



REGULAR BOARD OF DIRECTORS MEETING

501 Taft Highway
Bakersfield, California

TUESDAY, August 3, 2021

AGENDA

CALL TO ORDER AND ANNOUNCEMENT OF QUORUM

12:00PM

CLOSED SESSION:

- A. Conference with Legal Counsel – Potential Litigation – Closed Session Pursuant to Gov. Code § 54956.9(d)(2),(e)(1):
1. One Matter

REGULAR SESSION:

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. **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. Approve Minutes of the Regular Board Meeting of July 20, 2021.
 - B. Review and Consideration of Land IQ Scope of Work Proposal for Evapotranspiration, Precipitation, and Crop Type within Kern Delta Water District.
- III. **BOARD MEMBER COMMENTS** (This item provides Board Members with an opportunity to make announcements or provide general comments.)
- IV. **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.



**MINUTES OF THE REGULAR MEETING
OF THE BOARD OF DIRECTORS**

July 20, 2021

TUESDAY, July 20, 2021, 12:32PM– 3:07PM

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

DIRECTORS ABSENT: Antongiovanni.

STAFF PRESENT: General Manager Teglia, Water Resources Manager Mulkay, Assistant General Manager Bellue, General Counsel Iger, Controller Duncan, Hydrographer Hyatt, Groundwater Manager Marquez, Assessor Thorne-Casey, and Administrative Assistant Rodriguez.

OTHERS PRESENT: Doug Kaiser, Michael Brancato, and Travis Millwee.

CLOSED SESSION DECLARED AT 12:32PM

President Palla called to order the Closed Session of the Kern Delta Board of Directors at 12:32PM 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.
3. Stella Stokes and Curlee Bradford v. Nathaniel Villasenor et. al.

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

1. Two Matters

Closed Session was concluded at 1:19PM.

REGULAR SESSION DECLARED AT 1:30PM

President Palla called to order the Regular Session of the Kern Delta Board of Directors at 1:30PM.

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

Item A: No reportable action.

Item B: No reportable action.

INTRODUCTION OF GUESTS AND PUBLIC

Those listed as others present were announced as guests.

I. PUBLIC COMMENT

Mr. Michael Brancato provided comments including submitting a list of questions to the Board for review and response (attached to the minutes). General Manager Teglia and Water Resources Manager Mulkay verbally responded to each of the questions.

II. CONSENT CALENDAR

M/S/C (Garone/Collins) (yes-7, no-0): With Director Antongiovanni absent, the Board approved and authorized items II A through II D of the Consent Calendar.

- A. Approval of Minutes from the Regular Board Meeting of June 15, 2021.
- B. Approval of the June/July District Construction and Water Banking Disbursements.
- C. Approval of the June/July District Disbursements.
- D. Approval of Revised District Board Meeting Calendar.

III. BUSINESS AND FINANCE

A. Business & Finance Committee – July 15, 2021: District Controller Duncan provided a report from the July Business & Finance Committee Meeting.

A(i). Approval of June 2021 Financial Reports: Mr. Duncan presented the June 2021 District and Water Banking Project Financial Statements, Treasurer's Reports, and District Delinquency Report.

M/S/C (Spitzer/Tillema) (yes-7, no-0): With Director Antongiovanni absent, the Board approved the June 2021 District and Water Banking Project Financial Statements, Treasurer's Reports, and Delinquency Report as presented.

A(ii). District Assessments Status Update: Mr. Teglia introduced District Assessor Joan Thorne-Casey who provided the Board with a brief update regarding the collection of the District's 2021 assessments. To date, 97% of assessments have been collected with a total outstanding amount of roughly \$26,600 (which includes delinquent accounts for 2021 and prior years). The remaining collection process includes publishing the names of delinquent accounts several times in the Bakersfield Californian and ultimately concluding with the District recording a lien on the subject parcels.

B. Revised District Purchasing Policy Recommendation: Mr. Teglia and General Counsel Iger provided an overview of the revised District Purchasing Policy, which was recommended for approval by the Business and Finance Committee. The updated purchasing policy, along with the current policy, and a comparison memo were included in the Board packet.

M/S/C (Tillema/Spitzer) (yes-7, no-0): With Director Antongiovanni absent, the Board approved the revised District Purchasing Policy as presented.

IV. OPERATIONS AND PROJECTS

A. - A(i-ii). Operations and Projects Committee – July 6, 2021: The July 6, 2021 Operations and Projects Committee was canceled, however, Assistant General Manager Bellue provided a brief report regarding

District maintenance activities, recent encroachment permit requests, and construction activities related to the Romero and Kern Island basins.

B. Sunset Groundwater Recharge Facility Project - Update: Staff provided a brief update regarding the status of the Sunset Project. A request for proposals, advertising the project was posted on the District's website and published in the Bakersfield Californian in early July with a bid opening scheduled for August 6th. A mandatory pre-bid meeting is set for July 21st. Staff anticipates coming back to the Board to award this phase of work at the Board's first meeting in September.

V. KERN RIVER WATERMASTER

A. - A(ii). District Water Master Report: District Hydrographer Hyatt reviewed and discussed the water supplies of the District for the month of June and early July. Approximately 18,370 acre-feet of water was delivered in District during June. Mr. Hyatt also provided information related to a long-term seasonal outlook, which included current river forecast information showing a 17% April – July runoff on the Kern River and the current State Water Project allocation, which is 5%. Finally, Mr. Hyatt discussed the status/schedule of various District utilities based on the current runoff information.

Groundwater Manager Marquez provided graphical information regarding depth to groundwater at various monitoring locations throughout the District.

B. - B(i). Kern River Watermaster Report: The July Kern River Watermaster report and the Isabella construction update, provided by the Army Corps of Engineers, were included in the Board packet.

VI. MANAGER'S REPORT

A. – A(ii). Mr. Teglia provided a brief verbal report including the plan to discuss a proposal from Land IQ for District-wide evapotranspiration data analysis at a future meeting. Mr. Teglia also presented the District's draft 2020 Crop Report for review and approval.

M/S/C (Spitzer/Collins) (yes-7, no-0): With Director Antongiovanni absent, the Board approved the 2020 District Crop Report as presented.

B. External Agency Report: Mr. Teglia provided verbal comments supplementing a memorandum included in the Board package which provided information on the meetings and activities of various external agencies. These agencies include, but are not limited to, the Kern County Water Agency (including the status of the Delta Conveyance Project and Contract Extension), Kern Fan Authority, Kern River Watershed Coalition Authority, Kern Groundwater Authority, Kern River Groundwater Sustainability Agency, the South Valley Water Resources Authority, the Water Association of Kern County, and the Integrated Regional Water Management Plan.

C. Water Banking Projects Report: Mr. Teglia provided verbal comments supplementing a memorandum included in the Board package which provided information on water banking project activity on the Kern Fan.

D. VAWC July Legislative Update: A copy of the July 2021 VAWC Legislative Update was provided in the Board packet.

IX. ATTORNEY'S REPORT

A. Mr. Iger informed the Board that he has developed a Notice of Violation letter that can be sent out to property owners, water users, or others that are identified as violating District rules and regulations. The

notice provides an opportunity to put the identified party on notice to correct the violation or be subject to a District imposed fine. This process will greatly assist the District in correcting such violations.

B. 2021 District Election Update: Mr. Iger provided the Board with an update on the election calendar which governs the District election process for 2021. Several Board seats are up for election including Divisions 1,2,4 & 7. Staff has completed the necessary noticing of the District election as required.

In addition, Mr. Iger discussed the current Board vacancy for Division 5, which is the result of the recent resignation of Division 5 Director John Bidart (effective July 6, 2021). Mr. Iger reviewed the options available to the Board has to fill the vacancy. Following this discussion, the Board decided to consider appointing a Division 5 Director at the August 17, 2021 Board meeting.

X. BOARD MEMBER COMMENTS

None.

XI. ADJOURNMENT:

There being no further business, President Palla adjourned the meeting at approximately 3:07PM.

Respectfully Submitted,



Steven Teglia, General Manager

Approved by Board,



Richard Tillema, Board Secretary

Michael Brancato

Brancato Farms

13301 S Union Ave
Bakersfield Ca 93307
Phone (661) 703-9004
Brancatofarms@aol.com

July 18, 2021

To: Kern Delta Water District Board & Administrators

Questions

#1. From January 2021 thru March of 2021 I was informed that the district had plenty of water, order all you want.
{we need to use it up per dispatch}

#2. I asked can we not save it for this summer? as we are in a drought?
No we need to get rid of it to keep the river flow running for the PG&E power plant.
{who ever makes these decision we could've saved the water, let PG&E take us to court, that would've taken a year or more, the district would've had water for deliver?}
If this is controlled by the Army Corps of Engineers has the board or its administration negotiated with any presidential administration or leaders in both the house and senate over the decades to address this?

#3. We've had historical rains a few years ago, that water was let out to repair the dam, was it banked?
The dam fix has been on a wait list for decades.
The Army Corps of Engineers if all goes well will do a test fill of Isabella?
Where is that water going to come from?

#4. Water Banking hasn't that been going on for a decades?
Where is that water?
If the district had banked money for a decade, then tried to do a withdrawal just to find out there was a 10th to no money in the banking account you can bet someone would be in court right?
In many ways it's the same thing isn't it?

#5. I have been told that extortion water can be bought & brought into the district? Yes it will coast hundreds of dollars an acre foot but it can be had. If the district is interested I can provide the number of the person who can assist,

#6. Doesn't the water district its administration and the board have a fiduciary duty & responsibility to deliver adequate water to its customers to sustain crops?

*#7. The district should have 50 plus years of records showing how much water is consumed at each gate, that water is delivered was any of this information used in the pro ration?
As you know we are not getting enough water to even sustain the crops.*

#8. We pay property tax, a water tax, land use tax, water delivery tax, assessment tax etc. When property is sold for development water is available those who have put in permanent crop have also developed the land and water should be made available for them as well.

#9. Because of the lack of water deliver, production has decreased by 40% I am sure this is of no surprise to you board members as we are all in the same boat.

#10. I am requesting a copy of KDWD mission statement if there is one, in addition I am also requesting a copy of KDWD'S responsibilities to its customers.

#11. Moss can the maintenance department do something about the moss in the canal's? can you or are you allowed to add copper to the system & that will help.

In closing I am requesting that this be put into the minutes of the meeting and I await your response.

*Sincerely,
Michael Brancato*

LAND IQ DATA DRIVEN METHOD (LDDM) FOR EVAPOTRANSPIRATION, PRECIPITATION, AND CROP TYPE AT THE FIELD LEVEL – KERN DELTA WATER DISTRICT

TO: Steve Teglia/Kern Delta Water District

FROM: Joel Kimmelshue/Land IQ
Seth Mulder/Land IQ
Frank Anderson/Land IQ
Zhongwu Wang/Land IQ
Casey Gudel/Land IQ

DATE: July 7, 2021

INTRODUCTION

This scope of work proposal was developed at the request of the Kern Delta Water District (KDWD) for the purpose of developing a monthly field by field estimate of actual evapotranspiration (ET) occurring within the KDWD. Included in the deliverables will also be field by field precipitation, and twice-yearly field by field crop mapping. A web tool will be used to relay the results each month.

Calculation of ET can be performed accurately using weighing lysimeters and eddy correlation monitoring techniques. These methods are limited, however, because they provide point values of ET for a specific location and fail to provide the ET on a regional scale. This limitation has motivated the development of using remotely sensed (RS) data from satellites to evaluate ET over large areas. Satellite data are well suited for deriving spatially continuous ET surfaces that can be sometimes pared down to the field scale because of their temporal and spatial characteristics. However, the most accurate use of RS models require calibration to actual surface measurements and work from the field level originally. The approach proposed for the tasks in this scope of work includes a combination of high-density, specific ground measurements and remotely sensed modeling, calibrated with those field measurements.

STAFFING RESOURCES AND PROJECT COOPERATORS

Staff expected to work on this project from Land IQ have been involved in various aspects of evapotranspiration modeling, agricultural remote sensing, and regulatory support for the last 4 to 26 years, and are listed below. Other appropriately qualified staff may also participate to facilitate completion of any tasks approved by the KDWD as a part of this proposed scope of work.

- Principal In Charge and Principal Agricultural Scientist – Joel Kimmelshue, PhD
- Principal Remote Sensing Analyst – Zhongwu Wang, PhD
- Biometeorologist – Frank Anderson, MS

- Agricultural Scientist – Seth Mulder, MS
- Agricultural Scientist – Andrew Loberg, BS
- Remote Sensing Analyst – Juan Geng, MS
- Project Manager/Client Relations – Casey Gudel, MS
- GIS Analyst – Justin Sitton, BS
- Support Staff – Various as needed

Land IQ also welcomes input and collaboration with KDWD and or associated District/GSA staff and intends on integrating staff into continued instrumentation efforts, data collection, and monitoring programs as the on-the-ground, local component of the team, if desired and feasible for KDWD. This is not a requirement of the work efforts, however.

Implementation of these tasks may also include coordination efforts with other technical providers that Land IQ will manage as a part of this overall effort. Land IQ intends on working openly with these parties to help facilitate, to the extent possible, understanding and acceptance of the work approaches and data management used for analysis and ultimate results.

TASKS

This scope of work has been developed based on individual task discussions and requests from KDWD. These tasks include:

- **Task 1** – Monthly Field by Field ET, Precipitation, and Semiannual Crop Mapping
- **Task 2** – Monthly Reporting Via A Web-Based Tool
- **Task 3** – Station Management and Maintenance
- **Task 4** – Outreach

Each of these tasks is discussed in detail below and includes schedule and deliverables. A cost summary for all work is provided.

TASK 1. MONTHLY FIELD BY FIELD ET, PRECIPITATION, AND SEMIANNUAL CROP MAPPING

Scope of Work: It is proposed that the Land IQ Data Driven Method (LDDM) developed for Semitropic Water Storage District (used since 2016), North Kern Water Storage District (used since 2018), Shafter Wasco Irrigation District (used since 2018), East Kaweah Groundwater Sustainability Agency (used since 2020), the Tule Subbasin Groundwater Sustainability Agencies (used since 2020), Kings County Water District and the Mid Kings River GSA (beginning in 2021), Southern San Joaquin Municipal Water District (beginning in 2021), Southwest Kings GSA (beginning in 2021) and North Fork Kings GSA (beginning in 2021), and others be used. The LDDM is used to interpret image data and leverages robust and repeated ground station data to be implemented within the KDWD as well as a more direct image analysis. The approach yields more accurate results when repeated and representative ground calibration data are available as compared to RS ET estimates without ground truthing.

Because the LDDM establishes calibration and validation data at the field level and also analyzes at the field level, the result is field-level consumed water which can then be rolled up to any regional area desired. This is unique to the LDDM RS method as compared to other RS approaches and models.

Scope Confidentiality: This scope of work is considered confidential in nature, and is intended for review and consideration only by the addressees or direct representatives of the organization in the “Prepared For” line.

This method does, however, require robust ground truthing data, which is proposed as part of this work effort for KDWD. This effort will employ Landsat 8, Sentinel 2, and purchased high resolution satellite imagery (contracted by Land IQ and included in the overall cost). Satellite data will be screened for cloud cover and terrain corrected. It is important that the images used contain a clear sky. Ground measurements from monitored eddy covariance (EC), surface renewal (SR), Land IQ stations, and cooperators stations will be used to generate hourly ET data correlated to the satellite image overpasses and then used as a dependent variable in the modeling process.

It should be noted that Land IQ has hired as flex employees for complete independent review of our monthly results the following individuals:

- Blake Sanden, M.S., UCCE Irrigation & Agronomy Farm Advisor Emeritus, Kern County
- Allan Fulton, M.S., UC Irrigation and Water Resources Advisor, Emeritus, Kings and Tehama Counties

Deliverables: None

Schedule: Individual analyses will be completed monthly, and results delivered (Task 2) to the KDWD within approximately 25 days from the end of the previous month.

TASK 2. MONTHLY REPORTING VIA A WEB-BASED TOOL

Scope of Work: Monthly reports will be developed. The first of the 12 monthly reports will begin on the 1st of the month following completion of recording of 30 days of climatic data and will be delivered within approximately 25 days of the end of the previous month. Results will be delivered in both report and web-based format. The web tool will contain all fields, field boundaries, current crop mapping, coverages of field-by-field ET and precipitation as well as a download link for all results and reports. The web-based tool is designed to be used at the GSA level. The tool is not currently designed for individual grower access, however, can be developed at additional cost not included in this scope of work.

Deliverables: Monthly results will be delivered in both shape file and report formats.

In addition to ET, Land IQ will provide field by field crop type mapping for KDWD in electronic and summary form at least 2 times per year. These data will be the same crop mapping detail that are provided to the State of California, Department of Water Resources as Land IQ is the contractor for that dataset. The delivery of the crop mapping will be approximately July 15 and October 15 of each year and may be modified based on crop rotations and timing. Field by field precipitation will also be delivered as spatially interpolated from rain gauges on Land IQ climatic stations and other publicly available and reliable gauges (e.g. CIMIS stations, airports, municipalities, etc).

The three deliverables include:

- Monthly field-by-field ET
- Monthly field-by-field precipitation
- Field-by-field crop mapping (2 times per year)

All electronic vector and raster GIS files are available upon request.

Schedule: Individual analyses and reporting will be completed monthly, and results delivered within approximately 25 days of the end of the previous month being analyzed. Crop mapping data will be delivered on or about July 15 and October 15 of each year.

TASK 3. STATION MANAGEMENT AND MAINTENANCE

Scope of Work: This effort installs, manages and continuously maintains 6-8 ground truthing climatic stations of eddy covariance and/or surface renewal approaches to collect instantaneous ET ground data at select locations representing crop production within KDWD. At times, and depending on crop type/location shift, it should be expected that some stations may need to be moved. However, with some permanent crops within KDWD, some stations will stay within those permanent crops and are not expected to be moved. Regardless, all costs are included in the overall cost. Participating grower cooperation is required for station siting.

The data collected by these stations will be used to calibrate the LDDM RS models for ET and create ET estimates across all fields within KDWD to get a complete estimate of KDWD-wide ET and ET by crop type by field. Data stations are fully telemetered by cellular communication systems to Land IQ servers. The system incorporates data flagging protocols to identify any inconsistencies in collection or outages. Land IQ will conduct approximately monthly site visits in coordination with KDWD personnel (if desired) to verify proper functionality and perform any necessary or seasonal adjustments.

Deliverables: None

Schedule: Continuous

TASK 4. OUTREACH AND PRESENTATIONS

Scope of Work: This task accounts for up to two meetings per year to assist with or participate in outreach meetings with growers and/or District/GSA representatives.

Deliverables: Presentation materials

Schedule: As needed or directed by KDWD.

TOTAL COST AND PAYMENT TERMS

According to DWR records and Land IQ mapping there are approximately 128,635 gross acres within KDWD. Land IQ has mapped 11,332 acres of urban areas within KDWD.

Therefore, the net analysis area is 117,303 acres. The annual cost is \$0.76/acre/year, thus KDWD will receive a monthly invoice of \$7,429 for the 3-year duration. This amount does not include any credits that may be realized through the grant moneys of approximately \$365,000 obtained by Kern Groundwater Authority for the purposes of this work.

Land IQ is currently in conversations with other neighboring GSA's and Subbasins. If those larger acreage GSA's and Subbasins ultimately use the LDDM, the per acre costs may decrease depending on the acres involved and associated equipment cost. The cost may also stay the same. These costs are based on a minimum of a 3-year project duration commitment. If KDWD decides to not complete the 3-year project duration, the remainder of costs for outstanding labor and expenses will be due.

The cost of \$0.76/acre/year includes all equipment, labor, expenses, supplies, project management, and all other associated costs.

It should be noted that costs are estimates at this time and unforeseen variables and/or efficiencies may occur which may alter costs up or down. Also, annual escalations (e.g. 1-4%) to account for increases in labor costs may or may not be implemented at the beginning of each calendar year.

Scope Confidentiality: This scope of work is considered confidential in nature, and is intended for review and consideration only by the addressees or direct representatives of the organization in the "Prepared For" line.