Regional Water Quality Control Board
North Coast Region
Staff Summary Report
April 1, 2025

ITEM: 3

SUBJECT: Workshop on the 2025 Russian River Pathogen TMDL Action Plan

BOARD ACTION: No formal action will be taken by the Regional Board. The Board will solicit comments from interested persons and may provide comments to staff.

BACKGROUND: North Coast Regional Water Quality Control Board (North Coast Water Board) staff have developed the *Revised Final Staff Report for the Action Plan for the Russian River Watershed Pathogen TMDL* (2025 Staff Report) to present the information and analyses that support a revised *Action Plan for the Russian River Watershed Pathogen Total Maximum Daily Load* (Action Plan). The Action Plan includes both the Russian River Watershed Pathogen Total Maximum Daily Load (Russian River Pathogen TMDL) and a program of implementation, as authorized by Water Code section 13242. The 2025 Staff Report and the Action Plan it supports, represent a third iteration of pathogen related data analysis and implementation requirements to come before the North Coast Water Board for consideration. Two previous versions of the Action Plan have been adopted by the North Coast Water Board; one in 2019 and the second in 2021. Neither the 2019 nor the 2021 Action Plan were considered by the State Water Resources Control Board (State Water Board), the California Office of Administrative Law (OAL), or the United States Environmental Protection Agency (U.S. EPA) and have therefore never been amended into the Water Quality Control Plan for the North Coast Region (Basin Plan).

In January 2022, North Coast Water Board staff initiated a process for the State Water Resources Control Board (State Water Board) to consider approval of two related amendments adopted by the North Coast Water Board for incorporation into the Basin Plan. 1) *the Action Plan For The Russian River Watershed Pathogen Total Maximum Daily Load* and 2) the update to *Section 4.1.11: Policy On The Control Of Water Quality With Respect To On-Site Waste Treatment And Disposal Practices Specific To The Russian River Watershed, Including The Laguna De Santa Rosa.* Due to the contentious nature of public comment, the project has required elevated coordination between the State Water Board and North Coast Water Board staff. The considerable coordination led North Coast Water Board staff to re-consider options for onsite waste treatment system (OWTS) implementation in the Action Plan. As a result, prior to bringing the amendments before the State Water Board for consideration, North Coast Water Board staff initiated revisions that amend the OWTS implementation sections of the Action Plan and relevant portions of the Staff Report.

DISCUSSION: Federal Clean Water Act section 303(d) requires that states identify waterbodies that do not meet water quality standards, and the pollutants that impair them. The Russian River Pathogen TMDL project was initiated based upon waterbody

impairments first identified on the 2012 303(d) list (and which remain on the current 2024 303(d) List) to satisfy Clean Water Act section 303(d)(1)(C), which requires the state establish a TMDL for those pollutants and waters that do not meet water quality standards. TMDLs examine water quality problems, identify sources of pollutants, and calculate the maximum pollutant loading that will meet water quality standards. An Action Plan is established under Water Code section 13242 and specifies the actions and solutions needed to ensure compliance with water quality standards. Action Plans are often adopted by regional water boards as amendments to Basin Plans which contain requirements necessary to control the discharge of waste and other controllable factors affecting the quality of waters of the state. The Russian River Pathogen TMDL Action Plan is proposed as an amendment to the Basin Plan for the North Coast Region.

The North Coast Water Board's authority to establish action plans pursuant to Water Code section 13242 is tied to achieving water quality objectives, now and in the future, regardless of whether or not a waterbody is listed as impaired pursuant to Clean Water Act section 303(d). As a result, the Action Plan to control pathogens in the Russian River Watershed applies to both 303(d) listed and non-303(d) listed waterbodies, as well as their watersheds. The Action Plan seeks to minimize human exposure to waterborne disease-causing pathogens and to protect uses of water for recreational activities such as wading, swimming, fishing, and boating. To accomplish this goal, pursuant to Water Code section 13243 authority, the Action Plan includes a Fecal Waste Discharge Prohibition that applies to all surface waters of the Russian River Watershed. Compliance with the prohibition can be achieved by either preventing the discharge of fecal waste, complying with a relevant permit, or through implementation of a memorandum of understanding (MOU).

A TMDL is meant to identify sources of relevant waste from all activities associated with a given waterbody and to establish a program of implementation to control those sources. The Action Plan builds upon management measures required by existing regional and statewide regulations and orders designed to reduce or eliminate fecal waste discharges from numerous potential sources across the watershed. The Action Plan addresses fecal waste discharges associated with wastewater treatment facilities, sanitary sewer systems, recycled water, land application of biosolids, municipal storm water runoff, onsite waste treatment systems (OWTS), dairies, and unpermitted sources such as ranches, hobby farms, and homeless encampments. As with other discharges of waste to land in California, OWTS require either Waste Discharge Requirements (WDRs) or a waiver of WDRs. The OWTS category has been the focus of most public comments in prior years. It is one source of pathogens among the many present across the Russian River Watershed, though more difficult to address than some, because the responsibility for source control often falls to individual property owners experiencing widely diverse circumstances.

On June 19, 2012, the State Water Board adopted the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy). The OWTS Policy provides the framework under which OWTS can be covered under a statewide conditional waiver of WDRs. The OWTS Policy took effect

on May 13, 2013, and the North Coast Water Board, in accordance with the statewide OWTS Policy, amended the Basin Plan on June 18, 2015, to incorporate requirements of the OWTS Policy into the Basin Plan for the North Coast Region. When the OWTS Policy was incorporated into the Basin Plan, the Russian River Pathogen TMDL project was already underway. As a result, regional requirements were retained for the Russian River Watershed pursuant to section 4.2.1 of the OWTS Policy pending the adoption of a Russian River Watershed specific TMDL project. Those regional requirements are found in *Section 4.1.11: Policy On The Control Of Water Quality With Respect To On-Site Waste Treatment And Disposal Practices Specific To The Russian River Watershed, Including The Laguna De Santa Rosa* (section 4.1.11). Requirements within section 4.1.11 remain in effect until the TMDL project is adopted.

The Russian River Pathogen TMDL project design involved four watershed studies to evaluate all potential sources of fecal waste discharge to surface waters of the Russian River Watershed: a Land Cover Study, an OWTS Study, a Recreation Study, and a PhyloChipTM Study. These TMDL studies measured multiple fecal indicator bacteria [FIB (including *E*. *coli* data, enterococci, and Bacteroides data)] and microbial source tracking indicators (MST), which provided evidence of seasonal and episodic fecal waste pollution at locations throughout the watershed and associated with key land use factors. The identified key land use factors associated with exceedance of FIB standards and thresholds included: a) developed sewered lands: b) developed unsewered lands: c) agricultural lands: and d) shrubland (including rural residential land uses), especially during wet weather. The TMDL studies also identified human fecal waste as a significant source of waste in both the Russian River mainstem and tributaries, using both Bacteroides markers and MST. The results from these four studies provided scientific peer reviewers the data upon which they relied when considering imposition of a watershed wide fecal waste discharge prohibition to address findings of watershed wide pathogenic sources that require control for the protection of water quality and human health. That same peer reviewed information provided the basis for a watershed wide conceptual Advanced Protection Management Program (APMP).

An APMP is a management program that establishes standards consistent with Tier 3 of the OWTS Policy for OWTS near impaired/polluted waterbodies to provide elevated source control and protections. Section 10.1 of the OWTS Policy states that an APMP must specify its geographic area and the OWTS requirements that apply within that area. The standards for OWTS in an APMP and the APMP area itself may be established by the following:

- A TMDL implementation plan (Action Plan) adopted by a Regional Water Board
- An approved Local Agency Management Program (LAMP) with special provisions for OWTS that are near impaired waterbodies
- The default APMP requirements prescribed by section 10.0 of the OWTS Policy

In the absence of an approved LAMP containing special provisions applicable to an APMP, in 2019 and again in 2021, North Coast Water Board staff moved to narrow the geographic scope of a TMDL-established APMP from watershed wide to a subwatershed level. To accomplish this task, staff assessed FIB, MST, and beach advisory data on a Hydrologic Unit Code (HUC-12) subwatershed scale. Within the context of the 2019 and 2021 TMDL Staff Reports, the HUC-12 subwatershed-based FIB and MST data analyses was used to define an APMP boundary that applied to OWTS where HUC-12 data indicated exceedance of FIB objectives or thresholds and evidence that the source was related to human waste. OWTS within the 2019 and 2021 APMPs would be subject to special siting and design provisions. In addition, investigation of cesspools, failing OWTS, and substandard OWTS would be prioritized within the APMP.

The conclusions presented in the 2025 Staff Report arise from consideration of the same data and other assessments that were derived from the original four peer reviewed TMDL studies. Assessment of this information is not based upon HUC-12 assessment, but is now based upon individual stations, land uses, and hydrologic subareas (HSAs) across the Russian River Watershed. These individual station assessments are used as multiple lines of evidence confirming evidence of pollution. The data and assessment presented in the 2025 Staff Report conforms to that which was submitted for scientific peer review in 2015. These data are not used to define a region-specific APMP. Rather than defining a region-specified geographic scope or requirements for an APMP, the 2025 Action Plan points to the OWTS Policy as the foundation for the geographic scope of an APMP in the Russian River Watershed, consistent with the processes available for defining other APMP scopes across the North Coast Region. Special provisions may still be assigned within an APMP based upon an approved LAMP, or in the absence of special provisions new or replacement OWTS in the APMP must meet the requirements in Tier 3 of the OWTS Policy. For existing systems in the APMP not covered by special provisions in an approved LAMP, Tier 3 requirements may be required by the Regional Water Board on a case-by-case basis where additional water quality protections are warranted.

The revised Action Plan also carries forward two prohibitions from Basin Plan *Section 4.1.11: Policy On The Control Of Water Quality With Respect To On-Site Waste Treatment And Disposal Practices Specific To The Russian River Watershed, Including The Laguna De Santa Rosa*: one against the use of cesspools, and the other a conditional prohibition against the use of holding tanks for the purposes of managing domestic waste within the Russian River Watershed. The issue of wastewater treatment, along the lower Russian River in particular, has been a concern for decades. This is a longstanding issue, and the Action Plan provides a framework to address the associated waste discharges. The Action Plan framework for OWTS across the watershed: 1) maintains existing Basin Plan requirements for holding tanks and the prohibition against the use of cesspools, that have applied to onsite waste treatment and disposal since 1974, and 2) relies upon siting and design requirements of the State Water Board's OWTS Policy, and approved LAMPs, including APMP requirements applicable to OWTS within 600 feet of waterbodies identified on Attachment 2 of the OWTS Policy , and 3) continues to provide a mechanism for OWTS compliance with the

Action Plan's fecal waste discharge prohibition, while focusing resources on the categories of OWTS with the highest risk of pathogen discharge across the watershed.

RECOMMENDATION: Not applicable.

SUPPORTING DOCUMENTS:

1. Notice of Public Comment Opportunity, Board Workshop, and Public Hearing to Consider Adoption of Revisions to a Basin Plan Amendment Regarding The Russian River Watershed Pathogen Total Maximum Daily Load

2. Draft Revised Action Plan for the Russian River Watershed and the Russian River Pathogen Total Maximum Daily Load

3. Draft Revised Staff Report for the Action Plan for the Russian River Watershed Pathogen Total Maximum Daily Load (2025)

4. Editorial Basin Plan Amendment in Strikeout-Underline