

## East San Joaquin River Expert Panel

### Comments – 7 January 2020 Presentations

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#### **Irrigation discharge flows:**

With regard to today's sampling presentations, one of the Panel Members asked about including rainfall data into the sampling data graphs. It seems that an assumption is made that agricultural discharges occur immediately following application of the given parameter. Are actual discharges of irrigation waters to surface waters tracked? If discharges from the irrigated fields are not continuous, it would seem prudent to include data of when discharges to surface waters occur. This information could be valuable to assess whether violations are linked to agricultural discharges rather than application of chemicals to the agricultural lands which would not account for holding times.

#### **Dissolved Oxygen Levels:**

Dissolved oxygen (DO) levels are at their lowest just before sunrise and therefore sampling time is quite important. This seems to have been adequately addressed/questioned by a panel member. However, it was stated that drive times to the sampling locations are lengthy and therefore sampling around sunrise was not conducted.

It was stated that low DO levels have routinely been detected, despite sampling beyond the morning hours. It would be prudent to conduct DO sag analyses to determine if the sampling location, compared with the discharge points, is the worst-case location for dissolved oxygen violations. Since the current sampling locations are fixed, it is doubtful that the worst-case dissolved oxygen levels are being located.

It should also be noted that DO is not a conservative parameter. It is possible, if not likely, that upstream dissolved oxygen violations are being missed by sampling so far downstream from the point of oxygen demanding substance discharges. Such violations may be significantly worse than those measured downstream and ongoing violations may be missed for DO levels increasing as the day progresses or dilution waters are introduced.

It was stated during one of the presentations that dissolved oxygen could not be treated/controlled from discharges. The principal causes of low DO are nutrients, nitrogen and phosphorus, or oxygen demanding substances as measured by BOD and COD. Control of nutrients and oxygen demanding substances is commonly used to bring wastewater discharges into compliance with DO levels, the technologies and source control measures are available.

#### **pH levels:**

It was stated during one of the presentations that pH could not be treated/controlled from discharges. Assuming that off pH chemicals are not causing violations, identification of acidic or alkaline soils with remediation or taking such areas out of service should be examined with

regard to pH compliance. It does not appear that this level of investigation has been conducted to determine the cause of pH violations.

### **Cost of sampling:**

The cost of sampling was extensively discussed and questioned. Only the cost of sampling and reporting has been considered in determining compliance with the Water Code Requirement (Section 13267) that the cost bear a reasonable relationship to the need and benefit of such sampling and reporting.

No one is recommending that unreasonable or unproductive sampling be conducted. Environmental compliance projects are rarely considered to be cost effective since it is typical that the only costs considered are the cost to achieve compliance or conduct sampling. Rarely, is a cost to the environment assessed and such costs are difficult to quantify. What is the dollar cost of losing a species of fish or losing the beneficial uses of a groundwater aquifer due to pollution? The need and benefit of sampling and reporting are assessed in the waste discharge requirements, but a cost of non-compliance or degradation of beneficial uses is not assessed.

Small family farming operations comprise approximately 61 percent of the agricultural growers, but account for approximately 6% of the total irrigated lands, the rest are corporate farms. This may have bearing on the requirement that cost bear a reasonable relationship to the benefit of sampling, with regard to the ability to pay. There was also no presentation on how the costs to the regulated agricultural community has been distributed amongst the Coalition members.

The Waste Discharge Requirements created a third party (Water Quality Coalition) between the Dischargers and Regional Board staff and essentially created a new bureaucracy. The third party collects and assesses water quality data and submits summary compliance reports to the regional board. The third party also regulate the wastewater dischargers by requiring corrective measures and assess their effectiveness. The cost of this new bureaucracy has not been assessed. In the past, state agencies have assessed the cost of out source contracting to be significantly greater than if the work was done in agency.

As stated above, no one is recommending that unreasonable or unproductive sampling be conducted. While \$2 million annually for sampling seems like a lot of money to most of us, the true costs and benefits of sampling and reporting have not been assessed.