



**Hydrogeologic Consulting & Water Resource Management**  
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January 4, 2010

Monterey Peninsula Water Management District  
 Attn: Henrietta Stern, Project Manager  
 5 Harris Court, Building G  
 Monterey, California 93942

**Subject: *Suspension of 'Acceptance' or, 'Processing' of Existing Water Distribution System Permits***

Bierman Hydro-Geo-Logic, P.C. (BHgl) has prepared this letter to discuss the proposed first reading of an ordinance to; "temporarily suspend 'acceptance' and/or, 'processing' of existing Water Distribution System (WDS) permits for all wells within the District that derive a water supply from fractured hard-rock aquifers"<sup>1</sup>. BHgl is in disagreement with the proposed ordinance for the follow reasons;

- There are existing land owners/applicants<sup>2</sup> which have completed Pre-Applications in addition to pump testing their wells during the last pump season (Aug 1---Oct 31, 2009)<sup>3</sup> and/or, completed pump testing in previous pump seasons (June 1---December 30, 2008) which followed MCHD<sup>4</sup>/MPWMD<sup>5</sup> guidelines that are now in the reporting stages and close to submittal formal WDS permits. The financial burden for these applicants would be costly and unprecedented, and therefore, BHgl is requesting that MPWMD establish a grace period and/or, a list of applicants that should be considered 'in-line' and able to move forward with obtaining WDS permits. The list could be based on Pre-Application submittal and pump testing dates.
- Monterey Peninsula Water Management District (MPWMD) already has rules and regulations<sup>6</sup> to demonstrate well adequacy for associated use, which is based on several factors, including, but not limited to; 1) whether or not the pumping wells calculated yield<sup>7</sup> meets the projects proposed maximum day demand (MDD) in equivalent 12-hr cyclic pumping scenarios, 2) whether or not there is more than 5% constructive groundwater interference between neighboring wells (within 1,000 feet) saturated thickness and, 3) whether there is potential significant irreversible impacts that could exist to Sensitive Environmental Receptors<sup>8</sup> (SER) and, 4) Groundwater quality for potable use.
- As per Monterey County Health Department (MCHD)<sup>9</sup>, the County requires and addresses well sighting locations by assuring setback requirements to leach-field and leach-field expansion areas are met, not only on the well parcel, but on neighboring parcels. The County confirms the well site and location is adequate based on public health and safety prior to drilling commences.

<sup>1</sup> E-mail from Henrietta Stern, MPWMD, dated December 8, 2009, 9:09pm.

<sup>2</sup> BHgl Clients Specifically, Powell; Price; Druid Hills Ranch; Littig; King; Saddle Mt. RV Park;

<sup>3</sup> State of California Waterworks Standards, Source Capacity Standards, March 2008.

<sup>4</sup> Monterey County Health Department; "Source Capacity Test Procedures" May 2008, and were generated from earlier guidelines entitled "Well Capacity Procedures in Fractured Bedrock Formations" dated March 1996, revised, January 2002, and March 2008.

<sup>5</sup> Monterey Peninsula Water Management District; *Procedures for Preparation of Well Source and Pumping Impact Assessments*, dated September, 14 2005, Revised May 2006.

<sup>6</sup> Monterey Peninsula Water Management District; Rules and Regulations of MPWMD, July 21, 2009 & *Procedures for Preparation of Well Source and Pumping Impact Assessments*, September, 14 2005, Revised May 2006.

<sup>7</sup> Adjusted 24-hr specific capacity times the wells available drawdown (1/3 of the wells saturated thickness).

<sup>8</sup> MPWMD *Procedures for Preparation of Well Source and Pumping Impact Assessments*: SERs include the Carmel Valley Alluvial Aquifer (CVAA) and certain tributaries within the Carmel Valley River Watershed.

<sup>9</sup> Monterey County Health Department; Monterey County Code, Title 15.08 Water Wells.

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- In response to citizen concerns<sup>10</sup>, specifically, whether “areas” containing existing legal lots of record (<1-acre) are adequate size for a well. This lot size is considered adequate because it has been established that a neighboring parcel (or well parcel) on a public sewage disposal system will not pose a threat to the well or the wells groundwater quality to where it would cause adverse impacts to public health and safety so long as, at a minimum; 1) the minimum setbacks from the well to sanitary sewer line, storm drain, or industrial discharge line are maintained<sup>11,12</sup> and, 2) there is a lack of seepage pits, leach-fields and required expansion disposal field in an “area” with an established public sewage disposal systems. However, it should be noted that areas with existing lots of record (< 1-acre) where seepage pits/leach-fields are existing (portions of Carmel Meadows) MCHD will not allow domestic water wells to be drilled.
- As per the Carmel Highlands Wastewater Management Study<sup>13</sup>, well adequacy for associated use should be on a case-by-case basis, and depends primarily on the density of seepage pits/leach-fields in relation to the density of wells, depth of overburden/soil, depth to impermeable and weathered bedrock, the well’s perforated interval, and the feasibility of connecting to a public sewage disposal system (all of which is already generally assessed by MCHD prior to issuance of a well permit).

Other Notes:

There is no reason that a well perforated in a fractured hard-rock aquifer cannot be a long-term sustainable supply for a single family dwelling (SFD) or combination of SFD and caretaker/guesthouse with water conservation/drought tolerant landscaping. BHgl believes an over-pumped well is the lack of the well owner to understand water conservation and the wells sustainable extractable yield. A well owner needs to understand that a fractured hard-rock well is sustainable as long it is pumped at a rate that it is capable of supporting. Well operation requires, but is not limited to, observation of volumes pumped, static and pumping groundwater levels & groundwater level trends and specific capacities rates over time to ensure the wells long term sustainability.

Recommendations:

- Require mandatory monitoring of all wells within 500 feet of pumping well to protect not only neighboring well owners but, the new well owner’s interest in groundwater quality and quantity. This will help protect existing and new well owners and determine appropriate production limits to the well being approved for a WDS permit.
- Require technical calculations and pumping impact assessments on all wells and sensitive environmental receptors (SERs) within 2,000 feet of pumping well to protect neighboring wells and SERs interest in groundwater quality and quantity.
- In areas of shallow bedrock and lack of public sewage disposal system on existing parcels less than 1-acre, require mandatory installation of an alternative, enhanced wastewater treatment system to treat effluent leachate water to tertiary standards. This type of system will include settling tanks and dosing tertiary leachate to evaporation beds. It would require quarterly monitoring and reporting to both MCHD and/or State Water Resources Control Board (SWRCB) to ensure operational requirements are met and sustained.
- Limit production on wells, including replacement wells that pre-date MPWMD rules and regulations (i.e., grandfathered-in) which are using an excessive amount of water to where the volume used is

<sup>10</sup> MPWMD Board Meeting, December 14, 2009; Public Comment suggested that there are liabilities and restrictions on neighboring properties (<1-acre lots) due to wells drilled on adjoining neighboring properties.

<sup>11</sup> Monterey County Health Department; Monterey County Code, Title 15.08 Water Wells.

<sup>12</sup> California Department of Water Resources, California Wells Standards, Bulletin 74-90, supplement to Bulletin 74-81, 1991.

<sup>13</sup> Questa Engineering Corporation in cooperation with Todd Engineers, Denise Duffy and Associates; Carmel Highlands Onsite Wastewater Management Study, December, 2009.

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more than 5% of the neighboring wells saturated thickness. As BHgl understands, MPWMD, Rule 20-A requires District staff to set system limits for previously existing systems pursuant to Rule 40-A.

- Establish the MPWMD district boundary as the Carmel Valley Alluvial Aquifer (CVAA) watershed boundary, not some arbitrary boundary which has no relation the CVAA watershed.
- Conduct an analysis on the groundwater extraction volumes from the wells drilled in both granitic and shale fractured aquifers within the CVAA watershed boundary to determine whether the extraction volumes will adversely impact baseflow to the CVAA or projected reduction in baseflow conditions to the CVAA in the long term.
- Require 72-hr constant rate testing on all wells, including replacement wells, whether or not the replacement well is for a well that preceded MPWMD district rules and regulations.

Summary:

There are existing regulations at MCHD<sup>14</sup>, MPWD<sup>15</sup> and/or the State<sup>16</sup> that limits a wells actual yield to something less based on conservative factors each agency imposes to obtain a water system permit. Land owners and applicants who propose to drill a well on their property (whether it be a existing lot of record of less than 1-acre in a area of public sewage disposal, or, a new parcel greater than 2.5 acres on a septic/leach-field system) should be allowed to do so, as the land owners have prevailing water rights<sup>17</sup>.

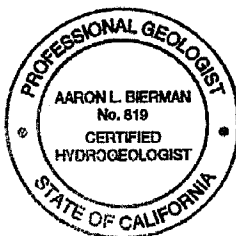
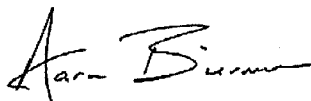
If temporary suspension of WDS permits are initiated, it would be detrimental to land owners/applicants because of the finical burden associated with their respective property as they have not, or can-not obtain a Cal-Am connection and, there is no water allocation from Cal-Am in the foreseeable future (Cease and Desists Order).

Conclusion:

In conclusion, temporary suspension of 'acceptance' and/or, 'processing' of existing WDS permits for all wells within the District that derive a water supply for fractured hard-rock aquifers is considered excessive and unnecessary as there are rules and regulations already existing that effectively determine whether a well is adequate for intended use for the project proposed.

BHgl recommends NO temporary suspension of the WDS permitting process.

Respectfully submitted,



Aaron Bierman  
Certified Hydrogeologist #819

<sup>14</sup> Monterey County Health Department; "Source Capacity Test Procedures" dated May, 2008, and were generated from earlier guidelines entitled "Well Capacity Procedures in Fractured Bedrock Formations" dated March 1996, revised, January 2002, and March 2008.

<sup>15</sup> Monterey Peninsula Water Management District; *Procedures for Preparation of Well Source and Pumping Impact Assessments*, dated, September, 14 2005, Revised May 2006.

<sup>16</sup> State of California Waterworks Standards, Source Capacity Standards, March 2008.

<sup>17</sup> Under the Appropriation Doctrine, the individual who first uses the groundwater has the greatest right to it. This is often called the "first in time, first in right" concept. The rights of subsequent users are ranked according to when they first used the groundwater. At some point, all the groundwater will be spoken for and no groundwater will be availability for any new users.