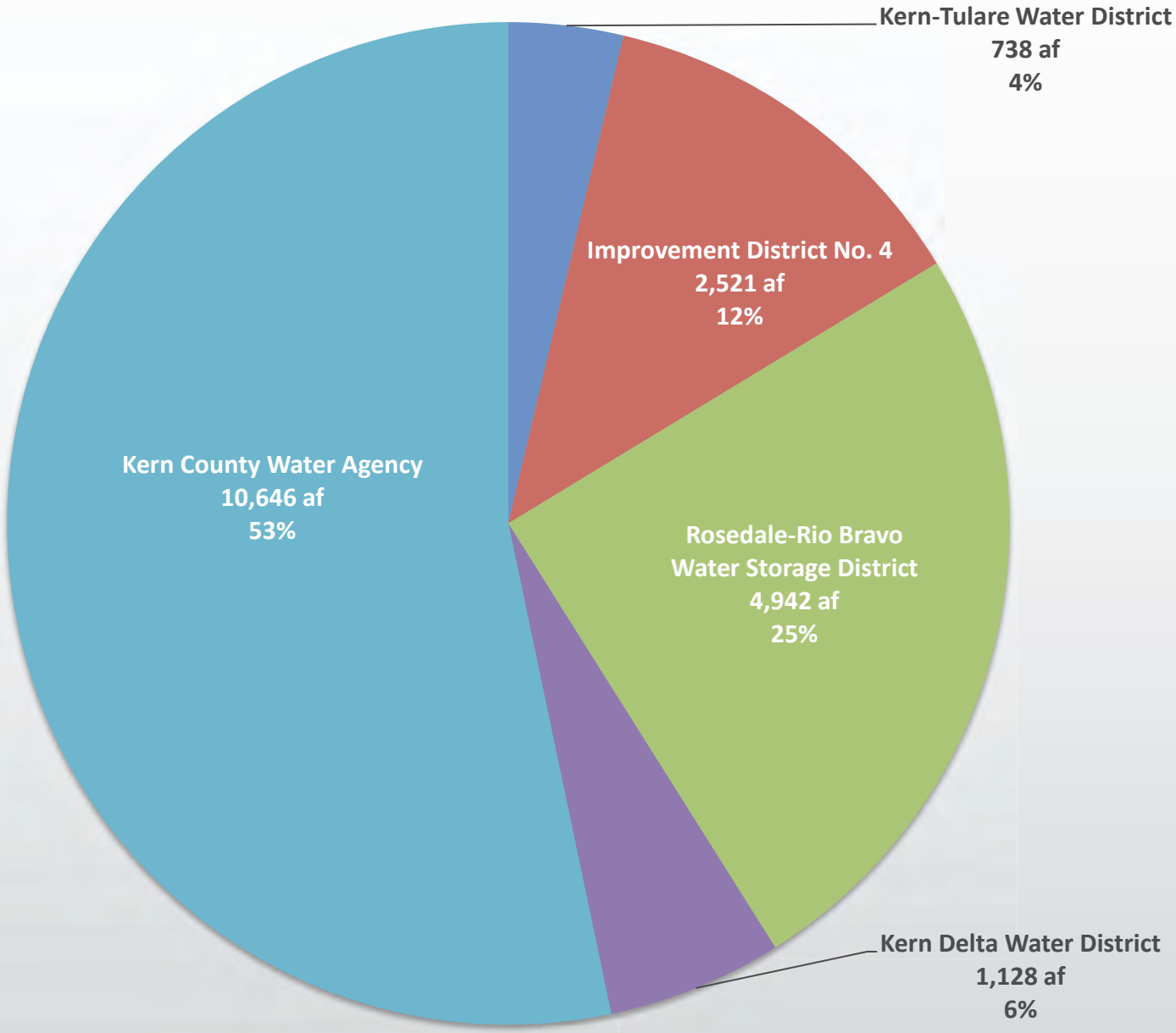
Total Gross Recovery 97,039 af

Attachment 2

Kern Fan Banking Projects
2021 Estimated Recovery by Participant
Through April 30, 2021



Cross Valley Canal
April 2021 Deliveries
Total deliveries 19,975 af



Cross Valley Canal
Deliveries by Direction and Source
2021

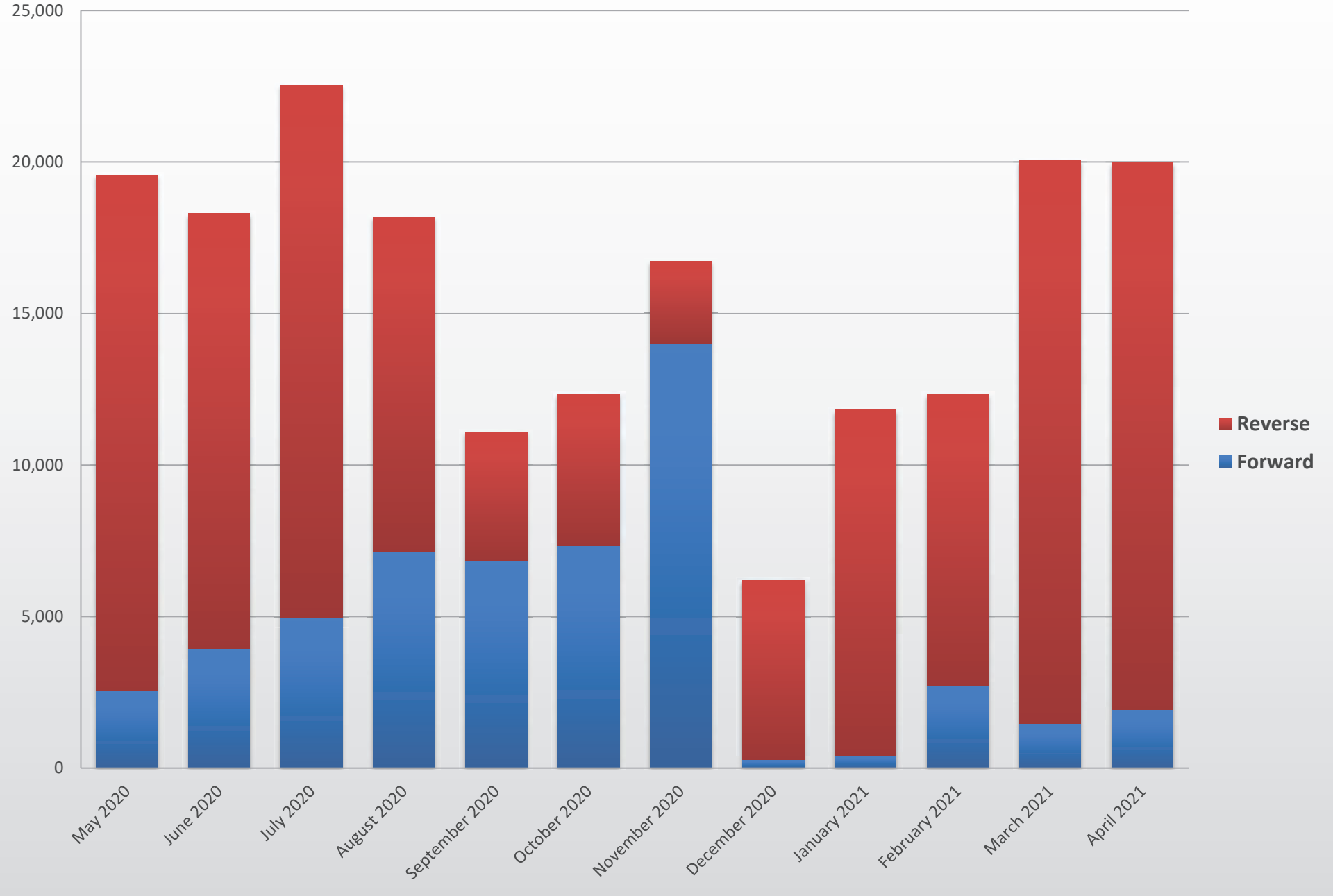
Deliveries are shown in acre feet

	Deliveries by Direction			Deliveries by Source				
	Forward Flow	Reverse Flow	Total	State Water Project	Central Valley Project	Kern River	Recovered Groundwater	Total
January	427	11,390	11,817	-	-	-	11,817	11,817
February	2,723	9,610	12,333	-	-	-	12,333	12,333
March	1,462	18,585	20,047	-	-	-	20,047	20,047
April	1,926	18,049	19,975	-	-	-	19,975	19,975
May	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-
July	-	-	-	-	-	-	-	-
August	-	-	-	-	-	-	-	-
September	-	-	-	-	-	-	-	-
October	-	-	-	-	-	-	-	-
November	-	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-	-
Total	**6,538**	**57,634**	**64,172**	**-**	**-**	**-**	**64,172**	**64,172**

Attachment 3

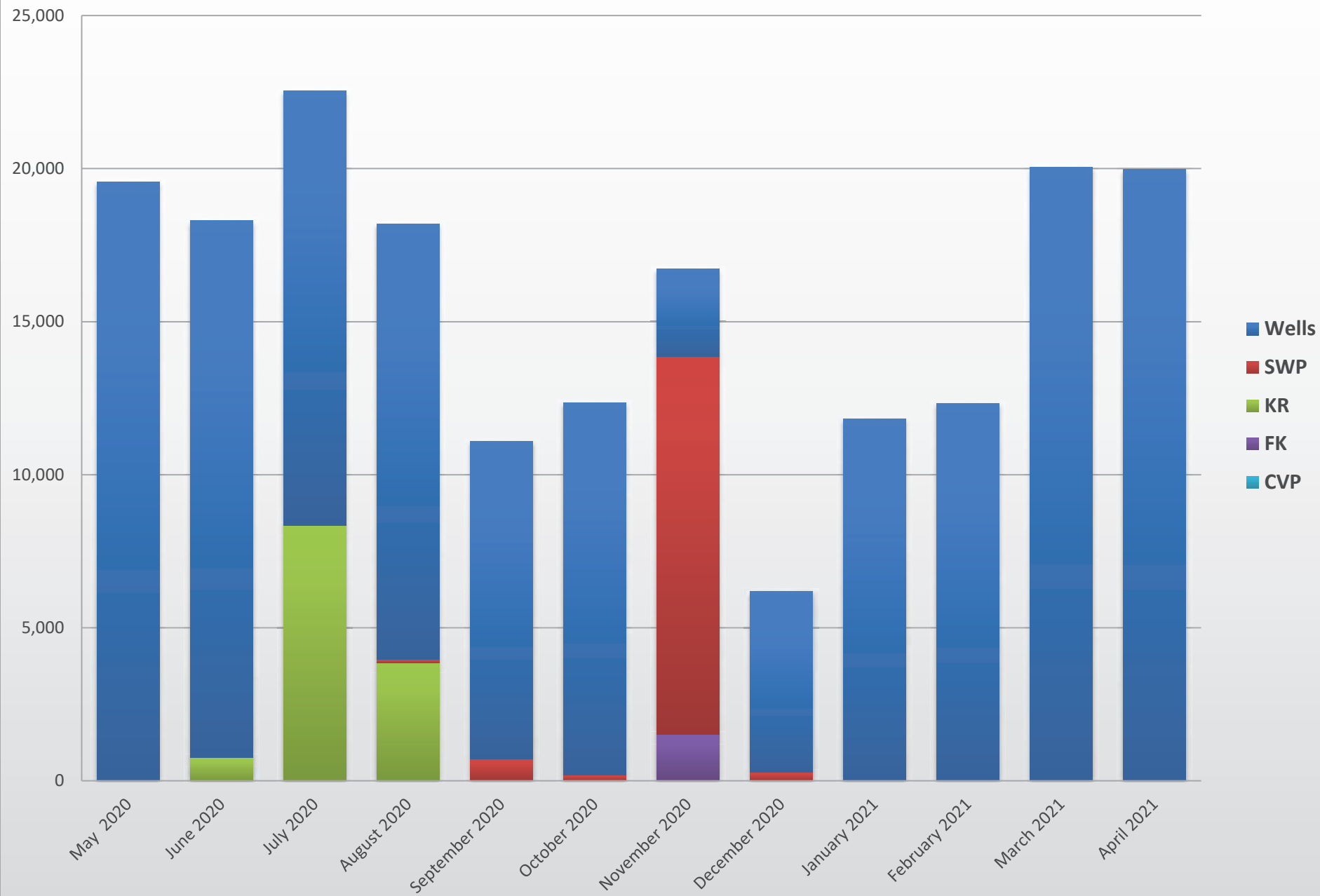
Cross Valley Canal

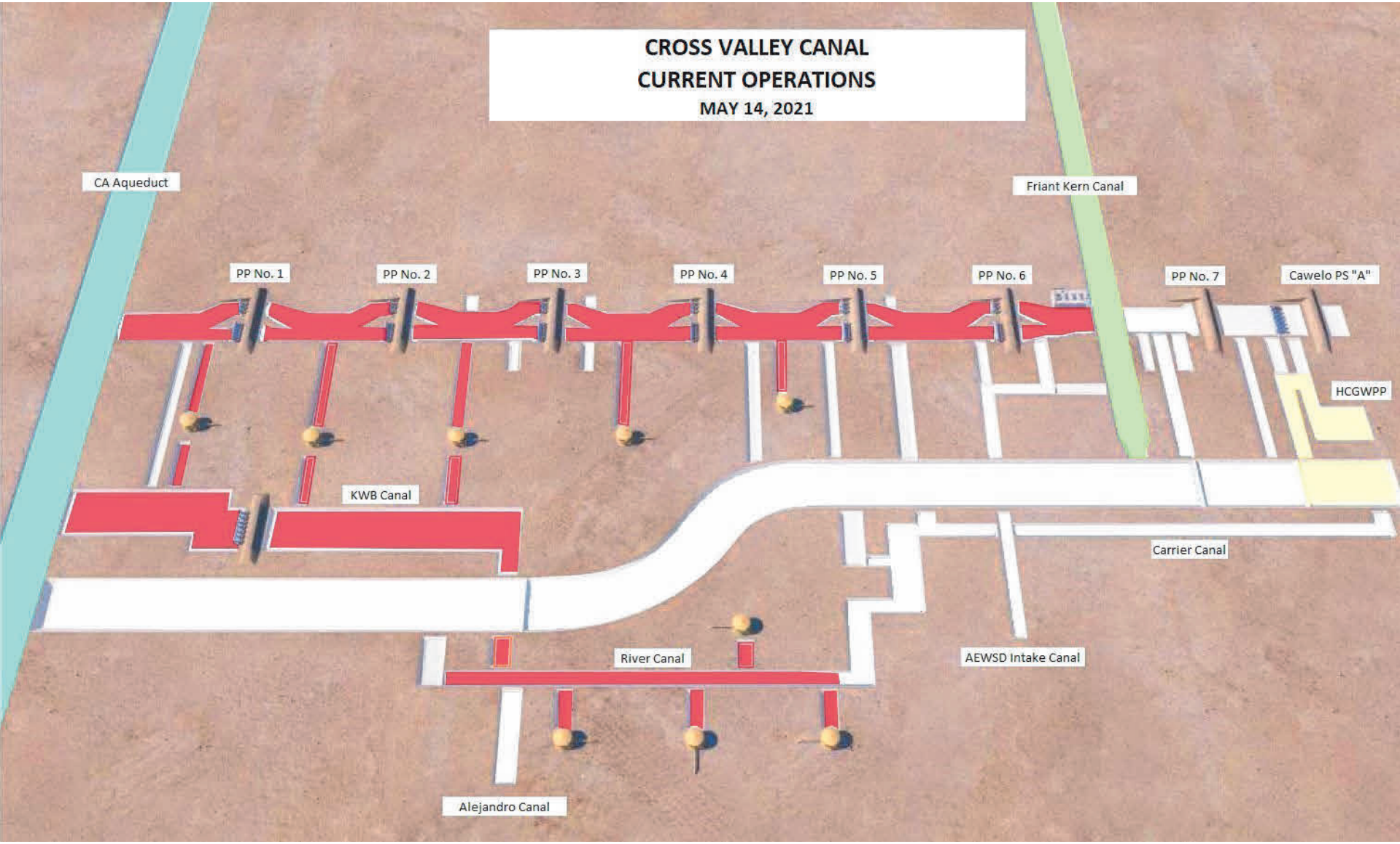
Twelve Month Delivery by Direction



Cross Valley Canal

Twelve Month Delivery by Source




CROSS VALLEY CANAL
CURRENT OPERATIONS
MAY 14, 2021
CA Aqueduct
Friant Kern Canal
PP No. 1
PP No. 2
PP No. 3
PP No. 4
PP No. 5
PP No. 6
PP No. 7
Cawelo PS "A"
HCGWPP
KWB Canal
Carrier Canal
River Canal
AEWSD Intake Canal
Alejandro Canal

Valley Ag Water Coalition
2021-22 Regular Session, First Year - Friday, June 04, 2021

AB 252 **(Rivas, Robert D) Department of Conservation: Multibenefit Land Repurposing Incentive Program: administration.**
Current Text: Amended: 3/29/2021 html pdf
Introduced: 1/14/2021
Status: 6/3/2021-In Senate. Read first time. To Com. on RLS. for assignment.
Is Urgency: N
Is Fiscal: Y
Location: 6/3/2021-S. RLS.
Summary: Would require the Department of Conservation to establish and administer a program named the Multibenefit Land Repurposing Incentive Program for purposes of providing grants to groundwater sustainability agencies or counties, or other specified entities designated by groundwater sustainability agencies or counties, for the development or implementation of local programs supporting or facilitating multibenefit land repurposing at the basin scale. The bill would establish procedures for the department's administration of the program and would require the department to develop guidelines to implement the program and to exercise its expertise and discretion in awarding program funds to eligible applicants.

Position
Support

AB 377 **(Rivas, Robert D) Water quality: impaired waters.**
Current Text: Amended: 4/13/2021 html pdf
Introduced: 2/1/2021
Status: 5/25/2021-Failed Deadline pursuant to Rule 61(a)(5). (Last location was APPR. SUSPENSE FILE on 5/19/2021)(May be acted upon Jan 2022)
Is Urgency: N
Is Fiscal: Y
Location: 5/25/2021-A. 2 YEAR
Summary: Would require, by January 1, 2023, the State Water Resources Control Board and regional boards to prioritize enforcement of all water quality standard violations that are causing or contributing to an exceedance of a water quality standard in a surface water of the state. The bill would require the state board and regional boards, by January 1, 2025, to evaluate impaired state surface waters and report to the Legislature a plan to bring all water segments into attainment by January 1, 2050. The bill would require the state board and regional boards to update the report with a progress summary to the Legislature every 5 years. The bill would create the Waterway Recovery Account in the Waste Discharge Permit Fund and would make moneys in the Waterway Recovery Account available for the state board to expend, upon appropriation by the Legislature, to bring impaired water segments into attainment in accordance with the plan.

Position
Oppose

AB 564 **(Gonzalez, Lorena D) Biodiversity Protection and Restoration Act.**
Current Text: Introduced: 2/11/2021 html pdf
Introduced: 2/11/2021
Status: 4/30/2021-Failed Deadline pursuant to Rule 61(a)(2). (Last location was A. & A.R. on 2/18/2021)(May be acted upon Jan 2022)
Is Urgency: N
Is Fiscal: Y
Location: 4/30/2021-A. 2 YEAR
Summary: Would establish the Biodiversity Protection and Restoration Act and would provide that it is the policy of the state that all state agencies, boards, and commissions shall utilize their authorities in furtherance of the biodiversity conservation purposes and goals of certain executive orders. The bill would require all state agencies, boards, and commissions to consider and prioritize the protection of biodiversity in carrying out their statutory mandates. The bill would require strategies related to the goal of the state to conserve at least 30% of California's land and coastal waters by 2030 to be made available to the public and provided to certain legislative committees by no later than June 30, 2022.

Position
Oppose

AB 754 **(Mathis R) Sustainable groundwater management: groundwater sustainability plan.**
Current Text: Amended: 4/15/2021 html pdf
Introduced: 2/16/2021

Status: 6/3/2021-In Senate. Read first time. To Com. on RLS. for assignment.
Is Urgency: N
Is Fiscal: Y
Location: 6/3/2021-S. RLS.
Summary: The Sustainable Groundwater Management Act authorizes the State Water Resources Control Board to designate a high- or medium-priority basin as a probationary basin if the basin is not entirely covered by an adopted groundwater sustainability plan or plans or a department-approved alternative by the applicable deadline. The act authorizes the board to adopt an interim plan for a probationary basin, as specified. This bill would authorize the department to extend the deadline for a high- or medium-priority basin not subject to critical conditions of overdraft to be managed under a groundwater sustainability plan or coordinated plans by up to 180 days after January 31, 2022, upon request of a local agency or groundwater sustainability agency in the basin for an extension of a specified period of time. The bill would require a request to be submitted by January 3, 2022, and to be responded to by the department by January 10, 2022.

Position
Watch

AB 1164 **(Flora R) Dams and reservoirs: exclusions.**
Current Text: Amended: 5/4/2021 html pdf
Introduced: 2/18/2021
Status: 6/3/2021-Referred to Com. on N.R. & W.
Is Urgency: N
Is Fiscal: Y
Location: 6/3/2021-S. N.R. & W.
Calendar: 6/15/2021 9 a.m. - John L. Burton Hearing Room (4203) SENATE NATURAL RESOURCES AND WATER, STERN, Chair
Summary: Current law requires the Department of Water Resources to adopt, by regulation, a schedule of fees to cover the department's costs in carrying out the supervision of dam safety. Current law excludes certain obstructions from being considered a dam, including a barrier that is not across a stream channel, watercourse, or natural drainage area and that has the principal purpose of impounding water for agricultural use. This bill would specify that the exclusion from being considered a dam for a barrier that is not across a stream channel, watercourse, or natural drainage area and that has the principal purpose of impounding water for agricultural use applies only to a barrier owned or operated by a private entity. The bill would provide that a barrier owned or operated by a public entity that is not across a stream channel, watercourse, or natural drainage area and that has the principal purpose of impounding water for agricultural use shall not be considered a dam only if certain criteria are met, including, among other criteria, that the operator provides to the county office of emergency management a structural failure plan.

Position
Favor

AB 1376 **(Gray D) Water quality: state certification.**
Current Text: Introduced: 2/19/2021 html pdf
Introduced: 2/19/2021
Status: 4/30/2021-Failed Deadline pursuant to Rule 61(a)(2). (Last location was E.S. & T.M. on 3/4/2021)(May be acted upon Jan 2022)
Is Urgency: N
Is Fiscal: Y
Location: 4/30/2021-A. 2 YEAR
Summary: The Porter-Cologne Water Quality Control Act authorizes the State Water Resources Control Board to certify or provide a statement to a federal agency, as required pursuant to federal law, that there is reasonable assurance that an activity of any person subject to the jurisdiction of the state board will not reduce water quality below applicable standards. The federal act provides that if a state fails or refuses to act on a request for this certification within a reasonable period of time, which shall not exceed one year after receipt of the request, then the state certification requirements are waived with respect to the federal application. This bill would require the state board to make the certificate or statement available on its internet website for a 60-day public comment and review period, and would provide that the certificate or statement shall not be final until voted upon by a majority of the members of the state board at the conclusion of that period.

Position
Watch

AB 1399 **(Flora R) Diversion or use of water: penalties.**
Current Text: Introduced: 2/19/2021 html pdf
Introduced: 2/19/2021
Status: 5/7/2021-Failed Deadline pursuant to Rule 61(a)(3). (Last location was PRINT on 2/19/2021)

(May be acted upon Jan 2021)
Is Urgency: N
Is Fiscal: N
Location: 5/7/2021-A. 2 YEAR
Summary: Under current law, the diversion or use of water other than as authorized by specified provisions of law is a trespass, subject to specified civil liability.This bill would make nonsubstantive changes to those provisions.

Position
Watch

AB 1500 **(Garcia, Eduardo D) Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2022.**
Current Text: Amended: 5/11/2021 html pdf
Introduced: 2/19/2021
Status: 5/20/2021-Joint Rule 62(a), file notice suspended. From committee: Do pass and re-refer to Com. on RLS. (Ayes 12. Noes 3.) (May 20). Re-referred to Com. on RLS.
Is Urgency: Y
Is Fiscal: Y
Location: 5/20/2021-A. RLS.
Summary: Would enact the Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2022, which, if approved by the voters, would authorize the issuance of bonds in the amount of $7,080,000,000 pursuant to the State General Obligation Bond Law to finance projects for safe drinking water, wildfire prevention, drought preparation, flood protection, extreme heat mitigation, and workforce development programs.

Position
Support/Amend

SB 45 **(Portantino D) Wildfire Prevention, Safe Drinking Water, Drought Preparation, and Flood Protection Bond Act of 2022.**
Current Text: Amended: 4/8/2021 html pdf
Introduced: 12/7/2020
Status: 6/1/2021-Ordered to inactive file on request of Senator Portantino.
Is Urgency: N
Is Fiscal: Y
Location: 6/1/2021-S. INACTIVE FILE
Summary: Would enact the Wildfire Prevention, Safe Drinking Water, Drought Preparation, and Flood Protection Bond Act of 2022, which, if approved by the voters, would authorize the issuance of bonds in the amount of $5,595,000,000 pursuant to the State General Obligation Bond Law to finance projects for a wildfire prevention, safe drinking water, drought preparation, and flood protection program.

Position
Support/Amend

SB 359 **(Caballero D) Climate change: Resilient Merced County Incentive Pilot Program.**
Current Text: Amended: 4/19/2021 html pdf
Introduced: 2/9/2021
Status: 5/25/2021-Failed Deadline pursuant to Rule 61(a)(5). (Last location was APPR. SUSPENSE FILE on 5/3/2021)(May be acted upon Jan 2022)
Is Urgency: N
Is Fiscal: Y
Location: 5/25/2021-S. 2 YEAR
Summary: Would, until _____, require the Strategic Growth Council, in consultation with the Department of Conservation and the state board, to develop and implement the Resilient Merced County Incentive Pilot Program (pilot program) to assist the County of Merced to use scenario-planning tools to estimate and account for the countywide greenhouse gas reduction and carbon sequestration potential of different land management, restoration, and conservation activities and for the council to provide financial assistance to private landowners to voluntarily implement activities resulting from the use of the scenario-planning tools used by the county. The bill would require the council to implement the pilot program as a component of the Sustainable Agricultural Lands Conservation Program and consistent with the Affordable Housing and Sustainable Communities Program.

Position
Watch

SB 559 **(Hurtado D) Department of Water Resources: water conveyance systems: Canal Conveyance Capacity Restoration Fund.**

Current Text: Amended: 5/20/2021 html pdf
Introduced: 2/18/2021
Status: 6/3/2021-Referred to Com. on W.,P., & W.
Is Urgency: N
Is Fiscal: Y
Location: 6/3/2021-A. W.,P. & W.
Summary: Would establish the Canal Conveyance Capacity Restoration Fund in the State Treasury to be administered by the Department of Water Resources. The bill would require all moneys deposited in the fund to be expended, upon appropriation by the Legislature, in support of subsidence repair costs, including environmental planning, permitting, design, and construction and necessary road and bridge upgrades required to accommodate capacity improvements. The bill would require the department to expend from the fund, upon appropriation by the Legislature, specified monetary amounts to restore the capacity of 4 specified water conveyance systems, as prescribed, with 2 of those 4 expenditures being in the form of a grant to the Friant Water Authority and to the San Luis and Delta-Mendota Water Authority. The bill would make operation of these provisions contingent on specified conditions being met. The bill would make these provisions inoperative on July 1, 2030, and would repeal the provisions as of January 1, 2031.

Position
Support

Total Measures: 11
Total Tracking Forms: 11