

Comments on TWDRs and CDO
California Dairies, Inc. Tipton Plant

NPDES No. CA0082805

Tentative WDRs

1. II, A. Although the LTRID distribution system is technically hydraulically connected to the Tule River, the use of the connection is very rare. The Casa Blanca Canal and its tributaries normally carry only irrigation water to farms and do not spill into the Tule River. As indicated in Attachment F, to reach the Tule River would require 3 to 4 miles of northerly travel through 5 or 6 control points. CDI is willing to forgo discharging to LTRID and retain effluent in storage ponds during times that an actual hydraulic connection occurs (Casa Blanca Canal spilling into the Tule River).
2. II, H. As noted, the Basin Plan does not specifically identify beneficial uses for Morrison Ditch or Casa Blanca Canal. In fact, the only current beneficial use is agricultural supply (AGR) and groundwater recharge (GWR). The use of the ditch/canal for water contact recreation (REC-1) does not occur and is not likely to ever occur. Warm freshwater habitat (WARM) only occurs incidental to the ditch/canal's primary function for conveying agricultural water. Canal maintenance activities and the lack of a continuous supply of water diminish the value, if any, of warm freshwater habitat. The draft permit acknowledges that the ditch/canal is not a fishery. CDI concurs that groundwater is potentially useable as a municipal and domestic supply (MUN) but the direct use of canal water as a municipal supply is unlikely because the water supply is intermittent and further, there are no communities present downstream of the CDI plant that could use the water for municipal supply. The correct classification of beneficial uses may affect several discharge limits, including those for zinc, ammonia and toxicity. CDI is not aware of any formal or legal finding that the Morrison Ditch and the Casa Blanca Canals are "waters of the United States". This is a staff interpretation and has not been affirmed by the Board. CDI believes that waste discharge requirements for water discharged to the LTRID canal system should be based only on the AGR and GWR beneficial uses. The proposed requirements do not provide sufficient evidence to classify the beneficial uses of

the LTRID canals as anything other than AGR or GWR. To the extent that discharge limits are based on beneficial uses other than AGR or GWR or the assertion that the canals are waters of the United States, the limits should be revised and/or deleted as inapplicable. See Comment 1 above regarding CDI's proposal to "disconnect" from the Casa Blanca Canal during times when the canal is hydraulically connected (spilling) into the Tule River.

3. IV, A, 1, a. Footnote 1 and 2 on Table 6 are missing. There are two items "a".
4. IV, A, 1, a, Table 6. Boron and chloride are regulated at two discharge points. Regulation at only one discharge point is required. Compliance at one point will be presumptive evidence that compliance has been met at the other point of discharge. The two points of compliance constitutes double jeopardy for CDI. CDI requests that EC be regulated only at D001.
5. IV, A, 1, a, Table 6. CDI prefers that TSS be regulated at Discharge 002. CDI is concerned that algal growth in storage ponds may degrade TSS. More consistent TSS performance is expected at D002.
6. IV, A, 1, b. The upper pH limit of 8.3 can be exceeded naturally in ponds because of the diurnal photosynthetic process and variation in carbon dioxide levels in the water. An upper pH limit of 9.0 is requested so that CDI does not have to use acid to adjust the pH when discharging. No significant impact will occur to the receiving water at pH 9.0. The use of chemicals for pH adjustment will add to EC. CDI understands that this is required in the Basin Plan. However, the requirement is too broad and does not rationally apply here.
7. IV, A, 1, c. EC is regulated at two discharge points. If the EC compliance limit is met at Discharge 002, it does not need to be regulated at Discharge 001. The two points of compliance constitutes double jeopardy for CDI. CDI requests that EC be regulated only at D002.
8. IV, A, 1, d. CDI requests deletion of the requirement for Total Coliform Organisms. The CDI facility does not treat domestic sewage. The treatment process, with a detention time of over 20 days, will significantly reduce any coliform organism associated with milk. CDI has not been required to monitor total coliform in the past. The last 14 years of operation, no water quality issue has arisen related to coliform. CDI has observed that water fowl frequently utilize the storage ponds. CDI is concerned that the monitoring of coliform may be positive, primarily as a result of waterfowl rather than from the waste discharge. To be absolutely certain that compliance will be achieved with these requirements, CDI will need to provide facilities for disinfection. Any disinfectant used will add to the EC of the water. No improvement in water quality or practical protection of a beneficial use will arise from this requirement.

9. IV, A, 1, e. CDI believes that acute whole effluent toxicity testing is unnecessary because the beneficial use of WARM is not justified for the LTRID canals. In 14 years of discharge, there has been no evidence of any adverse affect on the LTRID canals with respect to effluent toxicity. CDI is requesting that this requirement be deleted.
10. V, A, 9. See item 6 above. When the CDI discharge is the only flow in the canal, an upper pH limit of 9.0 will not result in adverse impacts on the canal water quality. CDI is requesting that the upper pH limit be 9.0.
11. VII, A. BOD and TSS Effluent Limitations should be based on grab samples, consistent with the monitoring program. Composite samples are not necessary in long detention time pond systems as adequate mixing and compositing naturally occurs in the treatment process.

Attachment C – Wastewater Flow Schematic

12. A revised Attachment C is attached.

Attachment E Monitoring and Reporting Program (MRP)

13. IV, Table E-2: CDI requests that the sample frequency for chloride, boron, zinc, ammonia be changed from 1/month to 4/yr and the sample frequency for standard minerals be changed from 1/month to 1/year.
14. VI, A, Table E-3: CDI requests that the sample frequency for boron and chloride be changed from 1/month to 4/year.
15. VI, B: Please clarify the meaning of the PND monitoring location. Does this include lined aerated lagoons that are held at a constant level and are used for treatment rather than for storage? Is this intended to only include unlined ponds with variable water surface elevation? Is dissolved oxygen monitoring required for continuously aerated treatment ponds? CDI requests that freeboard monitoring apply only to storage/percolation ponds and not to the aerated lagoon treatment ponds. DO monitoring should not apply to processes that are intentionally anoxic for biological nutrient removal. For the aerated lagoons, periods of high loading will result in high organism oxygen utilization rates, temporarily depressing the DO levels. DO less than 1 mg/L should not be considered a potential odor generating event unless the DO drops to 0 for a sustained period of more than 2 to 4 hours.
16. VIII, A, Table E-6: Receiving water in the Casa Blanca Canal may only run for several weeks in a low water years, such as 2008, and may run for several months in a good water year. CDI requests that the sample frequency for

ammonia be changed to 4/year. Footnote 4: clarify that the reference to effluent ammonia monitoring is a reference to Table E-2.

17. VIII, B, Table E-7: CDI believes that there is sufficient data available from prior groundwater monitoring (7 sample events through February 08) to warrant a reduction in sample frequency for nearly all parameters, Most constituents show very little variability quarter to quarter. CDI requests that the sample frequency for depth, elevation, pH, nitrate, EC and TDS be reduced from 4/year to 2/year. CDI further requests that the sample frequency for ammonia be changed from 4/year to 1/year.

Attachment F –Fact Sheet

18. II, B, pg F-8. The current set points are: EC < 1000, pH <10 and opacity <25% for diversion directly to ponds. High strength wastewater with EC > 1000 is diverted to the 200,000 gallon EQ tank for subsequent treatment by the MVR wastewater evaporator. The average flow of high strength treated by the ponds is 650,000 gallons per day (not mgd).
19. II, B, pg F-9. The pond liners are 60 mil (60/1000 inches) not 60 millimeter. The detention time in Ponds A and B is about 2 days.
20. IV, B, Table F-3. The maximum daily flow should be 4.32 mgd, not 4.35 mgd.
21. IV, C, 3, g. Salinity is the greatest water quality challenge for the CDI Tipton facility. CDI has implemented virtually all source control measures (use of KOH in place of most NaOH, caustic recovery, segregation of waste streams, reduction in quantity of chemicals used, housekeeping, etc) that are practical and do not compromise sanitation requirements. CDI has operated a MVR wastewater evaporator since the plant start-up primarily to remove salinity from high strength wastewater. CDI plans to add additional capacity (either new MVR evaporator or RO system to further reduce salinity). End of the pipe salinity removal by evaporation or RO has very high capital and operating costs. Furthermore, both processes create a high salinity concentrate that must be hauled off-site for reuse or disposal. CDI believes that it is not practical, from an economic viewpoint, to continue to expand end of the pipe salinity removal beyond what has been proposed. CDI therefore requests that consideration be given by the Regional Board to changes in the salinity (EC) limits that are consistent with the definition of BPTC. CDI believes that an EC limit of 1000 will prevent pollution and will not impact the beneficial use of water in this water short area. An EC balance was submitted showing how it is possible to achieve compliance with an EC limit of 500 above background. The source water EC of

about 217 makes the target EC 717. Although this is possible to achieve, non-compliance may occur at times because there is little margin for error. The treatment system relies upon cow water to blend with other process wastewater to achieve the EC limit. There may not always be the required quantity of low EC cow water and process wastewater to meet the EC limit on a daily basis. CDI therefore plans to have available a supply of well water that will be used for blending of the effluent to meet the stated requirements.

22. Attachment F, V, B, 3. Groundwater samples from monitor wells show a change between upstream and downstream locations for various constituents including EC and TDS. However, nitrate has improved between the upstream and downstream wells. Other constituents show no significant change from upstream to downstream. The monitor wells were constructed to sample first encountered groundwater. The first encountered groundwater is not likely to be representative of groundwater as a whole and is not representative of groundwater pumped in the vicinity for agricultural irrigation. CDI believes it is premature to conclude that groundwater has degraded or that beneficial use has been impacted.

Other comments

23. Attachment G was not included in the Order. Please provide a copy for review.
24. Please clarify how this order will be enforced (points of compliance) between the time of adoption and construction of the proposed facility improvements.