(1/23/18) Board Meeting
A-2239(a)-(c)
Deadline: 12/22/17 by 12 noon

RECEIVED
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SWRCB Clerk

December 21, 2017

VIA EMAIL ONLY

Ms. Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
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P.O. Box 100
Sacramento, CA 95812
commentletters@waterboards.ca.gov

Re: Waste Discharge Requirements General Order No. R5-2012-0116
Comments to A-2239(a)-(c)

Dear State Water Board Members,

Thank you for the opportunity to provide comments on the Eastern San Joaquin Water Coalition Irrigated Lands Regulatory Program Draft Order. I am a fourth-generation member of a farming family in the Salinas Valley. Our farm supports the five families of our owners and over 700 employees.

I was recently given the opportunity to participate on a panel discussion regarding the Eastern San Joaquin Draft Order at the California Farm Bureau Annual Meeting held earlier this month. I have included a copy of my presentation slides at the end of this comment letter, Attachment A. The body of my comment letter will walk you through the slide deck with some specific comments to each point, from a grower perspective.

Central Coast Crops

Central Coast Agriculture, in particular cool season vegetable production, is quite complex. Our farm, for example, consists of a total of 44 individual ranches which vary in size; some are contiguous and some are not. The total number of blocks or fields among these ranches is 436 with an average size of 13.3 acres each. Some of these blocks get broken down even further for multiple staggered plantings, and as we plant through the year the average size of each individual planting is about eight acres. We average about 2.3 crops per acre per year and all of these crops have differing maturities or days from planting to harvest. For example, the spinach we grow will vary from between just 29 to 40 days total from planting to harvest; broccoli from 89 to 140, and iceberg lettuce might range from 66 to 115 days. We currently raise over 25 different crops and the total number of individual plantings for us in one year's time is in the thousands. Also, this isn't a "plant in the spring/harvest in the fall" scenario; our biggest planting week of the year is the last week of July.

Crop Rotations are critical for soil fertility and structure, as well as pest, disease, and weed management. I use Climatic Gradient (as compared to climate zones) because it is more representative of what we experience in the Salinas Valley, instead of a sudden change from one area to another. Climatic gradient is north/south and east/west depending on proximity to the mountains and ocean, as well as aspect to the sun.

Our operation alone spans over 32 different soil types, including (but not limited to) multiple profiles of sandy loam, silt loam, gravelly loam and clay loam, some with various slope elements as well.

Our operation has wells that don't change. Other wells have N03 concentrations that spike and plummet within days. It is unclear if this is a function of up-aquifer influence, legacy nitrate, septic tank pollution, or influences from farming practices. Regardless, our family has been diligent about managing our inputs carefully. We also take these levels into account in our nutrient budgeting, accounting for the fact that NO3 in our wells is sometimes more bioavailable to our plants than others, depending on timing of the crop's development cycle.

Concern: A/R Metrics

Deliverables are defined in Central Coast agriculture as the many different ways that a crop can be harvested & packed. For the 27 different crops we grow, we currently have 264 different deliverables. Romaine, for example, can be cut and packed to 58 different specifications to our customers.

Different sub-areas require different growing practices. For example, in the Salinas Valley a grower in Castroville (North County) will have fewer irrigation events on a crop of broccoli than a grower in King City (South County) where the average high temperature can consistently be 20 degrees warmer. Under this proposed regulation, will the increased water use in South County unfairly cast the grower in a bad light?

The ESJ order is confusing. It is mandating reporting on a geographical basis, but doesn't fully articulate why that is required versus reporting on a crop basis. If the goal is to do a mass N balance on a geographical basis, SWRCB needs to acknowledge that this has nothing to do with actual in-field management. This is a regulatory metric that is not helpful with day-to-day operation.

As I mentioned earlier, the number of plantings alone is a huge data capture. In looking back at our Salinas planting schedule for 2017, there were 3,657 individual line items. Some other data figures for reflection: The total number of fertilizer applications on only 33 of our ranches required for the 2016 Total Nitrogen Applied Reporting was 8,369. Soil sample data points for that same 2016 timeframe were 4,922 and are 4,012 for 2017 to date. With this number of plantings, one could estimate individual irrigation events in excess of 50,000 irrigations per season.

It is not only going to be difficult for Ag to use the tools mandated by the SWRCB ESJ Draft Order, it is going to be next to impossible for CCRWQCB Staff to use the mandated tools for short-term leases (3 to 6 months) and berries.

The A/R concept may be great in theory, but when put into practice in this draft (i.e. mapping/reporting concept) it is not practical to implement.

Map Slides
You can see how complex these maps are with only the planting information recorded on them. If I had included other criteria, which will be required through the proposed A/R reporting metric, including deliverables, irrigation, soils, fertility inputs, seed types/varietals, EvapoTranspiration) the maps would be black and completely unreadable. Deliverables alone, because of the varying amounts of residues left in the field, would result in yet another layer of complexity.

These factors will make reporting, as per the ESJ Draft Order, difficult (more likely, impossible).

Nutrient & Irrigation Management
Irrigation: We already talked some about varying water quality issues, but how about the variety of irrigation method and water sources. Common irrigation methods on the Central Coast are sprinkler, furrow and drip. It is common to use combinations of irrigation systems such as sprinklers for pre-irrigation and germination, then drip after the plants are established. Sources can range from wells, reservoirs, municipal or recycled water. Larger vegetable irrigation systems frequently consist of numerous wells which are all hydraulically connected to each other through a complex series of pipes and because the N concentration of each well varies, it is impossible to know the amount of N being applied in irrigation water for a particular planting.

EvapoTranspiration: How would we accurately estimate ET across soil types, bed spacing, varieties, etc. What research will be needed?

Projected Yields: This once again addresses challenges due to various deliverables. Yields are typically collected in units of cartons per planting and there are many different weights per carton depending on the packing density in the carton. All cartons do not weigh the same and the size of the carton for a particular harvest is frequently determined at the last minute by the buyer and their decision is controlled by the current (this week's) price for the commodity in question. Another scenario to consider: how do you accurately collect yield information when growing seven different types of lettuces in one field? What about conventional vs. organic? A really good organic yield is about 85% of a conventional field.

There is a lot of confusion regarding removal targets and co-efficients. One short-term challenge is insufficient research to calculate the coefficient to convert crop yield to nitrogen removed in order to calculate the A/R and A-R ratios. This burden, and cost falls on the 3rd party who must do the research by March 1, 2021. How do you accurately calculate removal targets, when you are growing romaine hearts vs. whole heads? Romaine hearts will leave more in the field (due to more trimming). Does that automatically cast the romaine heart grower in a bad light? What happens if a crop is left behind (example: no demand in the market)? Will growers be required to report the crop

deliverable since different deliverables leave more or less residue in the field? Will growers be required to estimate the amount of residue left in the field?

Variabilities: How do you account for times when nitrogen use is influenced by factors out of your control, such as disease, pest pressure, heat, etc. There are many factors that influence whether a crop, or how much of a crop, makes it to market. There are also decisions made mid-crop cycle that weren't expected due to factors out of the grower's control.

With regard to experts: Will an irrigation specialist certify nitrogen application? Will a CCA (Certified Crop Advisor) certify irrigation?

Elimination of Low Vulnerability
The format of the proposed templates calls to question the applicability or usefulness for actual Irrigation or Nutrient Management (most of which I've alluded to above).

Third-Party Coalitions
The Central Coast region has an uneasy relationship between the regional water board and the two third-party entities ('coalitions') created to manage surface and groundwater monitoring. During negotiations for the Ag Order adopted in 2012 the regional water board staff strongly discouraged coalitions as a means to allow growers to aggregate their groundwater monitoring program for cost savings or uniformity. Only during a last minute insertion by a regional water board director at the adoption hearing were coalitions included as an option for groundwater monitoring along the Central Coast.

Growers in Region 3 then elected to form their groundwater coalition, the Central Coast Groundwater Coalition ('CCGC'). During the first iteration of the 2012 Ag Order, the monitoring requirements were changed each year and costs escalated for participating CCGC growers. Then, the regional water board staff determined that information previously promised to be held as proprietary (i.e. trade secrets) was released publicly, both for growers participating in CCGC and those reporting their monitoring on their own. Unfortunately, the information submitted by CCGC on well water quality that was to remain as aggregated and reported by anonymous identifiers was forced to be released to the public by an unfavorable court decision.

These collective actions have led to a general distrust of how information is submitted and maintained by the regional water board staff when collected and aggregated through a third-party coalition. The Eastern San Joaquin Agricultural General WDR Requirements (ESJR) predisposes that information gathered through the third-party entities will be reported in aggregate format with anonymous identifiers to the regional water board, but experience on the Central Coast states that this will not be the case. Outside forces will work against this reporting structure and force individual farm and well information to be released into the public domain.

There are distinctions and challenges on the Central Coast that require modifications of the draft East San Joaquin Order for the Central Coast region. Crops grown on the Central Coast are very different and the precedential requirements need to be suspended while more appropriate measures are negotiated. This will allow for more time to

conduct research and gather data. In speaking with Dr. Lowell Zelinski, Central Coast Representative Member to the State Nitrate Expert Panel…he states, "cool season vegetable N reporting is distinctly different than all other commodities that I am aware of. How to report this information calls for a Central Coast Expert Panel which can deal specifically with the incredible complexity of nutrient management on the Central Coast." While big data is a hot trend, you will not be getting meaningful data under the current language of the draft order. We agree with the sentiments expressed in the letter you received by Monterey County Farm Bureau, et.al. as it relates to working with Central Coast agriculture on next steps.

The last item I wanted to comment on is with regard to the overlap between the East San Joaquin Draft WDR Order and SGMA. I wanted to express confusion about 1) how the Groundwater Quality Trend Monitoring Provision will apply to Irrigated Lands Regulatory Program on the Central Coast, 2) how the Groundwater Quality Trend Monitoring requirements may be redundant with the requirements in the Groundwater Sustainability Plan (yet to be written) required by the SGMA, and 3) concern about the lack of coordination between the ILRP and SGMA programs within SWRCB and how there may be a substantial amount of redundancy between the two programs.

Again, thank you for your consideration of these comments. I am very concerned with the precedential nature of the proposed order and its ramifications on the future of Central Coast agriculture. It is not a good fit for the complexities we deal with every day in Region 3. It is our family's hope that this is taken into account before the final regulation is put in place.

Sincerely,

Colby Pereira
Costa Farms, Inc.

Attachment A: "Central Coast Impacts – Eastern San Joaquin Irrigated Lands Program"

FARM BUREAU MONTEREY 1917 2017 100 YEARS

CENTRAL COAST IMPACTS

EASTERN SAN JOAQUIN

IRRIGATED LANDS PROGRAM

Colby Pereira
Costa Farms, Inc.

CENTRAL COAST CROPS

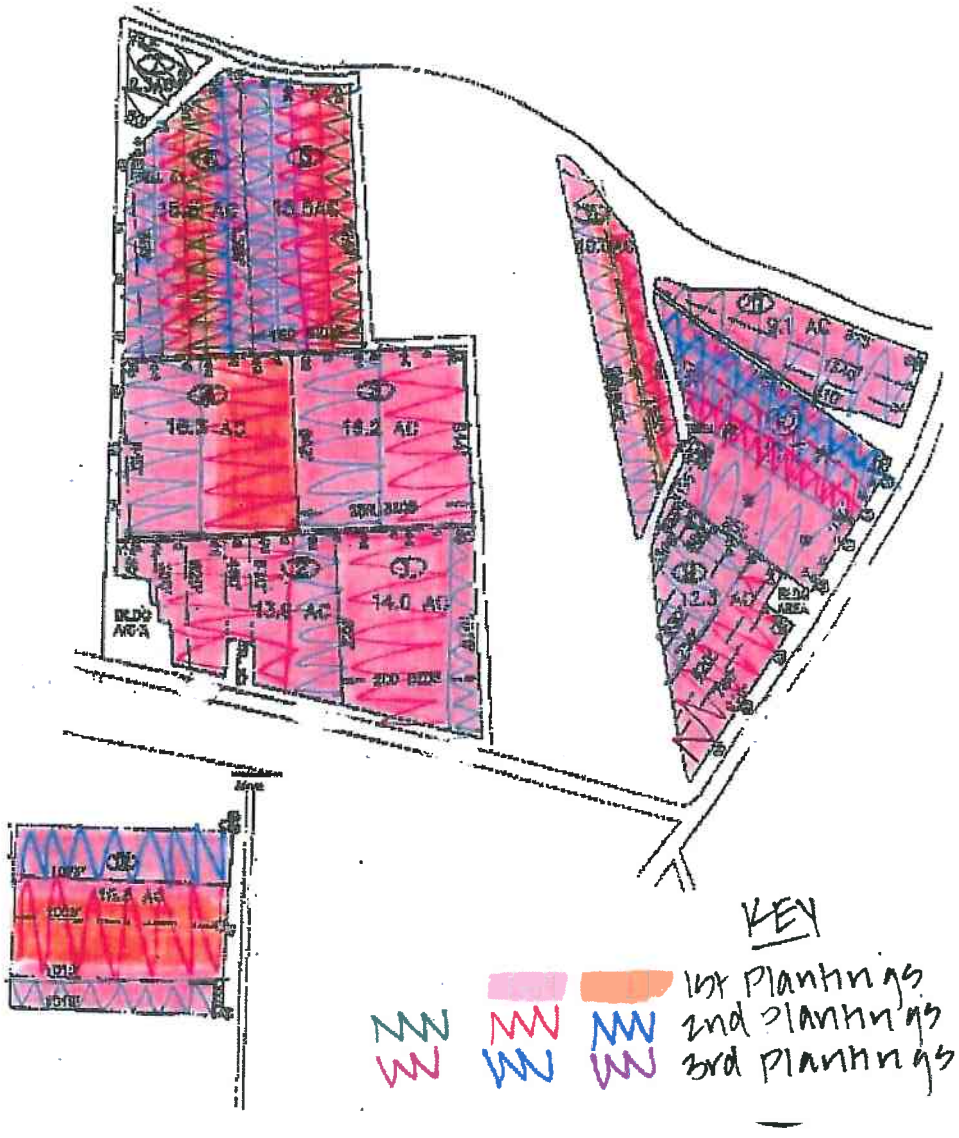
- 150 CROPS AND VARIETIES GROWN EACH YEAR
- FOUR-YEAR CYCLE OF CROP ROTATIONS
- VARIABLE COASTAL CLIMATIC GRADIENT
- OVER 45 DIFFERENT SOIL TYPES WITH NATURALLY OCCURRING ELEMENTS
- GROUNDWATER QUALITY VARIABILITY
- RECLAIMED WATER UTILIZED ON 12,000 ACRES IN MONTEREY COUNTY

CONCERN: A/R METRICS

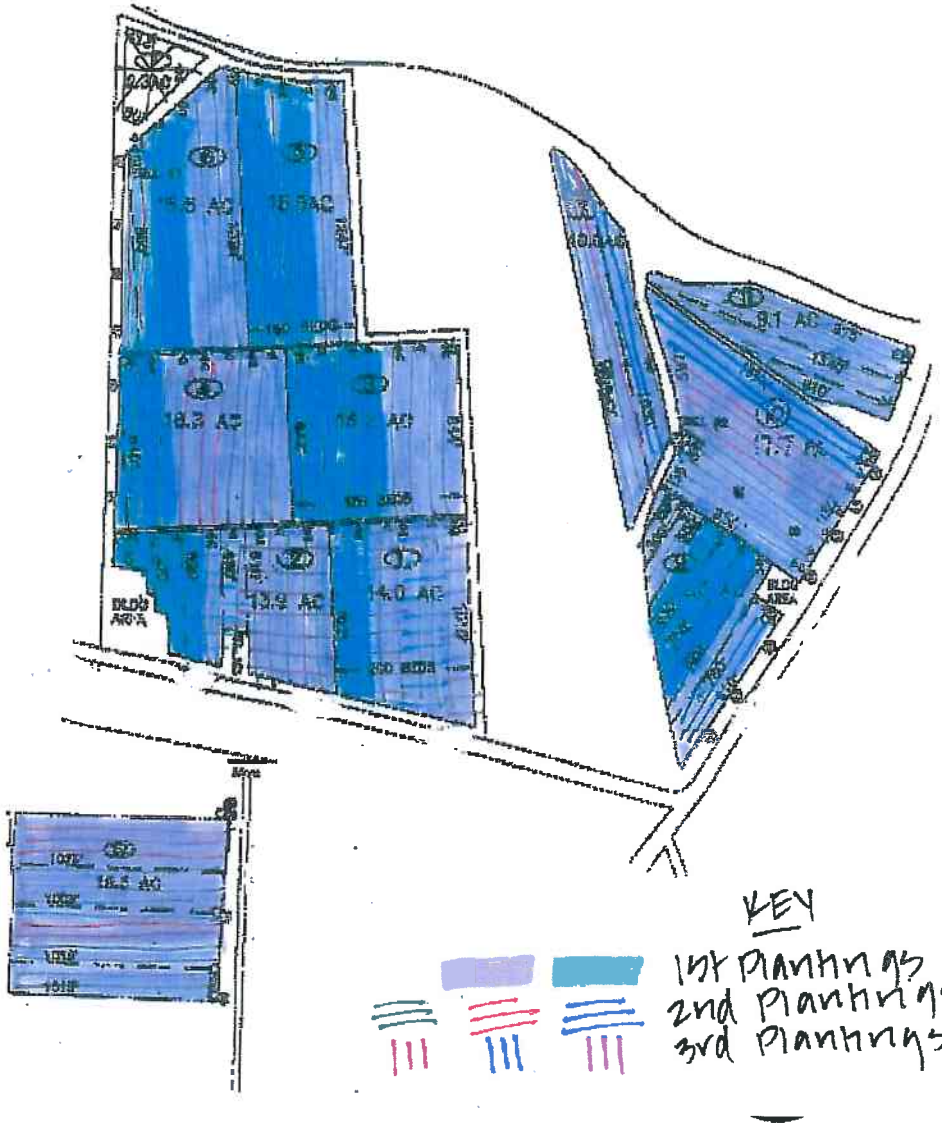
- NITROGEN APPLICATIONS VARY BY CROP, SEASON, SOIL TYPE, AND DELIVERABLES
- A/R RATIOS WILL BE DIFFERENT FOR THE SAME CROP IN DIFFERENT SUB-AREAS
- DATA CAPTURE IS A SIGNIFICANT BURDEN TO FARM OPERATORS
- DETERMINATION OF 'OUTLIERS' IS PROBLEMATIC FOR ROW CROPS & BERRIES
- THREE-AVERAGE FOR ANY ONE CROP ON THE SAME FIELD WILL BE IMPOSSIBLE TO CAPTURE DUE TO CROP ROTATIONS

2015 Multiple Plantings

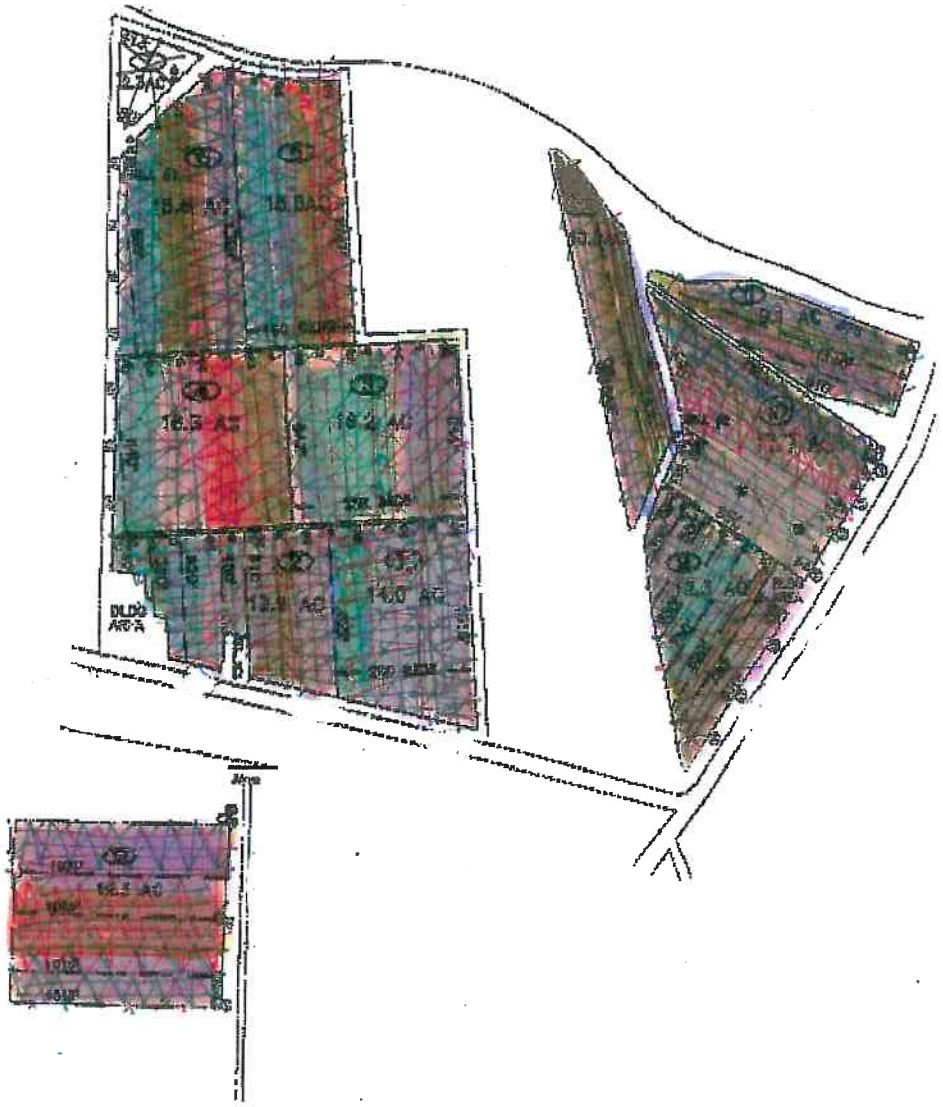
2016 Multiple Plantings



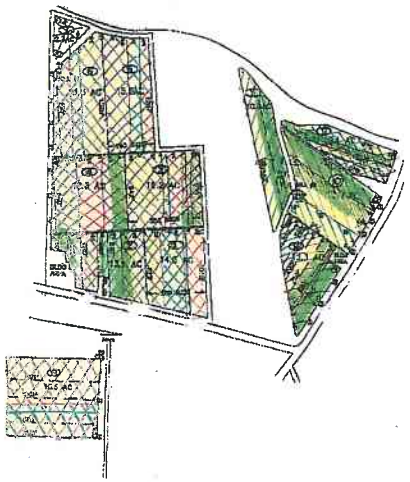
2017 Multiple Plantings



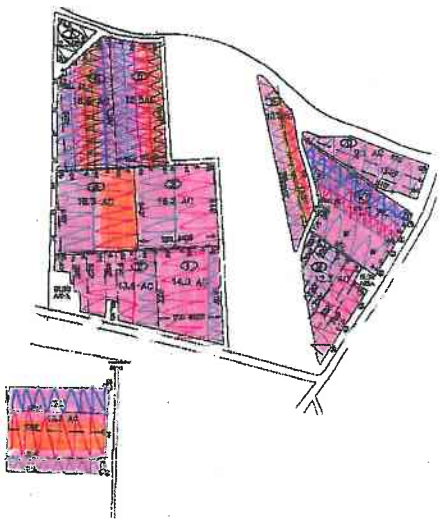
3-Year Average For Multiple Plantings



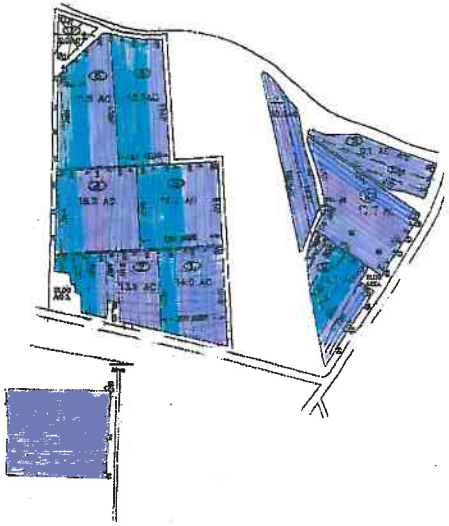
3-Year Average for Multiple Soil Types



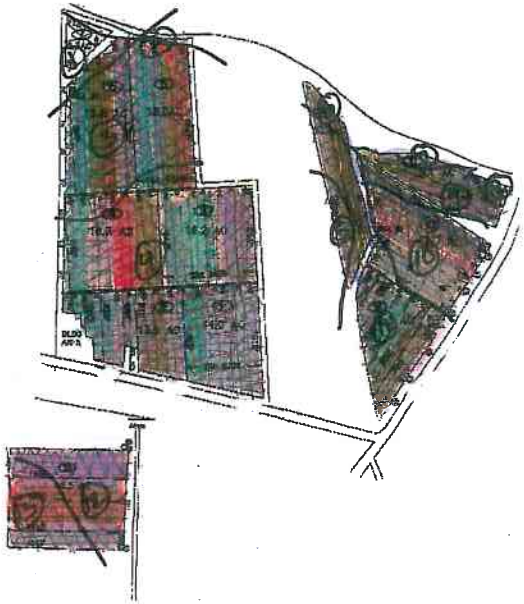
2015



2016



2017



3- Year Average

NUTRIENT & IRRIGATION MANAGEMENT

- COMBINING THESE TWO ELEMENTS INTO ONE PLAN ADDS LAYERS OF COMPLEXITY AND CALCULATIONS:
  - IRRIGATION METHODS AND ANTICIPATED APPLICATIONS
  - CROP EVAPOTRANSPIRATION
  - PROJECTED YIELDS
  - WEATHER VARIABILITIES BY SEASON

- MOST FARMS WILL NEED TO HIRE EXPERTS TO HELP DEVELOP AND VALIDATE CROP CULTURAL PRACTICES AND ASSUMPTIONS

ELIMINATION OF LOW VULNERABILITY

- ALL GROWERS WILL BE REQUIRED TO FULFILL COMPLIANCE REQUIREMENTS REGARDLESS OF RISK BY CROP OR SPECIFIC FIELD CONDITIONS OR CIRCUMSTANCES
- ALL GROWERS NOW MUST PREPARE IRRIGATION AND NUTRIENT MANAGEMENT PLANS; DIFFICULT AND EXPENSIVE FOR SMALL GROWERS
- UNIFORM REPORTING OF DATA WILL REQUIRE SPECIALIZED PERSONNEL TO TRACK, COLLATE, AND ANALYZE DATA SUBSETS
- PLACES UNDUE BURDENS ON THOSE WHO HAVE NO RISK FACTOR; ASSUMES GUILTY UNTIL PROVEN OTHERWISE

THIRD-PARTY COALITIONS

- SURFACE WATER & GROUNDWATER MONITORING COALITIONS ALREADY EXIST BUT DO NOT FULFILL ALL PROPOSED REQUIREMENTS
- COSTS OF COALITIONS EXCEED PROJECTIONS; INDIVIDUAL REPORTING MAY BE MORE COST EFFECTIVE FOR SOME GROWERS
- NO DESIRE TO PROVIDE MORE DATA TO COALITIONS AFTER ADMINISTRATIVE AND LEGAL DETERMINATIONS ERODING PRIVACY OF INDIVIDUAL INFORMATION
- COMMODITIES ARE DEVELOPING 'SUSTAINABILITY IN PRACTICE' CERTIFICATIONS
- LEGALITY OF REQUIRING EXISTING COALITIONS (AS TAX-EXEMPT ORGANIZATIONS) TO MEET REGULATORY REQUIREMENTS

Central Coast Farming presents
a complex set of challenges
for collecting compliance data.

FARM BUREAU MONTEREY
100 YEARS
1917 2017