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From: Steve Lederer, Director

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Subject: Summary of Draft Changes to the Three Tier Procedure Used in the Water Availability Analysis (WAA)

Following the work of the Groundwater Advisory Committee (GRAC), policy direction by the Board of Supervisors, information provided by Luhdorff & Scalmanini, Consulting Engineers (LSCE) (the County's groundwater consultant), and experience using the existing procedure, various changes to the Water Availability Analysis (WAA) are being proposed. This memo summarizes the major changes to the tiered procedure outlined in the WAA. Those interested in more detail are encouraged to read the proposed document for a comprehensive understanding of the proposed changes.

The WAA was first put in place in the early 1990's and has been used ever since (with periodic revisions) as a tool for analyzing ***DISCRETIONARY*** projects in the unincorporated county (such as wineries, new vineyards on slopes over 5%, restaurants, hotels, etc.) that propose to use groundwater.

Tier 1: Water Usage Volumes¹

The current WAA includes a section for evaluating proposed water usage (volume) and thresholds for acceptable use. These thresholds are 1.0 acre-ft allowed/acre of land on the valley floor, 0.3 acre ft allowed/acre of land in the MST, and 0.5 acre-ft allowed/acre of land in all other areas. While the 1.0 acre-ft/acre criteria on the valley floor and the 0.3 acre-ft criteria in the MST have proven to be both scientifically and operationally adequate, the same cannot be said of the 0.5 acre-ft/acre criteria used in "all other areas", which primarily means hillside parcels. While the 0.5 acre-ft/acre criteria is generally applicable on a watershed scale, the variability of water availability for individual parcels in the hills makes it impractical to create a single meaningful threshold that would apply to all parcels. As such, the proposed WAA deletes the 0.5 acre-ft/acre criteria and requires a parcel-specific analysis for hillside parcels.

Tier 2: Well to Well Interference

The current WAA contains a "well to well" interference analysis, which is used only when the initial water usage standards (as discussed above) are exceeded. The currently required analysis is a pumping test which was (theoretically) designed to identify both well capacity and well to well

¹ An acre-foot of water is 325,851 gallons.

interference. Unfortunately, this process has not worked well from a practical standpoint, and LSCE’s analysis finds it questionable from a technically defensible standpoint.

As proposed in the Draft Revised WAA, the Tier 2 analysis will be required:

- For all hillside parcels (this is new, as discussed above); or
- If the water thresholds of Tier 1 are exceeded (this is current practice); or
- If substantial evidence in the record indicates a need to do so (current practice and CEQA required).

The basic steps of a Tier 2 “well to well” interference analysis are as follows:

- Step 1: If project well is >500 feet away from other wells; no further analysis is required (Note: The well to be used for the project (the “project well”) could be an existing or new well);
- Step 2: If well does not meet the distance standard under step 1, determine appropriate location of well (or adequacy of existing well) following further analysis of the site specific conditions such as:
 - Distance to nearest well
 - Hydrogeologic setting
 - Well construction details (i.e., design pump rates, depth, screen and seal depths)
 - Operational procedures

Tier 3: Groundwater/Surface Water Interaction

The current WAA does not contain standards for, and does not specifically require, evaluating “well to surface water” interference. The lack of this standard resulted in the inability of a recently proposed small vineyard project to reasonably demonstrate the lack of impact of the project that was located in proximity to a small stream that feeds the Napa River. Opponents of the project raised the issue that the project’s well would reduce flows in the tributary stream, which is a habitat for endangered species. In the absence of adopted standards, the only methods of countering the opponents’ arguments were expensive project specific consultant studies and an EIR, which would have been outside the applicant’s ability to conduct. The project applicant rescinded the application. As such, well to surface water procedures (Tier 3) have been created for those situations where they are needed. The Tier 3 analysis will be required when substantial evidence in the record indicates a need to do so (this is current practice and CEQA required).

The basic steps of the well to surface water procedure are similar to the well to well interference procedure (Tier 2), but the threshold distance in step 1 is between 500 to 1500 feet, depending on pumping capacity.

Summary of Tiers:

Criteria	Current WAA	Proposed WAA
Tier 1: Water Usage	Exists	Use existing standards for MST and Valley Floor, require parcel specific analysis for all other areas (hillsides)
Tier 2: Well to Well Interference	Exists	Change method of performance; required for hillside parcels
Tier 3: Groundwater/Surface Water Interaction	Does not address	Included new procedure for performing analysis when it is required

