

Proposed Modifications to the Basin Plan to Incorporate Definitions and Terminology

The following definitions will be inserted into a Chapter 6 Glossary of the Sacramento and San Joaquin River Basin Plan and into a Chapter 5 Glossary of the Tulare Lake Basin Plan:

ALTERNATIVE COMPLIANCE PROGRAM (ACP): project(s) designed to provide the same or higher level of intended protection to water users that may be adversely affected by the discharge. For example, where a discharge is unable to comply with water quality objectives for nitrate, the discharger may seek an exception and offer to provide a safe and reliable alternative water supply for nearby drinking water wells that exceed or threaten to exceed the primary MCL for nitrate. Alternative Compliance Programs may be used in conjunction with other non-traditional regulatory options (including variances, exceptions, offsets, management zones and assimilative capacity allocations) to mitigate the adverse effects from a discharge until a feasible, practicable and reasonable means for meeting water quality objectives becomes available.

AQUIFER: A body of rock or sediment that is sufficiently porous and permeable to store, transmit and yield significant or economic quantities of groundwater to wells or springs.

AREA OF INFLUENCE/CONTRIBUTION: The portion(s) of Basin or Sub-basin where a discharge or discharges will co-mingle with the receiving water and where the presence of such discharge(s) could be detected.

ASSIMILATIVE CAPACITY: The capacity of a high-quality receiving water to absorb discharges of chemical constituents and still meet applicable water quality objectives that are protective of beneficial uses. State Water Board Resolution 68-16, the Statement of Policy with Respect to Maintaining High Quality of Waters in California (*State Antidegradation Policy*) requires a consideration, to the extent feasible, of the degree to which a discharge will affect the available assimilative capacity of a high-quality water relative to baseline water quality when the Regional Board is authorizing degradation. For the purposes of the Nitrate Control Program, available assimilative capacity may be calculated based on the average groundwater concentration of nitrate in the receiving water.

AVERAGE GROUNDWATER CONCENTRATION: The mean, volume-weighted concentration of a chemical constituent computed using the reasonably available, representative and reliable well data collected in a given Basin or Sub-basin during the most recent 10-year sampling period. The Regional Board may authorize longer or shorter averaging periods where necessary and appropriate. Statistical tools and transformations or other QA/QC data may be used to identify and disqualify outliers, to normalize data, or to spatially and temporally de-cluster well data to reduce the potential for sampling bias when estimating a mean concentration. See SNMP Attachment B2.2 for a more detailed description and examples of some technical methods previously accepted for use in estimating average chemical concentrations in groundwater.

BASELINE WATER QUALITY: The lowest concentration of a chemical constituent in a receiving water since the relevant water quality objective for the constituent was established or since October 28, 1968, whichever is later, unless the Regional Board has subsequently authorized degradation of that groundwater consistent with the *State Antidegradation Policy*.

GROUNDWATER BASIN: A groundwater basin is an alluvial aquifer comprised of soils and sediments that are sufficiently porous and permeable to store, transmit and yield significant or economic quantities of water to wells or springs. Groundwater basins have a definable bottom and well-defined lateral boundaries that are usually characterized by impermeable formations of rock or clay or by subsurface gradients that physically constrain subsurface flows to a limited direction. The California DWR has identified 126 groundwater basins or sub-basins in the Central Valley Region (see SNMP Attachment B2.2).

BASIN PLAN: A Water Quality Control Plan, which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems, and provides the basis for the Regional Board's regulatory programs. The Basin Plan designates beneficial uses, establishes water quality objectives to ensure the reasonable protection of those beneficial uses and the prevention of nuisance, and establishes programs of implementation for achieving water quality objectives.

BEST EFFORTS: The highest level of water quality that can be reasonably achieved using the most effective and affordable methods generally available to reduce the discharge of pollutants or mitigate potential adverse effects of such discharges on the receiving waters. Best Efforts is conceptually comparable (but not legally synonymous) with other similar phrases commonly used to proscribe the most effective, efficient and affordable means for minimizing pollution, such as: Best Available Technology Economically Achievable (BATEA), Best Practicable Control Technology (BPT), Best Conventional Pollution Control Technology (BCT), and Best Management Practices (BMP). However, unlike the phrase BPTC, use of the term Best Efforts is not restricted to situations where baseline water quality is better than relevant water quality objectives.

BEST MANAGEMENT PRACTICES (BMP): Structural or non-structural (operational) control techniques designed to reduce the discharge of pollutants into receiving waters, especially for non-point sources where conventional wastewater treatment technologies are not a feasible or practicable compliance option.

BEST PRACTICABLE TREATMENT OR CONTROL (BPTC): The applicable standard that must be met by a discharger when the Regional Board is authorizing the degradation of high-quality waters pursuant to the *State Antidegradation Policy*. BPTC is conceptually comparable (but not legally synonymous) with other similar phrases commonly used to proscribe the most effective, efficient and affordable means for minimizing pollution, such as: Best Available Technology Economically Achievable (BATEA), Best Practicable Control Technology (BPT), Best Conventional Pollution Control Technology (BCT), and Best Management Practices (BMP).

CONDITIONAL PROHIBITION: Conditional prohibitions of discharge can be established in the Basin Plan for any type of discharge. (Wat. Code § 13243) A conditional prohibition may specify conditions or areas where the discharge of waste, or the discharge of certain types of waste, will not be permitted. A conditional prohibition established in the Basin Plan is directly enforceable by the Regional Board even in the absence of WDRs or a waiver regulating the discharge or discharger.

CONTAMINATION: Water Code section 13050, subdivision (k) defines “contamination” as “an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.”

CURRENT GROUNDWATER QUALITY: For the purposes of the nitrate and salinity control plans, “current groundwater quality” is defined as the volume-weighted Average Concentration of a chemical constituent in a given Basin or Sub-basin. Current water quality can be computed separately for the Production Zone, Upper Zone, Lower Zone, Shallow Zone and Management Zone.

DE MINIMIS DISCHARGE: A discharge that will not cause any significant effect on groundwater quality. *De minimis* discharges of nitrate are specifically defined in the Regional Board’s Nitrate Control Program.

DOMESTIC WELL: A private water supply well that provides water typically used by single family homeowners for private use and consumption.

EARLY ACTION PLAN (EAP): For the purposes of the Regional Board’s Nitrate Control Program, an EAP is a plan that identifies specific activities, and a schedule for implementing those activities, that will be undertaken to ensure immediate access to safe drinking water for those who are dependent on groundwater from wells that exceed the Primary MCL for nitrate. (See also the SNMP Nitrate Permitting Strategy).

EXCEPTION TO A WATER QUALITY OBJECTIVE: A special authorization, adopted by the Regional Board through the normal public review and approval process, that allows a discharge or group of discharges to groundwater, subject to various conditions, without an obligation to comply with certain water quality objectives that would normally apply to the given discharge for the period of the exception. Exceptions are limited to a specific term that is determined by the Regional Board. (See also the SNMP Exceptions Policy).

FEASIBLE, PRACTICABLE AND REASONABLE: Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. "In a successful manner" means avoiding significant and unacceptable adverse impacts.

GROUNDWATER: Water that collects or flows beneath the Earth's surface, filling the porous spaces in soil, sediment, and rocks. Groundwater originates from rain and from melting snow and ice and is the source of water for aquifers, springs, and wells.

INFEASIBLE, IMPRACTICABLE OR UNREASONABLE: Not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. "In a successful manner" means avoiding significant and unacceptable adverse impacts.

LOWER GROUNDWATER ZONE (see Fig. 1): The remaining portion of a groundwater basin or sub-basin's Production Zone excluding the Upper Zone. Wells located in the Lower Zone are generally used for crop irrigation although some wells in the lower zone are also used for municipal supply. The upper boundary of the Lower Zone varies based on well construction information for a given basin or sub-basin (see reference citation in the definition of Upper Zone. Where the Corcoran Clay layer exists and a significant proportion of domestic wells rely on water above the Corcoran Clay layer, the Corcoran Clay layer defines that upper boundary of the Lower Zone.

MANAGEMENT ZONE: A discrete and generally hydrologically contiguous area for which permitted discharger(s) participating in the management zone collectively work to meet the goals of the SNMP and for which regulatory compliance is evaluated based on the discharger(s) collective impact, including any alternative compliance programs, on a defined portion of the aquifer. Where Management Zones cross groundwater basin or sub-basin boundaries, regulatory compliance is assessed separately for each basin or sub-basin. Management Zones must be approved by the Regional Board. (See also SNMP Management Zone Policy).

NATURALLY-OCCURRING BACKGROUND CONCENTRATION: The concentration of a chemical constituent that is likely to be present a given groundwater Basin or Sub-basin without the influence of anthropogenic activities that may have occurred over time, accounting for temporal and spatial variability.

PUBLIC NUISANCE: As applied to adverse water quality problems resulting from the treatment or disposal of wastes, any condition that:

- is injurious to health, indecent or offensive to the senses, or an obstruction to the free use of property, and
- affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individual may be unequal.

(Wat. Code, § 13050, subd. (m).)

OFFSET PROJECT: Project(s) implemented in conjunction with, but separately from, a discharge where the net impact of both on receiving water quality is better than what would be expected to occur if the discharge was required to comply with waste discharge requirements prescribed in the absence of any offset. (See also the SNMP Offsets Policy).

PERCHED GROUNDWATER (see Fig. 1): Groundwater that is supported by a zone of material of low permeability located above an underlying main body of groundwater with little or no hydrologic connectivity to the underlying main aquifer. In most cases, Perched Groundwater is excluded when characterizing the Production Zone, Upper Zone or Shallow Zone of the main Aquifer which makes up a given DWR Basin or Sub-basin.

POLLUTION: an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects the waters for beneficial uses or the facilities which serve these beneficial uses. (Wat. Code, § 13050, subd. (l).) Naturally-occurring background concentrations are not considered pollution.

PRODUCTION ZONE FOR GROUNDWATER (see Fig. 1): The portion of a basin or sub-basin from which the vast majority (~90%) of groundwater being pumped and utilized. The Production Zone generally extends from the top of the saturated zone to the bottom of the lowest screened production well. The Production Zone may be further subdivided into the Upper Zone and the Lower Zone. Groundwater in storage below the Lower Zone is not included when describing or characterizing the Production Zone.

RECEIVING WATER(S): A surface waterbody (lake or stream) or a groundwater Basin or Sub-basin into which pollutants are discharged.

SATURATED GROUNDWATER ZONE (see Fig. 1): The area below the land surface in which all pore space between soil, sand and rock particles is filled with water. The Saturated Zone is below the Unsaturated Zone and excludes areas of soil moisture where water is held by capillary action in the upper unsaturated soil or rock.

SHALLOW GROUNDWATER ZONE (see Fig. 1): The 10% uppermost portion of the Upper Zone. For regulatory purposes, the term "Shallow Zone" should be used in lieu of the phrase "First-Encountered Groundwater."

SUB-BASIN: A sub-basin is a smaller, but contiguous, area of the aquifer within a larger groundwater basin. The sub-basin boundaries can be defined both vertically and horizontally by a number of factors including, but not limited to: mineral or chemical concentrations, pumping practices, porosity, ownership, overlying land uses, jurisdictional oversight, flow gradients, tributary relationships, or other variables that merit the sub-basin be managed differently from adjacent areas in the same larger groundwater basin. The California DWR has identified 126 groundwater basins or sub-basins in the Central Valley Region; 41 of these aquifers are located on the valley floor, and the remainder are located in the surrounding foothills and mountains (see SNMP ATTACHMENT b2.2).

TRIGGER(s): A concentration or level for a specific constituent (e.g. TDS) or parameter (e.g. Electrical Conductivity) which, when equaled or exceeded, may require some dischargers to initiate certain actions or implement certain measures.

UNSATURATED ZONE (see Fig. 1): The area below the land surface in which the pore space between soil, sand and rock particles contains varying degrees of both air and water in ratios that inhibit extraction of significant or economic quantities of groundwater extraction. The term "Unsaturated Zone" is generally considered to be synonymous with the term "Vadose Zone."

UPPER GROUNDWATER ZONE (see Fig. 1): The portion of a groundwater basin or sub-basin from which most domestic wells draw water (40% Domestic well depth weighted, 10% virtual farm wells (Irrigation modeled), 20% urban public water supply wells, 20%

rural public water supply wells and 10% DDW systems). It generally extends from the top of the saturated zone to the bottom of the lowest screened domestic wells. In areas where the Corcoran Clay layer exists, and a significant portion of domestic wells draw water from above the Corcoran Clay layer, the upper zone will extend to the top of the Corcoran Clay layer. The lower boundary of the upper zone varies based on well construction information for a given basin or sub-basin (as described in Section 2 of LWA/LSCE; Region 5: Updated Groundwater Quality Analysis and High Resolution Mapping for Central Valley Salt and Nitrate Management Plan; June, 2016).

VARIANCE TO WATER QUALITY STANDARD: A special authorization, adopted by the Regional Board through the normal public review and approval process, that allows an NPDES-permitted discharge(s) to surface waters or a waterbody, subject to various conditions, without an obligation to comply with certain water quality standards that would normally apply to the given discharge(s) or waterbody. Variances are limited to specific terms governed by federal law and must also be approved by U.S. EPA. Variances apply solely to surface waterbodies or discharges to those surface waters. (See also Res. No. R5-2014-0074).

Figure X-1: Subdivisions of a Groundwater Basin or Sub-basin Land Surface

