



**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

**895 Aerovista Place, Suite 101
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**RESOLUTION NO. R3-2022-0002
AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL
COASTAL BASIN TO ADOPT TOTAL MAXIMUM DAILY LOADS FOR TURBIDITY IN
THE GABILAN CREEK WATERSHED, MONTEREY COUNTY, CALIFORNIA**



California Environmental Protection Agency
Central Coast Regional Water Quality Control Board

Basin Plan Amendment
Attachment A to Resolution No. R3-2022-0002

Amendment to the Water Quality Control Plan for the Central Coastal Basin to Adopt
Total Maximum Daily Loads for Turbidity in the Gabilan Creek Watershed, Monterey
County, California



Attachment A to Resolution No. R3-2022-0002

Revise the June 14, 2019 Basin Plan as follows:

Amendment to the Water Quality Control Plan for the Central Coastal Basin to Adopt Total Maximum Daily Loads for Turbidity in the Gabilan Creek Watershed, Monterey County, California

Add the following to Chapter 4 after section 4.9.21:

4.9.22. Total Maximum Daily Loads for Turbidity in the Gabilan Creek Watershed, Monterey County, California

The Central Coast Regional Water Quality Control Board adopted this TMDL Project on February 17-18, 2022.

This TMDL Project was approved by:

The State Water Resources Control Board on: _____ Date

The California Office of Administrative Law on: _____ Date

The U.S. Environmental Protection Agency on: _____ Date

Problem Statement

All major surface waters in the lower Gabilan Creek watershed are highly impaired by turbidity and do not meet the Basin Plan general water quality objective for turbidity. Turbidity is an optical measure of stream water clarity, reported in nephelometric turbidity units (NTU). Turbidity can be caused by suspended solids such as clay, silt, finely divided inorganic and organic matter, algae, and other microscopic organisms in water that scatter light transmitted through the water and reduce clarity. At elevated levels, turbidity and associated suspended solids can have detrimental impacts on aquatic ecosystems. Aquatic life beneficial uses impaired by turbidity conditions include the following: cold fresh water habitat (COLD), warm fresh water habitat (WARM), wildlife habitat (WILD), rare threatened or endangered species (RARE), estuarine habitat (EST), migration of aquatic organisms (MIGR), and spawning and reproduction and/or early development (SPWN). Waterbodies identified as impaired in this TMDL Project include:

- Gabilan Creek
- Natividad Creek
- Alisal Creek
- Salinas Reclamation Canal
- Tembladero Slough
- Old Salinas River
- Merritt Ditch

- Espinosa Slough
- Santa Rita Creek
- Alisal Slough

Source Analysis

The source of turbidity varies by land use type in the Gabilan Creek watershed. Different types of management conditions and activities in the watershed cause erosion of fine sediments and mobilization of instream fine sediments and therefore are sources of turbidity. Table 1 summarizes the land uses and turbidity sources along with responsible parties for managing sources.

Table 1. Table of land uses, associated turbidity sources, and responsible parties.

Type of Land Cover/Use	Turbidity Source	Responsible Parties
Natural Areas	Erosion from undeveloped areas and woodlands	Landowners, ranching operations
Wetlands	Channel maintenance	Monterey County Water Resources Agency (MCWRA), landowners, owners and operators of agricultural lands
Wetlands	Stream or channel bank erosion and resuspension/remobilization of fine sediments	MCWRA, landowners, owners and operators of agricultural lands
Croplands	Sediment erosion from strawberry fields with plastic mulch	Owners and operators of agricultural lands
Croplands	Irrigation runoff from farm fields	Owners and operators of agricultural lands
Croplands	Stormwater runoff from farm fields	Owners and operators of agricultural lands
Nurseries and Greenhouses	Stormwater runoff from impervious surfaces	Owners and operators of agricultural lands, cannabis cultivators
Rural roads	Roadside ditch erosion, stormwater runoff	County of Monterey, landowners, owners and operators of agricultural lands
Highways	Stormwater runoff from impervious surfaces causing highway shoulder and channel erosion	Caltrans
Grasslands	Grazing	Landowners and operators of ranching operations

Type of Land Cover/Use	Turbidity Source	Responsible Parties
All	Insufficient vegetative buffers along creeks	Landowners and land managers
Developed urban areas	Urban stormwater runoff	City of Salinas, County of Monterey
Developed urban areas	Construction stormwater runoff	Landowners
Developed urban areas	Industrial stormwater	Landowners
All	Pumping (pump stations, agricultural drainage pumps)	MCWRA, owners and operators of agricultural lands

Controllable Water Quality Conditions

In accordance with the Basin Plan, controllable water quality shall be managed to conform to or to achieve the water quality objectives and load allocations contained in this TMDL Project. The Basin Plan defines controllable water quality conditions as follows: *“Controllable water quality conditions are those actions or circumstances resulting from man’s activities that may influence the quality of the waters of the State and that may be reasonably controlled.”* (Basin Plan, June 2019 ed., ch. 3, Water Quality Objectives, at p. 30.)

Compliance with Anti-degradation Policy

State and federal anti-degradation policies require, in part, that where surface waters are of higher quality than necessary to protect beneficial uses, the high quality of those waters must be maintained unless otherwise provided by the policies.

Section 3.2 of the Basin Plan states that wherever the existing quality of water in a stream reach, lake, or waterbody is better than the water quality objective established to protect and support the designated beneficial uses, that water quality shall be maintained and protected, unless and until warranted, pursuant to provisions in federal and state anti-degradation policies.

Compliance with anti-degradation requirements may be determined on the basis of trends in water quality in applicable waterbodies, consistent with the methodologies and criteria provided in section 3.10 of California’s *Water Quality Control Policy for Developing California’s Clean Water Act section 303(d) List* (California 303(d) Listing Policy or Listing Policy) (adopted September 30, 2004, by State Water Board Resolution No. 2004-0063, as amended by State Water Board Resolution No. 2015-0005 on February 3, 2015). Section 3.10 of the Listing Policy explicitly addresses the anti-degradation component of water quality standards, as defined in 40 Code of Federal Regulations (C.F.R) section 131.12, and provides for identifying trends of declining water quality as a metric for failing to comply with anti-degradation requirements.

Section 3.10 of the California 303(d) Listing Policy states that pollutant-specific water quality objectives need not be exceeded to be considered non-compliant with anti-degradation requirements: “A water segment shall be placed on the section 303(d) list if the water segment exhibits concentrations of pollutants or water body conditions for any listing factor that shows a trend of declining water quality standards attainment.”

Turbidity Numeric Targets

Numeric targets represent acceptable levels of pollutants that will result in the desired conditions for a waterbody. The Gabilan Creek watershed has two distinct geographic areas with separate numeric targets: the upper Gabilan Creek watershed headwaters have relatively undisturbed natural land cover and viable steelhead habitat, and the lower alluvial valley has highly developed land that includes streams from the base of the Gabilan Range to the outlet of the watershed at Moss Landing. The lower watershed is further divided into freshwater streams and brackish waterbodies near the coast. Interim and final turbidity numeric targets for the Gabilan Creek watershed are summarized in Table 2.

Upper Gabilan Creek Watershed: Attainment of the turbidity numeric targets (Table 2) for the upper Gabilan Creek watershed shall be assessed by comparing the seasonal 75th percentile value of samples collected from upper Gabilan Creek to the final numeric targets. Samples should be collected at even intervals (e.g., weekly or monthly) to evaluate numeric target attainment. Interim targets are not established for waterbodies in the less disturbed upper Gabilan Creek watershed since they have not been identified as impaired.

Lower Gabilan Creek Watershed: Turbidity numeric targets for streams in the lower Gabilan Creek watershed including Gabilan Creek (below Old Stage Road), Natividad Creek, Alisal Creek, Salinas Reclamation Canal, Santa Rita Creek, Espinosa Slough, Alisal Slough, Merritt Ditch, and Tembladero Slough (above tidal influence/brackish water) are interim and final numeric targets are equal to median turbidity levels (50th percentile) from reference sites with similar hydrogeomorphic characteristics to the lower Gabilan Creek. Brackish water sloughs in the lower watershed have interim targets but final targets are not established due insufficient monitoring data from reference sites.

Attainment of the turbidity numeric targets (Table 2) for the lower Gabilan Creek watershed shall be assessed by comparing the seasonal median value of samples collected from lower Gabilan Creek to the interim and final numeric targets.

Table 2. Interim and final turbidity numeric targets.

Waterbody (Site Number)	Interim Target -1 Dry Season (NTU)	Interim Target -1 Wet Season (NTU)	Interim Target-2 Dry Season (NTU)	Interim Target -2 Wet Season (NTU)	Final Target Dry Season (NTU)	Final Target Wet Season (NTU)	Final Target Year- Round (NTU)
Upper Gabilan Creek watershed, headwater streams	n/a	n/a	n/a	n/a	2.2	3.3	2.5
Gabilan Creek (309GAB)	40	124	12	21	6	8	11
Natividad Creek (309NAD)	53	38	12	21	6	8	11
Salinas Reclamation Canal/Alisal Creek (309ALG)	27	72	12	21	6	8	11
Merritt Ditch (309MER)	42	67	12	21	6	8	11
Santa Rita Creek (309RTA)	51	65	12	21	6	8	11
Salinas Reclamation Canal (309JON)	18	43	12	21	6	8	11
Espinosa Slough (309ESP)	13	65	12	21	6	8	11
Alisal Slough (309ASB)	12	27	12	21	6	8	11
Tembladero Slough (309TEH)	57	84	12	21	6	8	11
Tembladero Slough (309TEM)	38	52	12	21	6	8	11

Waterbody (Site Number)	Interim Target -1 Dry Season (NTU)	Interim Target -1 Wet Season (NTU)	Interim Target-2 Dry Season (NTU)	Interim Target -2 Wet Season (NTU)	Final Target Dry Season (NTU)	Final Target Wet Season (NTU)	Final Target Year- Round (NTU)
Tembladero Slough (309TDW) (brackish)	59	49	29	36	n/a	n/a	n/a
Old Salinas River (309OLD) (brackish)	29	36	29	36	n/a	n/a	n/a

1. To determine attainment of the final targets for streams in the upper Gabilan Creek watershed, compare the seasonal 75th percentile value of samples collected to the appropriate numeric target.
 2. To determine the interim and final targets for streams in the lower Gabilan Creek watershed (sites 309GAB to 309OLD in the table) compare the seasonal median value of samples collected to the appropriate numeric target.
- n/a = not available

Biological Condition Numeric Targets

For a more complete evaluation of aquatic life water quality standards attainment, this TMDL has two types of biological condition numeric targets: one is based on biological assessments and the second is based on a rapid habitat assessment method.

- **Biological Assessment: Taxa Richness of ≥ 24**

This biological condition numeric target is an interim numeric target for streams in the lower Gabilan Creek watershed and will need to be reevaluated in the future as habitat conditions improve and additional data become available for the watershed. The taxa richness score is a measurement of the number of different benthic macroinvertebrate taxa (e.g., genera or species) observed at a monitoring site. Macroinvertebrate taxa include mayfly, caddisfly, dragonfly, and stonefly larvae, as well as snails, worms, beetles, etc. The data shall be collected in accordance with the current Surface Water Ambient Monitoring Program (SWAMP) standard operating procedures for conducting biological assessments. There is no final numeric target established at this time, but one will be developed when sufficient data is available.

- **California Rapid Assessment Method (CRAM) Biotic Structure Score > 75**

This biological condition numeric target is a final numeric target. Biotic Structure Score represents relative level of habitat diversity, biological integrity, food web support, etc., most directly supported by a functioning wetland's aquatic zone. The CRAM Biotic Structure Score assessment includes the plants, algae, and the primary producers that are directly impacted by turbidity. The Biotic Structure Scores can range from 0 to 100.

TMDLs

The Gabilan Creek watershed freshwater turbidity TMDLs are equal to the interim and final turbidity numeric targets found in Table 2. Lower Tembladero Slough and Old Salinas River, which are brackish waters with EST beneficial uses, do not have final TMDLs or final numeric targets because there is insufficient data from reference monitoring sites.

Compliance with the TMDLs shall be measured at receiving water monitoring sites (including but not limited to those sites mentioned in Table 2) and based on seasonal, even interval sampling (e.g., weekly or no less frequently than monthly). TMDLs are based on the seasonal 75th percentile of data in the upper Gabilan Creek headwaters and seasonal medians of data in the lower watershed. These statistical ranges were selected because episodic storms and large events would skew analysis of seasonal data based other statistical summaries such as averaging or by comparing individual samples to targets.

Margin of Safety

The margin of safety component of a TMDL accounts for uncertainty concerning the relationship between pollution controls and water quality responses. (See 40 C.F.R. section 130.7(c)(1).) The margin of safety for these TMDLs is achieved through allocations and numeric targets based on numeric turbidity water quality objectives that are established from natural conditions. This turbidity water quality objective allows for an increase above the natural conditions in the range of 10 to 20 percent. The allocations and numeric targets do not incorporate the 10 to 20 percent increase above natural conditions. Establishing turbidity numeric targets and allocations at natural stream levels, without allowing for increases of 10 to 20 percent above natural, ensures protection of aquatic ecosystems and provides an explicit margin of safety.

An additional type of margin of safety included in this TMDL Project is found in the potential numeric targets from published studies on the effects of turbidity on aquatic ecosystems (i.e., effect levels known to interfere with aquatic life health). To derive the potential numeric target, a safety factor of 2 is applied to the published values (i.e., one half of the published effect level) to ensure protection of aquatic ecosystems. These potential numeric targets were not selected as final TMDL numeric targets since they are based on effect levels, or levels at which an adverse effect occurs, and therefore are not as protective as natural levels. The published values do, however, provide a level for comparison and assurances that key species are protected. The conservative difference between the potential turbidity numeric targets based on effect levels and the selected targets based on natural conditions provides another margin of safety.

Allocations

Turbidity TMDLs are allocated to point and nonpoint sources of discharge in the Gabilan Creek watershed (refer to Table 3). A TMDL is defined as “the sum of individual [waste load allocations] for point sources and [load allocations] for nonpoint sources and natural background.” (40 C.F.R. section 130.2(i).) For this TMDL Project, the turbidity

TMDLs, load allocations, and waste load allocations are equal to the interim and final turbidity numeric targets defined in Table 2.

Table 3. Turbidity sources and type of allocation.

Turbidity Source	Type of Allocation
Urban stormwater runoff	Waste Load Allocations
Construction and industrial stormwater runoff	Waste Load Allocations
Highway stormwater runoff	Waste Load Allocations
Low threat discharges	Waste Load Allocations
Irrigated agriculture/cropland	Load Allocations
Undeveloped areas and woodlands	Load Allocations
Grazing	Load Allocations
Wetlands (degraded streams and channels)	Load Allocations
Rural roads stormwater runoff	Load Allocations
Channel maintenance	Load Allocations
Pumping (pump stations and agricultural drainage pumps)	Load Allocations
Nurseries and greenhouses	Load Allocations

Attainment Schedule and Milestones for Turbidity Targets, TMDLs, and Allocations.

Waterbodies in the lower Gabilan Creek watershed are highly impaired by turbidity and the TMDL Project establishes a schedule of twenty years to achieve the final turbidity targets, TMDLs, and allocations. The TMDLs and allocations are equal to the interim and final turbidity numeric targets that are summarized in Table 2. The timeline for achieving the TMDL schedule and allocations starts upon the date of Office of Administrative Law (OAL) approval of these TMDLs and this Basin Plan amendment. The TMDL attainment schedule has the following three compliance levels.

- 1) First Interim TMDL Milestone: This allocation is equal to the Interim Target – 1 and must be achieved **ten years** after OAL approval.
- 2) Second Interim TMDL Milestone: This allocation is equal to the Interim Target – 2 and must be achieved **fifteen years** after OAL approval.
- 3) Final TMDL Attainment Date: This allocation is equal to the Final Turbidity Target and must be achieved **twenty years** after OAL approval.

In addition, this TMDL Project includes two types of biological condition numeric targets: an interim benthic invertebrate taxa richness target as a measure of aquatic health in response to improvements in turbidity conditions and a CRAM biotic structure target. Although there is no TMDL attainment schedule established, these two biological condition targets will be evaluated and considered when determinations are made whether waterbodies are achieving TMDL allocations and may be considered proxies for turbidity TMDL allocations.

Implementation

Irrigated Agricultural Lands Discharges:

Discharges from irrigated agricultural lands are nonpoint sources of pollution, which are therefore not subject to federal NPDES permits, but which are required to meet State waste discharge requirements (WDRs). Owners and operators of irrigated agricultural land in the Gabilan Creek watershed will implement this TMDL Project through compliance with a permit regulating waste discharges from irrigated lands, currently the General Waste Discharge Requirements for Discharges From Irrigated Lands (Order No. R3-2021-0040; the "Order") and the Monitoring and Reporting Program in accordance with Order No. R3-2021-0040. Owners and operators of irrigated agricultural lands must meet load allocations, achieve the TMDLs according to the TMDL attainment schedule, and help rectify the impairments addressed in this TMDL Project by complying with requirements in the Order that are relevant to reducing erosion and sediment discharges and actions that mobilize instream sediments. The Order regulates:

- (1) discharges of waste from commercial irrigated lands, including, but not limited to, land planted to row, vineyard, field and tree crops where water is applied for producing commercial crops;
- (2) discharges of waste from commercial nurseries, nursery stock production, and greenhouse operations with soil floors that do not have point source-type discharges and are not currently operating under individual WDRs; and
- (3) discharges of waste from lands that are planted to commercial crops that are not yet marketable, such as vineyards and tree crops.

The Order requires owners and operators of irrigated lands to do the following:

- A. Comply with load allocations and achieve the applicable TMDLs (refer to Table 2). The Order incorporates applicable load allocations as surface receiving water limits for owners and operators of irrigated lands in TMDL project areas.
- B. Conduct surface receiving water quality monitoring and reporting, implement follow-up actions to meet interim milestones and load allocations, and potentially complete ranch-level surface discharge monitoring and reporting in areas where water quality issues persist or applicable load allocations are not met by their

compliance dates.

- C. Report on irrigation system type, discharge type, slope, impermeable surfaces (i.e., plastic covered surfaces that do not allow fluid to pass through, including polyethylene mulch and hoop houses), and presence and location of any waterbodies on or adjacent to irrigated lands.
- D. Manage stormwater discharge intensity and volume from fields with 50 to 100 percent coverage of impermeable surfaces or with greater than or equal to 0.5 acre of impermeable surfaces so as not to exceed stormwater discharges from the equivalent permeable field area.
- E. Implement, assess, and report on all sediment, erosion, irrigation, stormwater, road, agricultural drainage pump, and impermeable surface management practices and maintain records of all management practices used to reduce erosion and sediment loading.
- F. Avoid disturbance (e.g., removal, degradation, or destruction) of existing, naturally occurring, and established native riparian vegetative cover and report on average width and length of riparian area.

The agricultural monitoring and reporting program for turbidity in the watershed must be adequate to determine progress toward achieving load allocations with sufficient statistical power. Upon approval of the TMDLs, the existing monitoring and reporting requirements of the Order must be evaluated to determine whether they are adequate. If the requirements of the Order are inadequate, then the monitoring and reporting program should be updated through the development of follow-up implementation work plans as required in the Order. Follow-up implementation planning must address the need for increased monitoring frequency and additional monitoring sites to achieve adequate statistical power necessary to evaluate progress toward achieving load allocations.

Storm Drain Discharges to Municipal Separate Storm Sewer Systems (MS4s):

The two MS4s in the watershed, City of Salinas and Monterey County, are required to implement and comply with the TMDLs. They must develop implementation plans to attain waste load allocations in the receiving waters into which they discharge.

City of Salinas:

The City of Salinas is subject to a Phase I MS4 Stormwater Permit (currently Order No. R3-2019-0073, NPDES No. CA0049981). This Permit requires the City to comply with applicable interim and final water quality-based effluent limitations and associated compliance schedules that implement the waste load allocations assigned to the City in approved TMDLs. Within one year of approval by the OAL, the City must prepare a plan to address the TMDL waste load allocations assigned to the City. The Permit requires the City's plan, referred to as a Pollutant Load Reduction Plan, to address all waterbody-pollutant combinations identified in the Permit, for which the City has not yet

demonstrated waste load allocation attainment. As such, the City will be required to update its Pollutant Load Reduction Plan to incorporate its assigned interim and final waste load allocations for turbidity in the Lower Gabilan Creek Watershed. In addition, the City will be required to meet the requirements of the reissued permit, which will incorporate the TMDL waste load allocations and TMDL attainment schedule.

Monterey County:

The County is subject to the State Water Board Phase II MS4 General Stormwater Permit (Order No. 2013-0001 DWQ). This General Permit requires the County to develop, submit, and begin implementation of a Waste Load Allocation Attainment Program that identifies actions the County will take to attain its waste load allocation within one year following approval of this TMDL by the Office of Administrative Law, or within one year of General Permit renewal, whichever comes first. The following permit requirements related to TMDL attainment may change in subsequent permit reissuances and the County is required to implement updates.

The Waste Load Allocation Attainment Program shall include:

1. A detailed description of the strategy the MS4 will use to guide Best Management Plan (BMP) selection, assessment, and implementation to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving waste load allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's waste load allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water

- quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' waste load allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and waste load allocations.
 9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the waste load allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Waste load Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
 10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
 11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
 12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of waste load allocations according to the TMDL schedule.
 13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
 14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

Non-stormwater discharges consist of all discharges from an MS4 that do not originate from precipitation events. The stormwater permits pertaining to the City and County effectively prohibit non-stormwater discharges through an MS4 into waters of the United States. Certain categories of non-stormwater discharges are conditionally exempt from the prohibition of non-stormwater discharge as specified at 40 C.F.R section 122.26(d)(2)(iv)(B)(1). Non-stormwater discharges that are regulated by a separate NPDES permit are not subject to the discharge prohibition.

MS4 Monitoring

MS4 entities with operations and stormwater conveyance systems discharging to receiving waters in the Gabilan Creek watershed are currently required to develop and

submit monitoring programs as part of their permit requirements. For the City, the goals of their monitoring program are described in the requirements of their Pollution Load Reduction Program and for the County they are described in their Waste Load Allocation Attainment Program. Monitoring in the watershed should continue to include data for turbidity, total suspended solids, and flow and staff recommends that the City monitor receiving waters at a minimum of three samples per year that coincide with existing outfall monitoring and reporting requirements. The City should conduct monitoring in the following receiving waters and at the following monitoring sites (at a minimum):

- Gabilan Creek (309GAB)
- Natividad Creek (309NAD)
- Alisal Creek (309ALG or 309ALU)
- Salinas Reclamation Canal (new site to be determined) at the confluence of Carr Lake
- Salinas Reclamation Canal (309ALD) below the City

Central Coast Water Board staff encourages these MS4 entities to develop and submit creative and meaningful monitoring and implementation programs. Monitoring strategies can use a phased approach, for example, by phasing in outfall or receiving water monitoring after BMPs have been implemented and assessed for effectiveness. Pilot projects, where BMPs are implemented in well-defined areas covering a fraction of the MS4 entity, may facilitate accurate assessment of how well the BMPs control the discharge of turbid water and manage increased flows from impervious surfaces and hydromodification. Successful practices would then be implemented in other or larger parts of the MS4 entity.

Industrial and Construction Stormwater Discharges:

Industrial facilities and construction operators are expected to meet the proposed waste load allocations through their existing permits. To maintain existing water quality and prevent any further water quality degradation, these permitted industrial facilities and construction operators shall continue to implement and comply with the requirements of the statewide Industrial General Permit (Order No. 2009-0009 amended by Order No. 2014-0057-DWQ, NPDES No. CAS000001) or the Construction General Permit (Order No. 2012-0006-DWQ, NPDES No. CAS000002), or any subsequent Industrial or Construction General Permits.

Dischargers disturbing one or more acres are required to enroll under the Construction General Permit. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. The SWPPP development includes site assessment and sediment and erosion control BMP selection.

The Industrial General Permit regulates industrial stormwater discharges from industrial facilities in California. Industrial facilities such as manufacturers, landfills, mining, steam generating electricity, hazardous waste facilities, transportation with vehicle maintenance, larger sewage and wastewater plants, recycling facilities, oil and gas

facilities, and agricultural processing facilities are typically required to obtain Industrial General Permit coverage. Except for non-stormwater discharges authorized in Section IV of the Industrial General Permit, discharges of liquids or materials other than stormwater, either directly or indirectly to waters of the United States, are prohibited unless authorized by another NPDES permit. Unauthorized non-stormwater discharges must be either eliminated or authorized by a separate NPDES permit.

Monterey County Regional Stormwater Resource Management Plan:

TMDLs will be implemented through projects that restore aquatic and riparian habitat or reduce turbidity that are identified in the Monterey County Regional Stormwater Resource Management Plan (Regional Plan), which was developed by the Greater Monterey Integrated Regional Water Management (IRWM) stakeholders. The Regional Plan is a comprehensive stormwater management strategy for the greater Monterey Region, which encompasses the Gabilan Creek watershed. The Regional Plan is an integrated approach implemented by collaborating stormwater management agencies and other stakeholders to optimize their stormwater planning and implementation efforts. The IRWM planning group represents government agencies, nonprofit organizations, educational organizations, water service districts, private water companies, and organizations representing agricultural, environmental, and community interests.

Prohibition of Discharge:

Unpermitted land disturbance activities such as road grading, channel maintenance, and channel dredging are identified as potential sources of turbidity in the TMDL. Beneficial uses of waters are protected from unauthorized discharges of sediment and organic materials by a land disturbance prohibition in the Basin Plan, section 4.8.5.1. This prohibition, or any future prohibitions addressing land disturbance, sediment discharges, or any activity that impacts turbidity in waters of the State, applies to unpermitted discharges in the watershed.

Pump Stations

MCWRA operates pump stations in several streams in the lower Gabilan Creek watershed and large volume discharges from the pumps are sources of turbidity. The pump stations house large instream pumps used for flood control and to drain low-lying stream channels in agricultural areas. The pumps were originally constructed and operated by agricultural landowners, but are currently operated and maintained by MCWRA. Although MCWRA operates these pumps, both landowners and MCWRA are both responsible parties for meeting load allocations.

The pump stations are considered agricultural discharges and therefore are nonpoint sources of pollution. Since the pump stations are categorized as nonpoint sources of pollution, and discharges from these pumps are not regulated by any permit, responsible parties must develop a Nonpoint Source (NPS) program that meets the five key elements of the Nonpoint Source Policy. The ultimate purpose of their NPS program is to meet the receiving water turbidity TMDL numeric targets and the turbidity water quality objectives. Within one year of TMDL approval by OAL, MCWRA shall submit the

NPS implementation plan to the Central Coast Water Board's Executive Officer for approval. The five key elements of a NPS program must include the following:

1. A NPS control implementation program's ultimate purpose must be explicitly stated and at a minimum address NPS pollution control in a manner that achieves and maintains water quality objectives.
2. The implementation program shall include a description of the management practices (MPs) and other program elements dischargers expect to implement, along with an evaluation program that ensures proper implementation and verification.
3. The implementation program shall include a time schedule and quantifiable milestones, should the Regional Water Board require these.
4. The implementation program shall include sufficient feedback mechanisms so that the Regional Water Board, dischargers, and the public can determine if the implementation program is achieving its stated purpose(s), or whether additional or different MPs or other actions are required.
5. Each Regional Water Board shall make clear, in advance, the potential consequences for failure to achieve an implementation program's objectives, emphasizing that it is the responsibility of individual dischargers to take all necessary implementation actions to meet water quality requirements.

MCWRA may proactively implement a NPS program and meet their TMDL load allocations using agency resources along with outside funding such as grants. However, failure to implement projects that address the pump station contribution to turbidity in receiving waters may result in the Central Coast Water Board addressing discharges through regulatory mechanisms such as waste discharge requirements, waivers, or cleanup and abatement orders.

Agricultural Drainage Pumps:

Agricultural drainage pumps are a potential source of turbidity in the watershed and dischargers operating agricultural pumps must implement management practices to achieve load allocations and turbidity water quality objectives in the Basin Plan.

The Order addresses agricultural drainage discharges as follows:

1. **Prohibition:** *Dischargers who utilize agricultural drainage pumps must implement management practices to dissipate flow and prevent channel and/or streambank erosion resulting in increased sediment transport and turbidity within surface water.*^[1]
2. **Farm Water Quality Management Plan (Farm Plan) that includes a Sediment and Erosion Management Plan (SEMP):** Dischargers must develop and implement a Sediment and Erosion Management Plan (SEMP) to identify specific water quality management practices implemented and assessed for effectiveness on the ranch to reduce water quality impacts and achieve turbidity

^[1] Order No. R3-2021-0040, Pt. 2, Section D, at p. 44, para. 14.

load allocations. The SEMP is a section of the Farm Plan, must be maintained in the Farm Plan, and submitted to the Central Coast Water Board upon request. Dischargers must incorporate planning elements from this TMDL project into their SEMP(s) and, as appropriate, into their follow-up surface receiving water implementation work plan(s). More specifically the SEMP must identify:

- a. Planning and management practice implementation and assessment that results in compliance with turbidity load allocations;
 - b. All sediment, erosion, irrigation, stormwater, road, agricultural drainage pump, and impermeable surface management practices implemented on the ranch; and
 - c. Assessment of management practice effectiveness.
3. **Annual Compliance Form (ACF):** Dischargers must submit summary information from the SEMP in the ACF. The ACF requires information about management practice implementation, assessment, and effectiveness to reduce water quality impacts. Methods for assessing the effectiveness of agriculture drainage pump management practice(s) can include visual inspection, photo documentation, and upstream and downstream turbidity monitoring. Management practices to reduce erosion and resuspension of sediments can include flow dissipation structures, channel vegetation, proper sizing of pumps, and armoring of channels.
4. **Follow-Up Surface Receiving Water Implementation:** Dischargers, either individually or as part of a third-party program, must develop a follow-up surface receiving water implementation work plan to achieve the following:
- a. Identify and abate sources of water quality impacts;
 - b. Evaluate the impact of irrigated agricultural waste discharges on receiving waters;
 - c. Evaluate the condition of existing perennial, intermittent, and ephemeral streams and riparian and wetland areas, including degradation resulting from erosion or irrigated agricultural discharges of waste;
 - d. Evaluate compliance with the numeric limits described in the Order;
 - e. Identify follow-up actions, including outreach, education, additional monitoring and reporting, and management practice implementation that will be implemented to achieve compliance with the numeric limits described in the Order.

Rangeland and Natural Areas:

Ranchers and landowners in the Gabilan Creek headwaters proactively implement practices to protect water quality. If monitoring data indicates that TMDL load allocations and water quality standards are not met in the future, responsible parties will be required to develop a NPS program that meets the five key elements of the NPS Policy, implement additional management practices, and regulatory approaches will be considered.

Highways and Rural Paved Roads

Stormwater discharges from State highways are regulated under the Caltrans Statewide Order No. 2012-0011-DWQ, NPDES NO. CAS000003. To maintain and protect water quality and prevent any further water quality degradation, Caltrans shall continue to implement and comply with the requirements of the statewide permit. TMDL allocations for turbidity apply at the watershed level and Caltrans shall assess their contribution to turbidity impairments and develop a plan to meet their waste load allocations. The assessment shall identify sources, Caltrans' contribution to loading, and the effectiveness of existing BMPs in addressing sedimentation and hydromodification. The implementation plan shall include implementation measures, monitoring, and a time schedule to achieve their waste load allocations. Within one year of TMDL approval by OAL, Caltrans shall submit the assessment and implementation plan to the Central Coast Water Board or the Executive Officer for approval.

Monterey County rural roads and right of way ditches outside of the Monterey County's MS4 boundaries are nonpoint sources of turbidity. Monterey County Public Works shall develop a NPS program to meet load allocations. The implementation program must include the five key elements described in the NPS Policy (as described above in the section titled Pump Stations). Within one year of TMDL approval by OAL, Monterey County Public Works shall submit a NPS implementation plan to the Central Coast Water Board for endorsement or approval by the Water Board's Executive Officer. Monterey County may proactively implement a NPS program and meet their TMDL load allocations using agency resources along with outside funding such as grants. However, failure to implement projects that address Monterey County's contribution to turbidity in receiving waters may result in the Central Coast Water Board addressing discharges through regulatory mechanisms such as waste discharge requirements, waivers, or cleanup and abatement orders.

Cannabis Cultivation

Owners, operators, and landowners of commercial cannabis operations will implement the TMDLs through achieving the TMDL load allocations and complying with the General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Dischargers of Waste Associated with Cannabis Cultivation Activities (Order No. WQ 2019-0001-DWQ) (Cannabis General Order), the associated monitoring and reporting program, and any future permits regulating the discharge of waste from commercial cannabis operations.

In addition to the requirements described in the current Cannabis General Order, this TMDL implementation plan also establishes additional requirements aimed to reduce turbidity impairments in the Gabilan Creek watershed. All cannabis cultivators in the Gabilan Creek watershed must develop a sitewide Sediment Discharge Monitoring and Reporting Plan. At a minimum, the plan must include:

- Sitewide Stormwater Management Plan, including location and condition of all stormwater conveyance channels. This plan must include a time schedule for rehabilitating all unstable conveyances.

- Monthly stormwater runoff monitoring for turbidity and pH and reporting of site maintenance status. Sampling locations must represent stormwater discharging from the cannabis disturbed area. Multiple sampling locations may be necessary to characterize the discharge from all disturbed areas. The Cannabis General Order includes additional details for stormwater monitoring and site maintenance status reporting.
- Instream (receiving water) turbidity monitoring for sites that are adjacent to surface water and have any amount of unstable ground present on site or are undergoing land disturbing activities. Samples must be taken for all days in which flow is present in the channel when land disturbing activities are taking place or ground conditions are unstable. Monitoring must include the following:
 - Quantification of baseline turbidity levels by sampling instream levels prior to work commencing for land disturbing activities or in dry weather for unstable ground conditions present on site.
 - Quantification of relative increase in turbidity, if any, due to land disturbing activities onsite or unstable ground conditions by taking instream samples upstream and downstream of disturbed area.

The effectiveness of erosion prevention and sedimentation control measures will be determined by comparing discharge events and instream receiving water monitoring to established watershed discharge goals for turbidity in the Basin Plan.

Other discharges regulated by enrollment in NPDES General Permits

NPDES General Permit holders shall implement the TMDLs and meet their waste load allocations through the following NPDES General Permits and updates.

- General Permit for Discharges with Low Threat to Water Quality – NPDES No. CAG993001
- General Permit for Discharges of Highly Treated Groundwater to Surface Waters – NPDES No. CAG993002
- General Permit for Discharges from Aquaculture Facilities and Aquariums – NPDES Permit No. CAG993003

Channel Maintenance

The State Water Resources Control Board and the Central Coast Water Board have the authority to regulate discharges of dredged or fill materials under section 401 of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act (Porter-Cologne).

CWA section 401 water quality certifications are issued to applicants for a federal license or permit for activities that may result in a discharge into waters of the United States, including but not limited to the discharge or dredged or fill material. WDRs under Porter-Cologne are issued for discharges of dredged or fill material to waters of the State.

Tracking and Evaluation

After the TMDLs are approved by OAL, the Central Coast Water Board will periodically review implementation actions, monitoring results, and evaluations submitted by responsible parties of their progress toward achieving their allocations, dependent upon staff availability and priorities. The Central Coast Water Board will use updates to the Clean Water Act section 303(d) List, annual reports from dischargers required to submit such reports, NPS program monitoring data and reports, evaluations submitted by responsible parties, and other available information to determine progress toward implementing required actions and achieving the allocations and numeric targets.

Central Coast Water Board staff may conclude in future reviews that ongoing implementation efforts are insufficient to ultimately achieve the allocations and numeric targets. If this occurs, Central Coast Water Board staff will recommend revisions to this TMDL Implementation Plan. Alternatively, Central Coast Water Board staff may conclude and articulate in the reviews that implementation efforts are likely to result in achieving the allocations and numeric targets, in which case existing and anticipated implementation efforts should continue. When allocations and/or numeric targets are met, Central Coast Water Board staff will recommend the waterbody be removed from the 303(d) List for turbidity.