

Submitted by Molly Erickson
at 11/21/2011 Board Meeting
Item 16

Beech Appeal

November 21, 2011

Time line of Beech Appeal

- June 24 Letter from GM Fuerst giving Beech 7 days to respond
- July 5 GM Fuerst confirms that his June 24 letter was appealable (Rule 70 allows 21 days to appeal)
- July 11 Beech appeal to Chairman Brower and Directors is received and date-stamped by MPWMD, but is not delivered to Chairman Brower and Directors
- July 20 GM Fuerst issues "complete" letters to Flores/Pisenti despite the pending Beech appeal
- July 26 GM Fuerst reverses his July 5 statement; says his June 24 letter is not appealable; rejects Beech appeal
- Sept 19 Board votes 7-0 on Director Markey's referral

Board voted 7-0 on September 19, 2011 to hear issues referred to Board in Exhibit 17-A of that Board packet:

1. Subordinate decisions related to the appeal by Judy and David Beech (July 26 letter)
2. Subordinate decisions related to the WDS applications by Flores and Pisenti (July 20 letter)

Requested motion tonight

- Flores/Pisenti Well #1 and Well #2 shall be retested pursuant to MPWMD Procedures and as follows:
 - Simultaneous 72-hour pumping of Well #1 and Well #2 with concurrent monitoring of Beech well
 - Pumping rates of 6.0 gpm (Well #1) and 3.0 gpm (Well #2)
 - "95% or two-foot" recovery within six days shall be demonstrated by actual measurements
 - Well capacity shall be determined by actual pumping rates, with no use of estimates

Reasons

- Retesting required because of failure to notify Beeches in October 2010
- Word "retest" not in MPWMD Procedures, so means "test again" (see MPWMD GM's 6/24/11 ltr)
- MPWMD Procedures state "minimum requirements" and do not allow partial testing
- MPWMD Procedures state that if 95% recovery is not achieved after 6 days, "then an evaluation of the test will be conducted by the District," and Board can exercise its discretion

Problems with "Estimating" Formula for fractured rock wells

- Well #2 had 6-day recovery of 54.42% instead of 95% – worst on record with MPWMD
- Fractured rock aquifers unpredictable
- Need to be extra thorough – hence 72-hour test in fractured rock instead of 24-hour test
- Necessary to get hard data where possible

MPWMD Rules: Definitions

"Fractured Rock"

"Fractured Rock . . . refers to water-bearing formations with generally limited production and reliability as compared to the less consolidated mixture of sand, gravel, silt and clay that characterize fluvial (river-related) strata. Groundwater occurrence and movement within Fractured Rock formations are primarily controlled by the "secondary porosity" associated with the fracture openings, as compared to the "primary porosity" associated with the pore spaces between grains in the granular matrix of fluvial sediments. . . ."

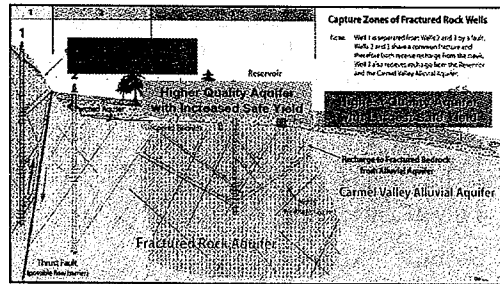
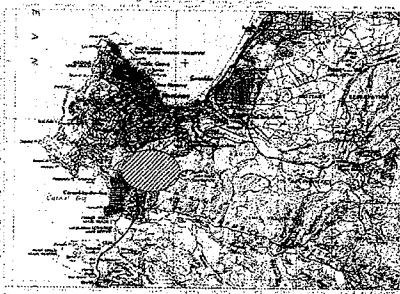
Monterey Peninsula
Water
Management
District

Fractured Rock Aquifer Sustainability

Progress Report to the Water
Demand Committee
June 2010

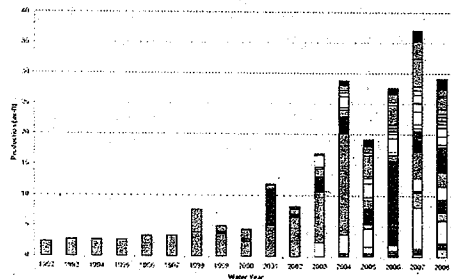
Monterey Peninsula
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5. Carmel Woods Aguajito Pilot Study Area



Monterey Peninsula
Water Management District

Conceptual Illustration of Recharge and Capture Zone Mechanisms in Fractured Rock Settings



Monterey Peninsula
Water Management District

Production History by Water Year within the Pilot Fractured Rock Aquifer Sustainability Area



County of Monterey
HEALTH DEPARTMENT

WATER SUPPLY
AND QUALITY
CONCERNS
IN THE
GRANITE RIDGE
AREA

ENVIRONMENTAL HEALTH DIVISION



Allen J. Stroth, MPA, REHS
Director Environmental Health

REASONS FOR SHORTAGES

- Productivity of Wells May Vary Drastically Over Short Distances Depending on the Fracturing
- Many other Counties in California are Experiencing the Same Problem in Fractured Consolidated Material

REASONS FOR SHORTAGES

- Fractures Become Dewatered Due to:
 - Competition
 - Droughts
 - Limited storage
 - Earthquakes may change fractures
- Productivity of Wells May Vary Drastically Over Short Distances Depending on the Fracturing

May 4, 2011 letter from MPWMD GM Fuerst to County Environmental Health

- Upcoming MPWMD report on a comprehensive study of fractured rock wells
- Anticipated June 2011



May 4, 2011
 Phil Fuerst, Director
 Monterey County Environmental Health
 2700 Broadway Blvd
 San Jose, CA 95128

Subject: Request for Comments on County Ordinance No. 1000 - Temporary
 Prohibition on Fracturing Rock Wells within the Monterey Peninsula Water
 Treatment District

The District is pleased to have your comments on the proposed Ordinance. The District has received many comments from the public and is currently reviewing them. The District is currently reviewing the Ordinance and will be making a decision on whether to adopt it. The District is currently reviewing the Ordinance and will be making a decision on whether to adopt it.

The District will support the Ordinance if it is adopted. The District will support the Ordinance if it is adopted. The District will support the Ordinance if it is adopted.

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“A reliable water supply is even more essential for those property owners who wish to pursue individual wells on lots in fractured bedrock settings due to lack of access to Cal-Am supply . . .”

(Order 95-10, CDO, moratorium on Cal Am connections/intensified uses)

A well that fails to meet potable water needs, the owner will not have access to Cal-Am water as a back-up supply, and would need trucked-in water, similar to the Granite Ridge situation.

“If a well fails to meet potable water needs, the owner will not have access to Cal-Am water as a back-up supply, and would need trucked-in water, similar to the Granite Ridge situation. The District shares MCHD’s intent that the Granite Ridge situation not be repeated on the Monterey Peninsula.”

Phil Fuerst
 Director
 Monterey County Environmental Health
 2700 Broadway Blvd
 San Jose, CA 95128

October 2010 Test Estimating Formula is Worthless

- Well #2 had 6-day recovery of 54.42% instead of 95% -- worst on record with MPWMD
- 40% recovery would still satisfy formula
- 30% ...
- 20% ...
- 10% ...

Well #2 could show 2% recovery, and still pass!

For a 3-day well drawdown of 100", a recovery of 95" (95%) is expected over 6 days.

Using the approach in the Bierman Report, a recovery of a mere 2" (2%) would produce an acceptable result! (Bierman Report, March 22, 2011, p. 18.) If we replace the 54.42% recovery used there with 2% recovery:

- % Reduction in Pumping Rate = 93% (95% - 2%)
- Flow Rate Reduction = 38.38 gpm (93% of 41.27 gpm)
- Post-Recovery Pumping Rate = 2.89 gpm (41.27 gpm - 38.38 gpm)

Using Bierman argument, 2.89 gpm "is greater than the MPWMD calculated maximum day demand of 2.66 gpm ... and therefore meets the requirements for a single-connection WDS permit."

The "estimating" technique used in evaluation of Well Recovery is a Loophole

- Apparently not documented or justified
- Without scientific foundation
- Renders crucial test of well recovery virtually impossible to fail

Why do Beeches care?

- Because if the well is unsustainable, the effects of pumping in fractured Monterey shale are unpredictable – the Beech well could be the first to suffer severely
- Therefore retesting must include reevaluation of Well #1 and Well #2 at requested rates to demonstrate recovery and well capacity – without use of meaningless "estimates"

If Board approves tonight's request, original Beech appeal is satisfied.

- Relief 1.5: A. Satisfied
B. Satisfied if Beech appeal considered timely, and later MPWMD "complete" letters denied
- Relief 2.5: Satisfied by referral to Rules/Regs Committee
- Relief 3.5: Satisfied by email agreement with Mr. Bierman, and referral to Rules/Regs Committee
- Relief 4.5: Satisfied by simplified request, and referral to Rules/Regs Committee
- Relief 5.5: Satisfied

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