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June 19, 2020

Central Coast Regional Water Quality Control Board
Att: Matthew T. Keeling, Executive Officer
895 Aerovista Place, Ste. 101
San Luis Obispo, CA 93401

VIA: E-mail to AgNOI@waterboards.ca.gov

RE: Comments on Draft Ag Order 4.0

Dear Mr. Keeling:

Monterey County Farm Bureau represents family farmers and ranchers in the interest of protecting and promoting agriculture throughout our County. Since 1917, Farm Bureau strives to improve the ability of those engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of our local resources.

Our organization has been actively involved in the Irrigated Lands Regulatory Program (Ag Order 4.0) development process, providing progress updates to our Board of Directors each month; a technical advisory committee was formed with Grower-Shipper Association of Central California so member stakeholders could address on-farm issues and provide input into the various aspects and elements of the proposed program. We appreciate the opportunity to provide comments on the draft Ag Order 4.0 released on February 21, 2020.

Background

Monterey County Agriculture is a diverse cropping system of vegetables, leafy greens, berries, grapes, cattle, totaling almost 150 varieties of seasonal and annual crops. The convergence of great soils, adequate water supplies (highly developed), and climate make the Salinas Valley area of Monterey County one of six areas of the world commonly referred to as a 'Mediterranean Climate' zone.

Annual Crop Reports are generated by the Agricultural Commissioner's office, with the latest report of 2018 placing Monterey County fourth in California production with \$4.25 billion in

gross farm gate value.¹ The diversity of our cropping systems allows for continual growth in value each year even if one or more crops experiences poor market pricing or sub-standard production quality.

Monterey County is dependent on local Agriculture for its economic vitality, with over 72,000 jobs directly or indirectly related to agricultural operations, production, and processing. Local communities are predominantly characterized as having large immigrant populations, most employed in either the Agriculture or Hospitality sectors.

Intense pressures from pests, diseases, and molds have challenged the entire agricultural community to seek out new and better ways to manage these issues. Continuation of research through UC Cooperative Extension and California Leafy Greens Research Program, for example, have helped to manage both on-going issues as well as new, exotic pests that are frequently introduced due to our global community and marketplace.

While Monterey County may be known as a tourist destination that includes Pebble Beach, Cannery Row, the Monterey Bay Aquarium and National Marine Sanctuary, the agricultural sector of our economy is nearly three times larger when direct, indirect, and induced economic factors are tabulated.² The Salinas Valley comprises nearly 220,000 acres of irrigated agriculture, plus many more acres dedicated to grazing in the surrounding foothills.

The past five years have brought new technology firms to the Salinas Valley as connections have been made with the Silicon Valley as their interest in 'Ag Tech' expands to include irrigation and field practices that are increasingly being improved through technology gains. The Technology Innovation Center in Salinas focuses on this integration of technology into the growing practices that are increasingly pressured by water quality and quantity regulations. Monterey County enjoys farming operations that are some of the most advanced in our State and are early adopters of new technologies; already nearly 70% of crops produced are grown utilizing micro-irrigation practices.

The Salinas Valley is known as the Salad Bowl of the World, producing 59% of the leafy greens consumed nationally each year, 53% of the broccoli, and 30% of the strawberries. Monterey County leads California's production in nine crops important to healthy diets: lettuce, strawberries, broccoli, cauliflower, mushrooms, spinach, artichokes, cabbage and celery.

Comments on Process

The extensive amount of information included in the draft Ag Order 4.0 documents, including all appendices, tables, findings, and narratives, represents a substantial change in how the regulated community will be monitored and required to comply with a large amount of new and different requirements. To fully understand the implications of such a broadly scoped regulatory program requires extensive and careful review of all the provisions contained therein, including any unintended consequences that result from these new monitoring and regulatory requirements.

¹ Monterey County Crop Report, 2018, County of Monterey Agricultural Commissioner, Salinas CA, June 2019.

² Economic Contributions of Monterey County Agriculture: Leading the Field Through Diversity and Technology, Monterey County Agricultural Commissioner, Salinas CA, June 2015.

The regulated community needs to be treated fairly and allowed substantial time to provide reaction and input into the Ag Order 4.0 process. The distractions of the COVID-19 crisis have consumed much valuable time that would otherwise be dedicated to reading, analyzing, and assessing the impacts of the multitude of information presented; many stakeholders may find themselves disenfranchised due to the pandemic and its lasting effects on farming operations.

During the 18 months leading up to the issuance of the draft Ag Order 4.0, representatives from agricultural associations participated in several meetings held with Central Coast Regional Water Quality Control Board (Regional Water Board) staff to discuss specific elements of the irrigated lands regulatory program, both those currently in place within Ag Order 3.0 and those under consideration for the draft Ag Order 4.0. During these discussions, agricultural representatives detailed the complexities of the cropping patterns, soil types, micro climates, and food safety measures that all farms must practice. Extensive discussion was held on the precedential mandates of the Eastern San Joaquin Irrigated Lands Regulatory Program (ESJ) and how those might be applied to intense Central Coast farming practices. The extent of these discussions appears to have not impacted much within the draft Ag Order 4.0 provisions and mandates; we find that many of the items and issues discussed in these sessions with Regional Water Board staff were not taken into account or were largely ignored.

We also raise concern over the process that got us all to this point. Several workshops and presentations were held before the Regional Water Board where the regulated community was not allowed to present or provide rebuttal to the presentations made before Regional Water Board members. This presented an unfair, one-sided viewpoint to Regional Water Board members and did not reflect the regulated community's efforts to find common ground and consensus for a new approach or revised program that provides a realistic pathway to compliance with water quality objectives.

This draft Ag Order 4.0 proposes to substantially change the footprint and method of producing food crops in the Central Coast region; the economic impacts of these changes cannot be minimized, and should be fully studied and considered during the adoption process because of the impacts to local communities. The value of the farming sector to the Central Coast economy is not reflected in this process; the lack of clarity and consideration of the economic impacts places all stakeholders at a disadvantage.

To this end, we find the process for development of the draft Ag Order 4.0 is deficient and places the regulated community in the unfavorable position of having to defend its right to grow crops and maintain a profitable livelihood, and indeed, to remain viable in the coming decade. Further, this draft Ag Order 4.0 is not a compromise program as was sought by the regulated community, to make it achievable with positive results on water quality improvements.

Farm Plans and Data Management

Multiple elements of the farm plan must be developed to be compliant with this proposed program. We find this set of requirements excessive and costly for most farms, and indeed, many small farms will not be able to develop all the technical information required for these plan elements. While some of these requirements exists in prior Ag Order iterations, the Sediment and Erosion Management Plan (SEMP) and Riparian Area Management Plan (RAMP) elements are more involved and will require professional expertise to substantiate the on-farm practices to be included in these plans.

We question the ability of farms to find enough professional expertise to develop, update, and certify all or parts of the Farm Plans, as indicated in the requirements for compliance. Changes to California law have thrown the entire consultant community into uncertainty (referencing AB 5 implementation), with many professionals now questioning their ability to provide services as they can neither be employees of any company or consultants in the true sense of the law. The atmosphere towards consultants with professional credentials in crop, soils, and pest control is hostile and will probably not survive (in its current form) the implementation of this new employer-employee relationship law. Liability exposures make it difficult for these consultants to certify any plan, no matter how simple or complex. While Regional Water Board staff may desire that elements of the Farm Plans be certified by these professionals, the reality is that this professional structure has been altered by state and liability laws and should not be mandated in the draft Ag Order 4.0; Regional Water Board staff has been made aware of these shortcomings and should have considered this new paradigm at the time of drafting these requirements.

Significant data collection by all farms will be mandated if compliance with all the Farm Plan elements is to be achieved. The number of crops produced, along with the rotation of crops on farms, will cause an intensive amount of data gathering at each step of a crop's cycle, from field preparation to harvest. An average farm of 300 acres will most likely have around 2,500 to 3,000 data points annually that must be recorded, stored, and then reported. There can be no underestimation of the amount of time and resources this will require, especially for a small farm operation where most of the employees are family members with limited time for office work. The complexities of this data management provision of the draft Ag Order 4.0 cannot be minimized and will significantly increase the burden of farming management.

One area of major concern is the collection of evapotranspiration (ET) data points that need to be maintained by farms or ranches during a crop cycle. Are these to be collected daily during the growing stages of the crop? Or as the weather changes? This could lead to a large number of datapoint record keeping that exponentially impacts daily farming operations. More clarity on the collection of ET information is needed prior to initiating this provision of the draft Ag Order 4.0.

Many of the farm operations in the Central Coast region, despite multiple communications from agricultural associations and the Regional Water Board itself, are largely unaware of the proposed provisions of the draft Ag Order 4.0. This will then present a large challenge to educate and train the responsible parties of all the requirements for record keeping, plan development, monitoring, and reporting that will be implemented over the course of the program (with a heavy front-end load). We find no evidence that the Regional Water Board staff has considered the amount of time, effort, and capital that will be required by farming operations to put these processes in place; the learning curve will be very steep and beyond the technical capacity of most skill levels currently available. Will the Regional Water Board staff assume the role of process educator to ensure that all enrolled in the Irrigated Lands Regulatory Program are aware of these new requirements? Agricultural associations and third-party providers should not be expected to manage this education and indoctrination process.

How will Regional Water Board staff manage the quality assurance (Q/A) of data submissions? With so many data points being reported by individual farms (say 4,300 farms with 2,500 data points on average, or an estimated total of 1,075,000 data points each year), there appears to be a strong need for data management and Q/A before any analysis can be undertaken. Errors in compliance reporting, which will happen due to human nature and the process of submitting the data by manual entry, will compound the inefficiencies of this data collection process. We

express concern that the Regional Water Board staff is not sufficiently prepared for the amount and extent of the data reporting that will take place, nor possess the ability to Q/A the data in a timely manner for proper analysis.

With the amount of data required to be collected and reported on the Annual Compliance Form (ACF), there may need be an extended time frame for reporting this information to the Regional Water Board staff; we suggest lengthening the reporting period to at least 90 days from the close of the reporting cycle year.

We suggest the answer to this data complexity is to move more to a whole farm model of reporting, rather than individual crops; we support collection of annual compliance reporting by farm or ranch rather than by each individual crop.

Nitrogen Application Limits

Agronomically, all crops require nitrogen to be successful to the point of producing yield that is marketable at a profit. Various factors such as climate, soil type, crop variety, and finished product structure all play into the nitrogen equation to produce a successful product for market. Science must drive the amounts of nitrogen required for each individual crop; much of that science is lacking for the mandated coefficients needed for compliance calculations. What may be researched for a crop in another region or state does not necessarily apply to the Central Coast region as climate and soils are different, with unique characteristics differentiating even the smaller areas of many of the production valleys. Much of the available research on coefficients is now dated. One size does not fit all.

We find the limits placed on residual nitrogen in soils post-harvest in the later years of the draft program unacceptable and not supported by scientific agronomic research or currently available farm practices (referencing Table C.1-2, "Time Schedule for Nitrogen Discharge Targets and Limits" for years beyond 2030). The timeframe is too short to achieve and substantiate this type of unilateral reduction in soil residuals for nitrogen given the current levels of agronomic science; more research is needed to validate any late-program limit mandates on nitrogen use and residuals.

It appears that Regional Water Board staff has taken the Thomas Harter groundwater report to the State Legislature (2012) and added a factor for water application rate to come to the 50 pounds per acre limit in 2050. This was not the intent of Dr. Harter when he presented his report nor should this metric be used as a regulatory limit; the calculation is too inaccurate to be a mechanism to determine groundwater recharge risk that includes residual nitrogen not consumed during the production of a crop. This type of calculation is far too general when considering the multiple soil types of the Central Coast region and does not account for denitrification during the immediate application and root zone transference (estimated to be 5% to 20% of the amount applied). One size does not fit all.

Rather than trying to measure individually by crop, we suggest that these complex calculations of residual nitrogen loading to groundwater be managed on a farm or ranch annual production cycle basis, then aggregated to a township level or a geographical area that fits with any cooperative monitoring efforts approved, similar to the ESJ precedential order. But even this measurement structure will pose challenges as it will bisect some farms and ranches into multiple townships or geographical areas.

The allocation that the Regional Water Board staff interprets as the water application rate (1.5 acre foot/acre) is actually low for the multitude of crops produced in the Central Coast region. Thus, the estimate for water application used for this calculation determination of 50 pounds per acre is not supported by agronomic science nor the Harter report conclusions due to underestimation of specialty crop irrigation requirements. Specific crops require differing irrigation needs; one size does not fit all.

Further, substantiating nitrogen remaining in soils post-harvest is subject to many factors and cannot be based on harvested product removed alone. Finished product structures vary even within the same crop such as romaine lettuce. The amount remaining in the field post-harvest depends on the overall crop yield and quality. What happens if there is a gleaning post-harvest, where the amount of product removed cannot be quantified? Is there an allowance for unharvested crops or fields (i.e. disease or pests, lack of harvest crew, bad weather, abandonment, etc.)? How will continuously harvested crops such as strawberries or multiple harvests of the same spinach crop measure the amount of nitrogen removed each harvest day? These variables add multiple layers of complexity and data collection points when taken fully into account for quick-turn fresh vegetable and berry crops.

Again, one size does not fit all.

Limits should be restated as *targets* to avoid a future expectation that all farms must and will meet all specified water quality objectives by a specific date. Farming is an imprecise process that is done outside in the environment with a multitude of variables; holding all farms to a one-size-fits-all *limit* will inevitably lead to some enforcement actions as well as third-party legal complaints against specific growers for circumstances beyond their control (a limit will be equated as a litigation threshold). *Limits* do not provide flexibility for a multitude of variables that can occur during production and harvest; *targets* will allow for this flexibility when it is just not possible to achieve the objective due to environmental or agronomic constraints, or the sub-watershed is impaired for other factors not related to agricultural activities.

What's missing here is that fertilizer application is not an exact science, dependent on a large number of agronomic and climactic variables; equating this to a *limit* is an attempt to mismanage that imperfect science into an exact number per crop.

We find that the two calculation formulas will require a multitude of data collection points to manage an accurate coefficient determination.

“Compliance Pathway 1: $AFER + (C \times ACOMP) + AIRR - R = \text{Nitrogen Discharge}$ ”

OR

Compliance Pathway 2: $AFER + (C \times ACOMP) = R$

In both formulas, $R = RHARV + RSEQ + RTREAT + ROTHER$

- a. **AFER** is the amount of fertilizer nitrogen applied in pounds per acre.
- b. **C** is the compost discount factor used to represent the amount of compost nitrogen mineralized during the year that the compost was applied.
- c. **ACOMP** is the total amount of compost nitrogen applied in pounds per acre.
- d. **AIRR** is the amount of irrigation water nitrogen applied in pounds per acre.
- e. **R** is the amount of nitrogen removed from the field through harvest, sequestration, or other removal methods, in pounds per acre.

- f. **RHARV** is the amount of nitrogen removed from the field through harvest or other removal of crop material.
- g. **RSEQ** is the amount of nitrogen removed from the field through sequestration in woody materials of permanent or semi-permanent crops.
- h. **RTREAT** is the amount of nitrogen removed from the ranch through a quantifiable treatment method (e.g., bioreactor).
- i. **ROTHER** is the amount of nitrogen removed from the ranch through other methods not previously quantified.”³

There are a number of unknowns in these two compliance pathways that require further consideration before they can be fully implemented by growers and harvesters:

- Note that AFER and ACOMP are not spread in uniform amounts over any particular acre of crop; some areas will require less or more depending on soil content, crop growth, or finished product yield. It is unclear if a grower is to average this amount over the entire farm, acre, or field, and if that is acceptable for compliance, and how that influences nitrogen residual in soils.
- Irrigation water nitrogen content (AIRR) is often variable through the growth cycle of a crop; multiple wells may be blended on any farm to achieve optimal irrigation efficiency, which can vary the nitrogen content based on how water is sourced from each well. How will variable amounts of N in AIRR be recorded within the coefficient calculation? Will estimates be allowed for irrigation water nitrogen concentrations in this situation?
- ESJ allows for AIRR to be averaged for water use reporting; we noted that estimates are allowed for AIRR reporting, but why is averaging not incorporated in the draft Ag Order 4.0 as one of the reporting methods?
- Use of AIRR is not specifically incentivized and may end up being a disincentive in these equations if an additional fertilizer application is needed to finish a crop.
- AIRR is utilized to moisturize soil for field preparation and germination when there is little or no nitrogen uptake; growers with irrigation wells with a high-nitrate concentration will be at a disadvantage to meet regulatory objectives when utilizing this farm practice.
- The Central Coast region’s Mediterranean climate has precipitation periods concentrated primarily in the months of October to April annually; this is not considered as a factor in groundwater percolation and replenishment. How will cycles of dry and wet periods impact groundwater quality objectives relative to farming practices that seek to contain residual N in soils?
- Variability in soil types throughout the Central Coast region is not considered, nor are weather sub-sets that may influence the amount of AIRR utilized for any crop.
- There is no element of these equations that accounts for the amount of water content removed at harvest in any given crop.
- Nitrogen application methods utilized on a farm or ranch are not considered; methods vary for nitrogen application and uptake efficiency, such drip, sprinkler, foliar, or furrow. Why is this not considered in the equation of N applied (AFER)?
- Most farmers will not be able to calculate their C (compost discount factor) as the amount of nitrogen varies in compost mixes and mineralizes at different rates due to a number of environmental factors. Are growers expected to hire professionals to make this calculation (or rely on their compost supplier to make this calculation accurately)?

³ Draft General Waste Discharge -10- Order No. R3-20xx-xxxx Requirements for Discharges from February 21, 2020 Irrigated Lands (WDR Document), Part 2, Section C-1., #4, page 25.

- Many growers are not the harvesters of their own crop and are not fully aware of the yield amounts per acre because they sell on contract to a specific buyer; growers, thus, would not be responsible for the sampling and testing of RHARV and would have not have sufficient data to calculate the required coefficient unless there is a specific provision to share this information, which many agreements between growers and buyers prohibit.
- There could be multiple finished products harvested from any given field; for instance, romaine in one field could yield hearts, leaf, and head products. This then requires multiple tissue samples to determining RHARV and adds significantly to costs of sampling, analysis, and data collection. How will this product differentiation be reported on the ACF? Again, this will be many more data points that will need to be collected, collated and reported.
- RSEQ will be difficult to calculate or even estimate; how will guidance or education be provided to the farmer who is not skilled to make this calculation?
- What determines ROTHER and how will that be qualified? We find there is no mention of biochar, glycerin, or other microbiomes that could improve carbon and nitrogen sequestration, or the use of cover crops to remove latent nitrogen, or volatilization of nitrogen to the atmosphere; none of these are included as methods of limiting nitrogen loss to surface or groundwaters. Without specifically including these methods, are farmers then forced to incur a costly and lengthy process to secure approval for use of these or any ROTHER method available?
- How will groundwater sustainability plans that seek to provide more replenishment of groundwater basins impact water quality objectives and trend monitoring over the time frame of the Ag Order? It's reasonable to assume that these replenishment resources will provide additional clean quality water to speed the dilution of remaining nitrates in groundwater basins; no consideration has been expressed on how groundwater quality will be improved by groundwater sustainability plans.

Any application limit for nitrogen will place growers on a slippery slope between harvesting a marketable crop and crop failure and, consequently, no N removal. This raises a question of whether an application limit that causes a crop failure or abandonment is the direct responsibility of the Regional Water Board for the portion of nitrogen remaining in the field due to the unharvested crop that is lost in the soils and at risk for leaching?

During the Regional Water Board staff's workshop for Monterey County farms on June 3, 2020, it was stated by Regional Water Board staff that irrigation water use (AIRR) would be analyzed to 'fine tune over-application of irrigation water' for the benefit of water quality, either surface or groundwater. There was no mention of how this measurement would be accomplished; the assumption, from this statement, is that Regional Water Board staff will review the estimates (or real numbers) of irrigation water use reported and make a determination on what farms or ranches are using too much water in the production of their crops. We question on what basis the Regional Water Board staff would be able to make this judgement simply by looking at numbers on an ACF submitted, without the context of the variability of the crop grown (or extenuating circumstances of any particular farm or ranch). We again assert that one size does not fit all in this case, particularly when evaluating AIRR from an ACF report.

While we note that Regional Water Board staff is trying to take into account a number of factors determining the nitrogen discharge during production of any crop, there is a lack of acknowledgement of on-farm credits for practices and mitigations that limit nitrogen loss and

discharge. This is extensively discussed in the Ag Partner Submittal⁴ from the coalition of agricultural organization of the Central Coast region.⁵ We urge Regional Water Board staff to seriously consider modifying both compliance pathway calculations to include on-farm credits as an incentive for improving practices and agronomics; this allows flexibility for growers to meet water quality objectives and moves away from the one-size-fits-all paradigm of the draft Ag Order 4.0 requirements.

Annual Reporting, Monitoring and Compliance Costs

We express concern about the cumulative costs of all the reporting requirements mandated in the draft Ag Order 4.0.

Costs of ACF compilation are probably underestimated by Water Board staff:

“Based on an average hourly wage rate of \$45 for in-house employees, a total of 4,401 Dischargers required to submit the ACF for their ranch, labor hours ranging from 0.4 to 1.6, and the required reporting fields in the ACF, the total estimated cost of ACF tracking and reporting costs under Ag Order 4.0 is between \$450,000 and \$1,800,000 (between \$1.06 and \$4.25 per acre) over the course of five years.”⁶

This cost estimate presumes to only incorporate the time for actual data entry into GeoTracker, not the time involved in compiling and researching all the datapoints, calculations of coefficients, and water quality testing data needed to complete the ACF, nor time needed to compile and complete the Total Nitrogen Applied (TNA) report (or in later years, the INMP Summary report):

“Based on an average hourly wage rate of \$45 for in-house employees, a total of 247,808 acres required to have TNA reports submitted, and labor hours ranging from 0.025 to 0.05, the total estimated cost of TNA tracking under Ag Order 3.0 is between \$1,394,000 and \$2,789,000 (between \$3.29 and \$6.58 per acre) over the course of five years.”⁷

These annual reports are a significant burden to all sizes of farms, as the complexities of multiple crops per acre per year with sampling tests, coefficient calculations, and harvest yields must be collated and reported individually. The costs of both of these compliance reports are underestimated and should not be easily dismissed; many small farms will struggle under the weight of these extensive reporting requirements.

We suggest that the entry of data into GeoTracker needs to be streamlined to include an upload process from a standardized worksheet (template). Current data entry is all manually keyed and will be very time consuming for any farm no matter the size or crop. Without a standardized process template in which to make compliance reporting simpler and faster, the amount of

⁴ “Ag Association Partners’ Comprehensive Submittal, Including Redline Revisions to the General Order (Ag Partner Submittal).”

⁵ Coalition primary partners are: Monterey County Farm Bureau, Grower-Shipper Association of Central California, Grower-Shipper Association of San Luis Obispo and Santa Barbara Counties, Western Growers Association, and Western Plant Health Association. California Farm Bureau Federation and other County Farm Bureaus, along with other organizations and agricultural concerns, participated in this coalition.

⁶ Attachment A, Section 16.e., pages 13-14.

⁷ Attachment A, Section 17.b.i., page 14.

resource time for compliance will certainly increase and will be unmanageable for many farms. This template would also provide a simpler method of acquiring and storing the necessary data for annual reporting cycles as they datapoints occur (as crops are harvested, for instance).

For the Irrigation Nutrient Management Plan (INMP), the following is estimated for costs:

”Based on an average hourly wage rate of \$45 for in-house employees, a total of 426,867 acres required to submit INMP Summary reports, and labor hours ranging from 0.025 to 0.05, the total estimated cost of tracking nitrogen removed and irrigation information under Ag Order 4.0 is between \$2,705,000 and \$5,410,000 (between \$6.43 and \$12.67 per acre) over the course of five years”.⁸

For Groundwater Monitoring, the following is estimated for costs (for both cooperative and individual monitoring efforts):

“In total, groundwater monitoring under Ag Order 3.0 cost an estimated \$3,840,000 (\$9.06 per acre) over the course of five years.”⁹

For groundwater well testing/monitoring, the following is estimated costs:

“Considering 6,242 total wells, an estimated average of \$155 cost per sample, annual sampling events for each well based on Groundwater Phase over the course of five years, and inflation, the total groundwater monitoring cost for irrigation and domestic well monitoring is estimated at \$6,924,000 (\$16.03 per acre) over the course of five years.”¹⁰

There are no cost estimates for groundwater trend monitoring noted. For surface water cooperative trend monitoring, assuming a third-party sampling and monitoring continue in Ag Order 4.0:

“Total cooperative surface receiving water monitoring costs under Ag Order 4.0 are estimated at \$8,847,000 (\$20.72 per acre) over the course of five years.”¹¹

Adding up these per acre estimates, there is now a range of \$35.84 to \$48.59 estimated over five years, or about \$9.70 per acre per year (taking an average in the middle of the per acre range). We find this artificially low and mischaracterizes the burden to be placed on farms and ranches particularly as other regulatory costs are implemented and increased. Landowners are now paying a new amount per acre for Sustainable Groundwater Management (SGMA) in the Salinas Valley groundwater basin region (currently at \$4.79 per acre),¹² which is based on a flat fee for administration of the agency only and does not include any sustainability projects or program implementation costs. Substantial infrastructure repair project costs (dams for Nacimiento and San Antonio reservoirs), development of an inter-lake tunnel for additional water storage capacity in reservoirs, and expansion of the Castroville Seawater Intrusion Project are all under consideration in the Salinas Valley and will be funded by landowners and farm operators, in major part.

⁸ Attachment A, Section 18.b.i., page 16.

⁹ Attachment A, Section 19.a.iii., page 18.

¹⁰ Attachment A, Section 19.b.ii., page 18.

¹¹ Attachment A, Section 22.d., page 21.

¹² Salinas Valley Basin Groundwater Sustainability Agency, regulatory fee established and approved March 14, 2019.

The cost estimates do not take into account subject matter experts who may be hired for data analysis and compliance reporting; these experts come at substantially higher hourly rates than what Regional Water Board staff shows in their estimates. Many small farms will be most impacted by needing to hire these experts to complete their annual compliance reporting, thus increasing their management costs considerably.

It should also be noted this water quality compliance cost estimate does not include costs for riparian set-back requirements, sediment and erosion management, or other monitoring and plan development requirements. To put this in perspective, an average farm of 300 acres would incur about \$2,900 for just these above noted annual reporting and monitoring costs alone; while that may seem like an insignificant cost to Regional Water Board staff, small farm operations will find that amount challenging, and represents only a small portion of the full compliance costs for the draft Ag Order 4.0. The cost estimates put forward by Regional Water Board staff are not supported in actual on-farm management settings.

Contrast these estimates with real-world dollars reported to the Regional Water Board in prior comment letters. For example, one grower who manages 1,200+ acres, some of which are in Tier 3 currently, noted water quality compliance costs of \$90.70 per acre, for a total of over \$114,000 just for water quality monitoring, reporting, and compliance under Ag Order 3.0.¹³ We would argue that the draft Ag Order 4.0 requirements exceed those of Tier 3 growers and the quoted cost of \$90.70 will certainly increase. Thus, the estimates for compliance costs are dramatically undervalued in the draft Ag Order 4.0

All cost estimates stated in draft Ag Order 4.0 are in today's dollars and do not reflect any increase in costs over the duration of the program. The costs of state program fees continue to increase each year, with annual projections taking this much higher than the current level as state expands staffing and required reporting. Labor costs will certainly increase during this period. Thus, costs for compliance will continue to escalate during the length of the program (and do not account for additional costs if the program is modified at a later date).

In 2018, Monterey County Farm Bureau and Grower-Shipper Association of Central California commissioned a study from researchers at CalPoly San Luis Obispo to determine the impacts of regulatory requirement costs on lettuce growers in the Central Coast region. The resulting study paper showed that regulatory compliance costs have increased 795% in the prior ten years to the study, compared to only a 29% in the costs of production.¹⁴ This indicates that lettuce growers in the Central Coast region are already carrying a heavy load of regulatory costs, and adding another layer of costs as indicated in the draft Ag Order 4.0 could very well be the tipping point for many farms, no matter the size. Market prices for crops produced have become more competitive, and margins thinner, over this ten-year span, putting increased pressure on small farms to remain financially stable and viable. A copy of this economic study of regulatory costs is included as Attachment A to this comment letter.

Additionally, losses experienced due to the COVID-19 pandemic are yet to be tallied up in full for Central Coast growers. Many acres have been abandoned prior to harvest, and we've all read in the media reports about fields being plowed under due to changing marketplace conditions.

¹³ "Comments to Ag Order 4.0 Options Tables" comment letter submitted by Costa Farms, January 21, 2019.

¹⁴ A Decade of Change: A Case Study of Regulatory Compliance Costs in the Produce Industry, Lynn Hamilton & Michael McCullough, CalPoly San Luis Obispo, December 2018, pages 21-22.

The losses and impacts to farming operations cannot be minimized and will surely impact the ability of many growers to meet the financial burden that the draft Ag Order 4.0 will place on their operations.

The larger-picture related to compliance costs is that they impact the small farm operation far more intensely, are cumulative and long-term. In numerous public surveys, there is broad support by consumers for the 'small farmer' as the reliable source for food production; these spiraling costs of regulatory compliance only serve to drive the small farm operations into financial instability and to reconsider their continued operation. We predict that the consolidation of smaller farms into larger farms will accelerate during the span of Ag Order 4.0 as a result of these increased compliance costs.

Riparian and Operational Set-Backs

The impacts of riparian set-backs will be substantial, both for costs and loss of productive land. Despite what is cited by Regional Water Board staff as acreage to be converted to riparian habitat (estimated as 4,064 acres¹⁵), the amount of productive, prime farmland that will be lost to riparian set-backs will be greater and thus economically infeasible for many landowners and farm operations.

What is missing from these set-back requirements is the supply chain food safety requirements dictated by buyers of fresh food products; there will still be a market-driven requirement for a bare-ground buffer between any vegetative area and the crop production field. In many instances, this ranges from 50' to 300' depending on the purchase agreement between the grower and buyer. The end result of a riparian set-back is just moving this buffer area further into the production field, causing substantial loss of cropping area more than the estimate provided by Regional Water Board staff.

If the goal of the riparian set-backs is to eliminate the bare-ground areas adjacent to cropping areas, then this strategy is severely flawed and does not reflect the real-world supply chain requirements.

The lack of an interactive Stahler classification map (link that was to be supplied by Regional Water Board staff) has hampered our ability to accurately review and make comment on impacts of the riparian set-back requirements as proposed. We request that additional comment time be provided to review, assess, and analyze this data since it was not available in a timely manner during this comment period.¹⁶

We estimate that the actual loss of productive, prime farmland to be at least 100% higher, or more, than what is estimated in the draft Ag Order 4.0, based on supply chain food safety mandates, and will probably run higher as the supply chain realizes that more vegetative areas are to be developed directly adjacent to or surrounding crop production fields. As demonstrated during the presentation to the Regional Water Board at the workshop that focused on food safety (March 2019), there are instances where farms adjacent to waterbodies could lose up to 60% of crop production acreage based on the configuration of the farm or parcel. This then becomes a regulatory mandate requiring that a significant amount of dedicated land be set aside for a

¹⁵ Attachment A, Section 27, page 25.

¹⁶ Link to the Map was provided on June 12, 2020, ten days prior to the comment period deadline.

specific purpose unrelated to the actual land use in place, either intentional or as an unintended consequence.

Leafy Green Marketing Agreement (LGMA) provisions note that all participating growers need to be aware of animal and avian incursions, and inspect for such prior to harvest:

“If there is evidence of intrusion by animals, the production block must undergo a detailed food safety assessment by appropriately trained food safety personnel (see Glossary) prior to harvest, as defined in the text of this document.”¹⁷

Monitoring for incursions is necessary, and:

“If evidence of animal intrusion is found in a production field, conduct a visual food safety assessment to determine whether the intrusion is a probable (medium/high hazard) or negligible (low hazard) risk. Low hazard (negligible risk) can be corrected by following a company SOP. Medium to high hazard (probable risk) intrusion should include a three-foot buffer radius around a do not-harvest area where the impacted crop has been isolated.”¹⁸

While it cannot be estimated fully how much wildlife the riparian set-backs will support, or indeed provide habitat for, the fact is that wildlife *will* occupy vegetative areas resulting in more instances of rodents and birds adjacent to crop production fields. This will, most likely, lead to increasing incursions into fields along with scouting for these incursions, causing more food safety concerns and crop losses that jeopardize the food supply safety integrity.

Federal regulatory compliance is set forth in the Food Safety Modernization Act (FSMA), where the Food & Drug Administration (FDA) has set out rules for implementation. FSMA promotes that food safety and the security of the food supply is a shared responsibility within the global food supply system, describing specific rules that lay out actions that all growers, producers, processors, and shippers must undertake to ensure food safety integrity; exposures to potential contamination are to be avoided and, indeed, prevented when possible. There are consequences under FSMA for failure to *prevent* these exposures, such as FDA advisory letters, courts actions that include seizure and injunction, detention of product to gain control of adulterated or misbranded products, recalls, and suspension of a food registrant to prevent shipment of a food product. These are all serious issues facing all growers who may be required to incur food safety exposure due to mandated riparian set-back areas.¹⁹

Another unintended consequence of riparian set-backs and increased food safety exposures will be the abandonment of many fields if a recall order is put in place similar to the last instances of romaine contaminations in the food supply. While the traceback period was underway (several weeks at least), all romaine was pulled from the marketplace and shipments were halted; product ready for harvest in the field was abandoned and ultimately plowed under. This means that there was no N removed from the fields with an unharvested crop; how will growers be allowed to report these types of marketing actions that are direct results of food safety recalls

¹⁷ Commodity Specific Food Safety Guidelines, CA Leafy Greens Marketing Agreement, Table 6-Animal Hazard in Field (Wild or Domestic).

¹⁸ Ibid.

¹⁹ Food Safety Modernization Act, U.S. Food & Drug Administration, “Frequently Asked Questions on FSMA” at <https://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm247559.htm>.

and contamination containment measures, without penalty? Riparian set-backs may increase these instances of field abandonment as an unintended consequence.

Establishment of riparian set-backs will require a significant effort to establish the vegetation (either trees, shrubs, or grasses, as specified). This doesn't just happen with the scattering of seeds or direct planting of seedlings; a landscape plan is required to be effective and successful. Establishing any landscape is difficult enough in a planned urban development setting; in set-back areas it will be much more difficult due to banks and slopes. After the plantings are established (meaning that new roots have grown into the native soils, which requires consistent irrigation, nitrogen, and monitoring), there will be need to provide on-going maintenance to avoid the establishment of exotic and invasive weeds as well as undesirable vegetation (crowding out desirable plantings). Possible vegetation management may also need to take place in the form of pruning, shaping, and grass mowing. Pest and disease control management will be necessary to keep riparian vegetation healthy and growing. This does not seem to be supported in the draft Ag Order 4.0:

“The following activities are prohibited within the minimum riparian setback and operational setbacks, except where specific exemptions apply:

- a. Commercial crop production;
- b. Installation of permanent structures (e.g., paved roads, storage sheds, buildings);
- c. Storage of chemicals, materials, equipment, or trash;
- d. *Application of chemicals, including fertilizers and pesticides;*
- e. Operation of heavy machinery, except as authorized through appropriate permitting mechanisms.”²⁰

We find it contradictory that establishment of new vegetative set-backs prohibits the very activities needed to establish such vegetation and maintain it over time. Moreover, if irrigation is supplied to establish these vegetative areas, including on banks and slopes adjacent to these water bodies, will there be an allowance for possible sediment movement and erosion that might occur due to this irrigation? Or will the farming operation be penalized for attempting to irrigate a riparian set-back under these circumstances? How will additional water use in the paradigm of climate change and extended drought periods be justified to establish these riparian set-backs?

There is little to no discussion in the draft Ag Order 4.0 of the many soil types of the Central Coast region. Many are incompatible to support the wetland and riparian species that are expected to be established in these set-backs. Many of these soil types cannot support the requisite amount of water needed to support riparian areas; historical photos and records do not indicate large riparian areas surrounding many natural water bodies of the Central Coast region.

Much confusion remains of where riparian set-backs need to be measured from; is this to be the center line of the channel, edge of the waterbody, high water mark, top of the bank? How does the width of an active channel get measured if flow only occurs variably or only occasionally? What if the stream or river is characterized as meandering and changes from year to year; does this change the range of the riparian set-back each year? How is this measured if there is a levee access road on top of the levee or adjacent to the waterbody? These, and other

²⁰ WDR Document, Part 2, Section C.5, #8, page 42 – italics emphasis added.

inconclusive requirements related to riparian set-backs, will make it very difficult for farm operations and landowners to fully interpret and comply with this requirement.

Overall, it is unclear if riparian set-backs are intended to improve water quality through capture and treatment of surface water flows prior to discharge to a water body. Will capture and treatment of surface water flows count as part of the vegetative set-back distance or will that treatment area be in addition to the set-back specification? Or, if treatment areas are not included in the riparian set-back distance, what incentives will be offered to growers and landowners to dedicate additional land to establish these treatment areas?

What happens to a riparian set-back if there is a flood event in the water body itself? Some or all of the riparian vegetation will be wiped out or washed away, leaving a severely damaged ecological area that probably cannot sustain vegetative life without substantial remediation; are landowners and farm operators expected to reconstruct these areas, only to have them at risk for another flood event? Conversely, what happens to riparian set-back areas that are influenced by the water body more frequently, such as a meandering stream or river?

We find it difficult or next to impossible to measure how a riparian set-back will be verified as having improved water quality of either surface or groundwater over a specific time period.

It is unclear if operational set-backs for Non-Riparian Priority areas are to remain as bare ground areas or naturally reclaimed areas (of weeds, exotic plants, and other undesirable vegetation). There are also unclear indications of how much of an operational setback will be required to be established for a specific non-riparian area, where that is measured from, and how it will be maintained. What if there is already a roadway in the operational setback? Growers will not be willing to go through a process to bring this roadway up to state code (as specified in the qualifications for all roadways); most roadways will be relocated to outside the operational setback due to this strenuous requirement, further impacting production lands.²¹ What if the operational setback currently includes area for equipment to turn around while making multiple passes through a field? Does the requirement of no mechanical equipment in the operational setback then hinder on-farm operations and increase production costs? Overall, this requirement will be another source of confusion if implemented.

Landowners and farm operators will most likely need professional technical expertise to determine their exact set-back requirements, measurements, and vegetative requirements. There are probably not enough of these professionals to provide this expertise to farms of the Central Coast region.

There is no discussion anywhere in the draft Ag Order 4.0 of the amount of wildfire fuel load that riparian set-backs will create in already fire-prone areas. Monterey County has suffered through some extensive fire storms in the past decade or more; adding more fire loading material could mean that wildfires could now race through productive farmland and vineyard areas that previously would not have burned due to cultivation and crop production. This is a serious deficiency in the analysis of vegetative requirements for the riparian set-back areas.

²¹ We suspect that Regional Water Board staff copied and mandated the roadway requirements from the Timber Harvest Management Plan program; this is an inappropriate and unnecessary application of regulatory requirements for an irrigated lands regulatory program involving primarily row crops (WDR Document, Part 2, Section D, #15, #16, #17, and #18, page 50).

Our interpretation of the findings for the riparian set-back requirements indicates that Regional Water Board staff is relying on the discharge prohibition policy to justify the mandate for this water quality requirement. We take issue with that reliance as the policy does not specifically call out that dedicated land use can be mandated as part of the discharge prohibition.

Here in Monterey County, the General Plan document (last updated in 2010) specifies agricultural zones where commercial crop and animal production is allowed. It appears that the riparian set-backs may create a conflict with this General Plan provision (and possibly in other counties of the Central Coast region). Since the majority of lands in the Salinas Valley are specified for agriculture, a specific mandate to remove production areas for riparian set-backs without recourse is contrary to a specific land use delineated in our General Plan policies.

Moreover, this may also become a conflict with the Williamson Act and create a property tax re-evaluation for the land no longer in active farming. Riparian area conversions are expressly discouraged and will cause cancellation of the Williamson Act contract on those parcels that are forced to set aside lands for use conversion. Penalties are assessed with these cancellations which could run into millions of dollars throughout the Central Coast region; a large number of farm parcels in Monterey County are currently enrolled in the Williamson Act and will be impacted by the riparian set-back requirements.

Finally, what is not settled is the legal issue of a 'physical occupation' of private property for the purpose of a public benefit (the physical use of private property for a quasi-conservation easement that prohibits commercial agricultural production). This will be a legal issue of 'practical ouster of owner's possession' that will most likely require court decisions to determine the extent of compensation required to landowners and farm operators for loss of productive farmlands. Forcing large areas to be dedicated to riparian set-backs, in quasi-conservation easements without adequate compensation and justification, will certainly generate several legal issues; the law and precedent case decisions are on the side of the landowners, in our view.

There is also the legal mandate of public agencies that require land use changes (either for a project or as part of a regulatory process, in this case dedicated riparian set-backs) to place conservation easements on other lands as a mitigation measure to ensure protection of the same amount of land in the original land use. This mandate is not considered in any of the draft Ag Order 4.0 documents nor mentioned in the draft environmental impact report. The Central Coast Water Board staff may not be able to mitigate all the lands converted to riparian set-backs with appropriate agricultural conservation easements within the Central Coast region, nor afford to do so.

Also, to be noted here, is that any potential resource for grant funding for a regulatory program requirement for riparian set-backs is prohibited under Proposition 1 provisions (and many federal funding programs) expressly due the regulatory requirement; this prohibition will most likely hinder the ability of landowners to establish new riparian set-backs, or engage conservation agencies and organizations for help with planning and execution critical to proper vegetative area establishment and maintenance. Due to the nature of the leasehold system of crop rotations for Central Coast farms, there will be little incentive for grower/lessees to invest in the establishment of these set-backs, forcing the funding entirely onto the responsibility of the landowner. Many landowners are not actively involved in farming or farming operation management, with many landowners structured as trust entities with absentee trustees; it will difficult to educate these landowners on the provisions of the riparian set-back requirements.

Without grant funding available, it will be difficult for many landowners to accomplish this mandate on their own.

We urge that the entire riparian set-back provisions of the draft Ag Order 4.0 be scrapped until further scientific and legal evidence can be provided on the food safety concerns, land use and inverse condemnation, and public benefit issues. There are too many areas of concern that will make this requirement unworkable for most farms and ranches, and generate significant management and legal conflicts.

Instead, establishment of riparian areas should be considered an opportunity for an on-farm practice that is *individually elective* by each farm operation depending on specific objectives and site-specific outcomes.

Levees and Manmade Barriers

Requirements for manmade barriers around waterbodies will lead to more confusing compliance requirements:

“A ranch that is bordered by a manmade barrier between the operation and a waterbody that prevents the establishment of a riparian and/or wetland setback on the farm that is not under the Discharger’s legal control may be exempt from this requirement (e.g., a flood control district levee, berm, etc.). This exemption only applies to the area of the farm that borders the barrier (e.g., if the farm has 1,000 feet of land adjacent to a waterbody but only 500 feet of that land borders a barrier, the Discharger must comply with the riparian and/or wetland setback requirement for the 500 feet of land adjacent to a waterbody that does not border the barrier).”²²

Many levees and berms were created decades ago by agencies that have abdicated or abandoned their maintenance responsibilities; landowners and farm operations have attempted to maintain these barriers when possible, or as needed. It will be difficult for many landowners and farm operators to prove that maintenance of these barriers is the responsibility of, and is clearly delineated to, another agency or responsible party, and that this maintenance will be performed or continued during the term of the Ag Order 4.0 program. This could set up a number of conflicts and, thus, make it difficult for the exemption to be qualified for or proven. This will lead to unnecessary costs of establishing riparian set-backs that are not actually needed or justified.

Additionally, there may be a public policy conflict with this proposed requirement for vegetation of barriers such as levees. Federal policy dictates that vegetation must be stripped from these types of barriers in order to maintain proper structural integrity. This federal policy has become a large source of conflict in the levee system of the California Delta region. Also, lack of vegetation on levees is important for flood insurance underwriting. Requirements for vegetative barriers will then create conflicts between federal and state regulatory requirements for landowners and farm operations, as well as jeopardize the ability to retain flood insurance.

Currently, the levee system of the Salinas River channel is not in the Army Corps of Engineers (USACOE) PL 84-99 program for levee management or jurisdictional control; Monterey County Water Resources Agency is not a local sponsor. This places the landowners as the responsible

²² WDR Document, Part 2, Section C.5, #33, pages 46 & 47.

parties for levee management, thus voiding any chance for the exemption proposed in the draft Ag Order 4.0. Other levee systems throughout the Central Coast region may be under the USACOE PL 84-99 program and subject to vegetation management under the Engineering Pamphlet (EP) 1110-2-18. We note that guidance is not regulatory mandate at this time as the entire vegetation issue on levees is under USACOE review (and delayed due to the COVID-19 pandemic).

Useful information on levee maintenance is provided in the USACOE Levee Safety Update for the first quarter of 2019:

“The primary source of these guidelines is the information contained in Engineer Technical Letter (ETL) 1110-2-583 Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams and Appurtenant Structures, 30 April 2014. ETL 1110-2-583 is scheduled to expire on April 30, 2019. The review mandated by Section 3013 is in progress, but will not be complete before ETL 1110-2-583 expires. In order to maintain the status quo while the review mandated by Section 3013 is completed, the information from ETL 1110-2-583 is being published in Engineer Pamphlet (EP) 1110-2-18. Conversion from ETL 1110-2-583 to EP 1110-2-18 consists of formatting changes only. No policy or substantive changes have been incorporated in EP 1110-2-18. This action allows for continuation of the existing vegetation policy and guidance until the USACE vegetation policy review required by Congress is completed and the guidelines are revised based on the results of the review consistent with Section 3013.”²³

This guidance puts the Regional Water Board in the unique position of ordering a farm practice contrary to federal guidance on levees and the consequences of vegetative management weakening the integrity of the structure itself, as noted by USACOE. There are guidelines for levee vegetation removal managed by USACOE and local sponsors participating in PL 88-94; thus, landowners and farm operators along the Salinas River, although not in the program itself, should consider these guidelines for similar management of levees to maintain structural integrity and protection from liability should a structural failure occur.

Another consideration not mentioned in the draft Ag Order 4.0 is that vegetated levees and manmade barriers are attractive to ground squirrels and gophers, which create a series of tunnels and holes throughout these structures if left unchecked. Management of rodent damage is not considered in the draft vegetative and riparian set-back requirements.

With these obvious conflicts in levee and manmade barrier management, we request that the Regional Water Board staff consider consultation with USACOE for levee systems in the PL 84-99 program, and consider the liability of weakening these structures when requiring vegetative management for those levees not in this program.

Food Safety Under FSMA

The requirements within the draft Ag Order 4.0 cause concerns for the integrity of our food supply, both under the LGMA and FSMA; extensive revisions to food safety measures due to recent foodborne illness outbreaks has farm operations struggling to ensure that every effort is

²³ United States Army Corps of Engineers “Levee Safety Update” Volume 3, Issue 1, dated January/February/March 2019, page 2.

undertaken to ensure that our food is safely produced and handled. A recent article published in *California Agriculture* (a publication of the University of California, Agriculture and Natural Resources Division) articulates the history of recent foodborne illness outbreaks in the past three years.

Part of this article describes the economic impacts that the foodborne illness outbreaks pose to farms, whether their product was involved in the U.S. Food & Drug Agency Advisory or not:

“While there are small farm exemptions and exceptions in FSMA, small growers still have to comply with new monitoring, recordkeeping and reporting requirements as of January 2020. These requirements are difficult to understand, even to determine one’s eligibility for an exemption. Altogether, compliance is more expensive for smaller farms than for large farms (Hardesty and Kusunose 2009; Karp, Baur et al. 2015). Although small growers are rarely implicated in foodborne illness outbreaks, they are subject to the regulatory consequences of a large outbreak and are confronted with barriers that may make small-scale production financially nonviable (DeLind and Howard 2008; Karp, Baur et al. 2015).”²⁴

The complexities of food safety measures cannot be underestimated; in a region where fast turning fresh crops are produced (and mostly consumed raw), the number of sources for potential food contamination are exponential. The burden of managing food safety documentation and reporting confronts even the largest of the Central Coast region’s farms. Small farms will be challenged to meet both the food safety requirements AND a new set of water quality requirements at the same time, especially when the FSMA requirements are not clearly spelled out, needing interpretation for some crops, and then water quality requirements with overly-involved plan development, complex calculations and recordkeeping are added into the mix.

The article explores possible alternatives for small farms if they are forced to alter their operations:

“Converting to an alternative crop is not necessarily a viable option to help these growers stay afloat. Many economic and experiential barriers make crop conversion a significant challenge, such as the lack of experience in growing alternative crops; the different equipment and labor needed; and the reality that alternate crops may not suite the local climate or soils, or the grower may be a land lessee with crop options limited by the landowner (Pollans 2017; Rodriguez et al. 2008). In addition, some buyer food safety policies have expanded buffer restrictions to crops that are not typically consumed fresh, such as grains, nuts and dried beans (Gennet et al. 2013).”²⁵

Farming has become highly specialized due to innovation, technology, and production practices developed and sharpened over multiple decades for each crop produced. It is unreasonable to expect that any farming operation will abruptly shift to another crop when faced with an economic disaster. Instead, there will probably be more farm failures as costs overwhelm operational capital and rapid change to another crop is hindered by lack of production knowledge and practices, as well as investment in equipment and technology.

²⁴ “Hasty Responses to Foodborne Illness Outbreaks Impact California Growers,” *California Agriculture*, January – March 2020, Volume 74, Number 1, page 7.

²⁵ Ibid.

In our increasingly litigious society, any food adulteration generates numerous lawsuits; many of these are filed as class action suits against growers, their processors and shippers, as well as harvesting operations. The risk of financial ruin is very real for any size farm should a foodborne illness outbreak be traced back to their farm or ranch. Indeed, there are several instances where incidental outbreaks have resulted in excessive financial liability and even bankruptcy for farming operations.

Compliance costs for food safety have increased considerably in the past decade:

“Most of these changes in regulatory costs are due to new food safety or labor water, health and safety laws. The most notable increases in regulatory costs are for food safety, as a result of the Leafy Greens Marketing Agreement and the Food Safety Modernization Act...”²⁶

When forced into a choice of multiple layers of complex regulatory reporting and compliance, small farms will be in the unenviable position of choosing between food safety and water quality compliance ... simply because the resources available cannot handle the responsibility load and management costs of both. Small farms don't have the financial resources to carry the full burden of the complete set of regulatory requirements from two complex (and often competing) mandated programs.

We see that food safety considerations will compete with the additional burden of water quality compliance requirements and overwhelm small farm management operations. The unintended consequence of this may be that many small farms in the Central Coast region will be unable to keep pace with the expanding list of compliance requirements, and therefore, fail to implement new on-farm practices that would improve either food safety *or* water quality.

Composting

Significant new language in the draft Ag Order 4.0 addresses on-site compost production and application. We see this as a disincentive to compost waste materials on-site and, instead, will drive more farms to reduce their compost production and use:

“Dischargers must manage the application of water to compost (including from precipitation events) to reduce the generation of wastewater”²⁷

“Working surfaces must be designed to prevent, to the greatest extent possible, ponding, infiltration, inundation, and erosion, notwithstanding precipitation events, equipment movement, and other aspects of the facility operations”²⁸

Water is a critical element in the composting process and should not be allowed to create a nuisance discharge; however, control over precipitation events may be much more difficult to achieve. Control of any precipitation will require a retention basin to capture any flows during storm events, or a conveyance to an existing retention basin. This cost would be a disincentive

²⁶ A Decade of Change: A Case Study of Regulatory Compliance Costs in the Produce Industry, Lynn Hamilton & Michael McCullough, CalPoly San Luis Obispo, December 2018, page 22.

²⁷ WDR Document, Part 2, Section D., #21.d., page 50.

²⁸ WDR Document, Part 2, Section D., #22.e., page 51.

for any farm doing on-site composting. Further, the requirements seem to suggest that an impermeable surface should be constructed for all on-site composting operations, to avoid infiltration and inundation.

The following is further disincentive of on-site composting disincentive for quickly rotating crops of the Central Coast region:

“Dischargers must maintain the following records in the Farm Plan. These records must be submitted to the Central Coast Water Board upon request.

- i. Total operational footprint of compost activities (in acres), including ancillary activities;
- ii. Compost operation records to provide background information on the composting operation history and a description of methods and operation used, including the following: feedstock types, volumes, sources, and suppliers. Description of the method of composting (e.g., windrow, static, forced air, mechanical). Description of how residuals are removed from the feedstocks and managed and/or disposed of.
- iii. Description of water supply.
- iv. Map detailing the location and size (in acres) of the working surface used for the storage of incoming feedstocks, additives, and amendments (receiving area); active and curing composting; final product; drainage patterns; location of any groundwater monitoring wells and water supply wells within and/or near the property boundary; location and distance (in feet) to nearby water supply wells (e.g., municipal supply, domestic supply, agricultural wells) from the nearest property boundary of the operation; identification of all surface waterbodies, including streams, ditches, canals, and other drainage courses; and distances from the nearest property boundary of the operation to these surface waterbody areas.
- v. Records of appropriate monitoring (dependent on method of composting) for composting to develop final product (temperature, turning, air flow, etc.).
- vi. Records of final product use, including locations and volumes.”²⁹

These substantial record keeping requirements will overwhelm any farm attempting to keep track of on-site composting operations, thus becoming a strong disincentive to generate compost for vertically integrated crop production operations. Instead, use of compost, including on-site compost generation when possible, should be managed for the environmental benefits achieved through such a process, including reduction of the carbon footprint when transporting such material and the carbon and nitrogen sequestration in soils.

Requirements for on-site compost production seem counter intuitive and will become a disincentive for farm operations.

Groundwater Trend Monitoring

We find that individual farm groundwater trend monitoring and reporting will be very difficult (and expensive) for most farms to achieve. First, groundwater moves around in the aquifer on its own (basic hydrology) and any particular farm or parcel cannot guarantee that on-farm practices to improve groundwater quality will really show up in their trend monitoring directly

²⁹ WDR Document, Part 2, Section D., #21.f., page 51.

below their farm. This type of trend monitoring and reporting is too subjective to be done on an individual farm basis.

Thus, we support the cooperative effort as outlined in the draft Ag Order 4.0, preferably by priority sub-watershed where possible. Only through cooperative monitoring and data sampling collection will it be possible to accurately determine if the groundwater quality is trending towards improvement in sub-basins identified as impaired. Incentives should be included in the cooperative effort to encourage participation in this effort; that could be in the form of regulatory relief from other groundwater reporting requirements or a modified ACF process.

This will be an expensive undertaking for most farming operations just to develop a trend monitoring plan, even with a cooperative effort. The draft Ag Order 4.0 fails to recognize this consideration and lacks the incentives for landowners and farm operators to participate cooperatively to reduce these costs. Regional Water Board staff appears to recognize there are significant costs involved in this type of trend monitoring:

“It is not possible to predict the total cost of groundwater trend monitoring, tracking, and reporting under Ag Order 4.0. The number of Dischargers who select a cooperative versus individual approach is unknown, and the requirements and associated costs are different depending on the approach selected. In general, it is expected that performing groundwater trend monitoring as part of a cooperative would provide economies of scale and therefore result in significantly less cost to Dischargers.”³⁰

It is important that Ag Order 4.0 recognizes these challenges and should include incentives for the cooperative groundwater trend monitoring option if this type of reporting is to be successful. We assert that a regional or sub-basin approach will have the best possible outcome for improving groundwater quality.

Sediment & Erosion Management Plans (SEMP)

We express concern with the discharge requirements for ranches with impermeable surfaces, defined as:

“Impermeable Surfaces. Plastic-covered surfaces that do not allow fluid to pass through, including polyethylene mulch and hoop houses. For the purposes of this Order, impermeable surface does not refer to relatively impermeable soils.”³¹

Dischargers with impermeable surfaces on slopes equal to or greater than 5% during the wet season (October 1 to April 30) must have a sediment and erosion control plan developed and certified by a qualified professional (defined in Attachment C of this Order).³²

This definition mainly applies to berries (strawberries and cane berries, including blueberries). Many of these crops are produced on fields with slopes of 5% or more, including both organic and conventional production. The production of these crops requires specific uses of plastic mulch for protection, either from weather, fowl, or disease and pests. These crops are part of

³⁰ Attachment A, Section 20.e., page 19.

³¹ Attachment C, Definitions, Item 52, page 13.

³² DWR Document, Part 2, Section C-4, #9, page 37.

the larger crop rotation pattern that occurs in the Central Coast region between leafy greens and vegetables; this crop rotation is important to soil health and has been in use for multiple decades because it is effective in controlling soil-borne pests and diseases in these crops.

Investment in resources and funds in developing a short-term SEMP for a berry field will be prohibitive. This will discourage production of these crops as part of the rotation (on average, two years of strawberries followed by a year of a leafy green, then a year of vegetables); thus, this requirement will add significant costs to preparation and establishment of a rotational berry field, currently the most expensive of all field crop preparation and investment.

Moreover, the requirement for SEMP will exasperate costs for berry growers and will, ultimately, drive more production out of the Central Coast region. This, in turn, will have an unintended consequence on crop rotation and soil health, promoting more soil-borne pests and diseases. We see this SEMP requirement as a possible elimination of a critical crop in the rotation of field management throughout the region.

Stormwater controls proposed in the draft Ag Order 4.0 present new challenges for these farms and ranches:

“Stormwater discharge volume from ranches with impermeable surfaces must not exceed stormwater discharge volume from equivalent permeable area for any storm event up to and including the 95th percentile, 24-hour storm event.”³³

“Where a project is located determines the absolute volume and/or intensity of a storm they will be required to design for, called the design storm. The Central Coast PCRs require mitigation of runoff volumes for the 95th percentile, 24-hour storm and mitigation of peak runoff intensity for the 2 through 10-year storm from impermeable surfaces.”³⁴

This seems to indicate that landowners will need to construct retention basins to manage storm flow to the noted level in any 24-hour period. While this may be a noble target, in reality it becomes a very expensive proposition for landowners (who will pass these costs along to their farm operators; leasehold rotations will prohibit farm operators from making these investments themselves). At what capacity are these retention basins expected to be constructed if there are multiple or frequent storm events in a short period of time? Retention basins will also reduce available production areas, require significant engineering and construction, most likely will need to be lined or have other methods to avoid percolation and groundwater infiltration, and will be utilized only infrequently. This seems like a very unnecessary expense when storm weather cannot be adequately predicted within any 24-hour period.

“Dischargers who utilize containment structures (such as retention ponds or reservoirs) to achieve treatment or control of the discharge of waste must manage, construct, and maintain such containment structures to avoid discharges of waste to groundwater and surface water that cause or contribute to exceedances of water quality objectives or impairment of beneficial uses. Dischargers may choose the method of compliance appropriate for the individual ranch, which may include, but is not limited to:

- a. Implementing chemical treatment (such as enzymes);

³³ DWR document, Part 2, Section C.4, #8, page 37.

³⁴ Attachment A, Section C.4, Item #34, page 164.

- b. Implementing biological treatment (such as wood chips);
- c. Recycling or reusing contained water to minimize infiltration or discharge of waste;
- d. Minimizing the volume of water in the containment structure to minimize percolation of waste; and/or
- e. Minimizing percolation of waste via a synthetic, concrete, clay, or low permeability soil liner.”³⁵

How will stormwater run-off be calculated and analyzed for the purpose of enforcement of this provision? What is the expectation that reporting of stormwater run-off during multiple or frequent events will be reported accurately on an ACF? If landowners and growers are to measure these storm events as they occur, will the Regional Water Board indemnify the employees (and their employers) who place themselves in hazardous situations to measure these flows? How will load be measured from stormwater discharges? Most instances of flash-flooding occur quickly, in short downbursts, that are often not predicted or anticipated. We cite the recent flooding event that occurred near Chualar in the Salinas Valley that caught nearly everyone by surprise, including CalTrans. How will these events be monitored and how will growers be expected to plan in advance for this type of downburst?

Impacts by stormwater controls and retention will have widespread effects on groundwater percolation, and specifically groundwater dilution by infiltration. There are really only two ways to improve groundwater quality; pump and fertilize, and replacement through dilution by infiltration. Control and retention of stormwater appears to be counter intuitive to improving groundwater quality, if that is the overall objective of the draft Ag Order 4.0.

Therefore, we request that this provision for stormwater control be removed from the WDR and MRP requirements. We find this provision is largely not implementable on a farm level and has less certainty for improving water quality relative to the amount of expense involved to predict and control the stormflows.

While we admit that there are concerns related to the use of agricultural plastics in on-farm practices, we find that the benefits to crop production outweigh the few instances where significant flow or erosion events might occur. Instead of requiring a specific level of flow control or reduction during storm events, we suggest that on-farm practices be identified in the farm plan document, as each individual farm parcel will have differentiating characteristics.

Sources of Contamination Not Attributable to Agriculture

California’s laws and regulations related to the application and use of agricultural chemicals are arguably the strictest in our nation. Not only do these chemicals come under federal scrutiny for product labels and appropriate use rates, the State requires its own independent approval process and labeling review. Monthly reporting of chemical applications is required of all farms and ranches, submitted directly to the County’s Agricultural Commissioner for review and compliance of the application rates and crop appropriateness.

We find that limitations beyond what the State of California’s Department of Pesticide Regulation (DPR) specifies are duplicative, unnecessary and unlawful. Extensive review of all agricultural

³⁵ WDR Document, Part 2, Section D., #10, page 49.

chemicals is undertaken by DPR to ensure public health and safety, as well as environmental protections; this should be the only regulatory threshold.

Thus, we find continued restrictions on the use of agricultural chemicals, as proposed in the draft Ag Order 4.0, are unwarranted. The legal application of an agricultural chemical under DPR regulatory requirements should be recognized as the threshold for compliance when considering overall use of those chemicals. Instead, there are many other sources where contamination from chemicals are not being fully assessed or evaluated for the contributions to both surface and groundwater.

Recent studies have focused on the use of neonicotinoids (neonics) in agricultural production; one example of other sources of discharges we cite here is the use of this class of chemicals in pet products. DPR recently requested that the Office of Pesticide Programs in Washington, D.C., consider these uses:

“While the Agency acknowledges that “spot-on uses...present the potential for prolonged exposure via a continuous source and frequent contact” (EPA-HQ-OPP-2008-0844, p.16), pet spot-on products are not considered for mitigation within the neonicotinoid PIDs. Spot-on products may be a major contributor of neonicotinoids entering the waste stream and, by extension, require consideration for purposed mitigation. Our work has shown that the use pattern of spot-on treatments results in measurable residues from routine pet washing from the recommended initial no-wash period of two days to the expected time of next application of 28 days (Teerlink et al, 2017a).”³⁶

While pesticide contamination remains a valid area of concern, in this case of neonics there is substantial cause for concern from sources beyond agricultural uses that should be focused on for surface and groundwater exposures. The draft Ag Order 4.0 does not address any of these potential sources for contamination; only a cursory statement is made about other sources:

“Data on current commercial application of pesticides indicate that neonicotinoid and pyrethroid pesticide use in the central coast region and statewide is generally increasing in urban and agricultural areas. These pesticides have been detected at toxic levels at a number of locations in the central coast region in recent years.”³⁷

DPR goes on to make several recommendations concern labeling of agricultural chemicals and monitoring for surface water discharges. We find that most of these are reasonable and within the current on-farm practices and regulations of allowed chemical applications; thus, it appears that the Regional Water Board needs to carefully consider other sources of chemical contaminations before limiting agricultural applications; the unintended consequences could be loss of crops, expanded incursions of exotic pests, and a wider spread of viruses and molds in various vegetable crops.

³⁶ “US. Environmental Protection Agency Pesticide Registration Review; Proposed Interim Decisions for Several Neonicotinoid Pesticides...” as subject of letter from CA Department of Pesticide Regulation to Office of Pesticide Programs, authored by Edgar Vidrio, Chief of Environmental Monitoring Branch, May 1, 2020, page 4.

³⁷ Attachment A, C.3, Item #19, page 144.

New Technologies and Innovation

We note that the draft Ag Order 4.0 makes little reference to new and evolving technologies that will improve irrigation efficiency, nutrient management, and on-farm practices for water quality improvements. This is a bit surprising as the Salinas Valley area of the Central Coast region has become the focal point for these new technologies; each year for the past five years, Forbes has held their annual Ag Tech Summit in Salinas, where entrepreneurs with concept-proven technologies and services are featured. Salinas Valley farmers are well known for their early adoption of new practices and technologies and continue to seek new on-farm management tools to improve efficiency.

However, we caution that there should be no assumption that new regulation will drive technology innovation. Farming practices are so complicated and intricate that no one simple engineering or technology solution will yield the expected regulatory results; nor will technology and farming practices evolve quickly enough to respond to the various timetables for compliance.

In Monterey County, irrigation use has decreased 15% in the past 20 years while yield values have increased over 45% in the same time period, and irrigated acreage has increased.³⁸ This shows that irrigation efficiency is consistently improving as farm operations adopt micro irrigation, soil moisture sensors, weather data stations, and other technologies as on-farm practices.

In recent years, research projects have yielded new technologies and services that are working to improve on-farm efficiencies for water and nutrients. We support the local University of California farm advisor's tool CropManage to aid growers helping to managing irrigation cycles for a number of crops. Briefly, CropManage allows ranch managers to open an individual account for each field (or ranch) and then enter information on when and how much irrigation and fertilizer is used; the software quickly uses weather data and University of California research to provide suggested management recommendations.

Technology such as CropManage should be encouraged and incentivized when appropriate; the incentive for new technology adoption should be some form of regulatory relief, such as in ACF reporting, INMP, or farm plan requirement reductions.

Innovation should be rewarded, not penalized, as has been experienced in prior iterations of the Central Coast Ag Order. We prefer investments in technology and innovation rather than farm-based expenditures on monitoring and reporting requirements.

Research Needed on Agronomics

The Central Coast region's crop production is quick turning and intensified agriculture. Very few places in the country, indeed the world, have the combinations of soils, water, and climate that make vegetable and berry crop production nearly a year-round endeavor. Crop rotations and production cycles have been refined over the past century when irrigation changed the paradigm for commercial crop production; all along this timeframe, the best agronomic science

³⁸ Compilation and analysis of Monterey County Water Resource Agency annual groundwater extraction reports, available online at <https://www.co.monterey.ca.us/government/government-links/water-resources-agency-old/documents/groundwater-extraction-summaries#wra>

of the time was utilized and helped to increase yields, reduce irrigation water use, and minimize environmental impacts.

Nutrient and irrigation targets/limits asserted in the draft Ag Order 4.0 will require additional agronomic research into new production practices, improved fertilization uptake, varieties that require less irrigation water for maturity, and soil health science to support continued farming year-after-year.

While much of this research is conducted through public institutions such as the University of California Cooperative Extension, current funding and budget challenges will limit the ability of these public research institutions to provide this on-going and needed effort. Pests and diseases will continue to interrupt production cycles, and growers are only one exotic pest or disease away from a complete food production crisis in any given crop. We have many examples of how exotic pests and diseases have impacted California crops; citrus trees are being devastated by huanglongbing (citrus greening disease) and grapevines have seen widespread impacts from Pierce's Disease over the past decade or more.

New production practices and crop protection tools will be necessary if the challenges of the draft Ag Order 4.0 are to be met, even in the extended compliance milestones delineated. Time is against us all in this regard.

We suggest that Regional Water Board staff should work with both public and private research institutions to address any expanded pathways to water quality compliance that the draft Ag Order 4.0 mandates over the next two or more decades. The agricultural sector will not have enough funding available to do all this research on their own and public agency funding is always in doubt and will continue to be constrained post pandemic.

Establishment of a research grant funding process should become a top priority by the Regional Water Board during the implementation of Ag Order 4.0, if adopted. This could be a robust program that collaborates across all stakeholders to find opportunities for progressive research projects oriented towards Central Coast region specialty crops, on-farm practices that are implementable on a broad scale, and promote sustainable farming investments. The Regional Water Board is in a unique position to bring together various stakeholders and identify all possible funding mechanisms available; all stakeholders should come to the table with their concepts but also their available resources; we suggest this needs to be a shared responsibility.

Sustainable Groundwater Management Considerations

With the enactment of the Sustainable Groundwater Management Act (SGMA) in 2015, multiple new agencies have been established in the Central Coast region to manage groundwater under a new paradigm of regulatory requirements. The sustainable use of groundwater must be achieved in the coming 20 years, with milestones and important reviews at intervals in that time frame. Several of these agencies have submitted their first groundwater sustainability plans (GSPs) in January of this year, and the remaining GSPs are due in January 2022.

These threshold plans propose practices, mitigations, and projects that can be implemented during the 20-year cycle of the GSP. In many cases, these plans include modeling of groundwater impacts that include groundwater recharge, either through infiltration or injection projects.

It is widely surmised that irrigation of crops in the Central Coast region contributes to groundwater replenishment through infiltration; indeed, that is this program's context of limiting fertilizer applications that could cause nitrogen discharges to groundwater through infiltration. With the proposed draft Ag Order 4.0 provisions that will certainly impact the amount of irrigation water applied, has there been research or a study undertaken to determine impacts to groundwater replenishment rates and what impacts that could have on the GSP implementations?

Over the course of the next 20 years, as the groundwater sustainability plans are implemented, additional replenishment projects will come on-line contributing to the groundwater basins of the Central Coast region. This will be 'clean' water and will help to improve any groundwater quality conditions through dilution and distribution. Should there be a milestone at some point during this program that assesses if SGMA replenishment projects are indeed contributing to improvements in groundwater quality? If so, should the nitrogen application targets be adjusted accordingly (on a basin-by-basin review)?

The issue of multiple agencies with regulatory programs that have differing objectives may challenge not only stakeholders to achieve their objectives but those agencies themselves. Since SGMA groundwater sustainability plans have much longer implementation timeframes, this necessitates adjustments in the Ag Order program to keep goals and objectives congruent and achievable. Without this type of coordination between public agencies, the stakeholders will most likely be pushed to the middle with conflicting requirements that are unachievable at the farm or ranch level.

Here in the Salinas Valley, seawater intrusion is by far the largest groundwater sustainability issue during the implementation of SGMA. To a large extent, balancing the groundwater basin and halting seawater intrusion relies on the underground flows of groundwater from inland to coastal zones (also known as the underground Salinas River). Infiltration of irrigation and storm water, along with replenishment projects, are anticipated to be part of that solution over time; the draft Ag Order 4.0 fails to recognize that on-going groundwater infiltration from all sources will be critical to achieving a sustainable groundwater supply.

We suspect that not all considerations have been given to the importance of groundwater replenishment from irrigation applications and SGMA sustainability plans throughout the Central Coast region, particularly where irrigation water supplies are nearly entirely dependent on groundwater levels. This could then become a conflicting public policy issue when other agencies are attempting to achieve differing objectives in groundwater basins.

There needs to be much more coordination with the various groundwater sustainability agencies to determine any unintended consequences of the draft Ag Order 4.0 that may occur with the implementation of GSPs by these agencies. Since each GSP is a separate, individually tailored plan to the respective groundwater basin, a one-size fits all approach to this process will not work well.

Economic Impacts

Various scenarios of impacts to the agricultural sector are plausible due to the mandates of the draft Ag Order 4.0. This draft program will dramatically impact how fresh vegetables and berries are produced in the Central Coast region. The sentiment from most farm operations is that the limits (targets) are unrealistic based on 'what we know now' and the current farming practices

in place. We continue to note that Central Coast farm operations are the most progressive in the state, and indeed the nation, when it comes to on-farm practices, natural resource conservation, and irrigation management.

Both the California Environmental Quality Act (CEQA) and the State Water Code require an economic analysis:

- From CEQA §21159 (3)(c): “The environmental analysis shall take into account a reasonable range of environmental, economic, and technical factors, population and geographic areas, and specific sites.”
- From Water Code §13141: “For an “agricultural water quality control program” total cost estimates and potential funding sources “shall be indicated.”

Our fear is that the economic impacts to our communities are not being fully represented or studies in this process. For instance, these questions come to mind:

- What happens to farmworker jobs when production areas are reduced for riparian setbacks? Less production means less jobs, which could cause havoc with local municipal economies and the Central Coast economy in general.
- If additional costs are expended for monitoring and compliance reporting, where do the corresponding effects of those extra expenditures reduce the ability to implement new on-farm practices?
- What happens if land values decline due to reduced production capacity and yields? Will this promote more sales of prime farmland or conversion to other uses?
- Will lower land values mean lower property tax evaluations, causing budget challenges to local municipalities and County government funding?
- If cropping patterns are forced to change to fewer crop turns, how will those impacts be felt in the communities of the Central Coast?
- Will small farms become financially and resource challenged to the point that they give up causing an increase in consolidations or land use changes?
- What becomes of land that is outright abandoned? What are the economic and environmental impacts of abandonment?
- For a region dependent on the economic success of agriculture, how will increased costs of compliance impact allied business expenditures and the economy supporting farm operations?

What is proposed in the draft Ag Order 4.0 will substantially alter the economics of farming in the Central Coast region. We predict more production will leave the area (and, indeed, the State) for areas where lower costs of production and regulatory compliance are being offered. The Central Coast Water Board staff fails to offer any replacement model of how the landscape of the Central Coast region will change in the coming years if this draft Ag Order 4.0 is adopted and implemented region wide. What happens to all the agricultural lands that are idled by this economic model change? What land uses is the Central Coast Water Board staff envisioning will replace farmland use and how will these changes be absorbed into local communities where jobs will be lost and disadvantaged communities, dependent on agricultural jobs, will become more disenfranchised by regulatory restrictions?

Cumulative impacts of regulatory costs need to be fully considered when any new regulatory program is contemplated; California’s intense regulatory environment has added complexity and a heavy burden of costs to all business operations, farming and ranching included, that are not

forced on the same operations in other states. These cumulative costs make locally produced crops and food items less competitive in the marketplace.

“This case study indicates that California agricultural producers face increasingly intensifying regulatory pressure, and as noted in this study, further regulations are yet to be implemented that may have serious implication for two necessary resources that are already in short supply – groundwater and farm labor. While California agriculture has thus far show resilience as regulations have escalated, the results of this study provide evidence that the regulatory burden has far surpassed production cost increases.”³⁹

Cumulative impacts of complex regulatory structures at all levels (federal, state, regional, and local) confuse growers with multiple challenges attempting to meet all lawful expectations:

“Federal regulatory requirements can be difficult enough for small business owners to navigate, but state and local regulations make matters even worse. State requirements are often more numerous and more demanding than at the federal level—imposing even more complicated or stringent requirements than analogous federal regimes or regulating matters not regulated by Congress. Local authorities often choose to go even further—even in those states notorious for imposing the most controversial and heavy-handed regulatory standards. Together these intertwined federal, state and local regulatory requirements present a formidable regulatory thicket. And every year the state and local regulatory thicket grows thicker. This is a cause of great concern, not just for the small businesses directly affected, but for everyone.”⁴⁰

There has not been a full assessment of the economic impacts of the draft Ag Order 4.0 to allow this to move forward for adoption; we find the draft environmental impact report deficient in the economic analysis and impacts of the draft Ag Order 4.0 program. A program this transformative needs to be fully vetted economically to ensure that the Central Coast region is not put into an artificial economic slump or depression. We see this as a distinct possibility given the pressures of water quality objectives, pandemic recovery, FSMA implementation, SGMA challenges and future water availability limitations, and infrastructure needs to ensure that our dams, reservoirs, and water delivery systems are fully functional.

Thoughtful Considerations for Irrigated Lands Regulatory Program Structure

The coalition of agricultural organizations is submitting a different approach to achieving water quality objectives (Ag Partner Submittal).⁴¹ This includes a robust proposal on a third-party cooperative effort that will provide functions such as surface water cooperative monitoring and groundwater trend analysis; irrigation and nutrient management and an enhanced surface watershed program are also detailed along with other program parameters.

³⁹ A Decade of Change: A Case Study of Regulatory Compliance Costs in the Produce Industry, Lynn Hamilton & Michael McCullough, CalPoly San Luis Obispo, December 2018, page 26.

⁴⁰ Managing the Regulatory Thicket: Cumulative Burdens of State and Local Regulation, Regulatory Transparency Project; Anastasia P. Boden, Braden Boucek, Paul J. Larkin Jr., Clark Neily, Jonathan Riches, Lawrence VanDyke, and Luke A. Wake; January 2019, Page 7.

⁴¹ “Ag Association Partners’ Comprehensive Submittal, Including Redline Revisions to the General Order (Ag Partner Submittal).”

The Ag Partner Submittal has been developed and brought before the agricultural community, as well as our technical advisory committee, for sound reasoning and vetting, and offers the best possible course for achieving water quality objectives; because these provisions and requirements are implementable on-farm and provide quantifiable milestones towards improvement, the agricultural community throughout Region 3 broadly supports the Ag Partner Submittal documents and supporting materials.

We ask that Regional Water Board members and staff give serious consideration to these regulatory program approaches as they provide a sound pathway to achieving water quality management that still allows for a productive working environment and farm financial viability.

Conclusion

The broader perspective of this draft Ag Order 4.0 should focus on the impacts to production of fresh food items in the global perspective of pandemic and how we assure that our population continues to have a reliable domestic food supply that is safely produced and affordable. There appears to be a large disconnect between the importance of food production, and in particular, domestic food production where we know how it's grown and what food safety measures are undertaken compared to the value of implementing drastic water quality requirements that impact farmers' ability to produce that fresh food supply. We express deep concern that regulatory oversight is losing focus on the bigger picture, that of allowing the farming community to continue to provide the other 98% of the population with their dinner.

While there are water quality issues that need to be addressed, there remains the fundamental question of how much current farming practices are contributing to the further degradation of groundwater resources. We suggest that these are mostly legacy issues from a period when the best agronomic knowledge was used at that time; current farm operations should not have to pay the price for the fault of those practices in hindsight. Current farming practices are far different from those of even 20 years ago; nutrient management has advanced to allow for better managed and targeted use partly due to the cost of the input and advances in agronomic science.

The Central Coast has some of the most progressive and efficient farmers of anywhere in the world. We question the entire structure of mandating a regulatory program that will substantially alter that efficiency, risking the ability of farmers to produce our important daily dietary requirements of fresh vegetables, berries, and leafy greens.

Agriculture, in general, is carrying the full burden of the costs of doing business as one of the most heavily regulated sectors of California's economy. Market challenges continue to depress margins, particularly for smaller farm operations. Other regulatory requirements related to labor and workplace rules, increasing minimum wage and overtime costs, health care, air quality regulations and equipment replacement mandates, employee health and safety post pandemic, and transportation expenses all add up to a depressed bottom line. If that bottom line is not positive, there won't be an agricultural sector to regulate for water quality or other environmental and marketplace mandates. Maybe that's the overall intent of this draft Ag Order 4.0; to ultimately eliminate farming as we know it on the Central Coast.

The past three months of the COVID-19 pandemic have upended our food supply system in ways previously thought unimaginable. Many farms have suffered significant financial losses due to shifting marketplace parameters, and many may report substantial losses for the tax

year as the final tally of losses is known. In Monterey County alone, over 2,000 acres⁴² of mature crops have been abandoned or plowed under; the stress on growers, processors, and shippers is immense. These losses indicate that farming operations will be structurally challenged for many years post-pandemic.

The economics of farming are drastically and dramatically different than when the draft Ag Order 4.0 was released, and additional costs for management of compliance requirements may not be in the financial picture for the majority of farming operations. This new regulatory structure may just indeed be the straw that breaks the camel's back and forces many small farms out of operation; it would be a shame to see a regulatory structure decimate the productive agricultural environment that is unique to the Central Coast region. The pandemic has created a new era of financial uncertainty that may last for several years; adding additional costs to our food production supply chain is not beneficial for farmers nor consumers.

We, as a society, are only nine meals away from food insecurity and uncertainty. If we have learned nothing else from the pandemic, our reliable, safe and affordable domestic food supply is paramount to our society being able to feed its residents. Creating a domestic food production shortage, artificially by regulation, forces more reliance on imported food products that is not in the best interest of our national security (noting that we cannot control how those foreign food products are produced nor the social equity of those workers who produce it). A society that is unable to provide its own residents enough food supplies, relying more and more on imports, is at the mercy of those who provide those imports. We see this draft Ag Order 4.0 as a threat to our domestic food supply of healthy daily dietary choices.

The draft Ag Order 4.0 proposes to extend regulatory authority to the Central Coast Water Board that is not expressly supported in the Clean Water Act or the Porter-Cologne Water Quality Control Act, and goes well beyond the precedential mandates of the ESJ Order. Agricultural associations spent many hours in the past two years with Regional Water Board staff detailing the complexities of modern farming practices; this draft Ag Order 4.0 fails to recognize the improvements and achievements made on-farm towards the water quality objectives set out in prior iterations of the program.

We urge extreme caution in these precarious economic times when adding additional burdens to the hardworking farmers that produce our healthy, fresh, safe, and affordable food supply.

On behalf of the Board of Directors of Monterey County Farm Bureau, sincerely,



Norman C. Groot
Executive Director

⁴² Monterey County Agricultural Commissioner's Survey of Growers for COVID-19 Losses, April 30, 2020; a copy is included as Attachment B to this comment letter.