STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

RESOLUTION NO. R3-2005-0132

AMENDING THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL COAST BASIN TO INCLUDE PAJARO RIVER TOTAL MAXIMUM DAILY LOADS AND IMPLEMENTATION PLAN FOR SEDIMENT INCLUDING LLAGAS CREEK, RIDER CREEK, AND SAN BENITO RIVER AND A LAND DISTURBANCE PROHIBITION

WHEREAS, the California Regional Water Quality Control Board, Central Coast Region hereby finds that:

1. The California Regional Water Quality Control Board, Central Coast Region (Water Board), adopted the Water Quality Control Plan for the Central Coastal Basin (Basin Plan), on September 8, 1994. The Basin Plan includes beneficial use designations, water quality objectives, implementation plans for point source and nonpoint source discharges, and statewide plans and policies.

2. The Water Board periodically revises and amends the Basin Plan. The Water Board has determined the Basin Plan requires further revision and amendment to incorporate Pajaro River Total Maximum Daily Loads (TMDL) and Implementation Plan for Sediment, including Llagas Creek, Rider Creek, and San Benito River and a Land Disturbance Prohibition.

3. The Water Board proposes to amend the Basin Plan by inserting amendments into Chapter Four, Section IX (Total Maximum Daily Loads) and Chapter Four, Section VIII.E.1 (Land Disturbance Prohibitions).

4. Section 303(d) of the Clean Water Act (CWA) requires states to identify and prepare a list of water bodies that do not meet water quality standards and to establish TMDLs for listed waterbodies.

5. The Pajaro River, Llagas Creek, Rider Creek, and San Benito River were identified on California's 2002 303(d) list as impaired by sedimentation/siltation.

6. The Pajaro River watershed lies within the central coast of California and includes the counties of San Benito, Santa Clara, Santa Cruz, and Monterey. Major tributaries to the Pajaro River are the San Benito River, Tres Pinos Creek, Santa Ana Creek, Pacheco Creek, Llagas Creek, Uvas Creek, and Corralitos Creek. Rider Creek is tributary to Corralitos Creek. The Pajaro River watershed encompasses approximately 1,300 square miles and drains into Monterey Bay.

7. The elements of a TMDL are described in 40 CFR 130.2 and 130.7 and section 303(d) of the CWA, as well as USEPA guidance documents. 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 CFR 130.2). The Water Board has determined that the Pajaro River TMDL for Sediment is set at levels necessary to attain and maintain the applicable narrative water quality objectives taking into account seasonal variations and any lack of knowledge concerning the relationship between effluent limitations and water quality (40 CFR 130.7(c)(1)). The regulations in 40 CFR 130.7 also state that TMDLs shall take into account critical conditions for stream flow, loading and water quality

parameters. TMDLs are often expressed as a mass load of the pollutant but can be expressed as a unit of concentration if appropriate (40 CFR 130.2(i)).

8. Upon establishment of TMDLs by the State or USEPA, the state is required to incorporate the TMDLs, along with appropriate implementation measures, into the State Water Quality Management Plan (40 CFR 130.6 (c)(1), 130.7; CWC sections 13050(j), 13242). The Basin Plan, and applicable statewide plans, serves as the State Water Quality Management Plan governing the watersheds under the jurisdiction of the Water Board.

9. The TMDL implementation plan requires compliance with a new land disturbance prohibition for sediment within the Pajaro River watershed. The Water Board may prohibit certain types of waste discharge pursuant to CWC 13243. Dischargers may demonstrate compliance with the prohibition by submitting and implementing a Nonpoint Source Pollution Control Implementation Program that is consistent with the Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program or documentation that demonstrates there is no activity that may cause discharges of sediment. Consistent with CWC 13244, the Water Board conducted public notice and hearing requirements for the proposed land disturbance prohibition.

10. Pursuant to CWC section 13241, the Water Board considered, in adopting the Land Disturbance Prohibition in the Pajaro River watershed: (a) past, present, and probable future beneficial uses of water. (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto. (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area. (d) Economic considerations. (e) The need for developing housing within the region. (f) The need to develop and use recycled water. The Water Board finds that: the prohibition will protect and enhance present and probable future beneficial uses of the Pajaro River watershed; the prohibition is a reasonable and necessary part of coordinated actions to achieve improved water quality conditions in the area; considering all cost information that the Water Board has received, costs to achieve compliance with the prohibition are reasonable relative to the benefit of improved water quality; the need for developing housing within the region is not relevant; and the need to develop and use recycled water is not relevant.

11. The Water Board's goal for establishing these TMDLs is to protect cold fresh water habitat, migration of aquatic organisms, and spawning, reproduction, and/or early development beneficial uses (COLD, MIGR, and SPWN, respectively) as defined in the Basin Plan.

12. The suspended sediment numeric targets are based on concentration and duration, which provides an exposure-based approach. This numeric target approach is new for Sediment TMDLs in California and has not been used before.

13. Water Board staff submitted a TMDL report to an external scientific review panel on April 12, 2005, as required by Health & Safety Code Section 57004. Water Board staff edited the Project Report or provided a written response that explained the basis for not incorporating the comments, or the comments did not result in any changes to the proposed Basin Plan Amendment. The scientific portions of the TMDL and implementation plan are based on sound scientific knowledge, methods, and practices in accordance with Section 57004.

14. Interested persons and the public have been informed of TMDL progress from the early stages of TMDL development. Efforts to inform the public and solicit public comment included public meetings, presentations to special interest groups, several individual meetings with vested stakeholders, and a number of telephone conversations with interested parties. Public notification of

the amendment to the Basin Plan occurred 45 days preceding the Board hearing. Notice of public hearing was given by advertising in newspapers of general circulation within the Region and by mailing a copy of the notice to all persons requesting such notice and applicable government agencies. Water Board staff responded to oral and written comments received from the public.

15. The Water Board considered costs of implementing measures to achieve these TMDLs. The costs to implement these TMDLs will be incurred by identified responsible parties. These costs are reasonable relative to the water quality benefits to be derived from implementing the TMDLs.

16. Implementation of this TMDL will require the identification of numerous landowners and operators across a diverse landscape and subsequent notification to comply with the conditional prohibition or submit nonpoint source implementation program plans. The Water Board intends to identify and notify these parties. However, the level of effort and a schedule to complete the identification and notification remains uncertain at this time, and will depend on staff availability, budget, and relationship to other water quality priorities.

17. Anti-Degradation – This order is consistent with the provisions of the State Water Resources Control Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" and 40 CFR 131.12. The TMDL will result in improved water quality throughout the region and maintains the level of water quality necessary to protect existing and anticipated beneficial uses.

18. The Water Board concurs with the analysis contained in the Final Project Report; the California Environmental Quality Act "Substitute Document" Report for Basin Plan Amendment, including the CEQA Checklist; the staff report and responses to comments; and finds that the analysis complies with the requirements of the State Water Resources Control Board's (State Board) certified regulatory CEQA process, as set forth in California Code of Regulations, Title 23, section 3775 et seq. Furthermore, the Water Board finds that the analysis fulfills the Water Board's obligations attendant with the adoption of regulations "requiring the installation of pollution control equipment, or a performance standard or treatment requirement," as set forth in section 21159 of the Public Resources Code. All public comments were considered.

19. The Basin Plan amendment incorporating TMDLs for sediment for the Pajaro River including, Llagas Creek, Rider Creek, and San Benito River and a Land Disturbance Prohibition must be submitted for review and approval by the State Board, the State Office of Administrative Law (OAL), and the US Environmental Protection Agency (USEPA). The Basin Plan amendment will become effective upon approval by OAL.

20. The amendment to the Basin Plan will result in no potential adverse effect, either individually or cumulatively, on wildlife and is therefore exempt from fee payments to the Department of Fish and Game under the California Fish and Game Code.

21. On December 2, 2005 in San Luis Obispo, California, the Water Board held a public hearing and heard and considered all public comments and evidence in the record.

THEREFORE, be it resolved that:

1. Pursuant to sections 13240, 13242, 13243, and 13244 of the California Water Code, the Water Board, after considering the entire record, including the oral testimony at the hearing, hereby adopts the amendment on "Attachment-Proposed Basin Plan Amendments."

2. The Executive Officer is directed to forward copies of the Basin Plan amendment to the State Board in accordance with the requirements of section 13245 of the California Water Code.

3. The Water Board requests that the State Board approve the Basin Plan amendment in accordance with the requirements of sections 13245 and 13246 of the California Water Code and forward it to OAL and the USEPA. The Water Board shall file a Notice of Decision with the Secretary of Resources and the Governor's Office of Planning and Research (State Clearinghouse) after approval by OAL and USEPA.

4. The Executive Officer is authorized to sign a Certificate of Fee Exemption.

5. If, during its approval process, the State Board or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Water Board of any such changes.

I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of the resolution adopted by the California Regional Water Quality Control Board, Central Coastal Region, on December 2, 2005.

Roger W. Briggs
Executive Officer

RESOLUTION NO. R3-2005-0132

ATTACHMENT - PROPOSED BASIN PLAN AMENDMENTS

AMENDMENT NO. 1. Revise the September 8, 1994 Basin Plan, Chapter 4 as follows:

Add the following to Chapter 4 after IX. G.:

IX. H. PAJARO RIVER TOTAL MAXIMUM DAILY LOADS FOR SEDIMENT INCLUDING LLAGAS CREEK, RIDER CREEK, AND SAN BENITO RIVER

The Regional Water Quality Control Board adopted this TMDL on December 2, 2005.
This TMDL was approved by:
The State Water Resources Control Board on _____.
The California Office of Administrative Law on _____. (*Effective date*)
The U.S. Environmental Protection Agency on _____.

Problem Statement
Anthropogenic watershed disturbances have accelerated the natural processes of erosion and sedimentation in the Pajaro River, including Llagas Creek, Rider Creek, and San Benito River. Special studies have identified a variety of watershed conditions that have lead to excessive sedimentation. Excessive sedimentation has caused an exceedance of the narrative, general water quality objective for sediment because sediment load and rate have interfered with the beneficial uses of these waterbodies including, fish and wildlife (COLD, MIGR, and SPWN).

The narrative objective states, "the suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses."

Numeric Targets (interpretation of the narrative water quality objective)
This TMDL establishes numeric targets as indicators of the narrative, general water quality objective for sediment. This TMDL uses two types of numeric targets: suspended sediment concentration-duration and streambed characteristics. Numeric targets for suspended sediment concentration-duration are presented in Table 1. Numeric targets for streambed characteristics are presented in Table 2.

Table 1 - Numeric Targets for Suspended Sediment Concentrations

Major Subwatershed [b]	Duration (Days)	Maximum Concentration of Exposure Category Range (mg/L)	Numeric Targets[a]	
			Number of Instances Greater than Maximum Concentration.	Maximum Duration of Instances (days)
Tres Pinos	1	1808	15	22
	2	665	42	44
	6	244	36	51
	14	244	20	51
	49	90	5	108
San Benito	1	1808	9	9
	2	665	30	21
	6	244	29	35
	14	244	14	35
	49	90	2	60
Llagas	1	1808	0	0
	2	665	0	1
	6	244	9	15
	14	244	1	15
	49	90	0	28
Uvas	1	1808	1	3
	2	665	12	8
	6	244	12	15
	14	244	1	15
	49	90	0	18
Upper Pajaro	1	1808	0	1
	2	665	3	3
	6	244	2	9
	14	244	0	9
	49	90	0	33
Corralitos (includes Rider Creek)	1	1808	0	1
	2	665	0	2
	6	244	8	11
	14	244	0	11
	49	90	0	36
Mouth of Pajaro	1	1808	0	1
	2	665	0	2
	6	244	8	11
	14	244	0	11
	49	90	0	36

[a] Targets based on a 15-year model run for the period from 1986 to 2000.

[b] Major subwatersheds of the Pajaro River.

Table 2 - Numeric Targets for Streambed Characteristics

Parameter	Numeric Target[1]
Residual Pool Volume[2]	V* = Mean values $\leq$ 0.21 Max values $\leq$ 0.45
Median Diameter (D_{50}) of Sediment Particles in Spawning Gravels	D_{50} = Mean values $\geq$ 69 mm Minimum values $\geq$ 37 mm
Percent of Fine Fines (< 0.85 mm) in Spawning Gravels	Percent fine fines $\leq$ 21%
Percent of Coarse Fines (< 6.0 mm) in Spawning Gravels	Percent coarse fines $\leq$ 30%

[1] Target values are for sampling reach(es) within an individual waterbody.

[2] Residual Pool Volume refers to the portion of a pool in a stream that is available for fish to occupy. Pool habitat is the primary habitat for steelhead in summer. Overwintering habitat requirements include deeper pools, undercut banks, side channels, and especially large, unembedded rocks, which provide shelter for fish against the high flows of winter. V* gives a direct measurement of the impact of sediment on pool volume. It is the ratio of the amount of *pool volume filled by fine, mobile sediment*, to *total pool volume*. Qualifying pools are defined by Regional Board sampling protocol (2002).

Source Analysis

Sources of sediment include the following nonpoint and point source discharge activities occurring within the respective land use source categories. Nonpoint sources include irrigated agriculture activities upon crop, fallow and orchard lands; timber harvesting activities upon forested lands; grazing activities upon pasture and range lands; urban and rural residential development, roads, farm animal and livestock boarding upon urban lands; unpaved roads in the San Benito watershed, and paved and unpaved roads in the Corralitos Creek and Rider Creek watersheds upon lands in the roads landuse category; hydromodification-related activities upon all types of land use; off-road recreational vehicle areas; sand and gravel mining; as well as natural erosion and landslides. Point sources include the small Municipal Separate Storm Sewer Systems (MS4s) of Watsonville, Hollister, Gilroy, and Morgan Hill.

TMDLs and Allocations

TMDLs and load allocations are assigned to sources for seven watersheds as represented in Table 3. These allocations are modeled load values that are necessary to meet the suspended sediment concentration-duration targets. The Regional Board will determine that the TMDL is attained when the numeric targets are achieved. When numeric targets are achieved, the Regional Board will assume that these loads are met.

Margin of Safety

The total load includes an implicit margin of safety that was derived through conservative assumptions.

Table 3 – TMDLs and Load Allocations

Major Subwatershed	Allocations[1] (LA/WLA)	Source Category: Crop, Fallow, and Orchard	Forest [2]	Pasture and Range	Urban Lands [3]	Roads	Barren [2]	Sand and Gravel Mining	Total Load
Tres Pinos	LA	477	352	41085	312		11551		53,778
	WLA				1				
San Benito	LA	1971	2083	19863	327	1180	14128	27	39,679
	WLA				100				
Llagas	LA	596	326	6978	354		144	0	9,185
	WLA				787				
Uvas	LA	946	989	12454	280		369		15,177
	WLA				139				
Upper Pajaro	LA	4114	1228	37664	356		425	3	43,951
	WLA				161				
Corralitos (including Rider Creek)	LA	3544	4536	2427	443	79	73	2	11,389[4]
	WLA				284				
Mouth of Pajaro	LA	3047	58	3055	383		500	35	7,268[4]
	WLA				191				

Notes:
[1] Annual load allocations (LA) and waste load allocations (WLA) expressed in metric tones (1 metric ton equals 1,000 kilograms). Blank cells indicate no allocations for specified source category.
[2] Forest includes loads from natural sources and from timber harvesting operations; Barren includes loads from natural sources only.
[3] Load allocations for urban lands outside of NPDES Phase 2 urban boundaries. Waste load allocations for urban lands within NPDES Phase 2 urban boundaries.
[4] Number rounded.

Implementation

The following actions will be taken to reduce sediment discharges from activities that occur within each of the land use source categories (headings) below. Regional Board staff intends to identify and notify the parties responsible for the activities according to the schedule below; however, if staff resources are insufficient or other water quality priorities emerge, this schedule will be modified.

Crop, Fallow, and Orchard Lands

Landowners and operators of crop, fallow, and orchard lands, where irrigated agricultural activities are conducted, will implement agricultural management measures and perform monitoring and reporting pursuant to the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated

Lands and the Monitoring and Reporting Program, Order No. R3-2004-0117. This is an existing, on-going activity.

Forest Lands
Landowners and operators of forest lands, where timber harvest activities are conducted, will implement timber harvest management measures and perform monitoring and reporting pursuant to the General Conditional Waiver of Waste Discharge Requirements for Timber Harvest Activities and the Monitoring and Reporting Program, Order No. R3-2005-0066. This is an existing, on-going activity.

Pasture and Range
Owners and operators of pasture and range lands, where grazing activities occur, must comply with the land disturbance prohibition.

Within one year following approval of the TMDLs by the Office of Administrative Law, the Executive Officer will notify the owners and operators of pasture and range lands of the prohibition and conditions for compliance with the prohibition. The Executive Officer will review and approve, or request modification of, the Nonpoint Source Pollution Control Implementation Program (Program) or documentation submitted in compliance with the prohibition within six months of the submittal date. Should the Program or documentation require modification, or if a party fails to submit a Program or documentation, the Executive Officer may issue a civil liability complaint pursuant to section 13268 or 13350 of the CWC, or alternatively, propose individual or general waste discharge requirements to assure compliance with the prohibition.

Urban Lands
Urban lands include the small communities of Watsonville, Hollister, Gilroy, and Morgan Hill (cities), rural properties throughout the watershed with farm animals or livestock boarding (rural properties), and roads throughout the watershed. These lands do not include unpaved roads in San Benito River watershed, and paved and unpaved roads within the Corralitos Creek and Rider Creek subwatersheds (See Roads below).

The cities must obtain a Municipal Separate Storm Sewer System (MS4) permit. Their Storm Water Management Programs must include specific actions to reduce sediment discharges pursuant to Clean Water Act Section 402(p)(3)(B) and Section D of State Board Order No. 2003-005, NPDES General Permit No. CAS000004 for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems. The cities will then describe the actions taken as part of their annual report. If necessary, the Regional Board's Executive Officer can require more stringent sediment controls. This is an existing requirement and an on-going activity.

Owners and operators of rural properties and roads must comply with the land disturbance prohibition.

Within one year following approval of the TMDLs by the Office of Administrative Law, the Executive Officer will notify the owners and operators of rural properties and roads of the prohibition and conditions for compliance with the prohibition. The Executive Officer will review and approve, or request modification of, the Program or documentation submitted in compliance with the prohibition within six months of the submittal date. Should the Program or documentation require modification, or if a party fails to submit a Program or documentation, the Executive Officer may issue a civil liability complaint pursuant to section 13268 or 13350 of the CWC, or alternatively, propose individual or general waste discharge requirements to assure compliance with the prohibition.

Roads
Within one year following approval of the TMDLs by the Office of Administrative Law, the Executive Officer will notify the owners and operators of unpaved roads within the San Benito River watershed and paved and unpaved roads within the Corralitos Creek and Rider Creek watersheds of the prohibition and conditions for compliance with the prohibition. The Executive Officer will review and approve, or request modification of, the Program or documentation submitted in compliance with the prohibition within six months of the submittal date. Should the Program or documentation require modification, or if a party fails to submit a Program or documentation, the Executive Officer may issue a civil liability complaint pursuant to section 13268 or 13350 of the CWC, or alternatively, propose individual or general waste discharge requirements to assure compliance with the prohibition.

Sand and Gravel Mining
Within six months following approval of the TMDLs by the Office of Administrative Law and pursuant to Section 13263(e) of the CWC, Regional Board staff will review existing waste discharge requirements (WDRs) for sand and gravel mining operations and revise or require activities to: 1) assess cumulative impacts, including fluvial geomorphic impacts, upon the beneficial uses of the San Benito River; 2) mitigate the impacts identified; and 3) monitor the effectiveness of mitigation activities. One year following approval of the TMDLs by the Office of Administrative Law, pursuant to Section 13267 of the CWC, the Executive Officer will require owners and operators of sand and gravel mining operations to submit a plan to assess cumulative impacts, including fluvial geomorphic impacts, upon the beneficial uses of the San Benito River. The Executive Officer will comply with the requirements of section 13267 when issuing the orders. Regional Board staff will encourage sand and gravel mining operators to conduct the cumulative impacts assessment cooperatively.

Streambank Erosion
Owners and operators of properties where hydromodification activities occur must comply with the land disturbance prohibition.

Within one year following approval of the TMDLs by the Office of Administrative Law, the Executive Officer will notify the owners and operators of properties where hydromodification activities occur of the prohibition and conditions for compliance with the prohibition. The Executive Officer will review and approve, or request modification of, the Program or documentation submitted in compliance with the prohibition within six months of the submittal date. Should the Program or documentation require modification, or if a party fails to submit a Program or documentation, the Executive Officer may issue a civil liability complaint pursuant to section 13268 or 13350 of the CWC, or alternatively, propose individual or general waste discharge requirements to assure compliance with the prohibition.

Monitoring
Regional Board staff will develop a monitoring program to measure in-stream numeric targets within five years following TMDL approval. The program will be consistent with other Central Coast Region sediment TMDLs, regional sediment monitoring programs, and in cooperation with implementing parties. If Regional Board staff concludes that sediment contributions from individual landowners should be monitored in addition to in-stream numeric targets, the Executive Officer will establish such monitoring requirements in compliance with section 13267.

Tracking and Evaluation
Regional Board staff will conduct a review every three years beginning three years after TMDL approval by the Office of Administrative Law. Regional Board staff will utilize required reports, as well as other available information, to review implementation efforts of responsible parties and progress being made towards achieving the allocations. Regional Board staff will also review numeric target monitoring (see above) to determine progress towards TMDL achievement in the waterbody. The numeric targets, not

actual loads or reductions in loads, will be measured, as they are a more direct indicator of beneficial use protection. Regional Board staff may conclude and articulate that ongoing implementation efforts may ultimately be insufficient to achieve the allocations and numeric targets. If staff makes this determination, staff will recommend that additional reporting, monitoring, or implementation efforts be required either by the Executive Officer (e.g. pursuant to CWC section 13267 or section 13383) or by the Regional Board (e.g. through revisions of existing permits and/or a Basin Plan Amendment). At any particular date, Regional Board staff may conclude and articulate that implementation efforts and results are likely to result in achieving the allocations and numeric target, in which case existing and anticipated implementation efforts should continue.

Three-year reviews will continue until the TMDLs are achieved. The target date to achieve the TMDLs is forty-five years after implementation commences.

AMENDMENT NO. 2. Revise the September 8, 1994 Basin Plan, Chapter 4 as follows:

Add the following to the end of Chapter 4 in VIII.E.1, Land Disturbance Prohibitions:

The controllable discharge of soil, silt, or earthen material from any grazing, farm animal and livestock, hydromodification, road, or other activity of whatever nature into waters of the State within the Pajaro River watershed is prohibited.

The controllable discharge of soil, silt, or earthen material from any grazing, farm animal and livestock, hydromodification, road, or other activity of whatever nature to a location where such material could pass into waters of the State within the Pajaro River watershed is prohibited.

The above two prohibitions do not apply to any discharge regulated by National Pollutant Discharge Elimination System permits, Waste Discharge Requirements or waivers of Waste Discharge Requirements.

The above two prohibitions do not apply to any grazing, farm animal and livestock, hydromodification, or road activity if the owner or operator:

i. Submits a Nonpoint Source Pollution Control Implementation Program, consistent with the *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program, May 20, 2004*, that is approved by the Executive Officer, or

ii. Demonstrates there is no activity that may cause soil, silt, or earthen material to pass into waters of the state within the Pajaro River watershed, as approved by the Executive Officer.

This Land Disturbance Prohibition takes effect three years following approval by the U.S. Environmental Protection Agency.