

ATTACHMENT H  
CORRESPONDENCE FROM  
ENVIRONMENTAL HEALTH BUREAU  
November 13, 2013

PLN040529

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# MONTEREY COUNTY



DEPARTMENT OF HEALTH Ray Bullick, Director

ANIMAL SERVICES  
BEHAVIORAL HEALTH  
CLINIC SERVICES

EMERGENCY MEDICAL SERVICES  
ENVIRONMENTAL HEALTH

PUBLIC HEALTH  
PUBLIC ADMINISTRATOR/PUBLIC GUARDIAN

November 13, 2013

Joel Panzer  
Maureen Wruck Planning Consultants, LLC  
21 W. Alisal Street Ste. 11  
Salinas, CA 93901

Re: PLN 04529

Mr. Panzer:

This letter is pursuant to the Planning Commission's decision on October 30, 2013 to continue the hearing to January 8, 2014. During this time various issues were to be further analyzed relating to the subdivision such as water supply treatment, CEQA, source capacity tests. A status of this project is to be given at the January 8, 2014 hearing.

PS-3.9 requires that a subdivision shall not be approved until evidence is provided that there is a long-term sustainable water supply in terms of water quality and quantity.

## **Water Quality:**

The Environmental Health Bureau (EHB) continues to recommend denial based on EHB's interpretation of PS-3.9. Small water systems struggle nationwide, statewide and locally to provide safe drinking water due to the lack of financial resources, aging infrastructure, cost of scale, management limitations, lack of long-term planning, and difficulty understanding current and future regulations. These challenges require adequate Technical, Managerial, and Financial (TMF) resources to face these challenges. The Environmental Protection Agency discusses these challenges in a July 2011 publication "National Characteristics of Drinking Water Systems Serving 10,000 or Fewer People". Based on these issues detailed in this publication and similar state experience and local experience with regulated water systems in Monterey County EHB has determined that existing/future owners of water source(s) for a proposed subdivision that needs treatment for primary contaminants and is proposed to serve 1 – 14 connections does not have the technical, managerial, and financial resources to provide a long-term sustainable water supply.

However, since this parcel has 4 existing single-family dwellings (sfd), the Planning Commission requested that the treatment option be further analyzed. Please provide a Point of Entry (POE) treatment system proposal for consideration. Please provide details on how the existing/future owners would operate and maintain the proposed treatment system (e.g. alarms, deed restrictions, waste disposal etc.) to provide safe drinking water. The POE treatment system differs from a Point of Use treatment system in that the POE treatment system provides treatment prior to the water entering the house so that all interior water fixtures in the dwelling are treated.

**Water Quantity:**

The revised subdivision proposes that each of the proposed 3 lots be served by an individual well instead of a water system. Presently, Well #2 is the only well with a 72-hour witnessed source capacity test, which had a credited capacity of 5.1 gallons/minute (gpm). Wells #1 and #3 do not have a 72-hour witnessed source capacity test.

Since the revised proposed subdivision proposes individual wells for each proposed lot as the water sources, all 3 wells will need to have the 72-hour source capacity test performed simultaneously. The simultaneous testing is required to determine to see if there is any interference between the wells and if so how significant is that interference. There must be sufficient credited source capacity so that 3 gpm for each sfd is demonstrated. One well will need to have an accredited source capacity of 6 gpm since two of the existing sfds will remain on one lot (3gpm per sfd). The other two wells will have to have a credited source capacity of 3 gpm each. (See the enclosed 72-hour source capacity protocol.)

You had inquired about the feasibility of performing source capacity tests now at the October 30, 2013 Planning Commission hearing. Source capacity tests for fractured rock wells are performed during the driest time of the year, which is August through October 30<sup>th</sup>. I mistakenly indicated November 30<sup>th</sup> at the hearing. However, if there are no significant rains, which there has not as the date of this letter, a waiver can be granted. Your hydrogeologist would need to discuss how weather conditions are similar (i.e. dry weather) in the resultant source capacity report. If you plan on conducting 72-hour source capacity tests in the near future the enclosed application needs to be completed and submitted with the applicable fees prior to the source capacity test.

If you have any questions regarding water quality or source capacity tests please contact Cheryl Sandoval at 755-4552.

**CEQA:**

Planning Staff was directed by the Planning Commission on October 30, 2013 to identify the environmental process required, pursuant to the CEQA Guidelines, if the project can be approved. Pursuant to Section 15064 of the CEQA Guidelines, when determining the significance of the environmental effect as caused by a project, careful judgment on the part of the public agency involved shall be based on scientific and factual data. According to the data provided by the Environmental Health Bureau, the water quality and quantity are an adverse significant impact to the health and safety of the property owner. Therefore, the project will require an Environmental Impact Report (EIR).

RMA – Planning also believes that the project significantly impacts the Land Use/Planning section, which asks:

*“Will the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?”*

The project violates policy PS-3.9, Public Services Chapter of the 2010 Monterey County General Plan which requires evidence of long-term water sustainability in terms of yield and quality for all lots to be created by a subdivision. Based on the information supplied to RMA – Planning thus far, the applicant has not been able to provide such evidence.

At this point, the only way an EIR can be avoided is if the Environmental Health Bureau determines that the water issues can be mitigated to a level less-than-significant, and determines that the property can supply each lot with a sustainable amount of water with adequate quality.

**REMAINDER PARCEL:**

During the Planning Commission hearing, County Counsel questioned the remainder parcel proposed on the project Vesting Tentative Map. Pursuant to the Subdivision Map Act, a remainder parcel is a parcel “not divided for the purpose of sale, lease, or financing” (66424.6). The owners, during the hearing, stated that the purpose for the subdivision was for refinancing, and would allow family members to eventually lease or sell their portions of the property. If the project can be approved, RMA – Planning requires that the project Vesting Tentative Map be revised by removing the remainder parcel.

If you have any planning questions, please contact Dan Lister at (831) 759-6617.

Sincerely,



Richard LeWarne  
Assistant Director  
Environmental health



Dan Lister  
Land Use Technician  
Planning Department

cc: Patrick Treffry, Senior Environmental Health Specialist



## Source Capacity Testing Procedures

### Purpose

All wells that are proposed to supply water for domestic use or to be connected to a water distribution system shall first undergo a continuous source-capacity (pumping) test to determine the yield of the well. These testing procedures outline the requirements for conducting a source capacity test and are based on the recently revised Water Works Standards in Chapter 15 of Title 22 of the California Code of Regulations, which may be downloaded at:

<http://www.cdph.ca.gov/services/DPOPP/regs/Pages/R-14-03-RevisionofWaterworksStandards.aspx>

### Definitions

- Alluvial: Pertaining to or composed of alluvium or deposited by a stream or running water.
- Alluvium: A general term for clay, silt, sand, gravel, or similar unconsolidated material deposited during comparatively recent geologic time by a stream or other body of running water as a sorted or semisorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope.
- Non-alluvial: A general term for consolidated or bedrock material.
- Source Capacity Test: A test that is conducted to determine aquifer or well characteristics.
- Static water level: The level of water in a well that is not being affected by withdrawal of groundwater.
- Steady State: Steady-state is indicated if the last four hours of drawdown measurements and the elapsed time yield a straight line in a plot of drawdown data (vertical axis) versus the time data (horizontal axis) on semi-logarithmic graph paper.
- Well yield: The volume of water discharged from a well in gallons per minute or cubic meters per day.

### Conditions

Tests for non-alluvial wells and alluvial wells in areas of known water shortage problems shall be conducted during the months of August, September, or October and shall start on a Monday or Tuesday between 9 a.m. and 2 p.m. If it is proposed to pump multiple wells at the same time, an application must be completed for each well.

Source capacity testing for wells located within the Monterey Peninsula Water Management District (MPWMD) shall also follow MPWMD's testing protocol, which may have more rigorous testing and review procedures. Some of the additional requirements include taking additional water level/flow rate reading during the test. For larger projects, such as subdivisions, a premeeting with MPWMD staff is advisable. Please refer to the MPWMD website "Wells Page" for information on well registration, metering and obtaining a Water Distribution System permit, including well testing procedures, at:  
<http://www.mpwmd.dst.ca.us/pae/wds/wds.htm>

Source capacity testing for wells that will serve a noncommunity or community public water system must adhere to additional requirements detailed in the Application for Source Capacity Test

All tests shall be witnessed by a representative of the Monterey County Health Department, Environmental Health Bureau (EHB) and shall follow the procedures set forth herein. A qualified individual approved by the Director of Environmental Health (hydrogeologist, engineer with experience in hydrology, experienced licensed well or pump contractor (C-57 or C-61), etc.) shall complete the test(s) and documentation. The test results shall be submitted in a form for direct comparison to the criteria set forth in this procedure. Once the information is submitted, a determination shall be made as to the yield of the well in gallons-per-minute that can be credited towards the required minimum flows for the potable use requested.

Requests for variances from the following procedures shall be submitted to EHB for review in advance of the test start date. All tests shall adhere to these procedures unless the variance is approved.

### Procedure

#### 1. Test set-up

- A. Complete the application form for scheduling a source capacity test and return to EHD. The test will not be scheduled without a completed application form, supporting documents and payment of 4 hours of time at EHB's current hourly rate for test witnessing fees. Time spent in addition to 4 hours will be billed at the completion of the test.
- B. Well shall be equipped with a meter that measures instantaneous and total flow. Tests conducted on wells that produce less than 10 gpm shall be equipped with a meter with 1 gpm increments.
- C. Discharge water shall be managed to prevent recharge of the well during the testing/recovery period and shall not be allowed to pond/percolate within 200 feet of the well.
- D. If multiple proposed production wells for the same water system are located within:
  - i. 500 feet of each other in a non-alluvial formation, the wells shall be pumped simultaneously in order to receive source capacity credit for all wells.
  - ii. 300 feet of each other in an alluvial formation, the wells shall be pumped simultaneously in order to receive source capacity credit for all wells.
- E. If there is a nearby well within 1000 feet in on the same or neighboring parcel, the well should be monitored for drawdown as the source well is tested.
- F. Well shall be equipped with a sounding tube.
- G. The sounding line shall be clearly marked with a minimum of 10-foot intervals. The sounding line will be checked before it's lowered into the well to verify starting measurement.
- H. For the purpose of obtaining an accurate static water level value, at least twelve hours before beginning the test, pump the well at the proposed pump discharge rate for no more than two hours, then discontinue pumping:

#### 2. Length of test

- A. Non-alluvial formations - pumping shall be a minimum of 72 hours with a recovery period equal to the length of time of pumping.
- B. Alluvial Formation – pumping shall be a minimum of 8 hours with a recovery period equal to the pumping length. Consult with EHB staff prior to initiating the test to determine if the length of

time for the test needs to be increased due to site specific factors including: distance to bedrock, known problems in the area, large fluctuating groundwater levels, drought conditions, etc.

3. Measurements Required (record each reading). Minor adjustments to flow rate may only be made during the first 24 hours of the pump test. After 24 hours, the flow rate shall remain constant.
  - A. The meter's accuracy shall be verified by the bucket test within the first hour of the test. To conduct the bucket test, determine the time it takes to fill a 5 gallon bucket and convert to gallons per minute by dividing 300 by the number of seconds it takes to fill the bucket. The results shall be compared to the meter readings to determine if a correction factor is needed.
  - B. If a continuous data logger that records water level is used, water depth measurements must be able to be read in the field. This can be accomplished by:
    - i. Providing a computer that displays the readings from the data logger
    - ii. Using a separate sounder
  - C. Before pumping begins
    - i. Record Static Water Level
    - ii. Record totalizer on meter
    - iii. Record pump size
  - D. During pumping, record time, water level, gpm, and total gallons with every measurement at the intervals listed below. Plot the drawdown data versus the time data on semi-logarithmic graph paper, with the time intervals on the horizontal logarithm axis and the drawdown data on the vertical axis
    - i. Alluvial test (minimum of 8 hours)
      - a. 0-120 minutes – measure every 15 minutes
      - b. 120 minutes until end of test– measure every hour-(well must have achieved steady-state in order to end test and receive credit. Steady state is indicated if the last four hours of drawdown measurements and the elapsed time yield a straight line in the plot. If steady state is not achieved, the test shall be continued for a longer period of time or adjusted until steady-state is achieved. If the pumping rate is adjusted, the test must be run for at least 8 hours at the new pumping rate)
    - ii. Non-Alluvial - 72 hour test
      - a. 0-240 minutes – measure every 30 minutes
      - b. 240-480 minutes – measure every 60 minutes
      - c. 480 minutes until end of test– measure every 4 hours thereafter until water drawdown level is constant for at least the last four remaining measurements
    - iii. Non-Alluvial - 10 day test
      - a. 0-240 minutes – measure every 30 minutes
      - b. 240-480 minutes – measure every 60 minutes
      - c. Every 8 hours for the remainder of the first four days
      - d. Every 24 hours for the next five days
      - e. Every 4 hours thereafter until the water drawdown level is constant for at least the last four remaining measurements
  - E. Recovery - The well must demonstrate that, within a length of time not exceeding the duration of the pumping time of the pump test, the water level has recovered to within two feet of the static water level measured at the beginning of the well capacity test or to a minimum of ninety-five percent of the total drawdown measured during the test, whichever is more stringent. (Record time and water level with every measurement).
    - i. Alluvial test



- a. 0-120 minutes – measure every 15 minutes
    - b. After 120 minutes, measure every hour until either the water level in the well recovers to within two feet of the static water level measured at the beginning of the well capacity test or to at least ninety-five percent of the total drawdown measured during the test, which ever occurs first.
  - ii. 72 hour or 10 day test
    - a. 0-240 minutes – measure every 30 minutes
    - b. 240 -480 minutes – measure every 60 minutes
    - c. After 480 minutes, measure every 12 hours until either the water level in the well recovers to within two feet of the static water level measured at the beginning of the well capacity test or to at least ninety-five percent of the total drawdown measured during the test, which ever occurs first.
4. Reporting requirements – After the test is complete, submit a report to EHB for review and approval. At a minimum, the report shall:
- A. Include all data and observations associated with a well capacity test conducted as well as the estimated capacity determination methods and calculations. The data shall be submitted in an electronic spreadsheet format. A copy of the data logger results shall be included, if applicable.
  - B. Plot the drawdown and pump discharge rate data versus time data on semi-logarithmic graph paper, with the time intervals on the horizontal logarithmic axis and the drawdown and pump discharge rate data on the vertical axis. (Graphing program should be used to plot data.)
5. After evaluation of the results, EHD may require further interpretation from a third party hydrogeologist.

#### Source Capacity Credit

1. The credited source capacity (approved well yield) will be based on the lowest flow measurement of the following: starting, ending, lowest recorded flow after 24 hours of pumping, and average. The credited source capacity will be based on actual flow measurements and not calculated yield.
2. 25/50% Policy - Wells produced from non-alluvial formations may be credited as follows for public water systems (a public water system has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year):
  - A. 72-hours of pumping receives 25% credit of the approved well yield.
  - B. 10-days of pumping receives 50% credit of the approved well yield
3. The well must demonstrate that, within a length of time not exceeding the duration of the pumping time of the pump test, the water level has recovered to within two feet of the static water level measured at the beginning of the well capacity test or to a minimum of ninety-five percent of the total drawdown measured during the test, whichever is more stringent. If the well recovery does not meet these criteria, the well capacity cannot be determined using the proposed pump rate.

The Health Officer may make changes to the above procedures in order to protect the public health due to site specific conditions.

Revised 3/96, 1/02, 5/06, 6/08, 6/09, 9/09, 8/11

# Required Source Capacity for New Development

## Non-Residential<sup>1</sup>

Provide engineered calculations using similar size/type system or water demand charts to determine maximum day demand.

## Residential<sup>2</sup>

<u>Type of System</u>	<u>Capacity Needed</u> <sup>1</sup>	
	<u>Alluvial</u>	<u>Non-Alluvial</u>
Private Well (unshared)	3 gpm	
2 connections	6 gpm	
3 connections	9 gpm	
4 connections	12 gpm	
5 connections	13 gpm	15 gpm
6 connections	13 gpm	18 gpm
7 connections	13 gpm	21 gpm
8 connections	13 gpm	24 gpm
9 connections	13 gpm	27 gpm
10 connections	14 gpm	30 gpm
11 connections	14 gpm	33 gpm
12 connections	14 gpm	36 gpm
13 connections	14 gpm	39 gpm
14 connections	14 gpm	42 gpm
≥15 connections (metered)	1 gpm/conn <sup>2</sup>	1 gpm/conn <sup>2,3</sup>

<sup>1</sup>The minimum required source capacity calculations must include the 25/50% policy for all Public Water System utilizing a well in a non-alluvial formation. For example, a business with a non-alluvial well that needs 10 gpm must have a well that is credited to produce 40 gpm.

<sup>2</sup>The minimum required source capacity for ≥15 connections is 1 gpm/connection unless existing usage data is available and calculations are done according to Section 64554 of Title 22 of the California Code of Regulations (see requirements on next page).

<sup>3</sup>The 25/50% credit policy does **not** apply to wells in non-alluvial formation that will serve 1-14 residential connections since the minimum capacity already addresses the concern that many non-alluvial wells lose production over time. The 25/50% credit policy **does** apply to wells in non-alluvial formation that will serve 15 or more residential connections. The 1 gpm/residential connection is the amount required all the approved well yield has been appropriately reduced for non-alluvial wells.

Additional Requirements (based on Chapters 15 and 19 of the Monterey County Code and Title 22 of the California Code of Regulations)

- New community water systems (serves 15 or more residences) are required to have two sources of supply.
- New community water systems are required to meet maximum day demand with the highest producing source offline
- All water systems with treatment are required to size the treatment facility to produce at least maximum day demand
- All water systems with treatment are required to increase the source capacity to meet maximum day demand after subtracting losses from the treatment facility (i.e., backwash, brine, filter-to-waste)

Section 64554 of Title 22 of the California Code of Regulations for public water systems (15 or more connections).

(a) At all times, a public water system's water source(s) shall have the capacity to meet the system's maximum day demand (MDD). MDD shall be determined pursuant to subsection (b).

(3) Both the MDD (max day demand) and PHD (peak hourly demand) requirements shall be met in the system as a whole and in each individual pressure zone.

(b) A system shall estimate MDD and PHD for the water system as a whole (total source capacity and number of service connections) and for each pressure zone within the system (total water supply available from the water sources and interzonal transfers directly supplying the zone and number of service connections within the zone), as follows:

(1) If daily water usage data are available, identify the day with the highest usage during the past ten years to obtain MDD; determine the average hourly flow during MDD and multiply by a peaking factor of at least 1.5 to obtain the PHD.

(2) If no daily water usage data are available and monthly water usage data are available:

(A) Identify the month with the highest water usage (maximum month) during at least the most recent ten years of operation or, if the system has been operating for less than ten years, during its period of operation;

(B) To calculate average daily usage during maximum month, divide the total water usage during the maximum month by the number of days in that month; and

(C) To calculate the MDD, multiply the average daily usage by a peaking factor that is a minimum of 1.5; and

(D) To calculate the PHD, determine the average hourly flow during MDD and multiply by a peaking factor that is a minimum of 1.5.

(3) If only annual water usage data are available:

(A) Identify the year with the highest water usage during at least the most recent ten years of operation or, if the system has been operating for less than ten years, during its years of operation;

(B) To calculate the average daily use, divide the total annual water usage for the year with the highest use by 365 days; and

(C) To calculate the MDD, multiply the average daily usage by a peaking factor of 2.25.

(D) To calculate the PHD, determine the average hourly flow during MDD and multiply by a peaking factor that is a minimum of 1.5.

(4) If no water usage data are available, utilize records from a system that is similar in size, elevation, climate, demography, residential property size, and metering to determine the average water usage per service connection. From the average water usage per service connection, calculate the average daily demand and follow the steps in paragraph (3) to calculate the MDD and PHD.

Revised 3/96, 1/02, 5/06, 6/08

# MONTEREY COUNTY



DEPARTMENT OF HEALTH Ray Bullick, Director

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## Application for Source Capacity Test

Test site address: \_\_\_\_\_

APN: \_\_\_\_\_ Related Planning Permit #: \_\_\_\_\_ Well Permit # \_\_\_\_\_

Billing Address: \_\_\_\_\_

Property Owner: \_\_\_\_\_ Phone/Address: \_\_\_\_\_

Responsible Party: \_\_\_\_\_ Phone/Address: \_\_\_\_\_

Contractor: \_\_\_\_\_ Phone/Address: \_\_\_\_\_

Contractor's qualifications: \_\_\_\_\_

Purpose of test: ( ) Water System ( ) Single Family Dwelling ( ) Commercial ( ) Subdivision ( ) Irrigation  
( ) MPWMD distribution permit ( ) Other, explain \_\_\_\_\_

Is there another well within 1000' of well? yes no Show wells on map with distance to well

If the well is proposed to serve a water system, what is the proposed number of connections? \_\_\_\_\_  
(Connections include all habitable structures, including caretaker and senior units - See page three for capacity requirements)

Proposed discharge rate (gpm): \_\_\_\_\_ Pump Specifications: \_\_\_\_\_ Pump depth: \_\_\_\_\_

Requested test start date and time: \_\_\_\_\_ (Subject to availability. Wells in non-alluvial materials shall only be tested during August, September, and October and shall start on a Monday or Tuesday between 9 a.m. and 2 p.m. If it is proposed to pump multiple wells at the same time, complete an application for each well)

Alternative requested test start dates: \_\_\_\_\_

Proposed test duration 8 hrs (alluvial only) 72 hrs (non-alluvial formations)  
24 hrs (alluvial only) 10 days (non-alluvial formations)

Include the following documents with the application (see page 2 for test set-up requirements):

1. Map and directions to test site (include location of test well and all wells within 1000')
2. Well completion report/drillers log (Please note that if well does not meet current construction standards, it may not be able to be used for a water system or subdivision with individual wells. Minimum construction standards include a minimum of a 50' seal. Wells near the end of their useful life may also not be used for subdivisions or new water systems).
3. Prepayment of 4 hours of time at the Department's current hourly rate of \$130/hr for test witnessing fees. Time spent in addition to 4 hours will be billed at the completion of the test.
4. Wells that will serve a public water system have additional requirements shown on page 2. These systems serve at least 25 people at least 60 days per year or 15 residential service connections.

**I declare that all information in this application is correct and I hereby agree to comply with all applicable requirements in the Monterey County Health Department, Division of Environmental Health's Source Capacity Testing Procedures.**

SIGNATURE OF PROPERTY OWNER  
X \_\_\_\_\_ Date \_\_\_\_\_  
Print \_\_\_\_\_

SIGNATURE OF CONTRACTOR  
X \_\_\_\_\_ Date \_\_\_\_\_  
Print \_\_\_\_\_

## Application for source capacity test, page 2

### Test Set-up Requirements for ALL Wells:

1. Well shall be equipped with a meter that measures instantaneous and total flow. Tests conducted on wells that produce less than 10 gpm shall be equipped with a meter with 1 gpm increments.
2. Discharge water shall be managed to prevent recharge of the well during the testing/recovery period and shall not be allowed to pond/percolate within 200 feet of the well. For a well to discharge into a storm drain there must be no history of contaminants in the area. The risk of erosion must be minimal and not allow sediment to be transported into the storm drain. If there is already sediment in the curb or catch basin, it should be removed prior to beginning the test. The discharge should be run through some type of filter such as a sediment sock or gravel bag berm.
3. If multiple proposed production wells for the same water system are located within:
  - a. 500 feet of each other in a non-alluvial formation, the wells shall be pumped simultaneously in order to receive source capacity credit for both wells.
  - b. 300 feet of each other in an alluvial formation, the wells shall be pumped simultaneously in order to receive source capacity credit for both wells.
4. If there is a nearby well within 1000 feet on the same or neighboring parcel, the well should be monitored for drawdown as the source well is tested.
5. Well shall be equipped with a sounding tube.
6. The sounding line shall be clearly marked with a minimum of 10-foot intervals. The sounding line will be checked before it's lowered into the well to verify starting measurement.
7. For the purpose of obtaining an accurate static water level value, at least twelve hours before beginning the test, pump the well at the proposed pump discharge rate for no more than two hours, then discontinue pumping.

### Public Water System Additional Requirements:

Include the additional following documents for wells that will serve a noncommunity or community public water system:

1. A copy of a United States Geological Survey 7 ½-minute topographic map of the site at a scale of 1:24,000 or larger (1 inch equals 2,000 feet or 1 inch equals less than 2,000 feet) or, if necessary, a site sketch at a scale providing more detail, that clearly indicates:
  - a. The well discharge location(s) during the test;
  - b. The location of surface waters, water staff gauges, and other production wells within a radius of 1000 feet;
2. For wells located in or having an influence on the aquifer from which the new well will draw water, a description of the wells' operating schedules and the estimated amount of groundwater to be extracted, while the new well is tested and during normal operations prior to and after the new well is in operation;
3. A description of the surface waters, water staff gauges, and production wells-shown in 1b.
4. A description of how the well discharge will be managed to ensure the discharge doesn't interfere with the test;
5. A written description of the aquifer's annual recharge.

### Required Source Capacity for New Development

Non-Residential<sup>1</sup>

- Provide engineered calculations using similar size/type system or water demand charts.

## Application for source capacity test, page 3

### Required Source Capacity for New Development, cont.

#### Residential<sup>2</sup>

<u>Type of System</u>	<u>Capacity Needed<sup>1</sup></u>	
Private Well (unshared)	3 gpm	
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<sup>1</sup>The minimum required source capacity calculations must include the 25/50% policy for all Public Water System utilizing a well in a non-alluvial formation. For example, a business with a non-alluvial well that needs 10 gpm must have a well that is credited to produce 40 gpm.

<sup>2</sup>The minimum required source capacity for ≥15 connections is 1 gpm/connection unless existing usage data is available and calculations are done according to Section 64554 of Title 22 of the California Code of Regulations (see requirements on next page).

<sup>3</sup>The 25/50% credit policy does **not** apply to wells in non-alluvial formation that will serve 1-14 residential connections since the minimum capacity already addresses the concern that many non-alluvial wells lose production over time. The 25/50% credit policy **does** apply to wells in non-alluvial formation that will serve 15 or more residential connections. The 1 gpm/residential connection is the amount required all the approved well yield has been appropriately reduced for non-alluvial wells.

#### Additional Requirements (based on Chapters 15 and 19 of the Monterey County Code and Title 22 of the California Code of Regulations)

- > New community water systems (serves 15 or more residences) are required to have two sources of supply.
- > New community water systems are required to meet maximum day demand with the highest producing source offline
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(3) Both the MDD (max day demand) and PHD (peak hourly demand) requirements shall be met in the system as a whole and in each individual pressure zone.

## **Application for source capacity test, page 4**

Section 64554 of Title 22 of the California Code of Regulations, cont.

(b) A system shall estimate MDD and PHD for the water system as a whole (total source capacity and number of service connections) and for each pressure zone within the system (total water supply available from the water sources and interzonal transfers directly supplying the zone and number of service connections within the zone), as follows:

(1) If daily water usage data are available, identify the day with the highest usage during the past ten years to obtain MDD; determine the average hourly flow during MDD and multiply by a peaking factor of at least 1.5 to obtain the PHD.

(2) If no daily water usage data are available and monthly water usage data are available:

(A) Identify the month with the highest water usage (maximum month) during at least the most recent ten years of operation or, if the system has been operating for less than ten years, during its period of operation;

(B) To calculate average daily usage during maximum month, divide the total water usage during the maximum month by the number of days in that month; and

(C) To calculate the MDD, multiply the average daily usage by a peaking factor that is a minimum of 1.5; and

(D) To calculate the PHD, determine the average hourly flow during MDD and multiply by a peaking factor that is a minimum of 1.5.

(3) If only annual water usage data are available:

(A) Identify the year with the highest water usage during at least the most recent ten years of operation or, if the system has been operating for less than ten years, during its years of operation;

(B) To calculate the average daily use, divide the total annual water usage for the year with the highest use by 365 days; and

(C) To calculate the MDD, multiply the average daily usage by a peaking factor of 2.25.

(D) To calculate the PHD, determine the average hourly flow during MDD and multiply by a peaking factor that is a minimum of 1.5.

(4) If no water usage data are available, utilize records from a system that is similar in size, elevation, climate, demography, residential property size, and metering to determine the average water usage per service connection. From the average water usage per service connection, calculate the average daily demand and follow the steps in paragraph (3) to calculate the MDD and PHD.

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