

ATTACHMENT 1  
to  
RESOLUTION NO. R1-2018-0025

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Water Quality Trading Framework for  
the Laguna de Santa Rosa Watershed

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Proposed for Regional Water Board Consideration:  
July 11, 2018

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## Introduction

The purpose of this document is to provide a framework for the implementation of water quality trading (WQT) activities in the Laguna de Santa Rosa (Laguna) watershed (hereinafter “this Framework” or “this WQT Framework”), where such activities are explicitly allowed under National Pollutant Discharge Elimination System (NPDES) permits adopted by order of the North Coast Regional Water Quality Control Board (Regional Water Board).

This Framework seeks to provide NPDES permittees with cost-effective and environmentally beneficial options for complying with effluent limitations for specifically named pollutant discharges to surface waters. Environmentally beneficial compliance options allowed under this Framework include restoration projects that support and/or enhance instream conditions, habitat quality, and ecological functions. This Framework is available to the City of Santa Rosa and the Town of Windsor.

## Foundational References

This WQT Framework draws heavily from the following foundational reference materials:

- U.S. Environmental Protection Agency *Water Quality Trading Policy*, dated January 13, 2003. (a.k.a. 2003 USEPA Trading Policy)
- *Building a Water Quality Trading Program: Options and Considerations*; a product of the National Network on Water Quality Trading, dated June 2015. (a.k.a. National Network’s *Options and Considerations* document)
- *Water Quality Trading Framework for the Laguna de Santa Rosa Watershed*; technical report prepared for Sonoma Resource Conservation District by Kieser & Associates, LLC, dated September 2015. (a.k.a. Local Stakeholder Recommendations)
- *The Water Quality Trading Toolkit*; created by the Association of Clean Water Administrators and Willamette Partnership, dated August 2016. (a.k.a. ACWA Trading Framework Template)

## Guiding Principles

While this Framework details the basic processes and requirements for facilitating WQT within the Laguna watershed, individual trades may introduce unique circumstances and challenges. Should questions arise about the intent of this Framework’s provisions, its users should defer to these guiding principles, as well as those provided in the Local Stakeholder Recommendations:

- Activities conducted pursuant to this WQT Framework must be supported by sound science and effectively accomplish regulatory and environmental goals.
- WQT activities must provide sufficient accountability, transparency, accessibility, and opportunities for public involvement to ensure that promised water quality improvements are delivered.
- The benefits of WQT must be realized without allowing adverse water quality impacts associated with credit-generating actions to occur in place, in kind, or in time.

- WQT activities must adhere to all applicable laws, including the federal Clean Water Act, the California Porter-Cologne Water Quality Control Act, and local laws.

## **1. Policy & Regulatory Instruments to Support Trading**

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### **1.1 Authority for Water Quality Trading in California**

The Regional Water Board's authority to utilize WQT as a means of controlling pollution in California is derived from federal and state laws and policies. Those laws and policies are enumerated in the Regional Water Board resolution and the administrative record that supports the approval of this WQT Framework (Resolution No. R1-2018-0025).

### **1.2 Regulatory Instruments to Support Trading**

This WQT Framework may be utilized by dischargers whose NPDES permits explicitly allow the use of nutrient offsets or pollutant credit trading as a means for complying with specific effluent limitations.<sup>1</sup>

### **1.3 Public Involvement**

In order to ensure public accountability, transparency, and accessibility during the implementation of this Framework, the following opportunities for public involvement are provided:

- Minimum 30-day public review, opportunity to comment, written response, and public hearing prior to the Regional Water Board's adoption of NPDES permits authorizing the use of nutrient offsets or pollutant credit trading as a compliance option;
- Minimum 30-day public review, opportunity to comment, written response, and public hearing prior to the Regional Water Board's approval or subsequent renewal of this WQT Framework;
- Minimum 30-day public review and opportunity to comment prior to the Regional Water Board Executive Officer's approval of supporting documentation for practices to be pre-qualified under this Framework (Section 2.5.2);
- Public notification and release (online) of the Regional Water Board Executive Officer's approval of Credit Project Plans and relevant project information (Section 7.2);
- Public notification and release (online) of key documents and reports related to project implementation and verification (Section 8); and
- Public notification and release (online) of key documents and notices related to credit certification and credit tracking (Section 9).

Nothing in this section shall be construed to alter in any way the statutory requirements of the Regional Water Board to provide opportunities for public review and comment on official permitting, enforcement, and/or other regulatory actions.

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<sup>1</sup> For purposes of this Framework, allowances for the use of nutrient offsets in Regional Water Board approved NPDES permits for the City of Santa Rosa (Order No. R1-2013-0001) and the Town of Windsor (Order No. R1-2013-0042) currently constitute allowances for water quality trading.

## 1.4 Regional Water Board Authority to Audit

Because this WQT Framework represents an option for complying with effluent limitations in NPDES permits issued by the Regional Water Board, and because the Regional Water Board has the authority to determine compliance with permits it issues, all activities conducted (and records generated) under the terms of this Framework shall be subject to audit and inspection by Regional Water Board staff. Additional information about the Regional Water Board's permit compliance and enforcement authorities is provided in Section 10 below.

## 2. Trading Basics

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### 2.1 Types of Trades

This Framework allows trading of pollutant credits (hereinafter "water quality credits").

### 2.2 Trading Parties

This Framework generally supports trading of water quality credits between NPDES permittees (i.e., point source dischargers or credit buyers) and unregulated nonpoint sources (i.e., credit generators or sellers). However, nothing prohibits point source dischargers from trading water quality credits amongst themselves (e.g., the City of Santa Rosa selling credits to the Town of Windsor), or an entity from generating water quality credits for its own use (e.g., the City's municipal parks department generating credits to be used by the City's NPDES permitted wastewater treatment facility), provided all other eligibility criteria and Framework requirements are met. Trading eligibility criteria are described in Section 3 below.

### 2.3 Trading Area

The trading area for this Framework (where water quality credits may be generated, bought, sold, and used) is the Laguna de Santa Rosa watershed in Sonoma County, CA. The 254 square-mile watershed consists of all areas drained by the Laguna de Santa Rosa, Santa Rosa Creek, and Mark West Creek, which collectively drain into the Russian River. A map of the trading area is presented in Figure 2.3 below.

### 2.4 Types of Credits to be Traded

This Framework supports trading of water quality credits for one pollutant only, total phosphorus, on a mass basis. Credits are generated through approved phosphorus reduction or removal actions. One credit is equal to one pound of total phosphorus. Additional information about credit characteristics is provided in Section 6 below.

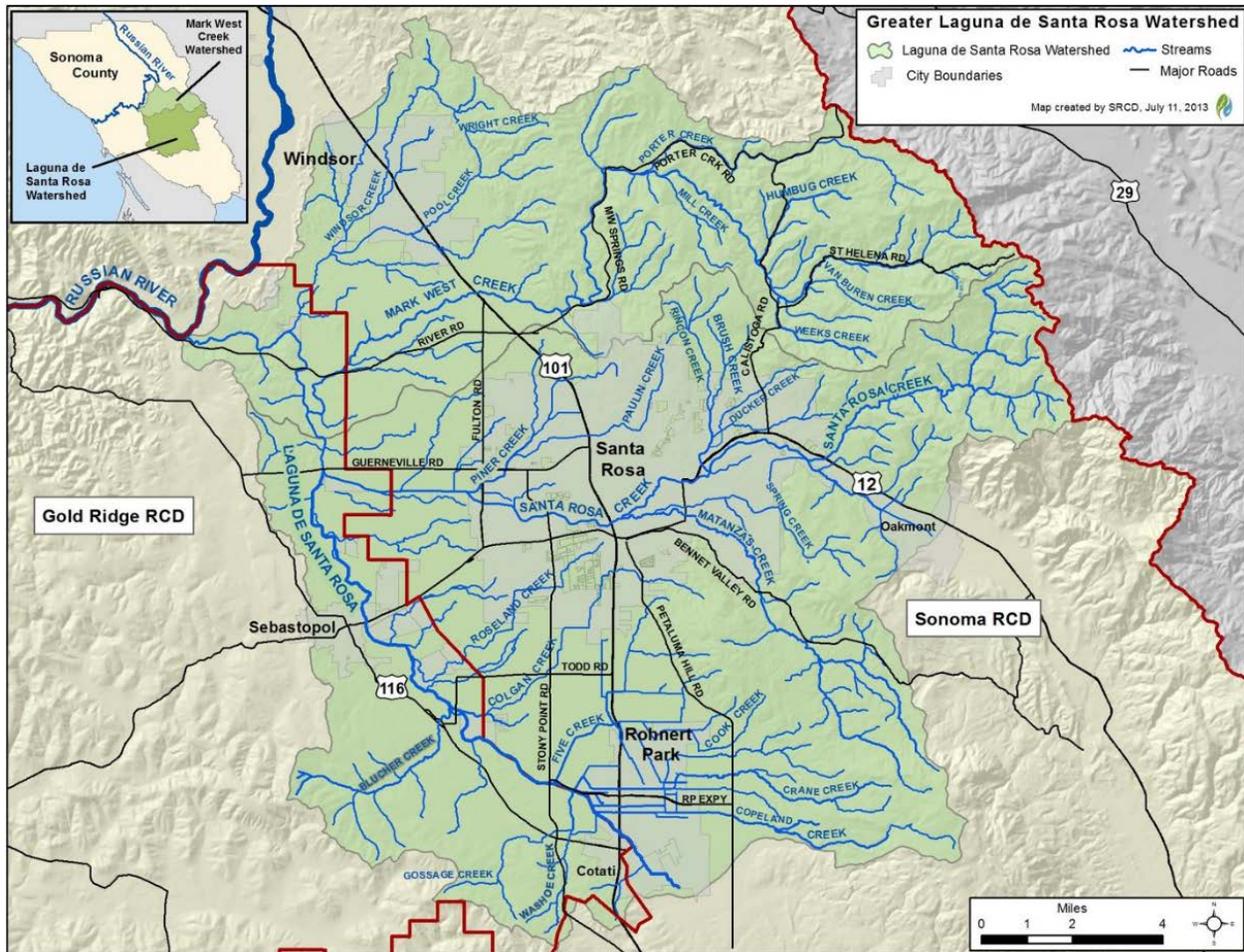


Figure 2.3. Trading Area for the Laguna de Santa Rosa WQT Framework<sup>2</sup>

## 2.5 Approved / Pre-qualified Practices

Supporting documentation for all practices used to generate water quality credits under this Framework must first be subject to public review and be approved by the Regional Water Board Executive Officer. Once approved, the practices (and associated credit quantification methods) shall be considered pre-qualified for future use on a project-scale, as will be described in Credit Project Plans (Section 7.1). To ensure transparency, the Regional Water Board will maintain a current and publicly-accessible list of pre-qualified practices as well as the approved supporting documentation for those practices on its website.

<sup>2</sup> Map copied from *Water Quality Trading Framework for the Laguna de Santa Rosa Watershed*; technical report prepared for Sonoma Resource Conservation District by Kieser & Associates, LLC, dated 2015. (a.k.a. Local Stakeholder Recommendations)

### 2.5.1 Supporting Documentation for Pre-qualified Practices

As mentioned above, in order to be considered pre-qualified for use on a project-scale, each practice proposed as the basis for water quality credit generation must be characterized by supporting documentation. The supporting documentation should establish the standards of quality, predictability, effectiveness, and transparency that will guide site-specific implementation of the practice in question and quantification of the water quality credits to be generated. Supporting documentation for each practice may vary based on the nature of the practice, but should generally include the following:

#### *Practice Standards*

- Description of the practice and its purpose;
- Description of where the practice should be applied (i.e. appropriate site conditions);
- Guidelines and performance standards for design, installation, and maintenance;
- Potential side effects, interactions, and additional benefits of the practice;
- Practice-specific baseline requirements (Section 3.2.2), maximum project life (Section 6.2), and applicable trading ratio (Section 5); and
- Monitoring requirements as needed to support practice implementation (Section 11.2).

#### *Credit Quantification Methods*

- Description of predicted practice effectiveness, as supported by site-specific analysis or literature;
- Technical summary of the method by which water quality credits will be calculated (i.e., credit quantification method), and a description of the method's accuracy, sensitivity, and uncertainty;
- Monitoring required to support the accurate use of the credit quantification method;
- Procedures for applying the credit quantification method and documentation requirements; and
- Date or version number of the credit quantification method, and identifying information for the method's developer.

#### *Project Review / Verification Procedures*

- Recommended procedures for pre- and post-project site condition assessments, monitoring, and project verification activities;
- Recommended documentation and reporting for pre- and post-project site condition assessments, monitoring, and project verification activities; and
- Recommended conditions / schedule for credit release (if applicable).

Where professional certification or special expertise is necessary for the design, installation, maintenance, credit quantification, or verification of a particular practice, the supporting documentation for that practice should describe such requirements.

Additional information about credit quantification methods is provided in Section 4 below. Additional information about documenting pre- and post-project site conditions is provided in Section 8.1. Additional information about initial and ongoing project verification requirements is provided in Sections 8.2 and 8.3, respectively.

## 2.5.2 Process for Approving Pre-qualified Practices

The process for approving (or pre-qualifying) a practice for use under this WQT Framework is as follows.

### *Step 1: Preparation and Submittal of Supporting Documentation*

New and/or updated practices may be proposed by any entity at any time for pre-qualification under this WQT Framework. Supporting documentation for each practice (described in Section 2.5.1 above) must be prepared and submitted to Regional Water Board staff, along with a request to initiate the approval process described herein.

### *Step 2: Initial Screening / Completeness Review*

Regional Water Board staff will perform an initial screening of the request for approval and supporting documentation for the proposed practice to verify completeness, and will solicit technical input and/or additional information from the proposal submitter (and others) as needed.

### *Step 3: Staff Review and Recommendation*

Once the request for approval and supporting documentation have been determined to be complete, Regional Water Board staff will review the package in a timely manner, and will prepare a recommendation for approval or denial of the proposal. A recommendation for approval may be accompanied by conditions of approval. A recommendation for denial shall be accompanied by reasons for the denial.

### *Step 4: Staff Concurrence, Public Notice and Comment*

If Regional Water Board staff recommends approval of the proposed practice, it will make available to the general public the request for approval, supporting documentation, and staff's recommendation (including any conditions of approval) for a minimum 30-day review and comment period. Regional Water Board staff will consider all comments received during the 30-day period, and may revise its recommendation (or conditions of approval) based on those comments. If Regional Water Board staff recommends denial of the proposed practice, it will forward its recommendation (including reasons for denial) directly to the Regional Water Board Executive Officer.

### *Step 5: Final Decision / Addition to Pre-qualified Practice List*

Regional Water Board staff will provide its final recommendation to the Executive Officer for his/her consideration and final decision. If the proposal is approved, the Executive Officer's notice of approval will be made available to the general public on the Regional Water Board's website and the practice will be placed on the pre-qualified practice list, along with the approved supporting documentation. If the proposal is denied, the notice of denial (including reasons for denial) will be made available on the website.

As suggested above, significant updates or revisions to supporting documentation for practices that have already been approved (i.e., practices that are already on the pre-qualified practice list) will follow the same process as for adding a new practice. Practice revisions may be triggered by a variety of events, including local lessons learned or the release of new information such as monitoring results,

standards updates, or new findings in scientific literature. For purposes of this provision, the Regional Water Board Executive Officer has the discretion to determine what constitutes a significant update or revision.

### 3. Trading Eligibility Criteria

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#### 3.1 Eligibility for Trading Parties

The following subsections outline the basic eligibility criteria that credit buyers and sellers must meet in order to participate in WQT under this Framework.

##### 3.1.1 Credit Buyers

As stated in Section 1.2 above, this WQT Framework may be utilized by dischargers whose NPDES permits explicitly allow the use of nutrient offsets or pollutant credit trading as a means for complying with specific effluent limitations. For purposes of this Framework, such dischargers shall be referred to as “credit buyers” and shall be considered eligible to buy and/or use water quality credits to meet their compliance obligations, provided that all other permit and Framework requirements are met.

##### 3.1.2 Credit Sellers

Any entity, public or private, landowner or operator, regulated or unregulated, may generate water quality credits to be sold and/or used under this WQT Framework, provided that all applicable Framework requirements and other obligations are met. For purposes of this Framework, such an entity shall be referred to as a “credit seller.” Other obligations may include, but not be limited to: applicable permit requirements, federal anti-backsliding provisions, federal and state anti-degradation policies, and any other affirmative statutory, regulatory, or contractual obligations.

#### 3.2 Eligibility Criteria for Credit-Generating Projects

Under this Framework, a pollutant reduction or removal action is eligible to generate water quality credits as long as it is not otherwise required. That is, any action already required by law, regulation, permit, enforcement action, or any other legally binding agreement is not eligible to generate credits.<sup>3</sup> On the contrary, actions taken voluntarily are eligible. The following subsections describe additional considerations relative to the eligibility of actions to be undertaken in credit-generating projects.

##### 3.2.1 Avoiding Localized Impacts

Consistent with the guiding principles listed in the Introduction section above, actions taken to generate credits under this Framework must provide water quality benefits that are equal to or greater than the pollutant discharges they are meant to offset in place, in kind, and in time. Furthermore, there can be no significant, adverse localized impacts as a result of a credit trade. Each Credit Project Plan (Section 7.1) shall be reviewed by Regional Water Board staff for adherence to these general criteria, to state and federal endangered species protection laws, and to state and federal environmental review laws (i.e., California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA)).

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<sup>3</sup> This provision includes, but is not limited to any requirement imposed by the Regional Water Board or by another regulatory agency.

### 3.2.2 Baseline Requirements for Credit-Generating Projects

For purposes of this WQT Framework, baseline shall be defined as the minimum level of effort or level of implementation that must be achieved before a project is eligible to generate credits. Depending on the nature of the credit-generating project, practice-specific baseline requirements may apply to the credit buyer, the credit seller, the project itself, the project site, or a combination thereof. Baseline requirements for every project, as originally established in pre-qualified practice standards (Section 2.5.1), must be specified in the approved Credit Project Plan (Section 7.1).

Consistent with the guiding principles listed in the Introduction section above, baseline requirements for projects conducted under this Framework shall at least correspond to the minimum requirements of any applicable laws, regulatory requirements, or other affirmative obligations such as those established in permits, easements, deed restrictions, and/or other binding contracts. Where no such requirements exist, baseline shall at least be equivalent to current conditions or practices at the project site, based on the prior three-year history of the property or operation.

Where approved credit-generating projects take place on lands subject to regulatory requirements, those requirements will be added to the defined baseline for the practices used. Thus, only voluntary actions that are above and beyond what is minimally required, or that take place prior to the adoption of a regulatory mechanism that requires those actions, shall be eligible to generate credits. For projects implementing practices that later become baseline requirements due to the effects of new or expanding regulatory programs, credits generated by those practices shall be honored for the approved project life (Section 6.2), but may not subsequently be renewed (Section 6.4).

### 3.2.3 Applied Timing of Baseline Requirements

All applicable baseline requirements must be met before any approved project is allowed to generate credits under this WQT Framework. This provision shall not prevent credit buyers or sellers from simultaneously implementing baseline requirements and credit-generating project components.

### 3.2.4 Applied Location of Baseline Requirements

Baseline requirements shall apply to the individual project site where an approved credit-generating project is being undertaken. However, the implementation of a credit-generating project at one location on a property shall not be allowed to result in the degradation of environmental conditions at another location on the property.

### 3.2.5 Timing of Framework Applicability

Immediately following the approval of this Framework by the Regional Water Board, projects are eligible to generate credits pursuant to its terms. Projects previously approved under the Santa Rosa Nutrient Offset Program (Regional Water Board Order No. R1- 2008-0061) shall be considered eligible under this Framework to continue generating credits according to terms under which those projects were originally approved and for their approved project lives.

### 3.2.6 Use of Public Conservation Funds

Under this WQT Framework, the use of public conservation funds<sup>4</sup> to implement credit-generating projects is not prohibited, provided the funding entity's requirements are met and provided proportional accounting is used to allocate the credits generated by the project to each funding source. Proportional accounting shall apply to costs associated with the following phases of a credit-generating project: Credit Project Plan development, project implementation, maintenance, verification, monitoring and reporting.

The use of proportional accounting may affect the number of credits a credit seller may sell or a credit buyer may use. For example, if half the cost of a credit-generating project is paid for using public conservation funds, then only half the credits generated by that project shall be available to sell to the credit buyer.

Alternatively, if a credit seller uses public conservation funds to meet baseline requirements for a particular credit-generating project, and the seller uses private funds to implement all other aspects of the project that exceed baseline requirements, then all of the credits generated by that project shall be available to sell to the credit buyer.

In any case involving the use of public conservation or any other externally-derived funds to generate credits under this WQT Framework, it is the obligation of the trading parties to know and adhere to the funding entity's requirements.

### 3.2.7 Credit Stacking

Credit stacking refers to the generation of credits for multiple environmental markets (e.g. compensatory wetland mitigation, carbon sequestration and/or phosphorus credits) from a single project. Under this WQT Framework, credit stacking is allowed with proportional accounting. That is, a project is allowed to generate multiple types of credits, but those credits must be accounted for and sold (or used) proportionately. For example, if a project generates both wetland and phosphorus credits, and the credit seller sells 60% of the project's wetland credits, only 40% of the phosphorus credits from that project can also be sold. Details of any credit stacking proposal must be specified in the approved Credit Project Plan (Section 7.1) and subsequently verified pursuant to the provisions of Sections 8.2 and 8.3 below.

## 4. Quantifying Pollutant Reductions for Water Quality Credits

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As described in Section 2.5 above, credit quantification methods for pre-qualified practices must be included in the supporting documentation for those practices, and will be approved on a case-by-case basis. Once approved, credit quantification methods for those practices shall be considered pre-qualified for future use.

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<sup>4</sup> Public conservation funds include those targeted to support voluntary natural resource protection, enhancement and/or restoration, with a primary purpose of creating, restoring, enhancing or preserving water quality, healthy soils, habitats or ecological functions. Public loans intended to be used for capital improvements of public water or wastewater systems (e.g., Clean Water State Revolving Funds and USDA Rural Development funds) and utility storm water and surface water management fees are not considered public funds dedicated to conservation.

Appropriate methods for quantifying water quality credits may include the use of models (mechanistic or empirical), pre-established pollution reduction rates (from experimentation or scientific literature), direct monitoring, or a combination of the above. Models and pre-established rates, if used, should be calibrated or otherwise tuned to local conditions. In general, for this WQT Framework, methods used to quantify water quality credits to be derived from a pre-qualified practice should rely on best available science, and should demonstrate accuracy, repeatability, sensitivity, transparency, and practicality, although some trade-offs amongst these qualities are inevitable.

## 5. Trading Ratios

The default trading ratio for this WQT Framework is 2.5:1. That is, in any given discharge season, if a discharger wishes to use water quality credit trading to comply with the “no net loading” effluent limitation for total phosphorus in its NPDES permit, it must generate or purchase water quality credits equivalent to 2.5 times the amount of total phosphorus that it discharges. The trading ratio is the sum of two factors, both of which are applied to increase the amount of credits needed by the discharger:

- *Uncertainty ratio*: A ratio that accounts for scientific uncertainty, including potential inaccuracies in estimation methods and/or variability in project performance.
- *Retirement ratio*: A ratio that sets aside a portion of credits generated for net environmental benefit.

Table 5.1 summarizes the ratio(s) that will be applied to all trades under this WQT Framework.

**Table 5.1. Applicable Trading Ratios**

Ratio Type	Multiplier	Description
Uncertainty	2.0	A factor of 2.0 accounts for all potential sources of variability and uncertainty, including the following factors that may affect credit estimation: <sup>†</sup> <ul style="list-style-type: none"> <li>- Average site conditions</li> <li>- Meteorological phenomena</li> <li>- Practice efficiency rates</li> <li>- Practice maturation rates</li> <li>- Pollutant equivalencies</li> <li>- Pollutant transport, delivery, and attenuation characteristics</li> </ul>
Retirement	0.5	A factor of 0.5 is recommended to ensure that all trades generate a net water quality benefit.
<b>TOTAL</b>	<b>2.5:1</b>	

<sup>†</sup> Note: Uncertainty associated with pollutant discharge estimates is not explicitly accounted for in this ratio because discharges from wastewater treatment facilities are assumed to be reasonably accurate.

The Regional Water Board Executive Officer may allow the retirement and/or uncertainty ratios specified above to be adjusted downward by as much as 0.5 (each) for a particular trade under the following circumstances:

- A reduced retirement ratio may be applied when a credit-generating project is explicitly designed to enhance environmental values (e.g., habitat or ecosystem restoration, recognized priority or multi-benefit actions).
- A reduced retirement ratio may be applied when a credit-generating project occurs on permanently protected lands.
- A reduced uncertainty ratio may be applied when a credit-generating project includes direct measurement of pollutant reductions.

## 6. Credit Characteristics & Accounting Conventions

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The following credit characteristics and accounting conventions shall apply to all credits generated under this WQT Framework.

### 6.1 Credit Life

“Credit life” is defined as the period of time during which a water quality credit may be used to offset a pollutant discharge, typically beginning with the credit’s “effective date” and ending with its “retirement date.”

The life of all credits generated under this WQT Framework shall be one year, beginning October 1 (i.e., the beginning of the NPDES discharge season) and ending September 30.

### 6.2 Project Life

“Project life” is defined as the period of time over which a project is anticipated to generate usable water quality credits. The life of a credit-generating project often spans several years (i.e., several consecutive credit lives). The credits generated by that project shall be distributed uniformly over those years, or as otherwise specified in the credit release schedule included in the approved Credit Project Plan (Section 7.1).

For purposes of this Framework, project life shall be allowed to vary based on the specific nature of the project, the project site, the pre-qualified practice(s) used, and on the expressed preferences of the credit buyer and seller. In general, relatively short project lives (i.e., 5 years or less) are appropriate for less permanent practices, or for those expected soon to become subject to new regulatory requirements, such as land management practices associated with agricultural operations. Longer project lives (i.e., up to 10 or 20 years) are appropriate for more permanent, longer-lasting practices, such as riparian restoration or upgrades to roads, fences, and drainage facilities. Project life shall be specified in each approved Credit Project Plan.

### 6.3 Banking Credits for Later Use

“Banking” is the generation of a water quality credit in one time period with the intention that it be used to offset a discharge in another (future) time period.

Under this WQT Framework, banking of credits shall be allowed for up to five years (i.e., five discharge seasons) for credits derived from projects that are explicitly designed to enhance environmental values (e.g., habitat or ecosystem restoration, recognized priority or multi-benefit actions), and up to three years (i.e., three discharge seasons) for credits derived from all other projects (e.g., erosion control or nutrient management actions). For instance, in the latter case, a water quality credit generated during the summer preceding the 2017/18 discharge season may be used to offset a discharge in the 2017/18, 2018/19, or 2019/20 discharge season. Any credits that remain unused after the allowable banking period shall be retired for environmental benefit. For purposes of this provision, credit-generating actions must take place before the discharges they are used to offset occur.

### 6.4 Project Expiration and Renewal

Under this WQT Framework, once a credit-generating project reaches the end of its specified project life, it shall be considered expired and no longer able to generate credits. However, where such a project continues to function, is properly maintained, and meets all eligibility criteria and Framework requirements that are in effect at the time, it may be renewed and allowed to generate additional credits. The process for renewing an expired project shall be the same as the process for approving a new project. (Section 7.2)

## 7. Project Planning, Pre-Screening, & Approval

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### 7.1 Credit Project Plans

All the documentation necessary to approve a credit-generating project under this WQT Framework must be submitted in a Credit Project Plan, which contains relevant project design, implementation, maintenance, monitoring, and credit information as detailed below. Only practices that have been pre-qualified under the terms of Section 2.5 of this Framework may be proposed for credit generation. Credit Project Plans must be prepared by qualified individuals<sup>5</sup> who can properly select pre-qualified practice(s) for use at a particular site, and incorporate them into a project design. Consistent with the guiding principles listed in the Introduction section above, all Credit Project Plans should be designed with the primary goal of improving water quality, and should be sufficiently detailed to allow plan reviewers to understand the nature of the proposed project, its conformance with applicable Framework provisions, and the anticipated water quality credits to be generated. Approval of a credit-generating project is contingent upon the Credit Project Plan being complete and sufficiently detailed. Credit Project Plans should contain the following elements:

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<sup>5</sup> Qualified individuals may include, but not be limited to the following: a Natural Resources Conservation Service certified planner, a local Resource Conservation District employee, a certified crop advisor, a certified erosion control specialist, a California licensed civil engineer or professional geologist, or other professional consultant. Supporting documentation for pre-qualified practices (Section 2.5.1) may specify when certified professionals or other experts are required for the design, installation, or maintenance of a particular practice.

### *Basic Information*

- Project name
- Date of submittal
- Project location
- Estimated size of the project area (e.g. number of acres or linear feet)
- Name of the project developer with organization and contact information
- Name of the initial owner of the water quality credits to be generated with organization and contact information

### *Project Design and Credit Information*

- Project goals and/or objectives
- Description of the project site (e.g., ownership, land use history, current site conditions)
- Identification of pre-qualified practices to be used
- Description of anticipated project benefits beyond pollutant reductions (if any)
- Declaration of project eligibility with supporting documentation or discussion
- Description of applicable baseline requirements and a discussion of how those requirements have been or will be satisfied
- Designs and specifications
- Project implementation plan and/or construction schedule
- Site assessment procedures and reporting requirements (Section 8.1)
- Identification of parties responsible for project implementation and site assessment
- Description of construction contracts or agreements
- Evidence or description of required permits and/or CEQA documentation
- Preliminary water quality credit calculations and proposed trading ratio, with justification if less than the default 2.5:1
- Disclosure of funding sources and proportional accounting estimates (if public conservation funds are used)
- Credit stacking proposal and proportional accounting estimates (if stacking is proposed)
- Proposed project life and credit release schedule
- Project design consultants (if any) with organization and contact information

### *Project Maintenance Plan*

- Description of maintenance requirements
- Project maintenance activities and schedule
- Description of adaptive project management procedures
- Identification of parties responsible for project maintenance
- Description of maintenance contracts and legal project protection agreements<sup>6</sup>

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<sup>6</sup> Under this WQT Framework, legal project protection agreements must be established for all credit-generating projects that provide necessary access to and legal protection of the project area against other dissonant land uses for, at a minimum, the proposed project life. It is ultimately the credit buyer/user's responsibility to ensure (by contract or otherwise) that the projects upon which it relies for water quality credits are sufficiently maintained to generate those credits over their project lives.

### *Project Monitoring, Verification and Reporting Plan*

- Description of monitoring, project verification, and reporting requirements (Sections 8.2, 8.3, and 11.2)
- Monitoring, project verification, and reporting schedule
- Identification of parties responsible for monitoring, project verification, and reporting
- Description of project verification contracts or agreements

## 7.2 Credit Project Plan Approval Process

Credit Project Plans to be implemented under this WQT Framework must first be reviewed and approved according to the following process:

### *Step 1: Preparation and Submittal of Proposed Credit Project Plan*

A proposed Credit Project Plan (Section 7.1) must be prepared and submitted by a credit seller or its agent to Regional Water Board staff, along with a request to initiate the approval process described herein. The Credit Project Plan and request must be submitted at least 90 days prior to the proposed start of project construction.

### *Step 2: Initial Screening / Completeness Review*

Regional Water Board staff will perform an initial screening of the proposed Credit Project Plan (and any supporting documentation) to verify completeness, and will solicit technical input and/or additional information from the credit seller, its agent, and others as needed.

### *Step 3: Staff Review and Recommendation*

Upon determining the proposed Credit Project Plan is complete, Regional Water Board staff will review the Plan in a timely manner, and will prepare a recommendation for approval or denial of the Plan. A recommendation for approval may be accompanied by conditions of approval. A recommendation for denial shall be accompanied by reasons for the denial.

### *Step 4: Final Decision / Public Notice*

Regional Water Board staff will provide its recommendation to the Regional Water Board Executive Officer for his/her consideration and final decision. The Executive Officer's final decision shall be made no later than 60 days following staff's determination that the proposed Credit Project Plan is complete. If the proposed Credit Project Plan is approved, the Executive Officer's notice of approval and relevant project information<sup>7</sup> will be made available to the general public on the Regional Water Board's website. If the proposed Credit Project Plan is denied, the notice of denial (including reasons for the denial) will be made available on the website.

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<sup>7</sup> The Regional Water Board recognizes that some Credit Project Plans may contain confidential information. Public disclosure of portions of a Credit Project Plan that contains confidential information or trade secrets may be limited in accordance with applicable laws that provide for protection of the disclosure of such information. The credit seller or its agent must identify information that it asserts is exempt from public disclosure. When doing so, the seller or its agent must provide the Regional Water Board a copy of the complete Credit Project Plan and a copy with the portions it asserts are protected in redacted form.

### 7.3 Credit Project Pre-Screening Process (Optional)

Prior to incurring the expense of developing a complete Credit Project Plan and initiating the plan approval process described in Section 7.2 above, a credit seller or its agent may wish to have certain plan elements pre-screened by Regional Water Board staff for conformance with the provisions of this WQT Framework. Pre-screening is not required, but is encouraged for all projects, especially to confirm project eligibility and applicable baseline requirements. Other worthwhile topics for pre-screening may include: proposed project life, applicable trading ratio, preliminary credit estimates, and/or special conditions or circumstances associated with a particular project or site.

The optional process for project pre-screening may be more or less formal, depending on the preferences of the credit seller or its agent, and depending on the nature and extent of the information being pre-screened. Steps of the process may be carried out in writing or verbally. In general, the credit seller or its agent shall submit a request for pre-screening to Regional Water Board staff, along with any draft plan elements or other relevant documentation. Staff will review the materials submitted for conformance with the provisions of this WQT Framework, and consult with the credit seller or its agent (and others) as needed to formulate a preliminary determination and/or response to the request.

## 8. Project Implementation & Verification

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Once a proposed Credit Project Plan has been approved via the process described in Section 7.2 above, the subject project must be successfully implemented and its performance independently verified before any resulting water quality credits may be certified and sold (or used). The following subsections describe requirements for project implementation and project verification under this WQT Framework.

### 8.1 Documenting Pre- and Post-Project Site Conditions

Site conditions for all credit-generating projects approved under this WQT Framework must be assessed and documented by the credit seller or its agent before and after project implementation. Project-specific site assessment procedures and reporting requirements will be included in each approved Credit Project Plan (Section 7.1).

### 8.2 Initial Project Verification

Initial project verification is the process of reviewing and confirming whether a credit-generating project has been implemented in accordance with its approved Credit Project Plan (Section 7.1). Initial verification pertains to the project “as-built”, which may differ somewhat from the Credit Project Plan as originally approved.

### 8.2.1 Required Elements of Initial Verification

Initial verification for each credit-generating project must be conducted by an independent and qualified third-party verifier.<sup>8</sup> Although project-specific requirements for initial verification may vary based on the approved Credit Project Plan (Section 7.1), required elements of initial verification shall always include the following:

- *Administrative Review*: Confirmation of project eligibility under the terms of this Framework based on available documentation and as-built conditions, and confirmation that contracts and agreements are in place to ensure legal project protection and maintenance for the approved project life.
- *Technical Review*: Confirmation that water quality credits were quantified accurately in the approved Credit Project Plan and that all required documentation (e.g., data files, sampling results, model parameters) and as-built adjustments to the preliminary credit calculations are complete and correct.
- *Implementation Review*: Confirmation (via site visit or other reasonable means) that the project was installed consistent with the approved Credit Project Plan, and that all baseline requirements have been met. Any discrepancies between the approved Credit Project Plan and as-built conditions must be noted and brought to the attention of the credit seller for correction.

### 8.2.2 Required As-Built Documentation and Initial Verification Report

Upon completion of project implementation, the credit seller or its agent shall submit to Regional Water Board staff and the project verifier the completed site assessment documentation (Section 8.1) and any revisions or updates to the approved Credit Project Plan that are necessary to reflect as-built conditions. Subsequent to the receipt of this information, the project verifier shall separately submit an initial verification report, featuring a summary of initial verification activities, results and opinions, recommendations for adaptive project management, and any outstanding findings, notes or concerns. Regional Water Board staff will make these documents available to the general public on the Regional Water Board's website.

## 8.3 Ongoing Project Verification

Ongoing project verification is the process of periodically reviewing and confirming whether a credit-generating project continues to be maintained in conformance with its approved Credit Project Plan (Section 7.1), that it continues to meet all relevant Framework criteria, and that credits generated by the project have been (and continue to be) accurately estimated using appropriate quantification methods and procedures.

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<sup>8</sup> Qualifications for third-party verifiers will vary based on practice and project type. In general, third party verifiers must: (1) have relevant knowledge and experience related to the practices being used to generate credits, (2) be familiar with the terms of this WQT Framework, with the supporting documentation for pre-qualified practices they are being asked to verify, and with the credit quantification methods used for that practice, (3) be capable of working in an independent and unbiased manner, and (4) have no conflicts of interest. Examples of possible third-party verifiers include, but are not limited to qualified individuals, as previously described in footnote 5 (Section 7.1).

Ongoing verification for each credit-generating project must be conducted by an independent and qualified third-party verifier – preferably the same party that conducted the initial verification of the project. Verification frequency, required elements of ongoing project review, and reporting requirements will vary depending on the individual project. Requirements for all ongoing verification activities will be specified in the approved Credit Project Plan.

Copies of all verification reports for credit-generating projects implemented under this WQT Framework shall be provided to Regional Water Board staff by the independent third-party verifier. Upon determining that a verification report is accurate and complete, Regional Water Board staff will make the report available to the general public on the Regional Water Board’s website. In the event that a verification report identifies a material failure to meet approved practice standards or other requirements of an approved Credit Project Plan, the credit seller (or the party responsible for project implementation, as identified in the Credit Project Plan) shall notify Regional Water Board staff immediately. Upon such notification, the seller (or responsible party) will have 60 days to submit to Regional Water Board staff a plan for remedy, including recommended performance benchmarks, the conditions under which Regional Water Board staff should consider suspending or cancelling any credits that have already been certified (Section 9.1), and recommendations for adaptive project management. Regional Water Board staff will make such plans available to the general public on the Regional Water Board’s website. In all cases, the Regional Water Board Executive Officer has the authority to determine whether a verification report accurately reflects the credits generated, and may certify, suspend or cancel credits as described in Section 9 below, or request additional information as necessary to verify that a project is implemented in accordance with its approved Credit Project Plan.

Regardless of project verification results, NPDES permittees (i.e., credit buyers or users) are ultimately responsible for complying with their effluent limitations, and any NPDES-related compliance matters or enforcement actions based on the results of project verification activities shall be taken up with the permittee.

## **9. Credit Certification, Registration & Tracking**

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### **9.1 Credit Certification**

Upon receiving a verification report confirming that water quality credits have been generated by an approved project (Sections 8.2 and 8.3), Regional Water Board staff will review the report for accuracy and completeness, and will solicit technical input and/or additional information from the report submitter (and others) as needed. Upon determining the verification report is accurate and complete, Regional Water Board staff will certify the credits generated by issuing an official Credit Certificate to the credit seller, or whomever the approved Credit Project Plan identifies as the initial owner of the credits. Once a credit is certified, it is officially available for purchase, sale, or use by an NPDES permittee. Immediately upon their issuance, copies of Credit Certificates issued by Regional Water Board staff shall be provided to the administrator of the credit registry, as described in Section 9.5 below.

## 9.2 Serialization of Certified Credits

To ensure accountability, transparency, and ease of tracking, each credit certified under this WQT Framework shall be assigned a unique serial number, accompanied by the date of certification. Serial information will be included in the Credit Certificate issued by Regional Water Board staff.

## 9.3 Changes in Credit Status

Once certified, the status of a credit may change over time. In order to ensure that credits generated under this WQT Framework remain valid, are used only once, and/or are retired on time, changes in credit status must be reliably tracked and accounted for. For purposes of credit tracking, the status of credits shall be defined and documented as follows:

### *Active*

Upon certification, all credits shall be considered active. The status of active credits shall be documented in Credit Certificates issued by Regional Water Board staff, as described in Section 9.1 above.

### *Used*

Credits shall be considered used once they have been applied by an NPDES permittee to meet an effluent limitation. The status of used credits shall be documented in annual compliance reports submitted to Regional Water Board staff as required in the user's NPDES permit.

### *Retired*

Credits shall be considered retired if they remain unused beyond the final year allowed under this Framework's credit banking provisions (Section 6.3). The status of retired credits shall be documented in Credit Retirement Notices issued by Regional Water Board staff to the credit owner.

### *Suspended or Cancelled*

Credits shall be considered suspended or cancelled if/when a project verification report identifies a failure to meet approved practice standards or other requirements of an approved Credit Project Plan, as described in Section 8.3 above. The status of suspended or cancelled credits shall be documented in Credit Suspension or Credit Cancellation Notices issued by Regional Water Board staff to the credit owner.

Immediately upon their issuance, copies of annual NPDES compliance reports, Credit Retirement Notices, Credit Suspension Notices, and Credit Cancellation Notices shall be provided by the issuers to the administrator of the credit registry described in Section 9.5 below.

## 9.4 Changes in Credit Ownership

Once certified, the ownership of a credit may change over time. In order to ensure that credits generated under this WQT Framework are owned by only one entity at a time, changes in credit ownership (i.e., credit trades via transfer or sale) must be reliably tracked and accounted for. For purposes of credit tracking, initial ownership of credits shall be documented in Credit Certificates issued by Regional Water Board staff, as described in Section 9.1 above.

Changes in credit ownership shall be documented in Credit Trade Notices submitted by the trading parties to Regional Water Board staff. At a minimum, Credit Trade Notices must include the quantity of credits traded, the serial number of each credit traded, the purchase price, and identifying information and signatures of the buyer (i.e., the new owner) and seller (i.e., the previous owner).

Immediately upon their issuance, copies of Credit Trade Notices shall be provided by the issuers to the administrator of the credit registry described in Section 9.5 below.

### 9.5 Credit Tracking & Registry Administration

As described in Sections 9.3 and 9.4 above, the status and ownership of water quality credits certified under this Framework is subject to change over time. In order to track these changes, and to ensure the accountability, transparency, and accessibility of WQT activities conducted in the Laguna watershed, a designated administrator shall maintain an official and publicly-accessible credit registry. The role of administrator shall be performed by Regional Water Board staff or by a trusted and qualified third-party designee.

As soon as a credit is certified as described in Section 9.1 above, the administrator shall add it to the credit registry and track it through its eventual use, cancellation, or retirement. Attributes to be tracked for each credit in the registry include, but shall not be limited to: serial number, date of certification, owner, status, project from which the credit was derived, and links to publicly-available project documents.

The administrator of the credit registry shall keep all credit information current, and shall update the registry immediately upon receipt of the various certificates, reports, and notices identified in Sections 9.3 and 9.4 above.

## 10. Compliance and Enforcement

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This WQT Framework provides authorized dischargers with an optional means for complying with certain effluent limitations in their NPDES permits. Compliance with effluent limitations in NPDES permits is ultimately based on the contents of annual reports required by those permits. If a permittee opts to utilize this Framework as means of compliance, its reports must include sufficient documentation to demonstrate that the water quality credits it used were appropriately certified under this Framework, and were sufficient to meet its effluent limitations.

The Regional Water Board has the authority to enforce the provisions of NPDES and other permits it issues, and to take enforcement actions as warranted and authorized under the California Water Code. Records generated during the implementation of this WQT Framework may be used as evidence in enforcement proceedings.

## **11. Framework Improvements and Monitoring**

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### **11.1 Improving Framework Specifications, Protocols, and Processes**

This WQT Framework shall be implemented to maintain adherence to the guiding principles listed in the Introduction section above, and managed in such a way as to capitalize on lessons learned. Changes and improvements to the provisions of this Framework are expected over time, and may necessitate a formal revision. Such a revision would be subject to standard requirements for public noticing, review, and Regional Water Board approval.

### **11.2 Monitoring / Evaluating Framework Effectiveness**

Some form of monitoring shall be required for every credit-generating project approved under this WQT Framework. In general, monitoring is needed to support applications of approved credit quantification methods (Section 4), and to verify the generation of credits (Section 8). However, the type, location, and frequency of monitoring activities will necessarily vary by pre-qualified practice type (Section 2.5.1), with specific details to be determined at the project scale and incorporated into an approved Credit Project Plan (Section 7.1).

Depending on the nature and location of an approved credit-generating project, examples of monitoring may include:

- Sampling of surface sediment nutrient concentrations at a project site to quantify credits generated;
- Topographical and vegetation surveys to complete site condition assessments;
- Repeated photo point monitoring to document as-built conditions and to verify continued project maintenance; and
- Instream sampling of turbidity, dissolved oxygen, and nutrient concentrations to verify project performance and effectiveness.

The overall effectiveness of WQT activities conducted under this Framework must be evaluated within the larger context of other beneficial use recovery actions being undertaken in the Laguna watershed. As a general rule, ambient water quality monitoring (i.e., surface water status and trends monitoring) is not specifically required under this Framework, but may be appropriate (and thus required) for some projects. Otherwise, ambient water quality monitoring is anticipated to be conducted under the auspices of the Russian River Regional Monitoring Program, or a similar, regionally-coordinated program. Nothing in this Framework prohibits any entity from lawfully conducting ambient water quality monitoring in the Laguna watershed.