The following text is to be inserted into the Water Quality Control Plan for the North Coast Region (Basin Plan) following the Navarro Temperature TMDL Action Plan. The text will retain the cesspool and holding tank prohibitions from the "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." The remainder of the "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" shall be deleted upon adoption.

ACTION PLAN FOR THE RUSSIAN RIVER WATERSHED AND THE RUSSIAN RIVER PATHOGEN TOTAL MAXIMUM DAILY LOAD (TMDL)

The Russian River Watershed encompasses 1,484 square miles in Sonoma and Mendocino counties, California. Major cities within the watershed include Ukiah, Cloverdale, Healdsburg, Windsor, Rohnert Park, Santa Rosa, and Sebastopol. The watershed also includes numerous unincorporated communities such as Calpella, Hopland, Forestville, Guerneville, and Monte Rio. The 110-mile mainstem channel of the Russian River originates in the Redwood Valley of central Mendocino County about 15 miles north of Ukiah and enters the Pacific Ocean in Sonoma County at Jenner. The Russian River serves as the primary water source for more than 500,000 residents in Mendocino, Sonoma and Marin counties and for agricultural production in Mendocino and Sonoma counties. It provides multiple water-based recreational opportunities important to the economies of the watershed and well-being of residents and visitors.

The Action Plan for the Russian River Watershed and the Russian River Pathogen Total Maximum Daily Load, hereinafter known as the Action Plan, is based on the authorities and requirements of both the federal Clean Water Act and the state Water Code section 13242 and applies to the entire Russian River Watershed. This Action Plan: (1) summarizes the elements of a TMDL; (2) summarizes findings relative to pollution assessment; and (3) describes the Program of Implementation designed to control fecal waste pollution, achieve bacteria water quality objectives (bacteria objectives), and restore and maintain the water contact recreation (REC-1) beneficial use to protect public health. The overall goal of the Action Plan is 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, the Action Plan includes a Fecal Waste Discharge Prohibition that applies to all surface waters of the Russian River Watershed. Compliance with the prohibition will be achieved by either preventing the discharge of fecal waste; complying with a relevant National Pollutant Discharge Elimination Program (NPDES) permit, Waste Discharge Requirements (WDR), or waiver of WDRs; or through the North Coast Water Board's implementation of Memorandums of Understanding (MOU) and development and implementation of a non-dairy livestock program.

1. Problem Statement

Several surface waters in the Russian River Watershed were first identified on the 2012 Clean Water Act Section 303(d) List of Impaired Waters[1] (and remain on the current 2024 303(d) List) due to fecal indicator bacteria (FIB) concentrations that do not support the REC-1 beneficial use nor attain the bacteria objectives. TMDL studies were implemented in the period of 2009-2014 to assess the relationship between suspected fecal waste sources and evidence of pollution[2]. As described in Section 2 (Sources of Fecal Waste) and shown on Figure 1‑1, fecal waste sources associated with evidence of pollution were identified throughout the watershed. Evidence of pollution included water quality samples; microbial source tracking/identification; and public beach closures.

REC-1 is a year-round beneficial use of the Russian River Watershed. Statewide bacteria objectives for the protection of REC-1 are established using *E. coli* fecal indicator bacteria for freshwater and enterococci fecal indicator bacteria for saline water. The *E. coli* and enterococci bacteria objectives are set at allowable rates of illness deemed acceptable for the protection of public health (e.g., 32 gastrointestinal illness per 1,000 recreators). U.S. EPA has established national criteria for the protection of REC-1 based on enterococci fecal indicator bacteria in freshwater. Human and bovine *Bacteroides* bacteria measurements detect the presence of fecal waste and allow an assessment of the human and animal source of the waste detected. Microbial source identification (e.g., PhyloChip™ phylogenetic DNA microarray) also allows an assessment of human and animal source by measuring the percentage of sample DNA that matches known DNA fecal waste profiles. Public health advisories represent direct adverse impact to the REC-1 beneficial use.

The source assessment (see Section 2, Sources of Fecal Waste) identifies all known sources of fecal waste discharge in the Russian River Watershed and describes special studies that identify associations between season, land cover category, and Onsite Wastewater Treatment System (OWTS) density with water quality outcomes, extending the areas with evidence of pollution to the whole watershed.

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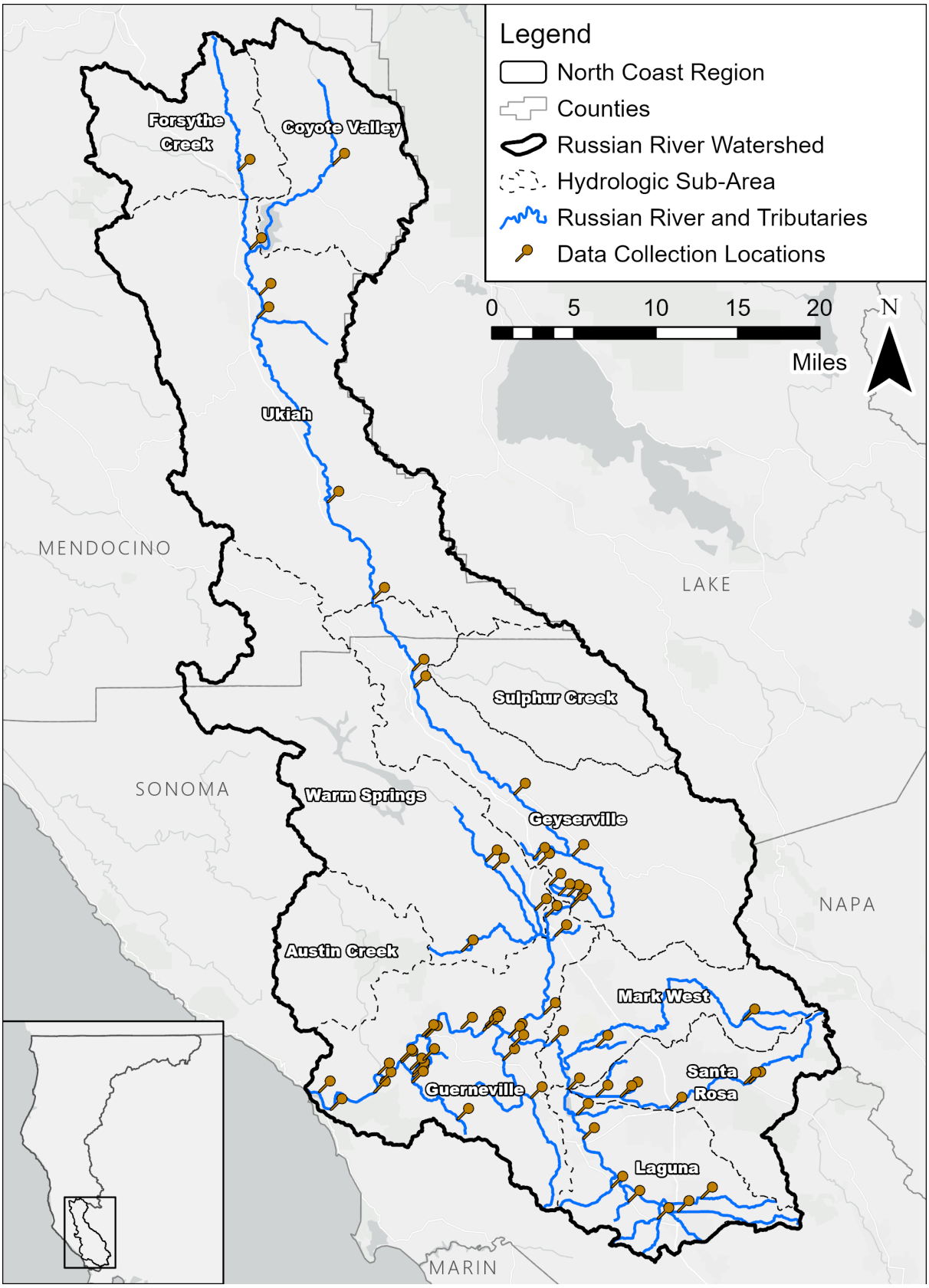
[1] USEPA partially approved the 2024 303(d) List on December 13, 2024. With respect to the Russian River pathogen listings, the 2024 303(d) List is the same as those approved in 2012.

[2] California Water Code section 13050 subdivision (l) defines “pollution” to mean: an alteration of waters of the state by waste to a degree, which unreasonably affects either of the following: (A) the waters for beneficial uses; or (B) facilities which serve these beneficial uses.

Figure 1-1: Russian River Watershed



2. Sources of Fecal Waste

Water quality monitoring studies in the Russian River Watershed (studies) find that FIB concentrations (e.g., *E. coli*, enterococci, and *Bacteroides*) in surface waters are significantly higher during wet weather periods than during dry periods, indicating that storm water runoff has a strong influence on the delivery of fecal waste to the Russian River and its tributaries. Studies also find that regardless of the time of year, *E. coli* and enterococci concentrations in surface waters are significantly higher in developed areas (both sewered and non-sewered), than other areas (e.g., shrubland, forestland, and agricultural lands). Human-specific *Bacteroides* bacteria concentrations in the wet period indicate a widespread human fecal waste signature in all land cover types, except forestland. Bovine-specific *Bacteroides* bacteria concentrations in the wet period indicate a widespread bovine fecal waste signature in shrubland, agricultural lands, and developed onsite septic (rural residential) areas. Focused assessments find that: 1) FIB concentrations correlate with parcel density in those areas with onsite waste treatment systems (OWTS); and 2) higher concentrations of both *Bacteroides* and *E. coli* bacteria are associated with periods of high use at beach recreational areas. PhyloChip™ phylogenetic DNA microarray data did not corelate with *E. coli*, enterococci or *Bacteroides* data, but did identify human waste signals and grazer waste signals. In total, these studies indicate the widespread presence of fecal waste sources throughout the Russian River Watershed.

The following specific source categories are determined to have potential to discharge fecal waste to surface waters in the Russian River Watershed and require control under this TMDL Action Plan. Section 7, Program of Implementation is applicable to the entire Russian River Watershed and describes the regulatory mechanisms for controlling each potential fecal waste source category.

2.1 Potential Sources of Human Fecal Waste Material

- Treated Municipal Wastewater to Surface Waters, including discharges from holding ponds;
- Untreated Sewage from leaking Sanitary Sewer Systems;
- Wastewater from Percolation Ponds and through Spray Irrigation;
- Runoff from Land Application of Municipal Biosolids and Biosolids Storage Areas;
- Runoff from Water Recycling Projects;
- Runoff from sites that receive discharges of waste to land;
- Leaking or failing Onsite Wastewater Treatment Systems, including individual systems and large or multi-user systems;
- Recreational Water Uses and Users;
- Homeless and Illegal Camping; and
- Stormwater Runoff entering Municipal Separate Storm Sewer Systems (MS4s) and entering water bodies outside of established MS4 boundaries.

2.2 Potential Sources of Domestic Animal and Farm Animal Waste

- Pet Waste;
- Manure from Non-Dairy Livestock and Farm Animals; and
- Manure from Dairy Cows

3. Numeric Targets

Numeric targets are developed for metrics that help assess progress towards attainment of the water quality objective. The Russian River Pathogen TMDL is based on the statewide *E. coli* bacteria objective for the protection of REC-1 in freshwater and enterococci in saline water, which are given as concentrations. The numeric targets established for this Action Plan are identical to the TMDL and statewide bacteria objectives[3]. As shown in Table 3–1, the numeric targets for *E. coli* for freshwater and enterococci for saline water are expressed as six-week rolling geometric means (GM) calculated weekly and statistical threshold values (STV) not to be exceeded more than 10 percent of the time, calculated monthly. The numeric targets are based on colony forming units (cfu) of bacteria per 100 mL water sample. For the purpose of this Action Plan and consistent with the statewide bacteria objectives for REC-1 protection, saline waters are those waters in which salinity exceeds 1 part per thousand more than 5% of the time during the calendar year.

Table 3–1: Numeric Targets for Fecal Indicator Bacteria

Fecal Indicator Bacteria	GM Target	STV Target
E. coli	≤ 100 cfu/100 mL	≤ 320 cfu/100 mL as a STV
Enterococci	≤ 30 cfu/100 mL	≤ 110 cfu/100 mL

4. TMDL and Load Allocations

The TMDL, waste load allocations (WLAs) for point sources, and load allocations (LAs) for nonpoint sources are expressed as receiving water concentrations of *E. coli* in freshwater and enterococci in saline waters identical to the statewide bacteria objective for protection of REC-1 for those sources that are permitted to discharge. WLAs and LAs are equal to the numeric targets stated in section 3 and Table 3–1 of this Action Plan. For potential fecal waste sources that are not permitted to discharge to a surface water, WLAs and LAs are identified as zero. Table 4–1 identifies the WLAs and LAs for

[3] The State Water Resources Control Board established statewide bacteria objectives applicable to both inland surface waters and ocean waters in Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays and Estuaries of California- Bacteria Provisions and a Water Quality Variance Policy and Amendment to the Water Quality Control plan for Ocean Waters of California-Bacteria Provisions and a Water Quality Standards Variance Policy and are available on the State Water Board's website (https://www.waterboards.ca.gov/bacterialobjectives/).

each source category. WLAs will be translated into appropriate effluent limitations in NPDES permits.

Table 4–1: Wasteload and Load Allocations

Source Category	Allocation Type	Allocation[4]
Municipal wastewater discharge to surface water (NPDES)	WLA	GM and STV for *E. coli* or enterococci depending on salinity
Municipal wastewater discharge to land (WDR)	WLA/LA	0
Sanitary Sewer Systems	LA	0
Land Application of Biosolids	LA	0
Recycled Water Irrigation Runoff	LA	0
Municipal Stormwater (NPDES)	WLA	GM and STV for *E. coli* or enterococci depending on salinity
CalTrans Stormwater (NPDES)	WLA	GM and STV for *E. coli* or enterococci depending on salinity
Large OWTS	LA	0
Individual OWTS	LA	0
Recreational Water Use and Users	LA	0
Homeless Encampments and Illegal Camping	LA	0
Non-dairy Livestock and Farm Animal Waste	LA	GM and STV for *E. coli* or enterococci depending on salinity
Dairies and CAFOs subject to NPDES permit	WLA	GM and STV for *E. coli* or enterococci depending on salinity
Dairies and CAFOs not subject to NPDES permit	LA	GM and STV for *E. coli* or enterococci depending on salinity

5. Margin of Safety and Seasonal Variations

Uncertainty regarding the relationship between source loading and ambient water quality outcome is eliminated when the TMDL is based on concentration limits identical to the statewide bacteria objectives for REC-1 protection. The statewide bacteria objectives for REC-1 protection incorporate an implicit margin of safety by establishing limitations based on the lower of two acceptable illness rates (i.e., 32 gastrointestinal illnesses versus 36).

[4] Load allocations are based on Table 3–1

There is no seasonal variation of the TMDL required because the TMDL is set at the maximum allowable concentrations of *E. coli* and enterococci necessary to protect public health during all times of the year.

6. Fecal Waste Discharge Prohibition

Discharges of waste containing fecal material from humans or domestic animals to waters of the state within the Russian River Watershed are prohibited.

In conformance with the Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control Program[5], violation of the Fecal Waste Discharge Prohibition is subject to direct enforcement. The next section of this Action Plan describes actions and requirements to implement and comply with the Fecal Waste Discharge Prohibition.

7. Program of Implementation

This Action Plan builds upon management measures required by existing regional and statewide regulations and orders designed to reduce or eliminate fecal waste discharges from wastewater treatment facilities, sanitary sewer systems, recycled water, land application of biosolids, municipal stormwater runoff, onsite wastewater treatment systems, and dairies. Where existing state-issued WDRs and actions undertaken by local regulatory agencies have been inadequate to ensure consistent achievement of bacteria objectives, this Action Plan identifies implementing parties and sets forth specific implementation actions that shall be taken to control fecal waste pollution, achieve wasteload and load allocations, attain bacteria objectives, and protect public health in the Russian River Watershed. The implementing parties and the specific implementation actions are identified in Table 9–1 and

Table 9–2.

The actions described in this section are consistent with the California Water Code and the Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program. In accordance with Water Code section 13243 and to achieve the water quality objective for bacteria, to protect present and future beneficial uses of water, to protect public health, and prevent nuisance, this Action Plan sets forth the following in section 7.1.

7.1 Implementation of the Fecal Waste Discharge Prohibition

Compliance with the Fecal Waste Discharge Prohibition can be achieved by (a) implementing adequate treatment and best management practices to prevent the discharge of fecal waste material from humans or domestic animals from entering waters of the state either directly or indirectly as a result of stormwater runoff or groundwater seepage and (b) any of the following means, as applicable:

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[5] Nonpoint Source Pollution Control Program Plans and Policy (https://www.waterboards.ca.gov/water_issues/programs/nps/plans_policies.html)

1. Comply with all fecal waste/pathogen-related provisions of an applicable NPDES permit.
2. Comply with all fecal waste/pathogen-related provisions of an applicable WDR.
3. Comply with all fecal waste/pathogen-related provisions of an applicable general WDR or waiver of WDRs (e.g., the conditional waiver included in the *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* (OWTS Policy[6]).
4. Implement the terms of a Memorandum of Understanding or equivalent agreement between the North Coast Regional Water Quality Control Board (North Coast Water Board) and relevant local agencies to address fecal waste discharge from homeless encampments and recreational water users.[7]
5. For non-dairy livestock[8], implement best management practices to achieve the assigned load allocation within 2 years of the effective date of this Action Plan[9] and, if required by the Executive Officer, develop and implement an Executive Officer-approved Ranch Management Plan. Once adopted by the North Coast Water Board, non-dairy livestock operations comply with the prohibition if discharges are in compliance with all fecal waste/pathogen-related provisions of an applicable WDR or waiver of WDRs.
6. Existing, new[10], and replacement[11] OWTS shall comply with sections 7.2 and 7.3 of this Action Plan. New and replacement OWTS near impaired water bodies listed in Attachment 2 of the OWTS Policy shall comply with special provisions contained in an approved Local Agency Management Program (LAMP), or if there are no special provisions, comply with the requirements in Tier 3 of the OWTS Policy and section

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[6] OWTS Policy (https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf)

[7] e.g., Russian River TMDL Memorandum of Understanding (https://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/russian_river/pdf/170420/Russian_River_TMDL_MOU_Redacted.pdf)

[8] Examples of domestic animals include, but are not limited to cows, horses, cattle, goats, swine, fowl, sheep, dogs, cats, or any other animal(s) in the care of any person(s).

[9] This TMDL becomes effective upon approval by the Office of Administrative Law (OAL).

[10] New OWTS means an OWTS permitted or approved after the effective date of the TMDL Action Plan

[11] OWTS Policy (2013), section 1.0, defines replacement OWTS to mean an OWTS that has its treatment capacity expanded, or its dispersal system replaced or added to.

7.3.7 of this Action Plan.

7.2 Implementation Actions for Onsite Waste Treatment Systems

On June 19, 2012, the State Water Resources Control Board (State Water Board) adopted the OWTS Policy[12]. The OWTS Policy took effect on May 13, 2013. The North Coast Water Board, in accordance with the statewide OWTS Policy, amended the Basin Plan on June 19, 2014, to incorporate requirements of the OWTS Policy into the Basin Plan for the North Coast Region. The Basin Plan amendment was approved by the Office of Administrative Law on July 4, 2016.

Section 3.2 of the OWTS Policy allows the North Coast Water Board to approve individual Local Agency Management Programs (LAMPs) allowing local agencies to provide alternative minimum standards to those specified in the OWTS Policy. Individual OWTS within the Russian River Watershed are regulated by the Sonoma County Permit and Resource Management Department (Permit Sonoma) in Sonoma County and by the County of Mendocino Health & Human Services Agency, Division of Environmental Health (DEH), in Mendocino County. These local agencies review development proposals that rely on individual OWTS for domestic waste treatment and disposal. Local agency staff also review permit applications and project plans for OWTS repairs and upgrades, and issue repair permits as necessary in accordance with local policies.

To ensure compliance with local regulations and technical standards for OWTS, local agency staff also evaluate OWTS design and site conditions prior to OWTS construction and may perform inspections in response to complaints and reports of OWTS failures.

7.3 Control of Water Quality with Respect to On-Site Waste Treatment and Disposal Practices Specific to the Russian River Watershed

The likelihood that surface water will be adversely impacted by OWTS is increased substantially in areas with a high density of OWTS, particularly those areas with small parcel sizes and where there is a high percentage of existing OWTS that predate adopted local standards for the design and siting of OWTS. The objective of controlling water quality with respect to OWTS is to ensure that OWTS in the Russian River Watershed are properly sited, designed, operated, and maintained to provide adequate removal of pathogenic organisms, comply with the Fecal Waste Discharge Prohibition, and attain numeric targets, waste load allocations, and load allocations. Pursuant to these objectives, owners of OWTS within the Russian River Watershed shall comply with the following minimum requirements as a condition of the OWTS Policy's Conditional Waiver, or, if applicable, any WDRs or waivers of WDRs issued by the North Coast Water Board.

7.3.1 Cesspools

The use of cesspools for on-site waste treatment and disposal are prohibited. Compliance with the cesspool prohibition shall be met in accordance with the actions specified in

[12] OWTS Policy (https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf)

Table 9–2.

7.3.2 Holding Tanks

The use of holding tanks are prohibited except where the responsible regulatory agency determines that:

1. It is necessary to abate an existing nuisance or health hazard; or
2. The proposed use is within a sewer service area, sewers are under construction or contracts have been awarded and completion is expected within two years, there is capacity at the wastewater treatment plant and the sewerage agency will assume responsibility for maintenance of the tanks; or
3. It is for use at a campground or similar temporary public facility where a permanent sewage disposal system is not necessary or feasible and maintenance is performed by a public agency.

7.3.3 Seepage Pits

Seepage pits may be authorized by the responsible regulatory agency as replacement OWTS for existing cesspools only when: (1) consistent with an approved LAMP and the OWTS Policy's Conditional Waiver or (2) WDRs or waivers of WDRs issued by the North Coast Water Board authorize their use.

7.3.4 General Operation and Maintenance Requirements

In accordance with section 2.5 of the OWTS Policy, owners of OWTS shall maintain their OWTS in good working condition, including inspections and pumping of solids, as necessary, or as required by local ordinances and requirements established in an approved LAMP, to maintain proper function and assure adequate treatment and disposal.

7.3.5 Inspections

Proper operation and maintenance are essential to the long-term performance of OWTS, and any OWTS may be required to undergo inspection to comply with the requirements in this Action Plan. Routine inspections and service visits can provide early detection of problems that could result in malfunction of OWTS and allow for timely repair before an OWTS becomes a public health hazard. The appropriate frequency of monitoring and maintenance is related to the complexity of the OWTS, its age, location, site constraints, approved variances, repair history, past monitoring and inspection results, peak hydraulic loading, and other factors. At a minimum, periodic inspections must evaluate whether both the treatment and effluent dispersal components are functioning adequately to minimize the threat to water quality and public health.

Periodic inspections may occur in conjunction with pumping of the septic tank, a property transaction, an in-field performance verification performed by a Qualified

Professional[13] or Service Provider certified by an OWTS manufacturer, or an inspection required by the responsible local agency or North Coast Water Board.

Results of periodic inspections shall be made available to the North Coast Water Board and/or the local agency upon request to enable the regulating agency to determine whether the OWTS is compliant with all regulations, requires corrective action overseen by the responsible local agency or North Coast Water Board, or requires issuance of WDRs or a waiver of WDRs by the North Coast Water Board. The North Coast Water Board under the OWTS Policy and this Action Plan maintains the authority to require corrective actions based on information acquired from these inspections and/or if the North Coast Water Board identifies a probable risk of waste discharge.

7.3.5.1 Basic Operational Inspection

At a minimum, a basic operational inspection shall include the following evaluations for applicable components:

1. Septic Tank and Pump Systems
    a. Observations to detect leaks, cracks, excessive corrosion, root intrusion, odors
    b. Presence and proper operation of liquid high-level alarm
    c. Assessment of liquid levels in relation to tank outlet
    d. Evidence of lack of water tightness
    e. Evidence of problems in downstream OWTS components, where they have been installed (e.g., distribution box, effluent filter, dosing tank)
    f. Proper settings and operation of pumping system(s), where they have been

[13] Qualified Professionals are individuals licensed or certified by a State of California agency to design OWTS and practice as professionals for other associated reports, as allowed under their license or registration. Depending on the work to be performed and various licensing and registration requirements, this may include an individual who possesses a registered environmental health specialist certificate or is currently licensed as a professional engineer or professional geologist. For the purposes of performing site evaluations, Soil Scientists certified by the Soil Science Society of America are considered qualified professionals. A local agency may establish, in an approved LAMP, alternative qualifications and/or certification for individuals conducting routine operational inspections

installed

2. Effluent Dispersal Area(s)
    a. Evidence of odors or surfacing effluent (e.g., excessive vegetation)
    b. Evidence of unequal effluent distribution
    c. Observations of inspection ports

Additional inspection requirements can be specified in waste discharge requirements or waiver of WDRs, or a North Coast Water Board issued Order[14].

7.3.6 Corrective Action Process and Criteria

In addition to conditions requiring corrective action set forth in section 11.0 of the OWTS Policy, OWTS meeting any of the following criteria are also deemed to be in need of corrective action and must be replaced, repaired, or modified so as to comply with Tier 1 of the OWTS Policy, an approved LAMP, WDRs, or a waiver of WDRs:

1. OWTS discharging to the ground surface or surface waters
2. OWTS that do not include a septic tank and an effluent dispersal system that complies with the OWTS Policy
3. OWTS with projected wastewater flow exceeding the capacity of one or more components of the treatment and disposal system
4. Violates the Fecal Waste Discharge, Cesspool, or Holding Tank Prohibitions in the Action Plan

Property owners with OWTS in the watershed that require corrective action or otherwise do not meet minimum requirements established in this Action Plan, may be required to contact the applicable local agency for a permit to repair or replace the OWTS or, where applicable, offered an opportunity to participate in the planning and completion of a community wastewater treatment and disposal system or equivalent alternative. Property owners that are required to upgrade, repair, or replace an existing OWTS or acquire a new OWTS must obtain the appropriate county permit in accordance with county ordinances and policies, and must obtain from the North Coast Water Board WDRs or a waiver of WDRs, if applicable. In accordance with an approved LAMP, the local agency may approve OWTS repairs and replacements in substantial conformance with the OWTS Policy on a case-by-case basis. Factors that the local agency may consider in determining that corrective actions substantially conform to the LAMP and OWTS Policy include but are not limited to circumstances where an OWTS owner has demonstrated a financial hardship and funding assistance is not available, and/or where due to unique site-specific factors, feasible compliance alternatives are unavailable. The local agency will be the lead organization for plan review, local permit issuance,

[14] In addition to the authority to issue waste discharge requirements pursuant to Water Code section 13263, or waivers of Waste Discharge Requirements pursuant to Water Code section 13269, Water code authorities that allow the North Coast Water Board to issue Orders requiring the inspection requirements include Water Code sections 13267, 13300, 13301, 13304, 13383.

construction inspection and monitoring of new OWTS and upgrades, and repairs or replacement of existing OWTS. This corrective action process does not limit the authority of the North Coast Water Board to require corrective action or issue orders to address threats to water quality, in substantial conformance with the OWTS Policy.

7.3.7 Advanced Protection Management Program for OWTS

7.3.7.1 Objectives

The OWTS Policy establishes Advanced Protection Management Program (APMP) requirements for new and replacement OWTS near impaired waterways and provides that certain APMP requirements may be met through special provisions established in an approved LAMP or TMDL. If there are no special provisions in an approved LAMP, or TMDL provisions, new or replacement OWTS within 600 feet of impaired water bodies listed in Attachment 2 of the OWTS Policy must meet the applicable specific requirements of Tier 3. The APMP requirements apply to an OWTS if any portion of the OWTS is partially or fully contained within the APMP boundary.

The APMP measures will:

1. Ensure that new and replacement OWTS in the Russian River Watershed are properly sited, designed, operated, and maintained to provide adequate removal of pathogenic organisms, comply with the Fecal Waste Discharge Prohibition, and attain numeric targets, waste load allocations, and load allocations.
2. Establish minimum requirements for new and replacement OWTS that are fair, affordable, and implementable, while at the same time meeting the objective for the Action Plan, which is to return and maintain the Russian River Watershed to a condition of consistent compliance with bacterial water quality objectives.

7.3.7.2 Basis

In addition to the provisions regarding the APMP in the OWTS Policy and an approved LAMP, the TMDL studies establish that many surface waters within the Russian River Watershed contain concentrations of FIB that exceed water quality objectives or indicate fecal waste pollution. Given their proximity to surface waterbodies, OWTS discharging to the subsurface near an impaired waterbody may contribute to the impairment by direct discharge (i.e., surfacing effluent from an improperly designed or located OWTS) or through contamination of groundwater in the vicinity of the OWTS as a result of incomplete soil treatment of the OWTS effluent and the migration of the contaminated groundwater to surface water.

7.3.7.3 Applicability

In the absence of special provisions in an approved LAMP that would otherwise define the boundary of the APMP, the APMP applies to any OWTS located on a parcel that is partially or fully contained within the APMP boundary described in Attachment 2 of the OWTS Policy. Owners of existing, new, and replacement OWTS whose OWTS are located entirely outside the boundaries of the APMP must still comply with relevant

requirements of the OWTS Policy, any approved LAMP, sections 7.1 through 7.3.6 of this Action Plan, and if applicable, individual and/or general WDR or waiver of WDRs.

All OWTS within the APMP must meet any special provisions in an approved LAMP. Compliance with the APMP minimum requirements and all applicable local requirements is a necessary condition for owners of OWTS to qualify for coverage under the OWTS Policy's Conditional Waiver of Waste Discharge Requirements. Failure to comply with conditions of the Conditional Waiver of Waste Discharge Requirements may result in revocation of waiver coverage or enforcement.

7.3.7.4 Supplemental Treatment Requirements

All OWTS within the boundary of the APMP must meet all requirements specified in any special provisions of an approved LAMP. If there is no approved LAMP or no special provisions in an approved LAMP, 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 or more stringent requirements may be required by an Order of the North Coast Water Board on a case-by-case basis where evidence indicates the discharge threatens or impacts water quality.

7.3.8 North Coast Water Board OWTS Assessment Program

The North Coast Water Board will assess OWTS within the Russian River Watershed to determine whether the OWTS complies with the Fecal Waste Discharge Prohibition and the requirements in section 7.3 of the Action Plan. The assessment may include a desktop evaluation or local record review, results of a sanitary survey, public survey, questionnaire, a physical site inspection or evaluation[15], any combination of these methods, or other assessment methods that may become available. Information that may be used to ascertain the performance of an existing OWTS includes, but is not limited to: the OWTS type, age, approved variances, repair history, monitoring and inspection results, septic tank pumping records, maintenance records, peak hydraulic loading, and record of complaints received.

The North Coast Water Board and/or the local agency will notify property owners of the need to submit assessment information. The notification will describe the required information and the due date to submit the information to the North Coast Water Board and the local agency. To effectively manage available staff resources, the North Coast Water Board may implement the Assessment Program in phases by geographic area or other appropriate mechanism.

If ordered by the North Coast Water Board, owners of OWTS must provide information about the OWTS to the North Coast Water Board or the local agency, and if deemed necessary, (a) contact the local agency to initiate corrective actions pursuant to section 11 of the OWTS Policy and the local agency's LAMP, or (b) submit a report of waste discharge to the North Coast Water Board for possible establishment of waste discharge requirements or a waiver of waste discharge requirements for the domestic

[15] The physical site inspection may fulfill the basic operational inspection requirement.

waste discharge.

7.3.9 Planning for Community-based Wastewater Treatment Systems

The development of a community-based wastewater treatment system, OWTS management plan, or Onsite Wastewater Management Authority or District, where authorized by a local agency, may be appropriate for some areas. The formation of community advisory groups to provide local stakeholder input to local agencies is essential for the successful development and implementation of community-based solutions. It is the intent of the North Coast Water Board to provide adequate time, through the use of time schedules or equivalent orders, consistent with section 11.6 of the OWTS Policy, for owners of failing and substandard OWTS to comply with this Action Plan and for local agencies to seek and obtain funding assistance for the planning and construction of community-based wastewater treatment and disposal systems or connection to an existing system, as necessary. Additionally, the North Coast Water Board intends to coordinate with local agencies to provide technical assistance in efforts to identify and seek funding for community-based solutions as well as to facilitate community outreach.

8. Monitoring

1. Monitoring will be conducted to provide information regarding the effectiveness of the Action Plan, including: (1) compliance with the Fecal Waste Discharge Prohibition; (2) achievement of WLAs and LAs; (3) attainment of the numeric targets; and (4) attainment of bacteria objectives and protection of beneficial uses.
2. Monitoring activities include: project monitoring, special studies, receiving water trend monitoring, and ambient monitoring of public recreational beaches during the summer recreation period. Monitoring activities for the OWTS fecal waste source category will focus on areas of high parcel density to assess the success of implementation actions and to identify areas where fecal waste pollution is attributable to OWTS. Monitoring and reporting requirements may also include additional metrics (e.g., human and bovine *Bacteroides* bacteria) and analyses, which support accurate, defensible conclusions and provide a reasonable basis for the adaptive management of fecal waste pollution and public health water quality issues in the Russian River Watershed. Monitoring will also be prioritized in watersheds with significant developed lands, agricultural lands, or rangeland.
3. Individual monitoring requirements will be specified in the controlling regulatory mechanism developed for each of the potential fecal waste source categories, as described in Table 9–1 and

   Table 9–2. The North Coast Water Board or Executive Officer may require specific monitoring or special studies under separate Water Code orders, including but not limited to Water Code section 13267 or 13383 orders, or WDRs or waivers of WDRs. All monitoring results will be reviewed and assessed periodically to inform potential revisions of individual permits, orders, or other regulatory mechanisms or revisions to the Action Plan.
4. The North Coast Water Board is participating with the Russian River Watershed Association and other partners in the development of a regional monitoring program

for the Russian River Watershed called the Russian River Regional Monitoring Program (R3MP). As appropriate, implementing parties under this Action Plan may participate in the R3MP once it is developed. The goal of the R3MP is to ensure that all publicly and privately funded environmental monitoring conducted in the watershed and related to the implementation of public policy and regulatory requirements is adequately standardized, coordinated, accessible, and designed to cost-effectively answer watershed management questions. The monitoring requirements in individual NPDES and WDR permits may be revised to reflect participation in R3MP, as appropriate.

9. Schedule

1. To implement requirements set forth in this Action Plan, the North Coast Water Board will also rely on existing regulatory tools including but not limited to individual and general NPDES permits, individual and general WDRs, individual and general Waivers of WDRs, direct enforcement of the fecal waste discharge prohibition, cesspool prohibition, holding tank requirements, and implementation of MOUs or equivalent agreement with local agencies.
2. Table 9–1 and

   Table 9–2 specify the implementation actions to be undertaken by implementing parties and the compliance dates by which the implementation actions must be completed. Implementation actions include compliance with existing WDRs or Waivers, the issuance of new WDRs or Waivers for previously unregulated or under-regulated sources of fecal waste material, and the development and implementation of new management plans and practices to control the discharge of fecal waste to surface waters.
3. For OWTS within the Russian River Watershed, the Action Plan establishes and implements the TMDL and Fecal Waste Discharge Prohibition by: (1) retaining cesspool and holding tank prohibitions from Chapter 4 of the Basin Plan; (2) deferring to the statewide OWTS Policy or approved LAMPs for OWTS requirements, including the definition of any APMP and any special provisions in the LAMP that pertain to APMPs; (3) providing guidance on periodic OWTS inspections; and (4) assessing the adequacy of existing OWTS.
4. The North Coast Water Board will periodically review and assess the effectiveness of the Action Plan. The assessment will consider permit compliance, effectiveness of best management practices, and trends in water quality improvement as demonstrated by the R3MP or other monitoring efforts. North Coast Water Board staff will coordinate with local agencies to enter into and implement MOUs and equivalent agreements and revise the agreements as necessary. The North Coast Water Board anticipates full attainment of the bacteria water quality objective within 20 years from the effective date of this Action Plan.

Table 9–1: Implementation Actions for Source Categories - Load/Wasteload Allocation = Statewide Objective

Fecal Waste Source Category	Implementing Parties (Source)	Implementation Actions and Compliance Date(s)
Municipal Wastewater Discharges	City of Ukiah, City of Healdsburg, City of Santa Rosa, Russian River CSD, Occidental CSD, City of Cloverdale	Compliance with the applicable NPDES permits - **Immediate**
Wastewater Holding Pond Discharges to Surface Water	Town of Windsor, City of Santa Rosa, Graton CSD, Forestville WD, Russian River CSD, other entities with storage pond discharges to surface water. North Coast Water Board.	**Within seven years after the effective date of this Action Plan**, the North Coast Water Board will begin to conduct reasonable potential analyses (RPAs) based on information submitted by the implementing party for entities that discharge wastewater from wastewater holding ponds to surface water. For discharges with reasonable potential to cause or contribute to an exceedance of the WLAs, water quality-based effluent limitations will be established in the applicable WDRs that will ensure compliance with WLAs for bacteria.
Municipal Storm Water Runoff	Sonoma County, Sonoma County Water Agency, City of Cloverdale, City of Cotati, City of Healdsburg, City of Rohnert Park, City of Santa Rosa, City of Sebastopol, City of Ukiah, Town of Windsor, County of Mendocino, Sonoma State University, and other entities enrolled under the Phase I and Phase II MS4 permits, North Coast Water Board	1. Compliance with the applicable NPDES permits, including implementation of approved Pathogen Reduction Plans – **Immediate** 2. For Phase I and II MS4 Permittees without approved Pathogen Reduction Plans on the effective date of the Action Plan, the North Coast Water Board will require submission of the Pathogen Reduction Plans under authority of section 13383/ 13267 subdivision (b) of the Water Code **within two years of the effective date of this Action Plan**. 3. **Within two years after the effective date of this Action Plan**, existing Phase I and II MS4 enrollees without an approved Pathogen Reduction Plan shall implement a Pathogen

Fecal Waste Source Category	Implementing Parties (Source)	Implementation Actions and Compliance Date(s)
		Reduction Plan approved by the North Coast Water Board Executive Officer. 4. New Phase I and II MS4 enrollees shall implement a Pathogen Reduction Plan approved by the North Coast Water Board Executive Officer **within two years of enrollment.**
California Department of Transportation (Caltrans) Storm Water	Caltrans	Compliance with the applicable NPDES permits – **Immediate**
Non-dairy Livestock and Farm Animal Waste	Owners and operators of animal facilities, inclusive of animal husbandry, livestock production, other similar agriculture operations, and commercial animal boarding facilities North Coast Water Board	1. **Within two years after the effective date of this Action Plan**, owners and operators of non-dairy livestock and farm animal facilities shall implement BMPs to achieve the assigned load allocation and, if required by the Executive Officer, develop and implement a Ranch Management Plan. Comply with all provisions of a WDR or waiver of WDRs upon adoption by the North Coast Water Board to control discharges of waste from non-dairy livestock and farm animal operations. 2. The North Coast Water Board will develop and adopt WDRs or waivers of WDRs for non-dairy livestock and farm animal waste to control the discharges of waste from these and other similar operations. Until WDRs or waivers of WDRs are adopted, owners and operators of non-dairy livestock and farm animal facilities shall continue to implement BMPs that are feasible and appropriate for compliance with the fecal waste discharge prohibition.
Dairies and CAFOs	Owners and Operators of Cow Dairies and CAFOs not subject to NPDES permits	Compliance with the applicable WDRs or Waivers – **Immediate**

Fecal Waste Source Category	Implementing Parties (Source)	Implementation Actions and Compliance Date(s)
Dairies and CAFOs	Owners and Operators of Cow Dairies and CAFOs subject to NPDES permits	1. Compliance with the applicable NPDES permits - **Immediate** 2. **Within two years after the effective date of this Action Plan**, enrollees under NPDES permits shall update their permit-required management plans to address sources of bacteria.

Table 9–2: Implementation Actions for Source Categories - Load/Wasteload Allocation = Zero

Fecal Waste Source Category	Implementing Parties (Source)	Implementation Actions and Compliance Date(s)
Percolation Pond and Irrigation Discharges	Calpella CWD, Hopland PUD, City of Cloverdale, City of Ukiah, Geyserville SZ, Airport-Larkfield-Wikiup SZ, Russian River CSD, other publicly and privately-owned wastewater treatment facilities in the Russian River Watershed that collect, treat, and dispose of or recycle treated effluent to land via percolation ponds or by irrigation	Compliance with the applicable WDRs - **Immediate**
Sanitary Sewer Systems	City of Ukiah, Ukiah SD, Calpella CWD, Hopland PUD, City of Cloverdale, Geyserville SZ, City of Healdsburg, Town of Windsor, Airport-Larkfield-	Compliance with the applicable WDRs - **Immediate**

Fecal Waste Source Category	Implementing Parties (Source)	Implementation Actions and Compliance Date(s)
	Wikiup SZ, City of Santa Rosa, South Park CSD, City of Cotati, City of Rohnert Park, City of Sebastopol, Sonoma State University, Graton CSD, Forestville WD, Russian River CSD, Occidental CSD, and other public entities that own or operate sanitary sewer systems	
Land Application of Treated Municipal Sewage Sludge (Biosolids)	City of Santa Rosa, other public and private entities applying biosolids as a soil amendment	Compliance with the applicable WDRs - **Immediate**
Recycled Water Irrigation Runoff	Entities permitted to beneficially reuse treated wastewater through irrigation to land, North Coast Water Board	1. Compliance with the applicable WDRs, Master Reclamation Permit, Water Recycling Requirements - **Immediate** 2. **Within three months after the effective date of this Action Plan**, each entity that is permitted to beneficially reuse treated wastewater and is implementing a Recycled Water BMP Plan or equivalent BMP Plan shall submit to the Executive Officer written certification that its existing BMP Plan adequately prevents and/or minimizes overspray, spills, and incidental runoff. **3. Within two years after the effective date of this Action Plan**, each entity that currently recycles water without a Recycled Water BMP Plan or equivalent BMP plan shall develop and implement a Recycled Water BMP Plan. Where the entity is the

Fecal Waste Source Category	Implementing Parties (Source)	Implementation Actions and Compliance Date(s)
		producer and user of recycled water, the entity shall also submit to the North Coast Water Board Executive Officer a Title 22 Engineering Report approved by the State Water Board Division of Drinking Water. 4. The North Coast Water Board will require submission of the certification statement and, where necessary, notices to update existing Recycled Water BMP Plans under authority of Water code section 13267 subdivision (b) of the Water Code. New Recycled Water BMP Plans, or equivalent BMP Plans, shall be submitted as part of a Notice of Intent for coverage under general WDRs or in conjunction with a report of waste discharge.

Fecal Waste Source Category	Implementing Parties (Source)	Implementation Actions and Compliance Date(s)
Recreational Water Uses and Users	North Coast Water Board, Sonoma County, Mendocino County	1. In accordance with a Memorandum of Understanding, Sonoma County and the North Coast Water Board will work with local entities and private parties along the Russian River to address water quality impacts relative to recreational water uses, and to promote the installation and location of sanitary facilities along the Russian River for use by recreational water users – **Immediate** 2. Mendocino County and the North Coast Water Board will develop a Memorandum of Understanding or equivalent agreement to address water quality impacts relative to recreational water uses - **Ongoing**
Homeless Encampments; Illegal Camping	North Coast Water Board, Sonoma County, Mendocino County	1. Mendocino County and the North Coast Water Board will develop a Memorandum of Understanding or equivalent agreement to address water quality impacts relative to homeless encampments and illegal camping – **Ongoing** 2. Sonoma County and the North Coast Water Board will update their Memorandum of Understanding to address water quality impacts relative to homeless encampments and illegal camping - **Ongoing** 3. The North Coast Water Board will prioritize permitting for homeless-dedicated and affordable housing projects in the Russian River area for which North Coast Water Board permits are required - **Immediate**

Fecal Waste Source Category	Implementing Parties (Source)	Implementation Actions and Compliance Date(s)
Large Onsite Wastewater Treatment Systems	Owners and operators of all OWTS with individual or combined projected flows greater than 10,000 gpd or owners of OWTS with individual or combined projected flows greater than set forth in an approved LAMP North Coast Water Board	1. **Within three months after the effective date of this Action Plan**, owners and operators of new or unpermitted OWTS with projected flow of over 10,000 gpd shall submit a Report of Waste Discharge (ROWD) to the North Coast Water Board. 2. **On an ongoing basis,** the North Coast Water Board staff shall review WDRs or Waivers of WDRs for Large OWTS located in the Russian River Watershed.

Existing, New and Replacement Onsite Wastewater Treatment Systems	North Coast Water Board Owners and Operators of Existing, New, and Replacement Onsite Wastewater Treatment Systems with individual or combined flows less than or equal to 10,000 gpd	The North Coast Water Board shall: 1. **Immediately upon the effective date of the Action Plan**, begin conducting periodic OWTS assessments as described in section 7.3.8 of this Action Plan. 2. **Within ten years after the effective date of this Action Plan**, complete the first periodic watershed-wide OWTS assessment. Owners and operators of Existing, New, and Replacement OWTS with individual or combined flows of less than or equal to 10,000 gpd within the Russian River Watershed shall: 1. **Immediately upon the effective date of the Action Plan**, comply with the Fecal Waste Discharge Prohibition. Maintain OWTS in good working condition, including inspections and pumping of solids, as necessary, or as required by local ordinances and requirements established in an approved LAMP, to maintain proper function and assure adequate treatment and disposal. 2. **Immediately upon the effective date of the Action Plan**, comply with the Cesspool and Holding Tank Prohibitions, and Seepage Pit requirements. i. The initial step towards compliance shall be to report, in writing, to the North Coast Water Board the existence and use of of cesspools, holding tanks, and seepage pits. The information provided shall include the property APN, system type, system age, the number of bedrooms served by the OWTS, and last inspection date. ii. If notified by the North Coast Water Board or local agency, conduct a basic operational inspection as described in section 7.3.5.1 and/or obtain an OWTS inspection conducted by a Qualified Professional as defined in the OWTS Policy. The resulting inspection report shall be

Fecal Waste Source Category	Implementing Parties (Source)	Implementation Actions and Compliance Date(s)
		submitted to the North Coast Water Board and the local agency according to the date specified in the inspection request. If the inspection report indicates a need for corrective action, the inspection report shall be submitted the North Coast Water Board and the local agency **within 90 days**. iii. Compliance with Cesspool and Holding Tank Prohibitions, and Seepage Pit requirements shall be determined by the North Coast Water Board or the local agency on a case-by-case basis based upon evaluation of site-specific information. 3. If notified by the North Coast Water Board or local agency that corrective actions are required, complete all corrective actions **within the time schedule**[16] **established by the North Coast Water Board or local agency**. In the absence of a notification from the North Coast Water Board or local agency, complete all corrective actions **no later than fifteen years from the effective date of the Action Plan.**

[16] The time schedule may be required under an order issued pursuant to Water Code sections 13267, 13300, 13301, 13304, or 13308, 13383, or within waste discharge requirements or waivers of waste discharge requirements.