MONTEREY COUNTY PLANNING COMMISSION

Meeting: August 28, 2013 Time: 1:30 P.M	**Agenda Item No.: 8**
Project Description: Conduct a public workshop to facilitate the development of draft regulations to address issues related to wells.	
Project Location: County-wide	**APN:** County-wide
Planning File Number: REF120022	**Owner:** N/A **Agent: N/A**
Planning Area: County-wide	**Flagged and staked:** N/A
Zoning Designation: County-wide	
CEQA Action: TBD	
Department: RMA - Planning Department	

RECOMMENDATION:

a. Conduct a workshop to facilitate the development of draft regulations to address issues related to wells; and
b. Provide direction on the preparation of a draft ordinance.

BACKGROUND AND DISCUSSION:

The Resource Management Agency-Planning, in collaboration with County Counsel, the Environmental Health Bureau and the Monterey County Water Resources Agency, has been working on drafting a new well ordinance for the past year. In 2012, a draft ordinance and administrative guidelines were prepared and circulated for review. A number of issues became apparent so staff basically stepped back to establish a more collaborative process. The Board of Supervisors directed staff to work with the Agricultural Advisory Committee (AAC) on the Ag-related issues.

In January 2013, staff completed a "Working Document" to identify and analyze a range of issues and options. Over the past six months, staff has been meeting with the AAC and its appointed Ad Hoc Subcommittee to work through the issues and obtain specific recommendations.

A revised "Working Document" has been prepared to present the issues and the analysis, as well as the recommendations from the AAC (**Attachment A**). This Working Document was provided to the Planning Commission on August 8, 2013. In addition it was sent out to stakeholders and interested parties inviting them to attend the workshop. The purpose of this workshop is to present the issues contained in the Working Document, provide an opportunity for the public to comment, and receive input and direction from the Planning Commission to inform the preparation of a draft Well Ordinance. In addition to the technical issues, staff recommends the following format:

- Chapter 15.08 of the County Code. Establish technical regulations relative to well construction.
- Titles 20 and 21 of the County Code (Coastal and Non-Coastal Zoning Ordinances). The General Plan (GP) and Certified Local Coastal Plan (LCP) include policies, technical criteria, and land use regulation relative to wells. Current practices would apply in both areas. Regulations specific to the GP implementation would apply in the inland areas only.
- Administrative Manual. Create procedures to provide guidelines that address unique conditions due to the diversity of Monterey County and various scenarios that could arise.

On August 16, 2013 a memo was received from the Refinement Group providing public comment on the issues presented in the Working Document.

Prepared by:

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(831) 755-5394
August 9,, 2013

Approved by:

Carl P. Holm, AICP, Deputy Director
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cc: Front Counter Copy; Planning Commission; Counsel (Strimling); RMA (Holm, Noel); RMA-Planning (Onciano); Env Health Bureau (LeWarne, Sandoval); MCWRA (Franklin, Gagne); Ag Commissioner (Roach, McGinnis); Nancy Isakson; The Open Monterey Project; LandWatch; Planning File REF1220022

Attachments:
A Working Document
B Public Comment Letter from the Refinement Group

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY

WORKING DOCUMENT
Proposed Well Ordinance – Analysis
Revised August 8, 2013

A. INTRODUCTION

Monterey County Codes need to be updated to implement policies adopted in the 2010 General Plan for the non-coastal unincorporated areas of the County. Existing County well regulations need clarification and updating to address on-going policy matters, update language to reflect changes in State regulations (State Bulletins), and resolve some recurring problems.

The General Plan (GP) and Certified Local Coastal Plan (LCP) include policies, technical criteria, and land use regulations relative to wells. Chapter 15.08 of the County Code establishes technical regulations for developing new wells. Titles 20 and 21 establish land use regulations (Coastal and Non-Coastal Zoning Ordinances). In order to address unique conditions due to the diversity of Monterey County and various scenarios that could arise relative to wells, and to increase transparency of the well permitting process, staff introduced an idea to develop an Administrative Manual with guidelines and procedures for implementing County Codes relative to wells.

Monterey County Resource Management Agency (RMA), in collaboration with the Environmental Health Bureau and the County Water Resources Agency, has been working on a new Well Ordinance and associated Administrative Manual for the past year or so. A number of issues have been raised with implementing General Plan policies and development of a draft well ordinance and related administrative manual. Staff framed what we understand to be the issues and provided a range of alternatives (options) for consideration intended to facilitate discussion for developing a new draft ordinance.

Many of the issues are inter-related and there are many different implementation scenarios. Therefore, this working document established an illustrative range of options for discussion purposes. . There may also be other options that could be considered. Policy makers may wish to combine options or direct staff on a completely different option.

The Board of Supervisors designated the Agricultural Advisory Committee (AAC) as the primary advisory group to work with staff on this assignment. The AAC created a subcommittee to address the issues and make recommendations to the full committee. Following is a summary of what has occurred to date:

- 2/11/13 AAC Subcommittee Meeting. Conducted a round-table discussion on all 10 issues in the "Working Document – Proposed Well Ordinance Analysis" dated January 9, 2013 (Subcommittee minutes, **Exhibit A**). Memo from the Refinement Group was submitted to the Subcommittee (**Exhibit B**).
- 4/8/13 AAC Subcommittee Meeting. Discussed and formulated recommendations for issues 1-5 contained in the Working Document (Subcommittee minutes, **Exhibit C**). A letter from

Peter Pyle (PG, CHG) from PGH Consulting Hydrology was submitted to the Subcommittee (**Exhibit D**).

- 4/25/13 AAC Meeting. Subcommittee recommendations on the Issues 1-5, along with staff comments, were presented to the full AAC for discussion (AAC memo and minutes, **Exhibits E** and **F)**.
- 5/13/13 AAC Subcommittee Meeting. Discussed and formulated recommendations for issues 6-10 contained in the Working Document (Subcommittee minutes, **Exhibit G)**.
- 6/27/13 AAC Meeting. Reviewed all issues related to agricultural and provided formal recommendations to the Planning Commission and Board of Supervisors (AAC memo, **Exhibits H)**.
- 7/18/13 Refinement Group. Considered three issues from the Working Document related to domestic wells where the AAC had no recommendation discussion (A summary of the discussion and recommendations are included in **Exhibit I,** RG memo, **Exhibit J)**.

B. APPLICABLE POLICIES

State Bulletins 74-81 and 74-90 (State Department of Water Resources):
Monterey County has an adopted Well Ordinance as required by Section 13801 of the California Water Code that references standards in Bulletins 74-81 and 74-90 set forth by the State Department of Water Resources (DWR). The County's Well Ordinance is codified at Chapter 15.08 of the Monterey County Code. Some of the standards set forth are setbacks from potential contaminant sources, construction standards that take into consideration geological and hydrogeological conditions, reporting, definitions, and different types of wells. The Bulletin indicates these standards are minimum statewide standards and may not be sufficient for local conditions. Monterey County has supplemented the State standards to address specific local conditions such as seawater intrusion, contaminant plumes, and source capacity tests in fractured rock geology to protect public health.

Local Coastal Program:
North County Land Use Policies

2.5.2: Phase new development within safe long term yields

2.5.3: Regulate construction of new wells or intensification of use of existing water supplies by permit. Restrictions on lot divisions in Granite Ridge until water supply issues are resolved.

4.3.5: Ag is priority land use over residential where there are limited public facilities. New subdivision and development dependant on groundwater shall be limited and phased until an adequate long-term supply is assured.

Big Sur Coast Land Use Policies

3.3.3.A: Prohibit land use development activities that will have the effect of diminishing surface flows in coastal streams to levels that will result in loss of plant or wildlife habitat.

3.4.3.A: Development of water supplies or intensification of use of existing supplies from springs, streams, well shall be regulated by permit. Prohibit transport of water out of a watershed. Water systems after 12/31/76 without a permit shall not be considered "existing." Conform to State and County Health Codes and Guidelines.

3.4.3.B: Priority for wells over surface water diversions. No substantial water use intensification without specific verification of adequate water supplies.

3.4.3.C: Permits for new wells shall require measuring of water extraction.

Carmel Area Land Use Policies

2.4.4.A: New development requires proof of adequate water supply, and demonstrate no adverse effect on environment during driest year.

3.2.3: Wells or other measures for monitoring salt-water intrusion are permitted.

5.3.3: Accessways should be located an adequate distance from wells.

Del Monte Forest Land Use Policies

111: Demonstrate adequate, long-term, public water supply.

1982 General Plan (applicable to the Coastal Zone):

21.1.6; Property owners shall repair or destroy wells that contribute to groundwater degradation.

53.1.2; The County shall assure adequate monitoring of wells in those areas experiencing rapid growth.

53.1.5; Proliferation of wells serving residential, commercial and industrial uses into common water tables shall be discouraged.

2010 General Plan (applicable to the Non-Coastal areas):

PS-2.4: Regulations for wells in hard rock areas.

PS-2.5: Regulations for water quality testing new individual domestic wells on a single lot of record. Ag wells exempt.

PS-3.3: Criteria for all new domestic wells. Replacement wells exempt.

PS-3.4: Criteria for high capacity wells. Replacement wells exempt.

PS-3.5: Addresses new wells in known areas of saltwater intrusion. Policy does not apply to deepening or replacement of existing wells, or wells used in conjunction with a desalinization project.

PS-3.9: Requires long-term sustainable supply in terms of water quality and yield for all lots created through subdivision

CV-3.20: Discretionary permit for new wells in Carmel Valley alluvial aquifer. Offset requirement.

NC-3.8: Discretionary permit for all new wells in fractured rock or hard rock areas in North County.

NC-5.4: Discretionary permit all new wells in North County planning area. Replacement wells exempt.

Glossary:

High Capacity Well; defined as a well with a flow over 1,000 gallons per minute (gpm).

Based on the 2010 General Plan and Local Coastal Program (LCP) policies, well applications may require a ministerial permit, discretionary permit or both. The following table generally summarizes Staff's current interpretation of GP and LCP requirements for various types of well permits.

Well – Entitlements Required		Ministerial Permit	Discretionary Permit
Ag Wells (under 1,000 gpm)	New	✓	
	Replacement	✓	
High Capacity Wells PS-3.4	New [2]	✓	
	Replacement	✓	
Fractured Rock	New [1]	✓	✓[3]

Well PS-2.4 NC-3.8	Replacement[1]	✓	
Domestic Wells (New) PS-2.5 PS-3.3 CV-3.20 NC-5.4	Inland – General, unless otherwise noted [1]	✓	
	Carmel Valley WITHIN Carmel River Alluvial Aquifer [1]		✓
	Carmel Valley OUTSIDE Carmel River Alluvial Aquifer [1]	✓	
	North County [1]		✓
Domestic Wells (Replacement) PS-3.3 CV-3.20 NC-5.4	Inland – General, unless otherwise noted	✓	
	Carmel Valley WITHIN Carmel River alluvial Aquifer	✓	
	Carmel Valley OUTSIDE Carmel River alluvial Aquifer	✓	
	North County	✓	
Wells in Coastal Zone	New		✓
	Replacement		✓

1- Criteria in PS-3.3 apply
2- Criteria in PS-3.4 apply
3- Discretionary permit required in North County only

The 2010 General Plan does not define "replacement" well or "new" well. GP policy language implies that a "replacement" well is not considered a "new" well by granting exceptions for replacement wells. The base GP well policies are PS-3.3 and PS-3.4, and both exempt replacement wells. There is no explicit exception for replacement wells in Area Plan policies (Carmel Valley, North County), but these policies were generated as mitigation for the base PS policies, so staff refers to that exemption when applying the AP policies.

Discretionary permits for wells are processed by RMA-Planning as an Administrative Permit. When a discretionary permit is required, appeals are governed by the permit process set out in Title 21. A ministerial permit is required for construction, destruction, or repair of any well. Ministerial well permits are processed by the Monterey County Environmental Health Bureau (EHB), including in cases where a discretionary permit from Planning is required. A decision by the Director of Health to deny, conditionally grant, suspend, or revoke a well permit is appealable to the Board of Supervisors (BOS) under current section 15.08.160. An applicant needs to obtain the discretionary permit from Planning first if a discretionary permit is required; once the discretionary permit is issued, the ministerial well permit is then issued by EHB.

C. ISSUE ANALYSIS

1. Limitations on New Domestic Wells

Existing subdivisions that created smaller lots (clustering) were approved based on the expectation that the development would be served by a water purveyor or system, not with individual wells. Due to water restrictions such as State Water Board Order 95-10 (and subsequent Cease and Desist Order on Cal Am), property owners and developers have looked to drilling wells where the subdivision was not designed to accommodate wells in order to move forward with development.

Allowing individual wells after-the-fact because of water restrictions creates a number of issues:

- Not all properties have equal ability to install a well (first come-first served). Potential impacts due to well density and set back requirements that restrict a lot from being allowed to drill a well if their neighbor already has a well.
- The ability for future development of sewer lines or onsite wastewater treatment systems (OWTS) (e.g. septic tanks, leach fields, etc) is impacted because State regulations require certain distances between wells and onsite sewage systems or sewer lines.
- Increases the potential of adversely affecting the water quality of the well(s) by increasing the density of wells to OWTS when sewage disposal is by OWTS. The minimum lot size is 2.5 acres when creating new lots that are to be served by an onsite individual well and by an OWTS.
- Creates potential policy conflicts when well setback regulations force subsequent development on neighboring lots into areas protected by policy (e.g. oak woodland).

Wells create potential impacts on neighboring properties due to restrictions of uses within certain proximity of a well (e.g. septic, sewer laterals, animal confinement, etc). Due to these restrictions on future uses near wells, placement of wells also requires consideration of existing infrastructure such as sewer main lines and proposed land use that may require planning for future infrastructure (e.g. annexation). The intent of adopting regulations to address this issue is to minimize impacts of wells on adjacent properties, and address wells proposed in areas with lot design/density that is more of an urban-level type of development. General Plan policies also require evaluating the effect on other domestic wells in the vicinity.

Wells in infill urban lots have been an issue of concern in the coastal zone and inland areas resulting in interim urgency ordinances (temporary moratorium) while the County develops regulations to address these issues. Setbacks for domestic wells were initially raised as part of appeals to the Board on well applications on small lots in the Coastal Zone. Issues raised included effect of the well on neighboring lots and potential effect on current and future placement of onsite wastewater treatment systems or sewer laterals. The greatest potential conflict occurs on smaller lots. Installing wells on smaller parcels ahead of development requires careful consideration of land use limitations to consider where a future home may be built.

AAC Discussion Summary:
This issue pertains to domestic wells. The AAC recommendations focus on Ag wells, thus no recommendations on requirements for domestic wells were discussed.

Options:
Based on issues raised through project appeal hearings, staff developed options for consideration:

I. Lot Size:

a. Restrict minimum lot size to 2.5 acres (in all cases)
b. Restrict minimum lot size to 2.5 acres if:
    1 an onsite wastewater treatment system (OWTS) exists, or development will be served by an OWTS; AND

2A an existing water system, or water system to be constructed, is intended to serve the lot but cannot provide a connection due to certain specified circumstances; OR

2B there is no public water system

c. Allow wells on lots less than 2.5 acres if it meets performance based criteria such as:
   1) Setbacks. See II below.
   2) Fractured Rock Geology. See Issue #3 (Fractured Rock) below.
   3) Well Replacement Sites. There must be adequate initial and future sites established.
   4) Water Availability:
      i. There is no water system
      ii. A water system is unable to provide water service

II. Set Backs:

a. Require that required set backs to be met within property lines
b. Address on a case-by-case basis with established performance standards which allow the well only if it does not substantially burden neighboring lots
c. Allow wells to affect neighboring property if the owner has written permission from the neighbor (agreement, easement)

AAC Recommendation:
No recommendation.

2. Setbacks for new Ag wells.

Monterey County does not have a policy that would regulate Agricultural (Ag) wells with a production capacity at or below 1,000 gallons per minute (gpm). Wells on Ag lands located near urban areas have the potential to impact adjacent domestic wells and/or existing/future infrastructure needs. Ag wells are typically located near roads for easy access. This could impact a road planned for future urban expansion because a sewer line cannot be located within 50-feet of the existing well. Larger Ag properties have space to drill wells, but the well location can impact Ag operations. The intent of the regulations would be to allow for efficient Ag operations while protecting the water supply and minimizing impact on adjacent properties, including existing and future infrastructure.

The primary purpose of requiring a setback is to address potential contamination between an Ag well and wastewater facilities. Locating a well near a property line could restrict or prohibit development on a neighboring lot (e.g. septic system). Also, good community planning requires consideration of infrastructure that would need to be located in a County road in the future that would pose a potential contamination issue to wells located near the roadway. However, this situation would not apply to all County roads, only to those areas that are planned to develop in urban uses in the future.

AAC Discussion Summary:
The AAC considered a standard setback from property lines where a new well would not require a well impact assessment. Certain cases might warrant a reasonable setback from the property line of a non-Ag property if the well setback has a significant impact to potential development. A setback of 20 feet from the property line to the new Ag well was thought to be appropriate.

The AAC recommended that Ag wells be exempt from setbacks for an adjacent Ag property (Option b). Ag wells should not have a required setback from a road that may, in the future (but does not currently), contain infrastructure (e.g. a sewer line) that could pose a contamination issue. Addressing future contamination potential should be the responsibility of the developers or County related to the new development, consistent with the Ag buffer setback policy.

The AAC suggested allowing an exception under certain circumstances (e.g. variance), but did not make specific recommendations for implementation. This issue was referred to subcommittee to develop criteria, appropriate authority, and noticing standards and make a recommendation to the full Committee.

Options:
The following options presented by staff address separate issues so can be considered as a package or individually:

a. Require a setback of up to 50 feet between a County road and a new Ag well if determined to be necessary by the Planning Director to accommodate future public infrastructure. The setback: 1) can be less than 50 feet if conditions allow; 2) is presumed not necessary unless determined to be required; 3) only applies to public infrastructure; and 4) setbacks as discussed in this context do not exempt high capacity wells from the requirements of General Plan Policy PS-3.4.
b. Exempt all new Ag wells that affect other Ag property
c. Establish a standard setback for Ag wells adjacent to non-Ag uses

AAC Recommendations:

a. Require no setback from the property line between a new Ag well and another Ag zoned property if the well is on land owned by the same person.
b. Require a 20-foot setback from the property line for a new Ag well on the property when the adjacent lot is a non-Ag zoned lot of record, or is on an Ag-zoned property owned by a different land owner.
c. Require no setback from a property line to the new well when the lot is adjacent to a roadway unless there is a defined easement or an approved development project (intent).
d. A well may be placed anywhere within an established well lot.
e. Setbacks should only apply to new Ag wells, not to replacement wells.

3. Wells in Consolidated Materials (Fractured Rock)

Monterey County Environmental Health Bureau is aware of the general areas of consolidated materials (fractured rock) within the County based on experience and historical studies. However, it is not possible to precisely identify all fractured rock areas on a map.

Allowing individual wells after-the-fact on small lots intended to be served by a municipal sewage system and water system because of water restrictions creates a number of issues, such as those noted in Issue #1 (Limitation on new Domestic Wells) above. In addition, wells in fractured rock may have unpredictable production due to recharge area or instances where seismic events could close off fractures in the rock that previously provided water to the well. This creates uncertainty for a long-term water supply. Changing the water supply from a water system to on-site individual wells increases the potential to create competition between wells (i.e. groundwater gradient changes resulting in loss of well production), especially as the number of wells increases over time. Also, small lots are constrained in

their ability to move the well location to find water if the existing well can no longer meet the owner's production needs.

Fire agencies require connection to a water system or a storage tank. As such, lots that are too small for an adequately sized fire tank are permitted to connect to the water system for fire suppression even if connections are not available for domestic use.

The Board adopted an Interim Ordinance (now expired) for wells in fractured rock, generated by issues with wells in the coastal zone and nearby inland wells while the County was developing regulations to address wells in fractured rock. The Regional Water Quality Control Board (RWQCB) has expressed concern with installing wells in consolidated materials/fractured rock (coastal and non-coastal) where there is no public sewer available because the density creates a greater potential to contaminate the public water supply. GP Policies PS-2.4 and NC-3.8 provide direction to create regulations for domestic wells in consolidated materials (e.g. fractured rock). In cases where an alluvial formation is located below hard/fractured rock and the well is drilled through the rock formation to the water source, staff does not consider that to be a fractured rock well.

AAC Discussion Summary:
There was discussion related to conditions where water can be extracted from formations above or below fractured rock that do not have the same characteristics as extracting water within hard/fractured rock formations. Ag wells are not generally drilled to extract water from fractured rock material because the wells cannot produce the amount of water needed to support the Ag operation. Therefore, this issue is more related to domestic wells.

Options:
Staff identified several options which appear available to address these issues:

a. Allow new wells based on outcome-based performance standards (e.g.; 50% permeable area post-development, Alternative OWTS (i.e. enhanced treatment) where soil < 20', enhance recharge of groundwater with a rainwater recharge system, higher production capability, require two well sites, etc.)
b. Allow new wells based on defined standards (e.g.; min. lot size; 100-foot sanitary seal, etc.)
c. Prohibit wells in fractured rock where there is an alternative water source (e.g.; water system is available – regardless if a connection is available at this time).

AAC Recommendations:
No recommendation.

Staff agreed to add clarifying language in the draft ordinance such that wells which penetrate, but are not perforated (i.e. constructed to extract water), in a hard/fractured rock formation are not subject to regulations intended for wells that extract water from hard/fractured rock.

4. High Capacity Wells

A high capacity well is defined in the 2010 GP Glossary as a well that can produce greater than 1,000 gallons per minute (gpm). This standard was reached through discussions as part of the General Plan Update hearings with technical consultation from the Monterey County Water Resources Agency. Ag wells that will produce at or under 1,000 gpm are not subject

to the GP well policies that require an impact assessment of the proposed well.

Each new well is considered individually when implementing the GP well policies; cumulative impacts are not part of the assessment. Therefore, one farmer could drill three wells that each produce 900 gpm without triggering the criteria for an impact assessment, while another farmer could drill one well producing 2,700 gpm that would be subject to an impact assessment and could require mitigation of any potential significant impact shown by the assessment.

In response to issues raised relative to the definition of High Capacity Ag wells, staff researched the criteria for determining "high capacity". This research only found a threshold in the Midwest, and that defines a high capacity well as producing over 75 gpm. While this reflects a much more conservative threshold than Monterey County, staff recognizes that standards are based on different circumstances (greater source of water, fewer geologic constraints, lower water intensive crops/use). Staff recognizes that Monterey County has diverse conditions with regard to aquifers and other issues related to thresholds for defining high capacity wells, however in lieu of a General Plan amendment, the regulations must address the current 1,000 gpm threshold.

Regulations for High Capacity Wells do not prohibit the drilling of a well and there is no limitation as to the amount of water being extracted by a well. However, GP policy does create a trigger to perform an assessment for any <u>new</u> High Capacity Well. The assessment looks for potential impact of the new well on in-stream flows or other domestic or water system wells. Staff is currently exploring different types of models to use in performing the assessment to provide the most accurate picture of potential impact. Per GP policy, any potential significant impacts from the new well, as indicated by the assessment, must be mitigated by the applicant (e.g. redesigning or relocating the well).

One issue raised by the agricultural community is the threshold for when mitigation is triggered. Other factors that relate to this issue include the replacement well exemption (item #5 below) and assessments of impacts on in-stream flows and domestic wells (item #6 below). Requirements for conducting an impact assessment only apply to new wells and not to replacement wells. This means that the definition of a replacement well is critical to the definition of a High Capacity Well.

In response to concerns from the AAC Subcommittee, staff also created a means of verifying a well's production capacity based on the proposed casing and pump size for those cases when a proposed well has an anticipated pumping rate less than or equal to 1,000 gpm but is capable (by design) of being a high capacity well. Industry standards for well pumps indicate that, generally, wells with a casing diameter of greater than 12-inches would have production potential to become a high capacity well, depending on the pump size and well location (e.g. alluvial vs fractured rock formation). Thus, staff has used the threshold of a 12-inch diameter casing to determine when an applicant who is proposing a well that is expected to produce less than or equal to 1,000 gpm needs to submit verification of the pumping rate.

Initially, staff implemented the following two-step process as a means of collecting the necessary data:

- Pre-Drilling. Applicants prepare a pump design plan based on the production they intend to achieve with the well. MCWRA verifies that the design does not indicate intent to be a high capacity well.
- Post-Drilling. The results of a pump test are required post drilling to confirm that the capacity is under 1,000 gpm. If the well's production indicates that it is, in fact, a high capacity well and operation of the well is determined to have potential significant impacts, mitigation would also be required (e.g. flow restrictors) by policy.

During implementation of the pre- and post-drilling verification process, staff received feedback from the AAC Subcommittee indicating that, in the Subcommittee's opinion, the pre-drilling component of the process is onerous and misrepresentative of actual outcomes. As a result of comments and additional review, staff now requires only the post-drilling verification of a well's pumping rate (i.e. pump test data). This does not provide the applicant with the benefit of MCWRA's review before beginning work, but it does achieve the intent of the GP policies. Applications for a High Capacity Well do not require any type of post-drilling verification.

Because production from the well can be changed by installation of a different pump, staff is concerned with a potential need to monitor wells with larger casings to ensure that they remain under the 1,000 gpm threshold. However, this can be managed by providing statements on the well permit describing the permitted maximum production per the applicant's representations, which could be used in future enforcement if the permit was found to be in violation. Monitoring could/would be handled reactively (complaint, other permit) and not proactively.

AAC Discussion Summary:
AAC discussed when to require verification (pre-drilling and/or post drilling) and what to require. There was not a specific recommendation in this regard. There was also discussion pertaining to the stated threshold of 1000 gpm that is defined in the General Plan. Monterey County is not a "one size fits all" and the policy (definition) should better reflect regional characteristics. For areas like North County and Carmel Valley, 1,000 gpm could be adequate, but to achieve this capacity in the Salinas Valley would be disappointing. In addition, a well using groundwater should not be linked to a policy protecting surface water. A definition with a threshold for high capacity wells needs to be science-based.

Within the context of the adopted GP, as adopted, AAC members discussed a number of technical issues to determine when a proposed well would be considered High Capacity. Committee members recognized staff's recommendation to require a submittal containing documentation for wells that propose a pumping rate less than or equal to 1,000 gpm, but which have the potential to be high capacity based on construction design. The intent is to prove that proposed wells meeting these criteria would not be high capacity wells and therefore would be exempt from the well impact assessment requirements.

The new ordinance should be clear that these requirements pertain to new wells and not to replacement wells. Submittals should be simple and straightforward and not require MCWRA to review or retain significant amounts of documentation.

Options:

a. Establish pre-drilling standards based on combined proposed well casing and pump size that would result in 1,000 gpm or less.
b. Process permit based on permit description. Applicant must demonstrate that actual (post-drilling) well capacity will be 1,000 gpm or less after it is drilled and pump installed by submitting a pump test conducted to County specifications. Standard condition that the well remains in conformance with description on the permit until/unless a new permit is obtained.
c. Adopt interim standards but process a General Plan Amendment to potentially amend the policy.

AAC Recommendations:
Amend the General Plan to redefine high capacity wells.

Until GP is amended (or if it's not amended), include submission of well use reports at the end of the year for check and balance process to verify use of the well.

5. Replacement Wells

Monterey County currently has no requirement (definition) for replacing a well (agricultural or domestic), but rather policies indirectly create an incentive (in the form of an exemption) to avoid certain reviews or permit requirements. GP policies PS-3.3, PS.3.4 and NC-5.4 all provide exemptions to assessment/permit for replacement wells. Replacement wells in the coastal (emergency) and non-coastal area are exempt from permitting and/or technical requirements.

Under the GP Policy PS-3.4, new high capacity Ag wells are subject to review criteria (assessment), but are exempt from the review criteria if the new well is replacing a well. The intent of exempting replacement wells is that we would not increase the number of "straws in the ground" that create a potential environmental hazard (conduit to a public water source). Eliminating or reducing the number of wells in sensitive areas (e.g.; in or near area of seawater intrusion) can help to reduce risk of contaminating potable water sources. Many older wells do not meet current standards (e.g.; perforations in multiple aquifers, do not meet minimum seal depth), which can increase potential risk of contaminating potable water sources, especially if left unused. State regulations require an inactive well to be destroyed after one year, unless one can demonstrate an intent to use the well again. Replacing older wells that pose a contamination hazard is a primary objective of these regulations. However, providing for efficient Ag operations should be considered.

To destroy an existing well is costly. Therefore, Ag has expressed a desire to be able to retain back up wells if they are not cumulatively increasing extraction. In some cases, a new well is installed to reduce the need to move water as far. There may be no increase in use by adding another well because the same amount of area is being irrigated or because an existing well has reduced production. As such, having more wells could be more efficient by using less energy (pumping) and/or creating less waste (leaks). Allowing wells to be retained subject to a condition that there is no net increase would require that a specific method of verification be established. Protecting the aquifer from contamination and the need to destroy wells that could cause a risk is of primary concern; however there should be the ability to retain certain existing wells for back up or other uses that would not increase the existing extraction amount.

AAC Discussion Summary:
The proposed modification is to clarify that the replacement well must not increase the "impact" as related to the original capacity. **The concept should be "replacement capacity" or "no increase in impact" for an entire property or area, instead of limiting the exemption to a single well.** For example, if there is a well field consisting of several wells that are or were producing at a certain capacity they can be replaced with a single well producing at that same capacity and the new well could be considered a replacement well and therefore not require an impact assessment.

Recognizing staff's concern for protecting the aquifer from contamination and the need to destroy wells that could cause a risk, the AAC still felt that there should be the ability to retain certain existing wells for back up or other uses that would not increase the existing extraction amount. An ordinance should encourage compact/consolidated operations that increase energy efficiency and do not affect food safety with contaminants in the water supply.

All appear to agree that protecting the aquifer from contamination is a primary concern. Many old wells pose a real threat. There may be a feasible method of determining that an existing well is not in such poor condition as to pose a contamination risk, and therefore could be retained for back up or other incidental uses, but this would be an exception to the regulation (*Working Document-options a and b*).

Staff also expressed concerns about making determinations based on prior historic well capacity or addressing well fields. In many cases, data about historic well capacity is not available. While the clarifier of considering a well field would provide greater flexibility for the Ag community, staff takes the position that one Ag well can be replaced with a new Ag well but that generally an existing well must be destroyed in order to address potential contamination of the aquifer. Staff understands the Ag perspective and may consider a different replacement standard for domestic wells where the justification to retain an existing well for incidental use related to an Ag operation is not a factor. However, the important issue with defining a "replacement well" is that such a well is exempt from certain requirements, including the assessment of impact on neighboring wells, properties, or streams.

Staff developed options:

a. Define replacement well to mean that an existing well must be destroyed. Retaining a well in any capacity would be considered an expanded use.
b. Establish criteria for when a well must be destroyed (inadequate seal depth, multiple perforations).
c. Establish criteria as to what wells may be considered as replacement:
    1) Water Source. Replacement well must be located:
        i. on the same parcel, or
        ii. in the same geographic area (water basin).
    2) Similar application/impact. Increase efficiency in Ag operation but not increase amount of extraction.
    3) Differentiate between Ag and domestic wells as to what constitutes replacement and when an existing well be required to be destroyed in order to be a replacement well.

AAC Recommendations:
Option c with modification to subsection c(3) as follows:

c. Establish criteria as to what wells may be considered as replacement:
    1) Water Source. Replacement well must be located:
        i. on the same parcel, or
        ii. in the same geographic area (water basin).
    2) Similar application/impact. Increase efficiency in Ag operation but not increase impact.
    3) Differentiate between Ag and domestic wells as to what constitutes replacement.

6. Assessment of Effect on In-stream Flows

GP Policies PS-3.3 and PS-3.4 establish criteria to review effects on in-stream flows necessary to support biological resources (also see policies in GP Goal 5 of the Conservation Open Space Element - Biological Resources). This applies to both domestic and high capacity (Ag, urban, and domestic) wells in the non-coastal areas; however, Ag wells that are not high capacity (equal to or less than 1,000 gpm) are not subject to these policies. Policy CV-5.4, developed as mitigation for the GP, has an additional requirement that extractions from the Carmel River must be fully offset for no net increase.

Assessment of effects on in-stream flows has been part of the CEQA review performed for discretionary (well) permits in the coastal zone, using existing LCP policies relative to ESHA and water as a threshold. The Monterey Peninsula Water Management District (MPWMD) requires monitoring of wells within 1,000 feet of the Carmel River. Although MPWMD includes coastal and non-coastal areas, this regulation affects mostly non-coastal properties because of the Carmel River influence area. The Salinas River is different from the other rivers because MCWRA manages water flows using water stored at reservoirs to provide multiple benefits year round.

GP Policy PS-3.4 is worded to require assessment of effects on "flows necessary to support riparian vegetation, wetlands, fish and other aquatic wildlife…" However, the EIR discussion leading to the mitigation, which provided the basis for this policy language, was focused on impacts to steelhead; there are specific water bodies that support steelhead migration. Based on research of GP documents, staff agreed to address this issue as follows:

1) Assessment for High Capacity wells under PS-3.4 is most relevant to impacts of water levels in water bodies that support steelhead habitat as defined by NOAA's National Marine Fisheries Service (NMFS). Staff proposes to apply assessment of impacts to in-stream flows to *designated critical habitat*, as defined and identified by the National Marine Fisheries Service (NMFS) (South-Central California Steelhead Recovery Plan, Public Review Draft, Southwest Regional Office, NMFS, September, 2012). As required by the Endangered Species Act, NMFS designated critical habitat for steelhead in 2005, including hundreds of miles of creeks and streams within Monterey County. Maps provided by Monterey County Water Resources Agency (MCWRA) highlight all such stream segments by watershed. These maps were derived from Federal Register/Vol. 70, No. 170, Friday, September 2, 2005, pages 52575-52579.
2) Effects to support riparian vegetation, wetlands, and aquatic wildlife in general would be best addressed in a Stream Set Back Ordinance per Policy OS-5.22. GP Policy OS-5.22 addresses riparian habitat by establishing set backs from streams. This policy specifically identifies the Arroyo Seco, San Antonio, Nacimiento, Gabilan and Toro and

additional water courses to the steelhead rivers, and may include other waterways based on stream classifications developed with the stream set back ordinance.

Monterey County Water Resources Agency (MCWRA) is currently using an analytical model as part of a multi-step process for assessing a proposed well's potential impacts to in-stream flows. An initial assessment is generally completed within 1-2 days from receiving the well application. An assessment does not prohibit the drilling of a well or regulate how much water can be extracted.

The analytical model is used to determine whether the proposed well has the potential to impact the identified stream(s) at a level which meets or exceeds a threshold value for depletion of in-stream flows. If no impact is determined using the analytical model, the applicant does not have to do anything further with regard to the assessment. If the assessment shows potential impact to a stream, the applicant is given options to mitigate – e.g. relocate the well, adjust the well specifications (pumping rate) or construction, or hiring a professional consultant to conduct a site-specific study. An alternative to avoid mitigation is to destroy an existing well, which is staff's current threshold for replacement.

The County's consultant team, working with County staff, established 2 cubic feet per second (cfs) of stream flow depletion as the threshold of significance for potential impact to flows affecting steelhead migration. WRA staff intends to periodically evaluate potential improvements to its analysis methodologies, which can be incorporated into the assessment process. When available, validated "site specific" aquifer perimeters may be utilized in the initial assessment.

Between GP adoption and June 2013, staff has processed 85 well applications that were subject to one or more of the new GP policies. A total of 11 applications indicated potential for significant impact that required mitigation. Only four of the eleven applications currently have unresolved issues outstanding. Staff's implementation of the process has evolved over time, resulting in more refined determinations. Staff finds that implementing the policy as described above could eliminate the need to amend the definition of a High Capacity well, and still meet the intent of the GP policy.

<u>AAC Discussion Summary:</u>
The primary areas of concern in addressing this issue include: how we define purpose of in-stream flow, and what constitutes a "stream" that requires this assessment. The AAC questioned the analytical assessment model used, indicating that it does not take into account actual water level at any point in time or season. Actual impact can depend on the time of year when the demand occurs (e.g. vineyards spray for frost control in winter, which is the wet season where there generally would not be an impact on water levels). The AAC requests that the scientific methodology reflect the most up-to-date available science.

<u>Staff developed options</u>:
a. Establish one standard set back for all (from centerline versus edge/bank). If within a standard set back, assessment is required in all cases.
b. Establish set backs based on classifications (river, stream, creek, ephemeral, intermittent, Salinas River-levels managed)
c. Assess in all cases consistent with current MCWRA process
d. Case-by-case assessment based on conditions/known species:

i. Steelhead
ii. Alluvial, hard rock, etc.
iii. Define affect based on pump design for Ag wells meeting high capacity definition

AAC Recommendations:
Require an assessment for High Capacity Wells in all cases where the water body is identified as critical Steelhead habitat. Periodically evaluate and use the most up-to-date scientific analysis methodologies applicable. .

7. Well Influence Assessment

All new wells in the coastal Zone are currently required to address influence on other wells as part of the coastal permit process. MPWMD currently requires wells within the District boundary (coastal and non-coastal) to consider impacts on other wells within 1,000 feet. MCWRA is currently using an analytical model to calculate zone of influence of proposed domestic and high capacity wells based on well specifications. This data is used to evaluate potential impacts to domestic wells within that zone.

AAC Discussion Summary:
This policy intends to mitigate where High Capacity Wells may have potential health impacts on existing domestic wells. A threshold of greater than five (5) feet of drawdown in an existing domestic or water system well over a twelve (12) hour pumping cycle, caused by operation of a proposed high capacity well, is the threshold currently being used to determine if mitigation is required. Staff indicated a willingness to refine this threshold to take into account additional factors. Further, the AAC suggested that the assessment of High Capacity wells should only apply to impacts on domestic wells in alluvial material, not other Ag wells.

Staff developed options:
Define "Immediate Vicinity"
a. Incorporate MPWMD standard of 1,000 feet
b. Having influence on another well based on well/pump design in alluvial only
c. Incorporate MPWMD standard of 1,000 feet for non-alluvial only

Testing Requirements
a. Incorporate existing regulations (e.g. MPWMD)
b. Develop standards

AAC Recommendation:
"Immediate Vicinity" – define as a High Capacity Well having influence on a *domestic* well based on well/pump design, located in alluvial material.

Testing Standards - Develop specific standards [as part of drafting the ordinance] based on discussion/input from full AAC accounting for actual use versus theoretical (e.g. pumping cycles, recharge, draw down).

8. Water Quality Testing Protocols

State Bulletin (DWR) establishes water quality testing as part of a permit process for new individual domestic wells. The California Health and Safety Code, Title 22 of the California

Code of Regulations, and Monterey County code Chapter 15.04 establishes water quality maximum contaminant levels and sampling frequency/protocols for water systems. The State Building Code, adopted by Monterey County, requires that each plumbing fixture be supplied with an adequate supply of running potable water. Monterey County, in conformance to state law, requires a permit for the construction of all water wells and also requires discretionary permits for wells located in the coastal zone. GP Policies PS-2.5 and PS- 3.3 make water quality testing and criteria a requirement for non-coastal areas. Similar policies in the LCP make water quality testing and criteria a requirement for coastal areas.

GP Policy PS-3.9 requires testing water quality and yield for all lots created through subdivision, beyond an existing lot of record. Monterey County has a variety of water quality issues. Where an issue is identified, the well may be required to test for up to one year. The standard is to use the most current four-quarter results that are averaged where multiple tests present different results. Applicants can continue to test as long as they wish until they obtain four consecutive quarters that result in meeting the standard. If the well does not meet standards, the developer can propose treatment for proposed water systems that are to be 15 connections or greater. This option requires showing technical, managerial and financial (TMF) capabilities to maintain a proposed treatment system.

AAC Discussion Summary:
This issue was determined to only apply to domestic wells and therefore the AAC has no recommendation.

Staff developed options:
Options for consideration include:

a. Maintain existing process and testing protocols for domestic wells only
    i. If initial test passes, they can proceed
    ii. If results exceed any Maximum Contaminant Level (MCL) or approaching the MCL (e.g. 80% of MCL) for Subdivisions, four quarters of testing may be required.
    iii. Treatment is an option for proposed water systems that are to be 15 connections or greater with adequate TMF and individual domestic wells on a single lot of record.
b. Establish timeframe for well data. Limit timeframe to initial four quarters. Do not allow additional testing if results exceed Maximum Contaminant Levels from the earlier timeframe.

AAC Recommendations:
No recommendation

9. Seawater-intruded areas

Section 15.08.140 of Chapter 15.08 of the County Code currently contains special technical requirements for wells located in the inland and coastal areas with known groundwater quality problems, including an area called “Zone 6 of the Monterey County Flood Control and Water Conservation District.” Section 15.08.140 requires adherence to special requirements for wells in “Seawater-intruded Areas” in order to protect groundwater. Most of the seawater intrusion occurs in the coastal area. For inland areas of known seawater intrusion, GP Policy PS 3.5 generally prohibits the construction of new wells in “known areas of saltwater intrusion, as determined by MCWRA”.

County regulations require special technical specifications for the construction, destruction, and repair of wells in seawater intruded areas. However, reference to "Zone 6" or "Seawater-intruded Areas" is not a precise delineation. Maps exist (and are updated every two years) that identify existing seawater-intruded areas; these maps will be used to determine where special requirements for the construction, destruction and repair of wells are applicable for the purpose of protecting groundwater. Pursuant to GP Policy PS-3.1, continuation of the presumption for water in Zone 2C is subject to future studies showing the Salinas Valley Water Project is successful in minimizing or avoiding expansion of seawater intrusion.

AAC Discussion Summary:
WRA staff indicated that data related to seawater intrusion is collected annually and that the mapping is updated every two years. The AAC indicated that the boundaries on the maps should be used to apply the regulations and not include any fringe areas.

Staff developed options:

a. Apply regulations only within delineated boundary of "Seawater-intruded Areas."
b. Extend regulations to wells within proximity to influence seawater intrusion as determined by the applicable water management agency.
c. Require a discretionary permit for wells in Seawater-intruded Areas.
d. If well is proposed in Seawater-intruded area within Zone 2C, then presume that there is no basis to prohibit the well based on the rebuttable presumption that the Salinas Valley Water Project is minimizing or avoiding expansion of seawater intrusion. Continuation of this presumption is subject to future studies showing that the SV Water Project is working to minimize or avoid expansion of seawater intrusion.

AAC Recommendations:
Apply regulations only within delineated boundary of "Seawater Intruded Areas" as mapped by the WRA and periodically updated.

If an Ag well is located in the Seawater Intruded Area of Zone 2C then it is presumed that the Salinas Valley Water Project will mitigate impacts and the subject well should not be prohibited.

Regulations apply only to production wells, not monitoring wells.

10. Archeological Study Requirements

Well permits in the coastal zone are subject to discretionary review that includes assessment of archaeological resources and potential impacts. GP (OS-6.3) and LCP policies/regulations generally require an archaeological study (arch report) for all "new development" in high and moderately sensitivity areas. Routine and on-going Ag is generally exempt from arch reports where the ground has been previously cultivated.

General Plan policies require arch reports to be prepared for "new development" in High and Moderate Sensitivity Areas. Since much of Monterey County is identified as having high or moderate potential, an arch report would be required for new development in undisturbed areas in most cases. Applicants can submit a form requesting a waiver to the

arch report if there has been a previous negative report that included the proposed development area, there is no land clearance/disturbance, or the project is minor and located on a previously disturbed site.

Arch reports are prepared based on surface evidence and historical records, and would not likely identify potential resources that would be found deep underground relative to drilling a well. Staff explored ways to best facilitate well permits while protecting resources, specifically where there are known significant archeological resources. The question is if drilling a well should be considered "new development."

Simply drilling a well would have potential impacts limited to the area where the auger drills the hole. Monitoring the well drilling is not helpful because it is not possible to ascertain if resources are affected because the spoils are finely ground. An arch report would probably not result in identification of any potential resources and drilling a well would cut through and destroy any artifacts or remains, generally without the ability to detect any effect. The only way to be sure to avoid remains would be through taking a unit sample (digging down to a certain level below where remains are typically found, which creates a greater amount of disturbance (impact)). However, some drilling techniques require a "pit" to circulate the mud and/or well cuttings. These pits have potentially more impact on buried resources because of the excavation involved. An alternative to a pit is what is called a "mobile pit" which is a portable container sitting on grade and does not require grading or digging.

This has evolved into a current practice for well permits in inland and coastal areas as follows:

- New development in high and moderate sensitivity areas start from a point of requiring an archaeology report. They can request a waiver if they meet the criteria.
- Drilling an Ag well in cultivated areas does not require an archaeology report but Planning will still issue a waiver of the Arch Report requirement.
- In areas that are uncultivated and located in a high or moderate sensitivity area, Ag wells require an archaeology report unless they qualify for a waiver.
- For any well (Ag or domestic) where a pit is included, the applicant can prepare a report or use a mobile pit and sifter method. A waiver is required for the mobile pit and sifter method.

AAC Discussion Summary:
The AAC suggested that wells should not be considered "new development" unless there is grading or a pit associated with them. Ag fields should be considered to be previously disturbed; however, range land would generally not be considered previously disturbed.

Staff developed options:

a. Require a report only in high sensitivity areas
    i. Only if/when the project includes a pit or other grading. Drilling a well with no pit would be exempt.
    ii. In all cases where there is a new well
    iii. Only where the proposed site has not been previously disturbed.
b. Require a report in high and moderate sensitivity areas
    i. Only if/when the project includes a pit or other grading. Drilling a well with no pit would be exempt.
    ii. In all cases where there is a new well

iii. Only where the proposed site has not been previously disturbed

Ag fields would be considered previously disturbed but range land would not.

AAC Recommendations:
Require an archaeological report in High Sensitivity Areas for a well if it includes grading (e.g. pit) and is in an area that has not been previously disturbed.

Drilling a well, without grading, is exempt from arch report requirements in all areas.

MEMORANDUM

TO: Monterey County Planning Commission

FROM: Refinement Group[1] (CHISPA, Monterey County Association of Realtors, Monterey Peninsula Taxpayers Association, Monterey/Santa Cruz Counties Building and Construction Trades Council, Monterey County Farm Bureau, Salinas Valley Water Coalition, Independent Growers Association, Center for Community Advocacy, Central Coast Builders Association, Coast Property Owners Association, Salinas Valley Chamber of Commerce, Monterey Peninsula Chamber of Commerce, Monterey County Hospitality Association, Grower-Shipper Association)

RE: Well Ordinance, Draft for Planning Commission Workshop of August 28, 2013

Date: August 16, 2013

Overall Comment:
As recommended by the Planning staff, the draft well ordinance should not apply "county-wide" because the 2010 General Plan expressly limits its application to inland areas only.

1. Limitations on New Domestic Wells

Refinement Group recommended option, Option c:

c. Allow wells on lots less than 2.5 acres if it meets performance based criteria such as:
   1) Setbacks. See II below.
   2) Fractured Rock Geology. See Issue #3 (Fractured Rock) below.
   3) Well Replacement Sites. There must be adequate initial and future sites established.
   4) Water Availability:
      i. There is no water system
      ii. A water system is unable to provide water service

Rationale: This option allows for flexibility and site-specific evaluation based on performance-based criteria.

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[1] The Refinement Group comprises representatives from diverse organizations who had previously organized to review and comment on the General Plan Update and now have re-assembled to participate in the County process for developing the ordinances to implement the General Plan. The Refinement Group supports a pro-active, public participation process in order to resolve issues upfront rather than in a battle at the end.

2. **Setbacks for new Ag wells**

Refinement Group recommended option: Consistent with AAC recommendations below.

AAC Recommendations:

a. Require no setback from the property line between a new Ag well and another Ag zoned property if the well is on land owned by the same person.

b. Require a 20-foot setback from the property line for a new Ag well on the property when the adjacent lot is a non-Ag zoned lot of record, or is on an Ag-zoned property owned by a different land owner.

c. Require no setback from a property line to the new well when the lot is adjacent to a roadway unless there is a defined easement or an approved development project (intent).

d. A well may be placed anywhere within an established well lot.

e. Setbacks should only apply to new Ag wells, not to replacement wells.

3. **Wells in Consolidated Materials (Fractured Rock)**

Refinement Group recommended option, Option a:

a. Allow new wells based on outcome-based performance standards (e.g.; 50% permeable area post-development, Alternative OWTS (i.e. enhanced treatment) where soil < 20', enhance recharge of groundwater with a rainwater recharge system, higher production capability, require two well sites, etc.)

Rationale: This option allows for flexibility and site-specific evaluation based on outcome-based performance standard.

4. **High Capacity Wells**

Refinement Group recommended newly developed option:

Develop separate standards for each basin based on the basin's sustainable yield. In some basins, the aquifer can maintain safe yields despite increased groundwater pumping. In others, recharge and recovery must be closely monitored.

5. **Replacement Wells**

Refinement Group recommended option: Consistent with AAC recommendations below.

AAC Recommendations:

Option c with modification to subsection c(3) as follows:

c. Establish criteria as to what wells may be considered as replacement:

1) Water Source. Replacement well must be located:

i. on the same parcel, or

ii. in the same geographic area (water basin).

2) Similar application/impact. Increase efficiency in Ag operation but not increase impact.
3) Differentiate between Ag and domestic wells as to what constitutes replacement.

6. Assessment of Effect on In-stream Flows

Refinement Group recommended option: Consistent with AAC recommendations below.

AAC Recommendations:
Require an assessment for High Capacity Wells in all cases where the water body is identified as critical Steelhead habitat. Periodically evaluate and use the most up-to-date scientific analysis methodologies applicable.

7. Well Influence Assessment

Refinement Group option, modified Option b, under Testing Requirements:

b. Develop standards – Develop separate standards for each basin based on the basin's sustainable yield. In some basins, the aquifer can maintain safe yields despite increased groundwater pumping. In other basins, recharge and recovery must be closely monitored to ensure that one well will not impact another nearby well.

8. Water Quality Testing Protocols

Refinement Group recommended option, Option a.ii & iii:

a. Maintain existing process and testing protocols for domestic wells only
ii. If results exceed any Maximum Contaminant Level (MCL) or approaching the MCL (e.g. 80% of MCL) for Subdivisions, four quarters of testing may be required.
iii. Treatment is an option for proposed water systems that are to be 15 connections or greater with adequate TMF and individual domestic wells on a single lot of record.

Rationale: For subdivisions, an applicant should be allowed to test until he/she can demonstrate four consecutive quarters of sampling results that meet the water quality standards. Developers should be allowed to propose treatment for water systems of 15 connections or greater.

9. Seawater-Intruded Areas

Refinement Group recommended options, Options a and d, consistent with AAC recommendations (below):

a. Apply regulations only within delineated boundary of "Seawater-intruded Areas."

d. If well is proposed in Seawater-intruded area within Zone 2C, then presume that there is no basis to prohibit the well based on the rebuttable presumption that the Salinas Valley Water Project is minimizing or avoiding expansion of seawater intrusion. Continuation of this presumption is subject to future studies showing that the SV Water Project is working to minimize or avoid expansion of seawater intrusion.

AAC Recommendations:
Apply regulations only within delineated boundary of "Seawater Intruded Areas" as mapped by the WRA and periodically updated.

If an Ag well is located in the Seawater Intruded Area of Zone 2C then it is presumed that the Salinas Valley Water Project will mitigate impacts and the subject well should not be prohibited.

Regulations apply only to production wells, not monitoring wells.

10. Archeological Study Requirements

Refinement Group recommendation – Consistent with AAC recommendations below.

AAC Recommendations:
Require an archaeological report in High Sensitivity Areas for a well if it includes grading (e.g. pit) and is in an area that has not been previously disturbed.

Drilling a well, without grading, is exempt from arch report requirements in all areas.

EXHIBIT A

MONTEREY COUNTY
AGRICULTURAL ADVISORY COMMITTEE

Special Ad Hoc Subcommittee

2010 Monterey County General Plan Implementation
Agriculturally Focused and Agriculturally Related Ordinances and Programs

Agricultural Commissioner's Office
Fruit & Vegetable Conference Room (inside main office)
1428 Abbott Street, Salinas, CA 93901
Phone: (831) 759-7325 ~ Fax: (831) 759-2268

Monday, February 11, 2013

MINUTES

Subcommittee Members

Kurt Gollnick	Bill Hammond	Bill Lipe

Staff and Guests

Norm Groot, Farm Bureau	Howard Franklin, MCWRA	Carl Holm, RMA
Dawn Mathes, RMA	Mary Perry, County Counsel	Bob Roach, Ag Comm Office
Mike Serpa, San Bernabe	Jacqueline Onciano, RMA-PD	Kevin Pearcy, Industrial Pump
Nancy Isakson, SVWL	Cheryl Sandoval, Environ. Hlth	Kathy Nielsen, Ag Comm Office
Richard LeWarne, Environ. Hlth.		

I. Welcome & Introductions

The meeting was called to order at 3:05 p.m. (quorum at 3:06 p.m.) by Chair Gollnick. Those present introduced themselves.

II. Public Comment (items not on the agenda)

No public comment.

III. Approve

The meeting minutes of June 11, 2012, were approved by consensus.

IV. Well Ordinance

Carl Holm, Deputy Director, Resource Management Agency

County staff provided an overview background of the "Well Ordinance Analysis" paper. The paper was developed collaboratively among several county departments, including Resource Management Agency, Water Resources Agency, and Environmental Health. The purpose of the "Well Ordinance Analysis" is to provide an overview of the issues associated with the development of the ordinance and gain feedback from the community and decision making bodies on policy direction.

Discussion was held in a workshop format among committee members, staff, and guests in attendance. Committee members and members of the public raised the following issues/questions to be considered:

- What portions of the policies in the "Well Ordinance Analysis" are required per the General Plan? Similarly which policies are not implicitly required, but that staff has deemed helpful in interpreting/implementing policy?
- What criteria is the County using for hydrologic assessments? Environmental Health will provide the criteria to Kathy Nielsen to distribute to the committee.
- Setbacks (new wells): Comment was made that agricultural land and agricultural operations should not be required to accommodate potential future development/infrastructure needs. New development should accommodate services/infrastructure needs. Suggestion that this issue would be better solved with an easement process.
- High Capacity Wells: Staff clarified that the "high capacity wells" is defined in the 2010 General Plan.
- Replacement Wells: Comment was made that intensification of use should be allowed because intensification of use was analyzed in the EIR.
- Discussion commenced on the policy language that would require the destruction of a well. It was noted that the old wells in the CSIP area have not been destroyed. It was also noted that it could be more efficient to repurpose existing, older wells rather than destroy them, if those wells are not a conduit for ground water contamination.
  - Committee members cautioned language that could result in an unintended incentive to drill more wells with lower capacity.
  - New well standards may result in lower yields/less production than older wells.
  - Replacement Wells Option "C" was preferred. Committee made the following suggestion for verbiage change: Under Section 5. Replacement Wells, Option C.
    c. Establish criteria as to what wells may be considered as replacement....2) Similar application/impact. Increase efficiency in Ag operation but not increase impact.
- Assessment of Effect on In-stream Flows:
  - Committee asked staff to report back on the method that was used in the EIR to determine potential impacts to riparian habitat and, specifically, which tributaries were used.
- Well Influence Assessment:
  - Suggestion was made to clarify hard rock vs. alluvial.
  - Suggestion was made to specify that this assessment would be required for new high capacity wells with a nearby domestic well.
- Seawater-intruded areas
  - Suggested that staff consider the 1995 sea water intrusion ordinance (pre Salinas Valley Water Project).

- Archeological Study Requirements
  - Suggestion to focus on specific areas and define sensitivity areas.

ACTION:

1. Cheryl Sandoval of the Environmental Health Bureau will circulate the definition of a replacement well that was contained in the initial draft Well Ordinance for further consideration by the Ag Commissioner's Office , the AAC Subcommittee and other interested parties;
2. Staff to report back on the method that was used in the EIR to determine potential impacts to riparian habitat and which tributaries were used;
3. Staff to return to the AAC Ad Hoc Subcommittee in March.

V. Adjournment

The meeting was adjourned at 5:30 p.m.

EXHIBIT B

This item was provided to the committee during the public comment period for the Well Ordinance item at the meeting of 1/24/2013.

MEMORANDUM

TO: Monterey County Agricultural Advisory Committee

FROM: Refinement Group[1] (CHISPA, Monterey County Association of Realtors, Monterey Peninsula Taxpayers Association, Monterey/Santa Cruz Counties Building and Construction Trades Council, Monterey County Farm Bureau, Salinas Valley Water Coalition, Independent Growers Association, Center for Community Advocacy, Central Coast Builders Association, Coast Property Owners Association, Salinas Valley Chamber of Commerce, Monterey Peninsula Chamber of Commerce, Monterey County Hospitality Association)

DATE: January 24, 2013

RE: Proposed Well Ordinance

At its July 26, 2012 meeting, the Agricultural Advisory Committee (AAC) voted unanimously to ask the Board of Supervisors to put the Draft Well Ordinance, and it's Interim Guidelines on hold. The AAC said it was concerned about the unintended consequences of pushing the draft ordinance through without the issues being adequately vetted.

The AAC also asked several questions at its meeting regarding the draft ordinance and its implementation, many to which staff answered that they didn't know or that matter hadn't been figured out yet. It seemed clear that while it is a lengthy ordinance; the details of the requirements had not been thought through and/or discussed and vetted, thus potentially resulting in unintended consequences and harm.

It is our understanding that the AAC sent a letter to the Board of Supervisors requesting that the draft well ordinance be put on hold, an ad-hoc group of stakeholders is convened to review, discuss and vet the issues surrounding the ordinance and its implementation. The Monterey County Farm Bureau sent a similar request to the Board of Supervisors. While we have found no record of a formal action taken by the Board of

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[1] The Refinement Group comprises representatives from diverse organizations who had previously organized to review and comment on the General Plan Update and now have re-assembled to participate in the County process for developing the ordinances to implement the General Plan. The Refinement Group supports a pro-active, public participation process in order to resolve issues upfront rather than in a battle at the end.

Supervisors, we had been informed that the Board wanted the draft well ordinance further vetted and discussed through the AAC's sub-committee.

To our knowledge there have been no meetings of the AAC's sub-committee to review and discuss the draft ordinance since the matter was discussed at the AAC's July 26, 2012 meeting—until today. We think this is unfortunate and a disservice to the AAC and the public.

Staff has done a good job of outlining the majority of the issues pertaining to this draft ordinance; however, there are many that are not included. They have included their analysis of 10 key issues and provide options for your consideration. They are asking for direction for developing a new draft ordinance. We think it is premature to offer recommendations on the options staff is presenting, and ask that the AAC recommend sending staff's analysis is to the AAC sub-committee for further vetting and discussion which should include the public. The sub-committee could then send recommendations to the full AAC. In the alternate, the AAC could conduct a public workshop which would allow the AAC and the public greater opportunity for review and discussion of these issues.

It is important that the draft ordinance be consistent with the General Plan policies, but we want to be sure that result is achieved in as clear manner as possible, can be successfully implemented without the unintended consequences. Criteria that will be used as the basis for different determinations required by the policy should be clear so that staff and the applicant know exactly how the determinations are made, on what basis, and what is required. To this end, it would be helpful to have a flow chart showing the different steps, and decisions points, involved in processing the different well permits—domestic and agricultural, high-capacity and non-high capacity.

We applaud staff in their efforts to reach out to the community at large and to listen to the concerns of those who must utilize and implement this ordinance, but unfortunately it hasn't been enough. The AAC should take a leadership role in this effort and request a workshop with the AAC's sub-committee or with the full AAC to allow for a detailed discussion and vetting of the issues prior to making any recommendation on the options presented. In its current form, the unintended consequences of the proposed Ordinance will be harmful to the ag community.

EXHIBIT C

MONTEREY COUNTY
AGRICULTURAL ADVISORY COMMITTEE

Special Ad Hoc Subcommittee

2010 Monterey County General Plan Implementation
Agriculturally Focused and Agriculturally Related Ordinances and Programs

Agricultural Commissioner's Office
Fruit & Vegetable Conference Room (inside main office)
1428 Abbott Street, Salinas, CA 93901
Phone: (831) 759-7325 ~ Fax: (831) 759-2268

Monday, April 8, 2013

MINUTES

Subcommittee Members

Kurt Gollnick	Bill Hammond	Bill Lipe

Staff and Guests

Norm Groot, Farm Bureau	Mary Perry, County Counsel	Carl Holm, RMA
Dawn Mathes, RMA	Tony Lombardo	Bob Roach, Ag Comm Office
Richard LeWarne, Environ. Hlth	Cheryl Sandoval, Environ. Hlth	Kevin Piearcy, Industrial Pump
Peter Pyle	Robert Haylock	Kathy Nielsen, Ag Comm Office
Marti Noel, RMA		

I. Welcome & Introductions

The meeting was called to order at 3:10 p.m. (quorum at 3:13 p.m.) by Chair Gollnick. Those present introduced themselves.

II. Public Comment (items not on the agenda)

- The proposed ordinance is inconsistent with federal water law and may result in adjudication. Yakima River in Washington was used as an example.
- Fractured rock –definition and applicability for agricultural wells is problematic. The Gabilan and Santa Lucia regions are very different than Granite Ridge.
- Differentiation between regions of the valley are needed in the definition of high capacity wells.
- The Salinas Valley Water Project has created and improved habitat.
- Definition of "replacement wells" is problematic.
- Well Impact Assessment: staff's proposed approach is inconsistent with water law. Flawed approach to impact assessment/analysis.
- Letter submitted by Peter Pyle.

- Consider recommending changes to the GP policies because of the implications experienced associated with implementing the policies.
- Policy should take into account demand times (viticulture vs. veg crops, vs stream needs)
- Flawed assumptions used in the MCWRA model.
- What happens if a well goes out and the applicant can't meet the various conditions of the new ordinance?

III. Approve

The meeting minutes of June 11, 2012, were approved by consensus.

IV. Well Ordinance

The Subcommittee reviewed the Issue Analysis, and recommends the following for consideration by the full Agricultural Advisory Committee (AAC):

Section 1. Limitation on Domestic Wells

The Subcommittee chose not to formulate a recommendation because this section is focused on domestic, not agricultural wells.

Section 2. Setbacks for new Ag Wells

The Subcommittee recommends that agricultural land and agricultural operations should not be required to accommodate potential future development/infrastructure needs. Rather, new development should accommodate services/infrastructure needs. The committee recommended that staff look into an easement process.

Of the options presented by staff in the issue paper, the Subcommittee makes the following recommendations:

- Require that all new and replacement ag wells, including high capacity wells, that may impact agricultural or nonagricultural uses have a 20-foot setback from the property line. If the adjoining property is owned by the same landowner, no setback would be required; however, the well location must be disclosed as part of the property sale.
- If the property line is adjacent to a county road, the setback is not required.
- Well lots, or parcels, are exempt from the setback requirement.

Section 3. Wells in Consolidated Materials (Fractured Rock)

The Subcommittee recommends that staff clarify this language to indicate that it is not applicable to agricultural wells.

Section 4. High Capacity Wells

Of the options presented by staff in the issue paper, the Subcommittee recommends a revised Option "c" with language as follows:

- Process permit applications based on description provided by the applicant and proposed well design. As-builts or other documentation must show that the well is under 1,000 gpm. Standard condition that the well remains in conformance with description on the permit until/unless a new permit is obtained.

Section 5. Replacement Wells

Of the options presented by staff in the issue paper, the Subcommittee recommends a revised Option "c," with language as follows:

c. Establish criteria as to what wells may be considered as replacement:

1) Water Source. Replacement well must be located:

i. on the same parcel, or

ii. in the same geographic area (water basin).

2) Similar application/impact. Increase efficiency in Ag operation but not increase ~~amount of extraction~~ impact.

3) Differentiate between Ag and domestic wells as to what constitutes replacement.

In addition to the above criteria, the Subcommittee recommends the following criteria be added to the consideration and determination of what wells may be considered Replacement Wells, as follows:

- Criteria should consider the design capacity, or the pumping capacity, of the original well, whichever is greater. Replacement wells should be allowed up to the design/pumping capacity (whichever is greater) of the original well.
- The criteria should consider the overall capacity of the property's water production system. Replacement wells should be allowed if the replacement well is consistent with the overall capacity of the property's water production system.
- Destruction of the original well may not be required if applicant can demonstrate no increase in impact and no cross contamination of aquifers.

Other recurring comments raised by the Subcommittee that the AAC may wish to consider bringing to the Board of Supervisor's attention:

- Consideration of the current General Plan definition of a high capacity well at 1,000 gal/min. This definition is considered problematic technically by the AAC for numerous reasons, and is an arbitrary number.
  - Recommend that the definition take into consideration regional variations.
- What happens if a well "goes out?" Is there a process for expedited application review/permitting?

ACTION:

1. Bring the above recommendations to the full AAC for consideration.

2. Continue at Section 6, Assessments of Instream Flows at the next Subcommittee meeting.

V. Adjournment

The meeting was adjourned at 5:15 p.m.

EXHIBIT D

Peter M. Pyle PG. CHG.
27 San Francisco Blvd, San Anselmo, CA 94960

PGH Consulting Hydrogeology
415-456-3680

April 5, 2013

Mr. Kurt Gollnick Chairman
Monterey County Ag Advisory Committee
Special Ad Hoc Subcommittee/Well Ordinance

RE: Proposed well ordinance and methods for determining limitations on new high capacity wells.

Dear Mr. Gollnick,

I am a consulting hydrogeologist writing on behalf of a group of Salinas Valley landowners coordinated by Kevin Piearcy. I have worked on various aspects of Salinas Valley hydrology since the early 1990's when I was with Stetson Engineers, Inc. I have more than 30 years experience in hydrogeology, the last 20 years of which has involved extensive analysis of groundwater/surface water interactions and modeling. I have been certified as an expert in hydrogeology in court and water rights administrative hearings in California, Nevada, Arizona and Utah. I have reviewed the proposed changes to the County well ordinance, fish flow studies and related documents over the past few months.

This letter includes a brief summary of the technical issues we have found regarding the Tier I and Tier II analyses, and the classification of streams and other habitat areas of concern. I have researched these issues in the technical literature, methods employed in other States and reviewed the approach to them recommended by the U. S. Geological Survey. We are available to assist the County in developing more accurate, defensible methods for identifying new high capacity wells that may affect streams, and more effective methods for evaluating potential impacts of wells on streams and nearby wells and optimize management of resources.

The existing Tier I analytical methods used by MCWRA to limit the location or pumping rates of new high capacity wells are outdated and produce significant errors in results. There are many limitations when these simple methods are applied to large, complex aquifers with multiple wells pumping simultaneously, such as the in Salinas Valley. Analytical methods overestimate the amount of stream depletions caused by pumping from wells because they use simple formulas that assume ideal conditions. These ideal conditions include:

- the aquifer(s) intercepted by the well and that of the nearby stream bed are the same,
- there is no aquifer heterogeneity laterally or vertically, essentially assuming the valley filled with a uniform sand, and that all wells in a each subarea have the same properties,
- the water table is at or above that of that of the stream bed,
- the water table is flat (no regional gradient or other wells pumping),
- there are no other sources of recharge to the aquifer other than the stream, and no return flow from water use goes back to the aquifer or stream.

- That a significant number of new high capacity wells is expected and that they represent a threat to fish flows and habitat not previously accounted for by MCWRA through the lengthy planning and assessment process for the Salinas Valley Water Project (SVWP).
- That these new wells can be distinguished from pumping by existing wells during periods when minimum flows for fish migration and passage have been specified by NMFS.
- That the producing aquifer zone(s) used by a new wells is hydraulically connected to streams or critical habitat areas during periods that coincide with when the wells are being used (such as during the irrigation season).
- That the current approach to limiting large capacity wells is effective during periods when minimum flows or specific habitat areas could be affected and the new wells are being pumped.

The MCWRA may have conducted some analysis for fish flows using the SVIGSM model. Not all of these studies are readily available. MCWRA should present any details of these studies if they address any of the points listed above and that confirm their overall approach to management of resources.

In addition we make the following recommendations:

- Define sensitive streams, stream reaches or habitat areas of concern with supporting data and maps.
- If a Tier I screening must be used, it should account for well depth, aquifer heterogeneity (not just an estimated stream bed conductivity) using nearby well logs, and account for the groundwater gradient.
- Define replacement wells with respect to construction details such as depth, diameter, depth of grout seal, and whether the new well is allowed to pump at a rate equal to that of the well it replaced, the rate pumped before the old well was abandoned or some other benchmark,
- Better define the Tier II analysis with respect to the data required and how it will be evaluated.
- Consider the use of a numerical model, the SVIGSM if appropriate, to optimize water use and in-stream flow requirements based on currently accepted methods.

In conclusion, it is recommended that the County modify their approach to evaluating the effects of proposed new high capacity wells. The analytical method currently used is too outdated and inaccurate to employ as a basis for limiting the use of water by property owners. These property owners have paid assessments to the County over many years even though most of the groundwater in the Salinas Valley is does not occur as a result of management by the County.

Best Regards,

Peter M. Pyle PG, CHG

Cc: Kevin Piearcy, Nick Jacobs

EXHIBIT E

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY

Benny J. Young, Director
Carl P. Holm, AICP, Deputy Director
Michael A. Rodriguez, C.B.O., Chief Building Official
Michael Novo, AICP, Director of Planning
Robert K. Murdoch, P.E., Director of Public Works

168 W. Alisal Street, 2nd Floor
Salinas, CA 93901
http://www.co.monterey.ca.us/rma

MEMORANDUM

DATE: April 17, 2013

TO: Agricultural Advisory Committee

FROM: Carl Holm, AICP, Deputy Director Resource Management Agency

SUBJECT: **Well Ordinance – Subcommittee Recommendations**
Working Document Items 1-5

The County Resource Management Agency, in collaboration with the Environmental Health Bureau and the County Water Resources Agency, has been working on a new Well Ordinance and associated Administrative Manual for the past year or so. A draft ordinance and administrative manual were prepared for discussion last year but due to a number of issues that draft was set aside. We stepped back to identify and evaluate what we heard as the key issues and then drafted options for discussion and refinement. The Agricultural Advisory Committee (AAC) designated Ad Hoc Subcommittee has met twice on this topic:

- 2/11/13 Subcommittee Meeting. Conducted a round-table discussion on the "Working Document – Proposed Well Ordinance Analysis" which was prepared by staff and is included as **Exhibit A**. Minutes from this meeting are attached as **Exhibit B**.
- 4/8/13 Subcommittee Meeting. Reviewed the first six issues contained in the Working Document and formulated recommendations for the first five issues for consideration by the full AAC.

Following is a summary of the discussion, the Subcommittee's recommendation and staff comments.

1. **Limitations on New Domestic Wells.**
   Subcommittee Recommendation:
   No recommendation.

   Summary of Subcommittee Discussion:
   This issue pertains to domestic wells. The Subcommittee determined that the AAC should only focus on Ag wells and not put forth recommendations on requirements for domestic wells.

2. **Setbacks for New Ag Wells.**

Subcommittee Recommendations:

a. Require no setback from the property line for a new Ag well and an adjacent Ag zoned property.
b. Require a 20-foot setback from the property line for a new Ag well on the property when the adjacent lot is a non-Ag zoned lot of record.
c. Require no setback from a property line for a new well when the lot is adjacent to a roadway.
d. A well may be placed anywhere within an established well lot.
e. Setbacks should only apply to new Ag wells, not to replacement wells.

Summary of Subcommittee Discussion:

The Subcommittee appeared to be seeking a standard setback from property lines so that a new well would not require a well impact assessment. A setback of 20 feet from the property line to the new Ag well was determined to be appropriate.

There was agreement among subcommittee members that Ag wells should be exempt from setbacks for an adjacent Ag property (Working Document-Option b).

They recognized certain cases might warrant a reasonable setback from the property line of an adjacent non-Ag property if the well could have a significant impact to potential development on the adjacent property.

The Subcommittee did not support requiring a setback for a new Ag well from a road that may, in the future (but does not currently), contain infrastructure (i.e., a sewer line) that could pose a contamination issue. They indicated that addressing future contamination potential should be the responsibility of the developers or County related to the new development, consistent with the Ag buffer setback policy.

Staff Comments:

The primary purpose of requiring a setback is to address potential contamination between an Ag well and wastewater facilities. Locating a well near a property line could restrict or prohibit development on a neighboring lot (e.g.; septic system). Also, good planning requires us to consider that a County road may need to accommodate infrastructure in the future that would pose a potential contamination issue to wells located near the roadway. However, this would not apply to all County roads.

Staff discussed this issue further after the Subcommittee meeting. Recognizing both sides of the issue, staff suggests requiring a setback of **up to 50 feet** between a County road and a new Ag well **if determined to be necessary** by the Planning Director to accommodate future **public** infrastructure. The key points here are the setback: 1) can be less than 50 feet if conditions allow; 2) is presumed not necessary unless determined to be required; 3) only applies to public infrastructure; and 4) setbacks as discussed in this context do not exempt high capacity wells from the requirements of General Plan Policy PS-3.4.

3. **Wells in Consolidated Materials (Fractured Rock).**

Subcommittee Recommendation:

No recommendation.

Summary of Subcommittee Discussion:

There was discussion related to conditions where water can be extracted from formations above or below fractured rock that do not have the same characteristics as extracting water within hard/fractured rock formations.

Ag wells are not generally drilled to extract water from fractured rock material because the wells cannot produce the amount of water needed to support the Ag operation. Therefore, this issue is more related to domestic wells.

Staff Comments:

Staff informed the Subcommittee that if a well were perforated in a formation (constructed to extract water) other than hard/fractured rock, then regulations relative to hard/fractured rock would not apply. We will add clarifying language in the draft ordinance.

4. **High Capacity Wells.**

Subcommittee Recommendation:

The Subcommittee generally recommended Working Document-Option c.

They discussed when to require verification (pre-drilling and/or post drilling) and what to require. There was not a specific recommendation in this regard.

There was also discussion pertaining to the stated threshold of 1000gpm that is defined in the General Plan and how this threshold does not address regional characteristics.

Summary of Subcommittee Discussion:

Within the context of the adopted GP, the Subcommittee discussed a number of technical issues to determine when a proposed well would be considered High Capacity. Committee members recognized staff's recommendation to require a submittal containing documentation for wells that propose a pumping rate less than or equal to 1,000 gpm, but which have the potential to be high capacity based on construction design. The intent is to prove that proposed wells meeting these criteria would not be High Capacity Wells and therefore would be exempt from the well impact assessment requirements. In cases where an application states that the well is to be under 1,000 gpm, documentation needs to demonstrate that the proposed well characteristics and infrastructure (pump, casing etc) are consistent with the claim.

- *Pre-Drilling*. Generally applicants prepare a pump design plan that could be submitted during the pre-drilling phase based on what they intend to achieve with the well. MCWRA would then preliminarily verify that the design does not indicate intent to be a High Capacity Well.
- *Post-Drilling*. Two options were discussed related to what should be submitted post drilling to confirm that the capacity is under 1000 gpm: 1) submittal of "as built" plans, or 2) results of a pump test.

It was suggested that the new ordinance be clear that these requirements pertain to new wells and not to replacement wells. It was agreed that the submittal should be simple and straightforward and not require MCWRA to review or retain significant amounts of documentation.

Staff Comments:

The definition of a High Capacity Well is in the General Plan. Staff acknowledged the situation related to regional differences, but noted that the task is to implement the General Plan as it is currently adopted. Amending the General Plan is an option that the AAC could propose to the Board of Supervisors. If there is a desire to amend the GP, that should be a separate recommendation.

Regulations for High Capacity Wells do not prohibit the drilling of a well, rather they determine when/if an impact assessment is required. There is no limitation as to the amount of water being extracted by a well, but there may need to be an assessment of potential impacts from that extraction if the proposed well is determined to be a High Capacity Well. Based on information from the County's consultant, a proposed casing in excess of 12 inches can be an indicator (threshold) that the result could be a High Capacity Well.

Staff recommends that applicants proposing a well that is expected to produce less than or equal to 1,000 gpm with a production casing greater than 12 inches submit a pump design plan at some point before the pump has been installed (either pre-drilling or post-drilling). This would give the applicant discretion to decide if they want MCWRA to evaluate the proposed design prior to drilling. In addition, a pump test would be required after the pump has been installed in order to verify the pumping rate of the well. If a well is demonstrated to have been designed to produce more than 1,000 gpm, an impact assessment would be required at that point. If the well were determined to have potential impacts, mitigation would also be required (e.g. flow restrictors) by policy. Applications for a High Capacity Well would not require a pump design plan or pump test.

5. **Replacement Wells.**

Subcommittee Recommendation:

The Subcommittee generally determined that Option c would be the preferred option with the following modification to subsection c(2):

2) Similar application/impact. Increase efficiency in Ag operation but not increase ~~amount of extraction~~ impact.

Summary of Subcommittee Discussion:

The proposed modification is to clarify that the replacement well must not increase the "impact" as related to the original capacity. The Subcommittee discussed the concept of "replacement capacity" or "no increase in impact" for an entire property or area, instead of limiting the exemption to a single well. For example, if there is a well field consisting of several wells that are or were producing at a certain capacity they could be replaced with a single well producing at that same capacity, the new well could be considered a replacement well and, therefore not require an impact assessment. The Subcommittee also discussed wanting the ability to retain certain existing wells for back up or other incidental uses related to the ag operation that would not increase the existing extraction amount.

The Subcommittee recognizes staff's concern for protecting the aquifer from contamination and the need to destroy wells that could cause a risk.

Staff Comments:

All agreed that protecting the aquifer from contamination is the primary concern. Many old wells pose a real threat. However, there may be a feasible method of determining that an existing well is not in such poor condition as to pose a contamination risk, and therefore could be retained for back up or other incidental uses, but this would be an exception to the regulation (Working Document-options a and b).

Staff is concerned about making determinations based on prior historic well capacity or addressing well fields. While the clarifier of considering a well field would provide greater flexibility for the Ag community, staff takes the position that one Ag well can be replaced with a new Ag well but that generally an existing well must be destroyed in order to address potential contamination of the aquifer. Staff understands the Ag perspective and may consider a different replacement standard for domestic wells where the justification to retain an existing well for incidental use related to an Ag operation is not a factor. However, the important issue with defining a "replacement well" is that such a well is exempt from certain requirements, including the assessment of impact on neighboring wells, properties, or streams.

6. **Assessment of Effect on In-Stream Flows.**

The Subcommittee did not conclude their discussion of this issue; however, a letter from Peter Pyle dated April 5, 2013 (*Pyle letter*) was read at the meeting (**Exhibit C**). This *Pyle letter* called into question the methodology used by MCWRA Tier I and II analyses.

Staff Comments:

The Tier I approach MCWRA is using was developed as a low-cost, defensible analysis to assess the potential impact of a proposed well. The Tier I approach is very effective in determining when impact is not likely (i.e. it is conservative), and is a result of many of the assumptions which are listed in the Draft Administrative Well Manual that was previously distributed (but will be refined for future consideration) and cited as limitations in the *Pyle letter*. Professionally licensed MCWRA staff performing the assessment substitute site-specific parameters for regional ones, and refine assumptions of the Tier I approach through professional judgment based on geology and/or hydrogeology, when applicable data are available. By adopting this approach, the County has been able to minimize additional regulatory oversight and reduce the number of applications that are subjected to the more site-specific, time-consuming, and costly Tier II analysis.

As suggested in the *Pyle letter*, the Tier II approach is a more rigorous analysis than Tier I and it addresses some of the assumptions inherent to the equations that are being used by focusing specifically on one well site. The Tier II approach is intended as one of multiple means by which an applicant may address potential impact of a proposed well, if such potential is determined by a Tier I assessment.

An acceptable analysis using the Tier II approach is expected to be based on field work conducted at the specific well site. It is also expected that the resulting analysis will quantify any difference(s) from the Tier I approach and demonstrate that the proposed well will not exceed established thresholds for significant impact. MCWRA staff is available to discuss the requirements of the Tier II approach with any Qualified Professional who has been retained to conduct such work for an applicant.

Attachments:

A. Working Document – Proposed well Ordinance Analysis
B. AAC Subcommittee Minutes (2/11/13)
C. Comment Letters

EXHIBIT F

MONTEREY COUNTY
AGRICULTURAL ADVISORY COMMITTEE (AAC)
Agricultural Center Conference Room
1428 Abbott Street

April 25, 2013; 2:38 p.m. to 3:25 p.m.

MINUTES

Members	Present	Guests & Staff	Affiliation
Tom Am Rhein	✓	Carl Holm	RMA
David Costa	✓	Patricia Lopez	Public Works
Steve de Lorimier	✓	Eric Lauritzen	Agricultural Commissioner
Alexandra Eastman	-	Bob Roach	Agricultural Commissioner's Office
Kurt Gollnick	✓	Christina McGinnis	Agricultural Commissioner's Office
Bill Hammond	-	Mary Grace Perry	Office of the County Counsel
Bill Lipe	✓	Kathy Nielsen	Agricultural Commissioner's Office
Mike Manfre	✓		
Steve McIntyre	✓		
Manuel Morales	✓		
Steve Ray	✓		
Scott Violini	-		
Ridge Watson	✓		

I. Call to Order

The meeting was called to order at 2:35 p.m.
(Due to Item V being pulled from the agenda, the following items were renumbered.)

II. Approvals

The minutes of the March 28, 2013, were approved unanimously.

III. Public Comments (items not on the agenda)

No public comments.

IV. Agricultural Commissioner's Update

Eric Lauritzen, Agricultural Commissioner

- The Monterey Bay International Trade Association will be holding an event here on branding the Monterey Bay Region. Congressman Farr will be speaking on this topic; Kurt Gollnick will be participating as a panel member. We have been working on implementing a LBAM compliance agreement, primarily for strawberries to keep trade going with B.C., Canada. The Mexican requirements for LBAM hosts are also an ongoing issue of great concern. USDA is working with Mexico to revise quarantine requirements similar to Canada.
- The fumigant Chloropicrin is still registered and used widely. DPR will conduct a public workshop over the next couple of months. The mitigation plan is expected to be out in the fall or later. The workshop will be here and information will be provided when it is available.

- The California Department of Public Health will be releasing a report called Ag Pesticide Use Near Public Schools in California. The report takes the top 15 counties in terms of pounds of pesticide use and analyzes the use within ¼ mile of schools. The report claims not to make any connection with exposure or risk. Some stakeholders have obtained advance copies for comments; release is expected in May.
- I spoke with Alec Arago from Congressman Farr's office regarding the Salinas Airport Tower closure. A letter from the AAC is not necessary at this time. The Congressman is in talks with the FAA and working on a letter of agreement to allow the agricultural aircraft to operate. Closure is delayed until June 15, 2013.

V. Public Works Department

Patricia Lopez, Management Analyst III/Project Manager
The recommendation as stated in the agenda has been changed (see below).

This item first was presented at the January 2013 meeting of the AAC at which time Ms. Lopez was asked to return with information regarding the project conforming to the General Plan. On March 27, 2013, the Planning Commission found it in conformance.

- This project receives 98% of its funding from grants related only to bicycle and pedestrian use. Monterey County competes on a statewide and local basis for these grants.
- Every project does and will go through an environmental review period. Ms. Lopez advised the committee that, if requested, she would show the plan to the committee prior to it going into environmental review.
- There is a Bike and Pedestrian Committee that is under the purview of TAMC and is made up of people representing each city.

RECOMMENDATION: Consider a recommendation that the Board of Supervisors adopt the 2011 Transportation Agency for the Monterey County Bicycle and Pedestrian Master Plan, with the caveat that the AAC will be consulted prior to ~~environmental review commencing as implementation of the plan is conducted~~ **circulation of CEQA and/or NEPA documents** for individual projects with the potential to affect any agricultural land.

Concerns Presented:
- Farmers needing to cross the paths;
- Responsibility of mud cleanup on paths;
- Drift?
- Notification to growers/property owners of proposed projects.

Responses:
- Public Works meets with the growers/property owners and discusses concerns with the property owner;
- Property owners in the vicinity receive information as the project is being developed;
- County Counsel suggested that any motion made should include the requirement that property owners be notified of the project;
- RMA is researching implications to growers/property owners, taking into consideration the Right to Farm Ordinance;

MOTION: A motion was made by Steve Ray and seconded by Bill Lipe recommending that the Board of Supervisors adopt the 2011 Transportation Agency for the Monterey County Bicycle and Pedestrian Master Plan, with the caveat that the AAC will be consulted prior to circulation of CEQA and/or NEPA documents for individual projects with the potential to affect any agricultural land.

AYES: 10
NOES: 0
ABSENT: 3

VI. Resource Management Agency

Well Ordinance Recommendations
Carl Holm, Deputy Director

On April 8, 2013, the AAC Ad Hoc Subcommittee reviewed the proposed ordinance on an item-by-item basis, through item five of ten. The results of this meeting were captured in a memo to the AAC.

1. The subcommittee did not have a recommendation on domestic wells; only ag wells are being addressed;
2. Ag should not be affected by proposed developments; variance was not decided upon; subcommittee will continue to work on this and bring it back to the full committee;
3. Consolidated material/fractured rock is more of an issue from a domestic well standpoint. Septic setback from a well is the same for ag use as it is for domestic use;
4. High capacity wells – went with option C; it was suggested to add submission of well use reports at the end of the year for check and balance process to verify use of the well. Mr. Holm advised that if the definition of a high cap well were to be amended, that is essentially opening up the EIR again and would involve considerable discussion;
5. Replacement wells are not defined in the General Plan. Cheryl Sandoval described the proper ways to seal an abandoned well in various soil conditions;

RECOMMENDATION: Vote to accept, deny, or modify the initial suite of recommendations forwarded by the Ad Hoc Subcommittee and provide feedback to RMA staff.

MOTION: A motion was made by Steve McIntyre and seconded by Dave Costa to postpone a decision on the well ordinance until the subcommittee reviews the remainder of the items and reports back to the full committee.

AYES: 10
NOES: 0
ABSENT: 3

VII. Administrative Matters

None

VIII. Adjournment

There being no further business before the Committee, the meeting was adjourned at 4:20 p.m.

Respectfully submitted,

Monterey County Agricultural Commissioner's Office

EXHIBIT G

MONTEREY COUNTY
AGRICULTURAL ADVISORY COMMITTEE

Special Ad Hoc Subcommittee

2010 Monterey County General Plan Implementation
Agriculturally Focused and Agriculturally Related Ordinances and Programs

Agricultural Commissioner's Office
Agricultural Center Conference Room
1428 Abbott Street, Salinas, CA 93901
Phone: (831) 759-7325 ~ Fax: (831) 759-2268

Monday, May 13, 2013

MINUTES

Subcommittee Members

Kurt Gollnick	Bill Hammond	Bill Lipe

Staff and Guests

Marti Noel, RMA	Mary Perry, County Counsel	Christina McGinnis, Ag Comm
Howard Franklin, WRA	Carl Holm, RMA	Richard LeWarne, Environ. Hlth
Norm Groot, Farm Bureau	Cheryl Sandoval, Environ. Hlth	Kathy Nielsen, Ag Comm
Tony Lombardo	Roberta Haylock	Charlie Hossom
Bob Perkins	Kevin Piearcy, Industrial Pump	Mary Ann Hooker

I. Welcome & Introductions
The meeting was called to order at 3:08 p.m. by Chair Gollnick. Those present introduced themselves.

II. Public Comment (items not on the agenda)
There was no public comment.

III. Approve
The meeting minutes of April 8, 2013, were approved by consensus.

IV. Well Ordinance *(continued from April 8, 2013, meeting)*
Carl Holm, Deputy Director, Resource Management Agency
Overview of Well Ordinance Analysis prepared by County staff. Discussion and technical input on the "Issue Analysis" and "Options" related to agricultural wells.

Issue 6. Assessment of Effect on In-Stream Flows
Carl Holm of the RMA provided an overview of the item. Topics discussed included mitigation, assumptions, which waterways to apply the regulations to ("blue line" versus

steelhead habitat streams), and the benefits of developing an online tool to assist applicants. The Salinas, Pajaro and Carmel Rivers will be considered. The rivers that are in the Coastal Zone will not be subject to the regulations since the 2010 General Plan does not apply there. Options discussed included applying a "set" distance versus assessing different types of streams. Considerations included addressing the minimum potential flow for steelhead (no new wells can impact in-stream flows beyond 2cfs). Development of a threshold is the first step, but other parameters will also be considered. The depth of the well will not be the defining issue. The Water Resources Agency staff explained their two-tier approach. If the Tier one analysis shows a potential for impact, more site-specific analysis is required, or mitigation could be applied in lieu of higher-level analysis. However, if regional information shows there is no potential impact, no additional information would be required.

MOTION: A motion was made by Bill Hammond and seconded by Bill Lipe to recommend an assessment be required in all cases where the water body is identified as critical steelhead habitat.

AYES: 3
NOES: 0
ABSENT: 1 (Violini)

Issue 7. Well Influence Assessment

Carl Holm presented an overview. The primary issue is the assessment that would be required for all new wells [both ag and domestic] that could impact other domestic wells. WRA staff explained that they are currently using an analytical model to calculate zone of influence of proposed domestic and high capacity wells based on specific well specifications. This data is used to evaluate potential impacts to domestic wells within that zone.

The Subcommittee discussion focused only on ag wells. It was mentioned that many ag wells have a high usage but only for very short periods of time. There was also concern expressed over the 1000 GPM parameter that is currently in the General Plan Policy.

Statistics are needed from the growers to show well patterns and the number of days that the regulation would need to be administered. It was agreed that the issue should be brought back to the full committee for consideration. Every effort will be made to keep all information confidential. The topics that will be considered once the item is brought back include well influence, distance, and the five-foot threshold.

MOTION: A motion was made by Bill Lipe and seconded by Bill Hammond to accept Item A and the testing requirements to be discussed by the full committee.

AYES: 3
NOES: 0
ABSENT: 1 (Violini)

Issue 8. Water Quality Testing Protocols
This item was not discussed further since it applies exclusively to domestic wells and does not apply to agricultural wells.

Issue 9. Seawater-intruded Areas
Carl Holm provided an overview of the topic, stating that the County's Environmental Health Bureau does not issue well permits for wells located in areas designated as sea water intruded, with two exceptions.
The Subcommittee requested clarification to distinguish a monitoring well from a production well. A higher standard of construction would be required to address any new wells within seawater intrusion areas.

MOTION: A motion was made by Bill Hammond and seconded by Bill Lipe to accept options "a" and "d" to deal with section 9 in the sea water intruded areas. a) Apply regulations only within delineated boundary of "seawater-intruded areas." Periodically update the delineation of "Seawater-intruded Areas" based on data from the applicable water management agencies and d) If well is proposed in Seawater-intruded area within Zone 2C, then presume that there is no basis to prohibit the well based on the rebuttable presumption that the Salinas Valley Water Project is minimizing or avoiding expansion of seawater intrusion. Continuation of this presumption is subject to future studies showing that the SV Water project is working to minimize or avoid expansion of seawater intrusion.

AYES: 3
NOES: 0
ABSENT: 1 (Violini)

Issue 10. Archeological Study Requirements.
Carl Holm provided an overview of the topic, explaining that the definition of "disturbed area" is the primary issue. If a site has not been previously disturbed and is highly sensitive, a report would be required. The subcommittee discussed if new wells should be considered "new development". When a well includes grading or a pit there could be impact. Bill Hammond made and withdrew a motion to accept option a, iii.

MOTION: A motion was made by Bill Lipe and seconded by Bill Hammond that if an area is previously disturbed, no report would be required; if not previously disturbed and in a high sensitivity area, require a report only when a new well includes a pit or other grading. Drilling a well without a pit would be exempt and no report would be required in a previously disturbed area.

AYES: 3
NOES: 0
ABSENT: 1 (Violini)

ACTION:
Bring the above recommendations to the full AAC for consideration.

V. **Adjournment**
The meeting was adjourned at 5:17 p.m.

EXHIBIT H

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY

Benny J. Young, Director
Carl P. Holm, AICP, Deputy Director
Michael A. Rodriguez, C.B.O., Chief Building Official
Michael Novo, AICP, Director of Planning
Robert K. Murdoch, P.E., Director of Public Works

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MEMORANDUM

DATE: June 18, 2013

TO: Agricultural Advisory Committee

FROM: Carl Holm, AICP, Deputy Director Resource Management Agency

SUBJECT: **Well Ordinance – Subcommittee Recommendations Working Document**

The County Resource Management Agency, in collaboration with the Environmental Health Bureau and the County Water Resources Agency, has been working on a new Well Ordinance and associated Administrative Manual for the past year or so. The Agricultural Advisory Committee (AAC) designated Ad Hoc Subcommittee to work with staff on this assignment. Following is a summary of what has occurred to date:

- 2/11/13 Subcommittee Meeting. Conducted a round-table discussion on the "Working Document – Proposed Well Ordinance Analysis" which was prepared by staff and is included as **Exhibit A**. Minutes from this meeting are attached as **Exhibit B**.
- 4/8/13 Subcommittee Meeting. Reviewed the first six issues contained in the Working Document and formulated recommendations for the first five issues for consideration by the full AAC. Minutes from this meeting are attached as **Exhibit C.**
- 4/25/13 AAC Meeting. The recommendations on the first six issues were presented along with staff comments to the full AAC for discussion, however formal action was deferred until the AAC received all the recommendations from the Subcommittee.
- 5/13/13 Subcommittee Meeting. Reviewed the remaining issues contained in the Working Document and formulated recommendations for those issues for consideration by the full AAC. Minutes from this meeting are attached as **Exhibit D.**

Following is a summary of all discussion topics, the Subcommittee's recommendation and staff comments.

1. **Limitations on New Domestic Wells.**
   Recommendation:
   No recommendation.

   Committee Comments:
   This issue pertains to domestic wells. AAC recommendation is focused on Ag wells and does not intend to submit recommendations on requirements for domestic wells.

2. **Setbacks for New Ag Wells.**
   Recommendations:
   a. Require no setback from the property line between a new Ag well and another Ag zoned property if the well is on land owned by the same person.
   b. Require a 20-foot setback from the property line for a new Ag well on the property when the adjacent lot is a non-Ag zoned lot of record.
   c. Require no setback from a property line to the new well when the lot is adjacent to a roadway.
   d. A well may be placed anywhere within an established well lot.
   e. Setbacks should only apply to new Ag wells, not to replacement wells.

   Committee Comments:
   The subcommittee discussed a standard setback from property lines where a new well would not require a well impact assessment. A setback of 20 feet from the property line to the new Ag well was determined to be appropriate.
   Ag wells should be exempt from setbacks for an adjacent Ag property (Working Document-Option b).
   Certain cases might warrant a reasonable setback from the property line of a non-Ag property if the well setback has a significant impact to potential development.
   There is not support for requiring a setback for a new Ag well from a road that may, in the future (but does not currently), contain infrastructure (i.e., a sewer line) that could pose a contamination issue. Addressing future contamination potential should be the responsibility of the developers or County related to the new development, consistent with the Ag buffer setback policy.
   AAC suggested allowing an exception under certain circumstances (e.g. variance), but did not have ideas for implementation. Referred to subcommittee to develop criteria, appropriate authority, and noticing standards and make a recommendation to the full Committee.

   Staff Comments:
   The primary purpose of requiring a setback is to address potential contamination between an Ag well and wastewater facilities. Locating a well near a property line could restrict or prohibit development on a neighboring lot (e.g.; septic system). Also, good planning requires us to consider that a County road may need to accommodate infrastructure in the future that would pose a potential contamination issue to wells located near the roadway. However, this would not apply to all County roads.
   Staff discussed this further after the Subcommittee meeting. Recognizing both sides of this issue, staff suggests requiring a setback of **up to 50 feet** between a County road and a new Ag well **if determined to be necessary** by the Planning Director to accommodate future

public infrastructure. The key points here are the setback: 1) can be less than 50 feet if conditions allow; 2) is presumed not necessary unless determined to be required; 3) only applies to public infrastructure; and 4) setbacks as discussed in this context do not exempt high capacity wells from the requirements of General Plan Policy PS-3.4.

3. **Wells in Consolidated Materials (Fractured Rock).**
Recommendation:
No recommendation.

Committee Comments:
There was discussion related to conditions where water can be extracted from formations above or below fractured rock that do not have the same characteristics as extracting water within hard/fractured rock formations.
Ag wells are not generally drilled to extract water from fractured rock material because the wells cannot produce the amount of water needed to support the Ag operation. Therefore, this issue is more related to domestic wells.

Staff Comments:
If a well were perforated in a formation (constructed to extract water) other than hard/fractured rock, then regulations relative to hard/fractured rock would not apply. Staff will add clarifying language in the draft ordinance.

4. **High Capacity Wells.**
Recommendation:
Recommend Working Document-Option c.
Include submission of well use reports at the end of the year for check and balance process to verify use of the well.

Committee Comments:
Subcommittee discussed when to require verification (pre-drilling and/or post drilling) and what to require. There was not a specific recommendation in this regard. There was also discussion pertaining to the stated threshold of 1000gpm that is defined in the General Plan and how this threshold does not address regional characteristics.
Within the context of the adopted GP, AAC members discussed a number of technical issues to determine when a proposed well would be considered High Capacity. Committee members recognized staff's recommendation to require a submittal containing documentation for wells that propose a pumping rate less than or equal to 1,000 gpm, but which have the potential to be high capacity based on construction design. The intent is to prove that proposed wells meeting these criteria would not be high capacity wells and therefore would be exempt from the well impact assessment requirements. In cases where an application states that the well is to be under 1,000 gpm, documentation needs to demonstrate that the proposed well characteristics and infrastructure (pump, casing etc) are consistent with the claim.

- *Pre-Drilling.* Generally applicants prepare a pump design plan that could be submitted during the pre-drilling phase based on what they intend to achieve with the well.

MCWRA would then preliminarily verify that the design does not indicate intent to be a high capacity well.

- *Post-Drilling*. Two options were discussed related to what should be submitted post drilling to confirm that the capacity is under 1000 gpm: 1) submittal of "as built" plans, or 2) results of a pump test.

It was suggested that the new ordinance be clear that these requirements pertain to new wells and not to replacement wells. It was agreed that the submittal should be simple and straightforward and not require MCWRA to review or retain significant amounts of documentation.

Staff Comments:
The definition of a High Capacity Well is in the General Plan. Staff acknowledged the situation but noted that the task is to implement the General Plan as it is currently adopted. Amending the General Plan is an option that the AAC could propose to the Board of Supervisors. If there is a desire to amend the GP, that should be a separate recommendation. Regulations for High Capacity Wells do not prohibit the drilling of a well, rather they determine when/if an impact assessment is required. There is no limitation as to the amount of water being extracted by a well, but there may need to be an assessment of potential impacts from that extraction if the proposed well is determined to be a High Capacity Well. Based on information from the County's consultant, a proposed casing in excess of 12 inches can be an indicator (threshold) that the result could be a High Capacity Well.
Staff recommends that applicants proposing a well that is expected to produce less than or equal to 1,000 gpm with a production casing greater than 12 inches submit a pump design plan at some point before the pump has been installed (either pre-drilling or post-drilling). This would give the applicant discretion to decide if they want MCWRA to evaluate the proposed design prior to drilling. In addition, a pump test would be required after the pump has been installed in order to verify the pumping rate of the well. If a well is demonstrated to have been designed to produce more than 1,000 gpm, an impact assessment would be required at that point. If the well were determined to have potential impacts, mitigation would also be required (e.g. flow restrictors) by policy. Applications for a High Capacity Well would not require a pump design plan or pump test.

5. **Replacement Wells**.
Recommendation:
Option c with the following modification to subsection c(2):

2) Similar application/impact. Increase efficiency in Ag operation but not increase ~~amount of extraction~~ impact.

Committee Comments:
The proposed modification is to clarify that the replacement well must not increase the "impact" as related to the original capacity. The concept should be "replacement capacity" or "no increase in impact" for an entire property or area, instead of limiting the exemption to a single well. For example, if there is a well field consisting of several wells that are or were producing at a certain capacity they can be replaced with a single well producing at that same capacity and the new well could be considered a replacement well and therefore not require an impact assessment. Recognizing staff's concern for protecting the aquifer from

contamination and the need to destroy wells that could cause a risk, there should be the ability to retain certain existing wells for back up or other uses that would not increase the existing extraction amount. An ordinance should encourage compact/consolidated operations that increase capacity for energy efficiency.

Staff Comments:
All agree that protecting the aquifer from contamination is a primary concern. Many old wells pose a real threat. There may be a feasible method of determining that an existing well is not in such poor condition as to pose a contamination risk, and therefore could be retained for back up or other incidental uses, but this would be an exception to the regulation (Working Document-options a and b).
Staff is concerned about making determinations based on prior historic well capacity or addressing well fields. While the clarifier of considering a well field would provide greater flexibility for the Ag community, staff takes the position that one Ag well can be replaced with a new Ag well but that generally an existing well must be destroyed in order to address potential contamination of the aquifer. Staff understands the Ag perspective and may consider a different replacement standard for domestic wells where the justification to retain an existing well for incidental use related to an Ag operation is not a factor. However, the important issue with defining a "replacement well" is that such a well is exempt from certain requirements, including the assessment of impact on neighboring wells, properties, or streams.

6. Assessment of Effect on In-Stream Flows

Sub Committee Recommendation: Require an assessment for High Capacity Wells in all cases where the water body is identified as critical Steelhead habitat.

Discussion Summary: GP Policy PS-3.4 is worded to assess effects on "flows necessary to support riparian vegetation, wetlands, fish and other aquatic wildlife..." However, the EIR discussion leading to the mitigation which provided the basis for this policy language was focused on impacts to Steelhead, and there are specific water bodies that support steelhead migration. As such, staff determined that:
1) Assessment for High Capacity wells under PS-3.4 is most relevant to impacts of water levels in water bodies that support Steelhead habitat as defined by NOAA's National Marine Fisheries Service (NMFS).
2) Effects to support riparian vegetation, wetlands, and aquatic wildlife in general would be best addressed in a Stream Set Back Ordinance per Policy OS-5.22.

WRA staff presented information about a 2-tier assessment process they use and the benefits to the applicants. Tier One uses a regional model that can quickly determine if a proposed well would likely have any impact based on known data (more site specific data = more refined result). If no impact is determined, the applicant does not have to do anything further. If there is a potential impact identified, then the applicant needs to hire a consultant to provide a more detailed report using a Tier Two model. Staff intends to put a tool on the WRA website that will allow an applicant to perform a simple preliminary analysis themselves before they apply.

The model determines if the well could reduce the water level in a manner that could affect habitat. An assessment does not prohibit the drilling of a well or how much water can be extracted. The County's consultant team, working with County staff, established a threshold of 2 cfs when there could be an impact to flows affecting Steelhead. If an impact is determined to be possible, then staff identifies options for mitigation that the applicant can consider. This could include relocating the well or changing the well design.

Between GP adoption and January 2013, three of 60 applications had issues that they were required to mitigate or replace a well. Staff implementation of the process has evolved as we have been working through these issues which have resulted in more refined determinations.

An issue raised by the Subcommittee is that the assessment model used does not take into account actual water level at any point in time or season. Actual impact can depend on the time of year when the demand occurs (e.g. vineyards spray for frost control in winter, which is the wet season).

Subsequent Information:
The Water Resources Agency (WRA) has done additional research and has confirmed that review of proposed new domestic and high capacity wells must include assessment of impacts to in-stream flows, for the purpose of minimizing impacts to natural resources including migration potential for steelhead. The WRA will apply assessment of impacts to in-stream flows to *designated critical habitat*, as defined and identified by the National Marine Fisheries Service (NMFS) (South-Central California Steelhead Recovery Plan, Public Review Draft, Southwest Regional Office, NMFS, September, 2012).
As required by the Endangered Species Act, NMFS designated critical habitat for steelhead in 2005, including hundreds of miles of creeks and streams within Monterey County. The attached maps highlight all such stream segments by watershed. These maps were derived from Federal Register/Vol. 70, No. 170, Friday, September 2, 2005, pages 52575-52579.

7. **Well Influence Assessment**
Sub Committee Recommendation:
"Immediate Vicinity" – define as a High Capacity Well having influence on a *domestic* well based on well/pump design, located in alluvial material.

Testing Standards - Develop specific standards based on discussion/input from full AAC accounting for actual use versus theoretical (e.g. pumping cycles, recharge, draw down).

Discussion Summary: This policy intends to mitigate where High Capacity Wells may have on existing domestic wells because of the potential health impacts. WRA staff explained the threshold currently being used, to determine if mitigation is required, is if a High Capacity Well is expected to result in greater than five (5) feet of drawdown at an existing *domestic* well within an eight hour cycle. Staff is open to refining this threshold to take into account additional factors. Further, it was determined that this should only apply to domestic wells in alluvial material, not other Ag wells. The Sub Committee felt that input from the full AAC would provide a more comprehensive look at the options.

8. **Water Quality Testing Protocols**
Sub Committee Recommendation:
This issue was determined to only apply to domestic wells and therefore the Subcommittee has no recommendation.

9. **Seawater-intruded areas**
Sub Committee Recommendation:
Apply regulations only within delineated boundary of "Seawater Intruded Areas" as mapped by the WRA and periodically updated.

If an Ag well is located in the Seawater Intruded Area of Zone 2C then it is presumed that the Salinas Valley Water Project will mitigate impacts and subject well should not be prohibited.

Regulations apply only to production wells, not monitoring wells.

Discussion: WRA staff indicated that data related to seawater intrusion was collected annually and that the mapping is updated every two years. The Subcommittee indicated that the boundaries on the maps should be used to apply the regulations and not include any fringe areas. Pursuant to GP Policy PS-3.1, continuation of the presumption for water in Zone 2C is subject to future studies showing the Salinas Valley Water Project is successful in minimizing or avoiding expansion of seawater intrusion.

10. **Archeological Study Requirements**
Sub Committee Recommendation:
Require an archaeological report in High Sensitivity Areas for wells if it includes grading (e.g. pit) and is in an area that has not been previously disturbed.

Drilling a well, without grading, is exempt from report requirements in all areas.

Discussion: General Plan policies require archaeological reports to be prepared for "new development" in High and Moderate Sensitivity Areas. The question is if drilling a well should be considered "new development." Simply drilling a well would have potential impact limited to the area where the auger drills, but it is not possible to ascertain if resources are affected because the spoils are finely ground. The only way to be sure to avoid remains would be to dig down to a certain level below where remains are typically found, which creates a greater amount of disturbance (impact). Therefore, it was determined that well should not be considered "new development" unless there is grading or a pit associated with them. Ag fields should be considered to be previously disturbed; however, range land would generally not be considered previously disturbed.

Attachments:
A. Working Document – Proposed well Ordinance Analysis
B. AAC Subcommittee Minutes (2/11/13)
C. AAC Subcommittee Minutes (4/8/13)
D. AAC Subcommittee Minutes (5/13/13)
E. Critical Habitat Maps

EXHIBIT I

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY

Benny J. Young, Director
Carl P. Holm, AICP, Deputy Director
Michael A. Rodriguez, C.B.O., Chief Building Official
Michael Novo, AICP, Director of Planning
Robert K. Murdoch, P.E., Director of Public Works

168 W. Alisal Street, 2nd Floor
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MEMORANDUM

DATE: July 3, 2013

TO: Refinement Committee

FROM: Carl Holm, AICP, Deputy Director Resource Management Agency

SUBJECT: **Well Ordinance – AAC Recommendations**

The Agricultural Advisory Committee (AAC) designated Ad Hoc Subcommittee to work with staff on this assignment. Staff presented a "Working Document" with options to consider as a basis for these recommendations. This memorandum represents a summary of AAC recommendations on all discussion topics. Staff has also included comments based on notes we developed through this process.

Staff is tasked to implement the General Plan as it is currently adopted. Implementation has evolved since the GP was adopted in October 2010 based on real applications, but remaining within what staff believes to be the intent of the policy. While staff separated issues to help define the discussion, it is important to keep all of the pieces in mind when considering policy implementation.

1. **Limitations on New Domestic Wells.**
   AAC Recommendation:
   No recommendation.

   Discussion Summary:
   This issue pertains to domestic wells. The AAC recommendations focus on Ag wells, thus no recommendations on requirements for domestic wells were discussed.

2. **Setbacks for New Ag Wells.**
   AAC Recommendations:
   a. Require no setback from the property line between a new Ag well and another Ag zoned property if the well is on land owned by the same person.

b. Require a 20-foot setback from the property line for a new Ag well on the property when the adjacent lot is a non-Ag zoned lot of record.
c. Require no setback from a property line to the new well when the lot is adjacent to a roadway unless there is a defined easement or an approved development project (intent).
d. A well may be placed anywhere within an established well lot.
e. Setbacks should only apply to new Ag wells, not to replacement wells.

Discussion Summary:
The subcommittee discussed a standard setback from property lines where a new well would not require a well impact assessment. A setback of 20 feet from the property line to the new Ag well was determined to be appropriate.
Ag wells should be exempt from setbacks for an adjacent Ag property (Working Document-Option b).
Certain cases might warrant a reasonable setback from the property line of a non-Ag property if the well setback has a significant impact to potential development.
There is not support for requiring a setback for a new Ag well from a road that may, in the future (but does not currently), contain infrastructure (i.e., a sewer line) that could pose a contamination issue. Addressing future contamination potential should be the responsibility of the developers or County related to the new development, consistent with the Ag buffer setback policy.
AAC suggested allowing an exception under certain circumstances (e.g. variance), but did not have ideas for implementation. Referred to subcommittee to develop criteria, appropriate authority, and noticing standards and make a recommendation to the full Committee.
Staff noted that the primary purpose of requiring a setback is to address potential contamination between an Ag well and wastewater facilities. Locating a well near a property line could restrict or prohibit development on a neighboring lot (e.g.; septic system). Also, good planning requires us to consider that a County road may need to accommodate infrastructure in the future that would pose a potential contamination issue to wells located near the roadway. However, this would not apply to all County roads.
Staff discussed this further after the Subcommittee meeting. Recognizing both sides of this issue, staff suggested requiring a setback of **up to 50 feet** between a County road and a new Ag well **if determined to be necessary** by the Planning Director to accommodate future **public** infrastructure. The key points here are the setback: 1) can be less than 50 feet if conditions allow; 2) is presumed not necessary unless determined to be required; 3) only applies to public infrastructure; and 4) setbacks as discussed in this context do not exempt high capacity wells from the requirements of General Plan Policy PS-3.4.

3. **Wells in Consolidated Materials (Fractured Rock).**
AAC Recommendation:
No recommendation.

Discussion Summary:
There was discussion related to conditions where water can be extracted from formations above or below fractured rock that do not have the same characteristics as extracting water within hard/fractured rock formations.

Ag wells are not generally drilled to extract water from fractured rock material because the wells cannot produce the amount of water needed to support the Ag operation. Therefore, this issue is more related to domestic wells.
Staff agreed to add clarifying language in the draft ordinance that: if a well were perforated in a formation (constructed to extract water) other than hard/fractured rock, then regulations relative to hard/fractured rock would not apply.

4. **High Capacity Wells.**
AAC Recommendation:
Amend the General Plan to redefine high capacity wells.

Until GP (or if its not) amended, include submission of well use reports at the end of the year for check and balance process to verify use of the well.

Discussion Summary:
The Committee discussed when to require verification (pre-drilling and/or post drilling) and what to require. There was not a specific recommendation in this regard. There was also discussion pertaining to the stated threshold of 1000gpm that is defined in the General Plan. Monterey County is not a "one size fits all" and the policy (definition) should better reflect regional characteristics. For areas like North County and Carmel Valley, 1,000 gpm could be adequate, but to achieve this capacity in the Salinas Valley would be disappointing. In addition, a well using groundwater should not be linked to a policy protecting surface water. A definition with a threshold for high capacity wells needs to be science-based.
Within the context of the adopted GP, as adopted, AAC members discussed a number of technical issues to determine when a proposed well would be considered High Capacity. Committee members recognized staff's recommendation to require a submittal containing documentation for wells that propose a pumping rate less than or equal to 1,000 gpm, but which have the potential to be high capacity based on construction design. The intent is to prove that proposed wells meeting these criteria would not be high capacity wells and therefore would be exempt from the well impact assessment requirements. In cases where an application states that the well is to be under 1,000 gpm, documentation needs to demonstrate that the proposed well characteristics and infrastructure (pump, casing etc) are consistent with the claim.

- *Pre-Drilling.* Generally applicants prepare a pump design plan that could be submitted during the pre-drilling phase based on what they intend to achieve with the well. MCWRA would then preliminarily verify that the design does not indicate intent to be a high capacity well.
- *Post-Drilling.* Two options were discussed related to what should be submitted post drilling to confirm that the capacity is under 1000 gpm: 1) submittal of "as built" plans, or 2) results of a pump test.

It was suggested that the new ordinance be clear that these requirements pertain to new wells and not to replacement wells. It was agreed that the submittal should be simple and straightforward and not require MCWRA to review or retain significant amounts of documentation.
Staff noted that a definition of a High Capacity Well is in the General Plan Glossary. Other factors that relate to this issue include replacement wells and assessments of in-stream flows.

Regulations for High Capacity Wells do not prohibit the drilling of a well, rather they determine when/if an impact assessment is required. There is no limitation as to the amount of water being extracted by a well, but there may need to be an assessment of potential impacts from that extraction if the proposed well is determined to be a High Capacity Well. The primary issue raised by agriculture seems to be when mitigation is triggered. As drafted, one farmer could drill three wells producing 900 gpm along the Salinas River without triggering the criteria while another farmer could drill one well producing 2,700 gpm that may require assessment leading to mitigation.
Based on information from the County's consultant, a proposed casing in excess of 12 inches can be an indicator (threshold) that the result could be a High Capacity Well. Within the parameter of the adopted General Plan, staff recommends that applicants proposing a well that is expected to produce less than or equal to 1,000 gpm with a production casing greater than 12 inches submit a pump design plan at some point before the pump has been installed (either pre-drilling or post-drilling). This would give the applicant discretion to decide if they want MCWRA to evaluate the proposed design prior to drilling. In addition, a pump test would be required after the pump has been installed in order to verify the pumping rate of the well. If a well is demonstrated to have been designed to produce more than 1,000 gpm, an impact assessment would be required at that point. If the well were determined to have potential impacts, mitigation would also be required (e.g. flow restrictors) by policy. Applications for a High Capacity Well would not require a pump design plan or pump test.

5. **Replacement Wells.**

AAC Recommendation:

Option c with modification to subsection c(2) as follows:

c. Establish criteria as to what wells may be considered as replacement:
    1) Water Source. Replacement well must be located:
        i. on the same parcel, or
        ii. in the same geographic area (water basin).
    2) Similar application/impact. Increase efficiency in Ag operation but not increase impact.
    3) Differentiate between Ag and domestic wells as to what constitutes replacement.

Discussion Summary:

The proposed modification is to clarify that the replacement well must not increase the "impact" as related to the original capacity. **The concept should be "replacement capacity" or "no increase in impact" for an entire property or area, instead of limiting the exemption to a single well.** For example, if there is a well field consisting of several wells that are or were producing at a certain capacity they can be replaced with a single well producing at that same capacity and the new well could be considered a replacement well and therefore not require an impact assessment.
Recognizing staff's concern for protecting the aquifer from contamination and the need to destroy wells that could cause a risk, there should be the ability to retain certain existing wells for back up or other uses that would not increase the existing extraction amount. An ordinance should encourage compact/consolidated operations that increase capacity for energy efficiency and do not affect food safety.

All appear to agree that protecting the aquifer from contamination is a primary concern. Many old wells pose a real threat. There may be a feasible method of determining that an existing well is not in such poor condition as to pose a contamination risk, and therefore could be retained for back up or other incidental uses, but this would be an exception to the regulation (*Working Document-options a and b*).
Staff is concerned about making determinations based on prior historic well capacity or addressing well fields. While the clarifier of considering a well field would provide greater flexibility for the Ag community, staff takes the position that one Ag well can be replaced with a new Ag well but that generally an existing well must be destroyed in order to address potential contamination of the aquifer. Staff understands the Ag perspective and may consider a different replacement standard for domestic wells where the justification to retain an existing well for incidental use related to an Ag operation is not a factor. However, the important issue with defining a "replacement well" is that such a well is exempt from certain requirements, including the assessment of impact on neighboring wells, properties, or streams.

6. Assessment of Effect on In-Stream Flows

AAC Recommendation:
Require an assessment for High Capacity Wells in all cases where the water body is identified as critical Steelhead habitat. Adjust and refine the scientific methodology to use the most up-to-date science available (modeling).

Discussion Summary:
GP Policy PS-3.4 is worded to assess effects on "flows necessary to support riparian vegetation, wetlands, fish and other aquatic wildlife…" However, the EIR discussion leading to the mitigation which provided the basis for this policy language was focused on impacts to Steelhead, and there are specific water bodies that support steelhead migration. As such, staff determined that:

1) Assessment for High Capacity wells under PS-3.4 is most relevant to impacts of water levels in water bodies that support Steelhead habitat as defined by NOAA's National Marine Fisheries Service (NMFS).
2) Effects to support riparian vegetation, wetlands, and aquatic wildlife in general would be best addressed in a Stream Set Back Ordinance per Policy OS-5.22.

WRA staff presented information about a 2-tier assessment process they use and the benefits to the applicants. Tier One uses a regional model that can quickly determine if a proposed well would likely have any impact based on known data (more site specific data = more refined result). If no impact is determined, the applicant does not have to do anything further. If there is a potential impact identified, then the applicant needs to hire a consultant to provide a more detailed report using a Tier Two model. Staff intends to put a tool on the WRA website that will allow an applicant to perform a simple preliminary analysis themselves before they apply.
The model determines if the well could reduce the water level in a manner that could affect habitat. An assessment does not prohibit the drilling of a well or how much water can be extracted. The County's consultant team, working with County staff, established a threshold of 2 cfs when there could be an impact to flows affecting Steelhead. If an impact is

determined to be possible, then staff identifies options for mitigation that the applicant can consider. This could include relocating the well or changing the well design.
Between GP adoption and June 2013, staff has processed 117 well applications. A total of 17 applications had issues that they were required to mitigate or replace a well. Three applications have unresolved issues outstanding. Staff implementation of the process has evolved as we have been working through these issues which have resulted in more refined determinations.
An issue raised by AAC is that the assessment model used does not take into account actual water level at any point in time or season. Actual impact can depend on the time of year when the demand occurs (e.g. vineyards spray for frost control in winter, which is the wet season where there generally would not be an impact on water levels). The AAC requests to that the scientific methodology reflect the most up-to-date available science.
Based on our research, staff determined that review of proposed new domestic and high capacity wells must include assessment of impacts to in-stream flows, for the purpose of minimizing impacts to natural resources including migration potential for steelhead. We intend to apply assessment of impacts to in-stream flows to *designated critical habitat*, as defined and identified by the National Marine Fisheries Service (NMFS) (South-Central California Steelhead Recovery Plan, Public Review Draft, Southwest Regional Office, NMFS, September, 2012). As required by the Endangered Species Act, NMFS designated critical habitat for steelhead in 2005, including hundreds of miles of creeks and streams within Monterey County. Maps provided by Monterey County Water Resources Agency (MCWRA) highlight all such stream segments by watershed. These maps were derived from Federal Register/Vol. 70, No. 170, Friday, September 2, 2005, pages 52575-52579.
Staff finds that implementing the policy as noted herein could eliminate the need to amend the definition of a High Capacity well, and still meets the intent of the GP policy.

7. **Well Influence Assessment**
   AAC Recommendation:
   "Immediate Vicinity" – define as a High Capacity Well having influence on a *domestic* well based on well/pump design, located in alluvial material.

   Testing Standards - Develop specific standards [as part of drafting the ordinance] based on discussion/input from full AAC accounting for actual use versus theoretical (e.g. pumping cycles, recharge, draw down).

   Discussion Summary:
   This policy intends to mitigate where High Capacity Wells may have potential health impacts on existing domestic wells. WRA staff explained the threshold currently being used, to determine if mitigation is required, is if a High Capacity Well is expected to result in greater than five (5) feet of drawdown at an existing *domestic* well within an eight hour cycle. Staff is open to refining this threshold to take into account additional factors. Further, it was determined that this should only apply to domestic wells in alluvial material, not other Ag wells.

8. **Water Quality Testing Protocols**
   AAC Recommendation:

This issue was determined to only apply to domestic wells and therefore the Subcommittee has no recommendation.

9. **Seawater-intruded areas**

AAC Recommendation:

Apply regulations only within delineated boundary of "Seawater Intruded Areas" as mapped by the WRA and periodically updated.

If an Ag well is located in the Seawater Intruded Area of Zone 2C then it is presumed that the Salinas Valley Water Project will mitigate impacts and the subject well should not be prohibited.

Regulations apply only to production wells, not monitoring wells.

Discussion Summary:

WRA staff indicated that data related to seawater intrusion was collected annually and that the mapping is updated every two years. The Subcommittee indicated that the boundaries on the maps should be used to apply the regulations and not include any fringe areas. Pursuant to GP Policy PS-3.1, continuation of the presumption for water in Zone 2C is subject to future studies showing the Salinas Valley Water Project is successful in minimizing or avoiding expansion of seawater intrusion.

10. **Archeological Study Requirements**

AAC Recommendation:

Require an archaeological report in High Sensitivity Areas for wells if it includes grading (e.g. pit) and is in an area that has not been previously disturbed.

Drilling a well, without grading, is exempt from report requirements in all areas.

Discussion Summary:

General Plan policies require archaeological reports to be prepared for "new development" in High and Moderate Sensitivity Areas. The question is if drilling a well should be considered "new development." Simply drilling a well would have potential impact limited to the area where the auger drills, but it is not possible to ascertain if resources are affected because the spoils are finely ground. The only way to be sure to avoid remains would be to dig down to a certain level below where remains are typically found, which creates a greater amount of disturbance (impact). Therefore, it was determined that wells should not be considered "new development" unless there is grading or a pit associated with them. Ag fields should be considered to be previously disturbed; however, range land would generally not be considered previously disturbed.

EXHIBIT J

MEMORANDUM

TO: Monterey County Planning Commission

FROM: Refinement Group[1] (CHISPA, Monterey County Association of Realtors, Monterey Peninsula Taxpayers Association, Monterey/Santa Cruz Counties Building and Construction Trades Council, Monterey County Farm Bureau, Salinas Valley Water Coalition, Independent Growers Association, Center for Community Advocacy, Central Coast Builders Association, Coast Property Owners Association, Salinas Valley Chamber of Commerce, Monterey Peninsula Chamber of Commerce, Monterey County Hospitality Association, Grower-Shipper Association)

RE: Well Ordinance, Draft for Planning Commission Workshop of August 28, 2013

Date: August 16, 2013

Overall Comment:
As recommended by the Planning staff, the draft well ordinance should not apply "county-wide" because the 2010 General Plan expressly limits its application to inland areas only.

1. Limitations on New Domestic Wells

Refinement Group recommended option, Option c:

c. Allow wells on lots less than 2.5 acres if it meets performance based criteria such as:
   1) Setbacks. See II below.
   2) Fractured Rock Geology. See Issue #3 (Fractured Rock) below.
   3) Well Replacement Sites. There must be adequate initial and future sites established.
   4) Water Availability:
      i. There is no water system
      ii. A water system is unable to provide water service

Rationale: This option allows for flexibility and site-specific evaluation based on performance-based criteria.

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[1] The Refinement Group comprises representatives from diverse organizations who had previously organized to review and comment on the General Plan Update and now have re-assembled to participate in the County process for developing the ordinances to implement the General Plan. The Refinement Group supports a pro-active, public participation process in order to resolve issues upfront rather than in a battle at the end.

2. Setbacks for new Ag wells

Refinement Group recommended option: Consistent with AAC recommendations below.

AAC Recommendations:

a. Require no setback from the property line between a new Ag well and another Ag zoned property if the well is on land owned by the same person.

b. Require a 20-foot setback from the property line for a new Ag well on the property when the adjacent lot is a non-Ag zoned lot of record, or is on an Ag-zoned property owned by a different land owner.

c. Require no setback from a property line to the new well when the lot is adjacent to a roadway unless there is a defined easement or an approved development project (intent).

d. A well may be placed anywhere within an established well lot.

e. Setbacks should only apply to new Ag wells, not to replacement wells.

3. Wells in Consolidated Materials (Fractured Rock)

Refinement Group recommended option, Option a:

a. Allow new wells based on outcome-based performance standards (e.g.; 50% permeable area post-development, Alternative OWTS (i.e. enhanced treatment) where soil < 20', enhance recharge of groundwater with a rainwater recharge system, higher production capability, require two well sites, etc.)

Rationale: This option allows for flexibility and site-specific evaluation based on outcome-based performance standard.

4. High Capacity Wells

Refinement Group recommended newly developed option:

Develop separate standards for each basin based on the basin's sustainable yield. In some basins, the aquifer can maintain safe yields despite increased groundwater pumping. In others, recharge and recovery must be closely monitored.

5. Replacement Wells

Refinement Group recommended option: Consistent with AAC recommendations below.

AAC Recommendations:

Option c with modification to subsection c(3) as follows:

c. Establish criteria as to what wells may be considered as replacement:

1) Water Source. Replacement well must be located:

i. on the same parcel, or

ii. in the same geographic area (water basin).

2) Similar application/impact. Increase efficiency in Ag operation but not increase impact.
3) Differentiate between Ag and domestic wells as to what constitutes replacement.

6. Assessment of Effect on In-stream Flows

Refinement Group recommended option: Consistent with AAC recommendations below.

AAC Recommendations:
Require an assessment for High Capacity Wells in all cases where the water body is identified as critical Steelhead habitat. Periodically evaluate and use the most up-to-date scientific analysis methodologies applicable.

7. Well Influence Assessment

Refinement Group option, modified Option b, under Testing Requirements:

b. Develop standards – Develop separate standards for each basin based on the basin's sustainable yield. In some basins, the aquifer can maintain safe yields despite increased groundwater pumping. In other basins, recharge and recovery must be closely monitored to ensure that one well will not impact another nearby well.

8. Water Quality Testing Protocols

Refinement Group recommended option, Option a.ii & iii:

a. Maintain existing process and testing protocols for domestic wells only
ii. If results exceed any Maximum Contaminant Level (MCL) or approaching the MCL (e.g. 80% of MCL) for Subdivisions, four quarters of testing may be required.
iii. Treatment is an option for proposed water systems that are to be 15 connections or greater with adequate TMF and individual domestic wells on a single lot of record.

Rationale: For subdivisions, an applicant should be allowed to test until he/she can demonstrate four consecutive quarters of sampling results that meet the water quality standards. Developers should be allowed to propose treatment for water systems of 15 connections or greater.

9. Seawater-Intruded Areas

Refinement Group recommended options, Options a and d, consistent with AAC recommendations (below):

a. Apply regulations only within delineated boundary of "Seawater-intruded Areas."

d. If well is proposed in Seawater-intruded area within Zone 2C, then presume that there is no basis to prohibit the well based on the rebuttable presumption that the Salinas Valley Water Project is minimizing or avoiding expansion of seawater intrusion. Continuation of this presumption is subject to future studies showing that the SV Water Project is working to minimize or avoid expansion of seawater intrusion.

AAC Recommendations:
Apply regulations only within delineated boundary of "Seawater Intruded Areas" as mapped by the WRA and periodically updated.

If an Ag well is located in the Seawater Intruded Area of Zone 2C then it is presumed that the Salinas Valley Water Project will mitigate impacts and the subject well should not be prohibited.

Regulations apply only to production wells, not monitoring wells.

10. Archeological Study Requirements

Refinement Group recommendation – Consistent with AAC recommendations below.

AAC Recommendations:
Require an archaeological report in High Sensitivity Areas for a well if it includes grading (e.g. pit) and is in an area that has not been previously disturbed.

Drilling a well, without grading, is exempt from arch report requirements in all areas.

Peter M. Pyle PG. CHG.
27 San Francisco Blvd, San Anselmo, CA 94960

PGH Consulting Hydrogeology
415-456-3680

April 5, 2013

Mr. Kurt Gollnick Chairman
Monterey County Ag Advisory Committee
Special Ad Hoc Subcommittee/Well Ordinance

RE: Proposed well ordinance and methods for determining limitations on new high capacity wells.

Dear Mr. Gollnick,

I am a consulting hydrogeologist writing on behalf of a group of Salinas Valley landowners coordinated by Kevin Piearcy. I have worked on various aspects of Salinas Valley hydrology since the early 1990's when I was with Stetson Engineers, Inc. I have more than 30 years experience in hydrogeology, the last 20 years of which has involved extensive analysis of groundwater/surface water interactions and modeling. I have been certified as an expert in hydrogeology in court and water rights administrative hearings in California, Nevada, Arizona and Utah. I have reviewed the proposed changes to the County well ordinance, fish flow studies and related documents over the past few months.

This letter includes a brief summary of the technical issues we have found regarding the Tier I and Tier II analyses, and the classification of streams and other habitat areas of concern. I have researched these issues in the technical literature, methods employed in other States and reviewed the approach to them recommended by the U. S. Geological Survey. We are available to assist the County in developing more accurate, defensible methods for identifying new high capacity wells that may affect streams, and more effective methods for evaluating potential impacts of wells on streams and nearby wells and optimize management of resources.

The existing Tier I analytical methods used by MCWRA to limit the location or pumping rates of new high capacity wells are outdated and produce significant errors in results. There are many limitations when these simple methods are applied to large, complex aquifers with multiple wells pumping simultaneously, such as the in Salinas Valley. Analytical methods overestimate the amount of stream depletions caused by pumping from wells because they use simple formulas that assume ideal conditions. These ideal conditions include:

- the aquifer(s) intercepted by the well and that of the nearby stream bed are the same,
- there is no aquifer heterogeneity laterally or vertically, essentially assuming the valley filled with a uniform sand, and that all wells in a each subarea have the same properties,
- the water table is at or above that of that of the stream bed,
- the water table is flat (no regional gradient or other wells pumping),
- there are no other sources of recharge to the aquifer other than the stream, and no return flow from water use goes back to the aquifer or stream.

- That a significant number of new high capacity wells is expected and that they represent a threat to fish flows and habitat not previously accounted for by MCWRA through the lengthy planning and assessment process for the Salinas Valley Water Project (SVWP).
- That these new wells can be distinguished from pumping by existing wells during periods when minimum flows for fish migration and passage have been specified by NMFS.
- That the producing aquifer zone(s) used by a new wells is hydraulically connected to streams or critical habitat areas during periods that coincide with when the wells are being used (such as during the irrigation season).
- That the current approach to limiting large capacity wells is effective during periods when minimum flows or specific habitat areas could be affected and the new wells are being pumped.

The MCWRA may have conducted some analysis for fish flows using the SVIGSM model. Not all of these studies are readily available. MCWRA should present any details of these studies if they address any of the points listed above and that confirm their overall approach to management of resources.

In addition we make the following recommendations:

- Define sensitive streams, stream reaches or habitat areas of concern with supporting data and maps.
- If a Tier I screening must be used, it should account for well depth, aquifer heterogeneity (not just an estimated stream bed conductivity) using nearby well logs, and account for the groundwater gradient.
- Define replacement wells with respect to construction details such as depth, diameter, depth of grout seal, and whether the new well is allowed to pump at a rate equal to that of the well it replaced, the rate pumped before the old well was abandoned or some other benchmark,
- Better define the Tier II analysis with respect to the data required and how it will be evaluated.
- Consider the use of a numerical model, the SVIGSM if appropriate, to optimize water use and in-stream flow requirements based on currently accepted methods.

In conclusion, it is recommended that the County modify their approach to evaluating the effects of proposed new high capacity wells. The analytical method currently used is too outdated and inaccurate to employ as a basis for limiting the use of water by property owners. These property owners have paid assessments to the County over many years even though most of the groundwater in the Salinas Valley is does not occur as a result of management by the County.

Best Regards,

Peter M. Pyle PG, CHG

Cc: Kevin Piearcy, Nick Jacobs

This item was provided to the committee during the public comment period for the Well Ordinance item at the meeting of 1/24/2013.

MEMORANDUM

TO: Monterey County Agricultural Advisory Committee

FROM: Refinement Group[1] (CHISPA, Monterey County Association of Realtors, Monterey Peninsula Taxpayers Association, Monterey/Santa Cruz Counties Building and Construction Trades Council, Monterey County Farm Bureau, Salinas Valley Water Coalition, Independent Growers Association, Center for Community Advocacy, Central Coast Builders Association, Coast Property Owners Association, Salinas Valley Chamber of Commerce, Monterey Peninsula Chamber of Commerce, Monterey County Hospitality Association)

DATE: January 24, 2013

RE: Proposed Well Ordinance

At its July 26, 2012 meeting, the Agricultural Advisory Committee (AAC) voted unanimously to ask the Board of Supervisors to put the Draft Well Ordinance, and it's Interim Guidelines on hold. The AAC said it was concerned about the unintended consequences of pushing the draft ordinance through without the issues being adequately vetted.

The AAC also asked several questions at its meeting regarding the draft ordinance and its implementation, many to which staff answered that they didn't know or that matter hadn't been figured out yet. It seemed clear that while it is a lengthy ordinance; the details of the requirements had not been thought through and/or discussed and vetted, thus potentially resulting in unintended consequences and harm.

It is our understanding that the AAC sent a letter to the Board of Supervisors requesting that the draft well ordinance be put on hold, an ad-hoc group of stakeholders is convened to review, discuss and vet the issues surrounding the ordinance and its implementation. The Monterey County Farm Bureau sent a similar request to the Board of Supervisors. While we have found no record of a formal action taken by the Board of

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[1] The Refinement Group comprises representatives from diverse organizations who had previously organized to review and comment on the General Plan Update and now have re-assembled to participate in the County process for developing the ordinances to implement the General Plan. The Refinement Group supports a pro-active, public participation process in order to resolve issues upfront rather than in a battle at the end.

Supervisors, we had been informed that the Board wanted the draft well ordinance further vetted and discussed through the AAC's sub-committee.

To our knowledge there have been no meetings of the AAC's sub-committee to review and discuss the draft ordinance since the matter was discussed at the AAC's July 26, 2012 meeting—until today. We think this is unfortunate and a disservice to the AAC and the public.

Staff has done a good job of outlining the majority of the issues pertaining to this draft ordinance; however, there are many that are not included. They have included their analysis of 10 key issues and provide options for your consideration. They are asking for direction for developing a new draft ordinance. We think it is premature to offer recommendations on the options staff is presenting, and ask that the AAC recommend sending staff's analysis is to the AAC sub-committee for further vetting and discussion which should include the public. The sub-committee could then send recommendations to the full AAC. In the alternate, the AAC could conduct a public workshop which would allow the AAC and the public greater opportunity for review and discussion of these issues.

It is important that the draft ordinance be consistent with the General Plan policies, but we want to be sure that result is achieved in as clear manner as possible, can be successfully implemented without the unintended consequences. Criteria that will be used as the basis for different determinations required by the policy should be clear so that staff and the applicant know exactly how the determinations are made, on what basis, and what is required. To this end, it would be helpful to have a flow chart showing the different steps, and decisions points, involved in processing the different well permits—domestic and agricultural, high-capacity and non-high capacity.

We applaud staff in their efforts to reach out to the community at large and to listen to the concerns of those who must utilize and implement this ordinance, but unfortunately it hasn't been enough. The AAC should take a leadership role in this effort and request a workshop with the AAC's sub-committee or with the full AAC to allow for a detailed discussion and vetting of the issues prior to making any recommendation on the options presented. In its current form, the unintended consequences of the proposed Ordinance will be harmful to the ag community.