



November 14, 2011

OWTS Policy

State Water Resources Control Board Division of Water Quality

Attn: Jonathan Bishop

1001 I Street, 15th Floor, P.O. Box 2231

Sacramento, CA 95812

Re: Comments on the Draft State Policy for Water Quality Control for Siting, Design, Operation and Management of Onsite Wastewater Treatment Systems (OWTS Policy) and a Substitute Environmental Document (SED)

Dear Mr. Bishop,

On behalf of Heal the Bay and Heal the Ocean, we appreciate the opportunity to review and provide the following comments on the proposed State Policy for Siting, Design, Operation and Management of Onsite Wastewater Treatment Systems (OWTS) (“proposed policy” or “Draft Policy”). Heal the Ocean is an organization located in Santa Barbara committed to ending ocean pollution through practical science-based solutions. Heal the Bay is an environmental organization with over 13,000 members dedicated to improving water quality in Santa Monica Bay and Southern California coastal waters for people and marine life. Heal the Bay and Heal the Ocean were the sponsors of AB 885 and the organizations have participated in numerous stakeholder committees and the draft regulation review processes. As you know, Heal the Ocean and Heal the Bay filed a lawsuit against the State Water Resources Control Board because the State Board has taken an unjustifiable and excessive amount of time to develop a policy on OWTS – 11 years after AB 885 was signed into law and over 7 years after the statute’s deadline. Statewide OWTS regulations are urgently needed to prevent further wastewater contributions to impairments caused to water bodies, particularly those 303d-listed on CWA impaired water body list. If drafted and implemented correctly, AB 885 regulations will effectively regulate OWTS in areas throughout California, especially in those areas most threatened by these systems. In turn, this will lead to major positive implications for water quality, public health and aquatic habitats.

We believe the approach taken in the Draft Policy is a significant improvement over the previous version of the policy released November 2008. Specifically, we support the risk-based, tiered approach, which is more reasonable for most OWTS owners and consistent with the original intent of AB 885 than the method outlined in the previous draft. The proposed policy is both much more protective of water quality in high risk areas, and far less costly for low-risk systems in other areas. Despite these positive aspects, a few critical issues must be addressed in the draft policy to ensure that it is adequately protective of water quality, public health, and aquatic habitats. As discussed below, a

number of clarifications and modifications must be made to improve the protection provided by the proposed regulations. Specifically, the draft policy must include:

- A more protective nutrient target of 10 mg/L as nitrogen for advanced treatment systems;
- More protective requirements and performance criteria for advanced treatment systems;
- Clear distance criteria to separate risk levels;
- Addition of requirements for existing OWTS located within setback areas;
- Requirements for monitoring and inspection;
- A more stringent compliance schedule to connect to sewers where feasible and a schedule for compliance with TMDLs.

These and other concerns are explained in more detail below.

Tier-Related Comments and Concerns

Tier 0

As written, the proposed policy puts every existing system that discharges less than 10,000 gallons per day and does not qualify as Tier 3 or 4 into Tier 0. This is not a protective approach for groundwater or surface waters. Existing OWTS may pose a moderate threat to water bodies not officially listed as 303d impaired without fitting into Tier 3 or 4. There are numerous existing systems that impact surface waters not listed as impaired. Perhaps more importantly, thousands of existing systems are degrading groundwater quality, and since groundwater quality is regulated separately from surface waters, it is critical to manage these systems before they lead to aquifer degradation that puts public health at risk and/or leads to more severe regulatory outcomes like OWTS bans. For instance, systems that do not meet the minimum depths to groundwater in Table 1 (Public Comment Draft Section 8.1.6) and the horizontal setback requirements of Tier 1 should be put into Tier 2 and should have monitoring requirements. This is a reasonable approach that would allow local OWTS management, and would help close a glaring gap in the policy.

With this in mind, the minimum horizontal setbacks described for Tier 1 in the Draft Policy (p. 17, Section 7.5) should be required of Tier 0, and we request this list of requirements be restated in the Draft Policy Tier 0 Section as follows:

- 5 feet from parcel property lines;
- 100 feet from wells;
- 100 feet from unstable land masses, earth slides, or as recommended by a geotechnical report;
- 100 feet from flowing surface water bodies where the edge of that water body is the natural or levied bank for creeks and rivers, or may be less where site conditions prevent migration of wastewater to the water body;
- 200 feet from vernal pools, wetlands, lakes, ponds, or other surface water bodies where the edge of that water body is the high water mark for lakes and reservoirs, and the mean high tide line for tidally influenced water bodies;

- 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet;
- 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth;
- Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth and the separation from the bottom of the system and ground water is less than 5 feet the horizontal setback required to achieve a 2-year travel time for microbiological contaminants shall be evaluated. A qualified professional shall conduct this evaluation. However in no case shall the setback be less than 200 feet;
- Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake and within the catchment of the drainage, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body;
- Where the effluent dispersal system is located more than 1,200 but less than 2,500 feet from a public water systems' surface water intake and within the catchment of the drainage, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body (Public Comment Draft Section 7.5).

Also, 10,000 gallons-per day is too high of a discharge rate to be considered Tier 0. This discharge value should be reduced to 3,500 gallons per day, the same project flow required r for new and replaced systems in Tier 1. Existing systems discharging more than this should be put into Tier 2 and given monitoring requirements.

Tier 2

Many existing OWTS pose a moderate level of risk to state waters, and should be regulated accordingly. In addition to new or replacement OWTS, Tier 2 should include existing systems that do not comply with all siting and construction requirements, as well as dispersal system performance requirements and specifications outlined for Tier 1 (as stated earlier in this letter). For example, if an existing system is within 100 feet of a well, it should be treated like a Tier 2 system. At a minimum, existing systems in Tier 2 areas should be part of a monitoring program and have basic minimum monitoring requirements. For instance, OWTS on moderate risk sites could be monitored through the salt and nutrient management plans now required in the recent State Board approved California Water Recycling Policy. These Tier 2 systems would not need separate monitoring requirements except in specific situations determined by the local Regional Water Board. The proposed policy should require these nutrient management plans to be approved by the local Regional Water Boards within 5 years of the adoption of AB 885 and should require some monitoring wells to be monitored as part of these plans. OWTS in Tier 2 will have no advanced treatment requirements, unless otherwise required by regional regulations. Tier 2 systems should be inspected every 3 years and on point of sale. If existing Tier 2 OWTS are within 200 feet of a sewer, they also must connect within 10 years. New and replacement OWTS that are within this setback should immediately connect to a sewer system.

Tier 3

Advanced Treatment Performance Criteria

The proposed policy sets weak performance standards for nutrients and fecal indicator bacteria in advanced treatment systems. According to the Draft Policy (p. 35, Section 10.7.1), “Effluent from the supplemental treatment components designed to reduce nitrogen shall be certified by NSF, or other approved third party tester, to meet a 50 percent reduction in total nitrogen when comparing the 30-day average influent to the 30-day average effluent.” What is the basis for this requirement? This means a system that currently takes influent averaging 50 mg/L in total nitrogen would only have to treat to an average of 25 mg/L total nitrogen. This level is not protective of human health or aquatic life and will not reduce algal impairments, anoxia and hypoxia conditions, and other eutrophication impacts. The treatment required should be 10 mg/L as nitrogen, as was the original intent of this policy. This would be consistent with many Basin Plans throughout the State. For example, the Los Angeles Water Quality Control Plan sets a water quality objective for nitrogen in waters that is not to exceed 10 mg/l nitrogen as nitrate-nitrogen plus nitrite-nitrogen. The water quality objective of 10 mg/l is based on a Department of Health Services drinking water standard. Thus, the advanced treatment requirement for nitrogen should instead revert back to a maximum 30-day average total nitrogen concentration of 10 mg/L as N. Even the 10 mg/L value will not be protective of aquatic life; this limit is only protective of human health. In order to protect aquatic life, levels of total nitrogen would need to be limited to nearly 1 mg/L. Hence, an advanced treatment requirement of 10 mg/L as N is generous and technologically feasible, and the proposed requirement in the Draft Policy is excessive and unreasonable. It is critical to note that the best available control technology exceeds even this level. The Los Angeles Regional Board has issued WDRs for OWTS in Malibu requiring systems to meet 3 mg/L total nitrogen.

The advanced treatment requirement for total coliform bacteria is also weak, requiring no more than 200 Most Probable Number (MPN) per 100 milliliters. The standard for total coliform bacteria concentrations should instead be similar to what was previously proposed:

1. 10 Most Probable Number (MPN) per 100 milliliters prior to discharge into a dispersal field where the soils exhibit percolation rates between 1 and 10 minutes per inch (MPI) or where the soil texture is sand; or
2. 1000 MPN per 100 milliliters prior to discharge into a dispersal field where the soils exhibit percolation rates greater than 10 MPI or consist of a soil texture other than sand.

These previous criteria are more protective of public health – a critical need in light of the fact that the total coliform are from human sewage.

Sewer Connection

We support that the policy does not place an advanced treatment requirement on an OWTS if the owner enters into a legally binding commitment to connect to a WDR-regulated centralized wastewater collection and treatment system. However, the Draft Policy requires owners to make this commitment within 7 years of the effective date of this policy, and then allows an additional 7 years to actually make the connection, totaling 14 years to connect to a sewer, regardless of risk level. In high-risk areas, there is no reason for this delay. Owners have known this policy is coming for over a decade. For Tier 3 systems to become eligible for a 5-year compliance extension, the owner must sign a legally binding agreement to hook up to a sewer or centralized treatment system within 5 years of policy approval. If they do so, then the OWTS get an additional 5 years to hook up to the sewer for a total of

10 years past the policy approval date. All OWTS within 600 feet of a sewer line should be mandated to hook up to a public sewer within 10 years. New development that falls within these sewer setbacks should immediately connect to a sewer system.

TMDL Requirements

We support the requirement in Section 10.2.1 that requires TMDL to be adopted for the water bodies listed in Table 2 within 5 years of the effective date of this policy and within 5 years of future 303 (d) listings. However, Tier 3 OWTS near waterbodies that already have TMDLs should be required to comply with the TMDL and with the advanced treatment requirements of this policy no more than 10 years from the effective date of this policy. Systems in 303(d) listed high risk areas where a TMDL has not been developed (within 600 feet of nutrient and bacteria impaired waters) that have not committed to connecting to a centralized sewage treatment system should have 5 years from this policy's effective date for compliance with the advanced treatment requirements of the policy, not the 7-year compliance timeline mentioned in the policy. This provides an incentive to move more impaired water bodies into the TMDL program.

Distance Criteria

The Draft Policy sets distance criteria as close as 100 feet to surface waters impaired by fecal bacteria. This is unacceptable, unjustified within the text of the Draft Policy, and actually counteracts the reason why AB 885 was drafted in the first place – there was specific focus on fecal bacteria pollution at the time this law was passed. Instead, all systems within 600 feet of or directly up gradient from 303d listed impaired waters that are impaired by bacteria and/or nutrients should be advanced treatment systems with technology appropriate for the type of impairment. OWTS near impaired waters need to upgrade to only the appropriate advanced treatment level. Perfect examples are the Malibu homes along Santa Monica Bay. It makes no sense for those OWTS to upgrade to denitrification because Santa Monica Bay is not listed for nutrients or eutrophication. However, disinfection is needed because there is a fecal bacteria TMDL for all Bay beaches. In Santa Barbara/Ventura County, the Rincon (which is soon connecting to public sewer) is listed on the CWA 303(d) impaired water body list for fecal and total coliform, not nitrates. If nearby waters are impaired for bacteria, then the required advanced treatment would consist of disinfection. If the water is listed for nitrates or total N, low dissolved oxygen, eutrophication, or algae, then a supplemental denitrification system is required. If the impaired waterbody is listed for both nutrients and bacteria, then disinfection and denitrification systems should both be required. If the local health department determines that areas within 600 feet are not high risk areas based on soils, groundwater monitoring, and OWTS inspection, then land owners could be allowed to apply for a waiver from the advanced treatment requirement. The waiver approval decision should be made by the local Regional Water Board. Under any scenario, all **new** systems in these high risk areas must be advanced treatment systems.

We ask the State Board to require that in addition to systems within an area 600 linear feet adjacent to the edge of an impaired water body, OWTS systems **upstream** of an impaired water body should also be considered Tier 3. Also, OWTS sited within 600 feet of tributaries that feed directly into water bodies impaired by nutrients and bacteria should be included in Tier 3. The 600 feet criterion can be modified by the local Regional Water Board (less or greater distance) if a local health agency or

municipal entity can provide data (soil, slope and groundwater monitoring) demonstrating that the high risk area should be treated differently due to increased or lessened risk. If the local Department of Environmental Health and Safety determines high risk areas are outside of 600 feet from a water body, OWTS within these areas must also be considered Tier 3. The above approach would ensure that most OWTS that cause or contribute to water quality impairments are appropriately regulated under Tier 3.

Alarm Requirement and Response Time

We support the requirement that supplemental treatment components to Tier 3 OWTS be equipped with a visual or audible alarm as well as a telemetric alarm that alerts the owner and service provider in the event of system malfunction. In addition, the policy should specify a timeframe in which the malfunction should be repaired. In the case of an advanced system malfunction that sounds an alarm, the proposed regulations should require a 1-week maximum response time. Corrective action for surfacing effluent must be taken immediately after the violation is reported. Also, please clarify in the policy that any surfacing effluent is a violation of the Clean Water Act and the Porter Cologne Act, as any discharges to waters of the U.S. are subject to the provisions of the Clean Water Act.

Overarching Comments and Concerns

Implementation

Upon its adoption, AB 885 must immediately apply to all new systems installed. All existing OWTS systems must comply within five years of AB 885 regulation Board adoption unless the systems are part of a TMDL with a predetermined compliance schedule. The compliance schedule outlined in the TMDL supersedes the suggested timeframe up to a limit of a ten-year compliance period. The goal of this approach is to incentivize the creation of TMDLs in regions with OWTS where TMDLs are not yet established. Even with established TMDLs, OWTS should be allowed no more than ten years to comply with AB 885. The Draft Policy lacks clarity on the possibility of OWTS moving from one risk level to another. For instance, the proposed policy should make it clear that once an OWTS is determined to be Tier 4 due to system failure and not due to proximity to an impaired water body, it can move to Tier 1 or Tier 2 as long as the system is replaced and functioning properly. It should not be allowed to go to Tier 0.

Inspections

The Draft Policy should require regular inspections for moderate-risk (Tier 2) and high-risk (Tier 3) Systems. OWTS owners in high-risk and moderate-risk areas should have their systems inspected at least once every 3 years. Inspections should **not** be used to prove that OWTS within 600 feet of a water body impaired for nutrients or bacteria contribute to the impairment. Instead, it should be assumed that existing systems in Tier 3 already cause or contribute to the impairment unless further investigation and soil and groundwater data prove otherwise. Tier 3 OWTS should also be required to report maintenance activities every year. OWTS owners in Tier 3 should have 1 year from the adoption of the AB885 regulations to have their systems inspected. For low-risk OWTS in Tiers 0 and 1, inspections should only be required upon sale of the property. The Tier 2 inspection requirements will be determined by the local management agencies, but should at least require inspections upon sale.

Monitoring

The Draft Policy should include a monitoring requirement for each tier instead of depending on the discretion of local agencies. The policy should contain a receiving water monitoring program for all tiers except Tier 0 and Tier 4 after a system has undergone extensive monitoring and repair. Specific monitoring requirements must be included in the Advanced Protection Management Program. Receiving water monitoring should be quarterly. In general, receiving waters should be monitored upstream and downstream of Tier 3 OWTS that act as potential sources of impairment. Effluent monitoring of advanced systems for TSS, bacteria and nutrients should be performed on a monthly to quarterly basis. Annual reports of this monitoring should be submitted to the appropriate OWTS management or oversight agency. At least one monitoring well should exist between an OWTS and an impaired water body in Tier 3 OWTS, unless there is a regional groundwater monitoring plan for the high risk area. Annual groundwater sampling should be required for systems within 600 feet of an impaired water body. The proposed policy should require Tier 1, 2, 3, and 4 OWTS owners with an onsite domestic well on their property to monitor groundwater by sampling and analyzing water quality every 5 years. As part of the requirements for Tier 2 systems, the local management agency should be required to develop and implement a regional monitoring plan within 2 years of policy approval.

Ban on New Seepage Pits

The Draft Policy should prohibit the construction of new seepage pits in areas above producing aquifers. In addition, new seepage pits should not be constructed near aquifers that have extraction wells. Seepage pits pose significant risk to both water quality and human health because they have much potential to contaminate groundwater and surface water. As mentioned in the EPA document published April 2001 Seepage Pits May Endanger Ground Water Quality, there are a number of reasons seepage pits pose a larger threat than leach fields:

1. Seepage pits disperse effluent in anoxic, or oxygen-poor, environments, where pathogens (especially viruses) may not be treated before they reach the water table. They place fluids below the root zone, where there is no immediate uptake by plants of the water and nutrients, nor is there the potential for treatment by evaporation or evapotranspiration.
2. If septic tanks and other treatment components are not properly sized, constructed and maintained, seepage pits may receive sewage solids (essentially functioning like cesspools.)
3. Water tables are not static, and may rise above the bottom of the seepage pit, flooding it and allowing direct contact of pathogens and nitrogen species with ground water.
4. Seepage pit construction and use may open up pathways to cracks and fissures in rock, sending effluent directly to waterways.
5. Depending on their depth, seepage pits may allow contaminated ground water to pollute pristine aquifers.

6. Seepage pits used for the disposal of untreated or partially treated industrial or commercial waste may pose additional hazards to ground water quality, if the effluent contains soluble toxics.

7. Seepage pits may cause other hazards not directly related to water quality. They are a hazard for people, animals and property that may fall into them. They may also affect slope stability and promote landslides. (EPA WTR-9 2001).

For these reasons, the Ground Water Office at EPA, Region 9 discourages the use of seepage pits for conventional OWTS, particularly on steep slopes, fractured rock areas, areas with shallow ground water, and/or areas where ground water provides the sole source of drinking water. The Draft Policy should also phase out their continued use, particularly in high-risk areas, while allowing exceptions only in low-risk situations.

Conclusion

Heal the Bay and Heal the Ocean support the SWRCB taking the tiered approach to regulating OWTS. AB 885 has great potential for protecting public health and improving surface and groundwater quality in California, but the proposed policy framework as laid out in the Public Comment Draft should be supplemented and clarified as specified in this comment letter to ensure that the program results in better protection of human health and aquatic life. The current draft policy has glaring holes that can be fixed as pointed out, to put an end to the contamination and the risk to human health and aquatic life by improper siting and use of certain OWTS. As sponsors of AB 885, please be assured that our intent on the law was and is to protect all Californians and state water bodies from on-site wastewater treatment system pollution. Thank you for your consideration of these comments. If you have any questions, please contact us at 310-451-1500.

Sincerely,



Mark Gold, D. Env.
President
Heal the Bay



Hillary Hauser
Executive Director
Heal the Ocean



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