

FY 2021-22 WORK PLAN

Planning and Stewardship Division

Programs:

TMDL Development
Watershed Stewardship
Basin Planning
SWAMP
303(d)/305(b) Integrated Report
CyanoHAB Response Program
Nonpoint Source Grants Program
Monitoring and Analytical Support Program
Flow and Riparian Protection



Photo Credit to the Nature Conservancy

Division Chief: Alydda Mangelsdorf

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1.0 BACKGROUND

The Planning and Stewardship Division (Division) plays a unique role at the North Coast Regional Water Quality Control Board (Regional Water Board). The Division is responsible for developing and maintaining the planning, monitoring, assessment, and stewardship functions of the office. These activities serve as the bedrock upon which the Regional Water Board implements its vision of **Healthy Watersheds, Effective Regulation, and Strong Partnerships**. The Planning and Stewardship Division is divided into two units: the Planning Unit and the Watershed Adaptive Management Unit; and includes the support of a Flow and Riparian Protection Specialist. The Planning and Stewardship Division also works closely with the Watershed Stewardship Coordinator who helps to guide and manage the watershed stewardship activities of the Division. This Division Workplan includes five sections that provide an overview of the Division, the resources used to support the Division's work, and the tasks and milestones of the Planning Unit, Watershed Adaptive Management Unit, and Flow and Riparian Protection Program.

1.1 Planning Unit

The Planning Unit is responsible for maintaining the *Water Quality Control Plan for the North Coast Region* otherwise known as the Basin Plan. The Basin Plan includes information regarding the North Coast Region, as well as the regulations by which the Regional Water Board implements the Porter-Cologne Water Quality Control Act and Clean Water Act. The regulations include designation of beneficial uses; water quality objectives to protect those uses; an antidegradation policy; and prohibitions, action plans, and policies by which the water quality standards are implemented, including Total Maximum Daily Load (TMDL) Action Plans. The Basin Plan provides the regulatory basis for the permitting and enforcement activities of the office.

Both the Planning and TMDL programs are guided by a workplan adopted by the Regional Water Board, which identifies the priorities of the Planning Unit for a 3-year period, as established during the triennial review of the basin plan. The Planning Program Workplan for FY 2018-2021 was adopted by the Regional Water Board in September 2018. The projects include:

- Russian River Pathogen TMDL Action Plan
- Laguna de Santa Rosa Nutrient, DO, Temperature and Sediment TMDL Action Plan/TMDL Alternative
- Ocean Beaches and Freshwater Creeks Pathogen TMDL Action Plan/TMDL Alternative
- TMDL Program Retrospective Review
- Groundwater Protection Strategy
- Instream Flow Criteria/Objectives for the Navarro River and Regionwide Narrative Flow Objective
- Climate Change Adaptation Strategy, including identification/development of landscape scale assessment tools to identify climate change vulnerabilities and locations of potential resilience (ONRWs)

- Revision to Chapter 3 of the Basin Plan to include language on Outstanding National Resource Waters (ONRWs)
- Revision to Chapter 3 of the Basin Plan to modify the biostimulatory substances objective to address biostimulatory conditions
- Revision to Chapter 2 to update cultural and subsistence fishing beneficial uses to be consistent with statewide beneficial uses

1.2 Watershed Adaptive Management Unit

The general function of the Watershed Adaptive Management Unit is to: 1) monitor and assess surface water quality conditions and 2) implement stewardship activities, including the administration of grants, to restore waters identified as impaired. There are many individual programs managed within the Watershed Adaptive Management Unit, which are coordinated to accomplish these general functions. They include:

- Surface Water Ambient Monitoring Program (SWAMP)
- Water Quality Assessment and 303(d)/305(b) Integrated Report
- Grants Administration and Management
- CyanoHAB Monitoring & Response Program

1.3 Flow and Riparian Protection Specialist

The Planning and Stewardship Division is supported by a Flow and Riparian Specialist who is a technical expert in those areas. The Flow and Riparian Specialist generally works to provide technical and policy support to advance inter- and intra-agency coordination on flow and riparian issues and develops tools to further the agency's mission on these topics.

1.4 Unplanned Work Activities

The Planning and Stewardship Division periodically is tasked with special projects, which are unplanned. Recent projects in this category include: fire response, including coordination with other emergency response agencies, water quality monitoring, emergency grant support, and communication support; and collaboration with the Regional Water Board's Stormwater staff, State Board staff and Caltrans to develop a new program for TMDL compliance for Caltrans in the North Coast Region. These special projects are important but require that Planning and Stewardship staff be redirected from other planned work activities. As a general principle, emergency projects that require less than 2 weeks of staff time are simply absorbed into the workflow, with minor adjustments to the deliverable schedules of relevant projects, as necessary. Projects that require more than 2 weeks of staff time require a focused evaluation of the other work priorities, reordering of priorities, and formal adjustments to other work commitments. Further, the Division has established a Monitoring and Analytical Support Team, which works on short-term projects that are vetted through the Unit Supervisors and lead staff. This Team is well positioned to pivot quickly to emergency monitoring and analytical needs.

Because of the nature of the work, staff in the Planning and Stewardship Division are rarely involved in enforcement activities. An exception is in the Scott and Shasta watersheds, where Stewardship staff implement Waivers of WDRs to reduce pollutant discharge in conformance with the TMDLs adopted by the Regional Water Board for those watersheds. When a complaint is received by the office that is not directly related to a permit program implemented by another division, Planning and Stewardship staff are sometimes asked to investigate the complaint, with the further potential need to develop an enforcement case, if warranted. These duties, too, are unplanned and when they happen require that staff be redirected from other planned work activities with the potential need to adjustment deliverable schedules.

Finally, directives from the Regional Board and State Board sometimes require staff reassignment. The need to convert website documents to an American’s with Disabilities Act (ADA) compliant form is a recent example.

Tables 3.1, 4.1, and 5.1 list by priority the core and special project activities associated with the Planning and TMDL Program, the Watershed Adaptive Management Program, and the Flow and Riparian Protection Program, respectively. Priority 1 activities are those that barring unforeseen circumstances will be staffed. Priority 2 activities are those that may be delayed or postponed should other unplanned priorities arise. Priority 3 activities are those that will not be staffed in this fiscal year. This schema will help determine those activities, which may be suspended or delayed due to high priority unplanned activities that arise during the fiscal year.

2.0 DIVISION RESOURCES

2.1 Staff Resources

The staff resources of the Division are listed in Table 1. Table 1 includes the technical, specialist, and management staff dedicated to the Division, including the individuals, their position, classification, and time base. Table 1 does not include the portion of the Administrative Unit’s time that is dedicated to supporting the Division. Due to two current vacancies within the Division, staffing is down 15%. Each full-time person year is represented as 1.0, even though a 10% furlough is currently in effect. Work planning for FY 2021-22 assumes no furlough.

Table 2.1: Planning and Stewardship Division Staff

Position	Name	Classification	PYs
Division Chief	Alydda Mangelsdorf	EPM I	1.0
Flow and Riparian Specialist	Bryan McFadden	Senior WRCE	1.0
Watershed Adaptive Management Unit Senior	Katharine Carter	Senior ES	1.0
SWAMP Program	Richard Fadness	EG	1.0
Grants Program	Michele Fortner	ES	1.0
Grants Program	Carrieann Lopez	ES	1.0
Integrated Report Program	Mary Bartholomew	ES	1.0

Position	Name	Classification	PYs
CyanoHAB Program Coordinator	Mike Thomas	ES	1.0
Planning Unit Senior	Lisa Bernard	Senior ES	1.0
Planning/TMDL Development	Lance Le	WRCE	1.0
Planning/TMDL Development	Kelsey Cody	ES	1.0
Planning/TMDL Development	Prachi Kulkarni	WRCE	1.0
Planning/TMDL Development	Matt Graves	EG	1.0
Planning/TMDL Development	VACANT	ES	1.0
Watershed Steward	Elias Scott	ES	1.0
Watershed Steward	VACANT	ES	1.0
Administrative Support	As assigned		Variable
		Technical and Specialist Staff Total	13
		Division Total	16

The allocation of PYs identified in Table 2.1 is described in Sections 3, 4 and 5. The Division Chief’s 1.0 PY is divided up as follows:

- 0.50 PY for supervision
- 0.10 PY for cross-program coordination
- 0.15 PY as a member of the Executive Team
- 0.25 PY on a Special Project (development of a Climate Change Adaptation Strategy for the North Coast Region)

2.2 Other Resources

The Planning and Stewardship Division also relies on non-staff resources to accomplish its work. These other resources can be divided into two categories: contracts and grants.

2.2.1 Discretionary Contract Funds

Technical support contracts are sometime available to provide contract support for complex TMDL and basin planning projects. The office is given an annual share in the State’s discretionary funds and is managed by the Regional Water Board’s Assistant Executive Officer (AEO). Technical support contracts are established through an internal prioritization process by which the discretionary funds are allocated to the Region’s highest priority projects. Lead staff of chosen projects develop a contract package and coordinate with the Contracts Unit at the State Water Board to develop and finalize the contract. The whole process takes approximately 2 years from project proposal to final contract. See Section 3 for projects supported by technical support contracts.

2.2.2 SWAMP Contract Funds

To support the statewide SWAMP Program, the State Water Board allots a portion of the statewide program contract funds to each region to budget for region-specific

monitoring and analytical needs. The Office of Information Management and Analysis (OIMA) manages several multi-year contracts that provide a variety of analytical and support services to SWAMP both for statewide and regional projects. Each region establishes an annual workplan in which it identifies its highest priority projects and the portion of its overall allotment, which is budgeted for those projects. Information related to the SWAMP Program is further described in Section 4.

2.2.3 Nonpoint Source Grant Funds

The North Coast Board implements a nonpoint source grant program that manages a competitive process to disperse grant funds originating through federal U.S. EPA under 319(h) of the Clean Water Act and the State's Timber Regulation and Forest Restoration Fund. Grants are awarded to entities implementing projects to control nonpoint sources of pollution, which support the mission and vision of the agency, such as restoration projects, BMP installations, and other similar projects.

The number and value of contracts and grants managed and implemented within the Planning and Stewardship Division varies from fiscal year to fiscal year. Further information on the Nonpoint Source Grant Program is provided in Section 4.

2.2.4 Americorps Members

The Planning and Watershed Stewardship Division often hosts 2 Americorps members who begin their tenure in October and complete their service the following August. The Americorps Program is administered by the California Conservation Corps (CCC) who recruits each year's members, conducts their initial interviews, and places them at host sites. A contract with the CCC to cover some of the costs of each member, including stipend and travel expenses, is administered by the San Francisco Regional Water Quality Control Board on our behalf, with 2 members placed at the Oakland office and 2 members placed at the Santa Rosa office. The members typically work with Planning staff and the Flow and Riparian Specialist to learn data collection, data analysis and watershed stewardship skills. The skills and commitment the Americorps members bring to their tenure with the agency is a demonstrable augmentation to the technical work capacity of the Division. The management and reporting obligations to the CCC associated with their tenure, however, is a cost to the division.

3.0 TMDL AND BASIN PLANNING PROGRAM

The Planning Unit, led by a full-time (1.0 PY) Senior Supervisor, implements a number of inter-related programs that 1) characterize watershed conditions (TMDL), 2) establish goals and solutions (water quality standards and programs of implementation), and 3) implement solutions (TMDL Action Plans, implementation policies, permits, and stewardship in strategic watersheds with the leadership of Watershed Stewards). This is consistent with the [Watershed Stewardship](#) model of the region. The priorities of the TMDL and Basin Planning programs are established through a triennial public review process that culminates with adoption by the Regional Water Board. The Planning Unit is currently operating under the [2018 Triennial Review](#). The Planning Unit is still working on the priorities established in 2018 and is unlikely to conduct a new triennial review in 2021. The Planning Unit Senior Supervisor manages the [TMDL Program](#) and [Basin Planning Program](#) and supports implementation of the triennial review priorities in each

of these programs through management of individual project leads. The Planning Unit Senior Supervisor also manages Watershed Stewards who implement TMDLs in three strategic watersheds (Scott, Shasta, Elk Rivers). As per the Sediment TMDL Implementation Policy and Temperature Implementation Policy in the [Basin Plan](#), implementation of the remaining 26 impaired watersheds with established TMDLs is accomplished with the existing regulatory and non-regulatory tools implemented by the full complement of the agency's programs.

In addition to projects that staff in the Planning Unit each coordinate, many staff also belong to a Monitoring and Analytical Support Team, which is described in Section 4.6. The Monitoring and Analytical Support Team is co-supervised by the WAM Unit Senior Supervisor and Planning Unit Senior Supervisor and includes staff throughout the Division.

The Planning Unit includes:

- **TMDL Program**, which is staffed by two full time (2.0 PY) TMDL staff, currently managing the Russian River Pathogen TMDL, Coastal Pathogen TMDL, and Laguna de Santa Rosa TMDLs projects.
- **Basin Planning Program** includes three full time (3.0 PY) Planning staff, with one of the positions currently vacant. The two Planning staff provide technical assistance on numerous Division projects and several projects in other divisions. They will not independently be leading planning projects in FY 2021-22, in favor of applying those staff resources to making greater progress on other high priorities. Once the current Planning vacancy is filled, the possibility of staffing one of the unstaffed Triennial Review projects will be evaluated against the needs of other priorities and commitments.
- Implementation of TMDLs in three strategic watersheds is staffed by two full time (2.0 PY) **Watershed Stewards**, with one of the positions currently vacant. The existing Watershed Steward leads stewardship activities in the Scott and Shasta rivers to implement the TMDLs, WDR waivers, monitoring and assessment, restoration planning and implementation, and coordination with other local, state, tribal and federal agencies on critical issues such as flow, species protection, and drought.

3.1 Core Activities and Projects by Priority

Each of the core activities and projects of the Planning Unit are identified in Table 3.1 and given a priority of 1, 2 or 3. Priority 1 core activities and projects are those that barring unusual circumstances, are top priorities and will remained staffed. Priority 2 core activities and projects are ones that may be put on hold if staff are diverted to other higher priorities. Priority 3 core activities and projects are those that are currently unstaffed. Performance targets are established each year for the Planning and TMDL Program based on 1) the number of TMDLs adopted, 2) the number of waterbody pollutant pairs that will be addressed by an action of the Board, and 3) the number of basin plan amendments adopted.

Table 3.1—TMDL and Planning Program Projects and Core Activities by Priority

Priority Level	Activity/Project	Category (Core or Special)	Target Date
1	Russian River Pathogen TMDL (See Section 3.2)	Special	2 nd Quarter
1	Laguna de Santa Rosa TMDLs/Alternative Restoration Plan (See Section 3.3)	Special	2022-23
1	R3MP	Core	Ongoing
1	Coastal Pathogen TMDL/Alternative Restoration Plan (See Section 3.5)	Special	Unscheduled
1	Narrative Flow Objective (See Section 5)	Special	2022-23
1	Scott and Shasta Watershed Stewardship (See Section 3.6)	Core and Special	Ongoing
1	Elk River Watershed Stewardship (See Section 3.7)	Core and Special	Ongoing
1	Groundwater Protection Strategy	Core and Special	See Surface Water and Point Source Division Workplan
1	Climate Change Adaptation and Resilience Strategy (See Section 3.8)	Core and Special	Policy Statements 2022-23
2	Technical Support to Permit Programs	Core	Ongoing
2	CEQA document review	Core	Ongoing
3	TMDL Program Retrospective Review	Core and Special	Unstaffed
3	Navarro Flow Objective (See Section 5)	Core and Special	Unstaffed
3	ONRW Definition and Designation	Special	Unstaffed
3	Biostimulatory Conditions	Special	Waiting for State Board action
3	Tribal and Cultural Beneficial Uses	Special	Unstaffed
3	2021 Triennial Review of the Basin Plan	Special	Unstaffed
3	Tribal Consultation	Core	Unstaffed

3.2 Russian River Pathogen TMDL

Role	Name	PYs
Supervisor	Lisa Bernard	Program and Staff Management
Technical Staff	Prachi Kulkarni	0.25 PYs
Technical Staff	Mary Bartholomew	0.25 PYs

Funding Source(s): Federal TMDL Program

3.2.1 General Program/Project Description

Reaches of the Russian River watershed are listed on the Clean Water Act 303(d) list of impaired waters due to the presence of fecal indicator bacteria (FIB). High concentrations of FIBs may indicate the presence of pathogenic organisms that are found in warm blooded animal waste, including human waste. Pathogens pose a potential health risk to people who recreate in contaminated waters. The project results in a pollutant control strategy designed to control fecal waste contamination and reduce the risk of illness to recreational use in watersheds now impaired. The pollutant control strategy takes the form of a TMDL Action Plan, proposed for adoption into the Basin Plan to accomplish fecal waste discharge control. The TMDL Action Plan includes a waste discharge prohibition, which is the basis for the actions identified in the program of implementation. The waste discharge prohibition applies to the Russian River Watershed and is specifically focused on the discharge of fecal waste material. The Russian River Pathogen TMDL Action Plan was adopted by the Regional Water Board in August 2019. Re-analysis of pathogen data to support the State Water Resources Control Board's 2018 Integrated Report process in 2020, produced new analytical results that have precipitated the need for the Regional Water Board to consider re-adoption of certain elements of the TMDL Action Plan. Upon the approval by the State Water Board and Office of Administrative Law, the TMDL Action Plan will go into effect. Upon approval of U.S. EPA, the obligation under the Clean Water Act to develop a TMDL for impaired waters will be met.

3.2.2 Program/Project Activities

Core Activities

- Project management
- Internal updates and information sharing
- Coordination with State Water Board staff

Special Projects

1. Regional Water Board workshop
2. Regional Water Board adoption hearing
3. State Water Board approval hearing
4. Office of Administrative Law approval process
5. U.S. EPA approval process

3.2.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
1st Quarter (9/21)	Regional Water Board workshop
2nd Quarter (12/21)	Response to Public Comments Regional Water Board adoption hearing
3rd Quarter (3/22)	State Water Board approval hearing
4th Quarter (6/22)	OAL approval process

3.2.4 Additional Summary Information

Affected Watersheds: Russian River

Applicable Contract(s): None

Applicable Grant(s): None

Applicable links: None

Performance Targets: 1 adopted TMDL, 11 waterbody-pollutant pairs addressed, 1 Basin Plan Amendment

3.2.5 Issues of Note

The Russian River pathogen project is very controversial, especially in the lower watershed. This is primarily due to the implementation consequences related to wastewater treatment, especially onsite wastewater treatment systems. Staff anticipate considerable public input and engagement, with the potential for other project work to be diverted to ensure adequate comment review, written response, and hearing preparation. In addition, State Water Board staff have been involved in the re-analysis of pathogen data and may have further input.

3.3 Laguna de Santa Rosa TMDLs/Alternative Restoration Plan

Role	Name	PYs
Supervisor	Lisa Bernard	Variable
Technical Staff	Kelsey Cody	0.8 PY
Technical Staff	Matt Graves	0.3 PY

Funding Source(s): Federal TMDL Program Grant

3.3.1 General Program/Project Description

The Laguna de Santa Rosa is a subwatershed of the larger Russian River watershed. It is listed on the Clean Water Act 303(d) list of impaired waterbodies due to water quality impairments associated with nutrients, low dissolved oxygen, elevated temperature, and excess sediment, which cause biostimulation. Planning Unit staff are developing a TMDL Action Plan/Alternative Restoration Plan to address these impairments. Fundamental to the impairments in the Laguna is the underlying altered hydrology of the watershed due to urbanization and other anthropogenic causes, demanding a multifaceted and multidimensional solution set, including pollutant allocations to multiple sectors, characterization of the loading effects of landscape wide modifications, and active restoration, with consideration of future impacts due to climate change. Development and implementation of the Laguna TMDL Project has and will require the coordinated actions of multiple partners.

3.3.2 Program/Project Activities

Core Activities

- Project Management
- Internal updates and information sharing
- External updates and information sharing
- Contract management

Special Projects

1. Peer Review Draft Staff Report
2. Public Outreach

3.3.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
1 st Quarter (9/21)	None
2 nd Quarter (12/21)	None
3 rd Quarter (3/22)	Peer Review Draft Staff Report
4 th Quarter (6/22)	Public Outreach

3.3.4 Additional Summary Information

Affected Watersheds: Laguna de Santa Rosa

Applicable Contract(s): A contract for \$9,450 is under development with Tetra Tech to support the development of responses to peer review comments

Applicable Grant(s): None

Applicable links: None

Performance Targets: None

3.3.5 Issues of Note

An inhouse shade model is under development, with the intention that it play a role in defining the elements of the Temperature TMDL. An updated scoping of the Temperature TMDL may result in alterations to the approach, with consequences for the proposed TMDL/Alternative Restoration Plan.

Input from Sonoma County representatives is crucial to developing the proposed program of implementation. The public review draft Staff Report may be delayed, depending on the level of input from Sonoma County.

3.4 Russian River Regional Monitoring Program (R3MP)

Role	Name	PYs
Supervisor	Matt St. John	N/A
Lead Staff	Kelsey Cody	0.2 PY
Representative to the Steering Committee	Matt St. John	N/A
Representative to the TAC	Alydda Mangelsdorf	N/A

Funding Source(s): Federal TMDL Support funds

3.4.1 General Program/Project Description

The Russian River Regional Monitoring Program (R3MP) Project represents a high priority initiative spearheaded by the Regional Water Board staff and supported by discretionary contract funds. R3MP is a science-based planning effort convened by public agencies and watershed stakeholders to develop a coordinated regional monitoring program for the Russian River watershed. A Steering Committee has been established and has generated a governance structure and charter. Steering Committee meetings are scheduled about every two months. A Technical Advisory Committee has also been established with its first meeting in April 2021. The Technical Advisory Committee is charged by the Steering Committee to establish a monitoring program to address issues of watershed health and meetings are scheduled every month. Technical and facilitation support is provided by SFEI/Aquatic Sciences Center.

3.4.2 Program/Project Activities

Core Activities

- Contract management
- Meeting planning support
- Meeting facilitation support
- Participation in the Steering Committee and TAC

Special Projects (from Contractor)

1. Conceptual model and monitoring questions
2. Master Monitoring Matrix
3. Analytical Framework
4. Existing Data and Sources
5. Data Gaps Analysis

3.4.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones (from the contractor)
1 st Quarter (9/21)	Conceptual model and monitoring questions

Fiscal Quarter	Milestones (from the contractor)
2 nd Quarter (12/21)	Master Monitoring Matrix
3 rd Quarter (3/22)	Analytical Framework
4 th Quarter (6/22)	Existing Data and Sources

3.4.4 Additional Summary Information

Affected Watersheds: Russian River

Applicable Contract(s): Contract Agreement No. 20-022-270 establishes the tasks and deliverables that SFEI/Aquatic Science Center will perform for the State Water Resources Control Board under multiple projects, including the R3MP project. The R3MP project is currently in its second Phase, is funded for a total \$150,000 and this phase is scheduled to conclude in 2023. The primary purpose of the technical support contract is for SFEI/Aquatic Science Center to conduct planning, organizational, and technical work under the direction of the Regional Water Board, R3MP Support Team, the R3MP Steering Committee, and R3MP TAC to develop a Regional Coordinated Monitoring Plan for the Russian River watershed.

Applicable Grant(s): None

Applicable links: [R3MP \(google.com\)](https://www.google.com)

Performance Targets: None

3.4.5 Issues of Note

Achievement of R3MP goals is dependent on strong engagement by the newly formed TAC. If other emergency matters (e.g., drought or fire response) distract TAC members attention this year, there is the possibility of project delays.

3.5 Coastal Pathogen TMDL/Alternative Restoration Plan

Role	Name	PYs
Supervisor	Lisa Bernard	Variable
Lead Staff	Prachi Kulkarni	0.55 PY
Support Staff	Mary Bartholomew	0.40 PY

Funding Source(s): Federal TMDL Program Grant

3.5.1 General Program/Project Description

The Ocean Beaches and Freshwater Creeks Pathogen TMDL Projects (Coastal Pathogen TMDL Project) was first adopted as a high priority TMDL Project during the 2014 triennial review of the Basin Plan and again adopted as a high priority during the 2018 triennial review. Since 2014, staff collected dry and wet season ambient water quality data from listed ocean beaches, listed freshwater streams, reference streams, and suspected fecal waste source areas over two calendar years. These datasets are

now complete, and staff have begun statistical analysis. Additional monitoring may be necessary. The Coastal Pathogen Project will result in pollutant control strategies designed to control fecal waste contamination and reduce the risk of illness associated with recreational use and shellfish consumption in watersheds now impacted by fecal pollution. The pollutant control strategy(ies) may take the form of a TMDL Action Plan, other Action Plan, or policy proposed for adoption into the Basin Plan. It may be an alternative TMDL and rely on mechanisms other than a Basin Plan Amendment to accomplish fecal waste discharge control. For example, the proposed control strategy may rely on Local Area Management Plans (LAMPs) and/or enhanced requirements under existing Waste Discharges Requirements for Sanitary Sewers, depending on their status at the time this Project concludes. In any event, implementation of pollutant control strategies will require close collaboration with local planning, permitting, and public health agencies to ensure the repair and installation of appropriate waste treatment and control measures.

3.5.2 Program/Project Activities

Core Activities

- Project Management, including scoping, scheduling, work planning, and coordination
- Internal updates and information sharing
- External updates and information sharing

Special Projects

1. Reference Streams Analysis Tech Memo
2. Freshwater Streams Analysis Tech Memo
3. Source Analysis Land Cover Loading Model Memo
4. Impaired Beaches Analysis Tech Memo
5. Jolly Giant Creek Monitoring Plan and monitoring

3.5.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
FY 2020-21	Jolly Giant Creek Monitoring Plan
1 st Quarter (9/21)	Reference Streams Analysis Tech Memo
2 nd Quarter (12/21)	Freshwater Streams Analysis Tech Memo
3 rd Quarter (3/22)	Source Analysis Tech Memo
4 th Quarter (6/22)	Impaired Beaches Analysis Tech Memo

3.5.4 Additional Summary Information

Affected Watersheds: Multiple freshwater streams and ocean beaches

Applicable Contract(s): None

Applicable Grant(s): None

Applicable links: None

Performance Targets: None

3.5.5 Issues of Note

A monitoring plan to collect additional pathogen data in Jolly Giant Creek has been developed. Staff are coordinating with the City of Arcata to collect additional data, with the hope of pinpointing fecal waste sources and working directly with the City to correct any discharges.

There is currently insufficient data to assess the relationship between tributary fecal waste discharges and effects in Humboldt Bay proper. This is a project element still under development.

The NPDES Program is working with Humboldt Bay dischargers to establish a Technical Advisory Committee to assess point source and stormwater discharges to the Bay and the potential effect on commercial oyster operations. This is a program element still under development.

3.6 Scott and Shasta Watershed Stewardship

Role	Name	PYs
Supervisor	Lisa Bernard	Variable
Technical Staff	Elias Scott	0.9 PY
Monitoring and Analytical Support Team	Various staff	0.5 PY

Funding Source(s): NPS Support Grant (federal), TMDL Program Support Grant (federal), and Waste Discharge Program Fees

3.6.1 General Program/Project Description

The Scott and Shasta Watershed Steward is responsible for implementing regulatory and non-regulatory tools within a coordinated recovery framework that leverages the authorities, funding, and expertise of watershed stakeholders, including agencies, tribes, NGOs, and private landowners. The Watershed Steward accomplishes this goal by building partnerships so as to: identify shared environmental concerns, identify strategic approaches to addressing shared concerns, and coordinating internally to bring the multiple regulatory and non-regulatory tools of the Regional Water Board to the table, including: SWAMP resources, Grant Program resources, Flow and Riparian Protection Program resources, TMDL Program resources, Restoration Program resources, and permit/enforcement tools.

The Regional Water Board adopted sediment and temperature TMDLs for the Scott River in 2005. It adopted temperature and dissolved oxygen TMDLs for the Shasta River in 2006. TMDL waivers were adopted in 2012 and again in 2018 to address multiple pollutant concerns in each of these watersheds. The pollutant concerns are largely related to ranch management, road management, tailwater management, and water conservation needs. The Scott and Shasta Watershed Steward implements

TMDL waivers by prioritizing high risk/high value properties, conducting inspections, requesting Ranch Management, Tailwater Management, Grazing Management, Erosion Control and Monitoring plans, as appropriate. The Scott and Shasta Watershed Steward also coordinates with staff in the Nonpoint Source and Surface Water Protection Division on timber harvest activities, restoration project planning and permitting, and other 401 certification projects. Further, he coordinates with the Groundwater Protection Specialist on groundwater management planning.

3.6.2 Program/Project Activities

Core Activities

- Scott and Shasta Stewardship Program Management
- External coordination with multiple watershed stakeholders on topics including flow/drought, groundwater management, waste discharge, and habitat restoration
 - Mid-Klamath Agency Coordination Meetings (quarterly)
 - Scott River Flow Enhancement Group (bi-weekly or as needed)
 - Shasta River Fall Flow Group (bi-weekly starting in July)
 - Klamath Basin Monitoring Program (biannually)
 - Moffett Creek Working Group (biannually)
 - Little Shasta Projects Group (monthly)
 - Klamath Fish Health Assessment Team (monthly or as frequent as conditions require)
- Internal coordination with staff actively implementing related projects and programs in the Scott and Shasta watersheds
- TMDL Waiver Implementation
- Watershed monitoring and adaptive management
- Internal and external updates and information sharing

Special Projects

1. Biostimulatory Conditions Study in the Scott River
2. Bacteria Monitoring in the Shasta River
3. Conduct at least 3 Ranch Assessments in each watershed
4. Scope the 2023 Waste Discharge Requirements (WDRs) to replace the TMDL Waivers for each watershed

3.6.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
FY 2020-21	<ul style="list-style-type: none"> • Biostimulatory Conditions Study Monitoring Plan for the Scott River was completed in FY 2020-21 • Bacteria Monitoring Plan for the Shasta River was completed in FY 2020-21
1 st Quarter (9/21)	None
2 nd Quarter (12/21)	None
3 rd Quarter (3/22)	<ul style="list-style-type: none"> • Draft Monitoring Memo for Scott River

Fiscal Quarter	Milestones
	<ul style="list-style-type: none"> Draft Monitoring Memo for Shasta River
4 th Quarter (6/22)	Completion of 3 ranch assessments per watershed
FY 2022-23 - 1st Quarter (9/22)	Draft scope of 2023 WDRs

3.6.4 Additional Summary Information

Affected Watersheds: Scott River, Shasta River

Applicable Contract(s): None

Applicable Grant(s): Grant Agreement D191311100 addresses grazing impacts in Parks Creek. D2113XXX (to be developed) will address road-related issues in tributaries to the Scott River. Active grant projects in the Scott and Shasta rivers amount to \$1,041,263. (See Section 4.5).

Applicable links: None

Performance Targets: 3 Ranch Assessments per watershed

3.6.5 Issues of Note

Now, in 2021, the Scott and Shasta watersheds are experiencing drought, which may result in a shift in the priorities of the Scott and Shasta Watershed Steward. This is particularly possible, if the Division of Water Rights takes any actions that require Regional Water Board support and coordination.

3.7 Elk River Watershed Stewardship

Role	Name	PYs
Supervisor	Lisa Bernard	
Project Lead	Vacant	0.8 PY
Technical assistance	Matt Graves	0.2 PY
Permitting assistance	Restoration Specialist	See Nonpoint Source and Surface Water Division Workplan
5-year Review	Timber WDR staff	See Nonpoint Source and Surface Water Division Workplan
Technical Assistance and Contract management	Lance Le	See Monitoring and Analytical Support Program
Grant management	Michele Fortner	See NPS Grants Program

Funding Source(s): Waste Discharge Program Fees and federal NPS Support funds

3.7.1 General Program/Project Description

The Elk River Watershed Steward is responsible for implementing regulatory and non-regulatory tools within a coordinated recovery framework that leverages the authorities, funding, and expertise of watershed stakeholders, including agencies, tribes, NGOs, and private landowners. The Watershed Steward accomplishes this goal by building partnerships so as to: identify shared environmental concerns, identify strategic approaches to addressing those concerns, and coordinating internally to bring the multiple regulatory and non-regulatory tools of the Regional Water Board to the table. These include: SWAMP resources, Grant Program resources, Flow and Riparian Protection Program resources, TMDL Program resources, Restoration Program resources, and NPDES and WDR permit and enforcement tools.

The Elk River has been listed as impaired due to sediment and sedimentation since the late 1990s. The Regional Water Board adopted a Sediment TMDL for the Upper Elk River in 2016, which was subsequently approved by the State Water Board (2017), OAL (2018), and U.S. EPA (2018). The Sediment TMDL for the Upper Elk River addresses sediment discharges from timberlands by requiring WDRs for Green Diamond Resources Company and Humboldt Redwood Company, as well as waivers for federal lands and nonindustrial timberlands. It also addresses sedimentation in the “impacted reach” by pointing to the state-funded Elk River Recovery Assessment as a modeling tool to help define the most strategic restoration/remediation projects. Further, it addresses the coordination needs of activities in the Elk by pointing to the Elk River Stewardship Program as the venue within which to address health and safety issues, water supply, flooding, coordinated science and monitoring, and habitat restoration and sediment remediation. The TMDL Action Plan requires a 5-Year Review of the progress towards meeting TMDL goals in 2021, 2026, and 2031.

3.7.2 Program/Project Activities

Core Activities

- Elk River Stewardship Program Management
- External coordination with multiple watershed stakeholders on topics including health and safety; water supply; flooding; coordinated science and monitoring; restoration/remediation planning, funding, and permitting; and TMDL compliance
- Internal coordination with staff actively implementing projects and programs in the Elk River watershed
- Watershed monitoring and adaptive management
- Internal and external updates and information sharing
- Contract management
- Grant management

Special Projects

1. Sediment TMDL 5-Year Review Charter and Workplan, including stakeholder engagement
2. Draft Monitoring Framework (contractor)
3. Sediment TMDL 5-Year Review Findings presented to the Regional Water Board

4. Recovery Action Plan (contractor)
5. Environmental Constraints Analysis Memo (contractor)

3.7.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
FY 2020-21	<ul style="list-style-type: none"> • Charter for the Sediment TMDL 5-Year Review • Workplan for the Sediment TMDL 5-Year Review
1 st Quarter (9/21)	Monitoring Framework due from contractor
2 nd Quarter (12/21)	<ul style="list-style-type: none"> • Recovery Action Plan due from contractor • Sediment TMDL 5-Year Review Findings presented to the Regional Water Board
3 rd Quarter (3/22)	Environmental Constraints Analysis Memo due from contractor
4 th Quarter (6/22)	None
FY 2022-23 - 2nd Quarter (12/22)	Programmatic Regulatory Compliance Strategy due from contractor

3.7.4 Additional Summary Information

Affected Watersheds: Elk River

Applicable Contract(s): Contract with CalTrout to develop Elk River Restoration framework and Watershed Stewardship Program elements

Applicable Grant(s): Grant Agreement D2013113 with CalTrout addresses environmental permitting needs for the Wrigley Orchard and Flood Curve projects, planning and design for the Toms Gulch area, and landowner outreach and education. Active grant projects in the Elk River amounts to \$241,334. (See Nonpoint Source Grant Program Active Projects).

Applicable links: None

Performance Targets: None

3.7.5 Issues of Note

The Elk River Watershed Steward position is recently vacant. Other agency staff have been identified to manage the high priority work, until the position can be filled.

3.8 Climate Change Adaptation Strategy

Role	Name	PYs
Supervisor	Matt St. John	Variable
Project Lead	Alydda Mangelsdorf	0.25 PY

Role	Name	PYs
Technical Support	Matt Graves	0.20 PY to support Climate Change and Narrative Flow projects
Technical Support	Lance Le	See Monitoring and Analytical Support Team – Section 4.6
Technical Advisory Committee	Clayton Creager	See Watershed Stewardship Program Workplan
Technical Advisory Committee (TAC)	Bryan McFadin	See Flow and Riparian Protection Program – Section 5

Funding Source(s): Varied

3.8.1 General Program/Project Description

The North Coast Region constitutes about 12% of the state’s geographic area including approximately 340 miles of scenic coastline. Historically, it has also accounted for about 41% of its annual runoff. The North Coast Region contains watersheds that includes state and federally listed threatened and endangered species, such as: the Southern Oregon/Northern California Coast (SONCC) and Central California Coast (CCC) evolutionarily significant units of coho salmon (*Oncorhynchus kisutch*); California Coastal Chinook Salmon (*Oncorhynchus tshawytscha*); and Northern California steelhead trout (*Oncorhynchus mykiss*). It also has two major bays: Humboldt Bay and Bodega Bay, both of which support significant development, including roads, treatment facilities, structures, homes, and industry. Dairy farming and other agricultural pursuits are common in the region’s low-lying floodplains and estuaries. Many of the region’s watersheds are groundwater-fed during summer months, requiring adequate wet weather infiltration and the region’s headwaters are crucial to supporting cold water habitat, as well. The incidences of toxic algae blooms in the North Coast have increased notably over the last several years, as well as water shortages during the dry season. The issues of sea level rise, increased flooding, prolonged drought, increased incidence of wildfire, etc. are observable phenomena, linked to climate change, and likely to worsen over time.

A Climate Change Adaptation and Resilience Strategy for the North Coast Region should 1) describe an adaptation and resilience vision for water resources in the Region, 2) identify the regulatory and non-regulatory tools available to the Regional Water Board that are useful to accomplish the vision (the Strategy), 3) assess existing science on a bioregional scale to identify high priority water quality related climate adaptation and resilience needs, 4) identify strategic partnerships necessary to round out the regulatory, science and monitoring, and funding solutions, and 5) implement key actions using new and existing programs, as necessary.

3.8.2 Program/Project Activities

Core Activities

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- Project Management
- Update and information sharing
- Outreach

Special Projects

1. Draft a white paper to outline the potential scope of the Strategy based on internal outreach with managers, Exec and Board members
2. Assemble Project Team/Charter
3. Draft a Climate Change Adaptation and Resilience Vision
4. Develop a Strategic Outreach Plan
5. Draft Policy Statement for Board consideration, which establishes the vision and incorporates the strategy outline

3.8.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
1 st Quarter (9/21)	<ul style="list-style-type: none">• Draft a white paper to outline the potential scope of the Strategy• Assemble Project Team and develop a charter
2 nd Quarter (12/21)	<ul style="list-style-type: none">• Draft a Strategic Outreach Plan• Draft a Climate Change Adaptation and Resilience Vision
3 rd Quarter (3/22)	Draft Policy Statement language in coordination with the Board
4 th Quarter (6/22)	Release Policy Statement for public review
FY 2022-23	<ul style="list-style-type: none">• Draft the Climate Change Adaptation and Resilience Strategy• At this time staff anticipate generating a Bioregional Strategic Workplan to serve as a long term coordinated agency workplan, which is based on assessment of existing science and outreach results, and prioritizes per watershed the water quality-related regulatory and non-regulatory actions the Board should take to accomplish the identified vision

3.8.4 Additional Summary Information

Affected Watersheds: Entire Region

Applicable Contract(s): None

Applicable Grant(s): None

Applicable links: None

Performance Targets: None

3.8.5 Issues of Note

Scoping and developing this project requires the input and support of multiple Seniors and Executive staff, all of whom are busy with other varied and unpredictable duties. The project lead is a Division Chief, whose time is often pulled in many directions. Diligent, conscious planning and efficiency will be required to make good use of time and make adequate progress. There is potential for many unforeseen diversions to impact the proposed schedule. Drafting the Climate Change Adaptation and Resilience Strategy and accompanying long-term Bioregional Strategic Workplan should begin in FY 2022-23.

4.0 WATERSHED ADAPTIVE MANAGEMENT PROGRAM (WAM)

The Watershed Adaptive Management (WAM) Unit led by a full-time (1.0 PY) Senior Supervisor implements several inter-related programs that support the monitoring and adaptive management functions of [Watershed Stewardship](#). In addition to supervising staff and managing programs, the Senior Supervisor also coordinates with the Nonpoint Source and Surface Water Division to develop the 5-Year Nonpoint Source Workplan, required under the Nonpoint Source funding grant from USEPA. The current 5-Year Nonpoint Source Workplan is for the period of 2020-2025.

In addition to the programs that staff in the WAM Unit each coordinate, many staff also belong to a Monitoring and Analytical Support Team, which is described in Section 4.6. The Monitoring and Analytical Support Team is co-supervised by the WAM Unit Senior Supervisor and Planning Unit Senior Supervisor and includes staff throughout the Division.

The WAM Unit programs include:

- **SWAMP Program** led by a full time (1.0 PY) SWAMP Coordinator
- **Nonpoint Source Grant Program** staffed by two full time (1.0 PY) Grants staff
- **Integrated Report Program** led by a full time (1.0 PY) Integrated Report Program Coordinator
- **CyanoHAB Response Program** led by a full-time (1.0 PY) CyanoHAB Response Program Coordinator

4.1 Core Activities and Projects by Priority

Each of these programs include ongoing (core) duties, as well as special projects that have start and end dates. Each of the programs themselves are Priority Level 1 (high priority) programs that barring unusual circumstances, the Division will continue to invest staff resources in. Should unforeseen conditions require that staff be diverted to other work (e.g., emergency response, high priority enforcement), individual core duties and/or project tasks would be adjusted, while ensuring that minimum program management continues for each program. Table 4.1 reflects these conclusions. There are no Performance Targets associated with the Watershed Adaptive Management Program.

Table 4.1—Watershed Adaptive Management Program Core Activities and Project by Priority

Priority Level	Activity/Project	Category (Core or Special)	Target Date
1	SWAMP Program (See Section 4.2)	Core	Ongoing
1	303(d)/305(b) Integrated Report Program (See Section 4.3)	Core and Special	Ongoing
Priority Level	Activity/Project	Category (Core or Special)	Target Date
1	Nonpoint Source Grant Program (See Section 4.5)	Core and Special	Ongoing
1	Monitoring and Analytical Support (See Section 4.6)	Core	Ongoing
2	Technical Support to Permit Programs	Core	Ongoing
2	CEQA document review	Core	Ongoing
3	No Priority 3 Activities/Projects		

Priority 1 Programs/Projects are ones that barring unusual circumstances, are top priorities. Priority 2 Programs/Projects are ones that may be put on hold if staff are diverted to other higher priorities. Priority 3 Programs/Projects are ones that are currently unstaffed.

4.2 SWAMP Program

Role	Name	PYs
Supervisor	Katharine Carter	Variable
Project Lead	Rich Fadness	0.60 PY
Support	Others	See Monitoring and Analytical Support Team – Section 4.6

Funding Source(s): Water Quality Trend Monitoring fund

4.2.1 General Program/Project Description

The Surface Water Ambient Monitoring Program, or SWAMP, is a statewide monitoring effort designed to assess the conditions of surface waters throughout the state of California. The program is administered by the State Water Board. The responsibility for implementation of monitoring activities resides with the nine regional water quality control boards that have jurisdiction over their specific geographical areas of the state. To support the regions' monitoring activities, the statewide SWAMP Program has created a Quality Assurance (QA) program, developed a standardized data storage system, created Standard Operating Procedures (SOPs) for sampling, generate peer reviewed monitoring plans for each project, and regularly updates a water quality indicator list to work from.

With input from staff and management, the SWAMP Coordinator develops a monitoring workplan to direct SWAMP monitoring resources to the highest surface water

monitoring priorities. Implementation of the SWAMP Workplan is an on-going activity with field work conducted both during the summer season (e.g., CyanoHAB) and winter season (e.g., stormwater runoff). At present, the SWAMP Coordinator's duties are to assist program staff with the development of monitoring plans and data assessment. The SWAMP Coordinator and other program staff conduct field sampling activities with assistance from Scientific Aids and Americorp members. The SWAMP Coordinator provides field equipment and guidance to program staff who conduct monitoring activities to support their own project work and trains staff on proper equipment use and data collection methods. The SWAMP Coordinator oversees contract work, as necessary. The SWAMP Coordinator is responsible for managing the data as received from the labs and assisting other program staff with assessment of the data to support programs, policy decisions, and watershed stewardship. Once the data quality assurance process has been conducted the data are imminently transferred to the California Environmental Data Exchange Network (CEDEN) database where they are available to members of the public. The SWAMP coordinator is responsible for entering SWAMP field data into the SWAMP database.

4.2.2 Program/Project Activities

Core Activities

- SWAMP Roundtable and Coordinator meetings
- SWAMP Statewide Workgroup meetings
- Internal updates and information sharing (EO Reports, presentations, meetings, e-mail updates)
- SWAMP workplan development and oversight: a) oversee the FY 2021-22 workplan activities and b) update and finalize the FY 2022-23 workplan
- Statewide laboratory contract coordination
- SWAMP database management: a) data input and retrieval and b) data validation
- Review and finalize project monitoring and QA/QC plans
- Maintain and oversee Regional Lab
- Maintain and oversee field monitoring equipment
- Provide monitoring and QA-related training
- Provide monitoring support
- Regional laboratory contract coordination

Special Projects

None

4.2.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
1 st Quarter (9/21)	None
2 nd Quarter (12/21)	None
3 rd Quarter (3/22)	None

4 th Quarter (6/22)	None
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4.2.4 Additional Summary Information

Affected Watersheds: The SWAMP Workplan for FY 2021-22 addresses: Scott River, Shasta River, Smith River Plain, pathogen-impaired coastal streams and beaches, Klamath, and cyanoHABs

Applicable Contract(s): Office of Information Management and Assessment (OIMA) implements statewide lab contracts and SWAMP contracts on behalf of all the regions. Region 1 is budgeted \$387,096 to support its SWAMP Workplan goals, which it generally distributes across the statewide contracts.

Applicable Grant(s): None

Applicable links: None

Performance Targets: None

4.2.5 Issues of Note

None

Table 4.2—FY 2021-22 SWAMP Workplan

Regional Projects	FY 2021	FY 2022	FY 2023	FY 2024	TOTALS
Coastal Pathogens TMDL	\$38,280				\$38,280
CyanoHAB Emergency Response	\$12,000	\$19,050	\$4,950	\$12,000	\$48,000
Elk River	\$8,415	\$154,038	\$21,780	\$4,950	\$189,183
General Lab Services	\$19,604				\$19,604
Integrated Report		\$45,505	\$11,313		\$56,818
Klamath Wildlife Refuge	\$100,462	\$87,200	\$65,462		\$253,124
Scott River	\$27,500		\$35,750		\$63,250
Scott/Shasta SGMA	\$25,410				\$25,410
Shasta River	\$41,800		\$41,800		\$83,600
Smith River	\$113,625	\$81,303	\$134,640		\$329,568
Total Yearly SWAMP Allocation	\$387,096	\$387,096	\$387,096	\$387,096	
Balance to be allocated	\$0	\$0	\$71,401	\$370,146	

4.3 303(d)/305(b) Integrated Report Program

Role	Name	PYs
Supervisor	Katharine Carter	Variable
Project Lead	Mary Bartholomew	0.2 PY

Funding Source(s): Federal TMDL Program Grant

4.3.1 General Program/Project Description

Section 305(b) of the federal Clean Water Act requires states to assess the condition of its waters and report its findings. Section 303(d) of the federal Clean Water Act requires states to identify water bodies that do not meet water quality standards and are not supporting their beneficial uses. These waters are placed on the Section 303(d) List of Water Quality Limited Segments (also known as the list of Impaired water bodies or 303(d) List). California has integrated the 303(d) List of Impaired Waters and the 305(b) Water Quality Assessment Report into a single report (Integrated Report). This Integrated Report satisfies the requirements of both Clean Water Act Sections 303(d) and 305(b). The State Water Board is responsible for producing an Integrated Report every 2 years. Each report compiles and assesses data for 3 regions at a time, such that each region is on a 6-year cycle.

In the fall of 2019, the State Water Board began administering the public process for the North Coast Water Board’s 2018 cycle as part of the State Water Board’s plan to meet Integrated Report submittal targets. The 2018 Integrated Report was adopted by the State Water Board in 2020, including new and revised listings and delistings in the North Coast Region. The State Water Board is also administering the public process for the 2020/2022 Integrated Report cycle to ensure it is completed on time. The State Water Board has not yet determined if future cycles will be administered by the Regions or by the State. Data for the North Coast Region will be considered again in the 2026 Integrated Report. One known task of the Integrated Report Coordinator in preparation for the 2026 Integrated Report will be the need to update all pesticide decisions to comply with the program requirement that each pesticide be evaluated in its own decision. **The North Coast Region is currently off-cycle, therefore some of the core activities listed below will not be worked on in FY 21/22.**

4.3.2 Program/Project Activities

Core Activities

- Implement the Integrated Report program in accordance with the direction, priorities, and schedule set forth by the State Water Board.
- Integrated Report Roundtables and statewide workgroups
- Coordinate with State and Regional Water Board staff, federal agencies, tribes, NGOs and the public to collect, assemble, and assess water quality data when on cycle. **Currently off-cycle**
- Periodically update staff and management on Integrated Report Program activities

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- Data review and management
- Update fact sheets, as necessary

Special Projects

1. Develop a monitoring plan to further evaluate numerous waterbody-pollutant pairs, including: pathogens in select locations of the Russian River, diazinon in Foss Creek, various metals listings that are based on few data, and various conventional pollutant listings that are based on few data (On hold due to other high priority work, see Issues of Note)

4.3.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
1 st Quarter (9/21)	None
2 nd Quarter (12/21)	None
3 rd Quarter (3/22)	None
4 th Quarter (6/22)	None

4.3.4 Additional Summary Information

Affected Watershed: Entire Region

Applicable Contract(s): None

Applicable Grant(s): None

Applicable links: [2018 Integrated Report](#)

Performance Targets: None

4.3.5 Issues of Note

Work on the Monitoring Plan to further evaluate numerous waterbody-pollutant pairs has begun but will not be completed and will not be implemented in FY 2021-22 as originally planned, as staff have been redirected to other higher priority projects.

4.4 CyanoHAB Response Program

Role	Name	PYs
Supervisor	Katharine Carter	Variable
Project Lead	Mike Thomas	1.0 PY

Funding Source(s): Water Quality Trend Monitoring funds

4.4.1 General Program/Project Description

In recent years, there has been an increased frequency and severity of cyanobacteria harmful algal blooms (CyanoHAB) around the world, including the North Coast Region. The Regional Water Board has received reports of freshwater nuisance blooms and algal scums, animal illnesses, and on occasion, human health impacts within the North Coast. The risk factors that contribute to freshwater CyanoHAB and nuisance blooms include nutrient (phosphorus and nitrogen) enriched waters, warming climate, reduced riparian shade, channel aggradation, and lower flows. The Regional Water Board is working to reduce risk factors through its water quality improvement programs. There is a current need to manage freshwater CyanoHAB blooms through improved monitoring, assessment, and increased educational outreach. Given the lack of rainfall and snowpack throughout the Region, staff are expecting that drought conditions in many areas will result in lower than usual stream flows this summer and may result in an increase in CyanoHABs. The North Coast Region received a new CyanoHAB Coordinator position in 2020, which was filled in early 2021.

4.4.2 Program/Project Activities

Core Activities

- Freshwater HAB Roundtables and coordination meetings
- Statewide program development and support
- Internal updates and information sharing
- HABs database management
- Annual program coordination and response planning
- Annual monitoring and response
- Outreach and education
- Regional program development
- Maintain and improve statewide emergency and incident response to cyanoHABs

Special Projects

1. Finalize the CyanoHAB report for the Russian and Eel rivers

4.4.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
1 st Quarter (9/21)	Final CyanoHAB Report for the Russian and Eel Rivers
2 nd Quarter (12/21)	None
3 rd Quarter (3/22)	None
4 th Quarter (6/22)	None

4.4.4 Additional Summary Information

Affected Watersheds: Entire Region

Applicable Contract(s): None

Applicable Grant(s): None

Applicable links: None

Performance Targets: None

4.4.5 Issues of Note

A dedicated CyanoHAB position is new to the North Coast Region. This first year will be dedicated to designing and establishing the position, as well as the new staff hired into it. A CyanoHAB expert at the SWRCB was to be a peer reviewer of the CyanoHAB Report for the Russian and Eel Rivers but will shortly be leaving for another job. We do not anticipate this will affect the project schedule.

4.5 Nonpoint Source Grant Program

Role	Name	PYs
Supervisor	Katharine Carter	Variable
Technical staff	Michele Fortner	1.0 PY
Technical staff	Carriann Lopez	0.95 PY
Specialist	Restoration Specialist	See Nonpoint Source and Surface Water Division Workplan

Funding Source(s): Federal NPS Support funds and Waste Discharge Program Fees

4.5.1 General Program/Project Description

California implements a Nonpoint Source Grant Program (NPS Grant Program), which is comprised of funds from a U.S. EPA Clean Water Act (CWA) section 319(h) grant to the State Water Board (CWA 319 grant)¹ and from the Timber Regulation and Forest Restoration Fund (Timber Fund) established by the State. These funds are allocated to third party grantees on a competitive basis, to implement projects associated with nonpoint source pollution control, remediation, and restoration. The Program Preferences identified by the Region each year represent the Region's highest priority watersheds for third party pollution control, remediation, and restoration.

4.5.2 Program/Project Activities

Core Activities

- Establish each year's Program Preferences through an internal review and approval process
- Update each year's Grant Guidelines
- Review and rank all grant applications statewide

¹ U.S. EPA has final approval authority of all projects funded with CWA section 319 funds.

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- Provide support to Technical Staff who manage individual grants
- Attend Statewide Nonpoint Source Roundtable meetings
- Produce the annual NPS Workplan
- Deliver semi-annual progress reports
- Periodically report on the progress and outcomes of individual grants to management, the Board, and the public
- Cultivate grant projects with high performing grantees, in high priority watersheds, and addressing high priority impairments and/or beneficial use restoration needs.

Special Projects

1. Develop a Catalog of Restoration Projects in applicable watersheds to: a) support the Watershed Stewardship Framework, b) support grant selection, c) support Caltrans' ability to achieve its proportional TMDL responsibility as required under the statewide stormwater NPDES permit, d) serve as supplemental environmental projects for consideration in enforcement negotiation, and e) serve as mitigation projects, especially as may be required as a condition of a 401 Certification.
2. Planning and Watershed Stewardship Division staff manage individual grants (see Table 4.2)

4.5.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
1 st Quarter (9/21)	None
2 nd Quarter (12/21)	Closeout 3 grants: D2013113 (Elk River), D1713103 (Trinity River), and D1713102 (Eel River).
3 rd Quarter (3/22)	Closeout 1 grant: D1813107 (Mendocino Coast TMDL Implementation)
4 th Quarter (6/22)	<ul style="list-style-type: none">• Closeout 2 grants: D1813110 (Large Wood Augmentation) and D1813108 (Post-Fire Mark West Creek)• Finalize grant agreements for the 3 Region 1 grants funded in FY 2021-2022• Present the findings of research, planning and coordination related to the development of a Catalog of Restoration Projects with internal and external partners

4.5.4 Additional Summary Information

Affected Watersheds: 2021 NPS Program Preferences identified: Elk River, Scott River, Shasta River, Salmon River, Eel River, Russian River, and Trinity River

Applicable Contract(s): None

Applicable Grant(s): See Table 4.2

Applicable links: None

Performance Targets: None

4.5.5 Issues of Note

For the 2020 grant cycle, the state declared that there were no Timber Fund dollars available. The lack of funding was announced after the solicitation had ended and therefore any applicant applying to implement a project under the Timber Fund was not eligible for consideration. Due to the struggling California economy the state has again declared that there will no Timber Fund dollars available for the current 2021 grant cycle and it is possible that there could be a lack of Timber Funds in future years as well.

Table 4.3-- Nonpoint Source Grant Program Active Projects

Agreement No.	Grant Contract Name	Grant Manager	Total Dollar Amount	Start Date	End Date	Description
D2013113	Elk River Watershed Stewardship Support, Planning, Design, and Permitting Project	Michele Fortner	\$241,334	7/1/2020	10/31/2021	Complete permit development initiated under D1513103 for Wrigley Orchard and Flood Curve; planning and design for the Toms Gulch area; and landowner outreach and education
D1713103	Trinity River Watershed Roadside Fuel Reduction Project	Michele Fortner	\$250,503	6/1/2018	11/30/2021	Fuels reduction to create fire break along 25 miles of county road. Thinning and fuels reduction along 25 feet on each side of road.
D1713102	Eel River Road Sediment Treatment and Inventory Project	Michele Fortner	\$693,047	6/1/2018	12/31/2021	Fix at least 6.5 miles of road. Inventory 30 miles of road. Reduce fuel load along at least 1 mile of riparian corridor.
D1813107	Mendocino Coast TMDL Implementation Program, Phase 2	Nonpoint Source and Surface Water Division	\$717,134	4/1/2019	3/31/2022	Implement NPS pollution controls along 14 miles of road in the Gualala and Navarro River watersheds
D1813110	Large Wood Augmentation, Phase II, in Sediment Impaired Watersheds in the North Coast Region	Nonpoint Source and Surface Water Division	\$421,223	5/1/2019	4/30/2022	Install large wood in 10 miles of high-priority coho salmon and steel head trout habitat in sediment impaired coastal watersheds. Locations identified by a Technical Advisory Committee.
D1813108	Post-Fire Management Practices in the Mark West Creek, Maacama Creek and	Michele Fortner	\$500,000	5/1/2019	6/30/2022	Identify sites and plan/implement post-fire management practices on the burned land of at least 5 landowners

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Agreement No.	Grant Contract Name	Grant Manager	Total Dollar Amount	Start Date	End Date	Description
	Laguna de Santa Rosa					
D1813109	Post-Fire Recovery from the Redwood Fire	Michele Fortner	\$749,507	4/1/2019	12/31/2022	Upgrade and stormproof 26 sites along 14 miles of road on four ranch ownerships. Revegetate 240 acres of burned hill slopes.
D1913111	Parks Creek Riparian Improvement	Eli Scott Planning Unit	\$609,263	4/30/2020	1/31/2023	Stabilize streambank; install fencing, riparian plantings, stock watering systems on Parks Creek between I-5 bridge and State Hwy 99.
D2013114	Tenmile Creek Streambank Erosion Prevention and Riparian Restoration Project	Carrieann Lopez	\$473,500	5/1/2021	3/31/2024	Stabilize stream bank on eroding tributary locations within the Tenmile Creek watershed using bioengineering techniques and riparian planting to reduce sediment contributions and reduce solar loading affecting water temperatures
D2013116	Post-Fire Recovery and Sediment Reduction in mark West Creek	Carrieann Lopez	\$331,377	TBD	TBD	Post-Fire Recovery and sediment reduction into Mark West Creek by re-constructing a retaining wall destroyed in the 2017 Tubbs Fire.
D2013115	Hart Ranch Stock Watering and Riparian Fence Project	Eli Scott Planning Unit	\$674,129	TBD	TBD	Increase dissolved oxygen and decrease temperature by installing off-stream stock watering systems, upgrading water transport infrastructure, installing fencing, and restoring riparian habitat with native plants and trees
D2113XXX	Eel River Road Sediment Treatment Project-Phase 2	Michele Fortner	\$608,886	2022	2025	Implementation of stormproof designs on at least 5 road miles in the Outlet Creek basin
D2113XXX	Post-Fire Recovery in Russian River Subwatersheds	Carrieann Lopez	\$632,782	2022	2025	Reduce loading of sediment as well as other toxins in the Russian River watershed from lands in Sonoma County impacted by recent wildfires. Project activities will include planning and implementation of a suite of post-fire BMPs on burned lands

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Agreement No.	Grant Contract Name	Grant Manager	Total Dollar Amount	Start Date	End Date	Description
D2113XXX	Scott River EFM Road Mill Creek Sediment Reduction Improvements	Elias Scott Planning Unit	\$432,000	2022	2025	Reduce sediment delivery to tributaries of the Scot River by treating several urgent or high priority sites, which includes stream crossings, road crossings, and misaligned culverts

*Shaded rows are projects that will close out during FY 2021-22

4.6 Monitoring and Analytical Support Program

Role	Name	PYs
Supervisor	Lisa Bernard	Variable
Project Lead	Katharine Carter	Variable
Analytical Support	Lance Le	0.50 PY
Analytical Support	Rich Fadness	0.20 PY
Analytical Support	Prachi Kulkarni	0.20 PY
Monitoring Support	Rich Fadness	0.20 PY
Monitoring Support	Lance Le	0.20 PY
Monitoring Support	Mary Bartholomew	0.20 PY
Monitoring Support	Matt Graves	0.20 PY
Monitoring Support	Carriann Lopez	0.05 PY
Monitoring Support	Prachi Kulkarni	0.05 PY
Monitoring Support	Ben Zabinsky	See Point Source and Groundwater Protection Division Workplan

Funding Source(s): Water Quality Trend Monitoring funds, Federal NPS Support funds, Federal TMDL Support funds, and Waste Discharge Program Funds

4.6.1 General Program/Project Description

A core team of three Planning and Watershed Stewardship Division staff have been identified as the division's Analytical Support Team. This team is available to the division to assist on complex analyses, including modeling, statistical analysis, GIS analysis, and data presentation. Upon agreement with the relevant supervisor, and considering workload, members of this team could also be available to provide technical support to other divisions, as well. Highlighted projects for FY 21-22 include: the Dairy Program, Basin Plan mapping tool, Laguna TMDL support, and Restoration Project Catalog.

A core team of eight Planning and Watershed Stewardship Division staff have been identified as the division's Monitoring Support Team. This team has approval from their respective supervisors to provide support on approved SWAMP monitoring projects.

4.6.2 Program/Project Activities

Core Activities

- Maintain project tracking
- Project scoping
- Project charters/workplans as necessary

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- Maintain Field Monitoring Calendar
- Perform work as described
- Internal Peer Review
- Update supervisor and share information across divisions as appropriate

Special Projects

1. Develop Field Monitoring Calendar
2. Develop protocol for requesting support
3. Develop a Project Tracking Spreadsheet for Analytical Support Projects

4.6.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
FY 2020-21	Field Monitoring Calendar
1 st Quarter (9/21)	<ul style="list-style-type: none">• Develop protocol for requesting support• Project Tracking Spreadsheet for Analytical Support Projects
<u>2nd Quarter (12/21)</u>	<u>None</u>
<u>3rd Quarter (3/22)</u>	<u>None</u>
<u>4th Quarter (6/22)</u>	<u>None</u>

4.6.4 Additional Summary Information

Affected Watersheds:

- Analytical Team Support--- Entire region
- Monitoring Team Support—Scott River, Shasta River, Jolly Giant Creek, and Smith River Plain

Applicable Contract(s): None

Applicable Grant(s): None

Applicable links: [Monitoring Calendar](#)

Performance Targets: None

4.6.5 Issues of Note

Both the Analytical Support Team and the Monitoring Support Team are made up of staff who are lead staff on other projects, too. Their ongoing involvement in these support activities is contingent upon workload, including any changes to the workload associated with their other projects. Nonetheless, these teams are well situated to pivot to other high priority monitoring and/or analytical work, if for example, drought or fire response requires such support.

5.0 FLOW AND RIPARIAN PROTECTION PROGRAM

The Flow and Riparian Protection Program is led by a full-time (1.0 PY) Senior Water Resources Control Engineer (Specialist), who implements several core and special project activities in service to the agency on issues related to flow and riparian protection. The Specialist provides staff resources to the whole office but reports to the Division Chief. The Specialist works with the other specialists in the office (e.g., Groundwater Protection Specialist and Restoration Specialist) to provide consulting services to staff; coordinate with external partners; and forward the mission, vision, and priorities of the agency, as outlined by their respective Division Chiefs, the Watershed Stewardship Coordinator, and the Executive Management Team.

The Flow and Riparian Protection Specialist is the primary mentor and manager for the Americorps members, with help provided by the Division Chief, the Watershed Stewardship Coordinator, and Technical Support staff from the Planning Unit.

5.1 Core Activities and Projects by Priority

The Flow and Riparian Protection Specialist manages ongoing (core) duties, as well as special projects that have start and end dates. In a drought year (e.g., calendar year 2021), all the core and special projects related to flow, drought response, and coordination on flow management naturally become a high priority (Priority 1). Should unforeseen conditions require that staff be diverted to other work (e.g., wildfire emergency response), individual core duties and/or project tasks would be adjusted, while ensuring that minimum program management continues for each core duty and project. For FY 2021-22, activities related to the development of numeric flow objectives for the Navarro River Watershed have been postponed (Priority 3) in favor of higher priority drought response activities. Management of Americorps members, contract management, flow monitoring, and participation on Technical Advisory Committees are staffed for FY 2021-22 but are identified as secondary priority (Priority 2) in the event that drought response duties grow or other emergency response activities become necessary. There are no performance targets associated with this program.

Table 5.1—Flow and Riparian Protection Program Core Activities and Projects by Priority

Priority Level	Activity/Project	Category (Core or Special)	Target Date
1	Narrative Flow Objective (See Section 5.2)	Special	2022-23
1	Interagency Coordination	Core	Ongoing
1	Flow and Riparian Consultation	Core	Ongoing
1	Drought Response	Core	Ongoing
2	Management of Americorps Members	Core	Ongoing
2	Contract Management	Core	Ongoing
2	Flow Monitoring	Project	Ongoing
2	Technical Advisory Committees	Project	Ongoing
3	Navarro Flow Objective	Project	Unstaffed

Priority 1 Programs/Projects are ones that barring unusual circumstances, are top priorities. Priority 2 Programs/Projects are ones that may be put on hold if staff are diverted to other higher priorities. Priority 3 Programs/Projects are ones that are currently unstaffed.

5.2 Flow and Riparian Protection Program

Role	Name	PYs
Supervisor	Alydda Mangelsdorf	Variable
Project Lead	Bryan McFadin	1.0 PY
Technical Support	Matt Graves	0.20 PY to support Climate Change and Narrative Flow projects

Funding Source(s): Waste Discharge Program Fees

5.2.1 General Program/Project Description

The Flow and Riparian Protection Program is developed and implemented by the Flow and Riparian Protection Specialist. The Flow and Riparian Protection Specialist provides expert technical guidance to internal and external partners in the areas of flow and riparian protection. He participates in external coordination meetings (e.g., Division of Water Rights, Department of Fish and Wildlife, Potter Valley Project). He provides in-house technical and policy support to programs attempting to address riparian protection and water withdrawal and storage. He provides the agency's formal review and comment on flow and/or water rights projects (e.g., water rights permits, Biological Opinion on the Russian River). He coordinates special studies to investigate the water quantity-related impacts to water quality, as well as the development of flow criteria and objectives. As an expert on temperature TMDLs he provides guidance, historical perspective, and data to staff working to assess the effectiveness of past TMDLs and develop appropriate implementation approaches for the future.

The Flow and Riparian Protection Specialist helps to manage two Americorps members, who provide staff support to such activities as flow monitoring and data assessment.

5.2.2 Program/Project Activities

Core Activities

- Program Management
- Management of Americorp members
- Internal and external updates and information sharing
- Represent the agency in various Interagency meetings (generally quarterly), including: the California Water Quality Monitoring Council eFlow Workgroup, the Interagency Flow Coordination Committee, CFS meetings, and the California Water Action Plan coordination committees (e.g., to coordinate development of flow objectives in Mark West Creek, South Fork Eel, and Shasta rivers).

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- Flow monitoring and assessment, including projects in Navarro River, Russian River, Cahto Creek, Scott River, and Shasta River
- Flow and Riparian consultation, including water rights permits, Potter Valley and Scott and Shasta flow issues
- Technical Advisory Committees for internal projects, including: Federal Lands permit, Shade Model, and Climate Change Strategy
- Drought Response, including: TUCPs, flow augmentation projects, and public outreach
- Contract Management

Special Projects

1. 2020-21 Stream Flow Monitoring Summary Report (Americorps members)
2. 2021-22 Stream Flow Monitoring Summary Report (Americorps members)
3. Navarro Flow Objective Triennial Review Project (to be delayed)
4. Narrative Flow Objective Triennial Review Project
5. White Paper to define key elements of a regionwide narrative flow objective
6. Peer Review Staff Report
7. Groundwater Report for Scott Valley (contractor)

5.2.3 Fiscal Year Milestones Table

Fiscal Quarter	Milestones
1 st Quarter (9/21)	<ul style="list-style-type: none"> ○ White Paper to define key elements of a regionwide narrative flow objective ○ 2020-21 Stream Flow Monitoring Summary Report (Americorps members)
2 nd Quarter (12/21)	None
3 rd Quarter (3/22)	<ul style="list-style-type: none"> ○ Groundwater Report for Scott Valley due from contractor (UC Davis)
4 th Quarter (6/22)	<ul style="list-style-type: none"> ○ Peer Review Staff Report to support a narrative flow objective ○ 2021-22 Stream Flow Monitoring Summary Report (Americorps members)

5.2.4 Additional Summary Information

Affected Watersheds: Scott River, Shasta River, South Fork Eel River, Navarro River, Mark West Creek, Cahto Creek

Applicable Contract(s): Contract with UC Davis to support groundwater studies in the Scott Valley; Contract with UC Berkeley under development to support a special study on the relationship between flow and dissolved oxygen in the Russian River.

Applicable Grant(s): None

Applicable links: None

Performance Targets: None

5.2.5 Issues of Note

The Governor announced an emergency drought declaration for Sonoma and Mendocino Counties and the Russian River watershed in April 2021. Region 1 support for the Division of Water Rights may include surveillance and monitoring of water use and flow conditions over the summer and fall. As such, the Navarro Flow Objective Triennial Review project will be delayed FY 21-20 in favor of the Flow and Riparian Specialist's involvement in drought response. There is the possibility of additional emergency drought declarations this year, given widespread drought conditions in the Region, which may further divert the Flow and Riparian Specialist attention and delay scheduled special activities. There is already a substantial increase in the amount of time devoted to weekly discussions/planning/advising on growing drought concerns

