SWRCB Staff's Preliminary Straw Proposal - For Distribution to Stakeholders
Waste Retention Ponds
October 2021

NOTE: This straw proposal reflects staff's initial proposal regarding requirements for waste retention ponds at dairies and is intended to generate discussion of its strengths and disadvantages and to provoke discussion of any different and better proposals. Staff is continuing to develop its proposals, and it is expected that staff's proposals may be revised significantly as a result of both the ex parte meetings and public comments on a draft water quality order.

Waste Retention Ponds	Staff Proposal
Existing ponds [that do not have hydraulic continuity to groundwater]	Interim requirement to meet a USDA Natural Resource Conservation Service 0.9 mm/day seepage rate (NRCS seepage rate), as long as the existing ponds do not have hydraulic continuity with groundwater. [The NRCS seepage rate is identified in the CVDRMP Summary Representative Monitoring Report (2019), page 7.] Existing ponds must meet the NRCS seepage rate with a confidence level as confirmed by a test conducted by a licensed professional. If the Regional Board finds that compliance with the NRCS seepage rate is still resulting in an immediate site-specific groundwater quality problem for any specific existing pond, it may impose additional requirements. If the NRCS seepage rate is not met, then the dairy must implement measures to assure the NRCS seepage rate is met unless it can show that the concentration of nitrogen in the leachate beneath the pond does not exceed 8 mg/L nitrogen. The above test must be repeated every 3 years to demonstrate the pond is not exceeding the NRCS seepage rate. Recognizing that the NRCS seepage rate is not directly related to meeting water quality requirements, meeting the NRCS seepage rate is an interim measure and the Regional Board may require all existing ponds to further reduce seepage rates. The dairy order would also direct the Regional Board to develop a final compliance strategy and schedule to ensure all existing ponds are protective of groundwater. The rationale for this approach is that pond liners are expensive, and literature shows minimal leakage from ponds configured in fine-grained soil and monitoring shows limited spatial impact. This approach would allow dairies that are meeting the interim seepage rate to focus on reducing loading from land application areas.
Existing ponds that may have hydraulic continuity to GW	Within one year of the SWRCB adopting the dairy order, the Regional Board will issue a Time Schedule Order directing the dairy to show that no hydraulic continuity with groundwater exists (i.e., no hydraulic connection between the pond and the reasonably anticipated future high groundwater elevation mark, including the capillary fringe), as confirmed by a Professional Engineer or Professional Geologist registered or licensed in the State of California. If the dairy cannot make that showing, the dairy must implement one of the "default pond construction standards" described below.

Waste Retention Ponds	Staff Proposal
New and reconstructed ponds	The following "default pond construction standards" apply to new ponds, and to existing ponds if either (a) additional infrastructure that either increases the pond's capacity, or modifies the pond's footprint, is added to the existing pond, or (b) there is a substantial disruption to the integrity of the containment system of the existing pond (e.g., by removing a significant portion of the sealing layer). The default pond construction standards are either: 1) A synthetic single membrane system with periodic electrical leak detection, vadose zone monitoring, and volumetric leak testing, or 2) A double synthetic liner with leachate collection system. To select option (1), a vadose zone must be available. For ponds that have hydraulic continuity to groundwater, this can be accomplished by adding soil or lowering the water table to create a vadose zone. All liners must include the pond sidewalls. All liners must be designed and constructed under the direct supervision of a professional civil engineer registered in the State of California. Any significant leaks in the liner that are detected must be repaired. Neither option would require groundwater monitoring for each individual pond (but groundwater monitoring for some ponds may be required by the Regional Board due to CV-SALTS). Representative groundwater monitoring under the CVDRMP is required.