Plan of Study

Monte Rio and Villa Grande Wastewater Treatment Project

Project Number 42179

Sonoma County Water Agency

August 14, 2019

INTRODUCTION

Several economically disadvantaged communities along the lower Russian River contain homes and businesses that rely on onsite wastewater treatment systems (OWTS) for treatment and disposal of septic waste. Many of these systems do not meet current standards and, therefore, have the potential to discharge inadequately treated wastewater into the Russian River and its tributary creeks.

This document describes the Plan of Study to analyze alternatives for compliance with Water Quality Control Board standards for wastewater disposal in the vicinity of Monte Rio and Villa Grande. The goal of the project is to help property owners to bring community wastewater treatment up to current standards and comply with the new Total Maximum Daily Load (TMDL) requirements, expected to be adopted by the North Coast Regional Water Quality Control Board (Regional Board) in 2019 to address pollution in the lower Russian River Watershed. Sonoma County Water Agency (Sonoma Water) is requesting planning funds from the State of California's Clean Water State Revolving Fund (SRF) to make the project more affordable to the communities served.

Due to factors such as topography, steep slopes, small lot-size and inadequate separation from surface or groundwater, many parcels in the communities of Monte Rio and Villa Grande may be unsuitable for onsite wastewater treatment. Because Monte Rio and Villa Grande currently qualify as economically disadvantaged communities, and therefore are eligible to access significant levels of grant funding for planning, design and construction of wastewater treatment systems, these communities were chosen as priority areas for addressing inadequate OWTS. Approximately 1,520 parcels are located in the project area.

The Monte Rio and Villa Grande Wastewater Treatment Project will have three phases: 1) Feasibility Study Assessment and Report 2) Design, and Environmental Documentation, and 3) Construction. A phased approach will ensure the community, local, regional, and state partners have the opportunity to work collaboratively to identify viable options for providing adequate wastewater solutions for properties in the project areas.

This Plan of Study requests funds for Phase 1 of the project. Phase 1 will evaluate potential solutions to achieve the goal of providing adequate wastewater treatment to the target communities. The outcome of Phase 1 will be a Project Feasibility Report recommending a solution package that meets the community needs and is feasible to accomplish within the parameters of the SRF program. It is anticipated that the project identified and recommended in Phase 1 will advance to Phase 2 for design, environmental documentation, and application to the State Water Resources Control Board for a construction loan to implement Phase 3.

WATER QUALITY PLANS AND POLICIES

In 2000, a number of water bodies in the Russian River Watershed were added to the Clean Water Act Section 303(d) list of Impaired Waters. The list identifies two water bodies in the lower Russian River as impaired for indicator bacteria pathogens due to the failure to fully attain the existing water quality objectives for bacteria as described in the Water Quality Control Plan for the North Coast Region (Basin Plan). These water bodies are the Russian River between the confluence of Fife Creek in Guerneville and Dutch Bill Creek in Monte Rio, and Dutch Bill Creek from the community of Occidental to its confluence with the Russian River in Monte Rio. The 2012 update to the 303(d) list retained these water bodies. Subsequent monitoring for the Russian River Watershed, undertaken as a source analysis in support of the Regional Board's Russian River Watershed Pathogen TMDL, shows evidence of fecal waste pollution in the tributaries to the river, and indicates that OWTS may be a significant source of pathogens contributing to the impairment.

In 2012, the State Water Resources Control Board (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 took effect on May 13, 2013. The Regional Board, in accordance with the OWTS Policy, amended the Basin Plan on June 18, 2015, to incorporate requirements of the OWTS Policy into the Basin Plan. The OWTS Policy sets forth that, upon approval by the appropriate regional water board, a local agency may implement a Local Agency Management Plan (LAMP) that establishes standards that differ from those specified for OWTS that meet low risk siting and design requirements. An Advanced Protection Management Program (APMP) is a management program that establishes standards for OWTS near impaired water bodies. The standards for an OWTS in an APMP may be established by any one of the following:

- A TMDL program of implementation adopted by Regional Board
- An approved LAMP with special provisions for OWTS that are near water bodies listed in Attachment 2 of the OWTS Policy
- The default APMP requirements prescribed by section 10.0 of the OWTS Policy

The objective of the APMP is to ensure that all OWTS in the Russian River Watershed are properly sited, designed, operated, and maintained in a manner consistent with local codes, ordinances, and state and federal clean water requirements. All OWTS meeting the APMP minimum standards are expected to provide adequate removal of pathogenic organisms, comply with the Pathogen TMDL's Fecal Waste Discharge Prohibition, and ensure that ambient pathogen indicator bacterial concentrations are protective of REC-1 beneficial uses.

However, where OWTS were constructed prior to the establishment of modern building codes and on parcels that are now generally considered unsuitable for onsite wastewater treatment and disposal, it is anticipated that many of these OWTS will not meet minimum APMP standards and will require corrective actions by the owners to bring their OWTS into compliance with the Pathogen TMDL. Many of these OWTS are within the project area.

PROJECT DESCRIPTION

Project Area

The lower Russian River area is made up of small unincorporated communities which include Camp Meeker, Northwood, Duncans Mills, Monte Rio, and Villa Grande (see Figure 1). While these communities are mostly rural, the building density in these communities resembles suburb densities. Homes and business are generally located in flood plains, or along steep and heavily-wooded hillsides. This Plan of Study focuses on an area within Monte Rio and Villa Grande. Similar studies will be conducted, as appropriate, for other affected communities in the Lower Russian River.

The project area contains about 1,520 parcels and is shown on Figure 2. Many of the homes in the Monte Rio and Villa Grande communities were originally summer vacation homes, and over the years many have become year-round residences, while others continue to be used as vacation homes. Some houses are used as commercial vacation rentals, and may experience large increases in usage and subsequent demand on their OWTS.

There is no centralized sewer service in the Monte Rio or Villa Grande areas. Properties in this area rely on individual OWTS, many of which are considered noncompliant with modern standards or are prohibited for use (cesspools). Only a small percentage of parcels in the project area are large enough to meet current OWTS standards. Shallow depths to groundwater or bedrock in some areas also may present obstacles for effective onsite wastewater treatment.

The Plan of Study will explore a variety wastewater treatment alternatives for the two communities, including, but not limited to, construction of an area wide collection system with discharge to a treatment plant, construction of a limited collection system for identified areas, upgrades to individual OWTS, construction of cluster systems for small neighborhoods, and evaluation of alternative forms of waste water treatment, including experimental toilet systems.

The Plan of Study will also assess governance issues (including evaluation of the potential for an onsite wastewater management district), consider funding sources for the various alternatives identified in the study, and seek community input to keep the citizenry aware of the progress of the study and to identify community support for the alternatives that are evaluated.

Past Projects

Significant efforts have been made in the past to address wastewater treatment issues in Monte Rio, albeit unsuccessfully. In 1997, the Sonoma County Board of Supervisors and the North Coast Regional Water Quality Control Board placed the community in a “Waiver Prohibition Area.” This effectively established a moratorium on new construction or reconstruction of buildings in the area. In addition, a Citizens Advisory Committee was formed that same year, which worked with County of Sonoma staff and private engineers to study the area, develop options and design a collection system and treatment plant for a limited portion of the current Project area. The community voted twice in favor of a self-imposed tax that was established and paid into for project

implementation, but a shortage of funding eventually ended that effort and the sewer district that was established was abandoned. A significant amount of knowledge and experience was gained and documented during that process, and will provide valuable information for this current effort to build upon, including an Environmental Impact Report from May 2000 and the Questa Engineering project report from June 30, 2000.

In 2010, Sonoma County formed the Monte Rio Wastewater Task Group (MRWTG) to revive the effort to resolve the wastewater issues (existing wastewater discharge problems and water quality degradation) of the Monte Rio area, focusing on the Monte Rio waiver prohibition area which prohibits waivers from construction standards for OWTS. The MRWTG reviewed the earlier work, investigated other alternatives, held community symposia to explain their work and answer questions, and developed recommendations for next steps. The MRWTG recommended focusing on governance next and developing more information on the feasibility of the various alternatives. The MRWTG also concluded that a multifaceted approach to wastewater treatment issues is necessary.

Project Feasibility Report

The Project Feasiblity Report will utilize studies, knowledge, and experience that were gained over the past 25 years, and combine this with current science, data, and engineering practices. The study will analyze alternatives for wastewater collection, treatment, and disposal to ensure compliance with TMDL standards, and will compare associated costs, and potential funding sources. The study will culminate in a feasibility report, which will include an alternative or alternatives recommended by the Community Advisory Group and the Interagency Team (see Stakeholder Participation below), a conceptual design (10%) of the recommendation(s), and a funding application for phase 2. All of which will prepare the project for Phase 2 (design development, right-of-way evaluations, environmental compliance documentation, and preparation of the State Water Resources Control Board construction loan application for Phase 3 funding).

Figure 1. Lower Russian River Communities

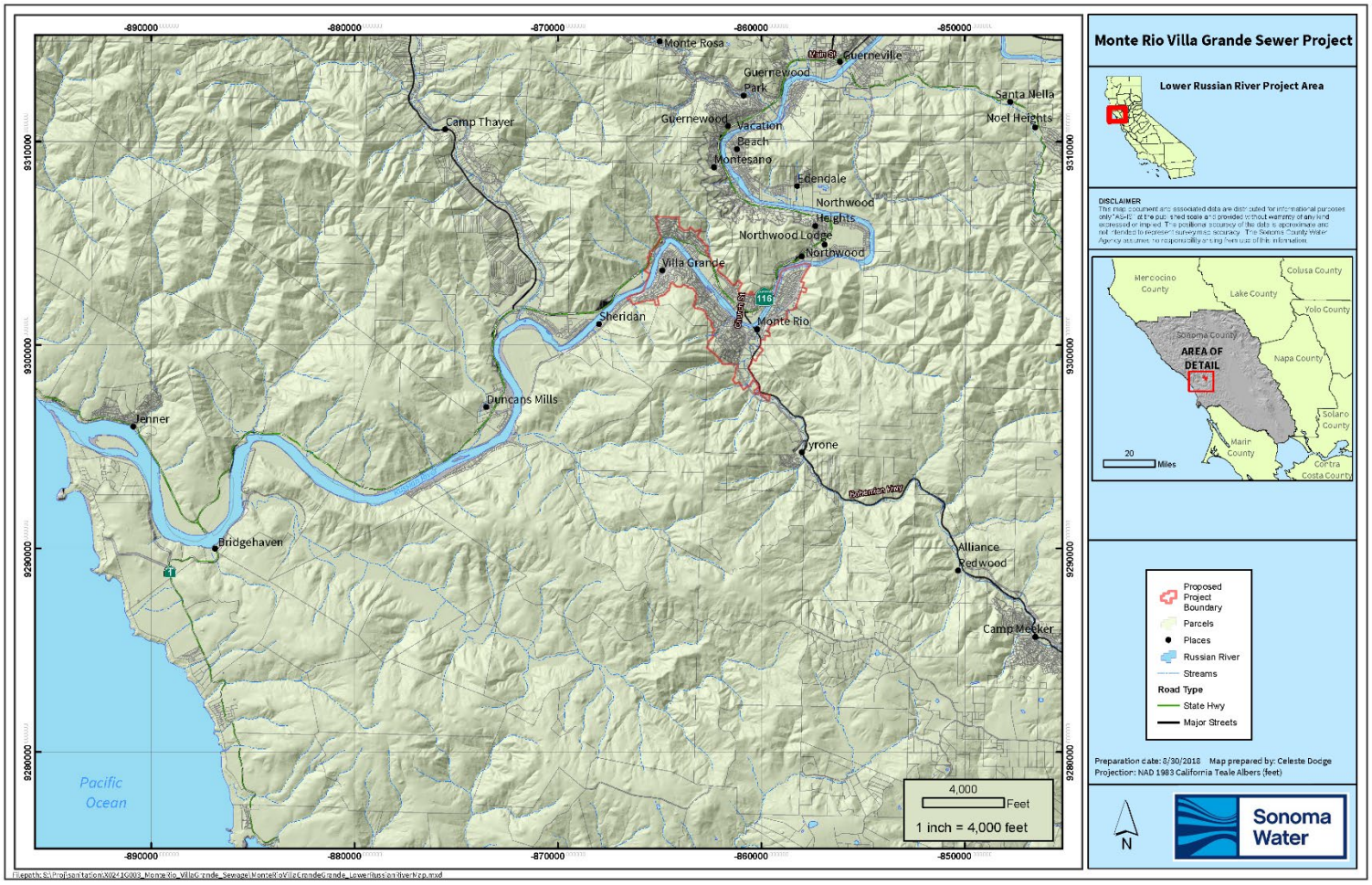
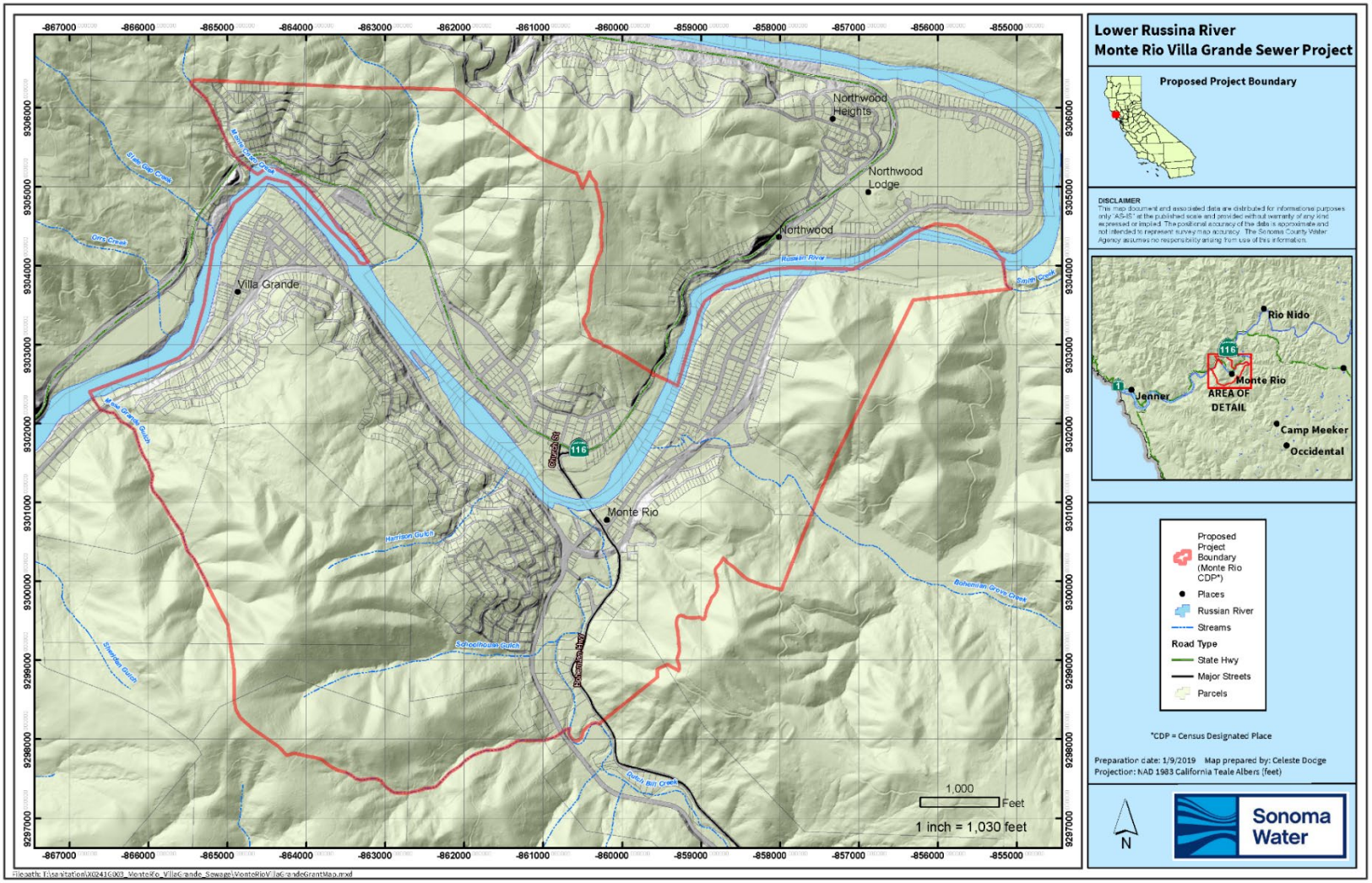


Figure 2. Plan of Study Project Area



STAKEHOLDER PARTICIPATION

Recognizing that potential changes stemming from regulatory determinations can be controversial, significant effort is being made to ensure broad participation and public transparency. Key stakeholders are identified as residents, community groups, local government agencies, business owners, neighborhood leaders, commission members, and other groups from which the community draws its informational resources.

In coordination with the Regional Board, the County of Sonoma, and local resource conservation districts, an Interagency Team has been formed to guide the overall project. Sonoma County Water Agency will apply to the Small Community Wastewater Grant program for planning funds to address the water quality impairment of the Russian River and its tributaries in the project area (Plan of Study).

There will be robust community involvement during this planning process. A Community Advisory Group has been formed to assist with the development of long-term community solutions for onsite wastewater systems upgrades that will meet with requirements and standards established in the Russian River Watershed Pathogen TMDL. The County of Sonoma will hire a Lower Russian River Ombudsperson, who will keep a library of the pertinent regulatory documents, participate in both the Interagency Committee and the Community Advisory Group, and will be available to the Monte Rio and Villa Grande communities at office hours to answer questions, help landowners and residents navigate the potential options and assess the impacts and opportunities on a parcel by parcel basis.

Interagency Team

The Interagency Team consists of representatives of the Regional Board, Sonoma County Fifth District Supervisor's office, Sonoma County's Permit Sonoma Department, Sonoma County Administrator's Office, and the Sonoma County Water Agency. The Interagency Team will meet as needed to assist the Community Advisory Group (see below), identify and resolve outstanding issues and concerns related to planning study development efforts, and build consensus throughout the feasibility study and design process.

Community Advisory Group

A Community Advisory Group (CAG) has been established to assist in the evaluation of wastewater solutions for Monte Rio and Villa Grande that will be documented in the feasibility study. The role of the CAG is to provide input and review to the consultant(s) on the feasibility study, and assist the community and the Interagency Team to establish long-term community solutions for onsite wastewater systems upgrades that will meet with requirements and standards established in the Russian River Watershed Pathogen Total Maximum Daily Load (TMDL).

Lower Russian River Ombudsperson

Throughout the planning process, the Lower Russian River Ombudsperson will conduct public outreach efforts, including holding community office hours in Monte Rio and a social media

presence. All parties recognize that an important key to the success of any project will be a successful public outreach and participation program.

Community Informational Workshops

Three Community Informational Workshops will be held to inform the general public of the following:

- The status of the Russian River Watershed TMDL as it relates to OWTS
- The feasibility study development efforts and recommended project(s)
- Any next steps to be taken

The first workshop will involve the dissemination of project information including a description of the goals and objectives of the Plan of Study. Workshop 2 will present an interim report on the progress of the Project Feasibility Report. Workshop 3 will present the result of the Project Feasibility Report and review the recommended alternatives.

SCOPE OF WORK

This section sets forth the scope of the planning efforts for the proposed Monte Rio and Villa Grande Wastewater Treatment Project. A qualified consultant or consulting firm will be selected through a federally compliant competitive selection process, and a detailed scope of work will be part of the resulting contract to perform the work. The final products will be a Project Feasibility Report and Conceptual Designs that will inform the full design, environmental review, and implementation that will follow in phase 2, along with an application for phase 2 funding. The scope of work described in this application is a high-level summary of the Plan of Study.

Task 1 Project Feasibility Report

The items below are arranged according to the major sections to be included in the feasibility report, followed by tasks related to the overall preparation and presentation of the planning work. The Project Feasibility Report will contain the following sections:

1. Introduction
2. Executive Summary
3. Project Planning Area
4. Existing Facilities
5. Wastewater Flows and Loads
6. Development and Screening of Alternatives Considered
7. Waste Discharge and Treatment Requirements of Alternatives
8. Selection of Preferred Alternatives

Deliverables

- Feasibility Report

Task 2 Conceptual Design of Selected Alternatives (10% Design)

The consultant shall develop a conceptual design for the recommended projects identified in the Feasibility Report. The conceptual design should be advanced enough to pursue Phase 2, and begin right-of-way (ROW) and California Environmental Quality Act (CEQA) analysis. In addition to the conceptual designs that will be developed for the preferred alternative(s), it may be appropriate to develop conceptual designs for several of the considered alternatives to aide in the analysis and selection of the preferred alternative(s). Conceptual designs for several of the considered alternatives may be developed depending on the perceived usefulness of those designs, the funding constraints of the planning grant, and the complexity of the alternatives.

Deliverables

- Conceptual Design (10%) of Recommended Projects

Task 3 Project Administration

This task will begin immediately after the obligation of funds and will continue throughout the duration of the project, ending with the submittal of the final project report. Sonoma Water will respond to the funding agreement reporting and compliance requirements associated with grant administration, and will manage the funding agreement including preparation and submission of supporting grant documents. Sonoma Water staff will prepare invoices including relevant supporting documentation for submittal. An application will be developed for submission to the State Water Resources Control Board (SWRCB) to fund phase 2 of the community project. This task also includes administrative responsibilities associated with the project such as coordinating with partners, and the project managers responsible for implementing the project, and contracting with and managing the consultant.

Deliverables

- Progress and Invoicing Reports
- SWRCB Funding Application for Phase 2 activities

PLANNING PROJECT BUDGET

Task 1. Project Feasibility Report	$400,000
Task 2. Conceptual Design	$55,000
Task 3. Grant Administration	$45,000
Subtotal	
	$500,000
Total	

PLANNING PROJECT SCHEDULE

	Month (post- funding agreement)																																		
Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Task 1 Project Feasibility Report																																				
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