

Attachment B

Feedback	Response
<p>Public Comment Period: The time allowed for public comment is insufficient to receive adequate response. The County office is closed for the majority of the comment period. The structure of this comment period suggests the County is not truly interested in receiving comments but merely posting the documentation as a procedural step.</p>	<p>YCEH extended the date by which Board approval would be requested. This allowed additional time for staff and LSCE to receive and review feedback received.</p>
<p>Replacement Well Distance: The requirement to locate a replacement well within 200 feet of the old well should be further reviewed.</p> <ol style="list-style-type: none"> 1.Subsurface conditions around an abandoned well create infrastructure risk to the new well. 2.Most parcels are small enough that relocating the replacement well anywhere on the parcel will have no impact to the groundwater conditions. 3.The older well may be located close to a neighboring well or domestic well. If this is the case the County should provide the option to relocate the new replacement well farther away on the same or adjacent parcel if owned by the same person or entity with common ownership. 	<p>The intent of limiting the distance of a replacement well from the original well is to ensure any effects of the replacement well on nearby wells are not significantly increased from the previous condition as a result of the replacement well construction and operation. It is unlikely for an abandoned well to be the cause of subsurface conditions extending very far from the well that create additional risk to construction of a new well. This conclusion is based on extensive experience designing and overseeing drilling, construction, and rehabilitation of agricultural, municipal, domestic, and monitoring wells in coordination with drilling contractors across California. Nevertheless, although the risk posed by constructing a new well in close proximity to an abandoned well is believed to be very low, the updated TM increased the allowable distance from the original well to the replacement well to 200 feet in response to concerns previously expressed by a commenter relating to the original TM. If a land or well owner elects not to drill and construct a well within the specified distance of the original well or proposes changes from the existing well's construction characteristics (e.g., increasing well casing diameter size), the well will not be considered a replacement well, but instead will be processed as a new well permit application, which includes meeting the well separation distance requirements in the table included in the TM. If there are unique circumstances that should be considered in a replacement well permit application review, including site-specific concerns that may warrant siting a replacement well greater than 200 feet from the original well, such circumstances should be discussed with County staff.</p>
<p>Replacement Well Construction:</p> <ol style="list-style-type: none"> 1.Newer drilling and logging technology allow for more accurate placement of screens. Better screen placement has the potential to lessen localized impact to neighboring wells and nearby domestic wells. Modifications to screening intervals should be considered for replacement wells. Similarly well depth can have an impact on neighboring wells and domestic wells. Older shallow wells can be replaced with deeper wells to improve localized conditions. 	<p>In consultation with the YSGA, and recognizing the nature of projects and management actions that have been outlined in the Yolo Subbasin GSP for sustainably managing groundwater, the County believes that widespread deepening of production wells with the intent to mitigate impacts on shallower wells may have unintended effects on the ability of the Subbasin to be sustainable. Many of the projects and management actions in the GSP involve enhancing surficial recharge processes, which will focus recharge in the shallower part of the groundwater system. Deeper wells extract water from greater depths where benefits from surficial recharge activities may be much more limited. A well that differs significantly in construction from the well it is replacing may be permitted as a new well and follow associated procedures.</p>
<p>There is no mention of how permits in the Focus Areas will have any different requirements than else where in the County</p>	<p>The YSGA will review all permits within the GSA boundaries for consistency with the Yolo Subbasin GSP in accordance with the YSGA's established procedures. This may involve different review processes for wells within Focus Areas identified by the YSGA. Yolo County will not permit wells until the County has received written verification from the YSGA that the well is consistent with the Yolo Subbasin GSA. Language has been added to the TM stating that applicants should contact appropriate GSA to ensure their application addresses all applicable GSA well permitting requirements, including a reference to the YSGA's Focus Areas map and website where applicants can find additional information.</p>
<p>Table 1, with the minimum well separation, is almost exactly the same as the previous memo.</p>	<p>No changes to the well separation distances are believed to be warranted at this time, though the County (in consultation with the GSAs) will periodically review the well permitting procedures and TMs to determine if adjustments are warranted based on groundwater condition changes. Please see the attachments to the TM, which document the methods used to develop the well separation distances.</p>

With new and replacement wells that require permits, there needs to be a required well construction design with any requested intervals of screens submitted with the permit. The depths and number of screens needs to be approved by YGSA.	This comment has been forwarded to the YSGA
There is no accounting for cumulative affect of multiple wells In the area, the depths and screening of other well in the region, the drawdown capacity of other wells on the water table and the cropping patterns and other water demands.	The TM is in place to address what is needed for YCEH to be in compliance with the EO. Cumulative impacts to groundwater levels and groundwater storage fall under the responsibility of the YSGA.
New well permits need to show a map all other wells within a 2,000 radius with information on the depths, screens, and pumping capacity of each well. The map also needs to show the closest boundary of a Focus Area.	The Focus Areas are a YSGA designation for the purposes of the YSGA review to determine compliance with EO N-3-23 4a. The Focus Areas do not play a role in the YCEH review to determine compliance with EO N-3-23 4b.
Requirements and recommendations from the YGSA need to be included with the permit. Only with written permission due to significant justification can these requirements and recommendations not be implemented. Failure to comply will result in the permit being revoked.	Language has been added stating that the County will include as a permit condition any recommendations that the GSA includes in it's written verification.
All new and replacement wells needing permits shall be inspected for completion and compliance with the permit before the well can be operational.	This is the existing practice. All wells are inspected for completion and compliance with the permit prior to being finalized.
Until there is adequate data and water budgets established, any new well with a pumping capacity of greater than 1,000 GPM will require a hydrogeologist report.	The establishment of water budgets fall under the responsibilities of the YSGA. This comment has been forwarded to the YSGA.
I would ask you to support the Board of Supervisors to consider that the Technical Memorandum (TM) takes full advantage of an "or" statement in the EO and just uses the criteria of new (non-exempt) wells impact on existing wells to determine water supply health. The State criteria that I hope the Supervisors considers the EO portion: "that groundwater extraction by the proposed well would not be inconsistent with any sustainable groundwater management program established in any applicable Groundwater Sustainability Plan adopted by that Groundwater Sustainability Agency and would not decrease the likelihood of achieving a sustainability goal for the basin covered by such a plan"	The GSP is under the responsibility of the YSGA. This comment has been forwarded to the YSGA.
The County should be prepared to withdraw approval of new wells and manage the draw of existing wells. It appears that the TM provides only guidance on placing wells and makes no attempt to describe potential damage from overdraft from existing wells.	The TM is in place to address what is needed for YCEH to be in compliance with the EO. Cumulative impacts to groundwater levels and groundwater storage fall under the responsibility of the YSGA.
At this moment in time, why doesn't the county have a ready range of acre feet that can be drawn by active wells in a given season, drought or otherwise?	This comment has been forwarded to the YSGA
The County could have reduced the difficulty of reaching and enforcing this conclusion by paying closer attention to the SMGA regulation that states : "To ensure sustainable outcomes, GSA boards need to expand the ability for diverse stakeholders to participate in decision making and include voting representatives from drinking water and environmental groups. State directives and full stakeholder integration is needed to balance out entrenched voting majorities and entrenched interests". I believe the County's ground water mapping facilitator (YSGA) would welcome members of the Concerned Citizen's Group on the YSGA Board to see that a plan meets community needs.	This comment has been forwarded to the YSGA
Considering the above, the County should heed calls to postpone approval of the TM policy, if only because comment was requested between December 22nd and January 2 (when most of us are indisposed).	YCEH extended the date by which Board approval would be requested. This allowed more time for staff and LSCE to receive and review feedback received.

<p>It is my belief that TM revision should have been released at the same time as the draft of the Yolo Subbasin Groundwater Agency's Well Permitting Process was finalized. It seems the two are very connected and depend on each other. The Focus Map, and the related Hydrogeologic Report (HR) are detailed in the YSGA draft document that has not been approved by their board nor had public comment, yet aspects of the content should be reflected in the County's Updated Well Permitting Procedures.</p>	<p>The YCEH and YSGA processes, while connected, are separate processes. YCEH and YSGA are working closely together to ensure that we are each addressing those items that are necessary to be in compliance with EO. YCEH delayed the update of the TM and presentation to the Board until YSGA released the Focus Area map and their updated TM for public comment.</p>
<p>Existing wells owned by the applicant located on the same parcel as the proposed well or on a parcel adjacent to the parcel with the proposed well are exempt from the minimum well separation distance requirement.</p> <p>This means that if a landowner adds a new well on an adjacent parcel, then potentially in the future splitting of the parcel, those two wells are too close if not held to the minimum separation distance. They need to hold to the minimum distances on all new wells-even with the same landowner on adjacent parcels. This second well used by the operation should be added to the projected amount of water used to the original well, and could require a HG report.</p>	<p>The purpose of the minimum well separation distance requirement is to minimize the impact on an individual nearby well. Since both the proposed well and the new well are owned by the same landowner, that landowner is taking the risk of any potential impacts to their existing well. If a sale of a parcel in these circumstances were to occur, any existing and new well owners can reasonably be expected to already be aware of or consider (as part of due diligence) the potential for mutual well interference as part of any ownership transaction.</p>
<p>Table 1 of Minimum Well Separation Distances has not changed distances from the original TM, except to include a report required at 2000 gpm. I am unclear if these set back distances are appropriate or not. If a HR was not required, I would think it important before permitting any new well that the anticipated impacts to groundwater levels in neighboring wells and the anticipated impacts on groundwater levels and groundwater storage are known.</p>	<p>The specified separation distance requirements are based on analyses of the likelihood of impacts on nearby wells affecting the operation and function of nearby wells at different pumping rates and are believed appropriate for addressing the EO requirements of the permitting entity. Please see the attachments to the TM, which document the methods used to develop the well separation distances.</p>
<p>Even though, in some cases, the current groundwater extractions appears not to be depleting the Valley Floor areas, I believe it would be prudent to reign back on huge agricultural extractions that is supporting larger acreage production allowing wells drawing 1999 gpm without a HG review. I propose that there needs to be an HR starting at 1000 gpm. 1000 gpm is absolutely adding to the disproportionate draw down on an aquifer, especially with land use changes, with potential continued drought conditions and the intention of sustainable groundwater management for the future.</p>	<p>This comment appears mostly directed at YSGA procedures. This comment has been forwarded to the YSGA.</p>
<p>In consideration of the areas in Focus Areas where domestic wells are of high density the 2,000-foot setback distance that will help buffer around these areas of domestic water extraction should be in referenced on the Table 1 for clarity as to distances where wells are permitted.</p>	<p>The Focus Areas are a YSGA designation for the purposes of the YSGA review to determine compliance with EO N-3-23 4a. The Focus Areas do not play a role in the YCEH review to determine compliance with EO N-3-23 4b. However, we have added a reference to the YSGA's Focus Area map and website to ensure applicants are aware of the YSGA's procedures.</p>
<p>This TM document with the current mapping does not refer to the YSGA Focus Areas and the different requirements within these areas. The Focus Areas need to be outlined and labeled in the map</p>	<p>The Focus Areas are a YSGA designation for the purposes of the YSGA review to determine compliance with EO N-3-23 4a. The Focus Areas do not play a role in the YCEH review to determine compliance with EO N-3-23 4b. However, we have added a reference to the YSGA's Focus Area map and website to ensure applicants are aware of the YSGA's procedures.</p>
<p>PROPOSED IMPLEMENTATION requiring hydrogeologist's reports for proposed new wells or alteration of existing wells if they are not exempt from the EO and fall into either of the following categories:</p> <ul style="list-style-type: none"> •Wells that are located within focus areas and which pump greater than 100 gpm or have a well casing diameter greater than 6 inches. 	<p>This comment appears mostly directed at YSGA procedures. This comment has been forwarded to the YSGA.</p>
<p>I would think that there is potential lawsuit if a person requesting a permit sees that there needs to be a HG for 2000gpm and then gets their permit rejected because they are wanting to drill in the Focus Area and there now needs to be a HR for flows exceeding 100gpm. I would think there should be clarity on the application about the different locations-Valley Floor, Upland and Focus Areas.</p>	<p>This comment appears mostly directed at YSGA procedures. This comment has been forwarded to the YSGA.</p>

<p>New requested well permits that are located in the Focus Areas will be required to do a HR if they intend to pump 100gpm. Essentially that means every AG well will need a HR. Small farms will not be able to afford the cost of a HR, but their gpm will likely be no greater than 200gpm. I recommend changing the minimum gpm from 100gpm to 200gpm as the minimum trigger for preparing a HR in the focus areas.</p>	<p>This comment has been forwarded to the YSGA.</p>
<p>Page 5, Procedure for GSA Verification Required by EO Section 4A. The TM states the GSA provides written verification that the extraction of groundwater from any applicable proposed well would not: (i) be inconsistent with an adopted sustainable management program, and (ii) decrease the likelihood of achieving a sustainability goal. The YGSA is currently developing requirements for a Hydrogeologist Report (HR) for new wells located in Focus Areas recently identified by the YSGA (WYA, October 2023). A.The LSCE TM should be amended to be consistent with the current YGSA well permit requirements for new wells proposed in the Focus Areas. B.Both the YSGA concern over Focus Areas and the subject TM refer to a need for a Hydrogeologist Report. It seems that a new well permit applicant may need to submit an HR to the YGSA and the County if the well is within a Focus Area. Please clarify how the contents of the HR reports may vary and whether conditions in the FAs are adequately accounted for in the methodologies presented in the updated TM.</p>	<p>Wells in areas identified by YSGA as Focus Areas are subject to YSGA verification procedures, which are related, but separate from County procedures. The hydrogeologist report requirement under the County policy must determine a proposed well is not likely to affect the operation and function of nearby wells. If a GSA (including the YSGA) requires a hydrogeologist report, such a report may also address County requirements related to well separation distances.</p>
<p>Table 1: Well spacing varies with the geologic and aquifer characteristics. The TM presents well separation distances for just two areas based on “different hydrogeologic settings:” the “Valley Floor” and “Upland” areas. By comparison, the YGSA Groundwater Sustainability Plan (GSP, Section 2.4) establishes six management areas (MA) within the Yolo Subbasin for implementation of project and management actions to achieve groundwater sustainability. In developing these MAs, YSGA considered “geologic, aquifer, and topographic characteristics”. It would seem that geologic, aquifer, and topographic characteristics vary significantly throughout the Subbasin while the County’s TM’s presents a broad generalization of conditions for well spacing determination (Table 1). This approach seems blind to the concerns that have led to identifying Focus Areas and significant concerns raised by stakeholders. . Therefore, why does the County’s TM only consider two hydrogeologic areas when the GSP identifies six hydrogeologic units and, more recently, the additional Focus Areas of concern?</p>	<p>The minimum well separation distances were developed with consideration of the diversity of well and hydrogeologic characteristics within the County and recognition of local hydrogeologic characteristics that affect the magnitude of mutual well interference that may occur at different distances and flow rates across the County, including differences within and between Management Areas defined in the Yolo Subbasin GSP. Although the final minimum well separation distance table is standardized across the entire Valley Floor area to address mutual well interference concerns, the analyses used to inform the minimum well separation distances consider many local factors including aquifer parameters, aquifer depth and saturated thickness, typical well flow rates and well depths, and how much mutual well interference is likely to affect the function and operation of nearby wells. The County’s establishment of minimum well separation distances is intended to address the County’s responsibilities under the EO relating to determining whether new wells are likely to interfere with the function and operation nearby wells; the County’s role in complying with the EO is focused on addressing the well spacing necessary to mitigate mutual well interference resulting from a new well. The process for determining if a well is consistent with the appropriate GSP, including considerations related to consistency with sustainable management criteria for sustainability indicators (e.g., chronic groundwater level declines, land subsidence) are addressed through the written verification process established by each GSA. The Focus Areas delineated by YSGA were developed to address the YSGA’s GSP consistency verification requirement for new well permits and are based on many different factors, many of which are unrelated to mutual well interference. The County’s minimum well separation distance requirement, in coordination with the GSA processes for verifying consistency with the applicable GSP, are believed sufficient to comply with the EO while addressing areas of concern raised by stakeholders.</p>
<p>Page 5, states “Applicants seeking a permit for a replacement well must complete Exhibit C.” The TM does not have an Exhibit A or B. Should Exhibit C be changed to Exhibit A?</p>	<p>Exhibit A & B are currently not referenced in the TM. Exhibit A is a required for all Domestic Wells and Exhibit B is for Public Water System Wells. The TM has been updated to reflect all associated exhibits.</p>

<p>Page 6, The County requires minimum well separation distances for ensuring proposed new wells or well alterations are unlikely to interfere with the function and operation of nearby wells, and refers to Table 1. Table 1 shows the minimum required horizontal distances from nearby active wells according to the proposed well pumping capacity and proposed well location. The TM should present information on the methodology and assumptions used to derive the well separation distances presented Table 1. The County prepared a TM on December 16, 2022 titled "DOCUMENTATION OF METHODS USED TO DEVELOP WELL SEPARATION DISTANCES TO ADDRESS EXECUTIVE ORDER N-7-22 SECTION 9" that provided a summary of the methods used to develop the well separation distances. The updated TM being reviewed should also present the methods and parameter selections used to calculate the minimum well separation distances presented on Table 1. Include the December 16 TM (or the updated version), as a reference, if appropriate.</p>	<p>The "Documentation of methods used to develop well separation distances" will be updated to include some additional information and explanation related to the analyses conducted to develop the separation distances table.</p>
<p>Page 6: as a follow-up to Comment/Question 4, the County's December 16, 2022 TM referenced above states: "The selection of well separation distances was based on analyses of likely pumping drawdown impacts at different distances from a pumping well under a range of well operational considerations and aquifer properties representative of conditions in the County. The propagation of pumping drawdown depends on the duration and intensity of the well pumping and hydrogeologic characteristics related to the aquifer's ability to store and transmit water. An analytical modeling approach based on application of the Theis equation (Theis, 1935) was utilized to estimate the amount of water level drawdown expected at different distances from the pumping well. Important inputs for the analytical modeling include well operational parameters of well pumping rate and duration and aquifer parameters of transmissivity (T) and storativity (S)."</p> <p>The GSP prepared by the YGSA, section 2.1.3.4 Aquifer Properties, indicates the aquifer system is represented by three layers which generally correspond to alluvium in the shallow zone (#1), upper Tehama Formation or intermediate and deep zones (#2), and the lower Tehama Formation or deepest zone (#3). The GSP Table 2-1 (shown below) shows a large range in S and T values among the layers. The County's December 16, 2022 TM referenced above also presents a large range of T and S values. What were the actual T and S values used for the TM's Table 1 spacing requirements, and how did these values compare to the T and S values assumed for the YGSA MUs discussed above? How sensitive were the well separation distances to differing assumptions of T and S values? How do the TM well horizontal well separation distances relate to wells constructed with different screened intervals and or wells with multiple screened intervals?</p>	<p>The "Documentation of methods used to develop well separation distances" will be updated to include some additional information and explanation related to the analyses conducted to develop the separation distances table.</p>

<p>Page 6, and as a follow-up to Comment/Question 4 and 5: Table 1 relates the proposed well flow rate and the required horizontal distance from nearby wells and does not consider the well depth or the vertical well screened intervals in either the proposed well or the nearby wells.</p> <p>For purposes of discussion, consider a new, 950 gallon per minute (gpm) agricultural well that is to be constructed in the Central Yolo MA area of the Yolo Subbasin. Assume the new proposed well is to be constructed with multiple well screen intervals: a shallow zone (260 to 300 feet), two intermediate to deep zones (460 to 560 feet and 600 to 660 feet), and a deep zone 720 to 780). Since the proposed well flow is less than 2,000 gpm, a hydrogeological study (HR) is not needed as part of the County's permit process, and Table 1 presented in the TM applies. Next assume there are two existing nearby wells, just over 500 feet away, one of which is screened from 180 to 280 feet and the other from 500 to 520 feet. Since the proposed well flow rate (950 gpm) and the horizontal setback distance (>500 feet) meet the Table 1 criteria presented in the TM, the proposed well would hypothetically be approved by the County. Presumably, per the TM, the YSGA would also review the well permit application, but the County's position would be to approve the well permit application because it meets the Table 1 requirements. For the example described above, does the methodology in the County's TM comply with the Governor's Executive Order, Section 4 of EO N-3-23 requirements that all well permit applications ("with limited exceptions") be evaluated and a determination that the well will not likely interfere with the operation and function of existing nearby wells?</p> <p>It is noted that the County's December 16, 2022 TM titled "DOCUMENTATION OF METHODS USED TO DEVELOP WELL SEPARATION DISTANCES TO ADDRESS EXECUTIVE ORDER N-7-22 SECTION 9 referenced above, 'will not likely "interfere with the operation and function" of existing nearby wells means the water level decline in nearby wells will be less than 5 feet when the new well is operating.</p>	<p>If a well permit complies with the minimum separation distances in Table 1, it is the County's determination that it is unlikely to interfere with the operation and function of nearby wells. The TM states that a well permit will not be issued by the County until it has received written verification by the responsible GSA that it is not inconsistent with the applicable GSP. In the case of well permits within YSGA, all permits would need to address requirements of the YSGA process, which currently includes additional level of review in designated Focus Areas, and the YSGA would need to provide written verification to the Yolo County, before the County would issue a permit.</p>
<p>I don't think the YCEH should have commissioned the LS TM on well spacing because it should have been the YSGW's responsibility. I think all that the YCEH had to do as the well permitting issuing entity was to prepare a well permitting memo that summarized all of the County's ministerial well permitting requirements that all ready exist, and add a new section that informs the well permitting applicant of the recent State DWR GW sustainability program and the YSGA role in the County's well permitting application (well location, well spacing, FAs, well construction, well pumping and monitoring etc.) A YSGA signature block on the YCEH permit applicant would be required. This makes the YCEH's role ministerial and reduces the YCEH responsibilities on technical matters and potential legal matters pertaining to hydrogeology.</p>	<p>In order to meet the requirements under the EO section 4B(1), YCEH needed LSCE to create the well spacing table.</p>