Regional Water Quality Control Board
Central Valley Region Board Meeting
22/23 APRIL 2021

Response to Written Comments for the
FC Tracy Holdings, LLC
Tracy Holdings Facility
San Joaquin County
Tentative Waste Discharge Requirements

At a public hearing scheduled for 22/23 April 2021, the Regional Water Quality Control Board, Central Valley Region, (Central Valley Water Board) will consider adoption of Waste Discharge Requirements (WDRs) for FC Tracy Holdings, LLC, for the Tracy Holdings Facility in San Joaquin County. This document contains responses to written comments received from interested persons regarding the tentative WDRs circulated on 4 January 2021. Written comments were required by public notice to be received by the Central Valley Water Board by 4 February 2021 to receive full consideration. Comments were received from Brown and Caldwell on behalf of FC Tracy Holdings on 3 February 2021 and Ms. Jo Anne Kipps on 4 February 2021.

Written comments are summarized below, followed by responses from Central Valley Water Board staff. In addition, staff has made a few minor changes to the tentative WDRs to improve clarity and fix typographical errors.

## FC TRACY HOLDINGS COMMENTS

**COMMENT NO. 1:** Finding 1. Please delete the phrase “and residual solids” from the first sentence. Residual solids will not be applied to the land.

**RESPONSE**: The phrase has been deleted.

**COMMENT NO. 2:** Finding 3. The correct address is 3590 West Lehman Road.

**RESPONSE**: The address has been corrected.

**COMMENTS NO. 3**: Finding 5. The area for LAA is approximately 25 acres. Acreage was reduced by setback requirements.

**RESPONSE**: The area was updated to 25 acres.

**COMMENT NO. 4**: Finding 11. Please modify the third sentence to read “The pond is equipped with a staff gauge to measure the pond freeboard”. No alarm has been installed.

**RESPONSE**: The text has been updated.

**COMMENT NO. 5:** Finding 14. The LAA area is 25 acres. The initial crop is planned to be a forage crop. In subsequent years the crop may be almond trees.

**RESPONSE**: The text has been updated.

**COMMENT NO. 6:** Finding 14. Please modify the phrase “sprinkler conveyance system” to “irrigation conveyance system”. Discharger would like the flexibility to utilize different irrigation methods if necessary.

**RESPONSE**: The text has been updated.

**COMMENT NO. 7:** Finding 19. Please modify the last sentence to read “No field or orchard runoff…”.

**RESPONSE:** The text has been edited.

**COMMENT NO. 8**: Finding 33.c. Please modify the phrase “use of sprinkler irrigation” to “use of conventional irrigation methods”.

**RESPONSE:** The text has been modified.

**COMMENT NO. 9**: Finding 54. Please modify the phrase “using sprinkler application…” to “using uniform irrigation application…”.

**RESPONSE**: The text has been modified.

**COMMENT NO. 10:** Requirements, B.1. Flow Limits, Table 11. Please add a footnote to clarify that effluent flows will be calculated as a portion of the total flow discharged to the LAA. The compliance flow meter captures flow from effluent, stormwater, and supplemental irrigation water. Total effluent flow will be calculated as the total flow discharged to the LAA, less the flow from other sources.

**RESPONSE**: The flow limit requirement has been modified to include effluent and stormwater, but excludes supplemental irrigation water.

**COMMENT NO. 11:** Monitoring and Reporting Program, Flow Monitoring. Please add a footnote to clarify that effluent flows will be calculated as a portion of the total flow discharged to the LAA.

**RESPONSE**: The text has been modified.

**COMMENT NO 12:** Information Sheet, Background. Please modify the phrase “located in Lodi…” to “Located in Tracy…”.

**RESPONSE**: The text has been corrected.

## JOANNE KIPPS COMMENTS

**COMMENT NO. 1**: The tentative Order is for the discharge of treated corn processing wastewater from a new facility known as "Tracy Holdings." The header in the tentative WDR, MRP, and information sheet identifies the dischargers as "GLORIANN FARMS AND FC TRACY HOLDINGS, LLC/FIVE CROWNS." These headers should be revised to identify the full legal name of each discharger (i.e., include "Inc." after GloriaAnn Farms and Five Crown).

**RESPONSE**: While these WDRs were issued for Tentative review, an updated Form 200 was submitted by the Discharger and the WDRs have been updated accordingly. FC Tracy Holdings, LLC is responsible for compliance with this Order.

**COMMENT NO. 2**: Finding 4 describes a nearby corn processing facility (GloriAnn Farms) that is owned and operated by "the Discharger." It would appear that it is GloriAnn Farms, Inc. that owns and operates this facility, not "the Discharger" identified earlier in Finding 2 as including the property owners of Tracy Holdings. Also, Finding 4, last sentence should read: "…because the existing facility and the Tracy Holdings facility will have the same processing capacity (26 tons/year fresh corn) and operating processes."

**RESPONSE**: While these WDRs were issued for Tentative review, an updated Form 200 was submitted by the Discharger and the WDRs have been updated accordingly. While the two facilities have the same operating processes, the volumes between facilities may vary. Information from the GloriAnn Farms Facility was used to approximate conditions at the Tracy Holdings Facility. No changes have been made to the last sentence of Finding 4.

**COMMENT NO. 3:** Finding 8 indicates that an onsite well will provide the facility's supply water. Has this well been installed yet? If so, the finding should include construction details (installation date, drilling technique, perforated interval, and water quality data) (similar to Finding 29 in WDRs Order R5-2012-0037-001 for GloriAnn Farms, Inc. and Mark Bacchetti, GloriAnn Farms Food Processing Facility, San Joaquin County).

**RESPONSE**: At the time the Tentative WDRs were issued, the data for the well were unavailable and it took some additional time for the Discharger to obtain and submit this information. The data have since been submitted and incorporated into the WDRs.

**COMMENT NO. 4**: Finding 10 states that the facility's combined wastewater and storm water will be discharged to a "lined and aerated wastewater pond." What type of liner will be used? What is its anticipated hydraulic conductivity?

**RESPONSE:** The pond is lined with 40-mil HDPE and this information has been added to the WDRs.

**COMMENT NO. 5**: Finding 12 presents a table characterizing the discharge from the GloriAnn Farms facility's aerated wastewater pond. Since the Tracy Holdings facility will be of similar processing capacity and have similar wastewater treatment operations, the implication that the table's values reflect the new facility's discharge quality. To strengthen that argument, the finding should briefly characterize the existing facility's source water and, if possible, confirm whether it is similar to that which will serve the new facility.

**RESPONSE**: The data from the source well have been added to the WDRs.

**COMMENT NO. 6**: Finding 14 indicates that the Tracy Holdings Land Application Areas (LAAs) comprise 29.1 acres cropped with almond trees. This finding (or a new finding) should identify the annual nitrogen demand of almond trees (in lbs/ac/year). This value (or range of values) should be also added to the table in Mass Loading Limitations D.1 as a footnote following "Crop Demand."

**RESPONSE**: The Discharger recently informed staff that the crop type grown on the LAAs will be forage crops. The Discharger is required to show they have met crop demand for nitrogen and document it in the monitoring reports.

**COMMENT NO. 7**: Finding 17 provides loading data for the existing GloriAnn Farms LAAs, which comprise 46.3 acres also cropped in almonds. Since the GloriAnn Farms LAA is 60% greater than the 29.1-acre Tracy Holdings LAA, the loading values provided for BOD, Nitrogen, and FDS at the GloriAnn Farms LAA, while informative, will not likely reflect the loadings in the proposed discharge. A row should be added in Tables 5 and 6 to identify the anticipated loadings associated with the proposed discharge.

**RESPONSE**: It is up to the Discharger to meet the BOD loading limit included in the WDRs.

**COMMENT NO. 8**: Finding 18 describes solid waste generation, management, and removal ("transported off site"). What will be the ultimate fate of the facility's processing solids?

**RESPONSE**: The Discharger is required to document solids disposal information as part of the Monitoring and Reporting Program. As required by Provision H.3:

*If removed from the site, sludge, solid waste, and residual solids shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for reuse as animal feed, or land disposal at facilities (i.e., landfills, composting facilities, soil amendment sites operated in accordance with valid waste discharge requirements issued by a Regional Water Board) will satisfy this specification.*

The Discharger has stated that solid wastes will not be land applied and therefore, this Order prohibits solids to be land applied. No changes to the WDRs have been made.

**COMMENT NO. 9:** Finding 20 states San Joaquin County Environmental Health Department will regulate the facility's domestic wastewater disposal (septic tank and leachfield). Elsewhere the tentative Order (Finding 29) states that the "Discharger's operation will provide approximately 209 jobs." The facility's domestic wastewater discharge can cause localized groundwater degradation that may complicate evaluations of groundwater impacts from the facility's processing wastewater discharges. To identify the location of this concentrated potential impact, Attachment B should depict the general location of the facility's domestic wastewater treatment and disposal system.

**RESPONSE**: The level of detail provided in the WDRs is sufficient and consistent with other Board adopted orders. The septic system is permitted and regulated by San Joaquin County Environmental Health Department and is not a part of this Order. The approximate location of the leachfield was added to Attachment B.

**COMMENT NO. 10:** Finding 26, which includes a table of groundwater monitoring data from three wells installed prior to discharge initiation, identifies in bold values that "exceed their respective Concentrations Protective of Beneficial Use (CPBU)."

**RESPONSE**: The text has been revised to use the term "water quality objectives".

**COMMENT NO. 11**: Finding 27 attributes the higher water quality in MW-3 as likely being due to its proximity to an unlined irrigation canal. This is a reasonable assumption. Some explanation is warranted, however, to explain MW-3's elevated pH (11.9) compared to neutral readings in MW-1 and MW-2 and MW-3's suspiciously excessive EC (5,448) compared to 1,999 in MW-1 and 2,414 in MW-2. Is there any more recent groundwater monitoring data that can be included in this finding?

**RESPONSE**: The Discharger is not currently under an MRP that requires additional and continued sampling of the monitoring wells. Therefore, no additional data are available until the MRP is adopted and implemented.

**COMMENT NO**. **12**: The tentative Order does not but should characterize regional groundwater flow and this flow direction should be added to Attachment B. Because of the likely influence on first encountered groundwater of high quality surface water from an unlined canal, MW-3 is an imperfect candidate to serve as a compliance well, especially a downgradient compliance well. The tentative Order should provide a technical explanation for why the Regional Board should authorize such a well for compliance purposes.

**RESPONSE**: MW-3 has been changed from a compliance well to a monitoring well but is required to be sampled and monitored.

**COMMENT NO**. **13:** Finding 30 concludes that it is "not possible to determine pre-1968 groundwater quality" because on-site wells weren't installed until 2020. After a quick search of the California Department of Water Resources website (wdl.water.ca.gov), I found a groundwater well within the LAA with historic data (pre-1968) (see Attachments A, B, and C). This well, 03S06E17D001M, like MW-3, is adjacent to an unlined irrigation canal. Perhaps more digging into available historical groundwater monitoring data might provide some insight as to the quality of groundwater when the State Antidegradation Policy was adopted.

**RESPONSE**: Central Valley Water Board staff evaluated groundwater wells in the area and determined that none of the available information characterized first encountered groundwater, which is the compliance point for the groundwater limits. The depth of the well and screen interval are unknown for well 03S06E17D001M and could not be located. Without this information, it is unknown if data from that well represents first encountered groundwater. While the Antidegradation Policy is silent on the methods to be used to determine water quality, it is standard practice to compare data from similar water-bearing zones or aquifers to each other to determine if impacts are occurring as these zones likely have similar properties (e.g., similar lithologies within the water-bearing zone). Central Valley Water Board staff worked with the Discharger regarding the lack of groundwater data specifically related to the land application areas where first encountered groundwater could potentially be degraded from the discharge. The Discharger chose to install shallow groundwater monitoring wells at the site to characterize pre-discharge groundwater quality in first encountered groundwater. Therefore, it is reasonable to use the shallow groundwater quality to determine compliance with the groundwater limits in the WDRs. No changes have been made. In addition, as required in the Antidegradation Policy, the Discharger is required to incorporate best practical treatment and control of the discharge to avoid pollution or nuisance.

**COMMENT NO. 14**: Finding 31, Table 10. Antidegradation Summary, Footnote 2 following "Downgradient Groundwater Quality (MW-1 and MW-2)" references data from "monitoring well located at the Tracy Holdings Facility." The values provided appear to be the average of those in Finding 26 (save TDS), obtained from a one-time sampling event in August 2020. If so, then this footnote should mention this to eliminate any ambiguity.

**RESPONSE**: The following text was added to the footnote: *groundwater sample was collected in August 2020.*

**COMMENT NO. 15**: Finding 31.c. Nitrate, 2nd sentence, recommend inserting "sets" or "establishes" before "a groundwater limit for the protection of groundwater."

**RESPONSE:** The text has been modified.

**COMMENT NO. 16**: Finding 43, a cut-and-paste error: Update "The list of crops in Finding XX" (Finding 5?)

**RESPONSE**: The text has been updated.

**COMMENT NO. 17**: Finding 49, regarding mobilization of iron and manganese in groundwater from excessive BOD loading, last sentence: “Many aquifers contain enough dissolved oxygen to reverse the process, but excessive BOD loading over extended periods may cause beneficial use impacts associated with these metals.” While this may be true elsewhere, what about the discharge area? Won’t the elevated iron and manganese in the area’s shallow groundwater, characterized in Finding 27, preclude or otherwise retard conditions to allow “enough dissolved oxygen to reverse the process?” What is the source(s) of technical information verifying this significant assumption?

**RESPONSE**: This text has been removed to be consistent with WDRs adopted for facilities in the Fresno and Redding areas.

**COMMENT NO 18**: Finding 53, regarding the Manual of Good Practice, states: Although it has not been subject to a scientific peer review process, the Manual of Good Practice provides science-based guidance for BOD loading rates that, if fully implemented, are considered a best management practice to prevent groundwater degradation due to reduced metals.

Until the theoretical oxygen transfer model upon which the Manual’s BOD loading limits is tested and confirmed with empirical data from a variety of discharge and groundwater conditions, it remains speculative. As such, to characterize the Manual’s recommended BOD loading rates as “science-based guidance” is misleading. If the Regional Board continues to rely on the Model’s untested model for justifying prescribed BOD loading rates, then it should require monitoring of groundwater for dissolved metals (iron, manganese, arsenic) along with hardness, alkalinity, and total organic carbon (in addition to the usual suite of monitored constituents—EC, TDS, FDS, nitrogen constituents, etc.).

**RESPONSE**: The list of constituents to be monitored in groundwater is appropriate for the site and is consistent with other food processors in the area. To be consistent with the Winery General Order, alkalinity, total organic carbon, and hardness have been added to the list of constituents.

**COMMENT NO**. **19**: Finding 54 compares the tentative Order’s BOD loading limit of 100 lb/ac/day and sprinkler irrigation disposal method to the Manual’s Risk Category 3 (greater than 100 lb/ac/day) when it appears to more resemble Risk Category 2 (less than 100 lb/ac/day). This should be explained or corrected.

**RESPONSE**: The proposed BOD limit of 100 lb/ac/day/cycle is appropriate for this discharge, consistent with other discharges under WDRs in the area, and consistent with the Winery General Order. While the discharge for this facility is characterized as Category 3, the loading rate is actually between Category 2 (<100 lb/ac/day) and Category 3 (>100 lb/ac/day).

**COMMENT NO. 20**: Finding 57 classifies the discharge's threat to water quality and complexity for annual fee purposes (23 CCR 2200O). The finding classifies the discharge as being Category 3 threat to water quality and Category C complexity. Given that the discharger employs a biological treatment system (aerated pond), the discharge's complexity should be elevated to Category B ("Any discharger not included in Category A that has physical, chemical, or **biological treatment systems** (except for septic systems with subsurface disposal)…" (emphasis added) .Category "C" complexity is for dischargers "having no waste treatment systems or that must comply with best management practices, dischargers having passive treatment and disposal systems, or dischargers having waste storage systems with land disposal."

The significant BOD removal from the aerated wastewater treatment/storage pond appears necessary to comply with the BOD loading limit. Accordingly, the facility's biological treatment system is an integral component of the Discharger's ability to comply with the tentative Order. Unless additional justification is provided to (incorrectly) classify the discharge's complexity as "C" the discharge complexity should be classified as "B."

> **RESPONSE**: Central Valley Water Board staff have evaluated threat and complexity of the treatment system and discharge and determined that 3C is appropriate for this discharge. Biological processes are considered active processes that require modification of effluent pH or DO, or specialized maintenance to meet effluent limits as in the case of domestic wastewater. At this Facility, the biological treatment is considered passive and may not be necessary for the discharge to meet effluent limits in the WDRs. No changes have been made.

**COMMENT NO. 21**: Effluent Limitation C.1 states:
The total volume of treated wastewater, stormwater, and supplemental irrigation water applied to the LAA shall not exceed an FDS annual average concentration of 700 mg/L. The FDS flow weighted average is based on total flow and concentration of wastewater discharged.

The tentative Monitoring and Reporting Program (MRP) requires monitoring of supplemental irrigation water, but only for its daily hydraulic loading to the LAAs, not its FDS. Isn't this FDS data necessary to determine the "FDS annual average concentration" of combined flows to the LAAs?

> **RESPONSE**: All wastewater, including storm water, process wastewater, and supplemental irrigation water is commingled in the wastewater pond. The WDRs have been modified to exclude source water quality for the evaluation of FDS for compliance determination. FDS was added to the list of constituents to be analyzed in the source water.

**COMMENT NO 21**: Discharge Specification E.1. I recommend the Regional Board require a standard similar to that contained in the Winery General Order recently adopted by the State Water Resources Control Board. Discharge Specification 2.b.ii in

this Order requires new ponds be equipped with liners to meet a hydraulic conductivity standard of $1x10^{-6}$ centimeters per second (cm/s) or less to prevent percolation-related degradation using one of the following:

a) A compacted clay liner, with a minimum clay thickness of two feet
b) A Portland cement concrete liner, designed to minimize cracking and infiltration.
c) A synthetic liner, consisting of a 40 thousandths of an inch (mil) synthetic geomembrane or a 60-mil high-density polyethylene liner installed over a prepared base or a secondary clay or concrete liner.
d) An equivalent engineered alterative specified in the NOI and/or technical report approved by the regional water board.

**RESPONSE**: Comment noted. Central Valley Water Board may evaluate this issue in the future. The pond at this Facility was constructed with a 40-mil HDPE liner and this information has been added to the WDRs.

**COMMENT NO. 22**: Provision I.1.d indicates that the Discharger may apply wastewater pond sludge to the LAAs. However, the tentative MRP does not, but should, specify how this pond sludge discharge is to be monitored to ensure its application to the LAAs complies with the loading limits specified in the tentative Order.

**RESPONSE**: Solids from the ponds will not be land applied. The text has been corrected.

**COMMENT NO. 23**: Since when did the State Water Resources Control Board revise its Antidegradation Policy to include the qualifier, “cost effective,” in its requirement for best practicable treatment or control?

**RESPONSE:** The phrase cost effective has been removed.

**COMMENT NO. 24**: The tentative MRP’s Source Water monitoring requires monitoring of only EC, TDS and Nitrate as Nitrogen every three years. Supplemental irrigation water FDS should be included to facilitate assessment with the Effluent FDS limit, as well as facility source water Na and Cl to gage the increase in these two salt constituents as a result of corn processing. To obtain sufficient data to better characterize source water, the monitoring frequency for all constituents should be increased to yearly for the first three years and once every three years thereafter.

**RESPONSE**: The MRP was modified as suggested.

**COMMENT NO. 25**: The tentative MRP’s Wastewater Effluent Monitoring requires composite sample types of the discharge from pond to the LAAs. Unless additional technical justification is provided for the need for composite samples, it would appear that grab samples from a 6.9-million-gallon pond would be sufficiently representative of the discharge to the LAAs. Also, iron and manganese monitoring frequency should be increased from annually to quarterly.

**RESPONSE**: Composite sampling was changed to grab samples. The monitoring frequency for iron and manganese was determined to be appropriate for this discharge.

**COMMENT NO. 26**: The tentative MRP requires annual groundwater monitoring for standard minerals and specifies this as including "at a minimum, dissolved iron, dissolved manganese, chloride, and sodium." To better assess the discharge's potential to degrade groundwater from metals and salinity constituents, arsenic, hardness and alkalinity should be added to the suite of standard minerals. And, groundwater should be monitored at least annually for total organic carbon.

**RESPONSE**: Alkalinity, total organic carbon, and hardness were added to the list of constituents to be analyzed in groundwater.