



SUMMARY REPORT

Agenda Date: 5/21/2019

To: Sonoma County Board of Supervisors

Department or Agency Name(s): Permit and Resource Management Department

Staff Name and Phone Number: Nathan Quarles, 565-1146

Vote Requirement: Informational Only

Supervisory District(s): Countywide

Title:

Local Agency Management Program and Onsite Wastewater Treatment System Regulations and Technical Standards Revisions

Recommended Actions:

Receive an update regarding County onsite septic standards and authorize submittal of a revised Sonoma County Local Agency Management Program and supporting documents to the North Coast Regional Water Quality Control Board.

Executive Summary:

State law mandates the State Water Resources Control Board (State Water Board) adopt standards for regulation of onsite waste treatment systems (OWTS) commonly known as septic systems. The State Water Board, through its OWTS Policy, has required local jurisdictions to submit OWTS programs to the appropriate Regional Water Board for review and approval.

In May 2016 staff presented the first iteration of the OWTS program to the Board of Supervisors seeking direction to submit the program to the local Regional Water Board (RWB). The Board directed the submittal of the Local Area Management Program (LAMP) and the OWTS Manual which was completed in June 2016. Subsequently, the RWB reviewed the initial submittal and required revisions. While completing the second version, the 2017 Complex Fire occurred and delayed the OWTS program revisions.

On May 22, 2018, staff presented the Board with the second iteration of an application and technical manual for submittal to the RWB. The Board provided direction to continue with engagement; to balance new state regulation with local policy creating a local program that protects resources and public health; and to craft a program that encourages permitting in comparison to strict policies that discourage permitting.

Permit Sonoma staff have hosted six community meetings, provided materials to educate the public on the process and technical details and revised the building policies to strike a balance among state regulation, resource protection and easier permitting. Staff also revised other technical aspects of the program to afford

more flexibility.

Community discussions have focused on four subjects:

- Repairs, replacement systems and new systems;
- Qualified consultants and OWTS designers;
- Building permit thresholds for septic system review; and
- Waterless toilets

The attached LAMP and OWTS Manual represents the third iteration of the application and technical manual. This version reflects the Board's input, the input received during the six community meetings and input from over three hundred submitted written comments. This summary staff report responds to the Board's May 2018 direction, provides overall background information, as well as options for the above topics for the Board's consideration.

Discussion:

Background

In 2000, the California Legislature passed Assembly Bill 885 amending Water Code section 13290 requiring the State Water Board to adopt regulations or standards for the permitting and operation of OWTS, commonly known as septic systems.

On June 19, 2012, the State Water Board adopted Resolution No. 2012-0032, adopting the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy). The OWTS Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS to protect water quality and public health through the consistent regulation of OWTS. Regional Water Quality Control Boards (RWBs) are responsible to implement the OWTS Policy. The OWTS Policy requires local jurisdictions to submit a LAMP to the appropriate RWB. The LAMP should demonstrate how the local septic program meets the objectives of the State's OWTS Policy.

The OWTS Policy establishes five risk-based tiers from Tier Zero to Tier Four. Tier Zero is for existing and properly functioning systems. Tier One establishes statewide standards for new and replacement systems. Tier Two allows local agencies to establish different standards than Tier One, provided they create comparable protections. Tier Three establishes standards for impaired water bodies and provides three options. Tier Four sets standards for systems in need of corrective actions.

Tier One standards are rigid and do not take local conditions such as geology or depth of groundwater into account. Tier Two allows for local standards provided the local standards meet the objectives of the OWTS Policy. Tier Three applies to impaired areas which are listed in the OWTS Policy. Tier Three requires additional and more protective standards within the listed impaired areas, but provides three options: 1) uniform standards within Tier Three; 2) compliance with an approved Total Maximum Daily Load (TMDL) Implementation Plan, if one exists for the impaired water body; or 3) a tailored approach documented in an

Advanced Protection Management Program (APMP).

In May 2016, the Board of Supervisors authorized the submittal of a LAMP and associated documents to the RWBs. Based on feedback from the RWBs and the affected community, staff prepared a revised LAMP and associated documents for consideration at a May 2018 Board of Supervisors meeting.

At the May 2018 meeting, the Board of Supervisors directed staff to request a six-month extension from the RWB and to revise the OWTS Manual based on their feedback from the May 2018 meeting, while also including the future community feedback. The Board of Supervisors directed staff to bring a revised manual back for their consideration within six months.

Overview of Sonoma County Response to OWTS Policy

The Permit and Resource Management Department (Permit Sonoma) has revised a Tier Two LAMP for review and approval by the RWB. Permit Sonoma is proposing to implement the Tier Three standards for impaired water bodies within Sonoma County except for Sonoma Creek that has an approved TMDL Implementation Plan. The North Coast RWB is anticipating approving a TMDL Implementation Plan for the Russian River in the spring of 2019 and the San Francisco RWB also anticipates publishing final TMDL documents for the Petaluma River in the spring of 2019. Given the timing and importance of these TMDL Implementation Plans, the LAMP achieves compliance with the OWTS Policy by implementing the Tier Three standards until the Russian River TMDL and/or the Petaluma TMDL adoption so that the County can respond with an APMP that is tailored to the specific TMDL.

The LAMP contains a general overview of the County regulations and a demonstration of OWTS Policy compliance. Compliance is demonstrated by cross-referencing specific OWTS Policy requirements with the applicable local regulation.

Permit Sonoma created a technical manual for on-site systems entitled the Onsite Wastewater Treatment System Regulations and Technical Standards (OWTS Manual). The OWTS Manual supports the LAMP and replaces in its entirety the *Regulations for Onsite Sewage Disposal in Sonoma County* last revised November, 2002 et seq. (i.e. Blue Book). The OWTS Manual provides the policy, procedural and technical details for implementation of the provisions of Sonoma County Code Section 24-31.5. The previous regulations or Blue Book was an alphabetized compilation of assorted Policies and Procedures, memos, emails, handouts, office forms, Board of Supervisors Resolutions, sections of County Code, flow charts, checklists, information sheets, etc. The Blue Book was cumbersome, outlived its usefulness and was not organized to readily demonstrate compliance with the OWTS Policy requirements.

Prior to the May 2018 Board of Supervisors meeting, Permit Sonoma solicited public review and comment to assist in the development of the OWTS Manual. Commenters included members of the Permit Sonoma Land Use Advisory Panel (LUAP), Permit Sonoma Director's Advisory Group, Permit Sonoma list of qualified consultants and contractors, and the OWTS Residents of the Russian River Committee. Feedback and comments from these outreach efforts have been incorporated into the documents included with this agenda

item.

At the May 2018 meeting, the Board provided direction for additional public outreach and for staff to produce a revised OWTS Manual. In Addition, the board assigned two members as a sub-committee to work with and direct staff on revisions to the OWTS Manual. In consultation with the Board's sub-committee, staff produced a revised OWTS Manual (version 5.0). Major revisions included alignment of building permit review criteria with the Sonoma County Code related to septic reviews, and inclusion of hardship provisions. Also incorporated into this current version is clarification of the County's experimental and alternative system program, allowing experimental data demonstrating compliance from comparable programs outside of Sonoma County.

During the fall of 2018, Permit Sonoma performed extensive outreach, held community meetings at various venues in the following towns: Petaluma, Monte Rio, Healdsburg, Santa Rosa, Sonoma and Guerneville, as well as targeted outreach to local stakeholders. Additional media outreach included local newspaper coverage, English and Spanish postings on Nextdoor, Facebook and Twitter. Public feedback has been welcomed throughout the process by attending meetings in person and accepting written and electronic comment forms, as well as an on-line survey available in both English and Spanish. The combined views for Nextdoor alone was nearly 24,000. In addition staff sponsored a technical review session with members of LUAP.

In addition to the revised OWTS Manual, staff also produced a frequently asked questions document, permit process flow charts and a summary document. These materials were made available to the general public in advance to the community workshops.

Staff received numerous comments via speaker cards at the community meetings and approximately 300 written comments were submitted to Permit Sonoma subsequent to the community meetings. These comments and feedback from the public outreach prompted additional changes to the OWTS Manual. Staff have prepared OWTS Manual version 6.0

Community discussions have focused on four subjects:

- Repairs, replacement systems and new systems;
- Qualified consultants and OWTS designers;
- Building permit thresholds for septic system review; and
- Waterless toilets

Replacement Systems / Voluntary Repairs

The revised OWTS Manual presents three general types of work that require a septic permit: repairs, replacement systems and new systems. Currently the County offers permits for a "voluntary repair." The voluntary repair typically includes replacing an entire leach line(s) compared to replacing a plugged or crushed segment of leach line. The State's OWTS Policy defines the former as a system replacement not a repair. Therefore, the County revised OWTS Manual is consistent in the use of the term "replacement system" and

standards applicable to a replacement system.

Permit Sonoma developed Policy 9-2-13 Approval Criteria for Issuance of Septic System Repair Permit (Policy 9-2-13) for septic system repairs also known as voluntary repairs. This policy was created in 2002 and revised in 2009. This policy recognized the difficulty of repairing septic systems due to the parcel size, pre-code septic systems, current standards and site constraints. This policy championed flexibility to balance the need for housing and protection of public health and safety. Not in all cases, but to afford needed flexibility, the more stringent regulatory language of “shall” and “must” was replaced with “should” and “recommended.”

Over time the voluntary repairs became more extensive by including new leach lines instead of fixing broken ones. Also, documentation of the site constraints was reduced. Today’s voluntary repairs typically consist of a line diagram indicating the location and length of the leach lines without information on site constraints, reasons for replacement, or site evaluation parameters - soil type, depth of soil, or depth to groundwater.

The State’s OWTS Policy defines an OWTS replacement a major repair. “Replacement OWTS” means an OWTS that has its treatment capacity expanded, or its dispersal system replaced or added onto after the effective date of this Policy.

The State’s OWTS Policy is forcing the County to address a long-standing concern about voluntary repairs not being in conformance with Policy 9-2-13. While maybe a step too far, by reducing flexibility, the State’s OWTS Policy does define a “Replacement System” which appears to be consistent with construction of a leach line and/or dispersal system. As such, local programs are required to treat replacement leach lines and/or dispersal systems as new installations.

Below are several Replacement System (RS) options for the Board’s consideration:

Option RS-1:

- Replacement of pipe or material in an existing trench with a repair permit.
- Construction of up to 25% of new dispersal system with a repair permit.
- Construction of over 25% of new dispersal system with a replacement permit.
- Percent is percentage of the existing dispersal system.

Option RS-2:

- Replacement of pipe or material in an existing trench with a repair permit.
- Construction of up to 33% of new dispersal system with a repair permit.
- Construction of over 33% of new dispersal system with a replacement permit.
- Percent is percentage of the existing dispersal system.

Option RS-3:

- Replacement of pipe or material in existing dispersal system with a replacement permit.
- Any amount of new dispersal is with a replacement permit.

Staff recommends Option RS-1 because it strikes a balance between reasonable repairs and necessary maintenance while respecting the intent of the State policy. The RWB has provided positive feedback on

accepting up to 25% as the criteria for a repair permit.

Qualified Consultant

Qualified Consultant refers to the professional authorized to perform specific activities such as design a septic system and/or produce a findings report. The State's OWTS Policy defines a Qualified Consultant to include an individual licensed or certified by a State agency to design OWTS and practice as professionals for preparation of other reports, as allowed under their license or registration. The OWTS Policy definition then lists a registered environmental health specialist, a licensed professional engineer, professional geologist and a certified soil scientist. The definition does allow a local agency to modify this definition as part of its local agency management program but does not elaborate on which additional professionals might be appropriate to add.

The proposed OWTS Manual uses the State definition without modification. OWTS Manual Section 4.4 specifies that a Qualified Consultant is needed to design all types of septic systems. In past policies, contractors and land owners were allowed to design standard septic systems.

While evaluating "voluntary repairs," Permit Sonoma staff determined that licensed contractors have submitted most of these applications without design work. Design parameters of a dispersal system need to include flow rate, soil type, depth of soil, percolation rate, sidewall area below dispersal pipe and depth to groundwater. These parameters are needed to calculate the size of the dispersal field and without a design Permit Sonoma staff cannot assess the system's ability to treat wastewater.

Staff inquired with the Board For Professional Engineers, Land Surveyors and Geologists who determined that licensed civil engineers and registered environmental health specialists are the appropriate professionals to perform septic design work. According to this State Board, C-42 contractors are not authorized to determine the type of system that should be installed and/or provide the preliminary soils evaluation. The Board For Professional Engineers' position has been affirmed through County Counsel.

Staff inquired with other environmental health departments on their practice of allowing contractors to perform septic design work. It is the practice of most environmental health departments to not allow licensed contractors to evaluate soils or to design septic systems.

State law authorizes professional engineers and registered environmental health specialists to evaluate soils and to design septic systems, and geologists and soil scientists to evaluate soils.

Sonoma County Code section 7-5(c) states that whenever approval of the on-site wastewater disposal system is required, the approval shall be based upon the requirements imposed by this chapter and any other state or local law or regulation which may be applicable, including basin plans and other standards promulgated by the North Coast Water Quality Control Board and the San Francisco Bay Regional Water Quality Control Board. Through section 7-5(c), the County is obligated to ensure state law is followed when we approve an on-site wastewater system.

As part of the public review process, one commenter suggested the use of public employees, who meet the minimum qualifications of a qualified consultant, to design septic systems rather than a private qualified consultant. The OWTS Manual definition and standards do not specify that the qualified consultant must be a private sector individual. Using public employees does appear to comply with state law, the OWTS Policy and the draft OWTS Manual. The concept does raise several practical and ethical questions. County job descriptions do not include design work. The County has not requested or informed public employees of the potential to perform design work. Requiring staff to conduct designs may require union negotiations, restructuring of union agreements and salary adjustments. There may be a concern surrounding errors and omissions and potential liabilities to the County. Finally, the role of regulator could become blurred with that of the designer.

Below are several Qualified Consultant (QC) options for the Board's consideration:

Option QC-1:

- Registered environmental health specialists to conduct full design; and,
- Licensed civil engineers to conduct full design; and,
- Soil scientists to conduct soils evaluations; and,
- Geologists to conduct soil evaluations

Option QC-2:

- Option QC1; and,
- C-42 contractors (a sanitation system contractor) to conduct full designs of standard systems; and,
- Land owners to conduct full designs for standard systems

Option QC-3:

- Option QC1; and,
- Properly licensed/registered public employees

Staff recommends Option QC-1 because licensed civil engineers and registered environmental health specialists are the professionals acknowledged by the State to perform all aspects of septic design work and this option is consistent with most environmental health departments.

Building Permit Thresholds

The amount of construction work on a structure, whether dwellings or commercial buildings, currently triggers various level of OWTS review. The overarching department policy for nearly 20 years has been to align the age of a structure to the age of the OWTS as reasonably as possible. This policy has evolved into a tiered approach that considers the amount of work to the structure and the level of review of the OWTS.

Subsequent to the May 2018 Board meeting, staff reviewed the relative code sections (Sonoma County Code sections 7-5(b)(4) & (5)) and the current building permit thresholds. The septic policies have been revised with new building permit thresholds that are in alignment with the intent of the Sonoma County Code. The revised building thresholds propose Permit Sonoma staff review septic systems when the building project either: 1) is

new development on a previously undeveloped parcel; 2) adds new wastewater flow to an existing system; 3) has the potential to adversely affect or damage a septic system; or 4) has the potential to adversely affect the parcel's ability to absorb sewage effluent.

Building projects that require a plan review will continue to be reviewed by Permit Sonoma staff to ensure the structure is not served by a cesspool. However, this only applies to building permits that need a set of plans. Building permits such as re-roofs, siding, HVAC's, furnaces, water heaters, and similar minor work will not be routed for review. Further, building repairs due to catastrophic events, flood damage, tree damage and similar occurrences will not be routed for review.

In instances when a code compliant OWTS is needed, a code compliant system can be demonstrated either through documentation of an existing system, upgrades to an existing system or new system.

The requirement to evaluate building permits is not embodied in the State's OWTS Policy, but is contained in Sonoma County Code. The absence of a building permit review criteria in the State's OWTS Policy does afford policy options for the Board.

Below are several Building Permit Threshold (B) options for the Board's consideration:

Option B-1:

- New dwellings require a code compliant system and reserve area(s).
- An increase in bedrooms/wastewater flow requires a code compliant system and reserve area(s).
- New structures with no increase in wastewater require a review for physical impacts to current and reserve dispersal areas based on land encumbrance:
 - ☐ 50% or less land encumbrance requires an evaluation of the reserve area
 - ☐ More than 50% land encumbrance requires a reserve area.
- Structural improvements that increase the building footprint with no increase in wastewater flow requires a non-conforming system with reserve area(s).
- Structural improvements that have no increase in building footprint with no increase in flow requires a non-conforming system (i.e., not a cesspool). An evaluation of reserve area is not required.

Option B-2:

- Building permits to be categorized as either remodels or rebuilds and minor or major additions.
- The lower thresholds (remodels and minor additions) require a minimum of a class III system (tank and leach field) and not by a cesspool.
- The upper thresholds (rebuilds and major additions) require a code compliant or a class I system.
- The criteria for remodels and rebuilds is 50% of the linear footage of exterior load bearing walls that are affected by the proposed project.
- The criteria for minor and major additions is 640 square feet.

Staff recommends Option B-1 because this option aligns building permit criteria to domestic waste flow and/or to the site's ability to absorb domestic waste flow.

Waterless Toilets

At various Board meetings, community meetings and through comments there has been an expressed interest in waterless toilets. Two main categories of waterless toilets include composting toilets and incinerator toilets. Staff researched the use and efficacy of waterless toilets.

As a result, Section 21 was added to the OWTS Manual. Several of the protections included in this section include solids being hauled off-site to an approved location, the solids are recognized as a biosolid and handled accordingly, and that a special permit is obtained to allow the County to review the operation and maintenance. Also this section would not be effective until Sonoma County Code section 7-13(G)(2) is amended to allow for waterless toilets.

The main benefits include reduction in water use and relatively low cost. The main drawback is no reduction in septic sizing as waterless toilets only address a portion of the wastewater generated by a household.

Code limitations exist in the California Plumbing Code and the Sonoma County Code. Both require flush toilets. A few jurisdictions do permit composting toilets and have standards that require 1.5 acre to 5 acre minimum parcel size, on-site disposal twelve inches below ground, and proper handling protocols. Many jurisdictions prohibit composting toilets.

There does not appear to be sufficient scientific research regarding composting of fecal matter and the performance of composting toilets. Most studies are incomplete in not evaluating the reduction of all pathogenic species.

To be successful the design for composting fecal matter needs to allow for proper time, heat, moisture and aeration / turning of the compost material. There are various waterless / composting toilets and not all are created equal and many do not meet the minimum for controlling these parameters. Not all of the available devices will successfully reduce the pathogens and other constituents.

The County has authorized a pilot program in partnership with the Occidental Art and Ecology Center and this pilot has yet to produce analytical results. Permit Sonoma welcomes additional pilot studies as well as references to published literature.

Permit Sonoma will continue to study composting toilets. The studies could include a more thorough literature review and/or a pilot program(s) to select composting units that can be proven to successfully reduce pathogens and other constituents. However, wide scale use of composting toilets under the County's experimental program and/or alternative program would not be warranted at this time.

Incinerator toilets are more effective in pathogen reduction than composting toilets. The units incinerate all organisms and solid matter into ash. From a health standpoint incinerator toilets are preferable, however,

there is an energy cost associated with incinerator toilets.

Below are several Waterless Toilet (WT) options for the Board's consideration:

Options WT-1:

- Implement the draft waterless toilet section as written, and
- Encourage other waterless toilet pilot projects.

Option WT-2:

- Implement WT-1, and
- Proceed with the necessary steps to revise Sonoma County Code to allow non-flush toilets with the constraints of no on-site disposal of the composted biosolids.

Option WT-3:

- Implement WT-1, and
- Revise the OWTS Manual and Sonoma County Code in accordance with the results of any future data from waterless toilet pilot projects and/or literature research.

Option WT-4:

- Pursue code changes to allow for incinerator toilets as a non-flush toilet, independent of options WT-1, WT-2, and WT-3.

Staff recommends option WT-1 due to the lack of scientific research demonstrating composting toilets are safe and reliable. Staff recommends option WT-4 because a properly operated and maintained incinerator toilet turns the domestic waste, including the pathogens, to ash.

Process

Permit Sonoma staff are seeking guidance and direction from the Board of Supervisors regarding policy determinations, modifications to the LAMP and/or OWTS Manual and authorization to submit the LAMP and OWTS Manual to the RWB.

In parallel to the submittal to the RWB, staff propose to have the Director of Permit Sonoma initiate the approval and public review process detailed in Sonoma County Code section 24-31.5. Sonoma County Code section 24-31.5 delegates authority to the Director of Permit Sonoma to adopt standards for on-site septic systems. This will allow the OWTS Manual to be effective while the RWB reviews and approves the LAMP and OWTS Manual.

The RWB may request modifications to the LAMP and/or OWTS Manual as part of their approval process. The breadth of any RWB comments will dictate the process to revise the LAMP and/or OWTS Manual. Minor changes might be subject to the approval by the Director of Permit Sonoma, while extensive changes might be subject to review and authorization by the Board of Supervisors.

It is expected that the OWTS Manual will be reviewed and updated periodically to address new issues,

policies, procedures, and technologies affecting the use and management of OWTS.

CEQA

The proposed adoption of the OWTS Manual and submission of the LAMP to RWQCB are actions that are categorically exempt from CEQA under CEQA Guidelines 15061(b)(3); 15307, and 15308.

Prior Board Actions:

05/22/2018: Board discussion of LAMP and OWTS Manual; provided direction to request a six-month extension from the RWB, to conduct additional community outreach and solicit additional feedback from the community, and to then revise the septic policies in response and to return to the Board within the six-month extension

05/10/2016: Board authority to submit LAMP and associated documents to the RWB

1995: Ordinance No. 4906, Section 5(B)

FISCAL SUMMARY

Expenditures	FY 18-19 Adopted	FY19-20 Projected	FY 20-21 Projected
Budgeted Expenses			
Additional Appropriation Requested			
Total Expenditures			
Funding Sources			
General Fund/WA GF			
State/Federal			
Fees/Other			
Use of Fund Balance			
Contingencies			
Total Sources			

Narrative Explanation of Fiscal Impacts:

There will be no known fiscal impacts to the County

Staffing Impacts:

Agenda Date: 5/21/2019

Position Title (Payroll Classification)	Monthly Salary Range (A - I Step)	Additions (number)	Deletions (number)

Narrative Explanation of Staffing Impacts (If Required):

No additional staffing is anticipated at this time

Attachments:

Attachment A-Local Agency Management Plan (LAMP)

Attachment B-Onsite Wastewater Treatment System Regulations and Technical Standards (OWTS Manual version 6.0)

Attachment C-Pertinent Sections of the Sonoma County Code

Attachment D-Permit Sonoma Policy & Procedure 9-2-13

Attachment E-Board For Registration Correspondence

Attachment F-County Counsel Memorandum

Related Items “On File” with the Clerk of the Board:

SWRCB OWTS Policy

Sonoma Creek TMDL Implementation Plan