

**California Environmental Protection Agency  
Central Coast Regional Water Quality Control Board**

**Basin Plan Amendment  
Attachment A to Resolution No. R3-2015-0004**

Amendment to the Water Quality Control Plan for the Central Coastal Basin  
to Incorporate Total Maximum Daily Loads for Nitrogen Compounds and  
Orthophosphate in Streams of the Pajaro River Basin



**ATTACHMENT A TO RESOLUTION NO. R3-2015-0004**

**Revise the September 8, 1994 Basin Plan as follows:**

**AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL COASTAL BASIN TO INCORPORATE TOTAL MAXIMUM DAILY LOADS FOR NITROGEN COMPOUNDS AND ORTHOPHOSPHATE IN STREAMS OF THE PAJARO RIVER BASIN**

**Add the following to Chapter 4 after IX. S:**

**IX. T. TOTAL MAXIMUM DAILY LOADS FOR NITROGEN COMPOUNDS AND ORTHOPHOSPHATE IN STREAMS OF THE PAJARO RIVER BASIN**

The Regional Water Quality Control Board adopted these TMDLs on July 30, 2015.

These TMDLs were approved by:

The State Water Resources Control Board on: April 5, 2016

The California Office of Administrative Law on: July 12, 2016

The U.S. Environmental Protection Agency on: October 6, 2016

**Acronyms**

BMP: best management practices

MS4: municipal separate storm sewer systems

OAL: Office of Administrative Law

**Problem Statement**

In the Pajaro River Basin, discharges of nitrogen compounds and orthophosphate are occurring in surface waters at levels which are impairing a spectrum of beneficial uses and, therefore, constitute a serious water quality problem. The municipal and domestic drinking water supply (MUN, GWR) beneficial uses and the range of aquatic habitat beneficial uses are not protected. A total of 27 waterbody/pollutant combinations are impaired due to exceedances of nutrient and nutrient-related water quality objectives. The pollutants addressed in these TMDLs are nitrate, un-ionized ammonia, and orthophosphate. Reducing these pollutants will also address several Clean Water Act section 303(d)-listed dissolved oxygen and chlorophyll a impairments in the Pajaro River basin.

The TMDLs protect and restore the municipal and domestic water supply beneficial use (MUN) and aquatic habitat beneficial uses currently being degraded by violations of the toxicity objective and the biostimulatory substances objective. The aquatic habitat beneficial uses currently being degraded include the following: wildlife habitat (WILD), cold fresh water habitat (COLD), warm fresh water habitat (WARM), migration of aquatic organisms (MIGR), spawning, reproduction, and/or early development (SPWN), preservation of biological habitats of special significance (BIOL), and rare, threatened, or endangered species (RARE). In addition, current or potential future beneficial uses of the agricultural water supply beneficial use (AGR) are not being supported. Nitrate can create problems not only for water supplies and aquatic habitat, but also potentially for nitrogen sensitive crops (grapes, avocado, citrus) by detrimentally impacting crop yield or quality.

For waterbodies that are not expressing biostimulatory impairments, the most stringent relevant water quality objective for nitrate (and therefore the one that is protective of the full range of all nitrate-impaired designated beneficial uses) is the numeric Basin Plan objective for nitrate in

municipal and domestic water supply. Reducing nitrate pollution and ultimately achieving the nitrate drinking water quality standard in these waterbodies will therefore restore and be protective of the full range of MUN, GWR, and/or AGR designated beneficial uses of the surface waters which are being currently impaired by excess nitrate.

All waterbodies are required to attain the Basin Plan general toxicity objective for un-ionized ammonia in inland surface waters and estuaries.

For waterbodies that are expressing biostimulatory impairments, the most stringent relevant water quality objective for nitrate-nutrients (and therefore the one that is protective of the full range of all nutrient-impaired designated beneficial uses) is the Basin Plan narrative general objective for biostimulatory substances in inland surface waters and estuaries. These waterbodies must achieve concentration-based TMDLs for nitrate and orthophosphate as identified herein. Reducing nutrient pollution and ultimately achieving the TMDLs for nutrients in these waterbodies will therefore restore and be protective of the full range of aquatic habitat, MUN, GWR, and/or AGR designated beneficial uses of the surface waters which are being currently impaired by excess nutrients.

The following impairments are addressed with these TMDLs:

- Beach Road Ditch: nitrate, low dissolved oxygen, nutrients (biostimulatory substances objective)
- Carnadero Creek: nitrate, low dissolved oxygen, nutrients (biostimulatory substances objective)
- Cassery Creek: nitrate, low dissolved oxygen
- Corralitos Creek: nutrients (biostimulatory substances objective)
- Coward Creek: nitrate
- Furlong Creek: nitrate, nutrients (biostimulatory substances objective)
- Harkins Slough: nitrate, nutrients (biostimulatory substances objective), low dissolved oxygen, chlorophyll a
- Llagas Creek: nitrate, nutrients (biostimulatory substances objective), un-ionized ammonia, low dissolved oxygen
- McGowan Ditch: nitrate, nutrients (biostimulatory substances objective)
- Millers Canal: low dissolved oxygen, chlorophyll a, nutrients (biostimulatory substances objective)
- Pajaro River: nitrate, nutrients (biostimulatory substances objective), low dissolved oxygen
- Pajaro River Estuary: un-ionized ammonia
- Pinto Lake outflow ditch: nitrate
- San Juan Creek: nitrate, low dissolved oxygen
- Struve Slough: low dissolved oxygen, nutrients (biostimulatory substances objective)
- West Branch Struve Slough: low dissolved oxygen
- Tequisquita Slough: low dissolved oxygen, nutrients (biostimulatory substances objective)
- Watsonville Slough: nitrate, nutrients (biostimulatory substances objective), low dissolved oxygen

### **Numeric Targets**

Numeric targets are water quality thresholds developed and used to ascertain when and where water quality objectives are achieved, and hence, when beneficial uses are protected.

➤ Target for Nitrate (MUN-GWR standards)

For impaired stream reaches that are required to support drinking water (MUN) and groundwater recharge (GWR) beneficial uses, the nitrate numeric target is 10 mg/L (nitrate as N) for these

TMDLs, which therefore is equal to the Basin Plan's numeric nitrate water quality objective protective of drinking water beneficial uses and groundwater recharge beneficial uses.

➤ Target for Un-ionized ammonia (toxicity)

For un-ionized ammonia (a nitrogen compound), the numeric target is 0.025 mg/L (as N) for these TMDLs, which therefore is equal to the Basin Plan's un-ionized ammonia numeric water quality objective protective against toxicity in surface waters.

➤ Targets for Biostimulatory Substances (nitrate and orthophosphate)

The Basin Plan contains the following narrative water quality objectives for biostimulatory substances:

"Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses."

To implement this narrative objective, staff developed scientifically peer reviewed numeric targets, based on established methodologies and approaches. The numeric targets for biostimulatory substances are presented in Table IX T-1.

Table IX T-1. Numeric targets for biostimulatory substances.

| <u>Stream Reaches</u>   | <u>Nitrate-N (mg/L)</u>  | <u>Orthophosphate-P (mg/L)</u>                                    |
|---|--|---|
| <u>Pajaro River, all reaches including the Pajaro River Estuary</u> | <u>3.9<br/>Maximum<br/>Dry Season Samples<br/>(May 1-Oct 31)</u> | <u>0.14<br/>Maximum<br/>Dry Season Samples<br/>(May 1-Oct 31)</u> |
|   | <u>8.0<br/>Maximum<br/>Wet Season Samples<br/>(Nov 1-Apr 30)</u> | <u>0.3<br/>Maximum<br/>Wet Season Samples<br/>(Nov 1-Apr 30)</u>  |
| <u>Corralitos Creek, all reaches</u>                                | <u>1.8<br/>Maximum<br/>Dry Season Samples<br/>(May 1-Oct 31)</u> | <u>0.14<br/>Maximum<br/>Dry Season Samples<br/>(May 1-Oct 31)</u> |
| <u>Salsipuedes Creek, all reaches</u>                               | <u>8.0<br/>Maximum<br/>Wet Season Samples<br/>(Nov 1-Apr 30)</u> | <u>0.3<br/>Maximum<br/>Wet Season Samples<br/>(Nov 1-Apr 30)</u>  |
| <u>Beach Road Ditch</u>   | <u>3.3<br/>Maximum<br/>Dry Season Samples<br/>(May 1-Oct 31)</u> | <u>0.14<br/>Maximum<br/>Dry Season Samples<br/>(May 1-Oct 31)</u> |
| <u>McGowan Ditch</u>  | <u>8.0<br/>Maximum<br/>Wet Season Samples<br/>(Nov 1-Apr 30)</u> | <u>0.3<br/>Maximum<br/>Wet Season Samples<br/>(Nov 1-Apr 30)</u>  |

| <u>Stream Reaches</u>   | <u>Nitrate-N (mg/L)</u>  | <u>Orthophosphate-P (mg/L)</u>                          |
|---|--|---|
| <u>Llagas Creek, all reaches downstream of Chesebro Reservoir</u> | 1.8<br>Maximum<br>Dry Season Samples<br>(May 1-Oct 31)                     | 0.05<br>Maximum<br>Dry Season Samples<br>(May 1-Oct 31) |
| <u>Carnadero and Uvas Creeks, all reaches</u>                     | 8.0<br>Maximum<br>Wet Season Samples<br>(Nov 1-Apr 30)                     | 0.3<br>Maximum<br>Wet Season Samples<br>(Nov 1-Apr 30)  |
| <u>Furlong Creek, all reaches</u>                                 |  |   |
| <u>San Juan Creek, all reaches</u>                                | 3.3<br>Maximum<br>Dry Season Samples<br>(May 1-Oct 31)                     | 0.12<br>Maximum<br>Dry Season Samples<br>(May 1-Oct 31) |
| <u>West Branch San Juan Creek, all reaches</u>                    | 8.0<br>Maximum<br>Wet Season Samples<br>(Nov 1-Apr 30)                     | 0.3<br>Maximum<br>Wet Season Samples<br>(Nov 1-Apr 30)  |
| <u>Tequisquita Slough</u>   | 2.2<br>Maximum<br>Dry Season Samples<br>(May 1-Oct 31)                     | 0.12<br>Maximum<br>Dry Season Samples<br>(May 1-Oct 31) |
|   | 8.0<br>Maximum<br>Wet Season Samples<br>(Nov 1-Apr 30)                     | 0.3<br>Maximum<br>Wet Season Samples<br>(Nov 1-Apr 30)  |
| <u>Stream Reaches</u>   | <u>Total Nitrogen (mg/L)</u>   | <u>Orthophosphate-P (mg/L)</u>                          |
| <u>Watsonville Slough, all reaches</u>                            | 2.1<br>Maximum<br>(total nitrogen)<br>Dry Season Samples<br>(May 1-Oct 31) | 0.14<br>Maximum<br>Dry Season<br>(May 1-Oct 31)         |
| <u>Harkins Slough, all reaches</u>                                |  |   |
| <u>Gallighan Slough, all reaches</u>                              | 8.0<br>Maximum<br>(total nitrogen)<br>Wet Season Samples<br>(Nov 1-Apr 30) | 0.3<br>Maximum<br>Wet Season Samples<br>(Nov 1-Apr 30)  |
| <u>Struve Slough, all reaches</u>                                 |  |   |
| <u>Millers Canal</u>  | 1.1<br>Maximum<br>(total nitrogen)<br>Dry Season Samples<br>(May 1-Oct 31) | 0.04<br>Maximum<br>Dry Season<br>(May 1-Oct 31)         |
|   | 8.0<br>Maximum<br>(total nitrogen)<br>Wet Season Samples<br>(Nov 1-Apr 30) | 0.3<br>Maximum<br>Wet Season Samples<br>(Nov 1-Apr 30)  |

➤ Targets for Nutrient-Response Indicators (dissolved oxygen and chlorophyll a and microcystins)

Dissolved oxygen and chlorophyll a numeric targets are identified to ensure that streams do not show evidence of biostimulatory conditions and to provide primary indicator metrics to assess biological response to future nutrient water column concentration reductions.

For waterbodies designated as cold fresh water habitat (COLD) and spawning (SPWN) beneficial uses the dissolved oxygen numeric targets is the same as Basin Plan numeric water quality objective which states that dissolved oxygen concentrations shall not be reduced below 7.0 mg/L at any time.

For water bodies designated as warm fresh water habitat (WARM) beneficial use, the dissolved oxygen numeric targets is the same as Basin Plan numeric water quality objective which states that dissolved oxygen concentrations shall not be reduced below 5.0 mg/L at any time.

Additionally, for all inland surface waters, enclosed bays and estuaries, the dissolved oxygen numeric target is the same as Basin Plan numeric water quality objective which states that the median dissolved oxygen should not fall below 85% saturation as a result of controllable water quality conditions.

For water bodies designated as cold fresh water habitat (COLD) and spawning (SPWN) or warm fresh water habitat (WARM) beneficial uses the numeric water quality target indicative of excessive dissolved oxygen saturation conditions is 13 mg/L (i.e., water column dissolved oxygen concentrations not to exceed 13 mg/L).

The numeric water quality target for chlorophyll a is 15 micrograms per liter ( $\mu\text{g/L}$ ) for all water bodies (i.e., water column chlorophyll a concentrations not to exceed 15  $\mu\text{g/L}$ ).

The numeric water quality target for microcystins is 0.8 micrograms per liter ( $\mu\text{g/L}$ ) for all waterbodies (i.e., microcystins not to exceed 0.8  $\mu\text{g/L}$  (includes microcystin congeners LA, LR, RR, and YR)).

### **Source Analysis**

Discharges of un-ionized ammonia, nitrate, and orthophosphate originating from irrigated agriculture, municipal NPDES-permitted stormwater system discharges, industrial and construction NPDES-permitted stormwater sources, livestock waste associated with grazing lands and rural residential areas, golf courses, and natural sources are contributing loads to receiving waters. Irrigated agriculture is the largest source of controllable water column nutrient loads in the Pajaro River basin and this source category is not currently meeting its proposed load allocation. Municipal NPDES-permitted stormwater sources are a relatively minor source of nitrogen compounds and orthophosphate, but can be locally significant. Livestock waste sources associated with grazing lands and rural residential areas are currently meeting proposed load allocations, as are sources associated with industrial and construction NPDES-permitted sources and golf courses.

### **TMDLs**

The following TMDLs will result in attainment of water quality standards and will rectify impairments described in the Problem Statement.

The un-ionized ammonia TMDL for all streams of the Pajaro River basin is:

- Un-ionized ammonia concentration shall not exceed 0.025 mg/L-N in receiving waters.

The nitrate TMDL for all streams of the Pajaro River basin required to support MUN beneficial uses is:

- Nitrate concentration shall not exceed 10 mg/L-N in receiving waters.

The nitrate and orthophosphate TMDLs for all reaches of the Pajaro River, including the Pajaro River Estuary are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 3.9 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.14 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The nitrate and orthophosphate TMDLs for Corralitos Creek (all reaches) and Salsipuedes Creek (all reaches) are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 1.8 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.14 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The nitrate and orthophosphate TMDLs for Beach Road Ditch and McGowan Ditch are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 3.3 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.14 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The nitrate and orthophosphate TMDLs for all reaches of Llagas Creek (downstream of Chesebro Reservoir), Carnadero Creek, Uvas Creek, and Furlong Creek are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 1.8 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.05 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The nitrate and orthophosphate TMDLs for all reaches of the San Juan Creek and West Branch of San Juan Creek are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 3.3 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.12 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The nitrate and orthophosphate TMDLs for Tequisquita Slough are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 2.2 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.12 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The total nitrogen and orthophosphate TMDLs for all reaches of Watsonville Slough, Harkins Slough, Gallighan Slough, and Struve Slough are:

- For dry season (May 1 to October 31): total Nitrogen-N concentration shall not exceed 2.1 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.14 mg/L in receiving waters, and
- For wet season (November 1 to April 30): total Nitrogen-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The total nitrogen and orthophosphate TMDLs for all reaches of Millers Canal are:

- For dry season (May 1 to October 31): total Nitrogen-N concentration shall not exceed 1.1 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.04 mg/L in receiving waters, and
- For wet season (November 1 to April 30): total Nitrogen-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The TMDLs are considered achieved when water quality conditions meet all regulatory and policy requirements necessary for removing the impaired waters from the Clean Water Act section 303(d) list of impaired waters.

### **Final Allocations and Interim Allocations**

Owners and operators of irrigated lands, municipal NPDES-permitted storm water entities, industrial and construction NPDES-permitted stormwater sources natural sources, owners and operators of golf courses, and owners/operators of livestock and domestic animals are assigned un-ionized ammonia, nitrate, and orthophosphate allocations equal to the TMDL and numeric targets.

The final allocations to responsible parties are shown in Table IX T-2. The final allocations are equal to the TMDLs and should be achieved 25-years after the TMDL effective date. Unlike the load-based TMDL method, the concentration-based allocations do not add up to the TMDL because concentrations of individual pollution sources are not additive. Since the TMDLs are concentration-based, the allocations are not additive.

Recognizing that achievement of the more stringent final dry season biostimulatory allocations embedded in Table IX T-2 may require a significant amount of time to achieve, interim allocations are identified. Interim allocations will be used as benchmarks in assessing progress towards the final allocations. Interim allocations are shown in Table IX T-3.

### **Controllable Water Quality Conditions**

In accordance with the Basin Plan, controllable water quality shall be managed to conform or to achieve the water quality objectives and load allocations contained in these TMDLs. 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 Chapter 3, Water Quality Objectives, page III-2.

### **Compliance with Anti-degradation Requirements**

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. The federal anti-degradation policy, 40 CFR 131.12(a), states in part, “Where the quality of waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State’s continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located...”

Compliance with anti-degradation requirements may be determined on the basis of trends in declining water quality in applicable waterbodies, consistent with the methodologies and criteria provided in Section 3.10 of the California 303(d) Listing Policy (adopted, September 20, 2004, SWRCB Resolution No. 2004-0063). Section 3.10 of the California 303(d) Listing Policy explicitly addresses the anti-degradation component of water quality standards as defined in 40 CFR 130.2(j), and provides for identifying trends of declining water quality as a metric for assessing compliance 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: “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”.

Practically speaking, this means that, for example, stream reaches or waterbodies that have a concentration-based TMDL allocation of 10 mg/L nitrate-N, and if current water quality or future water quality assessments in the stream reach indicates nitrate-N well under 10 mg/L nitrate-N, the allocation does not give license for controllable nitrogen sources to degrade the water resource up to the maximum allocation (10 mg/L nitrate-N).

**Table IX T-2. Final Allocations and Responsible Parties**

| <b>FINAL WASTE LOAD ALLOCATIONS (WLAs)<sup>AB</sup></b>                                  |  |  |   |   |   |   |
|--|--|--|---|---|---|---|
| <u>Waterbody<sup>C</sup><br/>the<br/>responsible<br/>party is<br/>discharging<br/>to</u> | <u>Party<br/>Responsible for<br/>Allocation<br/>&amp;<br/>NPDES/WDR<br/>number</u>   | <u>Receiving<br/>Water Nitrate<br/>as N WLA<br/>(mg/L)<br/><br/><u>Aquatic<br/>Habitat</u></u> | <u>Receiving<br/>Water Nitrate<br/>as N WLA<br/>(mg/L)<br/><br/><u>Human Health</u></u> | <u>Receiving Water<br/>Orthophosphate<br/>as P WLA<br/>(mg/L)</u> | <u>Receiving<br/>Water Total<br/>Nitrogen as N<br/>WLA (mg/L)</u> | <u>Receiving Water<br/>Un-ionized<br/>ammonia as<br/>WLA (mg/L)</u> |
| Pajaro River   | City of Watsonville<br>(Storm drain<br>discharges to<br>MS4s)<br>Storm Water Permit<br>NPDES No.<br>CAS000004                              |  |   |   |   |   |
|  | County of Santa<br>Cruz<br>(Storm drain<br>discharges to<br>MS4s)<br>Storm Water<br>General Permit<br>NPDES No.<br>CAS000004               | 3.9<br>Dry season <sup>D</sup>   |   | 0.14<br>Dry season <sup>D</sup>                                   | Not<br>Applicable   | 0.025<br>Year-round   |
|  | City of Watsonville<br>Wastewater<br>Treatment Facility<br>(Wastewater<br>discharges to<br>surface<br>waterbody)<br>NPDES No.<br>CA0048216 | 8.0<br>Wet<br>season <sup>E</sup>  | 10<br>Year-round  | 0.3<br>Wet season <sup>E</sup>                                    |   |   |
|  | South County<br>Regional<br>Wastewater<br>Authority<br>(Wastewater<br>discharges to<br>surface<br>waterbody)<br>NPDES No.<br>CA0049964     |  |   |   |   |   |

| <b>FINAL WASTE LOAD ALLOCATIONS (WLAs)<sup>AB</sup></b>  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| <b><u>Waterbody<sup>C</sup></u><br/><u>the</u><br/><u>responsible</u><br/><u>party is</u><br/><u>discharging</u><br/><u>to</u></b> | <b><u>Party</u><br/><u>Responsible for</u><br/><u>Allocation</u><br/><u>&amp;</u><br/><u>NPDES/WDR</u><br/><u>number</u></b>  | <b><u>Receiving</u><br/><u>Water Nitrate</u><br/><u>as N WLA</u><br/><u>(mg/L)</u><br/><br/><u>Aquatic</u><br/><u>Habitat</u></b> | <b><u>Receiving</u><br/><u>Water Nitrate</u><br/><u>as N WLA</u><br/><u>(mg/L)</u><br/><br/><u>Human Health</u></b> | <b><u>Receiving Water</u><br/><u>Orthophosphate</u><br/><u>as P WLA</u><br/><u>(mg/L)</u></b> | <b><u>Receiving</u><br/><u>Water Total</u><br/><u>Nitrogen as N</u><br/><u>WLA (mg/L)</u></b> | <b><u>Receiving Water</u><br/><u>Un-ionized</u><br/><u>ammonia as</u><br/><u>WLA (mg/L)</u></b> |
| All reaches of:<br>Watsonville<br>Slough,<br>Harkins<br>Slough,<br>Gallighan<br>Slough,<br>Struve Slough                           | City of Watsonville<br>(Storm drain<br>discharges to<br>MS4s)<br>Storm Water Permit<br>NPDES No.<br>CAS000004<br><br>County of Santa<br>Cruz<br>(Storm drain<br>discharges to<br>MS4s)<br>Storm Water<br>General Permit<br>NPDES No.<br>CAS000004 | Not<br>Applicable   | 10<br>Year-round  | 0.14<br>Dry season <sup>D</sup><br><br>0.3<br>Wet season <sup>E</sup>                         | 2.1<br>Dry season <sup>D</sup><br><br>8.0<br>Wet season <sup>E</sup>                          | 0.025<br>Year-round   |
| Corralitos<br>Creek,<br>Salsipuedes<br>Creek   | City of Watsonville<br>(Storm drain<br>discharges to<br>MS4s)<br>Storm Water Permit<br>NPDES No.<br>CAS000004<br><br>County of Santa<br>Cruz<br>(Storm drain<br>discharges to<br>MS4s)<br>Storm Water<br>General Permit<br>NPDES No.<br>CAS000004 | 1.8<br>Dry season <sup>D</sup><br><br>8.0<br>Wet<br>season <sup>E</sup>   | 10<br>Year-round  | 0.14<br>Dry season <sup>D</sup><br><br>0.3<br>Wet season <sup>E</sup>                         | Not<br>Applicable   | 0.025<br>Year-round   |
| San Juan<br>Creek, all<br>reaches  | San Juan Bautista<br>WWTP<br>(Wastewater<br>discharges to<br>surface<br>waterbody)<br>NPDES No.<br>CA0047902  | 3.3<br>Dry season <sup>D</sup><br><br>8.0<br>Wet<br>season <sup>E</sup>   | 10<br>Year-round  | 0.12<br>Dry season <sup>D</sup><br><br>0.3<br>Wet season <sup>E</sup>                         | Not<br>Applicable   | 0.025<br>Year-round   |

| <b>FINAL WASTE LOAD ALLOCATIONS (WLAs)<sup>AB</sup></b>                                  |  |   |  |   |   |   |
|--|--|---|--|---|---|---|
| <u>Waterbody<sup>C</sup><br/>the<br/>responsible<br/>party is<br/>discharging<br/>to</u> | <u>Party<br/>Responsible for<br/>Allocation<br/>&amp;<br/>NPDES/WDR<br/>number</u>   | <u>Receiving<br/>Water Nitrate<br/>as N WLA<br/>(mg/L)<br/><i>Aquatic<br/>Habitat</i></u> | <u>Receiving<br/>Water Nitrate<br/>as N WLA<br/>(mg/L)<br/><i>Human Health</i></u> | <u>Receiving Water<br/>Orthophosphate<br/>as P WLA<br/>(mg/L)</u>                   | <u>Receiving<br/>Water Total<br/>Nitrogen as N<br/>WLA (mg/L)</u> | <u>Receiving Water<br/>Un-ionized<br/>ammonia as<br/>WLA (mg/L)</u> |
| Llagas Creek,<br>Little Llagas<br>Creek  | City of Gilroy<br>City of Morgan Hill<br>Urbanized areas<br>(Storm drain<br>discharges to<br>MS4s)<br>Storm Water<br>General Permit<br>NPDES No.<br>CAS000004<br><br>County of Santa<br>Clara<br>(Storm drain<br>discharges to<br>MS4s)<br>Storm Water<br>General Permit<br>NPDES No.<br>CAS000004 | <u>1.8</u><br>Dry season <sup>D</sup><br><br><u>8.0</u><br>Wet<br>season <sup>E</sup>     | <u>10</u><br>Year-round  | <u>0.05</u><br>Dry season <sup>D</sup><br><br><u>0.3</u><br>Wet season <sup>E</sup> | <u>Not<br/>Applicable</u>   | <u>0.025</u><br>Year-round  |
| Uvas Creek,<br>Carnadero<br>Creek  | City of Gilroy<br>City of Morgan Hill<br>(Storm drain<br>discharges to<br>MS4s)<br>Storm Water<br>General Permit<br>NPDES No.<br>CAS000004   | <u>1.8</u><br>Dry season <sup>D</sup><br><br><u>8.0</u><br>Wet<br>season <sup>E</sup>     | <u>10</u><br>Year-round  | <u>0.05</u><br>Dry season <sup>D</sup><br><br><u>0.3</u><br>Wet season <sup>E</sup> | <u>Not<br/>Applicable</u>   | <u>0.025</u><br>Year-round  |
| San Benito<br>River  | City of Hollister<br>(Storm drain<br>discharges to<br>MS4s)<br>Storm Water<br>General Permit<br>NPDES No.<br>CAS000004   | <u>Not<br/>Applicable</u>   | <u>10</u><br>Year-round  | <u>Not Applicable</u>   | <u>Not<br/>Applicable</u>   | <u>0.025</u><br>Year-round  |

| <b>FINAL WASTE LOAD ALLOCATIONS (WLAs)<sup>AB</sup></b>   |  |  |   |   |   |   |
|---|--|--|---|---|---|---|
| <u>Waterbody<sup>C</sup></u><br><u>the</u><br><u>responsible</u><br><u>party is</u><br><u>discharging</u><br><u>to</u>  | <u>Party</u><br><u>Responsible for</u><br><u>Allocation</u><br><u>&amp;</u><br><u>NPDES/WDR</u><br><u>number</u>   | <u>Receiving</u><br><u>Water Nitrate</u><br><u>as N WLA</u><br><u>(mg/L)</u><br><br><u>Aquatic</u><br><u>Habitat</u> | <u>Receiving</u><br><u>Water Nitrate</u><br><u>as N WLA</u><br><u>(mg/L)</u><br><br><u>Human Health</u> | <u>Receiving Water</u><br><u>Orthophosphate</u><br><u>as P WLA</u><br><u>(mg/L)</u> | <u>Receiving</u><br><u>Water Total</u><br><u>Nitrogen as N</u><br><u>WLA (mg/L)</u> | <u>Receiving Water</u><br><u>Un-ionized</u><br><u>ammonia as</u><br><u>WLA (mg/L)</u> |
| <u>Any identified</u><br><u>impaired</u><br><u>waterbody</u><br><u>that receives</u><br><u>discharges</u><br><u>from NPDES-</u><br><u>permitted</u><br><u>industrial or</u><br><u>construction</u><br><u>activities</u><br><u>within the</u><br><u>Pajaro River</u><br><u>Basin</u> | <u>Industrial</u><br><u>stormwater</u><br><u>general permit</u><br><u>(storm drain</u><br><u>discharges from</u><br><u>industrial facilities)</u><br><u>NPDES No.</u><br><u>CAS000001</u><br><br><u>Construction</u><br><u>stormwater</u><br><u>general permit</u><br><u>(storm drain</u><br><u>discharges from</u><br><u>construction</u><br><u>operations)</u><br><u>NPDES No.</u><br><u>CAS000002</u> | <u>See specific</u><br><u>waterbody</u><br><u>for specific</u><br><u>WLAs</u>  | <u>See specific</u><br><u>waterbody for</u><br><u>specific WLAs</u>                                     | <u>See specific</u><br><u>waterbody for</u><br><u>specific WLAs</u>                 | <u>See specific</u><br><u>waterbody for</u><br><u>specific</u><br><u>WLAs</u>       | <u>0.025</u><br><u>Year-round</u>   |

| <b>FINAL LOAD ALLOCATIONS (LAs)<sup>AB</sup></b>  |  |  |   |   |  |  |
|---|--|--|---|---|--|--|
| <b><u>Waterbody<sup>C</sup></u><br/><u>the</u><br/><u>responsible</u><br/><u>party is</u><br/><u>discharging to</u></b> | <b><u>Party Responsible</u><br/><u>for Allocation</u><br/><u>(Source)</u></b>  | <b><u>Receiving</u><br/><u>Water</u><br/><u>Nitrate as N</u><br/><u>LA (mg/L)</u><br/><br/><b><i><u>Aquatic</u></i><br/><b><i><u>Habitat</u></i></b></b></b> | <b><u>Receiving</u><br/><u>Water</u><br/><u>Nitrate as N</u><br/><u>LA (mg/L)</u><br/><br/><b><i><u>Human</u></i><br/><b><i><u>Health</u></i></b></b></b> | <b><u>Receiving Water</u><br/><u>Orthophosphate</u><br/><u>as P LA (mg/L)</u></b>               | <b><u>Receiving</u><br/><u>Water Total</u><br/><u>Nitrogen as</u><br/><u>N LA (mg/L)</u></b> | <b><u>Receiving Water</u><br/><u>Un-ionized</u><br/><u>ammonia as N</u><br/><u>LA (mg/L)</u></b> |
| <u>Pajaro River,</u><br><u>all reaches,</u><br><u>including the</u><br><u>Pajaro River</u><br><u>Estuary</u>            | <u>Owners/operators of</u><br><u>irrigated agricultural</u><br><u>lands</u><br><u>(Discharges from</u><br><u>irrigated lands)</u>  | <u>3.9</u><br><u>Dry</u><br><u>season<sup>D</sup></u>  | <u>10</u><br><u>Year-round</u>  | <u>0.14</u><br><u>Dry season<sup>D</sup></u><br><br><u>0.3</u><br><u>Wet season<sup>E</sup></u> | <u>Not</u><br><u>Applicable</u>  | <u>0.025</u><br><u>Year-round</u>  |
|   | <u>Owners/operators of</u><br><u>land used</u><br><u>for/containing</u><br><u>domestic</u><br><u>animals/livestock</u><br><u>(Domestic</u><br><u>animals/livestock waste</u><br><u>not draining to MS4s)</u>           | <u>8.0</u><br><u>Wet</u><br><u>season<sup>E</sup></u>  |   |   |  |  |
|   | <u>No responsible party</u><br><u>(Natural sources)</u>  |  |   |   |  |  |
| <u>Corralitos</u><br><u>Creek, all</u><br><u>reaches</u><br><u>Salsipuedes</u><br><u>Creek, all</u><br><u>reaches</u>   | <u>Owners/operators of</u><br><u>irrigated agricultural</u><br><u>lands</u><br><u>(Discharges from</u><br><u>irrigated lands)</u>  | <u>1.8</u><br><u>Dry</u><br><u>season<sup>D</sup></u>  | <u>10</u><br><u>Year-round</u>  | <u>0.14</u><br><u>Dry season<sup>D</sup></u><br><br><u>0.3</u><br><u>Wet season<sup>E</sup></u> | <u>Not</u><br><u>Applicable</u>  | <u>0.025</u><br><u>Year-round</u>  |
|   | <u>Owners/operators of</u><br><u>land used</u><br><u>for/containing</u><br><u>domestic</u><br><u>animals/livestock</u><br><u>(Domestic</u><br><u>animals/livestock</u><br><u>waste not draining to</u><br><u>MS4s)</u> | <u>8.0</u><br><u>Wet</u><br><u>season<sup>E</sup></u>  |   |   |  |  |
|   | <u>No responsible party</u><br><u>(Natural sources)</u>  |  |   |   |  |  |
| <u>Beach Road</u><br><u>Ditch</u><br><u>McGowan</u><br><u>Ditch</u>   | <u>Owners/operators of</u><br><u>irrigated agricultural</u><br><u>lands</u><br><u>(Discharges from</u><br><u>irrigated lands)</u>  | <u>3.3</u><br><u>Dry</u><br><u>season<sup>D</sup></u>  | <u>10</u><br><u>Year-round</u>  | <u>0.14</u><br><u>Dry season<sup>D</sup></u><br><br><u>0.3</u><br><u>Wet season<sup>E</sup></u> | <u>Not</u><br><u>Applicable</u>  | <u>0.025</u><br><u>Year-round</u>  |
|   | <u>Owners/operators of</u><br><u>land used</u><br><u>for/containing</u><br><u>domestic</u><br><u>animals/livestock</u><br><u>(Domestic</u><br><u>animals/livestock waste</u><br><u>not draining to MS4s)</u>           | <u>8.0</u><br><u>Wet</u><br><u>season<sup>E</sup></u>  |   |   |  |  |
|   | <u>No responsible party</u><br><u>(Natural sources)</u>  |  |   |   |  |  |

| <b>FINAL LOAD ALLOCATIONS (LAs)<sup>AB</sup></b>  |  |  |   |   |  |  |
|---|--|--|---|---|--|--|
| <b><u>Waterbody<sup>C</sup></u><br/><u>the</u><br/><u>responsible</u><br/><u>party is</u><br/><u>discharging to</u></b>   | <b><u>Party Responsible</u><br/><u>for Allocation</u><br/><u>(Source)</u></b>  | <b><u>Receiving</u><br/><u>Water</u><br/><u>Nitrate as N</u><br/><u>LA (mg/L)</u><br/><br/><b><i><u>Aquatic</u></i><br/><b><i><u>Habitat</u></i></b></b></b> | <b><u>Receiving</u><br/><u>Water</u><br/><u>Nitrate as N</u><br/><u>LA (mg/L)</u><br/><br/><b><i><u>Human</u></i><br/><b><i><u>Health</u></i></b></b></b> | <b><u>Receiving Water</u><br/><u>Orthophosphate</u><br/><u>as P LA (mg/L)</u></b> | <b><u>Receiving</u><br/><u>Water Total</u><br/><u>Nitrogen as</u><br/><u>N LA (mg/L)</u></b> | <b><u>Receiving Water</u><br/><u>Un-ionized</u><br/><u>ammonia as N</u><br/><u>LA (mg/L)</u></b> |
| <u>Llagas Creek,</u><br><u>all reaches</u><br><u>downstream of</u><br><u>Chesebro</u><br><u>Reservoir,</u><br><u>Carnadero</u><br><u>Creek, all</u><br><u>reaches,</u><br><u>Furlong Creek,</u><br><u>all reaches</u> | <u>Owners/operators of</u><br><u>irrigated agricultural</u><br><u>lands</u><br><u>(Discharges from</u><br><u>irrigated lands)</u>  | <u>1.8</u><br><u>Dry</u><br><u>season<sup>D</sup></u>  | <u>10</u><br><u>Year-round</u>  | <u>0.05</u><br><u>Dry season<sup>D</sup></u>                                      | <u>Not</u><br><u>Applicable</u>  | <u>0.025</u><br><u>Year-round</u>  |
|   | <u>Owners/operators of</u><br><u>land used</u><br><u>for/containing</u><br><u>domestic</u><br><u>animals/livestock</u><br><u>(Domestic</u><br><u>animals/livestock waste</u><br><u>not draining to MS4s)</u> | <u>8.0</u><br><u>Wet</u><br><u>season<sup>E</sup></u>  |   | <u>0.3</u><br><u>Wet season<sup>E</sup></u>                                       |  |  |
|   | <u>No responsible party</u><br><u>(Natural sources)</u>  |  |   |   |  |  |
| <u>San Juan</u><br><u>Creek, all</u><br><u>reaches,</u><br><u>West Branch</u><br><u>San Juan</u><br><u>Creek, all</u><br><u>reaches</u>   | <u>Owners/operators of</u><br><u>irrigated agricultural</u><br><u>lands</u><br><u>(Discharges from</u><br><u>irrigated lands)</u>  | <u>3.3</u><br><u>Dry</u><br><u>season<sup>D</sup></u>  | <u>10</u><br><u>Year-round</u>  | <u>0.12</u><br><u>Dry season<sup>D</sup></u>                                      | <u>Not</u><br><u>Applicable</u>  | <u>0.025</u><br><u>Year-round</u>  |
|   | <u>Owners/operators of</u><br><u>land used</u><br><u>for/containing</u><br><u>domestic</u><br><u>animals/livestock</u><br><u>(Domestic</u><br><u>animals/livestock waste</u><br><u>not draining to MS4s)</u> | <u>8.0</u><br><u>Wet</u><br><u>season<sup>E</sup></u>  |   | <u>0.3</u><br><u>Wet season<sup>E</sup></u>                                       |  |  |
|   | <u>No responsible party</u><br><u>(Natural sources)</u>  |  |   |   |  |  |
| <u>Tequisquita</u><br><u>Slough</u>   | <u>Owners/operators of</u><br><u>irrigated agricultural</u><br><u>lands</u><br><u>(Discharges from</u><br><u>irrigated lands)</u>  | <u>2.2</u><br><u>Dry</u><br><u>season<sup>D</sup></u>  | <u>10</u><br><u>Year-round</u>  | <u>0.12</u><br><u>Dry season<sup>D</sup></u>                                      | <u>Not</u><br><u>Applicable</u>  | <u>0.025</u><br><u>Year-round</u>  |
|   | <u>Owners/operators of</u><br><u>land used</u><br><u>for/containing</u><br><u>domestic</u><br><u>animals/livestock</u><br><u>(Domestic</u><br><u>animals/livestock waste</u><br><u>not draining to MS4s)</u> | <u>8.0</u><br><u>Wet</u><br><u>season<sup>E</sup></u>  |   | <u>0.3</u><br><u>Wet season<sup>E</sup></u>                                       |  |  |
|   | <u>No responsible party</u><br><u>(Natural sources)</u>  |  |   |   |  |  |

| <b>FINAL LOAD ALLOCATIONS (LAs)<sup>AB</sup></b>   |  |   |  |  |  |  |
|--|--|---|--|--|--|--|
| <u>Waterbody<sup>C</sup></u><br><u>the</u><br><u>responsible</u><br><u>party is</u><br><u>discharging to</u> | <u>Party Responsible</u><br><u>for Allocation</u><br><u>(Source)</u>   | <u>Receiving</u><br><u>Water</u><br><u>Nitrate as N</u><br><u>LA (mg/L)</u><br><br><u>Aquatic</u><br><u>Habitat</u> | <u>Receiving</u><br><u>Water</u><br><u>Nitrate as N</u><br><u>LA (mg/L)</u><br><br><u>Human</u><br><u>Health</u> | <u>Receiving Water</u><br><u>Orthophosphate</u><br><u>as P LA (mg/L)</u> | <u>Receiving</u><br><u>Water Total</u><br><u>Nitrogen as</u><br><u>N LA (mg/L)</u> | <u>Receiving Water</u><br><u>Un-ionized</u><br><u>ammonia as N</u><br><u>LA (mg/L)</u> |
| <u>San Benito</u><br><u>River</u>  | <u>Owners/operators of</u><br><u>irrigated agricultural</u><br><u>lands</u><br><u>(Discharges from</u><br><u>irrigated lands)</u>  | <u>Not</u><br><u>Applicable</u>   | <u>10</u><br><u>Year-</u><br><u>round</u>  | <u>Not Applicable</u>  | <u>Not</u><br><u>Applicable</u>  | <u>0.025</u><br><u>Year-round</u>  |
|  | <u>Owners/operators of</u><br><u>land used</u><br><u>for/containing</u><br><u>domestic</u><br><u>animals/livestock</u><br><u>(Domestic</u><br><u>animals/livestock</u><br><u>waste not draining</u><br><u>to MS4s)</u> |   |  |  |  |  |
|  | <u>No responsible party</u><br><u>(Natural sources)</u>  |   |  |  |  |  |
| <u>Tres Pinos</u><br><u>Creek</u>  | <u>Owners/operators of</u><br><u>irrigated agricultural</u><br><u>lands</u><br><u>(Discharges from</u><br><u>irrigated lands)</u>  | <u>Not</u><br><u>Applicable</u>   | <u>10</u><br><u>Year-</u><br><u>round</u>  | <u>Not Applicable</u>  | <u>Not</u><br><u>Applicable</u>  | <u>0.025</u><br><u>Year-round</u>  |
|  | <u>Owners/operators of</u><br><u>land used</u><br><u>for/containing</u><br><u>domestic</u><br><u>animals/livestock</u><br><u>(Domestic</u><br><u>animals/livestock</u><br><u>waste not draining</u><br><u>to MS4s)</u> |   |  |  |  |  |
|  | <u>No responsible party</u><br><u>(Natural sources)</u>  |   |  |  |  |  |
| <u>Pacheco</u><br><u>Creek</u>   | <u>Owners/operators of</u><br><u>irrigated agricultural</u><br><u>lands</u><br><u>(Discharges from</u><br><u>irrigated lands)</u>  | <u>Not</u><br><u>Applicable</u>   | <u>10</u><br><u>Year-</u><br><u>round</u>  | <u>Not Applicable</u>  | <u>Not</u><br><u>Applicable</u>  | <u>0.025</u><br><u>Year-round</u>  |
|  | <u>Owners/operators of</u><br><u>land used</u><br><u>for/containing</u><br><u>domestic</u><br><u>animals/livestock</u><br><u>(Domestic</u><br><u>animals/livestock</u><br><u>waste not draining</u><br><u>to MS4s)</u> |   |  |  |  |  |
|  | <u>No responsible party</u><br><u>(Natural sources)</u>  |   |  |  |  |  |



| <b>FINAL LOAD ALLOCATIONS (LAs)<sup>AB</sup></b>   |  |   |  |  |  |  |
|--|--|---|--|--|--|--|
| <b>Waterbody<sup>C</sup><br/>the<br/>responsible<br/>party is<br/>discharging to</b>   | <b>Party Responsible<br/>for Allocation<br/>(Source)</b>   | <b>Receiving<br/>Water<br/>Nitrate as N<br/>LA (mg/L)<br/><br/><i>Aquatic<br/>Habitat</i></b> | <b>Receiving<br/>Water<br/>Nitrate as N<br/>LA (mg/L)<br/><br/><i>Human<br/>Health</i></b> | <b>Receiving Water<br/>Orthophosphate<br/>as P LA (mg/L)</b> | <b>Receiving<br/>Water Total<br/>Nitrogen as<br/>N LA (mg/L)</b> | <b>Receiving Water<br/>Un-ionized<br/>ammonia as N<br/>LA (mg/L)</b> |
| All reaches of:<br>Watsonville<br>Slough,<br>Harkins<br>Slough,<br>Gallighan<br>Slough,<br>Struve Slough   | Owners/operators of<br>irrigated agricultural<br>lands<br>(Discharges from<br>irrigated lands)   | Not<br>Applicable   | 10<br>Year-round   | 0.14<br>Dry season <sup>D</sup>                              | 2.1<br>Dry<br>season <sup>D</sup>                                | 0.025<br>Year-round  |
|  | Owners/operators of<br>land used<br>for/containing<br>domestic<br>animals/livestock<br>(Domestic<br>animals/livestock waste<br>not draining to MS4s) |   |  | 0.3<br>Wet season <sup>E</sup>                               | 8.0<br>Wet<br>season <sup>E</sup>                                |  |
|  | No responsible party<br>(Natural sources)  |   |  |  |  |  |
| Any identified<br>impaired<br>waterbody that<br>could receive<br>nutrient<br>discharges<br>from fertilizer<br>applications on<br>golf courses<br>within the<br>Pajaro River<br>Basin | Owners/Operators of<br>Public and Private<br>golf courses in the<br>Pajaro River basin<br>(golf course fertilizer<br>applications)                   | See<br>specific<br>waterbody<br>for specific<br>LAs   | See<br>specific<br>waterbody<br>for specific<br>LAs  | See specific<br>waterbody for<br>specific LAs                | See<br>specific<br>waterbody<br>for specific<br>LAs              | 0.025<br>Year-round  |
| Millers Canal  | Owners/operators of<br>irrigated agricultural<br>lands<br>(Discharges from<br>irrigated lands)   | Not<br>Applicable   | 10<br>Year-round   | 0.04<br>Dry season <sup>D</sup>                              | 1.1<br>Dry<br>season <sup>D</sup>                                | 0.025<br>Year-round  |
|  | Owners/operators of<br>land used<br>for/containing<br>domestic<br>animals/livestock<br>(Domestic<br>animals/livestock waste<br>not draining to MS4s) |   |  | 0.3<br>Wet season <sup>E</sup>                               | 8.0<br>Wet<br>season <sup>E</sup>                                |  |
|  | No responsible party<br>(Natural sources)  |   |  |  |  |  |

<sup>A</sup> Federal and state anti-degradation requirements apply to all waste load and load allocations.

<sup>B</sup> Achievement of final waste load and load allocations to be determined on the basis of the number of measured exceedances and/or other criteria set forth in Section 4 of the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* (the "Listing Policy" – State Water Resources Control Board, Resolution No. 2004-0063, adopted September 2004) or as consistent with any relevant revisions of the Listing Policy promulgated in the future pursuant to Government Code section 11353.

C Waterbody name includes all reaches of named waterbody and tributaries to the named waterbody.

D Dry season is May 1st – October 31<sup>st</sup>.

E Wet season is November 1st – April 30<sup>th</sup>.

The parties responsible for the allocation to controllable sources are not responsible for the allocation to natural sources.

Table IX T-3. Interim Allocations

| <b>INTERIM WASTE LOAD ALLOCATIONS (WLAs)</b>   |   |   |   |
|--|---|---|---|
| <u>Waterbody</u>   | <u>Party Responsible for Achieving Waste Load Allocation (Source)</u>   | <u>First Interim WLA</u>  | <u>Second Interim WLA</u>   |
| <u>All waterbodies given waste load allocations (WLAs) as identified in Final Waste Load Allocations Table</u> | <p><u>City of Gilroy</u><br/> <u>City of Morgan Hill Urbanized areas (Storm drain discharges to MS4s)</u><br/> <u>Storm Water General Permit</u><br/> <u>NPDES No. CAS000004</u></p> <p><u>City of Watsonville</u><br/> <u>(Storm drain discharges to MS4s)</u><br/> <u>Storm Water Permit</u><br/> <u>NPDES No. CAS000004</u></p> <p><u>County of Santa Cruz</u><br/> <u>(Storm drain discharges to MS4s)</u><br/> <u>Storm Water General Permit</u><br/> <u>NPDES No. CAS000004</u></p> <p><u>County of Santa Clara</u><br/> <u>(Storm drain discharges to MS4s)</u><br/> <u>Storm Water General Permit</u><br/> <u>NPDES No. CAS000004</u></p> <p><u>San Juan Bautista WWTP</u><br/> <u>(Wastewater discharges to surface waterbody)</u><br/> <u>NPDES No. CA0047902</u></p> <p><u>South County Regional Wastewater Authority (Wastewater discharges to surface waterbody)</u><br/> <u>NPDES No. CA0049964</u></p> | <p><u>Achieve <b>MUN standard-based and Un-ionized ammonia objective-based</b> allocations:</u></p> <p><u><b>10 years after effective date of the TMDLs</b></u></p> | <p><u>Achieve <b>Wet Season</b> (Nov. 1 to Apr. 30) <b>Biostimulatory target-based TMDL</b> allocations:</u></p> <p><u>Wet Season Allocation/Waterbody combinations as identified in Final Waste Load Allocations Table</u></p> <p><u><b>15 years after effective date of the TMDLs</b></u></p> |

| <b>INTERIM LOAD ALLOCATIONS (LAs)</b>  |   |  |   |
|--|---|--|---|
| <b>Waterbody</b>   | <b>Party Responsible for Achieving Load Allocation (Source)</b>                       | <b>First Interim LA</b>  | <b>Second Interim LA</b>  |
| All waterbodies given load allocations (LAs) as identified in Final Load Allocations Table | Owners/operators of irrigated agricultural lands<br>(Discharges from irrigated lands) | Achieve <b>MUN standard-based and Un-ionized ammonia objective-based</b> allocations:<br><br><b>10 years after effective date of the TMDLs</b> | Achieve <b>Wet Season</b> (Nov. 1 to Apr. 30) <b>Biostimulatory target-based TMDL allocations:</b><br><br>Wet Season Allocation/Waterbody combinations as identified in Final Load Allocations Table<br><br><b>15 years after effective date of the TMDLs</b> |

### **Margin of Safety**

A margin of safety is incorporated implicitly in the TMDLs through conservative model assumptions and statistical analysis. In addition, an explicit margin of safety is incorporated by reserving 20% of the load, calculated on a concentration basis, from wet season allocations.

### **Implementation**

#### **DISCHARGES FROM IRRIGATED AGRICULTURAL LANDS:**

Owners and operators of irrigated agricultural land must comply with the Conditional Waiver of Waste Discharge Requirements for Irrigated Lands (Order R3-2012-0011; the "Agricultural Order") and the Monitoring and Reporting Programs in accordance with Orders R3-2012-0011-01, R3-2012-0011-02, and R3-2012-0011-03, or their renewals or replacements, to meet load allocations and achieve the TMDLs. The requirements in these orders, and their renewals or replacements in the future, will implement the TMDL and rectify the impairments addressed in the TMDLs.

Current requirements in the Agricultural Order that will achieve the load allocations include:

- A. Implement, and update as necessary, management practices to reduce nutrient loading.
- B. Maintain existing, naturally occurring riparian vegetative cover in aquatic habitat areas.
- C. Develop/update and implement Farm Plans.
- D. Properly destroy abandoned groundwater wells.
- E. Develop and initiate implementation of an Irrigation and Nutrient Management Plan (INMP) or alternative certified by a Professional Soil Scientist, Professional Agronomist, or Crop Advisor certified by the American Society of Agronomy, or similarly qualified professional.

The current Agricultural Order provides the requirements necessary to implement this TMDL. Therefore, no new requirements are proposed as part of this TMDL.

#### **Monitoring**

Owners and operators of irrigated agricultural lands must perform monitoring and reporting in accordance with Monitoring and Reporting Program Orders R3-2012-0011-01, R3-2012-0011-02, and R3-2012-0011-03, as applicable, or their renewals or replacements,

#### **Determination of Progress and Attainment of Load Allocations**

Load allocations will be achieved through a combination of implementation of management practices and strategies to reduce nitrogen compound and orthophosphate loading, and water quality monitoring. Flexibility to allow owners/operators of irrigated lands to demonstrate progress towards

and attainment of load allocations is a consideration. Additionally, staff is aware that not all implementing parties are necessarily contributing to or causing a surface water impairment. However, it is important to recognize that impacting shallow groundwater with nutrient pollution may also impact surface water quality via baseflow loading contributions to the surface waterbodies.

To allow for flexibility, Central Coast Water Board staff will assess progress towards and attainment of load allocations using one or a combination of the following:

- A. Attaining the load allocations in the receiving water;
- B. Attaining receiving water TMDL numeric targets for nutrient-response indicators (i.e., dissolved oxygen water quality objectives, chlorophyll a targets and microcystin targets) and mitigation of downstream nutrient impacts to receiving waterbodies may constitute a demonstration of attainment of the nitrate, nitrogen and orthophosphate-based seasonal biostimulatory load allocations. Note that implementing parties are strongly encouraged to maximize overhead riparian canopy, where and if appropriate, using riparian vegetation, because doing so could result in achieving nutrient-response indicator targets before allocations are achieved (resulting in a less stringent allocation);
- C. Demonstrating quantifiable receiving water mass load reductions;
- D. Owners/operators of irrigated lands may be deemed in compliance with load allocations by implementing management practices that are capable of achieving interim and final load allocations identified in these TMDLs;
- E. Owners/operators of irrigated lands may provide sufficient evidence to demonstrate that they are and will continue to be in compliance with the load allocations. Such evidence could include documentation submitted by the owner/operator to the Executive Officer that the owner/operator is not causing waste to be discharged to impaired waterbodies resulting or contributing to violations of the load allocations.

#### STORM DRAIN DISCHARGES TO MS4s:

MS4 entities in the Pajaro River basin are required to implement and comply with the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (Order No. 2013-0001-DWQ, NPDES No. CAS000004). Consistent with the provisions of the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems, or any subsequent General Permits, the Central Coast Water Board will require MS4 entities discharging to receiving waters impaired by nutrient-related pollution in the Pajaro River basin to develop and submit for Executive Officer approval a Waste Load Allocation Attainment Program (WAAP). The Central Coast Water Board will require MS4 entities to develop and submit for Executive Officer approval a Waste Load Allocation Attainment Program consistent with the requirements of the General Permit, or with any subsequent General Permits. The WAAP shall include descriptions of the actions that will be taken by the MS4 entity to attain the TMDL waste load allocations, and shall specifically address:

- A. Development of an assessment and implementation strategy;
- B. Source identification and prioritization;
- C. BMP identification, prioritization, implementation schedule, analysis, and effectiveness assessment;
- D. Monitoring and reporting program development and implementation. Monitoring program goals shall address: (1) assessment of stormwater discharge and/or receiving water quality; (2) assessment of BMP effectiveness; and (3) demonstration and progress towards achieving interim goals and waste load allocations.
- E. Coordination with stakeholders; and
- F. Other pertinent factors.

Determination of Progress and Attainment of Waste Load Allocations

Waste load allocations will be achieved through a combination of implementation of management practices and strategies to reduce nitrogen compound and orthophosphate loading, and water quality monitoring.

To allow for flexibility, Central Coast Water Board staff will assess progress towards and attainment of waste load allocations using one or a combination of the following:

- A. Attaining the waste load allocations in the receiving water;
- B. Attaining receiving water TMDL numeric targets for nutrient-response indicators (i.e., dissolved oxygen water quality objectives, chlorophyll a targets and microcystin targets) and mitigation of downstream nutrient impacts to receiving waterbodies may constitute a demonstration of the attainment of the nitrate, nitrogen, and orthophosphate-based seasonal biostimulatory waste load allocations. Note that implementing parties are strongly encouraged to maximize overhead riparian canopy using riparian vegetation, where and if appropriate, because doing so could result in achieving nutrient-response indicator targets before allocations are achieved (resulting in a less stringent allocation);
- C. Demonstrate compliance by measuring concentrations in stormdrain outfalls;
- D. Demonstrate compliance by demonstrating load reductions on mass basis at stormdrain outfalls;
- E. MS4s may be deemed in compliance with waste load allocations through implementation and assessment of pollutant loading reduction projects and assessment of BMPs capable of achieving interim and final waste load allocations identified in this TMDL in combination with water quality monitoring for a balanced approach to determining program effectiveness; and
- F. Any other effluent limitations and conditions which are consistent with the assumptions and requirements of the waste load allocations.

Monitoring

MS4 entities with operations and storm water conveyance systems discharging to receiving waters impaired by nutrient-related pollution in the Pajaro River basin – specifically the cities of Watsonville and Gilroy, and the counties of Santa Cruz and Santa Clara – are required to develop and submit monitoring programs as part of their WAAP. The goals of the monitoring programs are described in the requirements of the WAAP.

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, whereby outfall or receiving water monitoring is phased in 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, may facilitate accurate assessment of how well the BMPs control pollution sources. Successful practices would then be implemented in other or larger parts of the MS4.

INDUSTRIAL AND CONSTRUCTION STORMWATER DISCHARGES:

Based on evidence and information provided in the TMDL report (attachment 2 to the staff report), NPDES stormwater-permitted industrial facilities and construction sites in the Pajaro River basin would not be expected to be a significant risk or cause of the observed nutrient water quality impairments, and these types of facilities are generally expected to be currently meeting proposed waste load allocations. Therefore, at this time, additional regulatory measures for this source category are not warranted. However, according to the U.S. Environmental Protection Agency and the State Water Resources Control Board, all NPDES-permitted point sources identified in a TMDL must be given a waste load allocation, even if their current load to receiving waters is zero.

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. 97-03-DWQ, NPDES No. CAS000001 or Order No. 2014-0057-DWQ, NPDES No. CAS000001) or the Construction General Permit (Order No. 2012-0006-DWQ, NPDES No. CAS000002, or any subsequent Construction General Permit), respectively.

Available information does not conclusively demonstrate that stormwater from all industrial facilities and construction sites are meeting waste load allocations. More information may be obtained during the implementation phase of these TMDLs to further assess the level of nutrient contributions to surface waters from these source categories, and to identify any actions needed to reduce nutrient loading.

#### MUNICIPAL WASTEWATER TREATMENT FACILITIES:

Based on available data, discharges of treated wastewater from municipal wastewater treatment facilities are expected to generally be a relatively minor source of nutrient pollution to surface waters of the Pajaro River basin. However, according to the U.S. Environmental Protection Agency and the State Water Resources Control Board, all NPDES-permitted point sources identified in a TMDL must be given a waste load allocation, even if their current load to receiving waters is zero.

Watsonville Wastewater Treatment Facility (Order No. R3-2014-0006 NPDES No. CA0048216) uses an ocean discharge point in Monterey Bay and these coastal marine waters are outside the scope of these TMDLs. Further regulatory measures in the context of these TMDLs for this facility is not warranted. However, this facility will be given a generic waste load allocation, to reserve discharge capacity if there is a need for future discharge points for this facility in surface waters of the Pajaro Valley (for example, as part of a recycled water program). As noted above, all NPDES-permitted point sources identified in a TMDL must be given a waste load allocation, even if their current load to receiving waters is zero, otherwise their allocation is assumed to be zero and no discharges of the identified pollutant(s) are allowed now or in the future.

The South County Wastewater Treatment Facility (Order No. R3-2010-0009, NPDES No. CA0049964) is permitted to discharge treated wastewater to the Pajaro River, but only under certain flow conditions. Based on available information, the existing effluent limitations and conditions in Order No. R3-2010-0009 would be expected to be capable of implementing and attaining the proposed waste load allocations identified in these TMDLs. The available information does not conclusively demonstrate that the permitted treated wastewater discharge to the Pajaro River poses no threats to aquatic habitat, and thus during the TMDL implementation phase the Central Coast Water Board may use its Water Code section 13267 authorities to have the South County Regional Wastewater Authority estimate their current or future nutrient loading contribution to the Pajaro River, and the Central Coast Water Board may subsequently assess what, if any, modifications to the nutrient effluent limitations are needed to those currently specified in Order No. R3-2010-0009.

The City of San Juan Bautista Wastewater Treatment Facility (Order No. R3-2009-0019 NPDES No. CA0047902), is permitted to discharge treated wastewater to an unnamed drainage ditch that is tributary to the San Juan Creek. At this time, the hydraulic connectivity of this ditch with other creeks and drainages of the San Juan Valley is uncertain; however, elevated nutrient concentrations on the treated wastewater discharged to the ditch appear to be generally exceeding water quality numeric targets identified in these TMDLs. Central Coast Water Board may use its Water Code section 13267 authorities to have the City of San Juan Bautista estimate their nutrient loading contribution, and nutrient-related water quality impacts to downstream receiving waters. On the basis of this, and other information collected during TMDL implementation, the Central Coast Water Board will incorporate effluent and receiving water limitations for the surface water discharge at the San Juan Bautista Wastewater Treatment Facility.

### DOMESTIC ANIMAL AND LIVESTOCK WASTE DISCHARGES:

The water quality data available from stream reaches that exclusively drain grazing lands, or lands where grazed animals and farm animals can be expected to be present, indicate the nitrogen compounds and orthophosphate proposed water quality targets, and thus load allocations, are being met in these reaches. Based on available data, this source category appears to be meeting their load allocation. As such, no new regulatory requirements are deemed necessary or are being proposed.

It is important to note that the Pajaro River basin is subject to a Domestic Animal Waste Discharge Prohibition (Resolution No. R3-2009-0008) and are subject to compliance with an approved indicator bacteria TMDL load allocation. Implementation efforts by responsible parties to comply with this prohibition and with indicator bacteria load allocations will, as a practical matter, also reduce the risk of nitrogen and phosphorus loading to surface waters from domestic animal waste.

While this source category is expected to be currently meeting load allocations, the existing data does not conclusively establish that all unpermitted confined animal facilities, grazing animal operations, or equestrian facilities are meeting load allocations. For this reason, the Central Coast Water Board is not proposing new regulatory measures for this source category at this time, but more information will be obtained during the implementation phase of the TMDLs to further assess the level of nutrient contribution from these source categories, and to identify any actions, if necessary, to reduce loading.

### PUBLIC AND PRIVATE GOLF COURSES:

Use of fertilizer on golf courses could conceivably be a source of nutrients to surface waters in any given watershed. Available data from creeks adjacent to golf courses in the Pajaro River basin, as well as information on regional and national golf course water quality data, suggest that golf courses would be expected to be meeting load allocations protective of designated beneficial uses in streams of the Pajaro River basin. Formal regulatory actions or regulatory oversight of golf courses to implement these TMDLs, therefore, is unwarranted at this time. Because anti-degradation is an element of all water quality standards, owners and operators of public and private golf courses should continue to implement turf management practices, which help to protect and maintain existing water quality, and to prevent any further surface water quality degradation.

While this source category is expected to be currently meeting load allocations, the existing data does not conclusively establish that all public and private golf courses in the Pajaro River basin are meeting load allocations. For this reason, the Central Coast Water Board is not proposing new regulatory measures for this source category at this time, but more information will be obtained during the implementation phase of the TMDLs to further assess the level of nutrient contribution from these source categories, and to identify any actions, if necessary, to reduce loading.

### **Tracking and Evaluation**

After the TMDLs are approved by OAL, the Central Coast Water Board periodically will perform a review of 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 annual reports, nonpoint source pollution control implementation programs, evaluations submitted by responsible parties, and other available information to determine progress toward implementing required actions and achieving the allocations and the numeric goal.

Responsible parties may also demonstrate that although water quality objectives are not being achieved in receiving waters, controllable sources of nitrogen compounds and orthophosphate are not contributing to the exceedance. If this is the case, the Central Coast Water Board may re-

evaluate the numeric goal and allocations. For example, the Central Coast Water Board may pursue and approve a site-specific objective. The site-specific objective would be based on evidence that natural conditions or background sources alone were the cause of exceedances of the Basin Plan water quality objectives.

Periodic reviews will continue until the water quality objectives are achieved. The implementation schedule for achieving this TMDL is 25 years after the date of approval by OAL.

### **Optional Special Studies and Reconsideration of the TMDLs**

Additional monitoring and voluntary optional special studies would be useful to evaluate the uncertainties and assumptions made in the development of these TMDLs. The results of special studies may be used to reevaluate waste load allocations and load allocations in these TMDLs. Implementing parties may submit work plans for optional special studies (if implementing parties choose to conduct special studies) for approval by the Executive Officer. Special studies completed and final reports shall be submitted for Executive Officer approval. Additionally, eutrophication is an active area of research. Consequently, ongoing scientific research on eutrophication and biostimulation may further inform the Water Board regarding waste load or load allocations that are protective against biostimulatory impairments, implementation timelines, and/or downstream impacts. At this time, staff maintains there is sufficient information to begin to implement these TMDLs and make progress towards attainment of water quality standards and the proposed allocations. However, in recognition of the uncertainties regarding nutrient pollution and biostimulatory impairments, staff proposes that the Water Board reconsider the waste load and load allocations, if merited by optional special studies and new research, ten years after the effective date of the TMDLs, which is upon approval by the OAL. A time schedule for optional studies and Central Coast Water Board reconsideration of the TMDL is presented in Table IX T-4.

Further, the Central Coast Water Board may also reconsider these TMDLs, the nutrient water quality criteria, or other TMDL elements on the basis of potential future promulgation of a statewide nutrient policy for inland surface waters in the State of California.

Table IX T-4. Time schedule for optional studies and Water Board reconsideration of waste load allocations and load allocations

| <b><u>Proposed Actions</u></b>     | <b><u>Description</u></b>   | <b><u>Time Schedule-Milestones</u></b>                     |
|------------------------------------|---|--|
| <u>Optional studies work plans</u> | <u>Implementing parties shall submit work plans for optional special studies (if implementing parties choose to conduct special studies) for approval by the Executive Officer</u>  | <u>By four years after the effective date of the TMDL</u>  |
| <u>Final optional studies</u>      | <u>Optional studies completed and final report submitted for Executive Officer approval.</u>  | <u>By six years after the effective date of the TMDL</u>   |
| <u>Reconsideration of TMDL</u>     | <u>If merited by optional special studies or information from ongoing research into eutrophication issues, the Water Board will reconsider the waste load allocations and load allocations and/or implementation timelines adopted pursuant to this TMDL.</u> | <u>By eight years after the effective date of the TMDL</u> |