

Eastern San Joaquin Agricultural General Receiving Water Limitations:

(all slides taken from the State Board)

Surface Water Limitations

Wastes discharged from Member operations shall not cause or contribute to an exceedance of applicable water quality objectives in surface water, unreasonably affect applicable beneficial uses, or cause or contribute to a condition of pollution or nuisance.

Groundwater Limitations

Wastes discharged from Member operations shall not cause or contribute to an exceedance of applicable water quality objectives in the underlying groundwater, unreasonably affect applicable beneficial uses, or cause or contribute to a condition of pollution or nuisance.

- The General Water Discharge Requirements (**WDRs**) state that these receiving water limitations are **effective immediately except where Members are implementing an approved Surface Water Quality Management Plan (SQMP) or Groundwater Quality Management Plan (GQMP), with an approved timeline**, as authorized by the General WDRs

We believe that a carefully-crafted third party-based approach should be an available option for all of the significant agricultural discharge programs in the state. Therefore, **we direct all** of the regional **water boards to issue** general waste discharge **requirements** or general waivers of waste discharge requirements **based on a third-party approach** consistent with our description of the roles and responsibilities of a third party in this Order within the next five years.

New Metric for Nitrogen Application Management

Board will direct growers to **track** values for **total nitrogen applied** to the field, **actual yield**, and nitrogen removed from the field through **primary and secondary harvest yields**. The nitrogen applied and nitrogen removed calculations as the simplest metric of good management – the multi-year ratio of **nitrogen applied** to the field (**A**) to **nitrogen removed** from the field (**R**), or the **A/R ratio**. The nitrogen applied includes nitrogen from any source. The nitrogen removed includes the nitrogen present in all harvested materials removed from the field (including any prunings, removed vegetation, etc.) plus, in the case of perennial crops, the nitrogen sequestered in the permanent wood.

We direct the Third Party to publish nitrogen removed coefficients for crops that cover 95% of acreage within the WDRs' boundaries by March 2021 and 99% of the acreage by March 2023 (with estimated coefficients based on similar crops being acceptable for crops covering the remaining 1%). The coefficients shall be approved by the Regional Water Board Executive Officer, in consultation with State Water Board staff. Third Party must use those values to retroactively calculate the A/R ratio and A-R difference and the three-year running average for the A/R ratio.

Data Sets Required

While we direct reporting of field-level data, rather than aggregated data **at this early stage, we will not require the individual field data to be routinely identified by name or location.** We are satisfied that the goals of the program can be carried out effectively if field-level data is **linked to anonymous identifiers**, with the Third Party withholding name and location data, **at least in the early stages of the program.**

We heard extensive testimony in these proceedings from third parties and growers stressing that the continuation of a third-party framework in irrigated lands programs depends in part on an expectation of confidentiality for growers who prefer to interface with a third party rather than the regulatory agency. We are not persuaded that the maintenance of confidentiality, in and of itself, is a legitimate goal of a regulatory program that must have transparency and accountability to the public.

The Water Board will receive several data sets commencing in May of 2019, in addition to the water quality monitoring data submitted under the existing WDRs: a data set with management practice implementation reported by Members on the Farm Evaluation, INMP Summary Report, and MPIR, three data sets with AR data reported by Members on the INMP Summary Report, **one associated with Anonymous Member IDs**, one associated with **Anonymous APN IDs**, and **one associated with townships**.

The Board is directed to use the data to first **verify the accuracy and completeness of the analyses and summaries**. Second, **use the data to confirm that the Third Party is appropriately following up with its Members**, including those who are AR data outliers, those failing to implement appropriate management practices, and those that fail to timely submit required reports. Third, **to make the anonymous field-level data tables available to researchers and *stakeholders***.

Finally, the Board, will evaluate the AR data for the purposes of **developing acceptable ranges for the multi-year A/R ratio target values for crops.** The Board is directed to develop, **target values for each crop within three years** of the availability of the nitrogen removed coefficient for that crop. It is expected that the multi-year A/R ratio target values will be further refined over time for different conditions (e.g., irrigation method, soil conditions) for each crop.

Sample Field-Level Data Reported by Anonymous Member ID

Anonymous Member ID	Crop for each field	N Applied			Total Nitrogen Applied (lbs/ac)	Nitrogen Removed (lbs/ac)	A/R	A-R (lbs/ac)	3 yr A/R
		N Applied via Fertilizer (lbs/ac)	N Applied via Organics/Compost (lbs/ac)	N Applied via Irrigation (lbs/ac)					
243721	Tomato ₁	180	10	6	196	148	1.3	48	1.3
243721	Tomato ₂	150	0	45	195	60	3.3	135	3.7
243721	Corn, silage	230	0	17	247	210	1.2	37	1.4
341962	Almond	180	5	22	207	140	1.5	67	1.3
810619	Corn, grain	200	0	5	205	120	1.7	85	1.6
810619	Alfalfa	0	0	35	35	510	0.1	-475	0.1
781936	Almond ₁	250	0	0	250	130	1.9	120	2.1
781936	Almond ₂	135	10	31	176	54	3.3	122	3.6

*The data in this table is for illustrative purposes only and does not represent actual data collected.

Sample Field-Level Nitrogen Data Anonymous APN ID

Anonymous APN ID	Crop for each field	N Applied					Total Nitrogen Applied (lbs/ac)	Nitrogen Removed (lbs/ac)	A-R	
		N Applied via Fertilizer (lbs/ac)	N Applied via Organics/Compost (lbs/ac)	N Applied via Irrigation (lbs/ac)	A/R	(lbs/ac)			3 yr A/R	
AQRTM	Tomato ₁	180	10	6	196	148	1.3	48	1.3	
AQRTM	Tomato ₂	150	0	45	195	60	3.3	135	3.7	
AQRTM	Corn, silage	230	0	17	247	210	1.2	37	1.4	
GJZQN	Almond	180	5	22	207	140	1.5	67	1.3	
MNOPR	Almond	180	5	22	207	160	1.3	47	1.2	
CFRMO	Corn, grain	110	0	5	115	92	1.3	23	1.6	
QZIFE	Corn, grain	110	0	5	115	92	1.3	23	1.6	
QZIFE	Alfalfa	135	10	31	176	54	3.3	122	3.6	
ROTBM	Almond	250	0	0	250	130	1.9	120	2.1	
LGTVI	Almond	135	10	31	176	54	3.3	122	3.6	

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Sample Township-Level Nitrogen Data

Township Range (TR)	Crop	Total Acreage (ac)	N Applied via Fertilizer (total lbs)	N Applied via Organics/Compost (total lbs)	N Applied via Irrigation (total lbs)	Total Nitrogen Applied (total lbs)	Nitrogen Removed (total lbs)	A/R	A-R (total lbs)
02S07E	Almonds	88	20000	60	2390	22450	22400	1.0	50
02S07E	Corn, silage	54	12420	0	650	13070	11340	1.2	1730
02S07E	Walnuts	35	5250	0	500	5750	3575	1.6	2175
05S14E	Almonds	115	20700	0	3540	24240	16100	1.5	8140
05S14E	Corn, grain	600	66000	250	0	66250	55200	1.2	11050
05S14E	Grapes	112	2800	75	200	3075	3140	1.0	-65
05S14E	Oats	32	--	--	--	--	--	--	--
05S14E	Pistachios	1293	155160	0	3550	158710	108612	1.5	50098
05S14E	Wheat	1040	156000	200	900	157100	104000	1.5	53100
06S09E	Almonds	38	5700	0	705	6405	2052	3.1	4353
06S09E	Corn, grain	2144	235840	0	9858	245698	197248	1.2	48450
07S11E	Almonds	4696	657440	2000	3250	662690	422640	1.6	240050
07S11E	Tomatoes	891	160380	0	9928	170308	131868	1.3	38440
07S11E	Walnuts	105	15750	45	0	15795	8400	1.9	7395
08S13E	Barley	400	57000	200	400	57600	32000	1.8	25600
10S15E	Almonds	9328	2000000	800	14048	2014848	1679040	1.2	335808
10S15E	Corn, grain	387	42570	250	0	42820	35604	1.2	7216
10S15E	Tomatoes	91	12000	30	500	12530	17900	0.7	-5370
10S15E	Walnuts	80	11500	0	50	11550	9600	1.2	1950
11S17E	Almonds	9817	1511000	0	820	1511820	1079870	1.4	431950
11S17E	Corn, silage	54	12420	0	650	13070	11340	1.2	1730
11S17E	Walnuts	760	140000	300	6000	146300	66500	2.2	79800
13S17E	Almonds	1724	410000	0	3760	413760	258600	1.6	155160
13S17E	Tomatoes	186	19500	10	0	19510	1467	13.3	18043
13S17E	Walnuts	189	30000	200	1550	31750	6250	5.1	25500

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