

4.2.C.8

In December 2017, the North Coast Regional Water Quality Control Board (RWB) adopted Order No. R1-2017-0039, allowing for repair or replacement of existing OWTS with less than **2-feet of separation to groundwater** provided the replacement OWTS includes supplemental treatment and/or enhanced effluent dispersal. Our proposal incorporates this Order, offering a pathway for owners unable to achieve the 2-foot requirement.

Response:

Permit Authority agrees while the proposal recommends adding language to section 4.2.C, it is more appropriate to include in section 4.3.C as section 4.3.C explains how one addresses or mitigates a prohibition listed in section 4.2. Similar language has been added to section 4.3.C in response to another commenter.

4.4.2

The proposal requiring private **Qualified Professionals/Consultants for the design** of replacement OWTS causes a substantial delay (generally 3+ months) for professional design and County approval. While this process is occurring, the owner would be required to contain the sewage discharge in some manner. PRMD staff has suggested that this could occur by pumping the tank as necessary. In reality, the tank would need to be pumped several times a month at a cost of \$450-550 each session. Most owners do not have the financial resources to complete pumping while the Qualified Professional is designing the system and the County is reviewing the design. The permit process needs to facilitate obtaining a permit to correct a failing system in order to prevent groundwater degradation and public health problems resulting from the release of untreated wastewater.

Response:

Timeliness:

Section 5 states that permits for systems in failure are to be expedited. This has been past practice and we are codifying this practice in the OWTS Manual.

Most failures occur in winter and under saturated soil conditions. These conditions make repairs more challenging and can lead to smearing of trench side walls. In our experience most contractors do not perform a significant amount of trenching during saturated soil conditions. Waiting weeks or months for dry conditions is not unheard of.

The presented discussion assumes a system in failure. In our experience very few replacement systems are for systems in failure.

Contractors:

In previous e-mail communications Mr. Holmer provided section 5537.2 of the Business and Professions Code indicating this was the section that contractors have argued gives them the ability to design a system they have under contract. This section of code resides in the Architects section of the B&PC. Architects are not authorized to evaluate soils and are not authorized to conduct septic design work. The presented B&PC section is not applicable to septic design work and does not support the argument that contractors can conduct septic design work.

Mr. Holmer also suggested County Counsel review the pertinent laws and regulations regarding which professionals can design septic systems. In verbal conversations Mr. Holmer identified Mr. David Hurst as

the counselor he worked with at the time this determination was reportedly made. At the author's request, Permit Authority contacted Mr. Hurst. Mr. Hurst does not recall making this determination. We then requested County Counsel to review their past determinations. County Counsel keeps all their legal determinations and could not find a legal determinations on this topic.

Permit Sonoma has reached out to the Board of Registration for Professional Engineers and inquired about which professionals are allowed to design septic systems. Their response is that licensed civil engineers and registered environmental health specialists are allowed to design septic systems in California.

Permit Sonoma staff as Designers:

Mr. Holmer suggests that Permit Sonoma REHS and/or Professional Engineers could design standard septic systems. Currently, County job classifications do not specify, list or call out the preparation of septic designs or calculations for Permit Sonoma staff. The County job classification lists plan review and inspection work and other job duties, but not design work. The County would need to modify the job classification, meet and confer with union representatives and possibly re-negotiate employee contracts.

Private designers have errors and omission insurance and take on liability when designing septic systems. The County would need to provide similar insurance and/or enter discussions with Risk Management about how to proceed relative to protecting the County and individual staff.

While couched in the arena of failed systems, the proposed edits to the OWTS Manual are not limited to failed or failing systems and would allow public employees to design any type of septic system. Humboldt County does allow public employees to conduct design work only in Class II soils. Napa County provides for a similar scenario. However, the proposed language does not limit Permit Sonoma staff to any particular type of design nor any particular soil type. It might be perceived that Permit Sonoma could then be in competition with the private sector for septic design services.

This idea seems to set the precedent wherein the designer is also the permit authority issuing the permit- this seems counter-intuitive to the role of an objective regulator. One best professional practice the County tries to adhere to is to not have one agency design and then approve the same design.

4.13.A

When a new OWTS is constructed, a **reserve expansion area** is required to be designated for future repair of the system. When the need arises for the system to be replaced (most often after 30-50 years), the approved reserve expansion area will be used. Many parcels do not have additional repair area available above what was demonstrated at the time of the original permit. Retaining this requirement could easily render small parcels unbuildable – absent the necessary expansion area, owners are left with no option to replace their system.

The proposed change clarifies that reserve expansion area is not required to be shown or tested to obtain a permit for a replacement system. **This is a critical conundrum to address prior to the approval of a local Policy.**

Response:

There are two scenarios for reserve areas: parcels created prior to October 1971 and 100% expansion area and parcels created during or after October 1971 and 200% expansion.

It seems the concern is that Permit Sonoma would invoke this requirement in response to a replacement septic system application. Provision 4.13.A is applied by several provisions within the OWTS Manual, specifically section 4.9.B.3 and section 6.6.

In section 4.9.B.3 the reserve areas are to be depicted on the site map. Section 6.6 details when the reserve area needs to be code compliant or is to be evaluated. The principle is not to require reserve areas beyond section 4.13.A. If a replacement system is proposed and the parcel is pre-October 1971, it is assumed the replacement system is going in the reserve area and no additional reserve area will be required. If there is usable data (soils, groundwater, etc.) to support the design of the replacement system no additional field evaluation would be needed.

If a replacement system is proposed and the parcel was created in October 1971 or later, it is assumed the replacement system is going in one of the two 100% reserve areas. Assuming no building permit is applied for and section 6 is not applicable, the only requirement is to identify on the site map the location of the three systems: existing system to be replaced, the new replacement system and the location of the second 100% expansion area. If there is usable data (soils, groundwater, etc.) to support the design of the replacement system no additional field evaluation would be needed.

The current draft of the OWTS Manual does not require demonstration of reserve area(s) when proposing a replacement septic system. Section 4.9.B.3 does require reserve area(s) to be depicted on a site map. The OWTS Manual does require evaluation of reserve areas when certain levels of structural development, via a building permit, is proposed, but not in the absence of a building permit.

5.3.D

PRMD has made a commitment to investigate all failed systems within 48 hours, but has not clarified what action will be taken when the investigation is made. The proposed change clarifies that a property owner who is attempting to correct a failed system **will not be fined if a Notice of Violation is issued.**

Response:

Permit Authority does not recommend deleting section 5.3.A. The thought is to differentiate between clients whose failed system comes to the attention of the County by means other than notification from the land owner.

We cannot agree to forego Code Enforcement Action completely as there may be cases where the client notifies us of a failing system and neglects to have the system repaired.

As other commenters have pointed out for other code sections, the use of language such as “reasonable measures” is subjective. Further, each situation is different, but if the system is discharging waste to a storm drain, roadside ditch and/or stream, the “reasonableness” is different than ponding effluent.

6.1.A

The proposed changes reflect PRMD's adopted policy regarding when a building plan-check is required for a structure. Our proposal would **keep OWTS regulations current if plan-check requirements/policies change**, and also recognizes that some projects do not require a permit.

Response:

Your suggestion regarding referencing the building policy was made by others and has been incorporated into the latest version.

Section 6.1 has been modified to be more global and includes three classes of building permits that are not to be reviewed by the Well and Septic section: building permit exempt projects, building permits with no plan check, and building permits with plan check that received damage.

6.4.A

The proposed change incorporates comments made by PRMD staff at the October 11, 2018 public meeting.

Response:

Language to fulfill the intent of this recommendation has been added to section 6.1.

6.4.C

The existing OWTS Policy allows a **"bedroom swap"** where the flow to a non-conforming system is not increased above design capacity. The bedroom swap entails removing a bedroom from the primary single-family dwelling (SFD) to allow construction of a bedroom in the ADU. This policy has not created problems with OWTS and should be continued.

Response:

Section 6.4.C has been revised to address two ADU scenarios. The first scenario is a new ADU adding bedrooms or waste flow which requires a code compliant system (new or existing with capacity). The second scenario is a new ADU using the primary dwelling's existing non-conforming system provided there is no increase in bedrooms (bedroom swap) or waste flow. However, a code compliant reserve replacement area is required in both scenarios.

6.7.A

The proposed change clarifies that, if the existing non-conforming OWTS has capacity for additional flow, **additional bedrooms can be added in cases that do not increase the originally permitted flow**. Many systems were designed using projected waste flows that did not reflect the (now mandated) **use of low flow plumbing fixtures**. In some cases, the retrofitting of low flow plumbing fixtures into a house can keep the projected flow within the design capacity even if a bedroom addition is made.

Response:

Previous comments to this effect have been submitted. Please see the revised section 4.5. Section 4.5.A recognizes low flow fixtures are a requirement of building codes and the reduction from 150 gpd per bedroom to 120 gpd reflects this. In addition section 4.5.D has been edited to allow for low flow credits in structures constructed prior to when the building code required low flow fixtures. Structures built after this date should have low flow fixtures.

6.8.A

We have proposed deletion of language that would require demonstration of a code compliant **reserve expansion area if an ADU** is constructed on a parcel. This proposed change provides for cases where there is a designated reserve area on the original OWTS approval or if use of a non-conforming system is approved for the ADU.

Response:

Permit Authority disagrees with this comment. An ADU is a new dwelling unit, has bedrooms, a kitchen and laundry. These are a step above a stand-alone bedroom addition or a bedroom swap. A new dwelling unit requires a code compliant system: either an existing code compliant system or a new code compliant system. The same argument applies for the reserve area serving a new ADU.

6.8.B

Our proposed language **recognizes a previously approved reserve expansion area** when a building footprint is being changed. It also allows the reserve expansion area to be based upon the nature and size of an existing, properly operating OWTS **even if it is non-conforming**. Finally, the suggested change **would allow interior modifications in a building where there is no change in the sewage flow** even if reserve expansion area is not available. This will enable owners to perform needed repairs to a structure where the parcel size is limited.

Response:

Permit Authority disagrees on recognizing a “previously approved reserve area.” Many parcels were created that did not have a reserve area identified or if identified was not perfected with soil profiles or other details. Many reserve areas were fully evaluated, but many others were not and we see a spectrum of effort that went into evaluating reserve areas.

The objective is to use building permits as the criteria to demonstrate that the parcel complies with section 4.13.A. Further, the bar is not set very high for improvements or those projects that have less than 50% land encumbrance. Section 6.8.B (new section 6.6.B) states that a site map depicting the reserve area should suffice.

Permit Authority agrees on if the project does not increase the footprint of the structure. See revised section 6.5.B.1 and 6.5.B.2. The intent is to evaluate the reserve area if the building improvement is an addition as opposed to an interior or tenant improvement.

6.10.A.4.a.ii

This is a minor change to reflect the proposal that some **ADU’s** do not require a code conforming system.

Response:

While not stated here, commenter suggests deleting section 6.10.A.4.a.i. Permit Authority disagrees with deletion. Reconstruction is a 100% tear down and rebuild. It is a new structure and is treated similarly relative to the findings report.

Permit Authority disagrees with the proposed edit. New dwelling units require a code compliant system – either through documentation that the existing system is code compliant or through construction of a new code compliant system.

6.11.B.2

In some cases, OWTS are located a long distance from the building structure. In this case, if modifications are being proposed to the structure, the system should not have to be uncovered so its location can be verified and a scale map prepared showing the location (which is an expensive and time-consuming process).

Response:

The proposed language seems redundant as provision 6.11.B.2 currently embodies the intent of the recommended language.

6.11.B.4.e

This change allows the use of alternative methods.

Response:

Proposed language seems vague, leading to discussions/arguments over what is acceptable. Permit Sonoma welcomes input and if you have specific ideas on how to evaluate system performance, please submit to well and septic staff for further consideration.

6.11.B.7

If the consultant is present at the time the tank is pumped, an additional pumping report should not be required.

Response:

In response to a previous comment, we removed the requirement for pumper records. See the revised provision 6.11.B.7.

7.1 & 7.2

We recognize the need for review of soils and groundwater conditions when replacing an OWTS. However, we feel strongly that the proposal to require a private **Qualified Professional to perform soils evaluations and groundwater determinations** for all replacement systems is counterproductive to timely mitigation of potential groundwater and public health degradation that result from a failing OWTS. It is paramount that the permit process be structured to facilitate the timely correction of failed systems.

PRMD's proposed soil and groundwater review process for replacement systems will require a total of at least 3 months. The process will require a Qualified Professional to schedule the work, backhoe operator, construct profile holes, schedule field review with PRMD staff, submit a written report for review, respond to staff comments, and receive final approval of the soils and groundwater evaluation. This is an excessively involved, time-consuming process that would be required before a plan could even be drawn for replacement of the OWTS.

Our proposed changes allow the **use of alternative methods for demonstrating acceptable soils** and depth to groundwater for replacement systems. Our proposal imposes the same level of review of soils and groundwater conditions as the PRMD draft. However, instead of requiring a private Qualified Professional in all cases, it allows the review of soils profile holes constructed by the applicant and reviewed by PRMD. Since all the staff employed by the Well and Septic Division are Qualified Professionals, review of soils and groundwater by staff satisfies the State OWTS policy and is consistent with the State policy for design of an OWTS.

This would reduce staff time necessary to review information submitted by a private Qualified Professional and the field review of a private consultant's work. The major benefit of the proposed procedure is that it allows timely review of soils conditions without the back and forth review that

generally occurs between a private consultant and staff. As mentioned above, time is of the essence in effecting a prompt and effective repair to a failing system.

We also propose an alternative where the **use of historical data can be used to determine soil and groundwater conditions**. The County began requiring rigorous, scientific review of soils and groundwater conditions for new OWTS in 1982. Soil and groundwater documentation on roughly 7000 parcels has been collected since that time. This is valid data that should be used for evaluations for replacement systems. The State OWTS policy recognizes and allows the use of historical data.

We also propose **allowing the use of historical data** from the parcel where the OWTS permit is being processed, **as well as other parcels in the vicinity** of the parcel where the replacement system will be constructed. The use of data from parcels in the vicinity will be with the provision that the data used is from the same mapped soil type as the parcel where the system is being replaced.

Finally, we propose that **certain critical soils mapped by the Sonoma County Soil Survey** as having potentially high groundwater conditions be allowed to construct a mound or at grade system without soils and groundwater evaluation. In these soils, the most likely result of soils testing is that a mound or at grade system will be required, which is the best available technology for these critical soils. This is consistent with Regional Board Order No. R1-2017-0039. If the property owner feels that their parcel is suitable for a less expensive system, the proposed policy allows for testing and evaluation.

These proposals will also substantially reduce the expense to the property owner for hiring a private consultant to soil and groundwater evaluation (while meeting strong environmental standards). This generally runs \$3000-5000, which can more effectively be spent on construction of the replacement system.

Response:

The cover letter discusses the timeliness for the replacement of failing systems. However, the suggested code language is silent on failing systems and suggests public employees may design all replacement systems.

The draft OWTS Manual proposes to expedite the septic permitting process for applications that address failing systems.

Having a default system for high groundwater areas in an interesting concept. We will take that under consideration.

Table 7.2.c

We propose adding a note to the **setback from perennial flowing streams to allow using the mean high-water mark as an alternative for determining the required 100-foot setback** between an OWTS and the stream. Along the Russian River, it can be difficult to establish the physical location of the bank of the river due to many small variations in terrain that have resulted from repeated flooding episodes. The mean high-water mark is defined in State law as the area where jurisdiction of the State Lands Commission ends and is generally indicative of the highest normal water flows other than extreme flood events. Providing a 100-foot setback from this point will be protective of the water quality of the river and is consistent with the setback from oceans, lakes and ponds. In addition, we have added language from the State OWTS policy **allowing reduced setbacks** if wastewater cannot migrate to the stream.

Response:

Comment noted.

7.6.G.1

We propose that data from parcels in the same soil type be used rather than an arbitrary line of 500-ft as proposed.

Response:

Please keep in mind that this section is an alternate to direct groundwater observations. Using the same soil type is too broad. The same soil types are found in various locations throughout the county. For example, soil type 5 (Yolo-Corina-Pleasanton association) can be found near Glen Ellen, Healdsburg and Jimtown. Soil type 11 (Hugo-Josephine-Laughlin association) can be found from Occidental north to the Sonoma-Mendocino County boundary (Soil Survey, Sonoma County California, General Soil Map, USDA). With the proposed language one could then argue to use groundwater data in similar soil types that are miles apart.

Groundwater has a gradient or slope. Just a 0.1% groundwater gradient equates to ½ foot over 500 feet. Five hundred feet is a reasonable distance as groundwater elevation beyond this distance will likely vary too much to be reliable.

Further, the reason for including soil profile readings in the groundwater section is to capture soil mottling that may have been observed.

7.6.G.4

We propose deletion of the current language that **soils and groundwater evaluations more than 3 years old cannot be used for evaluation of a replacement system. It is absurd to suggest that soil conditions and groundwater conditions will change in such a short time frame – soils are deposited over eons, not years.** Groundwater conditions are a function of the entire basin and are not altered by minor changes to drainage. If the soil on a site has been disturbed by grading or filling, or if significant changes have been made to drainage, this is easily observed during the PRMD staff site review. In this case, previous determinations can be reexamined in light of the changes to the site.

We propose **allowing the use of historical soils and groundwater data approved by the County since 1982** and in the same soil type. This provides a rational, scientific format for use of existing data which has been subjected to rigorous review in the past.

Response:

Previous comments were submitted on three year topic. This provision has been modified to read, “Soil profile readings or observation were made by both a Qualified Consultant and the Permit Authority and site conditions have not changed to render the reading or observations invalid; and,” This revision gets to the point that site conditions can change yet removes the arbitrary time period.

7.7.A & 7.11

The use of **percolation testing is being minimized or eliminated by most jurisdictions.** Percolation testing is an artifact that has carried over from earlier times when scientific methods of soil analysis had not been well developed. It is useful, however, when it is difficult to determine the permeability of the soil from the soil profile analysis. Our suggestion uses this more up to date approach.

Response:

Section 7.6 has been revised to be more explicit on our practice of percolation testing versus soil analysis. Below is a summary:

Development on undeveloped properties requires percolation testing.

Developed properties requires percolation testing or soil analysis:

Soils classified as zone 1 or zone 2 can use assumed percolation rates.

Soils classified as zone 3 or zone 4 require percolation testing.

Zone 3 or 4 soils with plasticity index of 20 or more requires wet weather testing.

Zone 3 or 4 soils with plasticity index of less than 20 requires dry weather testing.

Please provide Permit Authority with further information on what is replacing percolation testing and which jurisdictions are minimizing and/or eliminating the practice so that Sonoma County might review their approach.

9.3.F

The current language stipulates that OWTS **cannot be constructed during the rainy season**. This precludes construction during a large part of the year. We propose language that the system not be constructed when the soil is saturated. This is easily evaluated in the field. This will prevent the smearing of soils associated with construction during wet conditions.

Response:

Similar comments were received previously and this section was modified accordingly.

18

We propose the elimination of most of Section 18 as it applies to **“waiver prohibition areas”** adopted by the County. Most of these areas date back 30+ years to a time when the actual regulations for OWTS systems were developing and not well formulated. The defects in the regulations were recognized at the time and the thinking was that further modifications to weak regulations presented an excessive level of hazard. At this point in time, the State OWTS policy has been finalized and the regulations are well written and based upon scientific evidence. Variance procedures are specified and prohibitions on variances are specified. The OWTS Policy should supersede any need for old County waiver prohibitions.

In many cases, County **waiver prohibition areas are within the TMDL areas** and subject to stricter standards or the area has been provided with sewers. One of the waiver prohibitions for the West Petaluma area sets standards that don't actually decrease the nitrate discharge from some septic systems. There is better technology available for eliminating nitrate from the waste stream.

When attempting to provide an effective replacement system, flexibility is needed in order to deal with site conditions that can be extreme in some cases. If waivers are prohibited, certain types of alternative systems become less practical due to mandatory setback requirements. Alternative approaches to can also be precluded due to inflexibility in what is allowed. **It is time to eliminate the waiver prohibition areas that are simply artifacts of older regulatory adoptions.** They are both ineffective and counterproductive to providing the best replacement system in critical areas.

The provisions of Section 18 relating to TMDL areas should be retained.

Response:

The Permit Authority has clearly stated that some of these waiver prohibition areas will be a moot point once the Russian River TMDL Implementation Plan is adopted. The County's plan was to request the Board of Supervisor's dissolve or delete these waiver prohibition areas at the appropriate time. Other waiver prohibition areas may become a moot point if/when the Petaluma River TMDL is adopted. It is not appropriate to sunset these waiver prohibition areas until a replacement system is in place.

App A

Add compost toilets as approved experimental systems. These have been approved as a pilot project in Occidental.

Response:

Composting toilets are not an experimental system. The science has not proven these systems are effective at pathogen reduction. The OAEC has entered into a pilot program to help further the science of composting toilets.