

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
111	11.1	11.1 Table 11.1	Greg Schram	<p>Country club at 125 gal/person – seems very high</p> <p>Factories – 35 gal/employee – seems very high, should be 15 gal/employee</p> <p>Hotels – 60 gal per two person room – seem very low</p> <p>Hotels without bathroom – 50 gal per two person room – seems very low</p> <p>Offices – 20 gal/employee – Seems high, should be 15 gal/employee</p> <p>Restaurant flows – the portion per meal is likely right, but to add 10 gal/person on top of it seems very high.</p> <p>Schools – 20 gal/person without a shower and cafeteria seems very high. That means every kid is going to the bathroom 10 times a day.</p> <p>Retails – 20 gal/employee – seems high, should be 15 gal/employee</p> <p>Mobile home park – 100 gal/person – not sure why a person living in a mobile home park would use more water than a person in a home.</p> <p>Wine tasting facility – 3 gal/person – seems high, also it use to be 2.5 gal/person and I have not heard of any issues with existing systems. Also by changing this from 2.5 to 3 you have now made all existing winery systems non-compliant.</p> <p>Employee – 15 gal/person – I believe this is correct, but it contradicts factories, offices and retails</p>	<p>County is using other published sources. County has not evaluated each flow rate. US EPA and CA Plumbing Code should have comparable flow rates.</p> <p>County could present both sources (CPC and EPA) and allow designers to use which ever flow rate from the published literature.</p>	Cite or present sources of non-residential flow rates.
337	11.1	11.1 Table 11.1	Steve Brown	<p>Several sections in this table seem excessive. The County promotes water savings in every area. USEPA uses a design flow table with ranges of flow that might be a useful alternative.</p>	Need to review US EPA’s numbers.	No action.

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307	11.2	11.2	Tammy Martin	Unless the MOU that allows Permit Sonoma to permit small winery process wastewater systems has been revoked, I do not understand why this section has been removed. At a minimum, however, there should be language in this section to allow Permit Sonoma to issue tank only permits for winery process wastewater systems. The regional board is not going to perform construction inspections for process wastewater holding tanks, or sump tanks – nor are they going to be performing construction inspections for an in-ground process wastewater system with pre-treatment.	<p>The State’s OWTS Policy does not allow local agencies to regulate non-domestic waste.</p> <p>The County will continue to issue construction permits, but not permits that authorize the treatment / disposal of waste contrary to the State OWTS Policy.</p>	No action.
261	11.51	11.5.A	Mike Treinen	Provide an example of where one might be used.	Wineries, camps, resorts, restaurants. Almost any application that is over a design threshold for a traditional OWTS.	No action.
199	11.6	11.6 Figure 11.6	Jeff Loe	Please consider using the details that were prepared for PRMD on request in April 2021 to substitute for the current outdated details. Or update current details. I can adjust those details upon request.	All figures need to be redrawn. This is on the “to do” list.	No action.
196	11.61	11.6.A	Jeff Loe	Groundwater is sampled as suggested in 11.6 C. Please make consistent	Need to revise 11.6.A due to the revisions to the OPR program and that only OTWS with treatment units will need monitoring wells.	<p>Revise 11.6.A so the last sentence reads, “Sampling of the liquid effluent in the well may be required to ...”</p> <p>Revise 11.6.C combining the two sentences and deleting the language about sampling the groundwater.</p> <p>Recommended to read, “Performance wells are to be located up-gradient, within, laterally and down-gradient of the OWTS.</p>

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197	11.62	11.6.B	Jeff Loe	Industry advocates C-33 concrete sand as equivalent to Monterey Sand. Please add C-33 concrete sand in place of or equivalent.	Current language reads, "... Monterey sand or equivalent shall be placed ..."	No action.
198	11.699	11.6.G	Jeff Loe	Annular seal 12 inches deep - should suffice. Extra verbiage is confusing.	Noted. Provision reads like a definition.	Revise to remove the language, "... between the side wall and the solid portion of the performance well pipe."
092	13	13	Elsa Frick	A provision needs to be stated in this policy that existing Mound system designed under the old application rate of 1.2 gal/sf/day for the size of the gravel bed will be considered equivalent to code conforming mounds and the gravel bed will require increase in size when and if it needs to be replaced.	We have a policy similar to this and I think there were two changes to mound design that offset each other for the most part.	Provide a provision for code equivalency.
112	13.1	13.1	Greg Schram	Most of this section should be rewritten. Most of it does not apply anymore. Especially the part of them only allowed in flood plains.	<p>The bottomless trickling sand filter started as an experimental system for problematic sites in a floodplain and was not intended for in-ground applications countywide. Hence the language describing this system as being above ground in floodplains.</p> <p>It has been used sporadically outside the floodplain on a case-by-case basis.</p> <p>It is understood there is a desire to expand the use of bottomless sand filters to county-wide use as an additional option.</p>	No action.

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					<p>Section 12 provides for a process experimental and alternative systems.</p> <p>Research of County records and/or other jurisdictions is the first step to moving this system from experimental to an alternative system.</p> <p>Staff have started a list of future OWTS Manual improvements, and this topic has been added to that list.</p>	
338	13.1	13.1	Steve Brown	<p>This section should probably be re-written. I'm afraid I had volunteered to do so and did not get it done. Originally I think bottomless sand filters were meant to be a modified mound, enclosing the basal area to eliminate the large footprint created by the sand and topsoil tapers.</p>	<p>See response to ID Num 112.</p>	<p>No action.</p>
200	13.11	13.1.A	Jeff Loe	<p>Bottomless sand filter need not be an above grade configuration. Inground bottomless sand filters are common.</p> <p>Remove word an before ASTM in second sentence.</p>	<p>See response to ID Num 112.</p>	<p>No action.</p>
202	13.123	13.1.B.3	Jeff Loe	<p>Remove "winter time"</p>	<p>Agree.</p>	<p>Revise section 13.1.B.3 to strike "winter-time" when referring to groundwater.</p>
203	13.132	13.1.C.2.b	Jeff Loe	<p>Be careful not to word surface water diversion in a way that triggers drainage review. Consider "Finish grade shall promote positive surface runoff away</p>	<p>Need options: 1) provide for positive drainage or 2) a surface water diversion.</p>	<p>Revise section 13.1.C.2.b to provide the two options.</p>

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				from the BSF.” This language could/should be used for Mounds and At-Grades.		
204	13.133	13.1.C.3.a	Jeff Loe	Reference to C-177 is wrong and is unnecessary. Avoid errors by eliminating unnecessary references. Recommend eliminating as determined by ASTM D-136 and C-177;	Noted.	Remove reference.
205	13.1345	13.1.C.4.e	Jeff Loe	A 2 inch transport and manifold piping could be too large for some designs. Typically should be designed for velocity ≥ 2 feet per second. I suggest using language from GPDC “All system components shall be appropriately sized for the system dosing flow rates, and shall meet specifications of the manufacturer. All transport piping, supply and return manifolds and fittings must be Schedule 40 PVC or Schedule 80 PVC if threaded fittings are utilized.”	Need to research first. A 2” diameter pipe with a velocity of 2 ft/s has a flow rate of approximately 28,000 gal per day using $Q = A * v$. Perhaps the 2” diameter pipe is oversized for other reasons, like to prevent clogging. Need to understand the 2” diameter requirement prior to altering the standard.	No action.
206	13.1348	13.1.C.4.h	Jeff Loe	The blow off mentioned is no where defined and is referred to as Purge Valve elsewhere in the manual. Please use consistent language. Suggest: Each distribution lateral shall be equipped with a purge valve at the distal end. The purge valve shall be housed in a secure, easily accessible valve box.	Consistent language is good.	Revise section 13.1.C.4.h to use “purge valve” as suggested.
207	13.141	13.1.D.1	Jeff Loe	Suggest replacing Wooden containment vessels with “Above grade BSF enclosures” Where the liner is buried for sand filters within an earthen structure, a plywood form is used to hold the liner and the geotextile fabric cushion in place.	See response to ID Num 112.	No action.

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				The plywood need not be pressure treated, because it can rot away with no ill effects.		
208	13.145	13.1.D.5	Jeff Loe	For maintenance and repair - I advise against having the boots on the interior (aggregate) side of the BSF. Have you ever tried to expose a feature buried in sand and gravel? All boots shall be placed on the outside of the liner.	See response to ID Num 112.	No action.
209	13.155	13.1.E.5	Jeff Loe	Performance wells exterior of BSF shall extend 24 inches "below the bottom of the sand media"	See response to ID Num 112.	No action.
201	13.1999	13.1.X	Jeff Loe	Please include sizing criteria. Recommend: Sizing the Infiltrative Surface - The minimum required infiltrative surface area (the top surface of the filter media) must be determined by dividing the design flow estimate by the sewage Application/Soil Loading Rate. In no case shall effluent be applied to the BSF at a rate exceeding 1.0 GPD/SF.	Need to research this suggestion. The Washington manual on sand filters indicates increased/premature clogging when using 1.0 gpd / sq ft. Further the Washington manual suggests the width is predication on vertical separation to a limiting condition.	No action.
211	13.2	13.2x	Jeff Loe	Please include GPDC sizing criteria. Recommend: Sizing the Infiltrative Surface – The infiltrative area is the trench bottom area. The minimum required infiltrative surface area shall be determined by dividing the design flow estimate by the sewage Application/Soil Loading Rate.	We have very few of these systems permitted or installed and we are searching for information on the sizing. Our initial view is this is essentially a trench with pretreatment unit and that the sizing would be similar to a standard trench. We hope to find a few examples and to provide guidance as the OWTS Manual moves toward adoption.	No action.

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212	13.232	13.2.C.2	Jeff Loe	<p>Please clarify: Why spacing closer than 36 inches is preferred for mounds and at-grades and 24 to 72 inches is allowed for GPDC.</p> <p>2. GPDC installations space orifice holes 24 inches minimum to 72 inches maximum on center.</p>	<p>The presumption is the orifice spacing came from each respective design team.</p> <p>The 36” for mound likely came from the team of authored the Wisconsin Mound Manual.</p> <p>The range of 24 – 72” for the GPDC likely came from whom ever created up this system. One explanation for being closer than mound systems is that GPDC includes pretreatment and higher quality effluent. Mound system may or may not be accompanied with a pretreatment unit.</p>	No action.
093	13.3	13.3 Figure 13.3d	Elsa Frick	This figure is too illegible to be included in this document please address it with a legible copy	Agree. We will remove until we can find or create a cleaner image.	Revise Figure 13.3a.
339	13.321	13.3.B.1.b	Steve Brown	Presoak in the test holes belongs in the perc test section. It applies to tests of any depth.	Agreed. Propose moving to section 7.8.	Move 13.3.B.1.b to section 7.8.
090	13.324	13.3.B.4	Elsa Frick	This seems arbitrary and will require a great deal of additional testing. It was not necessary please address what was wrong and how you expect this to be reasonable demonstrated?	The current 13.3.B.4 requires a minimum depth of permeable soil of 24 inches in a horizontal distance of at least 25 feet down gradient.	No action.

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					<p>The intent is to ensure adequate soil as the effluent moves horizontally through the soil.</p> <p>Staff are attempting to answer at what slope does this apply?</p> <p>And should a similar requirement apply to flat sites (sites with less than 1% slope).</p>	
213	13.324	13.3.B.4	Jeff Loe	I do not recall discussion with TAC that soil only required 10' from mound for flat sites. I am not comfortable with this. Could allow mounds perched on a level mesa with hardly any surrounding soil. What would the LLR be for a mound with so little surrounding soil?	See response at ID Num 090.	No action.
089	13.326	13.3.B.6	Elsa Frick	Yet another restriction, leave the pervious language as it was	Comment noted.	No action.
091	13.327	13.3.B.7	Elsa Frick	No basis for this has been reasonable presented. Staff asking for it is not sufficient. Staff have minimal experience in the field in general and almost no experience in the actual construction of the above ground systems. They only review once the system is built. They seem to be relying on imaginary methods of construction not supported by experience or research. While they are a smart bunch, they do not have the experience they need to push for this kind of change that has to potential to change the course of many projects past and present, This is a huge departure form the past	<p>Current code does not have a provision allowing mound systems to be located adjacent to each other gravel to gravel.</p> <p>A standard is needed to overcome the nature of permissive code.</p> <p>There is nothing in the State OWTS Policy that allows a mound system or an at-grade system or provides standards for specify system types.</p>	<p>Revise section 13.3.B.9.a to be "Downslope separation distances shall be measured from the down slope sand toe of the primary mound to the upslope sand toe of the secondary or reserve mound."</p> <p>Add an exception to reduce the setback distance should the design demonstrate vertical dispersal of the effluent (as compared horizontal movement or hydraulic mounding due to an impermeable layer or shallow groundwater).</p>

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				<p>practice and will result in too many “state of the art” septic systems now being rendered</p> <p>NON CONFORMING. There must be sound justification for this. There is nothing in state policy that requires this. There is nothing i the Wisconsin Mound Manual that supports it for “expansion areas”. This is a change that will warrant substantial push back from the community and property owners. It would make more sense to include language that address the past practice as acceptable and defines it where the “code was silent”. This change alone, could be the “deal killer.” in the adoption of this OWTS</p>	<p>The Wisconsin Mound Manual does include language indicating there should be a setback similar to setbacks that are used for other dispersal systems.</p> <p>Upon discussion with LUAP, staff propose abutting mound systems from sand-to-sand.</p> <p>Staff further propose an exception to the setback distance should a design demonstrate the soil type and perc rate below the mound will result in vertical dispersal of effluent, the sand-to-sand requirement can be reduced.</p> <p>Previously approved primary or reserve area will be honored as approved, provided the site has been properly evaluated.</p>	
340	13.327	13.3.B.7 8 & 9	Steve Brown	<p>If you are going to document minimum separation distances it should memorialize past standard practice, unless there is monitoring data to suggest that greater separation is needed.</p> <p>Past practice minimum separation has been 0 foot overlap of basal area. Implementation of this standard will render many properties as legal nonconforming without design of an alternative system. This is a monumental change without documented justification.</p>	<p>Previously approved primary or reserve area will be honored as approved, provided the site has been properly evaluated.</p>	See action for ID-Num 091.

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038	13.329	13.3.B.9	Rich Holmer (1/17/2022)	<p>The separation distances between mounds are proposed to be increased. The substantiation for this change is unclear since mounds have been found to be very dependable systems if they are properly maintained. Current design practice appears adequate. This change means that many approved mounds will now become “legal non-conforming”.</p> <p>Again, the justification for this change is unclear. I request that changes that deviate from the State OWTS policy and adopted codes be clearly substantiated by scientific evidence that supports the need for the proposed requirement and be subject to a peer review process.</p>	<p>See discussion for comment ID-Num 091.</p> <p>The State OWTS Policy does not provide any details of a mound system. To honor this comment, the County would need to provide scientific evidence to support standard systems, mound systems, at-grade systems, drip system, pressure distribution systems and so on.</p>	See action for ID-Num 091.
113	13.329	13.3.B.9.a and b	Greg Schram	This along with at grade separation is my biggest concern. The primary to primary separation is probably ok, but the primary to reserve separation seems way to large. They should be able to go sand toe to sand toe. If this regulation gets adopted all mound system will now be out of compliance.	See discussion for comment ID-Num 091.	See action for ID-Num 091.
308	13.329	13.3.B.9	Tammy Martin	The increase in mound separations is NOT warranted! Properly designed, used, and maintained mound systems function perfectly well adjacent to each other. Furthermore, a primary system and reserve system will not be utilized at the same time, so allowing the sand basal areas to be butted up against each other is appropriate.	See discussion for comment ID-Num 091.	See action for ID-Num 091.

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214	13.349	13.3.D.12	Jeff Loe	Reference to proper drainage work is confusing. Please clarify or omit. Suggestion: "Finish grade shall promote positive surface runoff away from the mound."	Need options: 1) provide for positive drainage or 2) a surface water diversion.	Revise section 13.3.D.12 to provide the two options.
094	13.35	13.3.E and all sections in 13 requiring monitoring wells	Elsa Frick	Please speak to the need and purpose of the performance wells. They were originally installed to assist in the the evaluation of the performance of the "expermental" and monitored systems . Please give some indication as to the use of the wells now given that they are not required to be in the monitoring program. I suggest the only wells to be required are in the gravel beds and at the toes of the systems downslope beds where they meet native ground . In this case they are trouble shooting tools for ho,e owners and not needed as they are no longer a part of the monitoring program I suggest the entirety of non standard monitoring wells be revisited. To my knowledge I am not aware of any real sampling that was done on these wells. They should not be required upslope and downslope of systems as they offer a home owner no information about the functioning of their systems.ONLY systems in the monitoring program should require monitoring wells and there should be stated standards for acquiring and using the information gained from these wells. It must be a justifiable requirement.	Due to changes in the OPR program, specifically only requiring systems with pretreatment unit to be included in the OPR program, staff propose to remove the requirement for performance / monitoring wells for systems without a pretreatment unit.	Revise appropriate sections of the OWTS Manual to eliminate the requirement for performance / monitoring wells for systems that do not have a pretreatment unit and/or are not required to be in the OPR program.
215	13.351	13.3.E.1	Jeff Loe	Update performance well detail. Simplify "constructed pursuant to construction detail" shall be per Figure 11.6.	Noted.	Revise 13.3.E.1 to be succinct.

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216	13.351	13.3.E.1.d.2	Jeff Loe	I believe reference should be to 13.3 E.1.c.2.	13.3.E.1.d is for flat sites (< 1% slope) and 13.3.E.2 is for sites with a slope greater than 1% slope. For flat sides, the requirement is for one performance well on each longitudinal side. For sloped sites, the requirement is for two performance wells on the down gradient side.	No action.
219	13.4	13.4 Figure 13.4	Jeff Loe	STPD Trench Detail The 2" dimension on left side includes lateral pipe. If the dimension included lateral pipe should be 3 inches.	Noted. All figures need to be re-drawn and updated.	No action.
341	13.423	13.4.B.3.b & c	Steve Brown	"from 20 to 25" should be "up to 25" "from 25 to 30" should be "up to 30" From 25 to 30 implies 30" trenches are not suitable from 0 to 20%	Agreed. Provides flexibility if needed.	Revise section 13.4.B.3.b and c to strike "from 20" and "from 25", respectively, and insert "up to".
342	13.428	13.4.B.8	Steve Brown	Change to "To maximize system function"....."without the addition of an approved pretreatment unit"	Agreed.	Revised section 13.4.B.8 to strike "evapotranspiration" and replace with "system function".
217	13.433	13.4.C.3.c	Jeff Loe	Suggest re-wording: Two inches of aggregate is required over the perforated sections of the pressurized line distribution lateral.	Agreed.	Revise 13.4.C.3.c to read, " ... over the perforated sections of the pressurized line <u>distribution lateral.</u> "
343	13.435	13.4.C.5	Steve Brown	This does not belong in "Soil Cover" section. Is it intended to say "Trenches shall not be backfilled with....."	Agreed. Need to re-draft. 5.a appears to be intent language and 5.c is duplicative to 13.4.B.8.	Revise section 13.4.C.5 so the heading reads, "Soil Cover".

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						The two sentences in the heading get moved into the body of 13.4.C.5 as standards. 13.4.C.5.b is edited to not allow backfilling with non-permeable soil types.
218	13.442	13.4.D.2	Jeff Loe	STPE trenches not beds; omit word 'beds' 2. Construct trench beds with special attention to proper elevation and strict attention to contour.	Agreed.	Revise 13.4.D.2 to delete "beds".
221	13.5	13.5 Figure 13.5a	Jeff Loe	Figure is poor and is not placed appropriately in the code. SIG illustration says 24" to LC, and SIG siting 13.6 B.4.a requires 36 inches.	Agreed that all figures and illustrations need to be updated. Regarding the depth for SIGs, section 13.5A does say that Figure 13.5a is for illustration purposes only.	Revising all figures has been added to a list for future items to be resolved.
222	13.5	13.5 Figure 13.5b	Jeff Loe	Figure is poor and appears to be sloping in wrong direction. Remove " Wisconsin " from figure. Replace figure. Annotate Distribution Cell	Agreed that all figures and illustrations need to be updated.	Revising all figures has been added to a list for future items to be resolved.
220	13.51	13.5.A	Jeff Loe	Remove " Wisconsin " from this introductory paragraph. We call it At-Grade not Wisconsin At-Grade.	Noted.	Revise section 13.5.A to strike the word, "Wisconsin".
309	13.52	13.5.B6-8	Tammy Martin	Same comments as 13.3.B.9 above	Noted.	Response to 13.3.B.9 is applicable here. Add an exception to reduce the setback distance should the design demonstrate vertical dispersal of the effluent (as compared horizontal movement or hydraulic mounding due to an impermeable layer or shallow groundwater).

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344	13.523	13.5.B.3	Steve Brown	Replace “to elevated groundwater” with “to limiting condition”	Agreed.	Revise section 13.5.B.3 to strike “elevated groundwater” and replace with “limitng condition”.
095	13.526	13.5.B.6	Elsa Frick	<p>No basis for this has been reasonable presented. Staff asking for it is not sufficient. Staff have minimal experience in the field in general and almost no experience in the actual construction of the above ground systems. They only review once the system is built. They seem to be relying on imaginary methods of construction not supported by experience or research. While they are a smart bunch, they do not have the experience they need to push for this kind of change that has to potential to change the course of many projects past and present, This is a huge departure form the past practice and will result in too many “state of the art” septic systems now being rendered</p> <p>NON CONFORMING. There must be sound justification for this. There is nothing in state policy that requires this. There is nothing i the Wisconsin Mound Manual that supports it for “expansion areas”. This is a change that will warrant substantial push back from the community and property owners. It would make more sense to include language that address the past practice as acceptable and defines it where the “code was silent”. This change alone, could be the “deal killer.” in the adoption of this OWTS</p>	<p>Noted.</p> <p>Separation distances are applicable to all dispersal systems including standard trenches, drip systems, mound systems and at-grade systems.</p> <p>Separation distances for mound and at-grades is a gray area without written standards. The point is to codify reasonable standards. If an exception is needed, designers can justify a reduced setback.</p> <p>Upon discussion with LUAP, staff propose abutting at-grade systems from cover-to-cover. This will afford a setback of at least 10’ due an internal distance of 5’ from the edge of the aggregate to the edge of the soil cover for each at-grade system.</p> <p>Staff further propose an exception to the setback distance should a design demonstrate the soil type and perc rate below the mound will result in vertical dispersal of effluent, the sand-to-sand requirement can be reduced.</p>	<p>Revise section 13.5.B.6.a and 13.5.B.7.a to read, “The downslope distances shall be zero feet.”</p> <p>Add an exception to reduce the setback distance should the design demonstrate vertical dispersal of the effluent (as compared horizontal movement or hydraulic mounding due to an impermeable layer or shallow groundwater).</p>

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223	13.526	13.5.B.6	Jeff Loe	Does Secondary At-grade follow 13.5 B.6.a. or 13.5 B.7.a.	<p>Section 13.5.B.6 is the separation distances for primary-to-primary systems.</p> <p>Section 13.5.B.7 is for primary-to-reserve systems.</p> <p>See discussion for ID Num 095.</p>	See action under ID Num 095.
345	13.528	13.5.B.8	Steve Brown	<p>If you are going to document minimum separation distances it should memorialize past standard practice, unless there is monitoring data to suggest that greater separation is needed.</p> <p>Past practice minimum separation has been 0 foot overlap of gravel area. Implementation of this standard will render many properties as legal nonconforming without design of an alternative system. This is a monumental change without documented justification.</p>	<p>The past practice has included a variation of separation distances.</p> <p>Staff report adequate separation distance for mounds and at-grade systems when space is available and that separation distance becomes contentious when space is limited.</p> <p>As time and pressure mount, staff have allowed lesser separation distances to accommodate designers and have approved less than optimal separations.</p> <p>Separation distances for mound and at-grades is a gray area without written standards. The point is to codify reasonable standards. If an exception is needed, designers can justify a reduced setback.</p> <p>Upon discussion with LUAP, staff propose abutting at-grade systems from cover-to-cover. This will afford a setback of at least 10' due an</p>	See action under ID Num 095.

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					<p>internal distance of 5' from the edge of the aggregate to the edge of the soil cover for each at-grade system.</p> <p>Staff further propose an exception to the setback distance should a design demonstrate the soil type and perc rate below the mound will result in vertical dispersal of effluent, the sand-to-sand requirement can be reduced.</p>	
114	13.5281	13.5.B.8a and b	Greg Schram	<p>This along with mound separation is my biggest concern. Both of the proposed separations seem too large. The separation from primary to primary should be no more than the width of the gravel bed and the reserve areas should be able to be gravel bed to gravel bed. No more than 5' apart. If this regulation gets adopted all mound system will now be out of compliance. There is also no reason to propose this kind of separation. We have not experienced any issues.</p>	See response in ID Num 095 and 345.	See action under ID Num 095.
224	13.5281	13.5.B.8.a	Jeff Loe	<p>There is no reason to change what has been practiced since 1995. There is no reason the cover soil can not provide adequate separation between at-grade beds. Suggest: a. Downslope separation distances shall be measured from the down slope edge of the primary at-grade (toe of fill) gravel toe to the up slope edge of the distribution cell aggregate area of the secondary or reserve at-grade.</p>	See response in ID Num 095 and 345.	See action under ID Num 095.

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225	13.53341	13.5.C.3.d.i	Jeff Loe	Correct pile to pipe."gravel below the distribution pile pipe"	Noted.	Revise section 13.5.C.3.d.i to strike "pile" and replace with "pipe".
226	13.53342	13.5.C.3.d.ii	Jeff Loe	Correct pile to pipe."gravel below the distribution pile pipe"	Noted.	Revise section 13.5.C.3.d.ii to strike "pile" and replace with "pipe".
227	13.5336	13.5.C.3.f	Jeff Loe	Reword for clarity: f. The gravel bed shall extend at least 2 two feet above upslope of the uppermost distribution pipe lateral.	Noted.	Revise section 13.5.C.3.f to strike "above" and replace with "upslope".
228	13.536	13.5.C.6.b	Jeff Loe	Recommend rewording to eliminate what is uncontrollable and unnecessary: b. 12 inches of soil covering after settling is to be placed over all the aggregate distribution cell, and shall extend to the limits indicated on the plan. Additional depth of topsoil must be placed during the time of construction to assure that the minimum depth is achieved following natural settling of the soil.	Noted. Additional soil is needed due to natural settling and compaction. The depth is difficult to quantify due to variations in the soil type used as cover, so this standard will remain as a qualitative standard.	Revise section 13.5.C.6.b to strike "after settling", strike "all" and "the" in front of "aggregate".
229	13.537	13.5.C.7.b.iii	Jeff Loe	Balancing valves shall be gate valves, Purge Valves shall be ball valves. Ball valves are not sensitive enough to balance. Gate valves require too much hand operation for purge.	Noted.	Revise section 13.5.C.7.b.iii to reflect the suggested language. <u>Gate valves used as balancing valves shall be PVC Schedule 40 or higher. Ball valves used as purge valves shall be PVC Schedule 40 or higher.</u>
230	13.537	13.5.C.7	Jeff Loe	Sizing formulae are not given. Suggested edits: 9. Sizing formulas for at-grade systems. Sizing calculations for all at-grade dimensions shall be provided with all proposals.	The suggested strike out is a heading. The headings for 13.5.C.8 and C.9 need to be on separate lines.	Revise section 13.5.C.8 and C.9 so the headings are on separate lines.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
231	13.547	13.5.D.7.f	Jeff Loe	Reference to proper drainage work is confusing. Please clarify or omit. Suggestion: "Finish grade shall promote positive surface runoff away from the mound."	Need options: 1) provide for positive drainage or 2) a surface water diversion.	Revise section 13.5.D.7.f to provide the two options.
232	13.626	13.6.B.6	Jeff Loe	Justify 48 inches to bedrock or make is 36" as for all other OWTS. Suggested edit: 6. Systems shall have a minimum separation of 36 inches from trench bottom to groundwater, fractured rock, bedrock, or impermeable soils beneath trench bottom and 48 inches to bedrock as measured beneath proposed trench bottom. Note that minimum separation may be reduced to 24 inches below trench bottom if acceptable pretreatment is used.	Agreed.	Revise section 13.6.B.6 to remove the 48 inches to bedrock.
233	13.632	13.6.C.2.b	Jeff Loe	13.6 B.1. allows SIG on slopes to 25%. 13.6 C.2.b. requires trench spacing of 10 feet to 20% and does not indicate spacing for 20-25% slopes. I see the SIG system akin to filled land STPD. I believe 8 foot trench spacing is adequate on slopes to 25%	Noted.	Revise section 13.6.C.2.b to change the 20% to be 25% slope.
234	13.633	13.6.C.3	Jeff Loe	Reference to sand filter is improper when they are not addressed in the OWRTS manual. Please omit. Suggestion: 3. Sand filter or other approved Approved Pre-treatment units are required on sites with percolation rates faster than 5 or slower than 90 minutes per inch.	Noted.	Revise section 13.6.C.3 to strike the reference to a "sand filter" but retain the requirement for an approved pretreatment unit.
235	13.64	13.6.D	Jeff Loe	The reference to Mound Construction is improper. Fill placement is similar to 9.6 A.14. Construction of trenches is similar to STPD 13.4 D. Suggestion: D. The construction criteria for SIG OWTS includes the following:	Noted.	Revise section 13.6.D to reference section 9.6.A.14 for fill placement and section 13.4 for trench construction.

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				1. See Section 13.3D 9.6 A.14 for fill placement & 13.4 D for trench construction.		
239	13.7	13.7	Jeff Loe	Fill placement is similar to 9.6 A.14. tubing installation is similar to Subsurface Drip Dispersal OWTS 13.7 D. Suggestion: D. The construction criteria for Filled Land Drip Dispersal OWTS includes the following: 1. See Section 9.6 A.14 for fill placement & 13.7 D for trench construction.	Consider using fill placement at 9.6.A.14 and applying those standards to drip systems that required above grade cover.	No action.
346	13.733	13.7.C.3	Steve Brown	This section can incorporate the level of drip line installation up to the ground surface and fill soil cover eliminate Section 13.8	Consider revising 13.7.C.3 to include installing drip tube at native. Note, this is allowed in 13.8, the concept is to add here to eliminate section 13.8.	No action.
236	13.7399	13.7.C.17	Jeff Loe	Misplaced text - This point belongs in Pretreatment Units section. The sentence is unclear and needs clarification. 17. For aerobic treatment unit (ATU) systems that function with external blowers, a cutoff switch or interlock that disables the pump shall be built into the control panel so the discharge pump will not function if the blower is may not be turned off.	Noted.	Revise section 13.7.C.17 to clarify and move 13.7.C.17 to section 13.9 Pretreatment Units.
237	13.8	13.8	Jeff Loe	This is a poor name for this system. Drip tubing is used for surface dispersal in some parts of the country. The described system does not surcharge at the surface as surface discharges are not permitted without WDR's. A better name might be At-Grade Drip Dispersal, or Filled Land Drip Dispersal.	At-Grade Drip Dispersal is pretty much the same as Surface Drip Dispersal. No one is stating the system is surcharging at the surface. Many systems that discharge at or above the native ground surface	Revise to heading to read, "At-Grade Dispersal OWTS." Revise the body of 13.8 to reflect the name change.

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					(mound systems for example) do not require WDRs.	
240	13.8	13.8	Jeff Loe	Table of Contents says Pretreatment Units In body of text is 13.9	TOC not updated for this version	Review TOC to ensure accuracy.
238	13.81	13.8.A	Jeff Loe	Description is confusing – make it more concise. Suggested possible alternate description A. A Filled Land Drip Dispersal OWTS involves drip tubing placed at the original ground surface through an imported or onsite fill soil which is placed to function as cover over the tubing. The fill is placed prior to placement of the tubing, the tubing is then placed at original grade level in narrow trenches that are hand excavated in the fill.	Noted.	Revise 13.8.A to simplify.
347	13.92	13.9.B	Steve Brown	Change to “...minimum depth to a limiting condition to two feet. However, in all instances, at least two of the required three feet below disposal depth must be acceptable native conditions.”	Noted.	Revise 13.9.B to read, “In cases where a pretreatment system is used, Permit Authority and RWQCB may allow two feet as the minimum depth of soil to a limiting condition. However, in all instances, at least two of the required three feet of soil below dispersal must be acceptable native soil.”
241	13.93	13.9.C	Jeff Loe	Please do not overlook the Single Pass – Intermittent Sand Filter. This section mentions recirculating sand filters. There are perhaps more single pass sand filters in use in the County that recirculating sand filters.	Noted.	Staff need to verify these are approved pretreatment units.

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242	14.1	14.A-H	Jeff Loe	Check & re-word references to non-standard systems.	The Section 14 heading and the following sub-sections contain “non-standard” and need to be edited: D.1 D.3 E F G should be moved to a general location H	Edit these subsections to remove “non-standard.”
318	14.133	14.13.C	Steve Brown	Change to “Exception for installation below an Impermeable soil lens” The use of a non-standard system is redundant; if a pretreatment unit is required then a standard system becomes nonstandard by definition.	Please clarify the OWTS manual section.	No action
348	17	17	Steve Brown	Sites that require variances often are stuck with a “best possible” scenario. If that is the case, it is near impossible to “assure that public health and water quality protection at least equal to that established by the rules, is provided.” I appreciate the removal of the Table of examples. Sometimes the justification for the variance is that the alternative is to continue the use of the cesspool, or seepage pit, or redwood tank, etc. The resulting system improvement may not meet the “protection established by the rules” but it will do the best the site can accomplish and the system	The variance is not the same as best possible or substantial conformance. A variance has the standard of equivalent protection just a different or non-codified standard. The substantial conformance is recognized as below that threshold and will be limited to specific criteria such as: <ul style="list-style-type: none"> • In the TMDL boundary • Not for new development 	Revised OWTS Manual to include the draft “substantial compliance” section.

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				inevitably becomes a monitored system as another tool to protect public health. I add this comment more as a plea to the staff that will review these applications that they should take into consideration the property owner may have no other alternatives.	<ul style="list-style-type: none"> • Demonstrated there is no other solution • Etc. 	
262	17	17 Table 17	Mike Treinen	I wasn't a part of the discussion to remove this table - possibly unacceptable to the state gods. I think it was an excellent guidance tool for designers and should be reinstated if possible.	<p>We want to treat the tried-and-true variances as exceptions and have proposed to move them to the applicable section, we will have the standard and the exception in the same location.</p> <p>Treating as an exception will eliminate a separate variance application and fee.</p>	See "Section 17 Variance to Exception.docs" document.
263	18	18.A.1-12	Mike Treinen	Although apparently not open for comment, these special study & prohibition areas are old appendages. Most or all could be eliminated in deference to the extremely strict current standards which were generally not present when they were promulgated long ago. These just make regulations more complex and expensive. (I commented thus in 2018 but you lost my comments)	<p>Agreed. Most but not all.</p> <p>The plan is to sunset any waiver prohibition area within a watershed subject to a TMDL once the LAMP and OWTS Manual is approved by the RWB.</p> <p>This will take a formal action from the Board of Supervisors and we need to wait for the substitute system (LAMP and OWTS Manual) to be approved.</p>	No action.
039	18	18	Rich Holmer (1/17/2022)	This section should be eliminated. Most of these provisions were adopted decades ago prior to the new, more rigorous State OWTS standards. Special area requirements and the prohibition of variances create havoc with permitting of replacement dispersal systems.	The plan is to sunset any waiver prohibition area within a watershed subject to a TMDL once the LAMP and OWTS Manual is approved by the RWB.	No action.

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096	18	18	Elsa Frick	Eliminate this outdated section of the manual. The extremely restrictive practices outline in this and the OWTS 7.0 manual address all these concerns many of which were adopted long before we had the plethora of innovative systems we have now. This section is superseded through the current OWTS and none of these areas have restrictions more restrictive than what is in the OWTS. It causes confusion for all and is not necessary.	The plan is to sunset any waiver prohibition area within a watershed subject to a TMDL once the LAMP and OWTS Manual is approved by the RWB.	No action.
268	20	20.2-20.4	Mike Treinen	All APMP descriptions should be <i>consistent</i> in finding that even though a parcel may be within the boundaries, the regs will not apply to systems totally outside of the boundaries. Hopefully the state or county will have clear detailed maps available down to parcel level <i>before</i> any enforcement begins..	Yes, the RWB current has maps. The label "Map 20.2 Russian River APMP Boundary" is a place holder for the boundary map. It does get even more refined. The rules, as we understand it, is if the dispersal system is within the 200' or 600' distance to the stream.	Add the Russian River APMP map.
264	20.1	20.1	Mike Treinen	This section requires telemetric connections, monthly to quarterly monitoring and quarterly sampling & service providers. Beyond moderate to high owner costs, is PRMD remotely prepared for the number of personnel needed to properly review, enforce, make and return phone calls & e-mails, filing reports etc? Or will all those reports just get filed - if even that. This needs serious review and paring down to be reasonable and enforceable or it will be just another failed program.		No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
265	20.221	20.2.B.1	Mike Treinen	What are HUC-12 sub waterways? Spell out what it is and better where to find them.	<p>We could add HUC to the acronym section 2, but I think HUC is only used once, so probably just spell it out here.</p> <p>HUC stands for hydrologic unit code. The number 12 refers to the scale of the watershed. Watersheds in a HUC12 range from 10 to 40 thousand acres.</p>	Spell out HUC for the one instance.
266	20.245	20.2.D.5.a	Mike Treinen	<p>Huge volume of work <i>in addition</i> to 20.1 above. To check for cracks the tank must be located and excavated as often needed and pumped (\$450-\$600 plus tank locating & excavation) to look for cracks. And a report must be done. In many cases tanks are hard to locate, under decks, under houses, under landscaping, in blackberry or poison oak patches, very deep etc. - all things we see in the field. Estimated minimum costs \$1,000+ plus I'm sure county fees to cover the substantial staffing needed to <i>properly</i> handle this program with the same programmatic issues as noted in comments for 20.1. Industry staff may be overwhelmed as well. Things to think about.</p>	<p>Not necessarily. A water tight test could be run. Plug the outlet, add water, and monitoring the water level via the manhole.</p> <p>These requirements are from the RWB.</p>	No action.
267	20.245	20.2.D.5.b	Mike Treinen	<p>Huge volume of work <i>in addition</i> to 20.1 above. To check for cracks the tank must be located and excavated as often needed and pumped (\$450-\$600 plus tank locating & excavation) to look for cracks. And a report must be done. In many cases tanks are hard to locate, under decks, under houses, under landscaping, in blackberry or poison oak patches, very deep etc. - all things we see in the field.</p>	Comment noted.	No action.

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				Estimated minimum costs \$1,000+ plus I'm sure county fees to cover the substantial staffing needed to <i>properly</i> handle this program with the same programmatic issues as noted in comments for 20.1. Industry staff may be overwhelmed as well. Things to think about.		
269	20.362	20.3.F.2	Mike Treinen	If I interpret these Petaluma and Sonoma Creek related sections correctly, any property without a septic tank and code compliant system, including undersized systems, regardless of function! must replace their system to be code compliant (\$\$\$\$). <i>Without some indication of a system failure</i> , this is premature and way excessive. Most old systems are undersized according to current standards and there are still some cesspools out there and systems that may be interpreted as needing corrective action. Hopefully this is reworded.	The RWB will be the agency responsible to require the upgrades. If/when a client requests a septic permit, then the County will assist with plan review and inspection services.	No action.
270	20.363	20.3.F.3	Mike Treinen	If I interpret these Petaluma and Sonoma Creek related sections correctly, any property without a septic tank and code compliant system, including undersized systems, regardless of function! must replace their system to be code compliant (\$\$\$\$). <i>Without some indication of a system failure</i> , this is premature and way excessive. Most old systems are undersized according to current standards and there are still some cesspools out there and systems that may be interpreted as needing corrective action. Hopefully this is reworded.	Comment noted. See response to ID Num 269.	No action.
271	20.452	20.4.E.2	Mike Treinen	If I interpret these Petaluma and Sonoma Creek related sections correctly, any property without a septic tank and code compliant system, including undersized systems, regardless of function! must	Comment noted. See response to ID Num 269.	No action.

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				replace their system to be code compliant (\$\$\$\$). <i>Without some indication of a system failure</i> , this is premature and way excessive. Most old systems are undersized according to current standards and there are still some cesspools out there and systems that may be interpreted as needing corrective action. Hopefully this is reworded.		
272	20.453	20.4.E.3	Mike Treinen	If I interpret these Petaluma and Sonoma Creek related sections correctly, any property without a septic tank and code compliant system, including undersized systems, regardless of function! must replace their system to be code compliant (\$\$\$\$). <i>Without some indication of a system failure</i> , this is premature and way excessive. Most old systems are undersized according to current standards and there are still some cesspools out there and systems that may be interpreted as needing corrective action. Hopefully this is reworded.	Comment noted. See response to ID Num 269.	No action.
040	21	21	Rich Holmer (1/17/2022)	It is time for the Board of Supervisors to amend the County Code to actually allow these. It is ridiculous to have standards for waterless toilets but to have a prohibition in the County Code against installing them. The proposed OWTS policy adoption process should include an amendment to the County Code to eliminate the prohibition.	Sonoma County Code has been amended to allow waterless toilets. Section 21.4.A is now a moot point and will be deleted.	Delete section 21.4.A.
097	21.3	21.3	Elsa Frick	Not consistent with County Code. This needs the Code amended in order for this to be meaningful, please	Comment noted. See response to ID Num 040.	Delete section 21.4.A.
041	22.1	22.1	Rich Holmer (1/17/2022)	This essentially requires that anything that is not listed as an exception in the County standards will require Waste Discharge Requirements from the WQCBs. This is an expensive, time consuming and	This section address systems that are not in compliance with the State's OWTS Policy.	No action.

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				<p>onerous process. The idea of a Tier 2 LAMP is to allow some flexibility for local conditions. This proposal does not allow for flexibility and creates a nightmare process for the property owner. It is actually not clear if the County is submitting this policy as a LAMP or is simply adopting OWTS standards.</p>	<p>The OWTS Manual does provide exceptions for most of the State’s OWTS Policy prohibitions, but not all.</p> <p>One way to comply with the OWTS Policy’s prohibitions is to utilize the exception. If there is no exception or the system can’t achieve the exception, this section provides the pathway.</p> <p>The pathways involve obtaining permission from the RWB through the steps listed in section 22.1.A.1 or section 22.1.B.2.</p> <p>Outside of the OWTS Policy this manual does provide a great deal of flexibility for on-site treatment and disposal of wastewater.</p>	
99	99	99	Nathan Quarles	<p>Future items to be resolved include:</p> <ul style="list-style-type: none"> • Contents of an adequate slope stability report/study; • Siting of new dispersal system over existing systems; • Lift station standards • Revise all figures; label all figure as “examples” or for illustrative purposes; 		

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				<p>ensure there are standards for the details of each figure.</p> <ul style="list-style-type: none"> • Setback Table; Add section J, related to upslope drainage. • Workshops for designers and staff • Process for OWTS Manual amendments. • Land Use section appended to section 16 • Eliminate percolation tests (alla Napa Co) • Eliminate the Waiver Prohibition Areas. • Leaching Beds vs Seepage Pits (add leaching bed as a system type) • Evaluate Bottomless Sand Filters for transitioning from experimental to alternative status. • Consider the method of averaging percolation rates proposed by Rob Huffman. 		