

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
117	.05	All	Jeff Loe	This document was initially poorly written and the additions and deletions do not improve overall quality. I recommend hiring a professional editor to proofread document, refine definitions, improve language, and omit redundancies.	Comment noted	Permit Sonoma has contracted with a technical write and a facilitator for publish outreach.
243	.05	All	Pete Lescure	<p><b>RETAIN THE SERVICES OF A PROFESSIONAL EDITOR TO DO THIS JOB WELL</b>, rather than relying on a bunch of amateurs who are busy conducting the rest of their lives and businesses. I consider this approach to be a total folly, destined to sow confusion and make yours and your staffs work ever more burdensome dealing with all of the newly created “legal, non-conforming” systems.</p> <p>Some time ago, prior to the official Blue Book I, in collaboration with the newly formed LUAP, attempted to enlist the Board of Supervisors in funding a professional editor to compile the loose collection of policies and procedures into an organized collection. Rich Homer sought \$25,000 from the BOS for that effort, who sadly and shortsightedly did not see the wisdom and denied the request. Imagine the headaches that would have avoided or at least ameliorated in the ensuing years.</p> <p>Out of that effort, we got the Vesting Ordinance which LUAP identified as the highest priority out of the extensive Table of Contents subjects we had compiled. Karen Waelde, Mark Stevens, and I wrote it Mark Kostielny vetted it and County Counsel slightly modified it. The Vesting Ordinance was</p>	Comment noted	Permit Sonoma has contracted with a technical write and a facilitator for publish outreach.

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				<p>created as a defense for property sellers/buyers to deal with the ever changing regulations and staff interpretations.</p>		
244	.05	All or most	Pete Lescure	<p><b>DELETE ALL THE PRESCRIPTIVE REQUIREMENTS</b> as they hamstring designers in their creative efforts to solve real problems. This was one of our greatest issues responding to AB885 to create the Statewide standards. That’s why it took four iterations and 11, 12, 13 ? years to get to the final version.</p> <p>As I, along with my COWA colleagues and several other bodies, commented to the SWRCB drafters of the first couple of versions, “With such prescriptive standards we will never solve the real problems in the existing ancient second home communities on our waterways which have become a major source of moderate income housing in California”.</p> <p>Designers require the flexibility to apply their knowledge of scientific and engineering principles, not to be restricted by rigid, prescriptive doctrine.</p> <p>If you feel you must retain the prescriptive standards, place them in the appendices as guidelines or “suggested methods of addressing <b>common</b> circumstances and situations.”</p>	<p>The goal is to keep the septic plan review process as a ministerial process. If the design meets the standards, the jurisdiction issues the permit. If the design does not meet the standards, the jurisdiction does not issue the permit.</p> <p>Prescriptive requirements equate to a ministerial process.</p> <p>The other permit review method is a discretionary review. Designers have the ability to design the system as they see fit, present conclusions the system will function properly and request the jurisdiction to issue a permit.</p> <p>The jurisdiction also has licensed professionals reviewing. The jurisdiction’s professional may disagree with the design professional and lengthy discussions ensue.</p> <p>In our experience, prescriptive standards and a ministerial process provides for a plan review system with more regulatory certainty, more transparency and more consistency</p>	No action.

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					than a discretionary process for construction.	
020	.1	General	Ted Walker	<p><b>I do not have time to complete my review of the proposed OWTS regulations. I respectfully request that you extend the time period for comments an additional 4 months. There is no need to rush the proposed changes, Was there a need to alter the percolation test requirements? For 10 minute perk tests, you just do not want to look a the fall between the 11<sup>th</sup> and 12<sup>th</sup> reading. You really are trying to find the stabilized rate. Why are you changing this? Has there been a problem?</b></p>	<p>This comment period is for the Land Use Advisory Panel. This document will be circulated to the public for their review and input. One can continue to submit comments during the public review.</p> <p>If you provide a specific comment, please cite the specific section. It takes additional effort to find the section and language in question (and we might not have it correct) as compared to citing the section you are commenting on.</p> <p>Regarding the comment on percolation tests, please review the old section 7.9.B and compare to the proposed sections 7.9.A and 7.9.B. The old 7.9.B is being separated out into two news sections (A and B): one for the six hour test and one for the two hour test. The language regarding a stabilized percolation rate has not changed.</p>	No action.
024	.1	General	Rich Holmer (12/30/2021)	<p>There are references to both the OWTS manual and the LAMP. I had thought your intent was to submit the OWTS manual to the RWQCB as the county's LAMP. If not, is there a separate process for the LAMP?</p>	<p>In the prior LAMP submission, the OWTS Manual was attached to the LAMP application as a technical, supporting document.</p>	No action.

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					We propose the same approach.	
099	.1	General comments about the approach	Elsa Frick	<p>I believe this document is too detailed and inflexible to be a “regulation” or even a LAMP. Frankly it is not clear if it is intended to be a LAMP I believe it is possible to create a document that addresses the State OWTS LAMP requirement sufficiently and addresses policies or tech bulletins that have flexibility. At least some flexibility to make changes needs to be available.</p> <p>As a case in point, look at what it is taking to get the at-grade drip systems approved, through what appears to be a discretionary process with staff eliminating language in reports, etc. Too much staff time reviewing variances, to little direction for staff and designers. This issue could have been addressed over a year ago by the release of a tech bulletin, waiving the need for the variance and streamlining the standards for all to see.</p> <p>Rather than making a guessing game of it. There should still be some kind of vetting process for new policies, but that can be developed as well so that we don’t need a 2 year long project everytime we need tp make a change in the standards. This document is way too cumbersome for the issues it tries to address and in too many instances represents a tightening of screws that were not loose.</p> <p>I would suggest bringing in a consultant to work with staff and management to develop critical</p>	As stated above, the OWTS Manual is part of the LAMP. It is prescriptive to reduce or eliminate as much discretion as possible.	No action.

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				<p>thinking path analyses to get to answers and solutions quickly. I have too many instances where additional information and testing is asked for and demanded for the sake of a record or compliance with the OWTS strictest interpretaions and results in no change the the actual construction plan itself. And changes to the plan that will not result in the system being installed and constructed different than proposed. The meticulous demand for details that truly do not affect the result or change a proposal is strangling development and not necessary.</p> <p>Critical path thinking analyses do not inject too much discretion on the part of an inspector. Much more discretion should be handed to the professional preparing these plans and projects.</p> <p>The review of the plans and projects should be a simple review of the main points of the LAMP and Design manual.</p> <p>The level of detail contained in this OWTS should be accompanied by stock plans published and prepared by Permit Sonoma or their agents. No stone was left unturned (so one might think) and in order to encourage compliance stock plans should accompany the design requirments.</p> <p>The OWTS should also include a requirement for training of staff on all matters of septic systems</p>		

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098	.2	Summary of Proposed Changes	Elsa Frick	<p>This summary needs to address the changes regarding the requirement for code conforming expansion areas in the bedroom swap sections and in the 50% rule section. There is no mention of this in the changes summary and there are huge consequences to property owners and developers of properties. The code conforming expansion area requirements can represent years of site work and \$20000 in engineering and fees and months and months of already strapped staff time to accomplish. That needs to be put out for all to see. It is a big change and it needs to be presented as such so that there are no surprises when these restrictions are imposed Many of these proposed changes will result in currently considered legal conforming systems becoming non conforming. For example, but not limited to, Lack of sufficient numbers of perc tests, standard type systems and other than drip and pd systems on slopes over 30%, mounds and at grades without separation between expansion beds (if this actually goes through), sites approved by mottling or where greater distances between perc test holes was allowed, criteria applied to sizing criteria that doesn't meet proposed interpretations of rates and other</p> <p>The cumulative impact analyses can severely limit development. Address the ramifications and the need for the expanded section. Please Identify all instances where these new regulations will affect existing system classifications and justify the changes in a manner that addresses the public health concerns and compliance with the State OWTS.</p>	<p>Please see individual section for specific responses.</p>	<p>No action.</p>

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				Please address the need for and authority to ask for information based on making and keeping a record in the summary of proposed changes		
118	.5	TOC	Jeff Loe	Table of Contents says Pretreatment Units are 13.8 while they are 13.9 in the body of text.	Comment noted.  The table of contents was not updated for this version	The table of contents will be updated accordingly in future versions.
001	1	1.1	Ted Walker	Purpose: Discusses the LAMP; has Permit Sonoma submitted the required annual reports to the Regional Boards as outlined in the LAMP and approved by the BOS? Can you give the LUAP members copies of the reports?	The County has not submitted annual reports to the Regional Water Board as the County does not have an approved LAMP at this time.	No action.
273	1.3	1.3.B.4.b	Jessica Chavez	Space between "functioning" and "oil"	Comment noted.	The space has been added.
116	3.1	3.1	Jeff Loe	Suggestion use the acronym GPD rather than gallon per day	For accessibility compliance acronym's need to be spelled out.	No action.
047	3.2.A	3.2 .a	Elsa Frick	as-built plans . This section should only be definitions. This seems to state policy. Making this kind of work for a Permanent Record seems to be an overreach. The gola should only be to correct what was different on the approved septic plan and should pertain to septic only, not the site plan	The term "as-built" is used twice within the OWTS Manual: Section 4.9.G Field Changes and section 15.1.C. Vesting Certificate application requirements. In the first instance field changes are to be noted on "as-built" plans. In the second instance, either the design or "as-built" plans are to be submitted as part of the vesting certificate application.	No action.

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					The definition helps to explain what is meant by “as-built” plans.	
119	3.2.A	3.2.a	Jeff Loe	<p>Use of both <b>Advanced Treatment Unit</b> and <b>Pretreatment</b> is confusing. “Unit” implies equipment to process, maybe leave Unit out of definition and use one of or the other term advanced treatment or pretreatment.</p> <p>Vague references lead to confusion. Leave NSF out or include applicable NSF/ANSI certifications NSF/ANSI 40, NSF/ANSI 245 The standards are set; rely on the standards.</p>	Comment noted.	Align advanced treatment, pretreatment, and supplement treatment and associated units/equipment.
274	3.2.A	3.2.	Jessica Chavez	<p>Advanced Protection Management Plan Recommendation: Remove last sentence, "Currently there are two within Sonoma County; Sonoma Creek and the Russian River." Reason: This may change over time, direct to a reference location that is not in the OWTS Manual.</p>	Agreed. There is a third TMDL – the Petaluma River. The definition can stand without naming the three areas.	Last sentence removed.
275	3.2.A	3.2.	Jessica Chavez	<p>Atterberg Limit Analysis Recommendations: ...when zone 3 or zone 4 soils...</p> <p>Reason: Wet weather percolation test always required when soil texture falls into zone 4, so we don’t need to determine PI of zone 4 soils.</p>	The OWTS Manual does not use the term “Atterberg Limit Analysis” other than the definition. Consider deleting the definition.	<p>Delete definition.</p> <p>We have edited the wet weather percolation section and wet weather perc is only required when concurrence on the soil profile is not reached.</p>
002	3.2.C	3.2	Ted Walker	<p>Cumulative Effects: Definition is a little weak. Suggest wording such as Hydraulic Mounding election below an OWTS and the migration of Nitrogen away from an OWTS for large Onsite Systems exceeding an average daily flow of 1,500</p>	The current Cumulative Effects definition is not new and is not proposed to be edited.	No action.

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				gals/day, or where multiple Onsite Systems are closely aggregated on an individual site. Also, refer to the Ramlit Process identified by the North Coast Basin Plan.	Regulatory language (such as sizes or flow rates) in a definition should be avoided. The regulatory language is more appropriate in section 7-12 where it currently does exist.	
276	3.2.C	3.2	Jessica Chavez	Class 2 Permeable Material Section 68-1.025 might be an incorrect reference. See attached CalTrans Standard Specifications; 68-2.02F(3) Class 2 Permeable Material.	Comment noted.	Reference updated in accordance with current 2018 CalTrans Standard Specifications.
125	3.2.Di	3.2	Jeff Loe	Dispersal System – why include evapotranspiration and infiltration bed in the definition if not used anywhere else in the document.	Other jurisdictions use these system types and a designer may propose them. It does no harm to include.	No action.
124	3.2.Dr	3.2	Jeff Loe	<b>Drain Field or Leach field</b> – Suggest incorporating the term leach lines in the definition.	Comment noted.	Revised to: “rock-filled trenches also known a leachlines”
100	3.2.Du	3.2	Greg Schram	Dual Drain Fields – States they are designed at 75%. 100% Drain fields should be allowed too	Comment noted. The 75% should be the minimum size.	Revised definition to read, “..., each designed to a minimum of <del>at</del> 75% of the toal design flow, ...”
003	3.2.G	3.2.g	Ted Walker	Should add a definition for Gleying. A term used by soils scientist and professionals in logging soil horizons. See USDA.	It is unclear how this definition would be used in the OWTS Manual.	No action.
009	3.2.G	3.2	Ted Walker	Groundwater: The current definition is very vague. Suggest a discussion with consultants and Permit Sonoma, that in many cases there maybe saturated soils encountered regardless of slope that is simply not groundwater. Also, there should be a historical and geographical reference that groundwater conditions are of a concern in a Basin Type Landscape Formation. Currently GW tests are being	If there are concerns of when/where/how to require groundwater evaluations, please cite the concerns and the appropriate section of the OWTS Manual.	No action.

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				asked for far outside of a Basin Landscape. Remember the Basin Plan?		
050	3.2.G	3.2	Elsa Frick	Grade break needs a definition	The term “grade break” is not used in the OWTS Manual. No definition needed.	No action.
005	3.2.H	3.2	Ted Walker	Hydraulic Loading: Add: Where the wastewater applied to a OWTS exceeds the design capacity of the soil conditions, and causes the wastewater to surface of the ground, creating a Public Health Hazard	<p>It is unclear how this definition would be used in the OWTS Manual.</p> <p>Hydraulic loading is the effluent flow rate going into the system. The proposed definition narrows the term “hydraulic loading” to mean an effluent flow rate that creates a failing system. Not all hydraulic loading are overloads or creates a failing system.</p> <p>The OWTS Manual already prohibits failing systems or surfacing systems. See Section 5.1.</p>	No action.
101	3.2.I	3.2	Greg Schram	Impermeable Soil Layer – Notes Zone four expansive soils are impermeable. This is not always true. Some zone 4 expansive clays are permeable.	Comment noted.	Remove reference to Zone 4 soils.
049	3.2.L	3.2.	Elsa Frick	add leaching bed Use the definition of the seepage pit.	Leaching beds are not used or referenced in the OWTS Manual or state OWTS Policy. No definition needed.	Definition of “Seepage Pit” revised within OWTS Manual. Used a blend of “Seepage Pit” definition from state OTWS policy and California Plumbing Code.

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277	3.2.L	3.2.	Jessica Chavez	<p>Add “Leaching Bed” definition from the attached California Plumbing Code H301.0.</p> <p>Recommended definition: Leaching bed means a gravel filled bed with dispersal laterals is used in lieu of trenches, as defined in the California Plumbing Code H301.0.</p>	<p>Leaching beds are not used or referenced in the OWTS Manual or the State OWTS Policy. No definition needed.</p> <p>California Plumbing Code does not define “Leaching Bed”.</p>	Definition of “Seepage Pit” revised within OWTS Manual. Used a blend of “Seepage Pit” definition from state OTWS policy and California Plumbing Code.
004	3.2.M	3.2.m	Ted Walker	Suggest: Add a term, called a Modification of the Onsite SDS. Such as replacing an impacted distribution box, a crushed or impacted pipe between the septic tank and d. box, or an impacted pipe between the d. box and the beginning of the gravel in a standard leachline. In such cases, a septic permit is not required.	Please refer to section 4.8.F. While not a definition, section 4.8.F clearly details the type of work that is exempt from obtaining a septic permit.	No action.
006	3.2.O	3.2	Ted Walker	Organic Loading: Add: “Where the quality of the wastewater in an OWTS causes the formation of an organic biomat layer in the dispersal system, that also causes the wastewater to surface of the ground, creating a Public Health Hazard.”	<p>It is unclear how this definition would be used in the OWTS Manual.</p> <p>Organic loading is rate of organic matter going into the system. The proposed definition narrows the term “organic loading” to mean organic loading at a rate that creates a failing system.</p> <p>The OWTS Manual already prohibits failing systems or surfacing systems. See Section 5.1.</p>	No action.
123	3.2.O	3.2	Jeff Loe	<b>OWTS Failure</b> – Backing up into plumbing fixtures should be removed from definition OWTS Failure. Sewage back up is commonly caused by building waste drain or building sewer blockage or electrical	In some cases a slow or slowing dispersal system can create a backup of effluent into the plumbing fixtures. Having a broader definition may	Revise definition to be explicit that the surfacing effluent or backup is caused by an OWTS component.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
				problem with sewage ejector; neither are part of OWTS.	assist the community with repairs/replacement systems.	
126	3.2.O	3.2	Jeff Loe	<b>OWTS, Replacement</b> is an OWTS that has its treatment capacity expanded, or its dispersal system replaced or added onto. Good example of redundant statement suggest removing either expanded or added on to.	This definition applies to treatment units, septic tanks as well as dispersal systems. The first phrase applies to treatment units and/or septic tanks. The second phrase applies to dispersal. Dispersal systems can be replaced (cutting out a segment and replacing) and/or added onto (a third leach line is being added to the first two.)	For clarification, revised to read: “OWTS, Replacement is an OWTS that has its treatment capacity expanded, or its dispersal system added onto or replace.”
127	3.2.P	3.2	Jeff Loe	<p><b>Strikeout Red text adds nothing &amp; distracts from definition- Post-Construction Storm Water Treatment Facility</b> means a <del>structural best management practice</del> <b>stormwater feature to</b> retain, detain, infiltrate and/or treat storm water runoff. <del>These facilities are specifically designed for post-construction applications and remain on the landscape after construction has been completed.</del></p> <p>Examples include wet ponds, dry basins, multi-chamber catch basins, infiltration basins/trenches, dry wells, porous pavement, grassy swales, filter strips, artificial wetlands, and rain gardens. <del>This definition does not include active construction storm water best management practices such as straw wattles, silt fences, silt basins or similar practices typically used during construction.</del></p>	<p>We tried to not use colors. Deletions are noted with the strikeout font and additions with the underline font.</p> <p>This draft manual provides setbacks from these types of post-construction features. Including examples of what is included and what is excluded assists the reader to understand what the setback applies to.</p>	<p>Ensure only black font and strikeout font for deletions and underline font for additions.</p> <p>No action.</p>

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128	3.2.Pr	3.2	Jeff Loe	<b>Pressure Dosing</b> – applies to more than dispersal fields, include treatment processes.	Perhaps generally, but not in the context of this OWTS Manual. This term is used in the context of effluent dispersal.	No action.
021	3.2.Q	3.2	Rich Holmer (12/30/2021)	The definition of a "qualified inspector" includes a property owner. Is the County going to allow property owners to perform the required inspections in the APMP area? Has the State WQCB bought into this?	The NCRWQCB has seen this definition. If they have a concern, they have not expressed it yet.	No action.
025	3.2.Q	3.2	Rich Holmer (1/17/2022)	The definition of a “qualified inspector” in the TMDL area includes a property owner. This appears to allow the property owner to perform the required 5 year inspections. This addresses concerns that I submitted in 2019 regarding the number of qualified inspectors in the county who can perform the required inspections. I still suggest, however, that a properly certified septic tank pumper be allowed to perform the inspections since not all property owners will be willing or able to perform the inspections. The Water Quality Control Board supports properly certified pumpers performing inspections if the County adopts enabling requirements.	Certified septic tank pumpers should hold a contractor’s license and a licensed contractor is part of the definition for “Qualified Inspector.”	No action.
007	3.2.Q	3.2	Ted Walker	<p>Qualified Consultant: you have spent a lot of time on this definition as to who can and cannot do. But very simply, we need to add that a Qualified Consultant can be a licensed contractor, to design and install Standard OWTS Repairs.</p> <p>Qualified Inspector: you need rewriting here. There is a major problem of integrity if you allow a homeowner to be a Qualified Inspector for their</p>	<p><b>Qualified Consultant Issue:</b></p> <p>Disagree. Contractors do not have the State licensure to design septic systems.</p> <p>Table 4.4 allows licensed contract (A, C-42, C-36) to design repairs.</p>	Revise Qualified Inspector to include National Association of Wastewater Technicians (NAWT).

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
				<p>own, or other properties in an Advanced Protection Area. And, are any Sonoma County Staff also qualified? No Way. You imply building inspectors, planners, secretaries, etc. can be a Qualified Inspector. No Way. Clean this up. And NAWT Certified Professional should be included.</p>	<p><b>Qualified Inspector Issue:</b></p> <p>This is in the context of TMDL compliance and providing an inspection once every five years.</p> <p>This is not for systems with supplement treatment that are in the County's mandated monitoring (OPR) program.</p> <p>The State has not objected to this definition and the five year inspection is for the State's TMDL compliance.</p> <p>The County is advocating for the property owner to be able to satisfy this State TMDL inspection requirement as inexpensively as possible.</p> <p>County staff already perform hundreds of inspections on a variety of system types throughout the county. County staff are qualified.</p>	
245	3.2.Q	3.2	Mike Treinen	<p>Having owners as a qualified inspector is a bad idea. Hard to believe owners are included. Add "other category of inspectors as approved by the PRMD Director" as the volume of inspections will likely exceed the number of experienced industry personnel.</p>	<p>This is in the context of TMDL compliance and providing an inspection once every five years.</p> <p>This is not for systems with supplement treatment that are in the</p>	<p>Revise Qualified Inspector to add, " ... as approved by the Permit Sonoma Director" when reference County of Sonoma staff.</p>

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
					<p>County’s mandated monitoring (OPR) program.</p> <p>The State has not objected to this definition and the five year inspection is for the State’s TMDL compliance.</p> <p>The County is advocating for the property owner to be able to satisfy this State TMDL inspection requirement as inexpensively as possible.</p>	
129	3.2.R	3.2	Jeff Loe	<p><b>Reserve Replacement Area</b> – align with section 6.6 use of word suitable suggests code compliant. All reserve areas may not be code compliant.</p>	<p>A suitable area is not the same as a code compliant area. Section 6.6.B discusses an evaluation of a reserve replacement are and section 6.6.C discusses requiring a code compliant reserve area. Both are suitable reserve areas depending on the percent encumbrance.</p>	No action.
008	3.2.S	3.2	Ted Walker	<p>Soil Structure Grade: I do believe grading the structure of the soils as 0, 1, 2, and 3 is technically correct. However, in the complete definition of Soil Structure, there are technical Factors that influence structure. They are climate, wetting and drying, organic matter, tillage, plants &amp; roots, microbes, and animals. I suggest that you properly refence the entire definition from NRCS properly, not just part.</p>	<p>Comment noted.</p>	No action.
048	3.2.Se	3.2	Elsa Frick	<p>This is the incorrect definition of a seepage pit, correct per CUPC definition</p>	<p>The 2022 CPC defines Seepage Pit as “A lined excavation in the ground which receives the discharge of a septic tank so designed as to permit</p>	<p>Definition of “Seepage Pit” revised within OWTS Manual. Used a blend of “Seepage Pit” definition from state OTWS policy and California Plumbing Code.</p>

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
					the effluent from the septic tank to seep through its bottom and sides”.	
278	3.2.Se	3.2	Jessica Chavez	Change “Seepage Pit” definition to match the attached California Plumbing Code H701.0. Recommended definition: Seepage Pit means an empty circle pit, that is typically 4 to 6 feet in diameter, and is lined with whole new hard-burned clay, concrete brick, or other approved materials as defined in the California Plumbing Code H701.0. is a pit filled with drain rock into which effluent	CPC H701.0 does not define a seepage pit but CPC H701.3 states the construction “shall be circular in shape and shall have an excavated diameter of not less than 4 feet...”  The 2022 CPC defines Seepage Pit as “A lined excavation in the ground which receives the discharge of a septic tank so designed as to permit the effluent from the septic tank to seep through its bottom and sides”.	Definition of “Seepage Pit” revised within OWTS Manual. Used a blend of “Seepage Pit” definition from state OTWS policy and California Plumbing Code.
130	3.2.Si	3.2	Jeff Loe	<b>Site</b> – I do not believe this definition is necessary at all, but if using it please pluralize area(s) in reserve replacement area(s)	We use “site” in several contexts: off-site easement, site evaluation, site evaluation area, etc.  A word can have multiple meanings and we will add a second or third meaning within the definition	Revise the “site” definition with additional meanings to fit the several uses or contexts of “site” as used in the OWTS Manual.
279	3.2.Soil H	3.2	Jessica Chavez	Soil Horizon or Layer Recommendation: Remove last sentence, Soil horizon is also known as soil zone.  Reason: Incorrect statement. Soil zone describes placement of a hydrometer sample point plotted on a soil triangle; only related to texture of soil within the horizon not the horizon as a whole.	Comment noted.	Remove the reference to “soil zone.”

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
051	3.2.Soil P	3.2	Elsa Frick	A soil profile is an excavation in the ground that allows for the analysis of the soil including identification of horizons (see definition of horizons) and soil texture, shape, grade, consistence, color and other characteristics of the soil	Agree. We are using the noun “Soil profile” as a verb or action “to evaluate the soil”	Revert to the “soil profile” definition in OWTS Manual v7.0.
280	3.2.Soil P	3.2	Jessica Chavez	Soil Profile Recommendation: Definition to read as follows, “Soil Profile is the description of soil horizons observed in an excavation, typically observed during the soil evaluation field study. Soil horizons are described by the soil's texture, color, structure, consistence, and other pertinent characteristics.”  Reason: A Soil Profile is not the field study. The proposed “soil profile” definition is a description of a pre-perc. Grade is not used in Sonoma County’s soil horizon descriptions.	Agree. We are using the noun “Soil profile” as a verb or action “to evaluate the soil”	Revert to the “soil profile” definition in OWTS Manual v7.0.
121	3.2.St	3.2	Jeff Loe	<b>Restore definitions of Perennial, Intermittent and Ephemeral Stream.</b> Seems impossible to regulate water quality without these definitions. Perennial and Ephemeral are both terms used in the basin plan.	The January 2021 technical advisory committee advised for the deletion of these terms and to use the blue lines streams on the USGS maps due to ease of use or practicality reasons.  In November 2023, LAUP recommended to use perennial and ephemeral streams.	Reverting to perennial and ephemeral streams.
120	3.2.Su	3.2	Jeff Loe	<b>Supplemental treatment</b> – The typical primary treatment component of OWTS is a septic tank. Supplemental processes almost always occur after the septic tank. Supplemental treatment definitely	Some versions of supplement treatment (active aeration units) occurs prior to settling. Some supplemental treatment	No action

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
				occurs prior to effluent dispersal. Recommend cleaning up definition.	(disinfection) occurs post settling. This definition covers both instances.	
122	3.2.Sw	3.2	Jeff Loe	Should <b>Swale</b> definition include there are no distinct banks	Agreed.	Will add, "... gently sloping sides <u>with no distinct bed or banks.</u> "
131	4.214	4.2.A.4	Jeff Loe	If variance is required state that.	There are not variances. These are more like exceptions. A variance request will not be required. Just demonstration the "exception" is being met.	No action.
246	4.2213	4.2.B.13	Mike Treinen	This is in the "Prohibited" section. A first glance makes it look like non-domestic OWTS are prohibited. Provide referral language to the section where they <u>are</u> approvable.	Understood. Will refer reader to Section 22.2 Non-Domestic Waste Not Subject to the SWRCB OWTS Policy.	4.2.B.13 will be amended to add, "The State OWTS Policy does not grant authority to local jurisdictions to permit the treatment or disposal of non-domestic wastewater. Please see Section 22.2 for the process to permit non-domestic waste discharges."
055	4.229	4.2.B.9	Elsa Frick	Seepage pits are not allowed per this OWTS once the definition of the seepage pit is corrected. THIS OWTS makes no provision of r seepage pits as properly defined	Seepage Pits are technically not prohibited. What is prohibited is less than 10 feet of separation between groundwater to the bottom of the seepage pit.	Definition of "Seepage Pit" revised.
281	4.229	4.2.B.9	Jessica Chavez	If California Plumbing Code definition of Seepage Pits is included, then it is recommended that they be listed as prohibited.  Recommended Addition: 9. Separation of the bottom of dispersal system to groundwater less than 10 feet. Seepage pits meeting the California Plumbing Code definition in Section H701.0. Leach beds previously referred to as seepage pits shall be allowed	Seepage Pits are technically not prohibited. What is prohibited is less than 10 feet of separation between groundwater to the bottom of the seepage pit.	Definition of "Seepage Pit" revised.

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102	4.31	4.3.A	Greg Schram	<p>Mitigations to prohibitions – A 3, 6 and 7</p> <p>3 – Any type of system shall be allowed as long as it meets soil requirements and the geotechnical engineer states it is safe.</p> <p>6 – Whether a tree can be removed or not should be up to a geotechnical engineer.</p> <p>7 – There is no reason to make the soil requirement more restrictive. Again should be up to the geotechnical engineer. Also if it is a steeper slope the effluent is going to want to travel faster horizontally rather than vertical, so not sure why deeper soils would be required.</p>	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p> <p>The OWTS Manual will be edited to be consistent with the OWTS Policy.</p>	<p>Revise 4.3.A to be more consistent with the OWTS Policy. See “Section 17 Variances to Exceptions.docx”.</p>
026	4.31	4.3.A	Rich Holmer (1/17/2022)	<p>This has been changed substantially. The section now requires drip systems or shallow trench pressure distribution systems on slopes over 30% and also requires three feet of soil below the trenches. This substantially increases costs of replacement systems for existing residences on steep parcels. If the property does not meet the three feet of soil requirement, it appears that they will need to file for waste discharge requirements from the WQCB (Section 22.1).</p> <p>In the current County OWTS policy, all that is required if a dispersal system is on a steep slope is a slope stability report without a requirement for any specific system type.</p>	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p> <p>The OWTS Manual will be edited to be consistent with the OWTS Policy.</p>	<p>Revise 4.3.A to be more consistent with the OWTS Policy. See “Section 17 Variances to Exceptions.docx”.</p>

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				<p>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.</p>		
303	4.31	4.3.A	Tammy Martin	<p>For slopes over 30% slope, a slope stability study by a geologist (&amp; waiver) should still be allowed for all systems assuming depth of soil for that particular system is present.</p>	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p> <p>The OWTS Manual will be edited to be consistent with the OWTS Policy.</p>	<p>Revise 4.3.A to be more consistent with the OWTS Policy. See "Section 17 Variances to Exceptions.docx".</p>
052	4.313	4.3.A.3	Elsa Frick	<p>The systems on steep slopes should not be limited to drip or PD systems only. There is no evidence of standard system (or other systems ) failure on steep slopes where a registered geologist has determined there would be no issue with such a system. Adding this restriction to steep slopes is not necessary or warranted. This change in policy from past practice renders all existing systems on steep slopes now legal non conforming. Many standard (including shallow sloping) systems are on steep slopes in Sonoma County, vetted by geologists and there have been no documented failures of them. This requirement drives up installation and operating costs and has no factual supporting reason for it</p>	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p> <p>The OWTS Manual will be edited to be consistent with the OWTS Policy.</p>	<p>Revise 4.3.A to be more consistent with the OWTS Policy. See "Section 17 Variances to Exceptions.docx".</p>

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282	4.313	4.3.A.3 to 4.3.A.7	Jessica Chavez	<p>Recommendation and Reason: Remove system specifics and allow for systems approved by the geotechnical engineer; we are already depending on them to determine the slope stability of the design proposed. If the system meets soil and groundwater requirements, <i>and is approved by geotechnical engineer</i>, then no special are depths needed. There are new tools and equipment coming out to meet construction needs as these types of systems become more common, so it is recommended to remove installed by hand. As long as contractors are not cutting roads or benching to use equipment, then with equipment it isn't a concern.</p> <p>3. Use of a subsurface drip system or shallow trench pressure distribution OWTS.</p> <p>4. Dispersal lines installed by hand.</p> <p>3. 5. No Benching.</p> <p>4. 6. Trees six inches in diameter or smaller larger shall are not to be removed.</p> <p>7. A minimum of three feet of soil depth below the dispersal lines or no evidence of saturation to three feet below the dispersal lines. Dispersal area shall meet all soil depth and separation to perched groundwater requirements</p>	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p> <p>The OWTS Manual will be edited to be consistent with the OWTS Policy.</p>	<p>Revise 4.3.A to be more consistent with the OWTS Policy. See "Section 17 Variances to Exceptions.docx".</p>
053	4.314	4.3.A.4	Elsa Frick	<p>This is not necessary. Many a clever contractor has been able to install standard trenches on steep slopes by building various jigs. The issue is addressed by not allowing benching</p>	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p>	<p>Revise 4.3.A to be more consistent with the OWTS Policy. See "Section 17 Variances to Exceptions.docx".</p>

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					The OWTS Manual will be edited to be consistent with the OWTS Policy.	
247	4.315	4.3.A.5	Mike Treinen	Why no benching? Add language that it's OK if the soils are deep enough and slope stability is OK. Also easier to do work on a bench.	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p> <p>The OWTS Manual will be edited to be consistent with the OWTS Policy.</p>	Revise 4.3.A to be more consistent with the OWTS Policy. See "Section 17 Variances to Exceptions.docx".
132	4.316	4.3.A.6	Jeff Loe	Small tree removal may be safer than large tree removal. Tree removal should be subject to review by geotechnical professional.	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p> <p>The OWTS Manual will be edited to be consistent with the OWTS Policy.</p>	Revise 4.3.A to be more consistent with the OWTS Policy. See "Section 17 Variances to Exceptions.docx".
310	4.317	4.3.A.7	Steve Brown	Should require 24" of soil below trench bottom; why 36"	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p>	Revise 4.3.A to be more consistent with the OWTS Policy. See "Section 17 Variances to Exceptions.docx".

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
					The OWTS Manual will be edited to be consistent with the OWTS Policy.	
054	4.317	4.3.A.7	Elsa Frick	This is an arbitrary addition. Steep sloping sites actually do provide increased soil depth over flat site system simply due to the geometry of the site. There is no justification to require additional depth. Shallow sloping systems provide the soil needed downslope (where the water will travel) and are specifically designed for the steep slope environment. Adding this restriction to steep slopes is not necessary or warranted. This change in policy from past practice renders all existing systems on steep slopes now legal non-conforming	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p> <p>The OWTS Manual will be edited to be consistent with the OWTS Policy.</p>	Revise 4.3.A to be more consistent with the OWTS Policy. See "Section 17 Variances to Exceptions.docx".
133	4.317	4.3.A.7	Jeff Loe	If one can site a drip system with 24" of soil beneath to 30% slope the additional foot of sub soil is arbitrary. <b>Please offer justification.</b> This could result in more aggressive designs rather than well designed drip fields. Bear in mind that oftentimes a portion of the drip field will be >30% slope, and by lengthening the system into steeper slope areas is good sound design. Also may have been intended to read " <b>and</b> no evidence of saturation". Three feet need not be restated-	<p>The standards did not change. The language from Section 17, row 5 was moved to this location.</p> <p>The OWTS Policy allows any system on slopes &gt;30% with a slope stability report.</p> <p>The OWTS Manual will be edited to be consistent with the OWTS Policy.</p>	Revise 4.3.A to be more consistent with the OWTS Policy. See "Section 17 Variances to Exceptions.docx".
134	4.341	4.3.D.1 and 2	Jeff Loe	Simply require NSF/ANSI 40 & NSF/ANSI 245 certified processes be included.	These are standard directly from the OWTS Policy and need to be achieved for compliance with the OWTS Policy.	No Action

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
010	4.4	4.4	Ted Walker	Qualified Professional and the chart, it appears that you are not allowing licensed contractors to design septic repairs. I suggest that we clean this up, so that a Qualified Professional, such as a licensed contractor, can design and install the repair, replacement, or modification of a Standard Types of Septic System. At this time, we are all hearing about boot legged septic system installations without permits and oversight. At this time, your current restrictions are too difficult and expensive for the homeowner. If you get rid of the 50% rule for repairs in section 4.8, that number of permitted repairs will go down. Not good Public Health practice.	<p>A qualified consultant, licensed contractor or home owner / builder can conduct repairs.</p> <p>The County and State (through licensing boards) do not allow contractors to design septic systems including replacement dispersal systems.</p> <p>The 50% rule is being removed at the direction of the Regional Water Board, hopefully to be replaced with 25%.</p>	<p>Edit section 4.4.A.3 to include homeowner.</p> <p>Edit section 4.4.A.4 to change land owner to homeowner.</p> <p>Edit Table 4.4 to be consistent with the edited 4.4.A.3 and A.4</p>
311	4.4	4.4 Table 4.4	Steve Brown	Tank Replacement should include owner/builder option	Agreed. There are standards, such as tank size, tank material, setbacks, that would need to be documented and verified, but a tank replacement is relatively light design work.	<p>Edit section 4.4.A.3 to include homeowner.</p> <p>Edit section 4.4.A.4 to change land owner to homeowner.</p> <p>Edit Table 4.4 to be consistent with new 4.4.A.3 and A.4</p>
135	4.414	4.4.A.4	Jeff Loe	Suggest excluding "land owner". At best make it consistent with Homeowner/builder in Table 4.4	Agreed. We should strive for consistent language.	<p>Edit section 4.4.A.3 to include homeowner.</p> <p>Edit section 4.4.A.4 to change land owner to homeowner.</p> <p>Edit Table 4.4 to be consistent with new 4.4.A.3 and A.4</p>

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103	4.543	4.5	Greg Schram	Should just state a minimum of 75% dual fields are required. 100% shall be required too.	Comment noted.	Delete provision 4.5.D.2 and 4.5.D.3.
312	4.543	4.5.D.3	Steve Brown	Eliminate dual field or pressure dose; no need to make more stringent than new system	Agree. Provisions 4.5.D.2 and D.3 are being removed from this section.  If a client proposes an ADU or additional bedroom(s) to take advantage of the low flow fixtures, that proposal will be evaluated separately.	Delete provision 4.5.D.2 and 4.5.D.3.
056	4.543	4.5.D.3	Elsa Frick	Why has this restriction been added? There is no such restriction for any low flow design flow in current standards. Why not just allow the calculation based on changing out the fixtures. There are very limited existing system that would meet this criteria, so while the allowance to lower the flow calculation seems like a “give” it will almost never be able to be applied. Or generate costs and complications (installing a sump and pump to deliver to existing leachlines) that are not warranted. It might seem like equal flow distribution is better, but that has not been proven. Especially for systems that only have one leachline there is no benefit to pumping to it.	This is not a new regulation.  Regardless, provisions 4.5.D.2 and D.3 are being removed from this section.  If a client proposes an ADU or additional bedroom(s) to take advantage of the low flow fixtures, that proposal will be evaluated separately.	Delete provision 4.5.D.2 and 3.5.D.3.
136	4.6	4.6	Jeff Loe	Recommend use of <b>servient tenement</b> and <b>dominant tenement</b> . Eliminate all other references to lots & parcels.	I will have the county surveyor review your recommendation.	Obtain input from County Surveyor.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
248	4.66	4.6.F.3.a	Mike Treinen	Allow variance for large parcels - pick a reasonable size. To design the grantor's future system and reserve in an area that might never even be used is more time and probably unnecessary expense.	Our position is we should not allow the grantee to prevent the grantor from the highest and best use that the zoning will allow.	No action.
313	4.68	4.6.H.2	Steve Brown	What does the ownership of a lot have to do with the definition of abutting? It appears this was added to chapter 7 as standards were developed for septic easements. Not sure why ownership matters.	Section H needs to be evaluated and cleaned up. We are currently in discussions with County Counsel and with the County Surveyor.	Continue discussion with County Counsel and with the County Surveyor.
104	4.684	4.6.H.4	Greg Schram	H4 – States Lots separated by a public road or highway shall not be considered abutting. There is no reason that a lot should not be allowed to cross a street or travel down a public road to get to an easement on another lot. It should just require an encroachment permit. It also states that it is ok to do this in a major subdivision. If a major subdivision can do it then individual parcels should be allowed as well.	Section H needs to be evaluated and cleaned up. We are currently in discussions with County Counsel and with the County Surveyor.	Continue discussion with County Counsel and with the County Surveyor.
057	4.76	4.7.F.1	Elsa Frick	It takes most projects 6 months to a year to get plan check approved. There are many instances where the process takes over a year, thereby rendering expiration during the process itself. Reconsider this to be more fair. This OWTS document, if approved will drive up the number of submittals required and staff already struggles to get projects out timely. To be fair, make the time period for the date of plan check approval. Everyone walks away a winner this way	<p>Granted the time to first review is lengthy in the Well and Septic section.</p> <p>Permit Sonoma is under a management review and subject to AB 2234, both of which call for quicker plan reviews.</p> <p>We are optimistic the time for first review for Well and Septic can also come down to a reasonable time frame.</p>	No action.

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011	4.8	4.8	Ted Walker	You have deleted the 50% replacement rule, down to zero. See comment above. This is going in the wrong direction. The State Water Resources Control Board is not aware of the local impact to this new regulation. Sometime, a septic system needs a modification here or there. So, at this time, I am going to suggest three elements in which a Septic System Trench Modification Can be Permitted without the need for a Site Evaluation, Soil Profile Hole or Ground Water Determination test. Case #1, standard existing trenches (that were previously permitted and inspected) where trenches are impacted by excessive root intrusion, siltation, and organic loading (formation of the Bio Mat layer in the trench). In such cases, the Qualified Consultant (licensed contractor may propose, permit, and install re-excavated leachlines, gravel beds, chambers, and related piping but not deeper than the current trenches. Note: this could be incorporated into Section 5.3 of the OWTS regs.	<p>The decision related to the 50% rule is being removed at the direction of the Regional Water Board, hopefully to be replaced with a 25% rule.</p> <p>The County and State (through licensing boards) do not allow contractors to design septic systems including replacement dispersal systems.</p>	Revert to section 4.8.D.3 contained in OWTS Manual v7.0, while editing the 50% to read 25%.
027	4.834	4.8.C.4	Rich Holmer (1/17/2022)	The 50% threshold for a repair versus a replacement dispersal system has been deleted entirely. In discussions with the North Coast Regional Water Quality Control Board, they have indicated that there may be some flexibility for minor additions to the dispersal system. Was an attempt made to negotiate this provision with the WQCB?	There have been numerous attempts at negotiating this point over the last several years. The latest RWB direction is that any length of a leach line or dispersal area is considered a replacement system.	<p>Revise 4.8.C.4 by replacing 50% with 25%.</p> <p>Revise 4.8.D.3 by replacing 50% with 25%.</p> <p>Add a new provision, 4.8.D.4, which recognizes in kind repairs of non-standard systems.</p>
058	4.84	4.8.D	Elsa Frick	There should be a provision to allow for the removal of bio mat. Staff is already measuring every thing to significant figures not appropriate for the technology (1/8" in from ground surface for example where it is not possible to measure to that level of	It is fully expected some scraping of the bottom will occur when the gravel is being removed.	Revise section 4.8.D.1 and 4.8.D.2 to recognize the removal of the biomat.

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				accuracy) there will be no end to the squabbles. We need to allow for the removal of biomatted soil in trench replcaments. It is usually only and inch or 2 and not significant to the intent of the policy	We can add some language regarding incidental deepening to remove the biomat, not expected to exceed a few inches.	
283	4.841	4.8.D.1	Jessica Chavez	1. (...) The trench shall be repaired no deeper than required to remove the biomat. the existing trench. 2. (...) The trench shall be repaired no deeper than required to remove the biomat. the existing trench.	It is fully expected some scraping of the bottom will occur when the gravel is being removed.  We can add some language regarding incidental deepening to remove the biomat, not expected to exceed a few inches.	Revise section 4.8.D.1 and 4.8.D.2 to recognize the removal of the biomat.
284	4.842	4.8.D.2	Jessica Chavez	1. (...) The trench shall be repaired no deeper than required to remove the biomat. the existing trench. 2. (...) The trench shall be repaired no deeper than required to remove the biomat. the existing trench.	It is fully expected some scraping of the bottom will occur when the gravel is being removed.  We can add some language regarding incidental deepening to remove the biomat, not expected to exceed a few inches.	Revise section 4.8.D.1 and 4.8.D.2 to recognize the removal of the biomat.
249	4.843	4.8.D.3	Mike Treinen	If original plans are not available, as is not uncommon due to pre-code, lost, misfiled etc, add language allowing for design by a Qualified Professional.	This provision attempts to allow in-kind repairs, not a newly design system.  However, the point is taken that in some instances the plans cannot be found.	Revise section 4.8.D.3 by adding, "... with the original plans or original construction, as observed in the field."  Section 4.8.D.3 will become 4.8.D.4 due to earlier comments.

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059	4.859	4.8.E.9	Elsa Frick	Soome provision should be made if an underprivileged owner needs to make repairs to an existing structure due to unsafe conditions but has a home served by a cesspool or other than non conforming system (wooden tank) and has to upgrade the system in order to comply with this OWTS in order to make repairs to their structure	<p>Section 4.8.E.9 is for a hardship replacement septic permit, not a building permit.</p> <p>A repair for an unsafe condition would not likely trigger a septic review. There would not be additional waste flow and work would typically be internal or at least no work outside the existing footprint.</p> <p>We can consider expanding 6.1.C to include building permits with plan check to repair unsafe conditions to an existing structure.</p>	
137	4.89	4.8.J	Jeff Loe	OWTS clearance should be required for all control panel replacements. The building inspector checks for code compliance only. Someone must verify that the panel is functioning properly. I recommend inspection to verify function be performed by qualified consultant, certified operator or Well & septic specialist.	Agreed. A field clearance might be appropriate.	Revise to include the recommended language.
138	4.899	4.8.K	Jeff Loe	OWTS clearance should be required for all solids handling pump applications being part of OWTS. Low rate septic tank effluent pumping should be considered. These pump systems with 3" plumbing at 20 GPM can surcharge septic tanks and treatment systems if not properly deployed. Override cycles and alarms are sometimes triggered by high flow rates. I recommend that sewage at 20 GPM not be	<p>As we are seeing more and more "lift stations" we need to consider adding a section for standards: capacity/sizing, how to tie into the septic tank.</p> <p>This section merely says a building permit is needed for the electrical connection.</p>	Creation of a section dedicated to lift stations.

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				connected to a septic tank that also serves as recirculation tank.		
285	4.89993	4.9.C	Jessica Chavez	<p>Recommended Addition to 4.9(C) Inspections. Paragraph (...) may waive attendance or approve alternative form of inspection.</p> <p>Reason: This would allow staff to approve photos or videos of minor system component installation, as deemed appropriate. Would be suitable for tank destructs, field cover, erosion control placement, etc.</p>	Agreed.	Revise to add the proposed language so the last sentence in paragraph 4.9.C reads, "The Permit Authority may waive attendance or approve alternative forms of inspections."
286	4.899932	4.9.C.2	Jessica Chavez	Spaces needed and recommended change, "previously approved proper location, and placed on contour. Drip tubing shall be installed on contour or within manufacture's allowed tolerance."	<p>Agreed on the spaces here and in other locations throughout the document.</p> <p>The intent here is that the major components of dispersal field are to be inspected. Not the specific details of each type of dispersal field.</p> <p>Consider removing the details. The details are presented in the specific sections.</p>	Revised to add spaces between the words.
314	4.899934	4.9.C.45 & 6	Steve Brown	Reorder to 4) final inspection, 5)189 inspection, 6)startup inspection	Agreed.	Revise to re-order as noted and to add tank destruct.
287	4.899937	4.9.C.7	Jessica Chavez	<p>Add tank destruct inspection. Recommended Addition:</p> <p>7. Destruction of existing septic tank, if applicable</p>	Agreed.	Revised to add the proposed item 7 to the list of inspections.

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028	4.899938	4.9.G	Rich Holmer (1/17/2022)	The provision of an as-built drawing for the OWTS is in line with past practice. Currently, some staff have been interpreting this to mean that any change in location of a dwelling or roadway must be incorporated into the as-built OWTS plan before final approval can be received on the OWTS construction permit. This results in the OWTS designer having to prepare an as-built plan for the entire parcel rather than for just the OWTS. This burden should not be imposed upon the OWTS designer and is an unnecessary expense to the property owner.	<p>This does not appear to be a question on the standard, but more of a process issue.</p> <p>The site map prepared by the Qualified Consultant should be accurate at time of submittal.</p> <p>If the site map is found to be inaccurate, it is reasonable to have the site map revised.</p> <p>It is very common to refer to site maps from prior permits to unravel how the site has been developed over time. Having accurate site maps that are currently before staff will pay dividend in the future.</p>	Revised to include language to clarify that “changes to the OWTS are minor, the changes shall be shown on as-built plans.”
139	4.899939	4.9.J	Jeff Loe	The permittee is often totally disconnected from the installation process and is not best person to notify inspections. Suggest rewording to <b>installer or permittee</b> .	The permittee is whoever signs the application for the permit. That person is responsible to ensure to work is completed and inspected.	Revise to include language, “The permittee or their agent shall notify”
140	4.8999392	4.9.J.2	Jeff Loe	This should be referenced to 4.4 but there is ambiguity where contractor and land owner are listed in 4.4. I recommend that letters from qualified consultants be required when the following are involved: interceptor drains, fills, shallow sloping, pumped, non-standard alternative & experimental, commercial & industrial.	<p>Not in agreement on the ambiguity since 4.9.J.2 applies to only those types of system required to be designed by a Qualified Consultant.</p> <p>These system types are listed in the first row of Table 4.4 and 4.4.A.1, A.2.</p> <p>However, adding clarifying language here is easy.</p>	Revise section 4.9.J.2 with language that refers to section 4.4.A.1 and A.2.

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250	4.9102	4.10.B	Mike Treinen	Original Consultants die, close their business or move out of the area and be unreachable. Provide language to allow for such contingencies.	<p>The intent is to address a change of Qualified Consultant for any/all reasons based on the phase of the project.</p> <p>The language reflects where the project left off in the process versus the reason why the first Qualified Consultant is no longer involved.</p>	No action.
251	4.9103	4.10.C	Mike Treinen	Original Consultants die, close their business or move out of the area and be unreachable. Provide language to allow for such contingencies.	<p>The intent is to address a change of Qualified Consultant for any/all reasons based on the phase of the project.</p> <p>The language reflects where the project left off in the process versus the reason why the first Qualified Consultant is no longer involved.</p>	No action.
315	4.9114	4.11.D	Steve Brown	Replace “open groundwater test periods” with “an open wet weather test season”	Agreed, we can change “test period” to “test season”	Revise as suggested.
029	4.913	4.13	Rich Holmer (1/17/2022)	This appears to be an attempt to allow some flexibility for replacement systems. It is fairly limited in scope, however, and relies on the installation of non-standard systems with pretreatment for the “exceptions”. I feel that there should be flexibility allowed in the design if the site and soil conditions are appropriate for not providing pretreatment or a non-standard system.	<p>Section 4.13 may appear to be new, but it is not. We have taken specific variances and moved them from section 17 and placed some of them here in Section 4.13 as exceptions. Other rows in Table 17 were moved to other locations in the revised draft.</p> <p>Please note that Table 17, rows 2, 3, 4, all refer to developed parcels only. This language was modified to read</p>	No action. See “Section 17 Variances to Exceptions.docx”.

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					<p>“For replacement dispersal area(s), ...”</p> <p>The difference being a developed parcel could propose a replacement system to maintain the existing development or a developed parcel could propose a new system for a new dwelling when the client is adding an ADU.</p> <p>The language of “developed parcels only” was intended to maintain existing development and has been used to argue for relaxed standards for second dwellings or ADUs. The proposed revision excludes relaxed standards for new systems.</p> <p>New systems should adhere to the design standards.</p> <p>Table 17, rows 2, 3 and 4 are now 4.13.A.1, A.2 and A.3.</p> <p>Table 17, row 1 is now 4.13.B.</p> <p>Table 17, row 13 is now 4.13.C</p> <p>If the site conditions do not provide the correct depth of good soil, or the correct separation to groundwater or percolation rates within acceptable ranges, the designer would need to acknowledge these limitations and</p>	

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					mitigate in some fashion or if in the TMDL provide an argument for substantial conformance.	
304	4.913	4.13	Tammy Martin	There should be more flexibility allowed in the design if soil conditions warrant not providing pre-treatment or a non-standard system.	See above response.	No action. See "Section 17 Variances to Exceptions.docx".
044	4.9131	4.13.A.1	Tai Nguyen	Section 4.13, A, 1. Change 15 percent fine to 15 percent silt and clay.	Agreed	Revise 4.13.A.1 accordingly. See "Section 17 Variances to Exceptions.docx".
060	4.9131	4.13.A.2	Elsa Frick	This should say an "average" percolation rate of less than 1 mpi. One or 2 fast holes does not mean too fast a perc. It is not uncommon to end up near a gopher channel that break free during a perc test. Perc tests are not perfect, but a simple method to demonstrate permeability. Significant figures need to be applied in the analysis of permeability . There is much too much effort being made to carry out analyses to minute detail not supported by the technology of sewage disposal. (structures need to be built to the nearest 1" in many cases, septic systems to the nearest 10' in most cases)Drilling down on one or 2 fast holes in a septic filed is missing the point of average. It is a myth (almost magical thinking) to assume all the waste will gravitate to the fast hole and stream immediately to the groundwater and contaminate ift for all eternity.This is overkill and should only apply if the "average percolation rate is less than 1 mpi"	<p>Consider 10 perc holes:</p> <p>One hole is 40 mpi. Nine holes are &lt; 1 mpi.</p> <p>For this mathematical example, assume these nine are a zero mpi (worst case scenario).</p> <p>The average is 40 mpi / 10 holes for an average percolation rate of 4 mpi.</p> <p>Allowing the criteria to be an average of less than 1 mpi is not appropriate as the vast majority of the site could have percolation rates of &lt; 1 mpi and still have an average percolation rate &gt; 1 mpi.</p> <p>Further, staff has researched this topic extensively going back to old basin plans, discussions with the RWB staff and with other jurisdictions. No</p>	No action.

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					<p>jurisdictions that we know of allows &lt; 1 mpi perc rates to be used.</p> <p>Despite that, Sonoma County does allow &lt; 1 mpi test locations to be utilized for specific system types with appropriate mitigations.</p>	
288	4.91312	4.13.A.2	Jessica Chavez	<p>Recommended: (A)2. For dispersal area(s) having soils with an average percolation rate less than one minute per inch (...).</p>	See response above.	No action.
061	4.91313	4.13.A.3	Elsa Frick	<p>Why is this limited to gravels? What about rock content? Why is the perc rate limited to 1-5 mpi only? A soil with over 50% rock and slower percolation rate means the water is traveling through soil that is likely providing treatment. This whole section is going to result in more percolation test requirements for replacing septic systems. Driving up costs, delays and adding workload to already stressed staff. I certainly appreciate the attempt to address every possible instance where an existing property needs to replace a septic system in failure but cannot meet the details of this OWTS manual with regard to siting septic systems for new construction in this County but the level of</p> <p>RESTRICTIONS AND DETAILED EXPENSIVE ANALYSIS AND REQUIREMENTS FOR THE CONSTRUCTION OF THE SEPTIC SYSTEM WILL DRIVE PROPERTY OWNERS TO NOT GET PERMITS FOR REPAIRS! WE'VE BEEN HERE BEFORE.</p>	<p>Section 4.13 may appear to be new, but it is not. We have taken specific variances and moved them from section 17 and placed them here as exceptions. Other rows in Table 17 were moved to other locations in the revised draft.</p> <p>Please note that Table 17, rows 2, 3, 4, all refer to developed parcels only. This phrase was modified to refer to replacement dispersal area since on a developed site, the presumption is there is an existing system and any proposed OWTS would be a replacement system.</p> <p>Table 17, rows 2, 3 and 4 are now 4.13.A.1, A.2 and A.3.</p> <p>Table 17, row 1 is now 4.13.B.</p>	Revise 4.13.A.3 to be more inclusive that just "gravel."

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					<p>Table 17, row 13 is now 4.13.C</p> <p>The standards did not change merely converted from variances to exceptions.</p>	
252	4.91313	4.13.A.3	Mike Treinen	Just noting that allowing soils w/ > 50% gravels is a large change from current 50% limitation	<p>This is not a new standard.</p> <p>4.13.A.3 came from Table 17 row 3, and is for a replacement system only in order to maintain the existing dwelling.</p>	No action.
289	4.91313	4.13.A.3	Jessica Chavez	<p>Recommended the following. (B) 3. For replacement dispersal area(s) having soils with greater than 50 percent gravels, and either an average percolation rate between 1 mpi and 5 mpi or no percolation test on file, the dispersal area(s) may be approved provided the following criteria are met: a. The dispersal area(s) has a percolation rate of one to five minutes per inch; and a. 1) A non-standard system type with the use of a pretreatment unit; or b. 2a) A standard system type with the use of a pretreatment unit and, 2b) A standard system type with the use of ultraviolet disinfection.</p> <p>Reason: More accurately reflects treatment concerns when high gravel content is observed, as it relates to percolation rates being too fast. Allows separation from cases where gravelly soils with suitable percolation rates are observed (see comment 4.13D)</p>	<p>The assumption here is that a replacement area is being proposed and that site evaluation work will be conducted or in compliance with section 7.6 for developed sites.</p>	No action.

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316	4.91313	4.13.A.3.a	Steve Brown	<p>Replace “gravels” with Coarse fragment” and “rate of one to five minutes per inch” with “no faster than one minute per inch”.</p> <p>Soils with more that 50% coarse fragment are not always fast perc</p>	<p>If the perc rate is only in the range of one to five, wouldn't that exclude rates faster than one mpi. It seems that that language be redundant.</p>	<p>Revise 4.13.A.3 to be more inclusive that just “gravel.”</p>
290	4.91314	4.13.A.4	Jessica Chavez	<p>4. For replacement dispersal areas that have less than 24 inches of suitable soil depth and/or less than 24 inches of separation to perched groundwater, the dispersal area may be approved provided the following criteria are met:</p> <p>a. A mound septic system with up to six inches of additional sand; or</p> <p>b. A mound with pretreatment; or</p> <p>c. An at-grade type septic with pretreatment and ultraviolet disinfection.</p>	<p>Assuming this is a proposal to add a new provision 4.13.A.4.</p> <p>We have permitted less soil with pretreatment with up to 9” of additional sand.</p> <p>Less than 24” to groundwater requires RWB approval (per the OWTS Policy).</p>	<p>No action.</p>
291	4.91315	4.13.A.5	Jessica Chavez	<p>5. For replacement dispersal area(s) that cannot meet property line, structure, or driveway setbacks, the dispersal area(s) may be approved provided the following criteria are meet:</p> <p>a. Upslope and lateral setbacks for dispersal areas using fill are reduced to no less than five feet; and</p> <p>b. The dispersal area remains on the subject parcel; and</p> <p>c. If a non-standard dispersal area utilizes the reduced setback(s) then a monitoring well shall be placed at the property line(s) with the reduced setback applied.</p>	<p>Assuming this is a proposal to add new provision 4.13.A.5.</p> <p>This would allow systems up to the property line. At this point a review is needed for downslope receptors.</p> <p>These cases should be addressed via a variance.</p>	<p>No action.</p>

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317	4.91322	4.13.B.2	Steve Brown	The code includes conforming systems for two feet of soil depth. If this is an exception it should require a minimum of one foot of adequate soil depth and nonstandard with disinfection or standard with pretreatment and disinfection.	<p>Two feet of soil depth is only conforming if mitigated.</p> <p>Standard systems require three feet of soil. The three feet can be reduced to two feet with either: a non-standard system; or a standard with treatment and disinfection.</p> <p>We are not proposing to allow a soil depth of one foot with a non-standard system and disinfection.</p> <p>We do have non-standard systems with pretreatment for other reasons, but not reducing to one foot of soil depth.</p>	No action.
105	4.91322	4.13.B.2.b	Greg Schram	B2b – Does this mean that if we now use a pretreatment unit to reduce the soil requirement for standard systems that now UV disinfection is required. This contradicts the pretreatment section of the policy and is not what has been practiced.	No. You’d need both if one is mitigating both soil depth and a setback distance to a well, water source, or stream. We’ve clarified the cumulative/ independent nature of the mitigations.	Revised to be consistent with “Section 17 Variances to Exceptions.docx”.
062	4.9133	4.13.C	Elsa Frick	Many soils have an impermeable lens. Impermeable needs to be defined. Where, relative to the disposal point in the soil horizons is the “impermeable lens”? This section needs more context as to what it is addressing. Review UPC	<p>This is when designers propose to place the dispersal below the impermeable soil lens.</p> <p>Impermeable soil layer is defined.</p>	Add a provision to the effect, “The dispersal area is installed in the permeable soil.”

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				regarding soils to be used in sewage disposal		
292	4.9133	4.13.C	Jessica Chavez	<p>Recommend update to reflect Plumbing Code, potential mistype. No need to say non-standard as the pretreatment unit will automatically make any system non-standard. Non-standard system types (PD, Drip) cannot be installed under a permeable soil lens per design standards.</p> <p>C. Exception for Impermeable Soil Lens</p> <p>1. For dispersal area(s) having an impermeable soil lens, the dispersal area(s) may be approved provided the following criteria are met:</p> <p>a. There is permeable soil below the impermeable soil lens; and</p> <p>1. The dispersal area is installed in the permeable soil; and</p> <p>2. Use of a non-standard system type; and</p> <p>2. 3. Use of an approved pretreatment unit.</p>	Agree. That is the intent.	Add a provision to the effect, "The dispersal area is installed in the permeable soil"
293	4.9134	4.13.D	Jessica Chavez	<p>Recommend adding an exception for when a suitable percolation rate is obtained in soils with a high gravel content.</p> <p>Reason: The concern with greater than 50% rock content is that percolation rates will be too fast to proper treat effluent and the effluent will not travel through soil (filter media) but rather through cracks and void space. Gravelly soils are often acceptable, as effluent will need to travel through the soil between the gravels and no large cracks will be encountered. Direct percolation testing can be performed to determine the soils suitability (percolation rate). Referenced below as addition</p>	There is also the concern about the lack of adequate soil depth. One might adjust the soil depth by dividing by the percent rock to establish an equivalent depth of soil. But then again the type of rock matters as well. This needs further consideration.	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
				<p>4.13(D) for ease of notating it is an addition to section 4.13.</p> <p>4.13 (D) Exception for greater than 50% gravel content.</p> <p>For dispersal area(s) having soils with greater than 50 percent gravels, dispersal areas may be approved provided the following criteria are met:</p> <ul style="list-style-type: none"> <li>a. A percolation test is performed; and</li> <li>b. An average percolation rate of 1 mpi or greater is observed</li> </ul>		
294	4.9135	4.13.E	Jessica Chavez	<p>4.13(E) Exception for Dispersal Area Over Inground Septic System</p> <p>For new dispersal area(s) over an existing inground septic system, dispersal areas may be approved provided the following criteria are meet:</p> <ul style="list-style-type: none"> <li>1. Separation between the bottom of the proposed dispersal area and top of the existing inground septic system’s gravel is equal to or greater than the required minimum depth of soil below the proposed dispersal area type; or</li> <li>2. A mound dispersal area with up to six additional inches of sand; or</li> <li>3. A mound dispersal area with an approved pretreatment unit; or</li> <li>4. An at-grade dispersal system with an approved pretreatment unit and ultraviolet disinfection</li> </ul>	<p>What is the condition of the soil over the existing / old system? This needs further consideration.</p>	<p>No action.</p>
030	6.432	6.4.C.2	Rich Holmer (1/17/2022)	<p>This is where a bedroom is eliminated from the primary unit to allow a bedroom in an ADU. As before, a properly functioning non-conforming system is allowed but there is a new requirement now added for a code conforming reserve expansion</p>	<p>The client is adding a new dwelling structure to the property. It is appropriate to ensure there is adequate reserve capacity for the development on that parcel.</p>	<p>Revise section 6.4.C.2.b to strike “code compliant” in front of reserve replacement area.</p>

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				area. This will result in considerable expense and time delays and will affect construction of ADUs.	The definition of a reserve replacement area ensures the reserve area has been evaluated, whether 15 yrs ago or last week.	
063	6.432	6.4.C.2.b	Elsa Frick	This was not in the previous OWTS There is no justification for this requirement. It is not driven by the State OWTS. It is not in keeping with the BOS and State demands for finding more housing quickly It seems to address a different agenda not in keeping with State and local demands for housing. It will drive up costs \$20,000 and delays potentially up to years if groundwater testing is required and the sheer number of properties it addresses will add further workload and delay in processing. All for something that may never be built	The plumbing code requires every building to be evaluated such that the reserve area is not adversely affected. This section refers to section 6.6 which establishes the 50% encumbrance system which provides more flexibility as compared to the plumbing code.  The client is adding a new dwelling structure to the property. It is appropriate to ensure there is adequate reserve capacity for the development on that parcel.	See revisions above.
253	6.432	6.4.C.2	Mike Treinen	Adding requirement for code compliant reserve for ADU's is a step backward for homeowners and further discourages legal additional housing. Requiring evaluation or requirement for guest house reserve - same comment as for ADU's.	We do need to balance differing goals. Yes the State and County want more housing, however, we also need housing that is sustainable in the long run.	See revisions above.
295	6.432	6.4.C.2.b	Jessica Chavez	b. If an increase in encumbrance is proposed, a code compliant reserve replacement area is required for the primary dwelling unit and ADU, pursuant to Sections 4.11.A and 6.6.	Depends on the percent encumbrance the building project/permit creates, if any.	See revisions above.
305	6.432	6.4.C.2	Tammy Martin	There should be the ability to have a non-conforming reserve area if the primary system is non-conforming.	Agree, provided the reserve area was evaluated with a soil evaluation, perc testing, etc.	See revisions.

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031	6.442	6.4.D.2.B	Rich Holmer (1/17/2022)	An "evaluation" of the reserve area or a code conforming reserve area is proposed to be required, see comments on Section 6.6.	Comment noted.  See response below.	See revisions.
064	6.442	6.4.D.2.b.	Elsa Frick	This was not in the previous OWTS There is no justification for this requirement. It is not driven by the State OWTS. It is not in keeping with the BOS and State demands for finding more housing quickly It seems to address a different agenda not in keeping with State and local demands for housing.It will drive up costs \$20,000 and delays potentially up to years if groundwater testing is required and the sheer number of properties it addresses will add further workload and delay in processing. All for something that may never be built!	Correct, it is driven by the California Plumbing Code which requires a replacement area for all proposed structures.  The 50% encumbrance method satisfies the intent of the plumbing code while affording some flexibility.	See revisions.
254	6.442	6.4.D.2	Mike Treinen	Adding requirement for code compliant reserve for ADU's is a step backward for homeowners and further discourages legal additional housing. Requiring evaluation or requirement for guest house reserve - same comment as for ADU's.	We do need to balance differing goals. Yes the State and County want more housing, however, we also need housing that is sustainable in the long run.	See revisions.
296	6.442	6.4.D.2.b	Jessica Chavez	b. If an increase in encumbrance is proposed, a code compliant reserve replacement area is required for the primary dwelling unit and ADU, pursuant to Sections 4.11.A and 6.6.	Comment noted.	No action
255	6.45	6.4.E	Mike Treinen	It seems excessive to demand reserve evaluation or requirement in every case for barns, pools etc., especially on larger parcels, when this is already more appropriately addressed by your "encumbrance" language.	The California Plumbing Code requires a replacement area for all proposed structures.  The 50% encumbrance method satisfies the intent of the plumbing code while affording some flexibility	No action

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045	6.453	6.4.E.3	Tai Nguyen	Section 6.4, E, 3: Non-bedroom accessory structures with plumbing shall provide documentation that the proposed structure does not represent an increase in wastewater flow to the existing septic system. I can't think of a document to provide. What documents are you referring to?	Building plans for structures should be sufficient to demonstrate no new bedrooms, no new kitchens, etc, and that the structure is not a dwelling.	No action.
033	6.522	6.5.B.2	Rich Holmer (1/17/2022)	This now requires reserve area in accordance with Section 6.6.	Correct.	No action.
256	6.522	6.5.B.2	Mike Treinen	Adding a deck or possibly even replacing one would come under this section. Same comments as above in 6.4E	Adding a deck would trigger 6.5.B.2. Replacing a deck would be work in an already encumbered area.	No action.
297	6.522	6.5.B.2	Jessica Chavez	2. For proposed additions which increase encumbrance the building footprint, a reserve replacement area shall be evaluated or required for the primary dwelling unit, pursuant to Sections 4.11.A and 6.6.	Correct. Comment noted.	No action
319	6.522	6.5.B.2	Steve Brown	Change to "a reserve replacement area shall be shown on the building application site plan. The reserve area shown will be based upon reserve area documented in permit records or by designation of reserve equivalent to existing system sizing."  The entirety of Section 6.6 could be eliminated.	Minimum standard site plan requirements for the department includes showing septic systems and expansion areas.  We could remove section 6.6 but then we are subject to the plumbing code language.	No action.
032	6.55	6.5.E	Rich Holmer (1/17/2022)	This replaces existing Section 6.5.D. and now requires reserve area in accordance with Section 6.6.	There is no 6.5.D or E. Assuming comment is for 6.4.D and E.	See revised language.

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					<p>Yes. Three levels to the percent encumbrance:</p> <p>No increase Increase up to 50% or less Increase more than 50%.</p>	
034	6.6	6.6	Rich Holmer (1/17/2022)	<p>This is the “50% lot encumbrance rule” which the Board of Supervisors removed in 2019. It requires that the “encumbrance” on a lot (meaning the area on the parcel unavailable for a septic system installation) must be calculated and, if it exceeds 50% of the lot size, a code conforming reserve area must be demonstrated.</p> <p>An existing, designated reserve area is only acceptable if the encumbrance is less than 50%. Note that this encumbrance requirement applies to Sections 6.4.C.2., 6.4.D.2.B., 6.5E and 6.5.B.2 as outlined above.</p> <p>There is not even an exception if the proposed building will be located in an already encumbered area such as a well or stream setback.</p> <p><u>Discussion:</u></p> <p>The County Code requires that a parcel not be over built with respect to the amount of area available for the septic system and future repair of the system. This requirement can be satisfied by a determination that the work proposed under a building permit does not impose additional sewage loading onto the septic system and does not encroach onto the existing system or approved</p>	<p>The California Plumbing Code requires a replacement area for all proposed structures.</p> <p>The intent is to use 50% encumbrance criteria in lieu of the California Plumbing Code.</p> <p>This provides some flexibility by not requiring a reserve area be evaluated for every building permit.</p> <p>We need to clarify that an existing reserve area can serve as a compliant reserve replacement area.</p> <p>Section 6.6.A.1 explains the encumbered area shall not be counted twice as in the example of a structure being placed within an already encumbered area.</p>	<p>Revise section 6.6.C to clarify if a reserve replacement area is needed due to more than 50% encumbrance, the reserve replacement area could be either a pre-existing reserve area on file or newly determined.</p> <p>6.6.C: “Requiring a <del>code compliant</del> reserve replacement area means a reserve OWTS shall be demonstrated pursuant to this OWTS Manual with either existing records on file with the Permit Authority or with a current Septic Design Application. <u>The existing records for the Septic Design Application shall consist of ...</u>”</p> <p>Add a new section 6.6.A.4 for when the site is already over 50% encumbered that an increase in percent encumbrance is needed to trigger the requirement for a reserve replacement area. Working in an encumbered area should not trigger the requirement for a replacement area.</p>

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				<p>reserve expansion area. Reserve expansion areas have been required to be properly tested, designed and designated on parcels by the County since at least 1980. All of these approved areas should be recognized and accepted in the building permit review process if the reserve area is unaffected and there is not an increase in wastewater flow. If there is not an approved reserve area, then the size of the reserve area should be based upon the size of the existing, properly functioning septic system and the setbacks to water wells, streams, etc.</p> <p>The California Plumbing Code Section 101.6 states that “Private sewage disposal systems shall be so designed that additional seepage pits or subsurface drain fields, equivalent to not less than 100 percent of the required original system, shall be permitted to be installed where the original system cannot absorb all the sewage.”</p> <p>Note that this Plumbing Code section references the 100% reserve expansion area as being based upon the <b>required original system</b> and this section is the only section of the Plumbing Code that references reserve expansion areas. There is no requirement in the Plumbing Code that evaluation of building permit applications be based upon a code conforming 100% reserve expansion area. Similarly, there is no provision in the State OWTS policy for review of the reserve expansion area when a building permit is applied for.</p> <p>Plumbing Code Section 101.7 states that “No property shall be improved more than its capacity to absorb sewage effluent properly by the means</p>	<p>This is a partial citation of California Plumbing Code H101.6. The omitted sentence reads, “... No division of the lot or erection of structures on the lot shall be allowed where such division or structure impairs the usefulness of the 100 percent expansion area.”</p> <p>To state that the plumbing does not address the evaluation of the reserve area is misleading.</p>	

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				<p>provided in this code.” This section also does not require that the reserve area be code conforming when evaluating building permit applications.</p> <p><u>Proposal:</u></p> <p>Review of OWTS for building permit issuance where there is NO INCREASE in flow to the OWTS:</p> <ol style="list-style-type: none"> <li>1. If 100% (or 200% as required) reserve expansion area is available as shown on the original, approved septic system permit, and is not affected by the proposed project, the reserve area is adequate for approval of the project with no further review or analysis.</li> <li>2. If no reserve expansion area was shown on the original septic system permit, a plot plan shall be submitted showing that there is 100% (or 200% as required) reserve area available. The reserve area shall be based upon the original, permitted size of the dispersal system.</li> <li>3. If the septic system predated the requirement for a septic system permit, then the reserve area must be shown in accordance with current OWTS policy</li> <li>4. If a building project with no increase in sewage flow is proposed and the proposed construction is located in an area of the parcel that is unsuitable for dispersal system construction, then no demonstration of reserve expansion area will be required for approval of the project. Areas that will be considered unsuitable for a dispersal system include areas within the required setback to a water</li> </ol>	<p>Depends on how the reserve area was perfected. If the designer conducted site evaluation work (soil evaluation, percolation testing, etc.) then agreed.</p> <p>If the designer identified an area without any testing or scientific basis, then disagree.</p> <p>One concern is this would be required absent the extent of development. Why require if a site is 20% encumbered? In the proposed language, if less than 50% encumbered and no reserve is on file, client is required to show the location of a potential reserve area. (6.6.A.2 &amp; 6.6.B.2)</p> <p>If the areas described as “unsuitable for dispersal” are encumbered areas under the draft language, then structures within these already encumbered areas would not increase the encumbered area or percent of the area encumbered.</p>	

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				well, stream, property line or other area not in compliance with Table 7.2.C. of the OWTS policy.		
065	6.6	6.6	Elsa Frick	Basing the requirement for demonstrating reserve area on a 50% encumbrance is arbitrarily restrictive and already causing undue headache time consuming and detailed expensive analyses for too many projects. Staff are inundated with the details of this already, resulting in bottlenecks and backlogs where they are already stressed and behind. There is nothing in the State OWTS requiring it. The UPC only refers to encumbrance of properties on septic . I have reviewed Rich Holmer’s comments regarding this section and concur with his comments whole heartedly. I will, therefore not repeat them here.	Comment noted. Several edits are proposed to clarify.	No action.
106	6.611	6.6.A.1	Greg Schram	It is still a little unclear as to what is required if the lot is over 50% encumbered, but the proposed improvement is within an encumbered area like a well setback. I understand that it will not get counted twice, but the lot is still over 50% encumbered, so does this trigger the need for code compliant reserve. It really should not, because the improvement is going where septic cannot.	<p>If the development is within an encumbered area, say a well setback, the site is not doubly encumbered so that would be a zero increase in the encumbrance.</p> <p>It is the building project/permit, not the pre-existing state of the land.</p> <p>The building project needs to create more than 50% encumbrance in order for the reserve area to be required.</p>	<p>Adding a section under 6.6.A to reaffirm that when the building project or current building permit application does not add to the percent encumbrance (being within a setback or encumbrance), no further evaluation is required.</p> <p>The new provision will be inserted between 1 and 2 so that 6.6.A.2, A.3 and A.4 will be re-ordered as:                      No increase (no further action)                      Increase to 50% or less (evaluation)                      Increase over 50% (required)</p>

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					<p>Less than that and we are asking to note where the reserve is located so the building does not go within an existing reserve area.</p> <p>With a zero increase in encumbrance the evaluation is over and no further requirement.</p>	Revise section 6.6.B.2 to include the preamble, " <u>If a reserve replacement area has not been identified, a site map ...</u> "
066	6.7	6.7	Elsa Frick	With all the changes proposed in the other sections regarding percolation test hole requirements, groundwater testing requirements and profile holes, only systems approved according to these strict standards will be code compliant. Already staff is requiring additional percolation tests, groundwater and profile test for properly functioning and properly sited septic system. You might as well delete this section as not prior system can meet these current standards unless it was designed and approved since 2020!	Comment noted.	No action.
257	6.921	6.9.B.1	Mike Treinen	Findings Report Cover Letter. With staff backlogs already excessive, why require additional documents and increase time and cost when the requested items could be included in the body of the report, within the 1st paragraph as an example. Some of the requested info is already in most of our reports.	Many finding reports are deficient and providing a summary in a cover sheet will assist with a quicker review.	No action.
023	7.2.B	7.2	Rich Holmer (12/30/2021)	The "altered terrain" section of 7.2 states that systems cannot be located in areas of flooding. How does this relate to the 10 year and 100 year flood plains? Are these considered "areas of flooding"? If	Section 7.2.B discusses "altered terrain" and appears to transition into a general provision after the "or" clause.	Revise section to, "... altered, modified, or <u>altered in such a way as to increase or create</u> areas of flooding, drainage problems, or geologic instability."

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
				so, what happens to existing residences in these areas?	The "... or in areas of flooding, drainage problems, or geologic instability." seems general and not related to altered terrain. While there are areas with natural flooding, natural drainage issues, or natural slope stability issues these conditions can also be created. Given the heading, the phrase after the "or" clause is to mean altered areas that then created localized flooding, a drainage issues or geologic instability.	
298	7.2.B	7.2.B	Jessica Chavez	<p>Recommend expansion of description 7.2(B) and addition of 7.2(B)3 and 7.2(B)4.                      Reason: fill is placed for some dispersal areas and some excavation must be performed for installation. Reserve is adjacent to fill.</p> <p>B. Altered Terrain</p> <p>1. OWTS shall not be placed in areas that have been altered, including:</p> <p>a. Filled areas</p> <p>1. Soil cover placed for dispersals areas, under an approved septic permit, shall not be considered altered terrain.</p> <p>b. Excavated areas</p> <p>1. excavations for the purposes of soil exploration shall not be considered altered terrain.</p> <p>2. Backfill of piping and dispersal area trenches shall not be considered alter terrain.</p> <p>3. ripped, plowed, altered, modified, or in areas of flooding, drainage problems, or geologic instability.</p>	<p>Section 7.2.B discusses "altered terrain" and appears to transition into a general provision after the "or" clause.</p> <p>The "... or in areas of flooding, drainage problems, or geologic instability." seems general and not too related to altered terrain. While there are areas with natural flooding, natural drainage issues, or natural slope stability issues these conditions can also be created. Given the heading, the phrase after the "or" clause is to mean altered areas that then created localized flooding, a drainage issues or geologic instability.</p>	<p>Revise section to, " ... altered, modified, or <u>altered in such a way as to increase or create</u> areas of flooding, drainage problems, or geologic instability."</p>

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				<p>c. Ripped or plowed                      d. Other modifications, excluding;                      1. Landscaping                      a. Walkways using crushed rock, gravel, flag stone, or other non-compacted surface material; or                      b. vegetative landscaping; or                      c. other landscaping that doesn't affect the areas septic suitability.                      e. Areas subject to flooding or drainage problems                      f. Areas of geological instability                      2. Such areas that have been excavated, ripped, plowed, altered, and/or modified may shall be acceptable if the soil is stable and soil evaluation indicates characteristics acceptable for installation of an OWTS such as approved structure, texture, consistency, pore space, percolation rate, soil depth, and separation to groundwater pursuant to this OWTS Manual.</p>		
320	7.2.B	7.2.B	Steve Brown	<p>This section is contradictory. 1 says "OWTS shall not be placed..." and 2 says it "may be acceptable..."</p> <p>You could keep 2 and add something like "altered terrain should be carefully considered when evaluating site conditions. Additional testing of an altered soil horizon may be warranted"</p>	<p>7.2.B.2 is an exception to the rule predicated on the soil has recovered it structure, texture, etc.</p>	<p>No action.</p>
035	7.2.B	7.2.4.B	Rich Holmer (1/17/2022)	<p>This includes a prohibition on installing OWTS in areas subject to flooding. Staff has recently begun to interpret this as prohibiting systems on flood plains. Clarification is needed as to 10 year and 100 year flood plains. Replacement systems will be needed for homes in these areas and should be</p>	<p>It is assumed the commenter is referring the section 7.2.B.</p> <p>Staff are not aware of specific examples of prohibiting a system in a flood plain as the determining factor.</p>	<p>Revise section to, " ... altered, modified, or altered in such a way as to increase or create areas of flooding, drainage problems, or geologic instability."</p>

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				expressly allowed. New systems for new construction should meet the required stream setback rather than a separation from a 10 year or 100 year flood plain.	<p>Perhaps due to a stream setback or other reason, but not due to being in a flood plain.</p> <p>Staff will provide language to clarify the intent which is altered terrain creating a local flooding or drainage issue.</p> <p>New and replacement systems need to adhere to the setbacks. If a reserve area was created before a given setback, the reserve area would be considered legal non-conforming and allowed to be used, provided an on-site evaluation was conducted at the time to support the reserve area.</p>	
141	7.2.B.1	7.2.B.1	Jeff Loe	OWTS sometimes must be placed in areas that flood periodically or have drainage problems. In these cases the systems must be designed to address conditions. Basin plan indicates setbacks are from top of bank ephemeral stream or 10 year frequency flood line. 50 year frequency flood can be addressed by design.	Noted. See revisions proposed above.	Revise section to, “ ... altered, modified, or <u>altered in such a way as to increase or create</u> areas of flooding, drainage problems, or geologic instability.”
067	7.2.B.2	7.2.B.2	Elsa Frick	Include the potential for placement of fill, other counties in our water quality control board jurisdictions allow the use of fill for septic systems. Lets make some real changes	We have revised section 7.2.B.2 so that if the altered terrain or fill has regained its soil structure, per evaluation, the soil evaluation would be honored.	No action.
151	7.2.E	7.2.E	Jeff Loe	For waterway setback reductions – pretreatment should include NSF/ANSI 40 and NSF/ANSI 245	Perhaps not within the setback section but we need to have consistency and/or clarity for	Revise to make pretreatment, supplemental treatment and advance treatment consistent.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
					pretreatment, advanced treatment and supplemental treatment.	
150	7.2.E	7.2.E, F, G, H, and I	Jeff Loe	Do these setback reductions require a variance?	No. The intent is to replace the variances (old process) with standards or exceptions.	No action.
299	7.2.E.2	7.2.E.2	Jessica Chavez	Can replacement OWTS have an increase in flow?	Yes, with pretreatment and disinfection per 7.2.E.2.	No action.
321	7.2.E.4	7.2.E.4	Steve Brown	“Sites that cannot meet these reduced setbacks will be required to setback to the greatest distance possible. A Variance application will be required to document setback deficiencies.”	The setback should be the largest possible, but can be reduced to 50% or 80%, depending on the setback item.	No action.
068	7.2.F.1	7.2.F.1.c	Elsa Frick	There is no such septic tank available, certainly not in Norther California	It is a potential option. One does not have to use it.	No action.
300	7.2.F.2	7.2.F.1.d	Jessica Chavez	Tank leakage water tightness test	Agreed.	Revise to include a water tightness test.
152	7.2.G	7.2.G	Jeff Loe	Is Class 2 well with 50’ seal allowed for reduced setback?	Per the well construction standards, a class II well can be no closer than 50’ from a dispersal system.	No action.
301	7.2.H.1	7.2.H.1	Jessica Chavez	Recommendation: Remove slope limitation and consultant property line certification by consultant. If owner a statement is acceptable, please provide document for owner to sign and reference document. Reason:	Slope limitation is the minimize the potential for effluent to travel onto neighboring property.  If you are getting that close to the property line we are asking for	No action.

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				<p>(1a) this seems very arbitrary, please provide reasoning and justification for 12.5%. Slope limitation of system type should be suitable. Pretreatment more relative mitigation.</p> <p>(1b) Consultants are not surveyors and therefore cannot sign a statement verifying exact property line locations.</p> <p>1. The downslope setback of a non-standard dispersal area may be reduced to 10 feet provided:</p> <p>a. The slope is no greater than 12 ½ percent; Uses approved pretreatment</p> <p>b. The consultant and property owner state in writing and on the approved OWTS plan that the location of the dispersal area is on the subject property; and,</p> <p>c. The downslope monitoring well is placed at the property line</p>	<p>assurances the system and effluent are not entering the neighbor’s property.</p> <p>We are asking for owner and designer assurances vs a land survey as an option. Owner can provide a land survey if they are not willing to provide the written statement.</p>	
070	7.2.H.1.2	7.2.H.1.b	Elsa Frick	<p>This seems to be an attempt to shed liability. The property owner and Consultant are not licensed to make such statements Only a licensed Surveyor is and by way of a Boundary Survey. Strike this</p>	<p>The County does not want to authorize trespassing or the placement of systems/effluent on neighboring properties without their knowledge, so either the owner/designer does not encroach into the downslope property line setback, provides a survey, which is expensive, or certify the system is on the owner’s property.</p>	<p>Revise 7.2.H.1.c to indicate the monitoring well, <u>if required</u>, will be at the property line.</p>
069	7.2.H.1.3	7.2.H.1.c	Elsa Frick	<p>The 12 1/2 % slope seems arbitrary. Where does this come from?</p>	<p>This came from Section 17, row 11 as we are converting the variances to exceptions.</p>	<p>No action.</p>

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					Slope limitation is to minimize the potential for effluent to travel onto neighboring property.	
302	7.2.J	7.2.J and 7.2.K	Jessica Chavez	<p>Recommendation: Add section J, related to upslope drainage</p> <p>7.2</p> <p>J. Reduced Setback for Dispersal Area(s) to Drainage Ways and Water body</p> <p>1. The location of OWTS components shall conform to the distances contained in the Table 7-2c multiplied by 0.5 provided:</p> <p>a. The drainage way is upslope of the proposed OWTS; and</p> <p>b. the setback is reduced to no less than</p> <p>c. The stream/waterway/water body is upslope of the proposed dispersal area</p> <p>K. Reduced Setback to Altered Terrain</p> <p>1. The septic system setback to fill shall be reduced to zero provided</p> <p>a. The fill is upslope of the dispersal area; and</p> <p>b. The fill is placed at a higher elevation than the proposed dispersal area; and</p> <p>b. a maximum 2:1 slope is utilized; or</p> <p>2. The location of the OWTS components shall conform to the distances contained in the Table 7-2c multiplied by 0.5 provided:</p> <p>a. the fill is related to a back filled excavation deeper than the proposed piping or emitters.</p> <p>b. The excavation is upslope of the septic system; and</p>	Come back to this one as each one needs further evaluation. Adding to the "to do" list.	No action (at this time).

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				<p>c. The setback is not reduced to less than 10 feet</p> <p>3. The setback to a cut bank shall be reduced to ten feet provided:</p> <p>a. The cut bank is upslope of the proposed dispersal area; and,</p> <p>b. The bottom of the cut bank is at a higher elevation than the dispersal area(s).</p>		
071	7.2.Ta	7.2 Table 7.2a	Elsa Frick	<p>Strike this table! It is tedious and represents way too many significant figures for the technology it addresses! It has been the source of too many arguments and restrictions. Almost no other jurisdiction (only ones that copied us) use this degree of “tolerances” to address sizing that is not in need of this degree of significant figures. See table 7.2.b and other established sizing standard. It is ok to set up ranges of percolation testing and then some acceptable standard deviations to be considered at the designer’s discretions when the average percolation rate is close to one value or another. Build in some much needed flexibility.</p> <p>Flexibility is not the same a discretionary, per se. But is does allow for some discretion on the part of the designer, to be accepted by the regulator at the professional designer’s discretion. Easy</p>	Comment noted.	No action.

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022	7.2.Tc	7.2 Table 7.2c	Rich Holmer (12/30/2021)	I could not find in table 7.2c the point on a stream or water way that the setback is measured from. Is it top of bank? If so, a definition of this term would be good.	We had “natural or levied bank” in version 7 Table 7.2c. It got dropped with all the changes, but the intent is from the top of bank. We will add that back in.	Revise Table 7.2C, to include a note 5, N5, for “natural or levied bank.”
036	7.2.Tc	7.2 Table 7.2c	Rich Holmer (1/17/2022)	<p>This table has been completely revised from the existing County OWTS policy. Setbacks for streams are now listed for “Blue line streams, non mapped streams and natural swales”. A blue line stream now requires a 100 foot setback from a stream shown on USGS maps as a solid blue line or a dot and dash blue line. The dot and dash blue line delineation on a USGS map indicates seasonal flow. This alteration to the setback results in a substantial increase in setback distances to smaller streams. Previously, these streams were classified as “ephemeral” and had smaller setbacks than for “perennial” streams. The justification for this increase in the setback to seasonal streams is not clear and does not appear to be justified.</p> <p>There is no definition of where stream setbacks are measured from. It should state top of bank or normal high water flow line.</p> <p>There is a lot of ambiguity currently regarding where the setback from the Russian River is measured from. The river generally has a series of plateaus along its banks. Some staff have interpreted the edge of the highest plateau as the point where the setback is to be measured from. The setback for the river should be specified as from the top of the closest bank to the river.</p>	<p>We are going back to ephemeral and perennial streams.</p> <p>We had “natural or levied bank” in version 7 Table 7.2c. It got dropped with all the changes, but the intent is from the top of bank. We will add that back in.</p>	<p>Revise Table 7.2C to strike “blue line” stream and replace with ephemeral, intermittent and perennial streams.</p> <p>Revise Table 7.2C to include the “top of natural or levied bank.” And to refer to DRN-005 for the two scenarios Figure 1 (e) for irregular bank slopes and Figure 1 (f) for undefined banks. The other scenarios in DRN-005 are not applicable to setbacks for septic systems.</p>

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				<p>There is a new requirement for setbacks from Storm Water and Groundwater Infrastructure. Although setbacks are probably a good idea, the proposed setbacks seem unnecessarily restrictive especially with regards to the setback for the discharge from an interceptor drain. These setbacks will impact the area available for an OWTS and will create the need for variances. They should be pulled out of the standards and subjected to a peer review process.</p> <p>The justifications for the above changes to table 7.2.C. are 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>These are similar to an open drainage ditch, but with an added benefit – treatment of storm water.</p>	
143	7.2.Tc	7.2 Table 7.2c	Jeff Loe	<p>Swimming pools must have other than down gradient setbacks. The table contains nothing additional for pools. Include pools with other structures. Pools often have sub drains than can pick up effluent!</p>	<p>Agreed. We will revise to include pools as a structure.</p>	<p>Revise the heading of Buildings or Structures to include swimming pools similar to a driveway, etc.</p>
144	7.2.Tc	7.2 Table 7.2c	Jeff Loe	<p>Intermittent streams are now being treated as perennial. This complicates the past. Unwarranted change.</p>	<p>The proposed language was to get away from ephemeral, intermittent and perennial streams and use USGS blue line streams.</p> <p>However, LUAP has recommending going back to ephemeral and perennial streams.</p>	<p>Revise Table 7.2C to strike “blue line” stream and replace with ephemeral, intermittent and perennial streams.</p>

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306	7.2.Tc	7.2 Table 7.2.C	Tammy Martin	Ephemeral streams should still have a lesser setback than perennial. Setbacks should be from top of bank. Drainage ways greater than or less than 18" in depth should have even smaller setbacks if they are lined. Setbacks to watertight storm drains of any size should be only 10' for septic tanks and all dispersal areas.	Yes. Agreed.	Revise Table 7.2C to strike "blue line" stream and replace with ephemeral, intermittent and perennial streams.  Revise to include the top of bank.
322	7.2.Tc	7.2 Table 7.2c	Steve Brown	20a- We should add Bluff setback of 50'  40 and 41 should reference 3 foot depth of soil  Add a line for lateral setback to cuts at 50% of downslope setback.	Natural bluff is within row 40 and 41.  The setback originated from the original NCRQB, under table 4-1. It has carried over to Sonoma County setbacks as far back as I can tell. The concern being break out and it would depend on the soil type.  The vertical separation can be 3' or 5' depending on the soil type.  Agreed on the lateral setback.	Add a row 42 to recognize a lateral setback to this category at 50% of the upslope/downslope setback.
147	7.2.Tc	7.2 Table 7.2c Line 26	Jeff Loe	It should not matter the size of storm drain pipe. What matters is the backfill surrounding the pipe. Any sand bedded utility trenches deserve the same setbacks. Add utilities with sand bedding to setback tables. Add utilities with native soil bedding to setback table.	Materials for bedding and/or backfill might provide a more or less permeable pathway. Any setback reduction based on these parameters would need to be evaluated.	No action.
149	7.2.Tc	Table 7.2c Line 39	Jeff Loe	Recommend 25' setback to non perforated stormdrain pipes down gradient from standard and non-standard dispersal areas.	Row 39 is for intercept drain outlets. The type of pipe is not relevant as the groundwater is becoming exposed to the surface.	Revise note 8 to clarify the outlet setback distance is equal to the setback distance for the stream, drain, pipe, etc, receiving the groundwater.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
148	7.2.Tc	7.2 Table 7.2c Line 38	Jeff Loe	Recommend 25' setback to downslope interceptor drain discharge to standard and non-standard dispersal areas. Interceptor drains shall discharge	In row 38, the existing setback distance for a non-perforated intercept drain is 15' downgradient of either a standard or non-standard system. Are you suggesting we increase that to 25'?	No action.
012	7.2.Tc	7.2 C and 7.2d	Ted Walker	Why are you removing this chart? It appears that it is being replaced almost entirely by a new chart, 7.2. Can you clarify reasoning for this? Can you articulate why you are making changes to setbacks? There are literally hundreds of systems that have been permitted, installed, and in operation since the early 1970's that will not meet the new setbacks outlined in Table 7.2d, such as Shallow Sloping, Fill Land Systems, At-Grade Systems and even Drip Dispersal Systems. If these new setbacks are enacted, they will constitute a "taking of property rights" and make the current existing systems technically illegal to this new proposed code modification. The point of distance for measurement nationally has always been the edge of trench (outside edge of the point of discharge). Not an additional 5 to 15 to 25 feet downgradient of the infiltrative area. These proposed changes are simply wrong and technically unjustified. N1: Fill Land Systems (new version is absolutely wrong. The fill placement around and downgradient of the system in not considered part of the treatment zone!!!!	<p>Correct. The setback chart is being replaced, reformatted and additional setbacks are being added.</p> <p>The reformatting is intended to group or order the setbacks by topic.</p> <p>Yes, there are some new setbacks. Storm water infrastructure is a one example. This infrastructure category was afforded a setback, but under "drainage ways." It seems more appropriate to create the new category for clarify.</p> <p>New regulations are put in place on a regular basis and are not considered a taking of property rights. Mitigations can be proposed if a setback prevents a site from being developed.</p> <p>Existing systems are not subject to new regulations and existing systems are not considered to be in violation when new regulations are put in place.</p>	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
					Regarding the filled land systems, your view point is noted, however, the point of measurement for a Filled Land System is the edge of trench.	
145	7.2.Tc.n3	7.2 Table 7.2c Notes 3 and 4	Jeff Loe	Notes 3 & 4 are elsewhere in code. They do not belong in Table 7.2c. They add nothing but confusion in the setback table.	Disagree on removing note 3 and 4. These were added due to questions for placement and the citation.  The water tight test is to provide clarity for the projects that have old tanks where water tight tests have never been done or up to current standards.	No action.
146	7.2.Tc.n6	7.2 Table 7.2c Note 6	Jeff Loe	Non-Mapped Stream is not included in definition of Stream	Need to delete note 5 and note 6 since we are reverting to ephemeral, perennial streams.	Delete note 5. Delete note 6.
142	7.2.Tc.n7	7.2 Table 7.2c Note 7	Jeff Loe	High waterline is complicated matter. I suggest setback is to contour of emergency spillway elevation.	Noted. Some of these are natural and do not have an emergency spillway.	No action.
015	7.2.Td	Table 7.2d	Ted Walker	This table is not needed, and it is technically flawed. A 25-foot setback for fill land and shallow sloping systems is wrong. And the soil cap measurement for At-Grade Systems (with drip) is flawed.	Table 7.2d depicts where to measure the setback from and other designers felt it was needed.  Table 7.2d states the point of measurement for a Filled Land System is from the edge of trench.  Systems where the effluent dispersal is at or near the surface are being afforded increased setbacks to protect the system.	No action.

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107	7.2.Td	7.2 Table 7.2d	Greg Schram	<p>Any reference of “Edge of Trench” should be changed to Centerline of Trench. The contractor has an option of different widths of buckets, so this is a moving target. Centerline of trench is always the same. Also it is easier for designers and plan checkers to go from centerline and centerline has been common practice.</p> <p>At Grade Drip Dispersal – Requires setback to fill. I would keep this the same as subsurface drip systems. It will get confusing otherwise.</p>	<p>The TAC along with County Staff agreed the edge of trench is the best option.</p> <p>Another commentor noted above, “The point of distance for measurement nationally has always been the edge of trench (outside edge of the point of discharge).”</p>	No action.
210	7.2.Td	7.2 Table 7.2d	Jeff Loe	Bottomless Sand Filter - Substitute vessel with “enclosure”	Comment noted.	Revise Table 7.2d accordingly.
258	7.2.Td	7.2 Table 7.2d	Mike Treinen	"Note 1" - point of measurement. Vague, subject to interpretation. Specify distance intended.	Comment noted.	No action.
323	7.2.Td	7.2 Table 7.2d	Steve Brown	<p>All system types should have setbacks measured from the absorption area (basal area for mounds and at grades – ok)</p> <p>I do not see a reason for SIG or At Grade drip to be different.</p> <p>N1 – Fill systems have adopted all of the depth of soil requirements of standard systems. Fill systems should be removed from downslope requirements.</p>	<p>Agree on the Shallow In Ground and will revise to be edge of trench.</p> <p>Disagree on at-grade drip as the drip tubing is placed on native grade.</p> <p>N1 – agree and will remove fill land systems from this note.</p>	<p>Revise table 7.2d for SIG systems to be “edge of trench.”</p> <p>Revise N1 to remove Filled Land System.</p> <p>Delete N2.</p>

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				N2 – drip absorption area should be used rather than edge of fill.	N2 should be removed as subsurface drip systems have a trench into native.	
324	7.32	7.3.B	Steve Brown	<p>Notification “the day before” With Selectron system the notification process continues up to midnight.</p> <p>Not sure what you mean by “Exploratory work”, please remove or specify. We explore properties in advance of making application for pre perc. We do not apply or notify for this type of work.</p>	<p>Selectron and the midnight cutoff works well for the Building Inspection section that has roughly eight building inspectors.</p> <p>For a section that does customer service, plan review and inspections, the added time is helpful to organize the section’s field workload.</p> <p>Exploratory work means other site evaluation work. We will revise.</p>	Revise 7.3.B to strike “exploratory work” and replace with “site evaluation.”
072	7.4	7.4	Elsa Frick	While there is great discussion about what is involved in describing the soils there is no provision for many of the required descriptions such as consistence, pores, dampness and roots to be used in decisions about sizing and suitability. These qualities are used in the critical path analyses of evaluating soils for suitability for sewage disposal. It can be taught and probably drilled down into details for objectively evaluating soils for suitability. The skills are lacking in current staff and need to be addressed. Sizing criteria based on soil texture and structure alone is flawed and results in some sites being denied and some with systems smaller than might be prudent. The use of all the characteristics of the soils for establishing suitability and for sizing needs to be brought back to the soils evaluation process.	Agreed. Comment noted.	No action.

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153	7.4	7.4 Figure 7.4	Jeff Loe	This should be a symmetric equilateral triangle.	Agreed. We will try to re-configure so each side is of equal length.	Revise Figure 7.4 to ensure each side is of equal length.
042	7.441	7.4.D.1	Tai Nguyen	Section 7.4, D, 1: A minimum of two soil profile hole are required. Additional soil profile hole may be required if there is dissimilar or inconsistent soil condition, enough to alter the ultimate design, are observed in the profile holes. Most of the time the soil profile holes are dissimilar. It is not common to get similar soil condition. I recommend removing this requirement.	The original 7.4.D had this same language imbedded in the paragraph. D.1 has been broken out of the paragraph and provided with the “ ..., enough to alter the ultimate design ...” language.  This phrase was added to recognize soils are commonly dissimilar or inconsistent but at some point the dissimilarity affects the design.  That is when the requirement for additional soil profiles kicks in.	No action.
043	7.443	7.4.D.3	Tai Nguyen	Section 7.4, D, 3: downslope permeability needs to be demonstrated. This is true with shallow permeable soil for a mound system, at-grade system and drip system but not for leach trench leach lines.	Correct. 7.4.D.3 is only applicable to those systems that require downslope permeability.  We will add clarifying language.	Revise 7.4.D.3 to “ <u>As required by system type, downslope permeability shall <del>needs</del> be demonstrated.</u> ”
325	7.452	7.4.E.2	Steve Brown	Soils with less than 15 percent silt and clay...add “and percolation rate faster than 5 minutes per inch”...  Some soils with few fines can per are rates that will slow the movement through the soil and provide good aerobic treatment.	If less than 15% silt and clay, more soil depth is needed, regardless of the percolation rate.	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
013	7.5	7.5	Ted Walker	Suggest the section be rewritten to as follows: Groundwater table determinations are required for lands having slopes of 0 to 5 percent in a (Landscape Formation that depicts a Basin Area). Groundwater determinations (may only be considered) on lands greater than 5 percent slope may be required if high seasonal groundwater is suspected (based upon historical, neighboring, or geological information).	Assuming the commentor is referring to 7.5.A. Here is the current language:  "Groundwater table determinations are required for lands having slopes of 0 to 5 percent in a basin area. Groundwater determinations on lands greater than 5 percent slope may be required if high seasonal groundwater is suspected."  Not sure adding language in parentheses provides clarity.	Revise to strike "basin area" and replace with "design area."
037	7.5	7.5	Rich Holmer (1/17/2022)	This whole process should be reevaluated to find a less cumbersome method. Future study by a LUAP subcommittee should be specified.	Comment noted.	No action.
326	7.543	7.5.D.3	Steve Brown	Hand dug holes are often left open or have a pipe set loosely in the hole to prevent cave-in or gopher fills. Remove the part about filling the annular space.	Rainfall and/or runoff could enter such a hole, but that would result in an artificially elevation groundwater reading and should be address per 7.5.D.4.	Remove the phrase regarding filling the annular space with gravel.
		7.5.D.5	N Quarles	Review 7.5.D.5: <ul style="list-style-type: none"> <li>• Reads like an indirect groundwater method.</li> <li>• Is not a construction method</li> <li>• Provides for a variance to 2' of soil</li> </ul>		Delete 7.D.5

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074	7.552	7.5.E.2	Elsa Frick	Add to the nearest inch to the end of the sentence. Ground level cannot be measured to any more significant figure than that.	Agree that some quantification is needed.	Revise 7.5.E.2 to add “ to the nearest ½ inch” after “...shall measure and record the depth of groundwater ...”
073	7.562	7.5.F.2	Elsa Frick	This his is wrong to punish or assume a failed groundwater test. Strike the canceled portion of this. You do not know why a test was canceled and it is improper to assume failure. Use the mottling, just as other jurisdictions do to allow the use of mottling. Some groundwater test periods are are wetter than others and some drier. The whole section about direct observations of groundwater conditions needs a make over. There is too much arbitrary minutiae in it. It should not be this hard. It is punishing too many property owners and is harshly restrictive unnecessarily.	Comment noted.	Remove “canceled” from 7.5.F.2.
326	7.564	7.5.F.4	Steve Brown	Soil mottling shall be observed.....”during the pre perc site meeting”  This section reads as though a separate pre perc is required to evaluate mottling.	If the designer is going to use soil mottling, observing soil mottling at pre-perc would be more efficient, but not mandatory since soil mottling is an option.  If soil mottling is conducted after the pre-perc, soil mottling should be conducted similar to a pre-perc.	No action.
016	7.6	7.6 Table 7.6	Ted Walker	Why?	Table 7.6 is a succinct method of presenting the old 7.6.C and 7.6.D.	No action.
329	7.6	7.6 Table 7.6a	Steve Brown	A column for Soil Zone should be added (1-4)	Good point. Prior language did not address zone 1 or zone 2 soils.	Revise table 7.6.A to be similar to:  Perc Test                  PI                  Zone

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits									
				<p>Wet weather is zone 4 or 4 with PI greater than or equal</p> <p>Dry weather Zone 3 or 4 with PI less than</p> <p>A dry weather Test row should be added for Zone 1 and 2 soil</p>	<p>Zone 1 and zone 2 soils are dry weather tests regardless of plasticity index and we don't need the PI to make that call.</p>	<table border="0"> <tr> <td>wet</td> <td>&gt;= 20</td> <td>3 or 4</td> </tr> <tr> <td>dry</td> <td>&lt; 20</td> <td>3 or 4</td> </tr> <tr> <td>dry or wet</td> <td>Not Required</td> <td>1 or 2</td> </tr> </table>	wet	>= 20	3 or 4	dry	< 20	3 or 4	dry or wet	Not Required	1 or 2
wet	>= 20	3 or 4													
dry	< 20	3 or 4													
dry or wet	Not Required	1 or 2													
328	7.64	7.6.D	Steve Brown	This can be shortened to "...concurrence on the soil profile is not reached a percolation test will be required."	7.6.C and D are for developed properties only. Removing the introductory phrase changes the intent of the provision.	No action.									
082	7.65	7.6.E	Elsa Frick	This section has the potential to render existing septic systems non conforming as it represents a departure from the past requirements and practice of performing 6 percolation tests to justify an area. Identify the reason for the additional testing requirements over past practice. What went wrong? Scientifically address the reason for the change. These types of "tightening of screws that aren't broken" results in a broken system. Staff is already asking for additional percolation test to prove existing systems are code conforming. This needs a justification based on sound examples of failure of the past practice to address a concern. It is really just another example of "significant figures" being applied to projects. 6 holes has always been sufficient. We do not need to drill down on these details just to satisfy some inspectors quest for perfection. It was not broken and it does not need fixing. It is not required in the State OWTS. then number of holes should not be determined by the number of expansion areas required. The test hoes identify an area. It used to be profile holes got a 75'	Comment noted.	No action.									

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				radius and perc holes 25'. That was not broken but now tightened. Sometimes an entire primary and 200% expansion area can fit in the influence of only 3 holes. Its OK when that happens!		
075	7.711	7.7.A.1	Elsa Frick	Smaller holes should be allowed. There is no significant difference in result. Older engineers may feel differently, but I have run holes of different diameters in the same proximity and not gotten SIGNIFICANTLY" different results. Larger holes use up more resources, gravel and water and are not necessary. TO the significant figures analysis we need to bring back the hole size will not matter. Table 7.2.a once revised will take this issue away.	Comment noted. Four inch was omitted in error. Adding 4" back into this provision.	Revise to include a range of bore holes to include four to eight in diameters.
076	7.715	7.7.A.5	Elsa Frick	It should read "after a percolation test hole (not pit)	In some instances, a pit is excavated, and a perc test hole is drilled or bored in the bottom of the pit.	No action.
154	7.8	7.8 Figure 7.8a	Jeff Loe	15% slope is irrelevant to detail / depth varies / 12" gravel for testing does not include 1" of in the bottom of the hole. / remove errant letters lay at right side bottom.	Agreed, need to strike the 15% in the title.  Most figures need to be updated.	Revise the title to "Typical Percolation Test Hole on 15% Slope"
078	7.9	7.9	Elsa Frick	What does individual stabalized or individual average percolation rate mean?	In some instances, designers do not use the 5/6 <sup>th</sup> or the 11/12 <sup>th</sup> reading, which typically is the stabilized perc rate, and use a rate averaged over several readings for the individual perc test location.  This is contrasted with calculating an average perc rate for the system area or a system perc rate, which is an	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
					average of multiple individual perc test locations.	
157	7.9	7.9 Table 7.9a	Jeff Loe	We should be able to demonstrate that rates <1 MPI are anomalous. We have long approached this via discussion with REHS based on soil texture and structure or via supplemental testing. Include method for provide acceptable use of the area <1 MPI.	You can, through the variance provision.	No action.
158	7.9	7.9 Table 7.9	Jeff Loe	Most perc tests contain individual holes <5 MPI. This is good soil. Hydrometer testing should be required only if there is a question of whether there is >15% silt and clay.	FYI, this is not new language. The new 7.9 was broken out into distinct provisions vs run-on paragraphs.  Table 7.9 mirrors and summarizes the text of section 7.9.  Soil characteristics should be known in order to evaluate if adequate treatment will occur, particularly with faster percolation rates.	
077	7.91	7.9.A	Elsa Frick	Should read 6 hour test that have not been refilled during the test	Need to discuss some scenarios with LUAP.	No action
330	7.91	7.9.A	Steve Brown	The rate should be based upon the smallest drop in an hour	Need to discuss some scenarios with LUAP. It seems the smallest drop per time will be the largest MPI.	No action.
331	7.92	7.9.B	Steve Brown	The rate should be based upon the smallest drop in ten min	Need to discuss some scenarios with LUAP. It seems the smallest drop per time will be the largest MPI.	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
079	7.95	7.9.E	Elsa Frick	<p>Strike this. It has made a ridiculous assumption and not consistent with the rule of averages and requires an expensive and complicated technology where there is no proof that the soils will not filter the waste adequately . This represents a huge departure from the past practice and will result in way to many properly functioning and filtering system to become non conforming just because one perc test ran fast.</p> <p>Again another instance ot significant figure analyses being applied too broadly resulting in too much change for no scientific evidence to justify</p>	<p>The basin plans do not allow perc rates &lt; 1 MPI. No supporting documentation has been provided to overturn the basin plans.</p> <p>Conversely, we do allow &lt; 1 MPI's for systems is pressure distribution as noted in 7.9.E.1</p>	No action.
333	7.95	7.9.E	Steve Brown	One test hole less than 1 mpi or greater than 120 should be ok to average into a system percolation rate.	Comment noted.	No action.
332	7.951	7.9.E.1	Steve Brown	I do not understand "individual stabilized" and "individual average" test rates.	In some instances, designers do not use the 5/6 <sup>th</sup> or the 11/12 <sup>th</sup> reading, which typically is the stabilized perc rate, and use a rate averaged over several readings for the individual perc test location.	No action.
155	7.97	7.9.G	Jeff Loe	If rates of 60-120 MPI are acceptable for standard systems include that range in 7.9 G.	The provision in 7.9 are predication on percolation rates not system types.	No action.
156	7.98	7.9.H	Jeff Loe	<p>Rates for non standard may include individual stabilized rates 1-120 MPI.</p> <p>If rates of 60-120 MPI are acceptable for standard systems include that range in 7.9 H.</p>	We do by reference. 7.9.H reads, "Individual stabilized or individual average percolation rates of greater than 60 to 120 minutes per inch is required for Non-Standard OWTS at	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
					<p>the specified dispersal area depths. Standard systems in this range with proof of soil permeability and soil depth below trench bottom.”</p> <p>The “in this range” refers to the first sentence and the “60 to 120 MPI” language.</p>	
080	7.991	7.10	Elsa Frick	Strike 10-day Many test periods can be longer and some shorter these days. It is sufficient to say groundwater test period	Agreed. For wet weather percs there is no 10-day window.	Revise 7.10.D to strike “10-day.”
108	7.9912	7.12	Greg Schram	This is just a clarification question. Not a comment. Is a cumulative impact study required if a system is discharging 1400 gpd and another system 55’ away discharges 200 gpd (total of 1600 gpd), but not within 50’, within 100’ though. I’m thinking it is not based upon Scenario D.	Correct. Scenario D applies and the answer is no, a cumulative impact study would not be required.	No action.
014	7.9912	7.12	Ted Walker	<p>Section on Cumulative Impact Studies: A few basics here. I have been a lot of my career at Sonoma County, PRMD at the California Environmental Health Association regarding issues of Cumulative impacts from OWTS. Working with regional board staff Bob Tancreto and Teresa Wistrom from the North Coast Regional Board: the basis of Flow from an OWTS is determined when the Average Daily Flow would exceed 1,500 gallon per day. Not the peak or potential flow.</p> <p>In the role of Technical Specialist for the California Environmental Health Association, I have organized training in the County of Sonoma and the State of</p>	<p>Seems to come down to average flow vs design flow. Criteria is 1500 gpd but question seems to be is that average or design flow.</p> <p>Secondly there are many on-site parameters to consider rendering capturing them all too problematic.</p> <p>The Ramlit study recommended a flow rate of 2500 gpd without stating if this was an average or maximum flow rate. The Ramlit study uses the 2500 gpd in the context of a dispersal</p>	No action.

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				<p>California with notable experts such as: Professor Finnemore of Santa Clara University, Dr. Patricia Miller, Virginia Department of Public Health, John Ayers, Ayers and Associates of Madison Wisconsin, Professors James Converse and Jim Tyler of the University of Wisconsin, and Mr. Norm Hantzsche of Questa Engineering present technical educational presentations of the subject of Cumulative Impacts from Onsite Systems.</p> <p>There are many areas of cover here. But the first comment, is this is very difficult to place in a Codified Document. Elements to review are basically large scale Onsite Systems (using average daily flow, not peak, the landscape formation of the area being utilized (is it a basin land form, a sloping site landform, percent of slope, limiting conditions gradient of the proposed system, soil features of the site, the strength of the wastewater proposed to be discharged, what is the nitrogen loading being discharged into the soils, is the organic loading being pretreated or not for nutrient reduction. And then, the separation and distances being suggested for multiple clustered systems. Another factor is the delivery of wastewater being proposed: is it gravity flow, is it pressure flow, or is it drip dispersal.</p> <p>I appreciate the work on your sketches of examples, but it lacks vital information such as just mentioned above. I suggest a verbal discussion on this topic. You can also look at previous work by others, such as the Willowside Estate Subdivision (Willowside Rd, Santa Rosa, Ca. by Earth Systems. Harmony School on Bohemian Hwy close to Occidental, Ca. by Questa Engineering in a sloping hillside landscape</p>	<p>system sizing, which typically is sized with the maximum flow rate.</p> <p>The Basin Plan reduced the 2500 gpd to 1500 gpd and also did not explicitly state if the flow rate was maximum or average.</p> <p>The strategy is to use the 1500 gpd criteria in the basin plan based on maximum flow rate, as the criteria for if a cumulative study is required. The proposed language then uses a lesser flow rate of 100 gpd per bedroom for the cumulative study.</p> <p>In the current OWTS Manual, the per bedroom flow was reduced from 150 gpd/bedroom to 120 gpd/bedroom, the flow rate criteria would now need 12.5 bedrooms, as compared to 10 bedrooms, to require a cumulative study.</p>	

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
				formation, and Vintners Inn, Hotel and Restaurant, by Questa Engineering, in a basin flat land formation.		
081	7.9912	7.12	Elsa Frick	The State OWTS does not require this. The analyses methods are flawed. This is an undue burden not substantiated by evidence. Strike this requirement until there is ample evidence and methodologies available to address it.	Comment noted.	No action.
017	7.9913	7.13 Table 7-13	Ted Walker	Too prescriptive. Not needed,	The lack of standards has caused weeks of delay, increased frustrations and is counterproductive. The County believes these standards are necessary to improve our program.  The goal is to codify a standard to minimize the back and forth between designer and regulator which lessens processing times and frustrations for the owner, designer and regulator.	No action.
083	7.9914	7.14	Elsa Frick	This section is not needed. Staff can be trained to think a project through consistently. It should be a guideline only and not part of an OWTS regulation. There are too many perturbations of this and it will result in lots and lots of additional tests and requirements. I thought we were trying to simplify things.	The OWTS Manual is a set of policies. Policies can help guide staff and designers alike.	No action.
159	7.9914	7.14	Jeff Loe	This entire section is undeveloped and incoherent.  Site Evaluation Work is not vestable and has nothing to do with vesting or previous designs and the		

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				<p>matter of new, replacement or repair OWTS should not matter. This section is about honoring older data.</p> <p>Discussion is outlined to be about Pre-percs, perc test and GW tests. Please include requirements or procedure for using older data. The older data if still acceptable can be used for any OWTS objective.</p>		
334	7.9914	7.14	Steve Brown	I am not sure this section is necessary. My input on this topic has been that prior work to evaluate soil suitability and required testing was done with County staff and those decisions by licensed County staff should be honored. I relate this to visual interpretation of 50% coarse fragment, presence of mottling	We do honor previous site work, but in some instances, we get into discussions with designers. The goal is to write down how we propose to treat prior site work.	No action.
160	8.114	8.1.A.4	Jeff Loe	Typical modern septic tank access covers do not contain handles. Remove mention of handle.	Comment noted.	Delete reference to “handles” in section 8.1.A.4
084	8.114	8.1.A.4 and 6	Elsa Frick	They seem to be the same but different, redundant Anyway	They are related but they are different and therefore not redundant.	No action.
161	8.115	8.1.A.5	Jeff Loe	Cleanout requirements stated are incomplete. Cleanouts in the building sewer are regulated by CA Plumbing Code 707.4 and need not be included in OWTS Manual. Recommend omitting this item.	Section 8.1.A.8 covers all plumbing elements from the house to the septic tank. Approved County Code requirements includes the plumbing code and cleanouts.	Delete section 8.1.A.5 and renumber.
162	8.117	8.1.A.7	Jeff Loe	I do not believe NSF certifies effluent filters. Please confirm and cite the certification or omit mention of NSF.	NSF Standard 46 rates wastewater treatment system components including septic tank effluent filters. There are six manufacturers that produce NSF-rated ST effluent filters.	No action

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
					NSF lists six companies that produce effluent filters.	
163	8.352	8.3.E.2	Jeff Loe	If an owner/builder installs their own septic & sump tank must they hire a licensed contractor to fill the tanks with water? Recommend editing items 2 & 3 to say Fill the tanks with water to $\geq 2$ inches into the riser.	8.3.E.2 and 3 could be combined and striking "license contractor."	Revise 8.3.E.2 and 3 to combine to read, "The septic tank, pretreatment tank, and or sump tank shall be filled with water to greater than or equal to two inches into the riser."
164	8.41	8.4.A	Jeff Loe	Pumps can be used for more than elevating effluent to a higher elevation that the structure served. Avoid unnecessary narrative.	Noted	No action.
165	8.5	8.5	Jeff Loe	Avoid unnecessary narrative. Perhaps what is meant is that all nonstandard systems require pumps for intermittent dosing.	Noted	No action.
259	8.511	8.5.B.1	Mike Treinen	Apparently not a functional change in the OWTS but an inlet baffle 4" from the bottom will soon be in sludge, possibly causing blockages that will force the solids out of the top of the baffle. We've seen this in the field. Normal is an 18" vertical extension.	Please check you reference. Section 8.5.B.1 is about the working capacity of a sump and does not mention where to place the inlet baffle.	No action.
166	8.641	8.6.D.1	Jeff Loe	Suggest rewording to "Dosing tank with a pump which discharges on demand."	Agreed, but recommend the option of timed or on demand.	Revise section 8.6.D.1 to include, "... discharges the tank <u>on timed dose or on demand at a minimum of once every three to four hours.</u> "
260	8.641	8.6.D.1	Mike Treinen	If there is no water added to the tank in 3-4 hours or even days or longer, the pump will need to be designed to discharge only if there is water to discharge.	Float switches are a common way to activate pumps when effluent enters the tank.	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
168	8.7	8.7 Figure 8.7	Jeff Loe	Interceptor Drain figure is horrible quality. I recommend that the detail be updated. Detail shows surface diversion ditch which is not always used; text does not offer any clarification on surface diversion. Surface diversion requires drainage review.	Agreed. Almost all the figures need to be updated.	No action.
167	8.711	8.7.A.1	Jeff Loe	I don't believe CA HSC allows REHS to design drainage features.	Comment noted. The OWTS Manual requires a qualified consultant for this type of design. The qualified consultant definition is an individual licensed by the state to practice as a professional. It is up to the individual to work within their disciplines.	No action.
115	9.1	9.1	Maria Carranza	<p>Comment or Clarify: Standard Dispersal Trenches are often installed deep (72" for example). Standard trenches are also installed under a heavy massive clay cap without pre treatment.</p> <p>Suggestion: Should pretreatment be required under clay cap. Uncertain if these deep trenches are acceptable. Code does not reference acceptability of deep trenches or clay cap.</p>	Pretreatment is predicated on the soil type, soil depth, separation to ground water in this case below the clay cap.	No action
018	9.1	9.1 Table 9.1	Ted Walker	Not needed.	<p>In a prior drafting cycle, staff received a request to include this very table.</p> <p>There are some members of the community who feel it is needed or at least desired.</p>	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
019	9.1	9.1 Figure 9.1	Ted Walker	<p>Standard trench only requires 12 inches of backfill. You show straw over rock, most good contractors and consultants ask for Mirafi 140N geotextile fabric, trench width is 18 inches wide.</p> <p>Mound and At Grade Soil Cap on sloping sites is way, way too much here. In conversations with James Converse, there is no technical reason for the soil cap to extend to 10 feet. Four to six feet on the downhill side is all you need. You most likely will negate/or hide the chance of downhill toe breakout of the infiltrative area by throwing more soil here. If breakout were to occur, you want to know about it, not hide it. And following Mound Guidelines, remove the soil cap and extend the sand layer. Like we have done in the past. Please review the document, Troubleshooting, Inspecting Mound Systems.</p>	<p>Please see section 9.2.E for the details. Section 9.2.E allows for more than one option as the barrier between the double-washed rock and the native back-fill. One image cannot depict all three options.</p> <p>What section is being referred to regarding soil caps. Mounds and At-Grades are non-standard systems detailed in section 13.</p> <p>The County has used and continues to propose to use the published guidance document for mound and at-grade construction.</p> <p>For the upslope and downslope soil cover, the OWTS Manual uses the same formulas and slope correction factors as published in the most recent version of the Wisconsin Mound Soil Absorption System and similarly for At-Grade systems.</p>	
086	9.1	9.1 Table 9.1	Elsa Frick	<p>Table 9.1 is not entirely consistent with table 7.2b It has already caused trouble</p>	<p>The first four columns of Table 7.2b are consistent with the first four columns of Table 9.1.</p> <p>Commentor does not explain the inconsistency nor the "trouble" the two tables have caused.</p>	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
109	9.14	9.1.D	Greg Schram	Standard system should be allowed on slopes greater than 30% with a geotechnical report.	<p>Sonoma County has had code language prohibiting septic systems of slopes greater than 30%.</p> <p>This code language resides in SCC Ch 25, Subdivisions.</p> <p>As such the practice has been to not allow standard system on slopes greater than 30%.</p> <p>Section 4.2.B.4 contains a general provision prohibiting OWTS on slopes greater than 30%.</p> <p>Section 4.3.A provides the exception to 30% prohibition.</p> <p>We are editing section 4.3.A.1 to be consistent with the OWTS Policy and to remove section 9.1.D.</p>	<p>Revise 4.3.A to be more consistent with the OWTS Policy.</p> <p>Delete section 9.1.D.</p>
085	9.14	9.1.D	Elsa Frick	This needs to be struck There is no justification for this restriction it was changed in the last OWTS7.0 and should not have been It has rendered perfectly functioning and sited septic systems now non conforming and there is no justification for the departure from past practice	See above.	<p>Revise 4.3.A to be more consistent with the OWTS Policy.</p> <p>Delete section 9.1.D.</p>
110	9.2	9.2 Figure 9.2	Greg Schram	I would state that this is just an example and dimensions may vary.	Agreed. The intent is to revise all figures; the figure should be examples or for illustrative purposes;	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
					the standards should be in text format.	
172	9.2	9.2 Figure 9.2	Jeff Loe	Detail is poor; suggest new detail with concise annotation. Left side: Trench depth leader left side of trench, Right Side: Backfill depth per plan, 12 inches min Geotextile fabric, untreated building paper or 2 inches straw Drain rock over pipe, 2 inches Distribution pipe - 3 or 4"Ø, level, end capped Drain rock under pipe per plan, 12 inches min Trench bottom shall be level Bottom: Trench width per plan 18 inches min.	Agreed. The intent is to revise all figures; the figure should be examples or for illustrative purposes; the standards should be in text format.	No action.
335	9.25	9.2.E	Steve Brown	Include nonwoven filter fabric also on Figure 9.2	Agreed. The intent is to revise all figures; the figure should be examples or for illustrative purposes; the standards should be in text format.	No action
087	9.29	9.2.I	Elsa Frick	This was added in the last OWTS revision. Sonoma County had no provision for equal distribution by distribution boxes as too often a box shifts and portals are missed, skipping lines unintentionally Equal distribution is flawed in distribution box technology, serial distribution can and does work fine on flat sites. There should at least be an option before some standard system on a flat site installed under permit 3 years ago gets deemed non conforming	This provision is in OWTS v3.0 adopted in 2016 and likely came from earlier versions.  Equal distribution is still cited in numerous publications, sometimes called parallel distribution.	No action.
169	9.299	9.2.J	Jeff Loe	Today's rectangular distribution boxes cannot easily be extended to grade. Best if they are buried 12" cover.	Section 9.2.J provides an option: backfill with 12" or extended to grade with a riser.	No action.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
170	9.2999	9.2.L	Jeff Loe	Unsure why L. "Construction and paving over leaching systems and replacement areas is prohibited." Is under Standard Dispersal Trenches; it applies across all system types. Might it better go in 4.2 Prohibitions?	Comment noted.	Strike section 9.2.L. Revise section 4.2.B to add sub-provision 4.2.B.14 with the same language from 9.2.L.
171	9.29999	9.2.N	Jeff Loe	Sewage distribution pipe is unclear. Suggest the distal end of Distribution Line or Leach line pipes shall be capped.	Comment noted.	Revise section 9.2.N to insert the "distal" so to read, "The <u>distal</u> end of each ..."
088	9.3	9.3	Elsa Frick	This section should be titled leaching beds and all use of the word seepage pit changed accordingly	Comment noted.	No action.
173	9.314	9.3.A.4	Jeff Loe	Volume requirement is uncertain. Specify if the seepage pit <b>void volume</b> beneath inlet invert shall be $\geq$ to required minimum septic tank volume. Or however else that volume might be determined.	The intent is for the seepage pit to have the same volume as the septic tank prior to filling the seepage pit with drain rock.	Revise 9.3.A.4 to use the term "volume" rather than size or gallonage capacity and that it is the volume prior to filling the seepage pit with drian rock.
184	9.319	9.3.A.10	Jeff Loe	Suggest: Trench width of 18 to 24 inches as specified by designer and permitted by PRMD.	Please see section 9.2.D that specifies widths between 18 and 24 inches, for standard dispersal trenches.  There is no section 9.3.A.10.	No action.
174	9.4	9.4	Jeff Loe	General System Installation Requirements – applies to Standard Dispersal Trench as well. Recommend bringing this to top of Section 9	Agree that this is a poor location for these general requirements. Some speak to any OWTS yet these are within the Standard OWTS section.  Recommend moving to section 4.11 General Provisions.	Delete 9.4.A (already at 4.11.E) Delete 9.4.B (already at 4.11.F) Delete 9.4.C (already at 4.11.G) Delete 9.4.F (already at 4.11.D)  Move siphon dosing prohibition to prohibitions in section 4.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
					<p>9.4.A already in manual at 4.11.E                      9.4.B already in manual at 4.11.F                      9.4.C already in manual at 4.11.G</p> <p>9.4.F already in manual at 4.11.D.</p> <p>Seems like 9.4.D could be added to prohibitions in section 4.</p> <p>Move section 9.4.E to a new provision in section 9.2. And eliminate section 9.4 and renumber.</p>	Move 9.4.E to 9.2 as a new provision with the edits recommended below in ID Num 176.
175	9.43	9.4.C	Jeff Loe	Is the currently applicable code CA Plumbing Code? The code section is 701.2. OWTS Manual does not regulate building sewer. Suggest piping between septic tank and distribution boxes shall be DWV pipe as required for building sewer or SDR 35 PVC. Pipe in the distribution lines/leach lines need not be DWV or have water tight fittings. SDR 35 or spec is ASTM-F810. Please review and make this a specification.	<p>Recommend moving most of 9.4 to section 4.11 as noted above.</p> <p>In regards to referring to the plumbing code, please consider these references are beneficial to the general public.</p>	Delete 9.4.C here and add to section 4.11.
176	9.45	9.4.E	Jeff Loe	<p>Could be worded better</p> <p>Distribution infiltrative side walls shall be scarified/roughened and soil crumbs removed prior to placement of drain rock.</p>	Agree with the first part but are contractors going to remove the "soil crumbs?"	<p>Revise 9.4.E as to include scarifying / roughening the side wall but exclude the removal.</p> <p>Move 9.4.E to new provision in section 9.2.</p>
177	9.46	9.4.F	Jeff Loe	Suggest rewording "Construction of OWTS shall be avoided when soils are wet or rain impending. If construction must proceed, the qualified consultant should determine and advise whether compaction	Agreed, we can change "test period" to "test season"	Delete 9.4.F and revise the general provision in section 4.11.

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			Steve Brown (4.11.D)	and smearing will occur, and issue instructions to minimize compaction and smearing. Trenches that have remained uncovered during any substantial rain may require abandonment or entire retrenching.”  Replace “open groundwater test periods” with “an open wet weather test season”		
178	9.5	9.5	Jeff Loe	Recommend word track rolled rather than compaction. Compaction suggests vibratory. In fact 9.6 A.16.d. says avoid soil compaction.	Assuming comments apply to section 9.6.	Revised section 9.6.A with the recommended language below.
185	9.518	9.5.A.8	Jeff Loe	Suggest that 8 & 11 be combined: The distribution pipe shall be covered with 2-3 inches of drain rock and 12” of soil (native + import).	Assuming comments apply to section 9.6.  Noted.	No action.
182	9.6	9.6 Table 9.6	Jeff Loe	Recommend title Filled Land OWTS Trench <b>Depth</b> and Fill Requirements Table rows 1, 4, 6 & 9 result in gravel placement above the bottom of the fill. I caution against this, because a surcharged leach line could out flow preferentially via the fill native soil contact. I do not believe effluent in the trench should be allowed to contact sidewall comprised of fill soil.	Provision 9.6.A.17 should ensure good bonding between native and fill material to mitigate this concern.	No action.
179	9.61	9.6.A	Jeff Loe	Recommend: Filled Land OWTS utilize onsite or imported fill to deepen the soil in the leach field area. The fill functions as cover soil, and not as trench absorption area.	Agreed. The proposed language will be incorporated at 9.6.A, except the reference to the “minimum of 12 inches over native” will be stricken as it is not always true.	Revise section 9.6.A with the recommended language.  Edit to strike the reference to “12 inches over native.”

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				Read what you have written: Systems are systems, imported soil is imported, minimum depth of 12 inches over native soil for the dispersal trench area of the system.	We ask for 12 inches of soil cover which could be a combination of in-trench plus cover fill.	
180	9.612	9.6.A.2	Jeff Loe	Confusing/recommend rewording 2. Filled Land proposals for subdivisions which have received tentative map approval based on the prior filled land septic system policy dated January 1, 2009 shall not be deemed acceptable for processing of the septic requirements for the subdivision. shall be re-evaluated under current Filled Land or alternate OWTS criteria.	Commented noted.	Revise 9.6.A.2 with the recommended language.
336	9.612	9.6.A.2	Steve Brown	This section should be eliminated. The change in depth of soil for fill systems is long enough ago that it does not apply to current development.	Noted. There may still be projects that relied on the prior Filled Land Design.	No action.
181	9.613	9.6.A.3	Jeff Loe	Unclear intent Too many thoughts and likely unnecessary. Recommend:  With the exception of the fill, Filled Land OWTS shall meet standard system siting and sizing criteria.	Agreed.	Revise section 9.6.A.3 in accordance with the recommendation.  Revised section 9.6.A.13 to strike the phrase, "... native soil meeting percolation test requirements."
183	9.617	9.6.A.7	Jeff Loe	Suggest that the full depth of gravel (beneath, around and over the pipe) be in native soil, which would limit fill to ≤12 inches.	This is the same concern from ID Num 182. The site work to bond the fill and native should mitigate the concern.	No action.
186	9.619	9.6.A.11	Jeff Loe	Suggest that 8 & 11 be combined: The distribution pipe shall be covered with 2-3 inched of drain rock and 12" of soil (native + import).	9.6.A.8 and 11 are two different issues.  Breaking 9.6.A.11 out into separate provisions.	Revise 9.6.A.11 into two provisions.

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187	9.6199	9.6.A.18	Jeff Loe	Omit "or sodded" Sod requires irrigation and therefore should never be used on filed land system. Also applies to 9.7 C.3.	Agree. Recommend updating with current storm water language.	Replace 9.6.A.18, last sentence to read, "The fill area shall be protected from erosion using approved storm water erosion prevention best management practices."
188	9.7	9.7	Jeff Loe	The soil depth requirement for shallow sloping is unclear. Please clarify.	There really is not a requirement for soil below the trench. This system relies on horizontal treatment due to the slope. That is why you see the language for 15 feet to breakout at the side slope.  We will attempt to revise the introductory paragraph.	Revise 9.7.A. to more accurately describe a shallow sloping OWTS.
189	9.712	9.7.A.2	Jeff Loe	This is confusing: If soil profiles ... prove unsatisfactory and are supported by soils profiles.. Please rewrite.	Agree. We are attempting to re-write to clarify.	Revise section 9.7 for clarity.
190	9.713	9.7.A.3	Jeff Loe	This section is on number of perc holes. Eliminate excess language.  "One hole 50 feet downslope of the lowest leach line in the primary/replacement area." <del>to show the permeable top soil is continuous (for example adequate distance and depth of soil exists to provide filtration and treatment of effluent).</del>	Generally, we should be shifting the radii, squares and site evaluation areas for percolation tests, soil evaluations, etc. However, this system type relies on horizontal soil and horizontal treatment. To prove soil exists laterally, additional testing is required.	Delete section 9.7.A.1  No action.
191	9.724	9.7.B.4	Jeff Loe	What does the statement mean. "Non-residential designs will be based on Permit Authority, EPA, or other approved design criteria." PRMD is the permit authority, EPA could be used to estimate waste	Recommend deleting the "non-residential" sentence.	Strike the last sentence in section 9.7.B.4.

ID Num	Sort Key	Section #	Commenter	Comment/Suggestion	Response	Action / Edits
				flows and wastewater strength, what other approved design criteria would apply. <b>If this is about waste flow and strength, those are addressed elsewhere.</b> I recommend that Shallow Sloping be allowed only for residential applications.		
192	9.726	9.7.B.6.c	Jeff Loe	Recommend that the diversion valve be housed in a readily accessible enclosure. Monument has no meaning.	Agree.  Need to specify what type of enclosure.	Revise section 9.7.B.6.c to remove monument but add a housing for the diversion valve.
193	9.727	9.7.B.7.a	Jeff Loe	What depth of groundwater is required?	Shallow sloping systems have a trench bottom at three feet. The OWTS Policy requires a minimum two feet separation to groundwater. We require three feet to groundwater, but two feet if mitigated with treatment. So without treatment, that would be six feet below grade, five feet with treatment.  The option is to install an intercept drain or demonstrate the site has three feet, below trench bottom, to groundwater.	Revise section 9.7.B.7a to include a three foot separation to groundwater , from the trench bottom.
194	9.8	9.8	Jeff Loe	Recommend name change to Standard Pressure Distribution OWTS or Standard PD.  The term Shallow Trench Pressure Distribution (STPD) has historically been used for a non-standard type of OWTS and is mentioned in MOU's and older septic regulations as a non-standard system.	Noted.  We are attempting to combine the two types of Shallow Trench Pressure Distribution systems (section 9.8 and 13.4) and calling out the difference between those two within one section.	Revise to combine section 9.8 and 13.4.

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195	9.81	9.8.A	Jeff Loe	Nothing is stated in regards to design of the pressure distribution system. Please refer to another section or make this clear.	The combination of sections 9.8 with 13.4 should clarify this comment.	Revise to combine section 9.8 and 13.4.
046	9.815	9.8.A.5	Tai Nguyen	Section 9.8, A, 5: For pressure distribution system, proof of soil below the trench bottom is 3 feet. I would recommend change it to 2 feet since leach lines are equal distribution and soil can filter in 2 feet.	We reduce the soil depth for pressurize drip systems due to the treatment unit, which is required for all drip systems. This system does not require advanced treatment, is in the family of standard systems and therefore requires the three feet of soil.	No action.